Fond du Lac Band of Lake Superior Chippewa (Nancy Schuldt)

Fond du Lac Band of Lake Superior Chippewa
Resource Management Division

Administration; Conservation Enforcement; Environmental; Fisheries
Forestry; Land Information; Natural Resources; Wildlife

Stephanie Handeland
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September 22, 2025

Re: Reissuance of NPDES/SDS Permits MN0031879, MN0055948, and Preliminary Determination to deny Variance from Class 4A sulfate water quality standard

Ms. Handeland:

The Fond du Lac Band of Lake Superior Chippewa (the Band) appreciates this opportunity to provide comments on the Minnesota Pollution Control Agency (MPCA) reissuance of draft NPDES/SDS permits for the US Steel Keewatin Taconite (Keetac) Mine Area (MN0031879) and Tailings Basin (MN0055948) facilities, and the agency's preliminary determination to deny US Steel's request for a variance from the class 4A water quality standard (WQS) of 10 mg/L sulfate, applicable to waters used for the production of wild rice. 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 LaPointe[1] (the "Ceded Territory").

Additionally, the Band has delegated water quality regulatory authority under §303(c) and §401of the Clean Water Act (CWA) and has comprehensive water quality standards approved by the US Environmental Protection Agency (EPA) applicable to the waters of our reservation. The Band implements our water quality standards to be as protective as possible of all designated beneficial uses for our surface water resources, including aquatic life, cultural, recreational, ceremonial and subsistence uses. Although the Keetac facility lies predominantly outside our watershed and the boundaries of the 1854 Ceded Territory, the Band has long engaged with the MPCA on environmental review and permitting actions at this facility as its legacy environmental impacts continue to affect resources of critical importance to tribal members throughout Minnesota.

The Band appreciates the opportunities we have had to communicate with MPCA technical staff through the development of these NPDES permits, and submits the following

[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).

comments, questions and concerns regarding the requirements defined in the draft permits and accompanying fact sheets:

PFAS Inventory Requirement

The Band is supportive of the new permit requirement for the company to conduct an inventory of PFAS compounds, and the clarification from an earlier permit draft that this inventory is due 18 months after permit issuance. Chemical additives are used at Keetac to treat make-up water for the recirculating non-contact cooling water system (corrosion inhibitors, descalers, and microbiocides), the wet scrubber and blowdown treatment system (pH control, coagulation, sulfate removal and clarification), and the vacuum seal water system and kiln (corrosion inhibitors/descalers). Chemical additives are also used in the reverse flotation process for beneficiation of blast furnace grade pellets (a collector, a frother, and a defoamer). Given the extensive list of chemical additives described for various facility processes, it is possible that PFAS compounds may be a component of these facility process waste streams, and it is currently unknown whether there may be a discharge/release to environment. This inventory is the necessary first step for informing future monitoring requirements and potentially new discharge limits, as the science behind the human health and ecological risk associated with various PFAS compounds further progresses.

New Surface Water Quality Monitoring Requirements

The Band is satisfied to see that both draft permits contain a substantial number of new parameter monitoring requirements, at various new and existing surface water and internal waste stream monitoring locations. These new data may inform the need for future effluent limits (i.e., nitrogen); for consistency with Minnesota's nutrient reduction strategy (i.e., phosphorus); and for conducting a functional equivalency analysis (required by regulators to consider whether discharges of wastewater from a facility to groundwater are functionally equivalent to direct discharges of the wastewater to surface water).

Additional mine site parameter monitoring requirements include sulfate, total dissolved solids (TDS), specific conductance (SC), nitrite + nitrate nitrogen, total Kjeldahl nitrogen (TKN), total nitrogen (TN) and total phosphorus (TP); dissolved mercury along with total suspended solids (TSS) (according to *MPCA Permitting Strategy for Addressing Mercury in Municipal and Industrial Wastewater Permits* (2013)). Mercury is also monitored in response to statewide mercury total maximum daily load or TMDL, approved by the USEPA in 2008.

Additional tailings basin monitoring requirements are established (SD 001, SD 005) for calcium, total iron, magnesium, potassium, sodium, manganese, chloride, alkalinity, fluoride, TDS, SC and oxidation reduction potential, to aid in determination of whether the tailings basin seepage is a functional equivalent of point source discharge. Sulfate monitoring is also required twice/month to demonstrate compliance with interim and final water quality-based effluent limits or WQBELs.

Whole Effluent Toxicity Testing

The Band appreciates seeing the requirement for quarterly Chronic Whole Effluent Toxicity Testing (WET testing) commencing in year 3 of the permit, at SD 001, SD 005, SD 009, rather than waiting until after the final WQBELs become effective. This change from an earlier draft permit is consistent with EPA's recommendation, in order to assess the need for future WQBELs.

Biological Monitoring

Biological (fish and benthic macroinvertebrates) monitoring in the Hay Creek watershed is a new requirement in the tailings basin permit, but it is only required to be conducted once during the five-year permit period. The MPCA watershed assessment team concluded, based upon a single sampling effort in 2015, that the fish community IBI score was excellent, but the macroinvertebrate IBI score for one of the sites was below the general use threshold and at the lower confidence interval of the macroinvertebrate IBI criteria.

There has been a 23-point decline in the macroinvertebrate IBI score at the site in question (15UM070) since previous sampling in 1999, and a decline in the fish IBI score as well. Staff recommended an additional macroinvertebrate score be collected to confirm a 'full support' decision under the tiered aquatic life use framework, recognizing that the stream appears to be in a declining pattern and likely in need of additional protection, and recommended placing it in the 'vulnerable' category. Yet subsequently, the assessment team determined that the stream is "meeting aquatic life parameters and recommends 'full support.'

Decades of untreated discharge of Keetac process wastewater through tailings basin "seeps" and direct surface discharges represents a cumulative impact to populations of sensitive biological communities in this ecoregion. For instance, multiple EPA studies and peer-reviewed literature document that salts and ionic pollutants at highly elevated concentrations (especially as compared to ambient conditions) are toxic to benthic macroinvertebrates and fish and may also be harmful to wildlife.[2] The Band urges MPCA to require at least two biological sampling efforts, with the first one occurring in the first year of this permit period. We also strongly recommend that a reference site, outside the influence of the tailings basin, be included in the monitoring program. The reference site can provide clearer context for future assessment decisions, particularly for a site where there is a documented decline in biological community scores over the past several decades of receiving untreated mine waste discharge. Reference site data may also be a supporting line of evidence in a functional equivalency analysis.

New Permit Effluent Limits/Reasonable Potential Analysis

Reasonable potential analysis was conducted during the previous permit development (2011) for SD 001 and SD 005 (and SD 009, when activated) for the tailings basin permit, and for SD

[2] 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 if sodium and magnesium sulfate in drinking water on mallard ducklings, J. Wildlife Diseases, Jan. 1988, Vol. 24, No. 1, pp. 30-44."

002, SD 003, and SD 012 for the mine site permit, and concluded there was a need to establish WQBELs for sulfate in both permits. Hay Lake, a wild rice water downstream of these discharges, has subsequently been listed by the MPCA as impaired for sulfate, further justifying the need for the WQBELs calculated in 2011 remain in these new permits. Interim effluent limits for sulfate at SD 002, SD 003 and SD 012 are the concentrations that are currently achievable; they are applicable until the facility attains compliance with the final effluent limits established in the compliance schedule. Keetac must attain compliance with the final sulfate effluent limits as soon as possible, but no later than April 30, 2030. The Band's disappointment with this continuing delay in compliance with clearly justified effluent limits is further articulated in our comments on the compliance schedules and anti-backsliding.

The MPCA states that since 2014 the maximum reported specific conductance value was 1028 µS/cm, never exceeding the agricultural criterion of 1500 µS/cm; therefore, a specific conductance effluent limit is not needed to protect irrigation. However, the Band is not concerned about whether Keetac's effluent will meet the state's irrigation standards; we are, instead, highly concerned about protecting aquatic life and compliance with class 2 standards. The failure to conduct reasonable potential analysis in these draft permits is, unfortunately, the realization of the Band's comments on the state's 2019 rulemaking on Class 3 & 4 WQS (Attachment 1), specifically around implementation of narrative class 2 WQS and the removal of existing state numeric criteria for ionic pollutants.

In the tailings basin permit fact sheet, the MPCA presents a rationale that since compliance with the final sulfate effluent limits will "protect Minnesota's class 2 aquatic life narrative standard from excess total salts and specific conductance, no additional specific conductance limits are needed in this permit". The agency states that "…compliance with sulfate limits would reduce those levels by over 10, 6, 2-fold. After compliance with sulfate limits, it is unlikely that specific conductance would be a stressor for aquatic life in downstream waters." The Band does not agree that this is a valid assumption. And in their comments on an earlier draft of the permit, EPA provided a clear recommendation that the agency "add to the record an analysis of the discharge of specific conductance or constituent ions to determine whether pollutants will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standards, including narrative water quality standards."[3] EPA did not agree that a plan to address sulfate should be a substitute for an analysis that directly addresses specific conductance or its non-sulfate constituent ions.

This thorny situation presents precisely the complications the Band communicated to the agency in April of 2019, when we provided detailed and critical technical comments on the MPCA request for comments on planned amendments to rules governing Water Quality Standards— Use Classifications 3 and 4, Minnesota Rules, chapters 7050 and7053. The technical support document (TSD) for that rulemaking assured that the agency fully recognized and acknowledged that for some pollutants, Classes 3 and 4 contain the *only* existing or most stringent numeric standards. EPA also provided comments during this

[3] Letter from EPA Region 5 to Theresa Haugen, Manager, Water and Mining Section, Re: Review of Two Draft NPDES Permits, U.S. Steel Keetac Mining Area (MN0031879) and U.S. Steel Keetac Tailings Basin (MN0055948), Keewatin, Minnesota. September 6, 2024.

rulemaking, explicitly advising MPCA that, to satisfy the requirements of Federal regulations at 40 C.F.R.§122.44(d)(1)(i), limitations in state-issued permits "must control all pollutants or pollutant parameters (either conventional, nonconventional or toxic pollutants) which the Director determines 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."[4] The Band submitted further comments to the Administrative Law Judge in 2021, orally and in writing (Attachment 2), as did multiple Minnesota tribes,[5] calling out the CWA deficiencies in this rulemaking.

However, the agency claimed they did not anticipate there would be significant increases in ionic pollutants or specific conductance relative to existing conditions, *because of their plans to develop detailed implementation procedures for the narrative standards under consideration* (emphasis added). During this rulemaking, MPCA provided their assurance, including preparing a white paper summarizing how it would evaluate the need for specific conductance conditions in implementing its standards, as ionic pollutants were identified as being of possible concern for waters downstream of some facility discharges.

Narrative standards provide a clear statement of the conditions that should be present in waterbodies, but do not provide numeric values that must be met to ensure those conditions. It is more difficult to use narrative standards to craft NPDES permit conditions, and an additional narrative translator step is needed in order to implement narrative standards in discharge permits. MPCA finalized the changes to the class 3 & 4 standards but delayed developing the process to translate the narrative standard into a numeric value. Instead, after the rulemaking, the MPCA proposed to work collaboratively with stakeholders and others to develop the process and publish a guidance document.

Since then, however, MPCA has made no apparent attempt to review the existing science, their own extensive water quality data, or conduct the studies necessary to develop protective criteria for these pollutants and adopt them as Class 2 numeric standards. And despite consistent comments and recommendations from the Band, other tribal agencies, NGOs, and the public, the MPCA moved forward with the removal of numeric specific conductance and so-called "salty parameters" criteria without first promulgating numeric criteria for these pollutants applicable to Class 2 waters (aquatic life use). 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 failing to protect all designated uses for waters of the state.

Compliance Schedule/Anti-backsliding

The permits issued in 2011 for the Keetac mine area and tailings basin required effluent limits for total sulfate, to be attained by no later than August 17, 2019. MPCA cites Minnesota

[4] EPA Class 3 & 4 revisions enclosure 4-8-16, attachment to Electronic Transmittal of EPA's comments on Minnesota Pollution Control Agency (MPCA) Request for Comments on Planned Amendments to Rules Governing Water Quality Standards-Use Classifications 3 and 4, Minnesota Rules, Chapter 7050

[5] Minnesota Tribal 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.

Session Law from 2016 (prohibiting agency enforcement of the state's EPA-approved sulfate criterion for wild rice waters) as the reason why US Steel delayed compliance with the schedule, and still has not attained compliance, six years later. In the fact sheets for the current draft NPDES permits, MPCA cites a letter from EPA dated February 16, 2022, stating that "Minnesota is required to issued NPDES permits containing effluent limitations to meet all federally approved water quality standards as required by the Clean Water Act, federal regulations, and EPA-approved Minnesota laws and rules." The agency presents this communication as the rationale by which they are now "free" to implement state water quality standards through NPDES permit limits and other regulatory requirements.

However, EPA had already clearly conveyed to the Legislature (State Senator Tom Bakk and State Representative David Dill), in a 2011 letter signed by Region 5 Water Division Director Tinka Hyde, that the proposed legislation in question would not be consistent with the state's statutory responsibilities under the Clean Water Act. Further, any change to an approved state water quality standard or criterion would need to be scientifically defensible or EPA would not approve it. This letter closes with the statement:

> "Additionally, should EPA determine that a state is not administering its federally approved NPDES program in accordance with requirements of the CWA, EPA has the authority to require the state to take corrective action, and if necessary, to withdraw authorization of the program, pursuant to 33 U.S.C. §§1342(c)(2)-(3)."[6]

The agency and the Minnesota Legislature were both well aware that the legislation in question was inconsistent with CWA requirements and in fact put MPCA's NPDES authorization in jeopardy – yet the Legislature moved forward with it, the governor signed it, and the MPCA complied with it. That these 2025 draft permits include new compliance schedules that postpone Keetac's requirement to attain the final sulfate effluent limits established in the 2011 permits until *five years from now* does in fact constitute backsliding. The interim effluent limits for sulfate are less stringent than the final effluent limits stipulated in the previous permit, which clearly conflicts with the backsliding prohibition in 33 U.S.C. §1342(o) and 40 C.F.R. §122.44(l)(1) unless one of the exceptions in those provisions apply, which is not the case.

Although MPCA has laid out a narrative justifying the compliance schedules in the new permits (and has included more specificity in the enforceable sequence of actions leading to compliance), the Band vehemently disagrees that factors relevant to whether a compliance schedule in these permits is appropriate under 40 C.F.R. §122.47(a) – how much time the permittee has already had to meet the WQBELs under prior permits, or the extent to which the permittee has made good faith efforts to comply with the WQBELs and other requirements in its prior permits – apply to this facility. On the contrary, US Steel has used every procedural tool at its disposal to avoid or actively contest their obligation to comply with Minnesota water quality standards for wild rice.

Both permit fact sheets describe a number of permit violations and administrative orders

[6] EPA letter to The Honorable Thomas Bakk, The Honorable David Dill, dated May 13, 2011, in response to their May 9, 2011 letter requesting EPA review of two draft bills altering MPCA implementation of its approved sulfate standard.

issued by the state over the course of the current permits. But they fail to acknowledge that in 2024, the EPA, in its own compliance investigation, found that Keetac had violated its permit effluents limits for sulfate on nearly three hundred occasions over a three-year period, from 2019 through 2022 (Attachment 3). Resolution of this enforcement action is still pending.

The Band is disturbed that this regulated facility has been given a free pass to flout state and federal statutes for so long. We are guardedly optimistic that these draft NPDES permits represent a clear rejection of the extraordinary and extralegal political measures taken on behalf of the industry and this facility that *have no basis in the CWA* and have only served to delay compliance and environmental protection. Tribal rights to clean and healthy water resources, guaranteed under treaties with the federal government, requires all permitted dischargers to comply with the Clean Water Act and Minnesota Rules. The rights of all Minnesota citizens are contingent upon the same.

Functional Equivalency Analysis

The permit includes a requirement for the permittee to conduct additional sampling at various surface water and internal waste stream monitoring locations, and to submit an evaluation prior to permit expiration with the facility's determination of functional equivalency of a direct discharge (FEDD) to a surface water from a discharge to groundwater at the tailings basin. New surface water monitoring stations (SW 002, SW 003, SW 004, SW 005, SW 006, SW 007, SW 008) have been added, for the same chemical parameters as the tailings basin. New internal monitoring locations (SW 003, SW 004) are also required for these same parameters.

The Band is puzzled why the draft permit has no groundwater monitoring requirements. It identifies only "Dike Seepage Survey" requirements. The tailings basin is principally underlain by glacial till and glaciofluvial deposits, per the fact sheet, with surface drainage further described. The probability of tailings basin seepage from hydrostatic pressure underneath the basin, not just through the dike walls, is exceptionally high. In order to provide a clear and compelling analysis for the functional equivalent of a direct discharge, there should be groundwater monitoring wells for these same water quality parameters, potentially located near SW 001, SW 005 and SW 006.

While it obviously is the permittee's responsibility to appropriately collect and timely report these data, the Band is not in support of relying upon US Steel to *prepare* this functional equivalency determination. We have seen far too many instances of suspect data analysis and interpretation from mine facility permittees to place any confidence in their results. The Band recommends that MPCA use the required reported data to conduct the FEDD analysis themselves.

Additional New Requirements

The draft permits also require the company to submit a Stormwater Annual Report by March 31 of each year following permit issuance. This is an important exercise for determining the efficacy of their site stormwater infrastructure maintenance and management practices and will hopefully incentivize comprehensive stormwater management at a time where climate change and extreme storm events elevate the need for effective controls.

The Band also appreciates the new requirement for the facility to host an annual public meeting to disclose factual information to community regarding facility operations, changes or plans for pollutant reductions, and compliance with permit conditions and effluent limits. This also is a crucial step for ensuring transparency and responsiveness to the local and regional community.

Denial of Variance Request

The Band wholeheartedly supports the agency's preliminary determination to deny US Steel's request for a variance from the wild rice sulfate standard. This well-justified determination is consistent with the March 31, 2025 Minnesota Court of Appeals decision to uphold the MPCA's denial of US Steel's application for a site-specific sulfate standard for Hay Lake[7]. The Court disagreed with US Steel's arguments that the MPCA decision was arbitrary and capricious, unsupported by substantial evidence, or based on legal error; and the agency legally erred by basing its decision on an unpromulgated rule.

The company's "Factor 3" (from EPA's Interim Economic Guidance, 1995) arguments are fatuous and circular; Factor 3 issues are typically considered in scenarios where the pollution is from indirect cause, outside the control of the permittee. Secondly, they do not demonstrate either the pollutant cannot be remedied (on the contrary, their studies demonstrate that it *can* be remedied), or that treating the pollutant will cause more environmental damage to correct than to leave in place. Their environmental cost arguments focus solely on increased carbon emissions from increased energy use and waste management but completely fail to consider or quantify the environmental *benefits* of treatment. This is, sadly, a common scenario; one that fails to account for the past, present and future costs to society of a degraded environment. Those are costs that the public bears, and in the case of diminished access to treaty protected resources like wild rice, disproportionately borne by tribal members.

The company's "Factor 6" arguments, or substantial and widespread economic and social impacts, are also unsupported by the math. Financial analysis of metrics for US Steel over the past three years establish that:

- US Steel is sufficiently profitable each year to pay for pollution control costs;
- the Permittee is not facing serious liquidity problems;
- the company long-term solvency ratio is higher than EPA's recommended threshold; and
- the company's debt-to-equity ratio indicates it has the capacity to take on debt if necessary to pay for pollution controls.

MPCA therefore (rightfully) concludes that substantial impacts on the Permittee will not result from compliance with WQS. From a variety of publicly available information, it is highly unlikely that Nippon Steel's recent purchase of US Steel diminishes any of these financial

[7] *Application for a Sulfate Site-Specific Standard for Hay Lake (AUID 31-0037-00)*, A24-0428 (Minn. App. Mar 31, 2025)

metrics, particularly as the Japanese corporation has publicly hyped its planned significant investments in modernizing US Steel facilities[8]. Further, the current federal administration has taken extreme measures to protect the domestic steel industry, in the form of steep tariffs on imported steel[9]. These actions were taken specifically to reduce foreign competition, stimulate local investment, increase local production capacity, and create US jobs in the industry. The company's economic hardship arguments for continuing to reject CWA compliance are simply not compelling.

The Band looks forward to seeing meaningful progress over the next five years towards protecting Minnesota waters under the MPCA's implementation and enforcement of these NPDES permits. We are anxious to see this regulatory approach expanded to other facilities that have, for decades, been enabled to avoid their responsibilities under Minnesota Rules and the Clean Water Act.

Sincerely,

Nancy Schuldt

Nancy Schuldt, Water Projects Coordinator
Fond du Lac Environmental Program

[8] Nippon Steel finalizes $15B takeover of US Steel after sealing national security agreement | AP News, last visited 9/22/2025

[9] Trump expands steel and aluminum tariffs to 407 more products, last visited 9/22/2025

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Katie Izzo
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April 22, 2019

Re: MPCA 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

Ms. Izzo:
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 possible 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 LaPointe[1] (the "Ceded Territory"). Within the Ceded Territory, all the signatory Bands have a legal interest in protecting natural resources.

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

MPCA proposes that every water of the state would remain designated for industrial consumptive use, but would be classified under a single industrial consumption use class (Class 3). Similarly, the MPCA proposes that every water of the state, except for wetlands, would remain designated for agricultural use/irrigation (Class 4A). Currently all waters of the state (except wetlands) are designated as 4B waters, and under the proposed rule, every water of the state would retain this livestock/wildlife use. Wetlands are currently designated as Class 4C, but MPCA is proposing to eliminate the 4C use classification and designate all wetlands as 4A and 4B. The agency is also proposing to replace exiting numeric standards for the current subclasses 3A-3D with a single narrative standard, and

[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).

replace numeric standards for Class 4A waters (bicarbonate, boron, pH, specific conductance, total dissolved salts and sodium) with a narrative standard, including a process for translating the narrative standard into a numeric effluent limit(s) for permitted dischargers. MPCA is proposing updated numeric standards for Class 4B waters that purportedly reflect current science.

MPCA clearly recognizes that removing a designated use requires substantial administrative effort and legal justification, and proposes the approach defined above as a means of avoiding that effort and "simplifying this rulemaking process."[2] The agency apparently assumes that Class 2 (aquatic life) uses will still be maintained under existing standards for that class, but the reality is that Minnesota Class 2 water quality rules have *no* corresponding numeric standards limiting bicarbonates, total dissolved salts, specific conductance and sulfates to protect fish and other aquatic life. The Band is not aware of any instance where a numeric limit for any of these parameters has been established in state water quality permitting explicitly for the protection of aquatic life. MPCA's own water quality assessments and stressor identification reports for impaired waters, along with extensive monitoring data, demonstrate that even the numeric limits currently in Class 3 and Class 4 water quality standards are not stringent enough to protect sensitive aquatic insects and fish.[3]

The MPCA has not proposed transferring any of these existing numeric criteria for salts, sulfate, and ionic pollution to Class 2 where they would protect fish and other aquatic life. However, the agency *is* proposing to move numeric chloride standards to Class 2, and wetland criteria into Class 2D, so clearly this simple mechanism for maintaining protective water quality standards for all applicable uses is evidently recognized as an option. MPCA has made no attempt to review the existing science or conduct the studies necessary to develop protective criteria for these pollutants and adopt them as Class 2 rules. Finally, the MPCA has completely disregarded the need to address the known effects of sulfate on mercury contamination of fish, in accordance with their own policy.

The Band raises the following concerns to 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.

Maintaining Standards that Protect All Uses

MPCA's expectation or assumption that current Class 2 standards would protect aquatic life and other more sensitive uses if the numeric water quality standards for industrial, agricultural and wildlife beneficial uses were removed is fundamentally flawed. 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

[2] TSD p. 11

[3] See, eg. MPCA St. Louis River Stressor ID report

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." 40 C.F.R.§122.44(d)(1)(i). *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 failing to protect all designated uses for waters of the state.

For instance, multiple EPA studies and peer-reviewed literature document that salts and ionic pollutants at highly elevated concentrations are toxic to benthic macroinvertebrates and fish, and may also be harmful to wildlife.[4] Specific conductance 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 changes in surface water that have been shown to adversely affect aquatic life. Ambient ion concentration levels are necessary to aquatic life, but negative effects from anthropogenic cumulative ionic toxicity are related to higher specific conductance levels. The elimination of specific conductance numeric criteria would constitute backsliding on a water quality standard that is already outdated and excessively high.

Replacement with Narrative standards

The TSD assures that the agency fully recognizes and acknowledges that for some pollutants, Classes 3 and 4 contain the only existing or most stringent numeric standards. They note that, in the 2018 request for comments on the triennial review of Minnesota WQS, stakeholders expressed concern that removal or revision may lead to increases in concentrations of these pollutants in some surface waters. However, the agency claims they do not anticipate there will be significant increases in ionic pollutants or specific conductance relative to existing conditions, because of their plans to develop detailed implementation procedures for the narrative standards under consideration.

[4] 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 if sodium and magnesium sulfate in drinking water on mallard ducklings, J. Wildlife Diseases, Jan. 1988, Vol. 24, No. 1, pp. 30-44."

But the Band is not convinced that the MPCA is evaluating existing and natural water quality in a scientifically defensible manner. The extensive state agency data that has been collected over the past decades can be easily compiled and mapped to show statewide conditions such as hardness. In the TSD discussion related to Figure 5 (Surface water hardness concentrations in Minnesota), MPCA notes: "Additionally, many surface waters of the state have hardness naturally higher than the Class 3B 250 mg/L hardness criteria (Figure 5), and some exceed the Class 3C 500 mg/L hardness standard. These waters could be in violation of the Class 3 standard without any wastewater input." This statement is misleading, if not deliberately deceitful; some areas of the state (for example, where taconite mining has been in operation for decades) exhibit hardness well in excess of the Class 3B hardness criteria *precisely* because industry has not been required to treat their polluted discharge to meet one of the very few numeric limits in their outdated NPDES permits.

Further, the TSD notes in its discussion of options for translating narrative criteria into numeric for permitting purposes (p. 34): "Industrial appropriators have already adapted their water treatment processes to account for the consistent hardness discharged from existing NPDES dischargers upstream of their surface water intake structures." This rationale sounds suspiciously like the agency is preparing to codify existing industrial dischargers' pollution as "natural conditions" as opposed to evidence of violations of state water quality standards.

Having numerical standards in place is much easier to enforce than narrative criteria. MPCA's history of not enforcing narrative *or* numeric standards does not bode well for future enforcement of more narrative standards. Changing the Class 3 and 4 narrative and numerical standards requires a scientific basis for each change. EPA stated in its preamble, at p. 51028 Federal Register/Vol. 80, No. 162 / Friday, August 21, 2015 / Rules and Regulations:

> …states and authorized tribes must adopt criteria that are scientifically defensible and protective of the designated use to ensure that WQS continue to ''protect the public health or welfare, enhance the quality of water and serve the purposes of'' the Act (CWA section 303(c)(2)(A)).

and states in the federal regulations:

> 40 CFR Sec. 131.11 (a) (1) States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use."

Removing the existing numeric criteria for Class 3 and Class 4 protection, without concurrently (or first) adopting sufficiently protective numeric standards for Class 2, does not conform to this regulation.

Economic Hardship vs. Conventional Pollutant Permitting requirements

MPCA has ostensibly implemented the current Class 3 and Class 4 regulations, including the numeric criteria, for many decades. This rulemaking appears to be directed towards placating regulated dischargers who claim economic hardship should exempt them from treating wastewater to meet these conventional pollutant criteria – standards that should have been met decades ago.[5] Regarding the known water quality degradation caused by untreated discharges from taconite mines in Minnesota, MPCA seems poised, with this rulemaking, to completely exempt a new sulfide mine (the PolyMet NorthMet project) from any liability for treatment or mitigation of legacy water pollution from the former LTV tailings basin, fulfilling a 'relaxed' WQS scenario defined by retiring Metallic Mining Sector Director Ann Foss.[6]

The Technical Support Document (TSD p. 15) states: "The MPCA has received comments from industrial and municipal wastewater dischargers about the substantial economic hardship that complying with the current Class 3 numeric standards (Chloride, hardness, pH) has already caused and will cause in the future if these standards are not updated."

The agency continues to make the case on behalf of the regulated dischargers: "There is no record in the MPCA's or MNDNR's history of an industrial appropriator submitting a notification to either the MPCA or MNDNR expressing concern with the quality of their appropriation water with respect to chloride, hardness, pH, or any other parameter. This is a strong indicator that industrial appropriators are able to design treatment systems to meet their water quality needs, and that the Class 3 water quality standards regarding pH, chloride, and hardness are not essential to the operation of the industrial appropriators." (TSD p. 29)

However, the CWA requires that, once approved by the EPA, all states are bound to enforce their water quality standards under the CWA. See 33 U.S.C. § 1313(c), 40 C.F.R. § 131.3(i). The MPCA includes substantial discussion in the TSD regarding industrial users' ability to treat water they appropriate from waters of the state to meet whatever relevant water quality, on a parameter-by-parameter basis, needed for their particular use or process. Table 2 (TSD p. 12) states: "All industrial water consumers expect to fully treat water to their specific needs and as a result do not need to be categorized into classes of protection."

[5] U.S. Steel letter to S. Lotthammer, MPCA re Minntac Tailings Basin – Use Attainability Analysis and Site-Specific Standard Requests, Oct. 2, 2017

[6] Ann Foss, Metallic Mining Sector Director, MPCA, Legacy Permitting/Financial Assurance for Change in Assignment Former LTV Steel Mining Company (LTVSMC) Tailings Basin and Plant Site, Dec. 12, 2017

MPCA goes on to assert: “The narrative standard would continue to allow for the use of waters of the state for industrial consumption with the understanding that industrial appropriators are willing and able to fund, operate, and maintain treatment systems to meet their specific water quality needs. The narrative standard would not prescribe categories or levels of water treatment technologies industrial consumers require, nor would it define the best or most affordable ways for industries to meet their specific appropriation water quality needs. The narrative standard would define a high-quality water, with respect to industrial consumption, as the water quality that the industrial appropriator is able and willing to appropriate and treat for their specific industrial needs.”(TSD p. 14)

This discussion serves the purpose, if not intentionally, of providing clear evidence that there is existing technology that industry around the nation and in the state of Minnesota currently employs to treat water to meet their process requirements. They have internalized those treatment costs as part of their cost of doing business. It is hard to understand why industry uses economic hardship as an argument for why they cannot use that same technology to treat their effluent and meet state WQS. Minnesota WQS are intended to protect waters of the state for all existing uses, for public good, and to protect human health. Industry cannot simply discharge their pollutants to waters of the state without first employing the necessary treatment to meet *all* existing and downstream uses, not merely Class 3 and 4.

The agency in fact points out: “Many of the water treatment technologies available when the industrial consumption standards were originally created in 1967 are still widely used today. Fundamental wastewater technologies such as coagulation, flocculation, media filtration, ion exchange, and lime softening are still used by industrial water appropriators in Minnesota. However, many of these treatment technologies have been substantially improved since 1967, and many new water treatment technologies are available.

For example, in the 1960s, water treatment engineers used distillation to produce high-purity water devoid of chloride and hardness for use in high-pressure boilers. Distillation is a very expensive, energy-intensive treatment process and by all accounts was difficult to operate and maintain. No Minnesota industrial appropriator uses distillation anymore to produce high-purity water. Instead industrial appropriators use membrane treatment such as reverse osmosis or ultrafiltration. In 1960, membrane treatment was a technology that only existed at the bench scale in advanced academic research laboratories. Since the 1960s, membrane treatment research and design has become one of the most important fields within water treatment, *and the technology has become widely available at a commercial scale* (emphasis added). Modern industrial appropriators use membrane filtration to produce high-purity water because it is more effective, less energy intensive, and substantially easier to operate than any other treatment system.”(TSD p. 29)

EPA Region 5 explicitly advised MPCA that, to satisfy the requirements of Federal regulations at 40 C.F.R.§122.44(d)(1)(i), limitations in state-issued permits “must control all pollutants or pollutant parameters (either conventional, nonconventional or toxic

pollutants) which the Director determines 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."[7] MPCA should not be elevating industry's desire to externalize their costs at the expense of aquatic life and the public's right to clean water for existing and future uses.

Interpretation/Translation of Class 3 Narrative Criteria to Numeric

The MPCA offers two options for how they may implement the proposed new Class 3 narrative criteria, through interpreting or translating them as numeric criteria:

1. Option 1: MPCA, through this rulemaking, develops a process to translate the narrative standard into a numeric value, and this process is incorporated into rule. This translation process could be either placed into rule directly or incorporated by reference through a document that either can or cannot be revised without further rulemaking.
2. Option 2: MPCA finalizes the changes to the standards but delays developing the process to translate the narrative standard into a numeric value. Instead, after the rulemaking, the MPCA works collaboratively with stakeholders and other to develop the process and publish a guidance document.

The agency's rationale for Option 2 is that the Class 3 numeric parameters are not toxic pollutants (as defined in 40 CFR 401.15) and therefore the narrative translator process is not required in this rulemaking. But even NPDES permittees have conveyed their opposition to MPCA developing wastewater permitting policy outside of rulemaking. The agency proposes:

"Under this option, the MPCA envisions facilitating a Class 3 narrative translator working group outside of this rulemaking. The working group would include NPDES municipal and industrial permit holders upstream of industrial consumers of surface water and by industrial consumers of water themselves as well as representatives of state, local, and other governments – such as the MNDNR and tribal entities – and stakeholders and other affected parties. The working group would be given charge and authority to consider permitting options for the Class 3 narrative NPDES translator and to recommend a Class 3 narrative translator permitting policy the MPCA would abide by in the future.

This working group approach was used successfully in the past to address municipal permit holder concerns regarding high wastewater chloride dischargers and could be a successful model going into the future to ensure that permit holders' concerns are incorporated into the MPCA policy."

The Band is all too aware of how policy-specific working groups can and do fall short of reaching consensus opinions on regulatory approaches. The MPCA has responsibility under

[7] EPA Class 3 & 4 revisions enclosure 4-8-16, attachment to Electronic Transmittal of EPA's comments on Minnesota Pollution Control Agency (MPCA) Request for Comments on Planned Amendments to Rules Governing Water Quality Standards-Use Classifications 3 and 4, Minnesota Rules, Chapter 7050

their delegated CWA authorities to determine how water quality standards will be implemented in a manner consistent with state and federal regulations.

Class 4 Narrative Translator

The MPCA is proposing a draft narrative translator process to ensure that waters used for irrigation do not have excess specific conductance attributable to NPDES dischargers. Earlier, in their Class 4A rulemaking discussion (TSD p. 57), they pose:

"It could be argued that the MPCA could simply choose the most sensitive crop type and set the standards at the level needed to protect that crop and soil condition. Certainly, when developing aquatic life standards, we protect for the most sensitive species. However, crops are different. Soil types do not change and the types of crops grown in any given location are relatively stable within a given crop rotation. In addition, the most sensitive species tend to be those that are less commonly grown or grown at scale (such as strawberries or blackberries). Given the availability of data, the MPCA contends that the approach we are putting forward provides an appropriate level of tailored protection for irrigated crops of all types."

Unfortunately, the agency's proposed approach does not account for climate change and the unanticipated or unpredictable shifts that Minnesota's future crop rotations may incur. It is an irresponsible and scientifically indefensible assumption that the most sensitive crops for a given agricultural parcel today will be the same five, ten or fifteen years from now.

Regarding the proposed process for implementing a new narrative standard in NPDES permits using a narrative translator, MPCA discusses their approach for determining reasonable potential (RP) for whether a wastewater discharger may exceed a standard. The RP process is specific to a particular parameter and must be performed for all parameters of concern during the issuance of a permit.

Figure 39 (Flowchart explaining the proposed irrigation narrative translator process) lays out the pathway for determining the need for conducting the RP process and developing water quality based effluent limits or WQBELs. The first step of the process acknowledges the need to meet downstream water quality standards, and uses Fond du Lac's proposed specific conductance aquatic life use criterion as an example. After listing all NPDES permittees upstream of the Fond du Lac reservation, the agency provides a figure of a load duration curve for specific conductance on the St. Louis River (Figure 40) as measured at the long term USGS gaging station at Scanlon, which is downstream of reservation waters. The TSD notes that 97% of the time, measured specific conductance is below the proposed Fond du Lac criterion, but fails to identify how MPCA would ensure an upstream permittee would not violate the Band's proposed water quality standard under low flow conditions. Additionally, the load duration curve is a visual representation of the longitudinal decrease in specific conductance with greater distance from active and historic mining sources, so if measured concentrations of specific conductance within the reservation boundaries were

plotted, the curve would be shifted to the left; i.e., a greater proportion of measurements would exceed the Band's proposed criterion under slightly higher flows.

The TSD discussion then takes a sharp turn towards the evaluation of effluent sodium chloride concentrations as the only relevant chemistry parameter for whether a discharger needs a WQBEL in their permit, and proximity of downstream irrigators the only relevant downstream waterbody use to be considered. The two examples (Lakefield WWTP effluent and MN DNR French River Hatchery) are not representative of the majority of NPDES permittees upstream of the Fond du Lac reservation. It is not clear how complying with a chloride limit (if indeed a permittee had a chloride limit for which they were in compliance) would reduce specific conductance sufficiently to be protective of the Band's proposed aquatic life use criterion.

Nowhere in the flowchart or in the TSD discussion does MPCA define how they would account for more stringent aquatic life use criteria in their narrative translator process. Consequently, ***nowhere in this proposed rule does MPCA actually describe how they would ensure NPDES permittee compliance with downstream water quality standards.***

The agency proposes the same two options (Options 1 and 2) for the timing of the development of a narrative translator for the Class 4A narrative standard as for the Class 3. Again, they point out that the criteria in question are not "toxic pollutants" by definition, and the narrative translator process is not required in this proposed rulemaking. MPCA again rationalizes Option 2, delaying the narrative translator process, as:

"Under this option, the MPCA envisions facilitating a Class 4A narrative translator working group outside of this rulemaking. The working group would include NPDES municipal and industrial permit holders upstream of agricultural consumers of surface water and by agricultural consumers of water themselves as well as representatives of state, local, and other governments – such as the MNDNR and tribal entities – and stakeholders and other affected parties. The working group would be given charge and authority to consider permitting options for the Class 4A narrative NPDES translator and to recommend a Class 4A narrative translator permitting policy the MPCA would abide by in the future.

This working group approach was used successfully in the past to address municipal permit holder concerns regarding high wastewater chloride dischargers and could be a successful model going into the future to ensure that permit holders' concerns are incorporated into the MPCA policy."

The Band's concluding comment on the proposed Class 3 Narrative Translator approach holds true for the Class 4A Narrative Translator approach. MPCA alone, not a stakeholder working group, is responsible to determine how water quality standards will be implemented in a manner consistent with state and federal regulations. The Band is more concerned about ensuring that protection of shared water resources, now and for future generations, is incorporated into the MPCA policy.

Inconsistent with Antidegradation Requirements

In the TSD (p. 151), MPCA wrote regarding the need for revisions to Class 3D and 4C standards: "In reviewing the 1993 SONAR, it became apparent that the standards included in these use subclasses were not always put in place with the intention to protect these designated uses, but *to protect the known or perceived quality of the water itself* (emphasis added). Therefore, in revising the Class 3 and 4 standards, MPCA is proposing changes to Classes 3D and 4C to ensure that the waters are designated appropriately to protect all the applicable designated uses." This action (revision) appears to run contrary to what antidegradation provisions of the CWA[8] and Minnesota Rules require: the maintenance and protection of existing instream water uses and the level of water quality necessary to protect existing uses. But it is not the only proposed revision that does not protect existing uses and the water quality needed to maintain those uses.

For example, Class 4 standards are also intended to protect wildlife, not just domesticated livestock watering or irrigation. Wildlife drink from untreated natural waters, and likely have a range of sensitivity to salinity. Many wildlife species also consume fish, exposing them to mercury that fish have bioaccumulated. If eliminating numeric standards for specific conductance or sulfate results in the extirpation of sensitive aquatic insects, or accelerates mercury methylation and increased mercury concentrations in fish, they are clearly not protective of wildlife.

As stated earlier, the proposed narrative translator process described for both Class 3 and Class 4 permitting does not provide protection for unanticipated future uses. We cannot predict what land use and water use changes may occur because of, for instance, global climate change. The Band has always interpreted that the CWA obligates implementing agencies to be conservative and broadly protective.

MPCA maintains the legally untenable position that the agency need only consider whether proposed changes will protect Class 3 and 4 designated uses. In order to meet the CWA requirement that existing uses be maintained as an absolute water quality floor (Tier 1)[9], MPCA must conduct, and provide for public comment, additional and substantial analysis beyond what is currently in the TSD demonstrating that the proposed revisions will not negatively impact existing uses.

Sulfate

In Table 29 (Details of proposed revision to Class 4B standards with rationale for the changes, with requests for input regarding options and additions to these standards.), the MPCA suggests the need for adding a numeric sulfate protective standard and seeks comment from stakeholders regarding how to address the difference in toxicity from sulfate among livestock species. The Band suggests that MPCA consider implementing a

[8] 40 C.F.R. §131.12(a)(1)

[9] 47 Fed. Reg. 49, 234,49,238 (col. 3)(Oct. 29, 1982)

sulfate criterion that is consistent with the agency's recognition of the role of sulfate in mercury methylation, as protecting wildlife requires more than simply considering which wildlife species might be more sensitive to sulfate exposure. Wildlife species are not only exposed to sulfate in the untreated water they drink, but may also be exposed to physiologically dangerous levels of mercury through eating fish and other aquatic food web species that bioaccumulate methylmercury.

Conclusion

In questions posed by MPCA to the EPA, requesting responses to questions pertaining to designated uses and criteria[10], the EPA provided:

> "As defined at 40 CFR § l 3 l .3(b), Water quality criteria are "elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use." [Emphasis added.] 40 CFR § 131.11 (a)(1) establishes the requirements for states in adopting criteria as follows:
>
> States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use."

EPA stressed emphasized the intent of the CWA is that water quality criteria be maintained and updated to reflect the most current science. Further:

> "Per 40 CFR 131.11 (a)(l), states and authorized tribal criteria must:
>
> 1. Be based on sound scientific rationale
> 2. Contain sufficient parameters or constituents to protect the designated use
> 3. Support the most sensitive designated use of the water body".

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.

These conventional pollutants under question in the proposed rulemaking, while not "toxic" per the regulatory definition, are not benign or without serious adverse effects to

[10] Letter from Christopher Korleski, Director, Water Division, USEPA Region 5, to Shannon Lotthammer, Assistant Commissioner, MPCA (Mar. 5, 2018).

sensitive ecosystems and biota, both plant and animals. They can decrease plant growth, lower crop yields and degrade stock water supplies. Excess salinity can affect overall soil health, reducing productivity, killing plants and leaving bare soil more prone to erosion. As salinity increases over time, wetlands become degraded, endangering wetland species and decreasing biodiversity. Drinking water sources require more extensive and expensive treatment to keep salinity at levels suitable for human use. Salinity damages infrastructure (roads, pipes, mechanical and processing equipment), shortening its life and increasing maintenance costs.[11]

The expectation or assumption that narrative Class 2 standards would protect aquatic-life and recreation if numeric water quality standards for industrial, agricultural and wildlife beneficial uses were removed is fundamentally flawed. These revisions should not be enacted until protective aquatic life use standards have first been promulgated.

Sincerely,

Nancy Schuldt

Nancy Schuldt, Water Projects Coordinator
Fond du Lac Environmental Program

[11] See, eg., https://www.environment.nsw.gov.au/topics/land-and-soil/soil-degradation/salinity, last visited 4/19/2019

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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 LaPointe[1] (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

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[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 discharges[6], 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 if 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]

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[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 applied 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 µS/cm statewide.[36] However, the agency then supports a translator approach to rationalize allowing conductance concentrations up to 3,000 µS/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.

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[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. "µS/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 µS/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 µS/cm, and validated the substantial reductions in macroinvertebrate populations statewide at specific conductance concentrations at or above 500 µS/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 µS/cm up to 3,000 µS/cm averaged over a 122-day period.[41] This means the instantaneous maximum concentration could far exceed 3,000 µS/cm—which essentially guarantees extinction of aquatic insects that can only tolerate maximum levels of 300 µS/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,

Nancy Schuldt

Nancy Schuldt, Water Projects Coordinator
Fond du Lac Environmental Program

c: Patina Park, Tribal State Relations Systems Implementation (by email only: patina.park@state.mn.us)
Laura Bishop, MPCA Commissioner (by email only: Laura.Bishop@state.mn.us)
Katrina Kessler, MPCA (by email only: katrina.kessler@state.mn.us)
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REGION 5
CHICAGO, IL 60604

May 14, 2024

Chrissy Bartovich
Environmental Director
Minnesota Ore Operations
United States Steel Corporation
P.O. Box 417
Mt. Iron, Minnesota 55768

Subject: Notice of Clean Water Act Violations, United States Steel Corporation - Keetac Mining Operations and Keetac Tailings Basin

Dear Chrissy Bartovich:

The U.S. Environmental Protection Agency, Region 5 (EPA) has identified violations of the Clean Water Act (CWA) by United States Steel Corporation (US Steel) at the Keetac Mining Operations and Tailings Basin located in Keewatin, Minnesota (Facility). Specifically, EPA has found that US Steel has violated federally enforceable sulfate effluent limits required by the Facility's National Permit Discharge Elimination System (NPDES) permits.

Under Section 309 of the CWA, the EPA has several enforcement options to resolve the alleged violations including issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial action. The EPA would like to reach an agreement under which US Steel will bring the Facility into compliance with the CWA.

If US Steel would like to confer with the EPA about this letter and the attached Notice of Violation (NOV), you should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter. In addition, to make the conference more productive, we encourage you to submit responsive information prior to the conference date. Please plan for your Facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. US Steel may have an attorney at this conference.

The statements in this letter and the NOV are for notification and are not final EPA positions.

If you submit additional information to the EPA in response to this letter, you may assert a claim of business confidentiality under 40 C.F.R. Part 2, Subpart B. Information subject to a

business confidentiality claim is available at 40 C.F.R. Part 2, Subpart B. If you do not assert a business confidentiality claim when you submit the information, the EPA may make this information available to the public without further notice.

If you would like to schedule a meeting to discuss the NOV or if you have any questions, the EPA contact on this matter is Jake Berger who can be reached at (312) 353-8024 or berger.jake@epa.gov, or your legal counsel may contact Jolie McLaughlin at (312) 886-4179 or mclaughlin.jolie@epa.gov.

Sincerely,

MICHAEL HARRIS

Digitally signed by MICHAEL HARRIS
Date: 2024.05.15 08:21:32 -05'00'

Michael D. Harris
Division Director
Enforcement and Compliance Assurance Division

Enclosure: Clean Water Act Notice of Violation