



Regulatory Update: Wild Rice Standard Revision

East Range Community Advisory Panel
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Iron Ore Alliance

Joint initiative between the United Steel Workers and U.S. Steel:

“We are working together to share the story of how important the company’s iron ore business is to Minnesota, because we want it to continue to grow, create more jobs, and find new ways to advance technology and protect the environment.”

Iron Ore Alliance

Co-Chairs:

United Steelworkers -- John Rebrovich
U.S. Steel -- Chris Masciantonio

www.ironorealliance.com

IOA -- Economic Impact of U.S. Steel MN Ore Operations

Employment, payroll and benefits

- Number of employees: 1,901
- Annual payroll: \$150.4 million
- Annual health care benefits: \$36.7 million
- Annual pension benefits: \$30.8 million
- Plus more than \$6.4 million to the Steelworkers Pension Trust
- Active United Steelworkers retirees once employed by Minnesota Ore Operations: 1,594

IOA -- Economic Impact of U.S. Steel MN Ore Operations

Taxes

- Annual state and local taxes: \$58.3 million
- Includes 2012 taconite production tax of \$43.8 million
- The two largest beneficiaries of taconite production tax revenues are Minnesota school districts and the Iron Range Resources & Rehabilitation Board

IOA -- Economic Impact of U.S. Steel MN Ore Operations:

Other economic impacts

- Number of suppliers/vendors in Minnesota: 370
- \$612 million in business with them annually
- Tax payments to benefit Minnesota public schools in 2013: \$58.1 million
- \$54 million in school trust land royalty payments, which is 94% of the total contributions to this fund
- \$4.1 million in production tax payments, which is 46% of the total production tax payments to local public school districts

Iron Ore Alliance

StarTribune Commentary:

This sulfate standard is the only regulation of its kind in the country, and it has never been consistently enforced in Minnesota. Why? Because wild rice often grows well in waters containing sulfate levels greater than 10 mg/L, and the treatment technology required to meet this questionable standard could have a negative economic impact on communities throughout our state — not just mining communities on the Iron Range.

Iron Ore Alliance

350+ Comments to MPCA submitted through IOA website:

- Sulfide is not toxic to wild rice at levels that typically exist in Minnesota's wild rice waters.
- 10 mg/L sulfate standard is not supported by science.
- Encourages MPCA to set a standard based on current scientific evidence, including study by Fort Environmental Laboratories.

Legislation: 2011

- \$1.5 million to conduct research
- Create an advisory group
- Upon completion of research:
 - Address water quality standard to protect wild rice
 - Designate waters subject to the standard
 - Designate time of year that the standard applies.
- To the extent allowable under the CWA “no permittee is required to expend funds for the design or implementation of sulfate treatment technologies.”

MPCA Schedule: December 2011

- Rule language for “water used for the production of wild rice” in Statement of Need and Reasonableness (SONAR) Fall 2012
- Rulemaking on “water used for the production of wild rice” completed Fall 2013
- December 2013 Initiation of rulemaking for sulfate standard revision (if needed) Spring 2014
- **Rulemaking completed (if needed) Spring 2015**

MPCA Schedule: 2015

- March 2015: “The MPCA anticipates having a formal rulemaking package, including draft rule language and the detailed Statement of Need and Reasonableness, ready for discussion toward the end of 2015.”
- July 2015:
 - Public notice, hearing and comment period --Late 2016/Early 2017
 - Report from Administrative Law Judge following rule hearing-- July 2017
 - **Adopt Rule -- Late 2017/Early 2018**

Legislation: 2015

- Authored by Iron Range Delegation Legislators
- Supported by the Minnesota League of Cities and the Coalition of Greater Minnesota Cities

Legislation: 2015

Until the MPCA amends the standard and designates in rule the waters where it applies the MPCA:

- shall not require permittees to expend money for design or implementation of sulfate treatment technologies or other forms of sulfate mitigation
- may require sulfate minimization plans in permits;

The MPCA shall complete the rulemaking to revise the standard and list waters subject to the standard by January 15, 2018.

MPCA Proposal

Current Standard:

10 mg/L sulfate for “waters used for production of wild rice during periods when rice may be susceptible to damage by high sulfate levels”

Proposal:

Protective sulfate concentration calculated for each wild rice water based on potential sulfide formation due to organic carbon and iron levels in sediment.

MPCA Proposal

Calculate Protective Sulfate Concentration:

- Use target level for safe sulfide concentration (0.165 micrograms/liter)
- Collect sediment samples in wild rice waters to measure organic carbon and iron concentrations
- Calculate sulfate level that will keep sulfide below target level.

MPCA Proposal – Designating Waters

List Wild Rice Waters Subject to Standard:

- 2011 and 2015 Legislation designation of waters in rule
- DNR Reports (estimates to 2 acres or greater)
- MPCA “Call for Data” (< 1 acre)
- 1854 Treaty Authority List
- UofM Surveys

MPCA Proposal – Designating Waters

- 1300+ waters on draft list
- 900+ waters on “watch list”

Reactions to MPCA Proposal

- Protective sulfide concentration science
- MPCA research confirms/disproves 10 mg/L standard
- Too complicated and expensive to calculate a sulfate limit for each water
- Equation not scientifically supported
- MPCA lists of waters are not based on information sufficient for rulemaking

Reactions to MPCA Proposal

- Implementation questions (sampling protocols)
- Alternative: State of Minnesota should protect wild rice through DNR/MPCA management plans rather than a water quality standard
- Cities ask MPCA to consider cumulative cost of existing and proposed WQ regulations

Key MPCA Finding: 10 mg/L sulfate standard is not appropriate

Proposed Approach to Minnesota's Sulfate Standard to Protect Wild Rice: Minnesota Pollution Control Agency March 24, 2015:

"Elevated sulfate has the potential to negatively impact wild rice. However, no single concentration of sulfate is protective of wild rice in all water bodies; sulfate is converted to sulfide at a different efficiency in each water body, depending on iron and total organic carbon concentrations in the sediment."

"Because a single concentration of sulfate is not an appropriate tool for protection of wild rice in different water bodies, MPCA proposes that whenever a protective sulfate concentration needs to be determined for a given wild rice water, sediment concentrations of iron and organic carbon be measured."

What does this mean to industry and cities?

According to MPCA:

- 150 cities & businesses have monitored for sulfate
- 144 cities & businesses have sulfate > 10 mg/L

Many cities and industries will need to provide additional treatment to meet the current standard

Not just mines – data centers, food processors, manufacturers, refiners

What does this mean to industry and cities?

The only technology which can meet the 10 mg/L standard is reverse osmosis.

City of St. Peter (pop. 11,400) has built an RO system for their drinking water system (2,300 gpm, 3.3 MGD). Capital costs: \$10.5 million. Annual O&M Costs: \$0.5 million/year.

Cost per household:

\$4.89/month, or

\$100/year

What does this mean to industry and cities?

But system discharges brine to the river. To meet a 10 mg/L sulfate standard, one needs to evaporate & crystallize the brine.

Additional Capital Costs: \$19 million

Additional O&M Costs: \$5.7 million/year

Additional Cost per household:

\$26.91/month or

\$323/year

What does this mean to industry and cities?

- Taconite industries

- Much higher flows, higher sulfate content

One estimate (2009) ONE discharge at ONE facility 7,000 gpm flow rate to meet 350 mg/L sulfate (not 10) was:

- \$110 million capital costs
 - Today's costs: \$120 million (BLS inflation calculator)
 - Estimated O&M Costs are in the tens of millions of dollars per year

Status 2016

- MPCA Reviewing Comments on Proposal
- Wild Rice Advisory Committee meeting Spring 2016
- MPCA will publish Statement of Need and Reasonableness and Proposed Rule for Comment for Comment
- Administrative Law Judge Hearing and Findings
- MPCA Decision late 2017/early 2018
- USEPA involvement in approval

Industry will do their part to protect wild rice

Hay Lake (August/September 2014) (upstream from Swan Lake) Sulfate concentration >23 mg/L



Second Creek (August/September 2014) (upstream from Partridge River) Sulfate concentration > 800 mg/L



Questions?

More information:

- Iron Ore Alliance: www.ironorealliance.com
- MN Chamber of Commerce:
www.mnchamber.com/proposed-wild-rice-sulfate-standard-and-its-impact-minnesota
- MPCA:
<https://www.pca.state.mn.us/water/sulfate-standard-protect-wild-rice>



Thank You



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