ATTACHMENTS

WaterLegacy Letter to U.S. Environmental Protection Agency
Minnesota 2014 and 2016 Draft Clean Water Act Section 303(d) Impaired Waters List
(August 26, 2016)

Attachment A	WaterLegacy email to EPA Regional Counsel regarding MPCA withdrawal from St. Louis River mercury TMDL. (Apr. 5, 2013) (2 pages)
Attachment B	WaterLegacy Comment on Clean Water Act Tribal Eligibility to Administer Regulatory Programs Rule Proposals (Sept. 5, 2014) (2 pages)
Attachment C	Minn. Chamber of Commerce v. MPCA, District Court Opinion (May 10. 2012) (11 pages)
Attachment D	MPCA Proposals and Summaries provided to Wild Rice Standards Study Advisory Committee regarding Wild Rice Assessment (May 1 – June 11, 2013) (7 pages)

Separately attached without lettering:

Attachment	WaterLegacy Comment Minnesota 2016 Draft Section 303(d) Impaired Waters List (August 26, 2016) (4 pages)
Attachment	Exhibits to WaterLegacy Comment Minnesota 2016 Draft Section 303(d) Impaired Waters List (August 26, 2016) (132 pages)

Subject: St. Louis River TMDL
Date: Friday, April 5, 2013 at 4:20:55 PM Central Daylight Time
From: Paula Maccabee
To: Wester.barbara@Epa.gov
CC: Muneer.alie@Epa.gov, Michael Sedlacek

Hello, Barbara:

I represent WaterLegacy, a non-profit organization dedicated to the protection of Minnesota's water resources and the communities that rely on them. We are very concerned about the Minnesota Pollution Control Agency (MPCA) withdrawal from the current mercury TMDL process for the St. Louis River. We obtained hundreds of documents in a Data Practices Request from the MPCA and have had a chance to review most of them. A couple dozen documents from this information request are attached with this email.

Our primary concerns are as follows:
1) The St. Louis River mercury TMDL is essential to protect public health. A February 10, 2012 report from Bruce Monson at the MPCA (attached with this email) showed that walleye in the lower reaches of the St. Louis River have a higher level of mercury contamination than other walleye in the region. This difference is statistically significant at a 95% confidence level. The level of mercury contamination is also higher in the lower reaches of the river than the upper reaches. We don't believe that air deposition of mercury alone can explain the observed levels in St. Louis River fish.

2) The Minnesota Department of Natural Resources (MDNR) research efforts pertaining to sulfates and mercury have been both funded and approved by the mining companies. This research has focused on sediments and pore water and has not tested methylmercury in biota. We are concerned that the research design may be biased against determining that control of sulfates is needed to reduce bioaccumulation of toxic mercury in the St. Louis River.

3) The MPCA's pull-out of the mercury TMDL for the St. Louis River may have been unduly influenced by the MDNR team. It is certainly precipitous, opaque and has taken place with no public disclosure let alone public involvement. The fact that the MPCA has placed the St. Louis River mercury TMDL in chaos on the eve of the release of the PolyMet SDEIS -- with its potential for substantial release of sulfates to the St. Louis River watershed -- raises further concern about the MPCA's actions.

4) In the MPCA's letter to the EPA, there is a suggestion that the MPCA is not ceasing activity on the mercury TMDL for the St. Louis River, but will be continuing this effort in some manner with the MDNR. This "continuation" seems inconsistent with internal communications and communication to other stakeholders, some of which are attached. If the MPCA language is read carefully, it suggests that research would continue in conjunction with the existing MDNR research. However, WaterLegacy is not confident that the research will ask the right questions. More fundamentally, we do not understand the MPCA letter to make any commitment to determine or implement TMDL limits on discharge to rectify mercury impairments of the St. Louis River. From our perspective, the MPCA is proposing monitoring and research, but no protection of the resource.

Last year, the Minnesota Department of Health last year reported that 1 out of 10 infants in Minnesota's Lake Superior Region were born with unsafe levels of mercury in their blood. The level of contamination of fish in the St. Louis River is even higher than that in the rest of the region. WaterLegacy believes that, from a public health point of view, derailing the St. Louis River mercury TMDL would be irresponsible.

WaterLegacy would respectfully request that the EPA convene not just government research partners, but citizens, anglers, and environmental health groups who are the key stakeholders for the St. Louis River TMDL. We would convene not just to discuss research completed to date or the current MPCA fiasco but to develop a path forward to get the St. Louis River mercury TMDL done in an effective and timely manner. WaterLegacy would also request

that the EPA step into this fragmented and dubious process and perform a federal TMDL, which could include the reservation waters, the estuary and the lower reaches of the river that are in Wisconsin.

We further believe that, pending clarity and objective analysis of sulfates and mercury contamination of fish in the St. Louis River, any new upstream source of sulfates would be likely to result in Clean Water Act non-compliance.

Please call me when you have had a chance to review these materials and our requests. I would appreciate the opportunity to discuss potential paths forward.

Sincerely yours,

Paula Maccabee, Esq.
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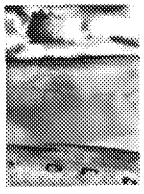

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September 5, 2014

Fred Leutner (Leutner.Fred@EPA.gov)
Office of Science and Technology
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Mail Code 4305T
Washington, DC 20460

Re: Potential Reinterpretation of a Clean Water Act Provision Regarding Tribal Eligibility to Administer Regulatory Programs and Streamlining Section 518(e) Treatment as State

Dear Mr. Leutner:

I work with WaterLegacy, a Minnesota non-profit organization formed to protect Minnesota water resources and the communities that rely on them. We've read with interest EPA's proposal under consideration: "Potential Reinterpretation of a Clean Water Act Provision Regarding Tribal Eligibility to Administer Regulatory Programs" and the webinar slides from last spring, "Rulemaking to Provide More Opportunities for Tribes to Engage in the Clean Water Act Impair ed Water Listing and Total Maximum Daily Load Program."

We applaud EPA's proposal that would remove the additional step of requiring Tribes to demonstrate regulatory jurisdiction over clean water within reservations under the second test of *Montana v. United States*, 450 U.S. 544 (1981). We understand that the EPA proposes that a new interpretive rule would state that Clean Water Act Section 518(e) provides an express delegation of authority by Congress to administer water quality standards regulatory programs within reservations.

Although we agree with the statement that Section 518(e) provides such a clear delegation, we believe that the EPA's interpretive rule should also affirm that Tribes have inherent sovereign authority recognized in the *Montana* case and subsequent precedent to regulate water quality in order to protect the political integrity, the economic security, the health, or the welfare of the Tribe. The EPA's interpretation that regulatory programs are authorized by Congressional delegation and require no additional factual demonstrations does not diminish the inherent authority of Tribes to regulate water quality.

WaterLegacy also supports EPA's proposal to facilitate Tribes in more readily exercising the authorities delegated by Congress under Section 518(e) of the Clean Water Act, including Impaired Water Listing and Total Maximum Daily Load Program under Section 303(d). However, we would respectfully suggest that the approach proposed by the EPA may be unnecessarily cumbersome.

WaterLegacy would recommend that, rather than proceed separately and incrementally with rulemaking for Section 303(d) and, eventually, for the NPDES permit program under Section

402, the EPA address these delegated authorities along with the simplification proposed to address delegated authority under Section 518(e).

We perceive no requirement under Section 518(e) for multiple layers of proof whenever a Tribe seeks to exercise Clean Water Act authority. In fact, the statute lists all of the areas where a Tribe may exercise authority under the Clean Water Act in one series, suggesting that Congress would have anticipated one demonstration of authority and capacity would suffice. The statute, thus, lists the requirements for a Tribe to demonstrate governance, the functions sought to be exercised and capacity under one paragraph stating, "The Administrator is authorized to treat an Indian tribe as a State for purposes of subchapter II of this chapter and sections 1254, 1256, 1313, 1315, 1318, 1319, 1324, 1329, 1341, 1342, 1344, and 1346 of this title to the degree necessary to carry out the objectives of this section." 33 U.S.C. §1377(e), CWA Section 518(e).

WaterLegacy would recommend the following to address treatment as a state for Tribes:

- EPA proceed with the proposed interpretive rule stating that Section 518(e) provides express delegated authority to Tribes to administer water quality programs within reservations without any additional demonstration of inherent regulatory authority.

- EPA also state in this interpretive rule that nothing in either Section 518(e) or EPA's rules or interpretation is intended to or serves in any way to diminish tribal inherent sovereign authority to regulate water quality.

- EPA further state in its interpretive rule that in recognition of Congressional delegation of authority to Tribes to exercise all of the enumerated functions in Clean Water Act Section 518(e) (33 U.S.C. §§ 1254, 1256, 1313, 1315, 1318, 1319, 1324, 1329, 1341, 1342, 1344, and 1346), EPA will also streamline the process whereby Tribes exercise these authorities. TAS for any of the enumerated functions in Section 518(e) will be approved when the Tribe designates functions and tribal waters where TAS would be exercised and demonstrates a reasonable expectation of capacity to carry out these functions.

WaterLegacy believes that interpreting Section 518(e) to provide a broad, unitary delegation of Clean Water Act authority to Tribes is consistent with the statutory text, with respect for inherent tribal sovereignty and with recent EPA Guidance recognizing tribal rights to self-determination. It would also be more efficient than a piecemeal approach. We would note that EPA would continue to have the authority to review and evaluate compliance with Clean Water Act requirements when impaired waters lists, TMDLs and NPDES permits are generated by Tribes.

We look forward to your response and invite contact by phone (651-646-8890) or email (pmaccabee@justchangelaw.com). Thank you in advance for your efforts to facilitate tribal exercise of authority under Section 518(e) of the Clean Water Act.

Sincerely yours,

Paula Goodman Maccabee
Advocacy Director/Counsel for WaterLegacy

Minn. Chamber of Commerce v. Minn. Pollution Control Agency

Minnesota District Court, County of Ramsey, Second Judicial District

May 10, 2012, Decided; May 10, 2012, Entered

Court File No. 62-CV-10-11824

Reporter
2012 Minn. Dist. LEXIS 194

Minnesota Chamber of Commerce, Plaintiff, vs. Minnesota Pollution Control Agency, Defendant, and WaterLegacy, Defendant-Intervenor.

Subsequent History: Affirmed by Minn. Chamber of Commerce v. Minn. Pollution Control Agency, 2012 Minn. App. Unpub. LEXIS 1199 (Minn. Ct. App., Dec. 17, 2012)

Prior History: Minnesota Chamber of Commerce v. Minnesota Pollution Control Agency, 469 N.W.2d 100, 1991 Minn. App. LEXIS 388 (Minn. Ct. App., 1991)

Core Terms

wild rice, sulfate, waters, water quality standards, subp, applies, void for vagueness, discharges, irrigation, Pollution, stands, requirements, cultivated, narrative, plant, vague, rice, summary judgment, wildlife, Lake, unconstitutionally vague, agricultural, designated, wetlands, aquatic, levels, declaratory judgment, matter of law, propagation, susceptible

Counsel: **[*1]** For Plaintiff: Thaddeus Lightfoot, Esq.

For Minnesota Pollution Control Agency, Defendant: Robert B. Roche, Assistant Attorney General.

For WaterLegacy, Defendant-Intervenor: Paula Maccabee, Esq.

Judges: HON. MARGARET M. MARRINAN, JUDGE OF DISTRICT COURT.

Opinion by: MARGARET M. MARRINAN

Opinion

FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER FOR JUDGMENT

This matter came on for hearing on the parties' cross motions for summary judgment on March 1, 2012. Thaddeus Lightfoot, Esq., appeared on behalf of Plaintiff; Assistant Attorney General Robert B. Roche appeared on behalf of Defendant Minnesota Pollution Control Agency; Paula Maccabee, Esq., appeared on behalf of Defendant-Intervenor WaterLegacy.

Plaintiff has withdrawn its claim regarding Count I of the Amended Complaint.

Plaintiff seeks partial summary judgment on the remaining following counts:

1) Count II: in which it alleges that the "Wild Rice Rule" is unconstitutionally vague and thus a violation of due process. The basis for this allegation is that the term "when rice may be susceptible to damage from high sulfate levels" is not defined.

2) Count III: in which it alleges that Defendant's actions applying the "Wild Rice Rule" exceed Defendant's statutory authority **[*2]** and are arbitrary and capricious because:

a. Defendant would apply them to all waters in the state rather than limit them to waters used for agricultural irrigation in the production of wild rice; and

b. Defendant has created a narrative wild rice classification for Class 4A waters without specifically listing or otherwise classifying those waters; and

c. Defendant has required that Plaintiff members perform wild rice surveys to determine whether waters fall within the narrative sub-classification.

3) Count IV: in which it asks the Court to construe the Wild Rice Rule under the authority of the Minnesota Declaratory Judgments Act (Minn. Stat. Ch.555).

Defendant and Defendant-Intervenor seek summary judgment regarding all of Plaintiff's claims.

FINDINGS OF FACT

1. The Minnesota Legislature has adopted wild rice as the official grain of the State of Minnesota and has explicitly recognized the importance of protecting it. Minn. Stat. § 1.148, subd. 1 (2010).

2. In keeping with the policy set by Minn. R. 7050.0186,[1] and in order to comply with the United States Environmental Protection Agency (EPA) requirements under the Federal Water Pollution Control Act Amendments of 1972, in 1973 the Minnesota Pollution Control Agency **[*3]** (MPCA) adopted water quality standards for Class 4 waters of the state.

The rationale for protection of these waters is addressed by Minn. R. 7050.0224, subp.1:

> The *numeric* and *narrative* [emphasis supplied] water quality standards in this part prescribe the qualities or properties of the waters of the state that are necessary for the agriculture and wildlife designated public uses and benefits. Wild rice is an aquatic plant resource found in certain waters within the state. The harvest and use of grains from this plant serve as a food source for wildlife and humans. In recognition of the ecological importance of this resource, and in conjunction with Minnesota Indian tribes, selected wild rice waters have been specifically identified [WR] and listed in part 7050.0470, subp.1.[2] The 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. If the standards in this part are exceeded in waters of the state that have the Class 4 designation, it is considered indicative of a polluted condition which is actually or potentially deleterious, harmful, detrimental, or injurious with **[*4]** respect to the designated uses.

Minnesota's wild rice sulfate standard is found in Minn. R. 7050.0224, subp. 2 (2011). The rule provides in pertinent part:

> Class 4A waters. The quality of Class 4A waters of the state shall be such as to permit their use for irrigation without significant damage or adverse effects *upon any crops or vegetation usually grown in the waters or area*, [emphasis supplied] including truck garden crops. The following standards shall be used as a guide in determining the suitability of the waters for such uses ...: Sulfates (SO
>
> 4) 10 mg/L, applicable to water used for production of wild rice during periods when the rice may be susceptible to damage by high sulfate levels.
>
> Minn. R. 7050.0224, subp. 2 (2011).

Of the subparts to the water quality standards in Minn.R. 7050.0224, subpart 2 (Class 4A waters) is

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[1] "It is the policy of the state to protect wetlands and prevent significant adverse impacts on wetland beneficial uses caused by chemical, physical, biological or radiological changes. The quality of wetlands shall be maintained to permit the **[*5]** propagation and maintenance of a healthy community of aquatic and terrestrial species indigenous to wetlands, preserve wildlife habitat, and support biological diversity of the landscape. In addition these waters shall be suitable for.... irrigation... as specified in part 7050.0224, subpart 4...."

[2] This rule specifically identifies as [WR] the sub-set of wild rice waters in the Lake Superior watershed.

the only one that specifically refers to crops and vegetation. Classes 4B and C have as their focus livestock and wildlife.

3. The MPCA adopted a wild rice numeric sulfate standard of 10 milligrams per liter ("mg/L") for water used for production of wild rice based on recommendations by the Minnesota Department of Natural Resources ("MDNR") that sulfate concentrations above that level are a serious detriment to the natural and cultivated growth of wild rice.

4. In addition to the numeric standard, Minnesota Rules also adopted a narrative standard that applies only to specifically identified wild rice waters. Minn.R. 7050.0224, subp.1, *supra*.

5. Whether standing alone, or viewed in tandem with the above rules, the term "when the rice may be susceptible to damage by high sulfate levels" is straightforward and understandable: if the rice is at a point in development when sulfates can damage it, the maximum sulfate **[*6]** level is 10 mg/L.

6. Testimony from the hearing on the initial adoption of the wild rice sulfate standard clearly establishes that, from the time of its initial adoption, the MPCA intended the wild rice sulfate standard to protect both naturally growing and cultivated wild rice.[3]

7. The first time that the MPCA imposed a discharge limit based on the wild rice sulfate rule (Minn. R. 7050.0224, Subp. 2) was in a 1975 permit for the Clay Boswell Steam Electric Station ("Clay Boswell Permit").

8. The record of the administrative hearing for the Clay Boswell Permit reflects that the hearing examiner supported application of a sulfate limit in that permit in order to protect natural stands of wild rice, not agricultural irrigation of cultivated wild rice.[4]

9. The MPCA issued sulfate limits three other times: a June 17, 2010 permit modification for U.S. Steel Corporation (Keetac mining area) and two October 25, 2011 permits for U.S. Steel (Keetac mining area and tailings basin). It is notable that the areas **[*7]** in question affect *natural* stands of wild rice, not the agricultural irrigation of cultivated rice. The direct receiving waters included both listed waters (Welcome Creek and O'Brien Creek) and unlisted waters (Welcome Lake and O'Brien Reservoir). All of these waters were classified as Class 4A and 4B waters. U.S. Steel neither requested an administrative hearing nor challenged the permit at the Court of Appeals.

10. In 2010, the EPA, addressing the issue of sulfate discharge for the Keetac mine expansion and the proposed PolyMet NorthMet mining project, advised Defendant MPCA that the wild rice protection rule must be applied to limit that discharge in receiving waters. Both of those projects affected natural stands of wild rice, rather than agricultural irrigation for cultivated rice[5] The waters to which this sulfate limit applied included lakes, rivers and creeks not specifically listed as wild rice waters in Minn. R. 7050.0470, Subp. 1.[6]

11. The MPCA has approximately ten years of sulfate data for mining discharges because it has monitored wastewater discharges from **[*8]** mining operations in order to evaluate their overall toxicity and their potential to adversely affect groundwater. The agency concluded that this data could be useful in evaluating the potential impact of mining discharges on the wild rice sulfate standard.[7]

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[3] Affidavit of Gerald Blaha, Ex. C, p. 27: testimony of John McGuire, Chief of the Section of Standards and Surveys, Division of Water Quality, MPCA.

[4] Affidavit of Gerald Blaha, Paragraph 9.

[5] Affidavit of Paula Maccabee, Ex. 8 and 9.

[6] Swan Lake, Swan River, Hay Creek, Hay Lake and Upper Partridge River. *Id*.

[7] The MPCA does not yet have similar data for municipal discharges, but is in the process of obtaining it as part of a broader MPCA strategy to evaluate the impact of wastewater discharges on Class 3 and Class 4 water standards. It intends to use the monitoring data to

12. To determine whether sulfate dischargers are potentially interfering with attaining the wild rice sulfate standard, the MPCA reviews permit applications on a case-by-case basis. Where the data suggests that a discharge has high levels of sulfates upstream of a water identified as one potentially used for production of wild rice, the agency may request dischargers to conduct surveys to determine if the discharge is, in fact, upstream of a water used for production of wild rice. This authority derives from M.S. 115.03, subd. 1 (e) (7) **[*9]** which gives the agency the authority to require owners and operators of such discharge systems to do so.

13. As part of the permit review process, the MPCA reviews the following information: (i) available wild rice records and databases that the MDNR maintains; (ii) consultation with aquatic plant biologists at the MDNR; (iii) information received from external stakeholders, including, but not limited to, Native American tribes and environmental groups; and (iv) information provided by the discharger.

14. The MDNR's list of waters where wild rice has been identified is not an exhaustive list of waters used for production of wild rice. Where a permit applicant discharges upstream of a water that is not on the MDNR list, but which has been identified as potentially producing wild rice, the MPCA has requested that the permit applicant conduct a survey of any wild rice stands in the receiving waters to help determine whether the receiving water is a water used for production of wild rice.

15. Any party who disagrees with the MPCA's determination of 1) whether a water qualifies as a water used for production of wild rice or 2) whether the permit needs to include a sulfate limit **[*10]** has the option of requesting a contested case hearing before an administrative law judge on the issue pursuant to Minn. R. 7000.1800. Although Plaintiff's members allege they have been affected by the wild rice sulfate standard, they failed to request such a hearing, and have sought relief under Chapter 555 of the Minnesota Statutes.

16. During the 2011 Minnesota Legislative Session, it was proposed that the application of Minnesota's wild rice sulfate standard be suspended, or that the sulfate standard be increased from 10 mg/L to 50 mg/L. In response to those proposals, on May 13, 2011 the U.S. EPA[8] wrote the sponsoring legislators warning that:

> 1) "[L]egislation changes [to] the EPA-approved water quality standards for Minnesota...must be submitted to EPA for review...and are not effective for Clean Water Act (CWA) purposes, including [National Pollutant Discharge Elimination System] permits, unless and until approved by EPA; and
>
> 2) If it "determined that a state is not administering its federally approved NPDES program in accordance with requirements of the CWA, EPA has the authority to...withdraw authorization of the program...."

17. Rather than passing either of the above bills, the 2011 Minnesota legislature passed, and the governor signed, a bill regarding the wild rice sulfate standard. Minn. Laws 2011 1 Sp. c. 2, art. 4, § 32. That law requires the MPCA to form an advisory group and conduct an extensive study of the impacts of sulfates and other substances on wild rice. *Id.* at § 32(c)&(d). Once that research is complete, the bill requires the MPCA to amend the wild rice sulfate standard to:

> (i) address water quality for both natural stands of wild rice and cultivated wild rice;
>
> (ii) specifically designate waters to which the wild rice sulfate standard applies; and
>
> (iii) designate the times of year when the

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determine whether additional discharge limits are necessary to protect Class 3 and 4 water quality standards, including the wild rice sulfate standard.

[8] The EPA has delegated the administration of the federal **[*11]** Clean Water Act in Minnesota to the MPCA.

standard applies. *Id.* at § 32(a)(1)-(3).

18. Pursuant to that legislation, the MPCA has formed an advisory group and held three meetings of that group to date (October 10, 2011, November 30, 2011 and March 27, 2012), established a study protocol, published a Request for Proposals to undertake research outlined in the study protocol, submitted a legislative report as required by December 15, 2011, and awarded a contract to the University of Minnesota to conduct the **[*12]** wild rice/sulfate studies.

CONCLUSIONS OF LAW

1. Plaintiff has withdrawn its claim that the MPCA's application of the wild rice sulfate standard has violated the Equal Protection Clause of the United States Constitution. Summary Judgment in favor of the MPCA and Defendant-Intervenor is therefore proper as to that claim.

2. Summary judgment is appropriate under the Minnesota Rules of Civil Procedure, when "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that either party is entitled to judgment as a matter of law. Minn.R.Civ.P. 56.03.

3. There are no genuine issues of material fact and the MPCA has demonstrated that it is entitled to judgment as a matter of law on each of Plaintiff's alleged claims.

A. Counts II and Count III: The Wild Rice **Rule does not violate due process. It is not unconstitutionally vague, nor is the application of the rule arbitrary and capricious.**

4. An agency rule is unreasonable (and therefore invalid) when it fails to comport with substantive due process because it is not rationally related to the objective sought to be achieved.[9] **[*13]** The rationale underlying the Wild Rice Rule (Minn. R. 7050.0224, subp. 2) is found in the subparagraph preceding it: since wild rice is a food source for both wildlife and humans, the quality of the waters and the aquatic habitat necessary to support its propagation and maintenance must not be materially impaired or degraded. The policy upon which this rationale is based (Minn.R.7050.0186) is the protection of the quality of wetlands so as to "permit the propagation and maintenance of a healthy community of...species indigenous to wetlands...In addition these waters shall be suitable for...irrigation...."

5. Where a rule is challenged as "invalid as applied", Minnesota law allows only limited judicial inquiry into the validity of an administrative regulation in question. The party challenging the rule bears a heavy burden and must establish that the rule is not rationally related to the legislative ends sought to be achieved or that in adopting the rule the MPCA exceeded its statutory authority.[10]

6. **[*14]** Plaintiff has not met its burden of proving that the MPCA's application of the wild rice sulfate rule conflicts with statutory authority or is otherwise not rationally related to the legislative goal of protecting the environment. MPCA's application of the wild rice sulfate rule is reasonably related to achieving the legitimate goal of protecting Minnesota's environment.

7. Minnesota's Class 4 waters, which encompass the sub-classification of Class 4A waters, are "waters of the state that are or may be used for any agricultural purposes, including stock watering and irrigation, or by waterfowl or other wildlife, and for which quality control is or may be necessary to protect terrestrial life and its habitat or the public health, safety, or welfare." Minn. R. 7050.0140, subp. 5 (2011).

8. Minnesota's Class 4A water quality standards are

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[9] *Mammenga v. Dep't of Human Services*, 442 N.W. 2d 786, 789 (Minn. 1989).

[10] *Mammenga v. Dep't of Human Services*, 442 N.W. 2d 786 (Minn. 1989); *Hirsch v. Bartley-Lindsay Co.*, 537 N.W.2d 480 (Minn. 1995).

intended to protect both naturally occurring vegetation grown in the waters themselves and cultivated crops in the area around the water. The MPCA's application of the wild rice sulfate standard to protect naturally growing wild rice in ambient waters of the state is legally valid because it is consistent with the plain language of the water quality standard. **[*15]** Minn. R. 7050.0224, subp. 2.

9. Under Minnesota law, "[t]he object of all interpretation and construction of laws is to ascertain and effectuate the intention of the legislature." Minn. Stat. § 645.16 (2010). Minnesota courts apply the provisions of chapter 645 to both statutes and administrative rules. The administrative and legislative records clearly demonstrate that the MPCA has always intended the wild rice sulfate rule to protect both cultivated and natural stands of wild rice. The agency's application of the rule to waters with natural stands of wild rice is legally valid because it is consistent with the administrative history and intention of the regulation.

10. The MPCA's application of the wild rice sulfate rule to protect waters with natural stands of wild rice is also consistent with a number of established legislative policies and statutory duties, among them the duty to ensure that the State of Minnesota maintains its responsibility to administer the federal Clean Water Act in Minnesota.[11]

11. In the 2011 special session, the legislature specifically directed the MPCA to adopt an amended rule which shall "address water quality standards for waters containing natural beds of wild rice, as well as for irrigation waters used for production of wild rice . . . ." Minn. Laws 2011 1 Sp. c. 2, art. 4, § 32 (a)(1). The MPCA's application of the wild rice rule to protect natural stands of wild rice is consistent with legislative policy that explicitly recognizes the importance of wild rice to the State of Minnesota.

12. The wild rice sulfate standard is a numeric standard set forth in Minn. R. 7050.0224, subp. 2. Minn. R. 7050.0224, subp.1 also includes a narrative standard that applies only to specifically identified wild rice waters. Minn. R. 7050.0470, subp. 1 (2011), in turn, specifically identifies [WR] the sub-set of wild rice waters in the Lake Superior watershed to which this narrative applies.

To the extent Plaintiff claims that the narrative wild rice standard does **[*17]** not identify the waters to which that narrative standard applies, the claim fails as a matter of law.

13. Under Minnesota law, "[a] statute that does not implicate First Amendment freedoms is facially void for vagueness only if it is vague in all its applications. Unless the statute proscribes no comprehensible course of conduct at all, it will be upheld against a facial challenge."[12]

14. The Plaintiff has not established that the wild rice sulfate rule is vague in all of its applications or that it proscribes no comprehensible course of conduct at all. The MPCA applied this rule in the Clay Boswell Permit and an independent hearing examiner supported the application of the rule in that case. The MPCA has recently applied the rule in the reissuance of the U.S. Steel Keewatin Taconite permit. U.S. Steel neither requested an administrative hearing nor challenged the permit in the Court of Appeals.

15. Under Minnesota law, a party challenging a law on constitutional grounds, including vagueness, bears a heavy burden **[*18]** of proof.[13] The Plaintiff

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[11] Minn. Stat. § 115.03, subd. 5 (2010) ("the agency shall have the authority to . . . establish and appl[y] rules . . . and permit conditions, consistent with and, therefore not less **[*16]** stringent than the provisions of the Federal Water Pollution Control Act, as amended, applicable to the participation by the State of Minnesota in the national pollutant discharge elimination system (NPDES)")

[12] *State v. Normandale Properties, Inc.*, 420 N.W.2d 259, 262 (Minn. Ct. App. 1988) (citing *Village of Hoffman Estates v. Flipside Hoffman Estates, Inc.*, 455 U.S. 489, 102 S.Ct. 1186, 1191, 71 L. Ed. 2d 362 (1982).

[13] "In attacking a rule on due process grounds, including a vagueness

must overcome every presumption of constitutionality and show that the wild rice sulfate standard is unconstitutionally vague as applied to Plaintiff's members. Plaintiff has not met this burden.

Sulfate Standard not Void for Vagueness

16. Contrary to Plaintiff's assertion, the fact that the wild rice sulfate standard does not include an explicit definition for the term "when the rice may be susceptible to damage by high sulfate levels" does not render the rule void as applied. The void for vagueness doctrine demands **[*19]** only that laws be drafted with "sufficient definiteness that ordinary people can understand what conduct is prohibited."[14] Even if a law speaks in "broad, flexible standards that require persons subject to a statute to exercise judgment," or requires persons to "rely on common sense and intelligence to determine whether their conduct complies with the law [it] does not render the law unconstitutionally vague."[15]

17. The civil, regulatory nature of the wild rice sulfate standard is subject to a "vagueness test" that is less strict than for criminal statutes. "To find a civil statute void for vagueness, the statute must be 'so vague and indefinite as really to be no rule or standard at all.'"[16] The challenged law must "define the forbidden or required act in terms so vague that individuals must guess at its meaning . . . ."[17] Put another way: "a statute will be upheld against a facial challenge unless [it] proscribes no comprehensible course of conduct at all".[18]

18. Civil laws regulating business are less likely to be void for vagueness than criminal laws "because businesses, which face economic demands to plan behavior carefully, can be expected to consult relevant legislation in advance of action. Indeed, the regulated enterprise may have the ability to clarify the meaning of the regulation by its own inquiry, or by resort to an administrative process."[19]

19. The application of the wild rice sulfate rule to Plaintiff in this case is not unconstitutionally vague under this standard. Plaintiff's members are not left to guess as to what conduct is prohibited or required under this rule.

20. The wild rice sulfate rule is an ambient water quality standard. As such, it describes the desired condition of Minnesota's waters, but is not a discharge standard and does not proscribe or prohibit conduct.[20] The only way that the MPCA can require or prohibit action based on the wild rice sulfate standard is through a permitting action.[21]

21. Before the MPCA issues a permit for a point source such as Plaintiff's members, it is legally required to publish a draft of the permit for public review and comment. Minn. R. 7001.0100 (2011).

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challenge, the challenger bears a heavy burden [cit. om.] The standard for determining vagueness is well-settled: [it is] void for vagueness if it fails to give a person of ordinary intelligence a reasonable opportunity to know what is prohibited or fails to provide sufficient standards for enforcement...The rule should be upheld unless the terms are so uncertain and indefinite that after exhausting all rules of construction it is impossible to ascertain legislative intent." *Minnesota Chamber of Commerce v. Minnesota Pollution Control Agency*, 469 N.W.2d 100, 107 (Mn.App. 1991).

[14] *State v. Romine*, 757 N.W.2d 884, 891 (Minn. Ct. App. 2008) (quoting *Kolender v. Lawson*, 461 U.S. 352, 103 S. Ct. 1855, 1858, 75 L. Ed. 2d 903 (1983)).

[15] *State v. Enyeart*, 676 N.W.2d 311, 321 (Minn. Ct. App. 2004).

[16] *Seniors Civil Liberties Ass'n v. Kemp*, 965 F.2d 1030, 1036 (11th Cir. 1992).

[17] *Humenansky v. Minn. Bd. of Med. Examiners*, 525 N.W.2d 559, 564 **[*20]** (citing Kolender v. Lawson, 461 U.S. 352, 103 S. Ct. 1855, 1858, 75 L. Ed. 2d 903 (1983).

[18] *State v. Normandale Properties, Inc.*, 420 N.W.2d 259, 262 (Minn. App 1988).

[19] *Village of Hoffman Estates*, 102 S.Ct. at 1193

[20] Minn. R. 7050.0224, subp. 2.

[21] See, for **[*21]** example., 40 C.F.R. § 122.44(d)(1) (2011) (requiring permitting authority to impose discharge limits in permits where evidence shows that discharge has reasonable potential to cause or contribute to a violation of a water quality standard in a receiving water); Minn. R. 7001.0150, subp. 2 (2011) (requiring MPCA issued permits to include terms necessary to achieve compliance with applicable state and federal law).

If Plaintiff's proposed permit includes a limit based on that rule, then Plaintiff's members have thirty days to review, comment on, and question that proposed limit. Any party who disagrees with the terms of a proposed MPCA permit has the right to request a contested case hearing before an administrative law judge to review and clarify the terms of the proposed permit. Minn. R. 7000.1800 (2011). Any party who is aggrieved by the agency's final decision in a permitting action has a right of certiorari review by the Court of Appeals. Minn. Stat. § 115.05, subd. 11 (2010). Plaintiff **[*22]** has not and cannot show that any of its members have been left guessing as to what conduct is required or prohibited. Plaintiff's void for vagueness challenge fails as a matter of law.

22. The term "when the rice may be susceptible to damage by high sulfate levels" is straightforward and can be understood using plain language. If wild rice is at a point in its life cycle when sulfates will damage the plant, then the receiving water must not exceed 10 mg/L. Because the rule can be applied based on its plain language, it is not void for vagueness. The goal of the law is to protect production of wild rice in Minnesota. In view of that goal it is reasonable to conclude that the standard applies at a point in the wild rice life cycle when sulfate is found to damage the plant. The rule is not void for vagueness.

"Bodies of Water" not Void for Vagueness

23. The fact that the MPCA does not specifically list every body of water to which the wild rice sulfate standard applies neither violates the Due Process clause of the Constitution nor does it exceed MPCA's statutory authority: neither the Constitution nor Minnesota or federal statutes require a state to list expressly every surface water to **[*23]** which a water quality standard applies. Such a requirement would be particularly absurd in a state such as Minnesota.[22]

24. Nor does the lack of a specific listing render the rule unconstitutionally vague. Plaintiff's members are not left guessing as to whether the wild rice sulfate standard applies to a particular water or as to what is required of them under the standard because the proposed permit details exactly what is required of Plaintiff's members.

25. The wild rice sulfate standard is likewise consistent with state and federal statutory requirements.

State Law

26. Under Minnesota law, the MPCA has the duty and the authority "to establish and alter such reasonable pollution standards for any waters of the state in relation to the public use to which they are or may be put as it shall deem necessary for the purposes of this chapter . . . ." Minn. Stat. § 115.03, subd. 1(c) (2010). Nothing in the statute suggests that the MPCA is required to list every single water to which a water quality standard applies. The **[*24]** legislature has given the MPCA broad discretion as to how to best structure Minnesota's water quality standards and has expressly recognized that it is proper for the MPCA to establish water quality standards for *groups* of waters instead of listing every single water to which a standard applies. The legislature has required the MPCA to "group the designated waters of the state into classes, and adopt classifications and standards of purity and quality therefore." Minn. Stat. § 115.44, subd. 2 (2010).

27. The MPCA's administrative rules likewise recognize the need for the agency to employ grouping in the establishment of water quality standards.[23] The assertion that Minnesota law requires a specific list of each water to which a water quality standard applies is without merit.

28. In adopting the wild rice sulfate standard, the MPCA established a group of waters to which the

[22] According to the Minnesota Legislative Manual (2011-2012) there are 11,842 lakes of more than 10 acres, 3 major river systems, and 6,564 (69,200 miles) rivers and streams.

[23] *See* Minn. R. 7050.0140, subp. 1 ("the waters of the state are grouped into one or more of the classes in subparts 2 to 8.")

standard applies. That group of waters consists of "waters used for production of wild rice." Minn. R. 7050.0224, subp. 2 (2011). This type of grouping is expressly authorized under Minnesota **[*25]** law.

29. As the EPA made clear in its May 13, 2011 letter to the Minnesota Legislature, the EPA has formally approved Minnesota's wild rice sulfate standard. When the EPA approves a state's water quality standard, it must determine whether the standard is "consistent with the requirements of the Clean Water Act." 40 C.F.R. § 131.5 (a)(1). In approving the wild rice sulfate standard, the EPA concluded that the standard is consistent with the federal Clean Water Act. Plaintiff's assertion that the wild rice sulfate standard is in any way inconsistent with the Clean Water Act lacks merit.

Federal Law

30. There is no requirement in federal law for the state to list expressly every single water to which a water quality standard applies in order for the standard to apply. On the contrary, the federal Clean Water Act allows for application of water quality standards to water bodies that are implicated without being expressly listed on an individual basis.

31. Minn. Laws 2011 1 Sp. c. 2, art. 4, § 32(a)(2) directs the MPCA to initiate rulemaking regarding identification of waters to which this wild rice sulfate standard applies. Plaintiff's assertion that state and federal law would require such **[*26]** a listing is inaccurate and would significantly impede the MPCA's ability to fulfill its statutory obligation to promulgate and enforce water quality standards for the State of Minnesota.

32. The Wild Rice Rule (Minn. R. 7050.0224, subp.2) is rationally related to both the stated policy and rationale of the rules and is not void for vagueness.

B. Count IV: Plaintiff's are not entitled to a Declaratory Judgment.

33. M.S. 555.02 specifies the actions a court may construe under the Declaratory Judgment Act:

> Any person...whose rights, status or other legal relations are affected by a statute, municipal ordinance, contract, or franchise may have determined any question of construction or validity arising [under the same] and obtain a declaration of rights, status or other legal relations thereunder.

34. This act is not an express independent source of jurisdiction[24]: it does not create an independent cause of action. Because Plaintiff's substantive claims all fail as a matter of law, Plaintiff's Declaratory Judgment Act claim must also be dismissed.

35. To the extent that Plaintiff's claims are **[*27]** based on permitting actions that the MPCA may take in the future, those claims are conjectural and not subject to court action at this time.[25]

36. Given the above, Plaintiff has adequate remedies at law and is not entitled to a declaratory judgment.

C. Request for Equitable Relief

37. Plaintiff has requested that the Court "preliminarily and permanently" enjoin the MPCA from imposing any of the sulfate discharge limitations discussed above. Case law addressing Minn.R.Civ. P. 65.02 (temporary injunctions) has established five factors determining whether such an injunction should be granted: a) the nature of the relationship; b) relative hardships; c) likelihood of success on the merits; d) public policy; and e) administrative burdens.[26]

38. Analyzed under those factors, Plaintiff's request

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[24] *Alliance for Metropolitan Stability v. Metropolitan Council*, 671 N.W.2d 905, 915 (Minn. App. 2003).

[25] Any such quasi-judicial action is reviewable via certiorari to the Court of Appeals under M.S. 115.05, subd. 11(2010).

[26] *Dahlberg Bros., Inc. v. Ford Motor Co.*, 272 Minn. 264, 137 N.W.2d 314 (1965).

should be denied. As with Minn. R. Civ.P.65.01, the threshold question is whether there is immediate and irreparable injury that constitutes a ground for the issuance of the injunction and whether that party **[*28]** does not have an adequate remedy at law.[27] The failure to meet this burden is, in and of itself, a sufficient basis on which to deny the relief.[28] In this case, each of Plaintiff's claims are based on actions that the MPCA allegedly *may* take in the context of permitting proceedings. Plaintiff has an adequate remedy at law for any MPCA permitting decision: the right to request a contested case hearing before an administrative law judge on any MPCA permitting matter,[29] and a statutory right of certiorari review of any final MPCA permitting decision before the Minnesota Court of Appeals.[30] Because Plaintiff clearly has adequate remedies at law in this case its request for equitable relief must be denied.

39. Analyzed under the *Dahlberg* factors, the Court reaches the same conclusion. In this case the determinative factors under *Dahlberg* are a) the likelihood of success on the merits (see discussion, *supra*;) and b) public policy[31] Balancing the relative hardships between **[*29]** the parties, the analysis also favors the Defendant. While complying with the rules may be more costly to the Plaintiff's members, the rationale for Defendant's action is clearly stated in Minn.R. 7050.0224, subp.1:

> "...The harvest and use of grains from this plant serve as a food source for wildlife and humans...the quality of these waters and aquatic habitat necessary to support the propagation and maintenance of wild rice plant species must not be materially impaired or degraded...

40. Plaintiff's argument that its members may have to take action to comply with the wild rice sulfate standard during the interim period in which the MPCA conducts the research necessary to amend the rule as directed by the Legislature is without merit. The Legislature has already addressed how the wild rice sulfate standard is to be applied during that interim period.[32]

For this Court to second-guess the Legislature's determination of how the standard should be applied while the standard is in the process of being amended is inappropriate. Plaintiff's request for injunctive relief **[*30]** should be denied.

NOW THEREFORE, IT IS HEREBY ORDERED:

1. The motion for summary judgment of Defendant MPCA and Defendant-Intervenor WaterLegacy's is granted in its entirety.

2. Plaintiff's motion for a "preliminary and permanent" injunction is denied.

2. Plaintiff's partial motion for summary judgment is denied in its entirety.

3. Plaintiff's Complaint is dismissed in its entirety with prejudice and on the merits.

10 May 2012

/s/ Margaret M. Marrinan

HON. MARGARET M. MARRINAN

JUDGE OF DISTRICT COURT

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[27] *Unlimited Horizon Mktg., Inc. v. Precision Hub, Inc.*, 533 N.W. 2d 63 (Minn. App. 1995).

[28] *Morse v. City of Waterville*, 458 N.W. 2d 728 (Minn. App. 1990).

[29] Minn. R. 7000.1800 (2011).

[30] Minn. Stat. § 115.05, subd. 11(1) (2010).

[31] See discussion supra at p. 3 regarding Minn.R. 7050.0186, M.S. 1.148, subd. 1.

[32] Minn. Laws. 2011 1 Sp. c. 2, art. 4, § 32 (e).

End of Document

May 1, 2013 Draft

Proposed 2013 Wild Rice/Sulfate Impaired Waters Assessment Approach

Assessment criteria for sulfate concentrations in wild-rice waters

Assessments will be based on median sulfate concentrations over the April through August critical season, taken from data sets that give unbiased representations of overall conditions during that period. Only waterbodies (as delimited by AUIDs, or assessment unit identification numbers) with at least ten sulfate measurements will be assessed. Data over the last ten years will be considered, although a known change in water quality conditions during those ten years may mean that only the more recent data is used for the assessment decision.

A waterbody will be considered to be impaired if it is determined to be a "water used for production of wild rice" and the median sulfate concentration is greater than the state water quality standard, as determined by a statistical test that is appropriate to the distribution of the data and at a 0.1 level of significance.

Waters to be evaluated during the 2013 wild rice/sulfate impaired waters assessments

The wild rice-based sulfate standard of 10 mg/L contained in Minn. R. 7050.0224, subpart 2 specifies that the standard is "applicable to water used for production of wild rice during periods when the rice may be susceptible to damage by high sulfate levels".

For the purpose of the 2013 wild rice/sulfate impaired waters assessments, a water body will be considered as a "water used for production of wild rice" through an evaluation process that parallels the current approach undertaken by MPCA staff when issuing discharge permits to waters containing wild rice stands. These wild rice stands can be existing stands in a waterbody or they can be previously documented stands present within a waterbody in the recent past dating back to November 28, 1975.

This case-by-case evaluation will consider the following in making the determination as to whether or not a waterbody will be part of the 2013 wild rice/sulfate assessment process:

- The waterbody meets the minimum sulfate data requirements outlined above; and
- The waterbody is listed in Appendix B of the February 15, 2008 Minnesota Department of Natural Resources report to the Minnesota Legislature titled *Natural Wild Rice in Minnesota* (MDNR 2008 report); or
- The waterbody has been identified and listed as a wild rice water by the 1854 Treaty Authority, or
- The waterbody is listed in the MDNR Zizania database as having wild rice identified within the surveyed portion of the lake or river system; or
- The waterbody was surveyed and wild rice stands were documented by NPDES/SDS permittees in connection with a pending discharge permit issuance or re-issuance; or
- The waterbody is identified as being associated with a MDNR aquatic plant management permit application for either the removal of wild rice plants or the introduction (planting) of wild rice; or
- Wild rice information that was submitted for a particular waterbody in response to the recent MPCA call for wild rice and sulfate data noticed in the April 1, 2013 *State Register* (37 SR 1438).

A general screening approach of the waters identified from the resource references noted above will include an evaluation of available wild rice acreage and density data. Wild rice stand acreage and density considerations will be an important consideration in leading to the draft listing of sulfate impaired waters used for the production of wild rice.

Wild Rice Standards Study Advisory Committee Meeting Summary and Follow-Up Items
MPCA Duluth Regional Office
May 1, 2013

Advisory Committee Attendees: Ricky Lien (for Ann Geisen), Nancy Schuldt, Paula Maccabee, Kurt Anderson, Joe Mayasich, Mike Robertson, Dave Skolansinski, David Smiga, Jennifer Engstrom, Rod Ustipak, Raymie Porter, Len Anderson, Robert Shimek, Anne Nelson, Rachel Walker, Darren Vogt, on phone: David Hatchett, Sara Barsel, Robin Richards, Steve Nyhus

MPCA staff: Shannon Lotthammer, Katrina Kessler, Pat Engelking, Gerald Blaha, Ed Swain, Phil Monson, Mark Tomasek, on phone: David Christopherson

Observers: Margaret Watkins, Bill LaTady, Tom Howes, Tom Thompson, Dorie Reisenweber, Peder Larson, Mike Hansel, Bob Tammen, Pat Tammen, Bruce Johnson, Dennis Szymialis, Carol Reschke, Wayne Dupuis, Lori Andresen

Agenda Item 1: Introductions

Agenda Item 2: Advisory Committee Updates

Mike Robertson gave a brief overview of hydroponics research that the Minnesota Chamber of Commerce is funding through Fort Environmental Laboratories in Oklahoma. A brief discussion followed including questions from the advisory committee about how the results would be used and how the agency might deal with conflicting results and the relative importance of the hydoponics work relative to field and mesocosm studies. Another attendee asked how the MPCA will consider various peer-reviewed and non peer-reviewed studies. Please send any comments or questions on the Fort Environmental Laboratories methods and information to Mike Robertson.

Rod Ustipak gave a brief update on the Twin Lakes wild rice work he has been involved with in 2012, which included efforts to lower water levels in that system last year.

Shannon Lotthammer mentioned that an article about the Wild Rice Standards Study appears in the May/June issue of the *Minnesota Conservation Volunteer*, which is reaching subscribers' mailboxes this week.

Agenda Item 3: Assessment Call for Data: Katrina Kessler from the MPCA gave a presentation outlining the process for the MPCA's upcoming assessment of wild rice and sulfate data for the impaired waters list. She also gave a brief overview of the draft assessment method and schedule for the process. Assessments for sulfate impairment of waters used for production of wild rice will be done on a case-by-case basis where sulfate data and wild rice information are available. Over the next month of two, the MPCA will be reviewing the data for quality assurance purposes. Discussion and comments from the advisory committee followed. Comments included:

- Question about why the median sulfate value is used when assessing the data and also why MPCA is using 0.1 for level of significance for the assessment. The MPCA followed up with Joe Mayasich about this comment and plans to document in writing the justification for the use of the 0.1 level of significant and associated confidence interval.
- Suggestion that phytoliths be added to the list of evidence of presence of wild rice in waters
- Suggestion that MPCA consider floristic quality assessments tools that are being developed for wetlands in the assessment process for sulfate impairment
- Questions and comments about the approach MPCA plans to take for the case-by-case determination of "water used for production of wild rice" determination .
- Question about how the MPCA addresses large waterbodies that have different characteristics within the overall waterbody (such as bays of lakes, large river reaches, etc. MPCA answered that large complex systems are often divided up for assessment purposes. The bays in Lake Minnetonka were mentioned as an example.
- Several questions and comments about identified window for sulfate data (April through August). Some advisory committee members thought this might exclude useful/applicable data.

- Suggestion that MPCA consider use of less than 10 data points for sulfate assessment.
- Question about how to let MPCA know about errors in the data mapping tool on the web site. MPCA said that any corrections/questions should be send to Gerald Blaha at gerald.blaha@state.mn.us or Katrina Kessler at Katrina.kessler@state.mn.us
- Question about how individuals could let the MPCA know about wild rice waters they are concerned about but may not have data for at this time.
- Members also asked why the MPCA is moving forward with assessment of the sulfate wild rice standard now, before the completion of the study? MPCA answered that this is a priority for EPA, and that we had many comments during the last impaired waters list comment period requesting us to assess for the existing sulfate wild rice standard.

Follow-up item #1: Katrina Kessler will forward information from EPA identifying sulfate/wild rice assessments for impaired waters as an EPA priority. Please see attached e-mail/file.

Follow-up item #2 (for advisory committee members): Any errors or questions that the Advisory Committee members or others find on the mapping tool should be brought to the MPCA's attention. Please send any corrections/questions should be send to Gerald Blaha at gerald.blaha@state.mn.us or Katrina Kessler at katrina.kessler@state.mn.us

Agenda Item 4: Study Status and 2013 Work Plan: Phil Monson and Ed Swain gave updates about the hydroponics studies and the 2013 field work. Phil indicated that the hydroponics researchers have found a PIPES buffer that allows them to maintain pH in the germination and juvenile seedling sulfate experiments, and that researchers are beginning method development for sulfide hydroponic experiments.

Ed then gave a brief update on the upcoming field work and noted that Amy Myrbo will be sampling 15-20 sites one time during the summer and another seven sites monthly. He showed a GIS map indicating the potential sites for intensive field monitoring. Ed noted that the MPCA would like to obtain more data from sites with greater than 10 ppm sulfate. One advisory committee noted that the St. Louis River estuary site was not indicated on the map, and Ed said that he would get that added. The MPCA would like feedback from the advisory committee on the candidate intensive sites (and any others that people might suggest) and for sites to visit once during the year.

Ed also talked about a high sulfate stream site with wild rice in North Dakota that the MPCA is considering sampling. The MPCA would like feedback about whether to sample this site or not.

The last two study topics, sediment incubation experiments and mesocosms, were not discussed at the meeting due to lack of time. They will be discussed at the next meeting.

Next steps: Shannon Lotthammer talked about scheduling another conference call (all advisory committee members) or meeting sometime in June to discuss the remaining items on the agenda. At that time, an update on the assessment process will also be provided. She also asked the advisory committee members to let Pat know if they felt the technical calls to be useful. Note a technical advisory call focused on hydroponics will also take place on May 23 from 2:30-4 p.m. Any advisory committee member is welcome to attend.

Wild Rice Standards Study Advisory Committee
June 11, 2013, MPCA St. Paul Offices
Meeting Summary

Advisory Committee attendees: Joe Mayasich, Kurt Anderson, Sara Barsel, Paula Maccabee, Nancy Schuldt, Darren Vogt, Ann Geisen, Raymie Porter, John Dockter, Kathryn Hoffman, Anne Nelson, Robin Richards, Bethel and Len Anderson, David Hatchett, Mike Robertson, David Smiga, Peder Larson (for David Smiga), Bob Shimek, Steve Nyhus

Others: Mike Hansel, Lloyd Grooms, Lori Andresen, Bob and Pat Tammen, Adam Lozeau

MPCA staff: Patricia Engelking, Shannon Lotthammer, Mark Tomasek, Ed Swain, Gerald Blaha, Phil Monson, Eric Alms

Agenda Item 1: Introductions and Meeting Goals

Shannon Lotthammer provided a review of the advisory committee purpose and meeting goals.

Agenda Item 2: Advisory Committee Updates

Nancy Schuldt announced that the Fond du Lac Band of Lake Superior Chippewa has received a National Environmental Information Exchange Network grant from EPA to develop a regional wild rice database. The three-year effort will begin this fall.

Paula Maccabee asked about the comments Water Legacy has submitted about the draft assessment process on the web. Mark Tomasek noted that the assessment process and comments would be discussed later in the meeting.

Agenda Item 3: Study Updates

- **Sediment incubation studies**—Ed Swain described the sediment incubation experiments that Nate Johnson is working on in his laboratory at UMD. The study is designed to explore whether sulfate in the overlying water penetrates into the sediment at winter and spring temperatures and if it is converted to sulfide. Sediment samples for this project were collected from two locations—the Partridge River north of Highway 110 above the confluence with Second Creek, and North Bay in the St. Louis River just west of Boy Scout Landing. The organic content of the two sites is different with the sediment from the St. Louis site having approximately ½ the organic content of sediment from the Partridge River site. The sediment incubation experiments are being conducted in triplicate at two different temperatures, with appropriate controls.

- **Field Survey**—Ed Swain described the planned sampling for 2013, indicating that the MPCA is now planning to sample 15 sites intensively three times during 2013 in June, July and August. An additional 10-20 sites will be sampled once in late summer/early fall. Ed noted that many of the sites sampled over the past two years are waters with low sulfate concentrations that successfully grow wild rice. Sampling this year will focus on obtaining data from higher sulfate systems that may or may not grow rice. The sampling will focus primarily on two areas where elevated sulfate has been observed/measured— the western and southwestern boundaries of wild rice in Minnesota and portions of the Iron Range.

  At two sites, Sandy Lake and Second Creek, porewater equilibrators (peepers) will also be deployed at least three times during the season to supplement the field water, sediment, and porewater sampling and analysis. The peepers will provide a profile of porewater chemistry at different depths in the sediment.

  - Advisory committee members had questions about which species of wild rice, *Zizania palustris* or *Zizania aquatica*, was present at the site at the Turtle River site in North Dakota. Ed Swain noted that

although the growth form looks different at the site in North Dakota, the wild rice seeds from this location were keyed out to be *Zizania palustris*.

- It was also suggested that the MPCA consider adding sites 32 (Padua Lake) and 36 (Raymond Lake) to the group of intensive sites. Raymond Lake had a successful wild rice restoration and Padua Lake did not. Another advisory committee member asked about Padua Lake, the site with unsuccessful restoration of wild rice. She suggested the MPCA try to learn why the wild rice restoration was unsuccessful as there could be many human impacts (ditching, tiling, irrigation, etc.) in this area of the state that could have affected the wild rice.
- Another committee member noted that the Geneva Lake sites had not had rice since the 1950s with the exception of one piece of one plant observed in 2002. It was noted that the land use in that area is heavily agricultural with extensive ditching and tiling.
- An advisory committee member asked if phytoliths would be measured in any of the sediment samples, and if the phytolith analysis could provide any sense of the abundance of wild rice as opposed to just indicating presence or absence. Ed Swain noted that there is budget to analyze 30 sites for *Zizania*-specific phytolith concentration in the sediment, which may be proportional to past wild rice abundance. Additional data collection may be collected during the 2013 field season to test the proportionality.
- Another advisory committee member suggested that the field crew be encouraged to take more extensive field notes. Ed noted that additional instructions about field notes has been provided to the field crew based on earlier Advisory Committee comments.

- **University of Minnesota-Duluth mesocosms (container experiments in 378 liter stock tanks)**—Ed Swain described the work that is underway at the UMD Research and Field Studies Station to determine responses of wild rice to a range of sulfate concentrations. The MPCA will be building on an experiment focusing on wild rice response to a range of sulfate concentrations that was begun in 2011. The experimental design uses a total of 30 polyethylene stock tanks (378 liter) divided into six replicate tanks per treatment with five treatment levels (control plus four sulfate levels). The four sulfate levels are 50, 100, 150 and 300 mg SO_4/Liter.

  Dr. Johnson will also be deploying two porewater equilibrators, known as peepers, in each of four tanks approximately monthly during the 2013 growing season. The purpose of the deployment is twofold: 1) to assess the porewater chemistry in each sulfate treatment over the growing season, and 2) to assess the ability of wild rice to release oxygen from the roots that decreases the concentration of sulfide in the porewater. The first task is assessed by deploying a peeper adjacent to growing wild rice plants. The second task is assessed by deploying a second peeper in the same tank in one end of the tank where plants have been purposefully not allowed to grow. In 2013 a Plexiglas vertical divider has been installed near one end of each tank, isolating about 10% of the container. No plants will be allowed to grow in that 10%, so that the effect of plants can be assessed. The Plexiglas divider extends only a few cm above the sediment, so that the overlying water is the same over each part of the tank. A diagram of the mesocosm tanks (not to scale) was put on the white board in the meeting room to indicate the placement of the divider, peepers, and stand pipe that each tank has to maintain water level.

  Advisory Committee members had several suggestions and requests for more information about the experiment design and mesocosm methods.

  - Questions were raised about the procedure to thin the wild rice plants in each mesocosm. An advisory committee member suggested that researchers try to minimize technician variation in the thinning process.

- Advisory committee members expressed a desire for more detail on the type and frequency of analyses at the mesocosms—what will be analyzed daily, weekly, monthly?
- One member suggested these experiments would usually be termed "microcosms" vs. "mesocosms."
- Advisory committee members asked if more than 5 plants could be selected for additional analysis. An advisory committee member asked for a description of the statistics relating to choosing the number of subsamples (5 out of 30).
- A suggestion was made to harvest the entire biomass of mesocosm experiments and to consider additional analyses on the harvested biomass at the end of the season. MPCA staff noted that the current draft SOP indicates that all the biomass above the sediment is harvested and weighed, and a subsample taken for further analysis.
- Suggestion that Dr. Myrbo's team retain seeds from wild rice plants at time of last sampling.
- Consider genetic analysis to ensure that inbreeding of wild rice has not taken place over time at the mesocosm site by comparing genetics of mesocosms to genetics of lakes.
- Advisory Committee members would like to see the levels of sulfate in the tanks prior to and after dosing with sulfate this year.
- Suggestion that placement of peepers in the mesocosms should follow a randomized procedure.

- **Hydroponics experiments**—Phil Monson reported on the status of the hydroponics experiments. Researchers have completed range finders for the sulfate germination and sulfate juvenile seedlings tests and are working on method development for the sulfide experiments. Final methods for the sulfate hydroponic experiments will be shared with the advisory committee before "definitive tests" are undertaken – the same will be true for the sulfide methods.
    - An advisory committee member commented that the juvenile seedling experiments would not have enough growth to be considered "floating leaf" stage. Members also reiterated the importance of documenting the definitions of the terminology used to describe various stages of plant growth.

Agenda Item 4: Assessment Process

Mark Tomasek reported on comments received on the draft assessment method for the wild rice sulfate standard and provided an update and timeline for the assessment process. The MPCA received comments from Water Legacy, the 1854 Treaty Authority, Minnesota Audubon and the Minnesota Chamber of Commerce on the draft assessment method. The MPCA has posted these comments on the wild rice web site and has made some changes to the assessment method based on the comments received. The comments and updated method can be found on the MPCA's wild rice web page under the assessment link (method development section: http://www.pca.state.mn.us/ktqh1083). Mark noted the assessment methods will continue to be revised as the agency moves through the assessment process, so that any refinements to the method that are made as the data are analyzed are fully documented. The data are currently undergoing quality assurance and quality control procedures and the assessment process, including professional judgment meetings, will take place in the summer and early fall. The draft impaired waters list will be put on public notice in the fall of 2013. At the time of public notice, there will be a formal public comment period.

Anyone who is interested in the impaired waters list can sign up on the MPCA's GovDelivery list that focuses on this topic. Please use the link below for the GovDelivery signup. It is a general signup. Anyone interested in the impaired waters list should click the EMAIL ALERTS link in the upper right corner of the page, provide their email address, click next and select TMDL (303d) Impaired Waters List. Other GovDelivery selections can be made here, as well.

GovDelivery Signup for the Impaired Waters List - http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/impaired-waters-list.html

Follow-up Items: Advisory committee members requested a copy of the 2012 assessment guidance document. This guidance document will be revised for the 2014 Impaired Waters List. This guidance document will include the methods for wild rice assessment.

Link to 2012 assessment guidance: http://www.pca.state.mn.us/index.php/view-document.html?gid=16988

Agenda Item 5: Next Steps

1. MPCA will get back to the Advisory Committee on changes made to the SOPs and site selection based on their specific suggestions and questions.
2. Final methods for sulfate germination and juvenile seedling methods will be completed and circulated. Draft methods for sulfide germination and juvenile seedling methods will be shared when available.
3. Another meeting will be planned for Duluth in August (to be completed before ricing season opens.)