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January 9, 2012

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Dear Ms. Foss, Mr. Clark, Mr. Colvin, Mr. Sedlacek:

I represent WaterLegacy, a non-profit organization dedicated to protecting Minnesota's water resources and the communities that depend on them.

We've had a chance to review the Minnesota Pollution Control Agency (MPCA) October 20, 2011 draft staff recommendation regarding "Waters Used for the Production of Wild Rice – Embarrass and Partridge Rivers," documentation prepared by Barr Engineering on behalf of PolyMet regarding wild rice surveys, comments submitted by the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) on November 17, 2011, and various applicable statutes and rules. We appreciate that the MPCA is consulting with tribal governments and that MPCA is continuing to research and discuss the appropriate designation of wild rice waters.

It is likely that tribal governments have additional information regarding wild rice on the Partridge and Embarrass Rivers. But, even based on the existing record from PolyMet's environmental review and NPDES tailings basin field studies, WaterLegacy believes that the MPCA staff recommendation of waters used for the production of wild rice is insufficiently conservative for the Partridge River and should include waters upstream of Colvin Creek. With respect to the Embarrass River, we believe that existing wild rice survey data and the historical presence of a wild rice farm at Unnamed Creek ("Rice Farm Creek" in the GLIFWC comment letter) conclusively demonstrate that there are waters used for the production of wild rice upstream of Embarrass Lake. The MPCA draft recommendation that Embarrass Lake be considered the "most-upstream portion of the Embarrass River system considered to be a water used for production of wild rice" must be revised based on the factual record and

applicable state and federal law.

Partridge River

The MPCA's October draft recommendation pertaining to the Partridge River was as follows:

Partridge River Watershed – Based on the information currently available MPCA staff have conservatively determined that the most-upstream portion of the Partridge River system considered to be a water used for production of wild rice is the 'upper' Partridge River from just downstream of its confluence with Colvin Creek to where it enters Colby Lake. Additionally, MPCA staff have determined that the 'lower' Partridge River between Colby Lake and the confluence with the St. Louis River is also considered a water used for production of wild rice.

WaterLegacy supports designation of the above waters as "waters used for the production of wild rice." Barr Engineering data confirms the presence of wild rice as far upstream as Colvin Creek and between Colby Lake and the confluence with the St. Louis River. (See, e.g., Barr, *NPDES Field Studies Report -Tailings Basin*, September 2011, Figure 6-1, Figure 6-2).

However, MPCA staff have recently confirmed that that wild rice surveys have been conducted on the Partridge River only as far upstream as Colvin Creek due to access and safety issues. (Katie Koelfgen email to Paula Maccabee, January 3, 2012). Thus, on the Partridge River, near the location of the proposed PolyMet mine site, wild rice has been found as far upstream as surveys have been conducted.

From WaterLegacy's perspective, it does not seem reasonable to assume that wild rice waters abruptly stop at the junction of the Partridge River and Colvin Creek. A more conservative approach would be to presume that wild rice continues to extend upstream to the proposed PolyMet mine site absent evidence that the Partridge River conditions change further upstream so that wild rice is no longer produced. As discussed below, since the legal protection for wild rice is based on wildlife uses as well as human harvest, the lack of human access to natural stands of wild rice should not exclude a designated use of waters for wild rice production.

Embarrass River

The MPCA's October draft recommendation pertaining to the Embarrass River was as follows:

Embarrass River Watershed – Based on the information currently available MPCA staff have conservatively determined that the most-upstream portion of the Embarrass River system considered to be a water used for production of wild rice is Embarrass Lake, a flowage lake of the Embarrass River. Staff determined that the limited number of individual wild rice plants at points in the Embarrass River upstream of Embarrass Lake is not sufficient to be used as a food source for wildlife or humans, and does not support a determination that those areas are a water used for the production of wild rice. Spring Mine Creek, Trimble Creek and the unnamed creek located near the former LTV tailings basin are determined not to be waters used for production of wild rice.

Setting the compliance point for the wild rice sulfate standard at Embarrass Lake is inconsistent with existing wild rice surveys. PolyMet's consultants found wild rice upstream of Embarrass Lake both at Hay Lake and just upstream of Hay Lake when they performed

surveys from 2009 to 2011. (*Ground Wild Rice Survey Results for Hay Lake (MNID 69435) & the Embarrass River Between Wynne Lake and State Highway 135, 2009-2011*, attached). According to the map's legend, wild rice was found at Hay Lake in both 2009 and 2011, with some rice also present in mud flats in 2010. At point 6 (24 miles) and point 8 (25.5 miles) upstream on the Embarrass River, wild rice was found every year from 2009 through 2011. These surveys support including Hay Lake and the Embarrass River upstream to at least mile 25.5 as waters used for the production of wild rice.

PolyMet's consultants also found wild rice upstream on the Embarrass River between Spring Mine Creek and Unnamed Creek/Rice Farm Creek, as reflected in Figure 6-2 of the NPDES Tailings Basin Field Study Report, cited previously, and documented on Figure 3 of the GLIFWC comment letter, which is attached.

MPCA's draft recommendation acknowledges that there was a paddy wild rice farm adjacent to Unnamed Creek/Rice Farm Creek and the Embarrass River as part of LTV wetland mitigation efforts from 2001 to 2003. The GLIFWC Figure 3 map shows the location of this agricultural use, and GLIFWC comments note that a Barr Engineering 1995 report on the LTV wetlands replacement plan stated that a wild rice farm operated at this location from 1957 until the operation went bankrupt in 1993.

Under federal and state law, it would be an abuse of discretion to place the compliance point for the wild rice sulfate standard as far downstream as Embarrass Lake. Production of wild rice is an "existing use" of the upper Embarrass River even if discharge from area mines and tailings basins may have diminished wild rice density and even though the wild rice farm documented by Barr and by the MPCA is no longer in operation.

Federal rules enacted pursuant to the Clean Water Act require that the wild rice sulfate standard be interpreted to preserve the use of waters for the production of wild rice if such use existed at any time on or after November 28, 1975. As stated in 40 C.F.R. §131.3(e), "Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards."

The wild rice farm at Unnamed Creek/Rice Farm Creek was clearly in operation on or after November 28, 1975, establishing that segment of the upper Embarrass River as waters used for the production of wild rice.

It is particularly inappropriate to exclude the Embarrass River upstream of Embarrass Lake since it is well known that this river segment has been impacted by sulfate discharge over the past three and a half decades during which degradation of uses has been legally proscribed. MPCA records reflect that the Embarrass River upstream of Embarrass Lake receives a surface water discharge containing sulfates from the LTVSMC Area 5 mine site at SD033 and groundwater flow containing sulfates from the LTVSMC tailings basin. Diminished density of natural wild rice is likely to have resulted from degradation due to these sulfate releases.

In addition, WaterLegacy is unaware of any legal or ecological basis for the MPCA draft proposal that the "limited number of individual plants" in upstream segments of the Embarrass River should exclude their consideration as waters used for the production of wild rice. Minnesota's sulfate standard states, "The numeric and narrative 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." Minn. R. 7050.0224, Subp. 1 (emphasis added). Minnesota's sulfate standard does not limit protection to wild rice that is of sufficient density to be used for human harvest, but explicitly includes wildlife uses.

A report issued by the Minnesota Department of Natural Resources in 2008 emphasizes the value of natural stands of wild rice for wildlife:

Martin and Uhler (1939) listed wild rice as the ninth most important source of food for ducks throughout the United States and Canada, and the third most important source of food for ducks in the eastern portions of the continent. Research conducted on the Chippewa National Forest found that natural wild rice was the most important food for mallards during the fall (Stoudt 1944). Although the value of wild rice to mallards, wood ducks, and ring-necked ducks is most commonly recognized, other ducks such as black ducks, pintail, teal, wigeon, redheads, and lesser scaup also use stands of wild rice (Rossman et al. 1982, Huseby 1997).

The stems of wild rice provide nesting material for such species as common loons, red-necked grebes, and muskrats; and critical brood cover for waterfowl. The entire wild rice plant provides food during the summer for herbivores such as Canada geese, trumpeter swans, muskrats, beaver, white-tailed deer, and moose (Martin et al. 1951, Tester 1995). In addition, rice worms and other insect larvae feed heavily on natural wild rice. These, in turn, provide a rich source of food for blackbirds, bobolinks, rails, and wrens. In the spring, decaying rice straw supports a diverse community of invertebrates and thus provides an important source of food for a variety of wetland wildlife including birds, small fish, and amphibians. Indeed, every stage of growth of natural wild rice provides food for wildlife (McAtee 1917, Stoudt 1944).

As a result, wild rice lakes and streams are breeding and nesting areas for many species. More than 17 species of wildlife listed in the MNDNR's Comprehensive Wildlife Conservation Strategy (2006) as "species of greatest conservation need" use wild rice lakes as habitat for reproduction or foraging (Henderson 1980, Martin et al. 1951). (MDNR, *Natural Wild Rice in Minnesota, A Wild Rice Study document submitted to the Minnesota Legislature by the Minnesota Department of Natural Resources*, February 15, 2008, pp. 7-8).

Minnesota's wild rice sulfate standard is also intended to prevent loss of genetic diversity among wild rice species. The Statement of Need and Reasonableness for the 1997 rule amendments that began the process of designating wild rice waters, stated, "It is the loss of genetic diversity that appears to be most problematic, not only from the standpoint of maintaining the natural stands, but also from its potential impact to the commercial wild rice production industry in the state." (*Statement of Need and Reasonableness - 1977, Amended Rules Governing Water Quality Standard for Protection of Quality and Purity, Minn. R. 7050.0180 . . 7050.0224, et al.* 1977, p. 23).

Naturalists have long recognized that smaller stands of wild rice may be instrumental in preserving genetic diversity. As wild rice expert John Moyle wrote in 1944, "The most distinct strains are found either in small isolated stands or in the large continuous stands of the general rice area; their natural development may be attributed to self-pollination over a long period of years." (John Moyle, *Wild Rice in Minnesota, Journal of Wildlife Management*, Vol. 8, No. 3 (1944), p. 181).

Based on wild rice surveys, the history of wild rice farm production, the use of natural wild rice for wildlife as well as for human harvest, the importance of preserving genetic diversity and of preserving designated uses from degradation, WaterLegacy respectfully requests that the MPCA revise its draft recommendations regarding waters used for the production of wild

rice on the Partridge and Embarrass Rivers. Since the Embarrass River is and will be impacted by sulfates in surface discharge and in groundwater flow from the tailings basin, it is appropriate to designate all segments used for the production of wild rice, rather than a single compliance point for sulfate limitations. WaterLegacy requests the following revisions:

- Absent data demonstrating that natural wild rice growth stops at some point on the segment of the Partridge River upstream of Colvin Creek, the segment of the Partridge River from Colvin Creek to the proposed PolyMet mine site should be designated as waters used for the production of wild rice;
- All of the following areas upstream of Embarrass Lake on the Embarrass River should be designated as waters used for the production of wild rice: Hay Lake, the segment of the Embarrass River upstream of Hay Lake to mile 25.5 and the area adjacent to the junction of the Embarrass River and Unnamed Creek/Rice Farm Creek.
- Additional investigation, including analysis of sediments, should be used to determine whether the segment of the Embarrass River from Unnamed Creek/Rice Farm Creek to Spring Mine Creek should also be designated as waters used for the production of wild rice.

Please feel free to contact me if you have any questions regarding the above information and requests. Please also keep WaterLegacy informed of any meetings or proposed changes to the MPCA's October draft recommendations regarding waters used for the production of wild rice in the Embarrass and Partridge Rivers.

Again, we appreciate the MPCA's ongoing consultation, research and discussion to ensure that the designation of waters used for the production of wild rice near the LTVSMC tailings basin and proposed PolyMet mine site is complete and accurate.

Sincerely yours,



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