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Re: NorthMet Project Draft Environmental Impact Statement (“EIS”)

Dear Mr. Arkley and Mr. Ahlness,

Please accept the following comments from the Center for Biological Diversity (“the Center”) regarding the proposed NorthMet mining project in northeastern Minnesota. The Center is a non-profit conservation organization with over 250,000 members and online activists, including hundreds of members in Minnesota. The Center has offices in a number of states, including an office in Duluth, Minnesota. The Center works to insure the long-term health and viability of animal and plant species across the United States and elsewhere. At the Center, we believe that the welfare of human beings is deeply linked to nature, and to the existence in our world of a vast diversity of wild animals and plants. Because diversity has intrinsic value, and because its loss impoverishes society, the Center works to secure a future for all species, great and small, hovering on the brink of extinction. The Center does so through science, law, and creative media, with a focus on protecting the lands, waters, and climate that species need to survive.

The Center has numerous members in the region who would be adversely affected by the proposed project. As proposed, the NorthMet mine would violate a number of environmental laws and regulations, including but not limited to the Endangered Species Act, state water quality standards and the Clean Water Act, laws and regulations intended to protect wetlands, the National Environmental Policy Act, the Superior National Forest Plan, and the Clean Air Act, and thus cannot be approved.

The Center supports and hereby incorporates by reference all comments submitted by the Tribal cooperating agencies, including those set forth in Appendix D to the Draft EIS, and within footnotes throughout Volume I of the Draft EIS.¹

¹ The Center also incorporates by reference the Draft EIS comments submitted by Minnesota Center for Environmental Advocacy, Friends of the Boundary Waters Wilderness, Save Lake Superior Association, the Indigenous Environmental Network, the Sierra Club, and WaterLegacy.

The Center also submits the following comments and concerns:

I. The Agencies Have Improperly Limited the Scope of the Environmental Analysis within the Draft EIS

The Council on Environmental Quality (“CEQ”) has promulgated regulations to implement the National Environmental Policy Act (“NEPA”), found at 40 C.F.R. Part 1500. The CEQ NEPA regulations are binding on all federal agencies. 40 C.F.R. § 1507.1. NEPA requires agencies to use the criteria for “scope” that is set forth in the CEQ regulations in order to determine “which proposal(s) shall be the subject of a particular statement.” 40 C.F.R. § 1502.4(a). Proposals which are related to each other closely enough to be, in effect, a single course of action, must be evaluated together in a single EIS. *Id.*

The CEQ NEPA regulations further define the proper scope of EISs, and mandate that connected, cumulative, and similar actions be assessed together in a single EIS. 40 C.F.R. § 1508.25. Actions are connected if they automatically trigger other actions which may require EISs, they cannot or will not proceed unless other actions are taken previously or simultaneously, or they are interdependent parts of a larger action and depend on the larger action for their justification. 40 C.F.R. § 1508.25(a)(1). Actions are cumulative if they will have cumulatively significant impacts. 40 C.F.R. § 1508.25(a)(2). And actions are similar if they have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography. 40 C.F.R. § 1508.25(a)(3).

According to the Draft EIS:

The Mine Site would be located at a previously unmined area in the Superior National Forest . . . The Mine Site is located on National Forest System lands; however, the mineral rights are privately held and under lease to PolyMet. It is the position of the United States that the mineral rights leased by PolyMet do not include the right to open pit mine the National Forest System land. . . The USFS and PolyMet are exploring the feasibility of a land exchange to consolidate the surface ownership and mineral rights to PolyMet and thereby remove all National Forest System lands from the proposed Project. The USFS will be initiating its own EIS to evaluate the proposed land exchange, while this NorthMet Project DEIS assumes the successful completion of a land exchange.

Draft EIS at S-1; *see also id.* at 1-3. From this description, there is no question that the proposed NorthMet mining project and the proposed land exchange are connected, cumulative, and similar actions that must be assessed together in a single EIS. 40 C.F.R. § 1508.25(a).

Because the mineral rights leased by PolyMet do not include the right to open pit mine the Superior National Forest lands, the proposed mine cannot proceed unless the

proposed land exchange occurs, meaning they are connected actions. 40 C.F.R. § 1508.25(a)(1); *Thomas v. Peterson*, 753 F.2d 754, 758-59 (9th Cir. 1985); *Save the Yaak Committee v. Block*, 840 F.2d 714, 719 (9th Cir. 1988) (the CEQ regulations require connected actions to be considered together in a single EIS). Moreover, the proposed NorthMet mine triggered the need for the proposed land exchange, and the proposed mine and land exchange are both interdependent parts of a larger action that depend on each other for their justification, further demonstrating that they are connected actions pursuant to the CEQ regulations. 40 C.F.R. § 1508.25(a)(1). Because there is a “clear nexus” between the two proposals, they must be considered together in a single EIS. *Save the Yaak Committee*, 840 F.2d at 720.

Indeed, EPA found it “difficult to consider the U.S. Forest Service (USFS) land exchange as a separate action,” since based on its own interpretation, “USFS maintains that a land sale or transfer must occur for the applicant to assess the mineral body, currently on public land.” July 31, 2009, EPA comments at 5. EPA thus questioned “how assessing the impacts of this connected action can be deferred to a separate analysis.” *Id.*

The proposed mine and proposed land exchange will also result in cumulatively significant impacts, meaning they are cumulative actions that again must be assessed together in a single EIS. *Id.* at § 1508.25(a)(2); *Thomas v. Peterson*, 753 F.2d at 759. And the proposed mine and proposed land exchange clearly share common timing and geography, again requiring their consideration and analysis in single EIS. *Id.* at § 1508.25(a)(3).

The agencies’ failure to consider the environmental consequences of the proposed mine and proposed land exchange together, in a single EIS, violates NEPA. 40 C.F.R. § 1508.25(a). The agencies must therefore issue a revised Draft EIS, for additional public and agency comments, in order to properly consider both of the related proposals in a single EIS.

II. The Draft EIS Fails to Adequately Explain How the Proposed Mine, Which Would Destroy and Adversely Modify Designated Critical Habitat, Would Not Violate the Endangered Species Act (“ESA”)

The Endangered Species Act (“ESA”) represents “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 180 (1978). “The plain intent of Congress in enacting this statute was to halt and reverse the trend towards species extinction, whatever the cost.” *Tennessee Valley Authority*, 437 U.S. at 184. In enacting the ESA, Congress spoke “in the plainest of words, making it abundantly clear that the balance has been struck in affording endangered species the highest of priorities, thereby adopting a policy which it described as ‘institutionalized caution.’” *Id.* at 194.

“One would be hard pressed to find a statutory provision whose terms were any plainer than those in [Section] 7 of the Endangered Species Act.” *Tennessee Valley Authority*, 437 U.S. at 173. “Its very words affirmatively command all federal agencies

‘to insure that actions *authorized, funded, or carried out* by them do not *jeopardize* the continued existence’ of an endangered species or ‘*result in the destructions or modification of habitat of such species.*’” *Id.*, (quoting 16 U.S.C. 1536) (emphasis in original). “This language admits of no exception.” *Id.*

Thus, pursuant to Section 7 of the ESA, each federal agency must consult with the U.S. Fish and Wildlife Service to insure that any proposed action is not likely to jeopardize the continued existence of any threatened or endangered species, or result in the destruction or adverse modification of the species’ critical habitat. 16 U.S.C. § 1536(a)(2). The ESA therefore mandates that “federal agencies take no action that will result in the ‘destruction or adverse modification’ of designated critical habitat.” *National Wildlife Federation v. National Marine Fisheries Service*, 524 F.3d 917, 933 (9th Cir. 2007) (quoting 16 U.S.C. 1536(a)(2)).

“Destruction or adverse modification” of critical habitat is defined as a direct or indirect alteration that appreciably diminishes the value of the critical habitat for both the survival and recovery of a listed species. 50 C.F.R. § 402.02. Such alterations include alterations that would adversely modify any of the physical or biological features that were the basis for determining the habitat to be critical. *Id.* The courts have found, however, that this definition “reads the ‘recovery’ goal out of the adverse modification inquiry, and that agencies must in fact consider impacts that appreciably diminish the value of critical habitat for *either* survival or recovery.” *National Wildlife Federation v. National Marine Fisheries Service*, 524 F.3d at 934; *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F.3d 1059, 1069-71 (9th Cir. 2004).

Thus, the agencies’ assessment of the impacts of a proposed action on a listed species’ critical habitat must include the project’s impact on the species’ habitat in terms of the species’ recovery as well as its survival, and how the action may impact the physical or biological features that were the basis for the species’ critical habitat determination. 50 C.F.R. § 402.02; *National Wildlife Federation*, 524 F.3d at 935; *Gifford Pinchot*, 378 F.3d at 1069. In addition, the agencies are not allowed to characterize as “insignificant” the potential impacts on a species’ critical habitat by considering only the broad scale or long-term impacts. *National Wildlife Federation*, 524 F.3d at 935; *Gifford Pinchot*, 378 F.3d at 1069.

For the proposed NorthMet mine, the agencies acknowledge in the Draft EIS that the proposed mine site is within formally designated critical habitat for both Canada lynx and gray wolves. DEIS, 4.4-2,3. More specifically, the mine site is located within “Lynx Analysis Unit” 12 on the Superior National Forest, and 94% of this Unit currently provides suitable lynx habitat. DEIS, 4.4-3. And the project is located within Zone 2 of the designated critical habitat for the gray wolf. DEIS, 4.4-3. Both lynx and wolves have been found within close proximity to the mine site. See Attachment A (GIS map); DEIS, 4.4-3, 4; DEIS, 4.4-10. Moreover, observations indicate the likelihood of a wolf pack whose territory includes the mine and plant sites. DEIS, 4.4-12.

The Draft EIS states that consultation between the Corps and U.S. Fish and Wildlife Service is “currently ongoing.” DEIS, 4.4-9. “Consultation will continue

throughout the EIS process and the results of the consultation process will be included in the FEIS.” *Id.* Pursuant to NEPA, the agencies should have waited to release the Draft EIS for public comment after ESA consultation was completed, to allow the concerned public to know the position of the expert wildlife agency regarding this proposed project prior to submitting comments. 40 C.F.R. §§ 1502.25(a), 1502.9(a).

The Draft EIS acknowledges that the proposed mine would “result in the destruction of approximately two square miles (1,454 acres) of suitable lynx habitat,” and the habitat loss “would result in fragmentation of lynx habitat in a portion of its current range.” DEIS, 4.4-10. This lynx habitat would be lost and fragmented “for the duration of the mine operations (over 20 years) and an additional 20 years or more after Closure before suitable habitat would again occur at the Mine Site.” *Id.*, 4.4-11. The Tribal cooperating agencies disagree with the Draft EIS’s statement that the effect on the statewide lynx populations would be insignificant, as the “analysis does not consider the possibility that the Mine Site might include critical components of lynx habitat present, such as den sites.” DEIS, 4.4-10, n. 3. The proposed project would also generate close to 4,000 miles of vehicle trips per day in the project area between the Mine and Plant sites, with an additional 4,000 miles per day within the Mine Site itself, which “could potentially result in vehicle collisions with lynx.” DEIS, 4.4-10.

Similarly, the proposed mine “would remove approximately two square miles (1,454 acres) of habitat” for gray wolves, and this habitat would be lost for over 40 years. DEIS, 4.4-12. Additionally, “[v]ehicle collisions are a major cause of wolf mortality,” and the “increased vehicular and rail traffic associated with the Project, including haul truck traffic within the Mine Site and truck and rail traffic between the Mine and Plant Sites could potentially result in vehicle collisions with wolves.” *Id.* Of the five main factors critical to the long-term survival of the wolf, the project would impact two: the availability of wild land and prey availability through the reduction in 1,454 acres of habitat at the mine site. *Id.*

In addition to the direct impacts to lynx and wolves, the proposed project would contribute to cumulative effects on wildlife, including the loss and fragmentation of habitat and encroachments into critical wildlife corridors. DEIS, 4.4-23. As discussed in the Draft EIS, there are only 13 remaining wildlife travel corridors connecting large roadless blocks of habitat across the heavily impacted iron range. DEIS, 4.4-30; see Attachment 7 (Emmons and Olivier Report, finding that the cumulative effects of past actions on wildlife travel across the 100-mile Iron Range has resulted in “thirteen relatively small identified travel corridors,” and that “[i]n light of this, future losses of any of these corridors may be considered significant”).

These remaining corridors range from less than 0.1 mile to over 3.2 miles wide. *Id.* Of these 13 remaining corridors, two would be adversely affected by the proposed NorthMet mine. DEIS, 4.4-31. As recognized by the Tribal cooperating agencies, “these impacts should be considered significant.” DEIS, 4.4-32, n. 10; *id.*, 4.4-34, n. 11. Moreover, “other reasonably foreseeable projects are anticipated to affect nine of the 13 wildlife travel corridors.” *Id.*, 4.4-32. And these impacts include the possible complete

loss of some of these remaining corridors. *Id.* at 4.4-32, 4.4-33. The Draft EIS recognizes that these impacts should be considered significant. *Id.*, at 4.4-32.

As recognized by the Draft EIS, mining impacts “represent a total habitat loss (i.e., wildlife use is essentially eliminated in the affected area for the duration of mine operations).” Draft EIS, 4.4-29. Such complete habitat loss of formally designated critical habitat for two listed species, for over 40 years, constitutes the destruction and adverse modification of critical habitat and is thus not allowed by the ESA. 16 U.S.C. § 1536(a)(2).

In addition, Section 9 of the ESA prohibits any person from “taking” a threatened or endangered species. 16 U.S.C. § 1538(a)(1)(B); 50 C.F.R. § 17.31(a); *Animal Protection Institute v. Holsten*, 541 F.Supp. 2d 1073, 1076 (D. Minn. 2008). The term “take” is defined broadly, and means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” *Animal Protection Institute*, 541 F.Supp. 2d at 1076 (quoting 16 U.S.C. § 1532 (19)). “Furthermore, a take need not be intentional.” *Id.* The proposed NorthMet mine would likely result in the “take” of lynx and wolves, through the destruction of their critical habitat, the anticipated vehicle collisions, and the continued loss and fragmentation of these species’ few remaining wildlife corridors in northeastern Minnesota, in violation of the ESA. 16 U.S.C. § 1538(a)(1)(B); 50 C.F.R. § 17.31(a).

III. The Draft EIS analysis of impacts to water quality, groundwater, and wetlands is inadequate under NEPA

See comments submitted by the Tribal cooperating agencies, as set forth in Appendix D to the Draft EIS, and also set forth within footnotes throughout Volume I of the Draft EIS, which are incorporated herein.

In addition to the comments submitted by the Tribal cooperating agencies regarding impacts to water quality, groundwater, and wetlands, the Draft EIS is also significantly deficient in addressing the cumulative effects of past mining in the Iron Range on these resources. Before permitting an entirely new form of mining in the state, the agencies must take a hard look at the past and ongoing legacy of water quality and wetlands impacts from the iron ore and taconite mining in northeastern Minnesota. The Draft EIS neglects to discuss the current and past pollution and wetlands impacts extending from Grand Rapids to Ely resulting from extensive mining, even though the proposed NorthMet mine would be located within this same, already polluted region.

More specifically, the Draft EIS is inadequate in its discussion, analysis, and disclosure of the ongoing pollution that is already occurring at the LTV site where the NorthMet mine is proposed. As acknowledged in the Draft EIS, surface seeps have been identified on the south, west, and north sides of the LTV tailings basin, which is proposed to again be used by NorthMet. DEIS, 4.1-7. “In addition to these visible surface seeps, groundwater flows out from beneath the Tailings Basin into the surrounding unconsolidated deposits to the south, west, and north.” *Id.* The current

groundwater seepage from the LTV tailings basin north towards the Embarrass River already exceeds the aquifer flux capacity, which has inundated wetlands immediately downgradient of the tailings basin. *Id.*; see also DEIS, 4.1-29 (stating that the “existing Tailings Basin is unlined and the perimeter embankments do not have a clay core or cutoff, which allowed for both surface seepage through the embankment and groundwater seepage under the embankment”).

As explained by the Tribal cooperating agencies, the existing LTV tailings are already contributing substantially to the level of pollutants observed in the groundwater, and it is simply illogical for the agencies to assume that additional seepage of water created by the NorthMet mine would somehow be cleaner than the existing seepage that is currently passing through the LTV tailings. DEIS, 4.1-14 n. 5. The Center agrees with the Tribal cooperating agencies that it is “unclear how the addition of mine waste to the basins would cause seepage water quality to improve.” *Id.* Wishful thinking is no substitute to the hard look required by NEPA.

Similarly, EPA “remains concerned” about information gaps regarding the possible impacts to groundwater from portions of the former LTV Mine, particularly (but not exclusively) the tailings basin.” July 31, 2009 EPA comments at 4. EPA is concerned that the proposal “would perpetuate seepage from the tailings basin, which could introduce contaminated or high sulfate groundwater into the receiving surface water bodies. *Id.* EPA thus recommends “that the DEIS thoroughly evaluate the benefits of a geomembrane cover to the tailings basin, insofar as the applicant’s analysis has not established that it is infeasible, only that it would have higher costs.” *Id.* In light of the ongoing pollution and high likelihood of additional pollution at this site, this issue needs far more detailed discussion within the EIS.

The Draft EIS is also seriously deficient in failing to analyze the impacts of past iron ore and taconite mining in this region on sulfate levels and mercury pollution, including the resulting impacts to fish and wild rice. The very purpose of an EIS is to inform the public and the decision maker in order to insure better decisionmaking for projects that may affect the environment. These purposes cannot be fulfilled until there is a detailed, objective analysis of the past and ongoing impacts of past mining in this region on sulfates and mercury, prior to considering a new wave of future mining in the region. This is especially critical due to the fact that streams in the project area and downstream are already acknowledged to be substantially impaired due to current mercury pollution. While it is easy to blame mercury problems on other states and regions, it is not simply a coincidence that areas downstream from the iron range have considerably higher mercury and sulfate levels than prior to the onset of decades of mining in this region.

The Draft EIS analysis for mercury and sulfates is also deficient in failing to consider and include the related impacts that would be caused by destroying hundreds of acres of peat bogs and wetlands, which are known to sequester mercury, and which would further release mercury into the environment, streams and waterbodies.

Similarly, the Draft EIS analysis for mercury and sulfates must also factor in the related impacts and contributions that would be created by the predicted water level fluctuations, which may be another major source of methyl mercury.

Additionally, the Draft EIS cumulative effects analysis is deficient in failing to discuss or disclose the considerable and serious water pollution that would occur if a series of copper-nickel mines are approved in the state, as currently anticipated.

As commented by the Tribal cooperating agencies, the Draft EIS also fails to demonstrate that perpetual water treatment would not be required at the mine site. DEIS, 4.1-55. The agencies cannot simply assume that PolyMet's estimation of 34 years for water treatment is correct. *Id.* If, as the Tribal cooperating agencies predict and other similar mines have shown, water treatment is likely to be necessary in perpetuity – for thousands of years (DEIS, 4.1-56 n. 15-16) – this obviously is a critically important factor for calculating financial assurance and insuring there will be no long-term legacy pollution resulting from this proposal. *See* DEIS, 4.1-112, n. 32 (Tribal cooperating agencies stating that a wastewater treatment facility “would need to operate for a minimum of 2000 years in order to treat leachate from the stockpiles”); DEIS, 4.1-113, n. 33 (stating that primary water treatment “would need to continue for thousands of years,” which “does not meet the Minnesota goal for maintenance free closure”).

The Draft EIS is also inadequate in its analysis of potential releases of mercury, which should be a primary issue of detailed analysis due to the already high levels of mercury in surrounding waterbodies. For instance, both during and after mining, stockpile leakage containing mercury will discharge to groundwater in very close proximity to the Partridge River. There will likely be additional discharge and release of mercury from the tailings basin into groundwater and surface waters. The Draft EIS fails to provide a sufficient, quantitative, and cumulative analysis of the likely discharge of mercury to all surface waters in and downstream from the project area, both during and after the proposed mining.

Regarding wetlands, in addition to the issues discussed below in the context of Section 404 of the CWA, the Draft EIS cumulative effects analysis is inadequate. The agencies cannot ignore the substantial impacts to wetlands resulting from taconite mining in this region. As explained by the Tribal cooperating agencies:

At a regional scale, Iron Range taconite mining has impacted wetlands through direct wetland fill as well as indirect impacts due to air deposition of mine related contaminants, water quality degradation, and the flooding/de-watering of wetlands which lead to changes in wetland functional values. There are two additional geographic scales at which wetland cumulative impacts should be characterized:

St. Louis River Watershed. The Fond du Lac band of Lake Superior Chippewa has identified this watershed as an area of concern. The cumulative impact analysis should quantitatively characterize the following:

1. The additive effect of PolyMet related air and water emissions to the Partridge and Embarrass River watershed wetlands and their impact on water quality of the St. Louis River.
2. The loss of wetlands and changes in wetland functional values in the St. Louis River watershed during the 3 timeframes, including a characterization of the potential for future mining impacts and the long-term maintenance requirements of the PolyMet mine as currently proposed.

1859 Ceded Territory. The Fond du Lac, Grand Portage, and Bios Forte tribes retains treaty guaranteed rights to harvest natural resources within the 1859 ceded territory. The cumulative impact analysis should quantitatively characterize the following:

1. The additive effect of PolyMet related air and water emissions to the wetlands of the 1859 ceded territory.
2. The loss of wetlands and changes in wetland functional values in the 1859 ceded territory during the 3 timeframes.
3. Loss of tribal access to wetlands in the 1854 ceded territory due to either the changes documented in 2. above, or due to mitigation of wetland impacts occurring outside of the ceded territory.

DEIS, 4.2-43, n. 38.

Moreover, as with numerous other issues, the Draft EIS analysis of wetlands impacts is inadequate because much of the work and analysis is deferred until later. As commented by EPA, “the current mitigation options – two restoration sites in Aitkin and Pine Counties and on-site post-closure locations – compensate for only 68% of projected impacts.” July 31, 2009, EPA Comments, p. 1. While the Draft EIS “states that the rest of the uncompensated wetlands would be addressed as permit conditions,” EPA requested that all mitigation be included within the Draft EIS, prior to permitting. *Id.* This is indeed required by NEPA, both to allow an accurate assessment of wetland impacts, and to allow the public to be meaningfully involved in commenting on this significant issue of concern for the proposed action.

IV. The DEIS Fails to Adequately Explain How the Proposed Mining Project Would Not Violate the Clean Water Act (“CWA”)

The CWA is designed to “restore and maintain the chemical, physical and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). The goal of the CWA is that the discharge of pollutants into navigable waters be eliminated, and “it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited.” *Id.* Section 301 of the CWA prohibits the discharge of any pollutant into waters of the United States, except as provided by specific statutory authority. *Id.* § 1311. The CWA and its implementing regulations define “waters of the United States” to include wetlands and riparian habitats adjacent to waters of the United States. *Id.* § 1362(7); 33 C.F.R. § 328.3(b). “Pollutant” is defined to include dredged or fill material. 33 U.S.C. § 1362(6). Any applicant for a federal permit to conduct any activity which may result in the discharge into the navigable waters must provide the permitting agency with a

certification from the State that any such discharge will comply with the CWA and state water quality standards. *Id.* § 1341. In addition, the CWA requires federal agencies to comply with state water quality standards. *Id.* § 1323(a); *Northwest Indian Cemetery Protective Ass'n v. Peterson*, 795 F.2d 688, 697 (9th Cir. 1986).

A. Section 404 of the Clean Water Act

Section 404 of the CWA regulates the discharge fill material into waters of the United States. 33 U.S.C. § 1344(e). The Secretary of the Army, acting through the Corps, may issue permits for such activities. *Id.* The Corps has adopted regulations to implement this permitting process, known as the "public interest" factors. 33 C.F.R. §§ 320 *et seq.* In addition, the EPA promulgated regulations, known as the "404(b)(1) Guidelines," to eliminate unnecessary environmental impacts. 33 U.S.C. § 1344(b)(1); 40 C.F.R. § 230. The Corps must review all proposed section 404 permits under both the Corps' public interest factors and EPA's 404(b)(1) guidelines. 33 C.F.R. § 320.2(f). The Corps may issue individual and general permits under section 404 of the CWA. 33 U.S.C. § 1344(a) & (e).

Section 404 of the CWA prohibits the filling or dredging of wetlands without first receiving a § 404(b) permit from the U.S. Army Corps of Engineers. 33 U.S.C. § 1344 (a), (d). The CWA and its implementing regulations "express a strong preference for wetland protection." *National Wildlife Federation v. Whistler*, 27 F.3d 1341, 1344 (8th Cir. 1994). A Section 404 permit may not be issued if (i) there is a practicable alternative which would have less adverse impact and does not have other significant adverse environmental consequences, (ii) the discharge causes or contributes to violations of any applicable state water quality standards, (iii) the discharge would result in the likely destruction or adverse modification of critical habitat, (iv) the discharge will cause or contribute to significant degradation of waters of the United States, (v) the discharge does not include all appropriate and practicable measures to minimize potential harm, or (vi) there does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the Corps' Guidelines for permit issuance. 40 C.F.R. § 230.10-12; *see Bering Strait Citizens for Responsible Resource Dev. v. U.S. Army Corps of Engineers*, 524 F.3d 938, 946-47 (9th Cir. 2008).

For the "practicable alternative" requirement, the Corps must follow a specific two step procedure. First, a correct statement of the proposed project's "basic purpose" is necessary. *See* 40 C.F.R. § 230.10(a)(3). The Corps is to define the proposed project's basic purpose. *See* 33 C.F.R. Part 325, App. B(9)(b)(4). Second, after the Corps defines the basic purpose of the project, it must determine whether that basic purpose is "water dependent." *See* 40 C.F.R. § 230.10(a)(3). As one example, a gold mining project located in a watershed is not considered water dependant. *See Bering Strait*, 524 F.3d at 947.

"[I]f a dredge or fill permit application does not concern a water-dependent project, the Corps assumes that practicable alternatives exist unless the applicant 'clearly demonstrated otherwise.'" *National Wildlife Federation*, 27 F.3d at 1344 (quoting 40 C.F.R. § 230.10(a)(3); *Resource Inv's, Inc. v. United States Army Corps of Eng'rs*, 151 F.3d 1162, 1167 (9th Cir. 1998). "This presumption of practicable

alternatives 'is very strong.'" *National Wildlife Federation*, 27 F.3d at 1344 (quoting *Buttry v. United States*, 690 F.2d 1170, 1180 (5th Cir. 1982)) (emphasis in original). "Practicable" is defined at 40 C.F.R. § 230.10(a)(2) as "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." When this presumption applies, the applicant must rebut the presumption by clearly demonstrating that a practicable alternative is not available, and the Corps presumes that all practicable alternatives that do not involve the discharge into a wetland have a less adverse environmental impact. 40 C.F.R. § 230.10(a)(3). The permit applicant must provide detailed, clear and convincing information proving that an alternative will less adverse impacts is impracticable. *Greater Yellowstone Coalition v. Flowers*, 359 F.3d 1257, 1269 (10th Cir. 2004).

In addition, a permit may not be issued "unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem." 40 C.F.R. § 230.10(d).

Furthermore, state regulations require that the quality of wetlands must be maintained to permit the 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. Minn. Rule 7050.0186(1). Wetland conditions must be protected to prevent significant adverse impacts to the designated beneficial uses, and the nondegradation provisions apply to wetlands. *Id.* 7050.0186(1)(b).

For wetlands mitigation, the first priority is to avoid the impact altogether; the second priority is to minimize the impact by limiting the degree to magnitude of the action; the third priority is to mitigate unavoidable impacts by compensation, with the first priority on the restoration of previously diminished wetlands and second priority on the creation of new wetlands. *Id.* 7050.0186(2).

No person may cause or allow a physical alteration of a wetland which has the potential for a significant adverse impact on one or more of its designated uses, unless there is not a prudent and feasible alternative. *Id.* 7050.0186(4). Prudent and feasible alternatives that do not involve wetlands are presumed to be available unless clearly demonstrated otherwise by the permit applicant. *Id.* If no prudent or feasible alternative is available for avoidance, the potential significant adverse impacts to wetlands must be minimized. *Id.* The permit applicant must also provide compensatory mitigation for unavoidable wetlands impacts. *Id.* 7050.0186(6). If compensatory mitigation is accomplished by restoration or creation, the replacement wetland must be of the same type and in the same watershed as the impacted wetland, to the extent prudent and feasible. *Id.* Compensatory mitigation must be completed before or concurrent with the actual physical alteration of the wetland affected by the proposed project to the extent prudent and feasible. *Id.*

For the proposed NorthMet mine, according to the Draft EIS, there are a total of 76 wetlands located within the Mine Site comprising 1,302 total acres. DEIS, 4.2-4. There are an additional 57 acres in 30 wetlands along the transportation corridor. *Id.*

As explained by the Tribal cooperating agencies, however, the amount of wetlands that are impacted, as set forth in the Draft EIS, is far less than the actual amount of wetlands that are likely to be adversely affected by the proposed mine. Draft EIS, 4.2-2, n. 3.

Because no initial determination of the Project's area of influence (AOI) on wetlands was made, the site field surveys of wetland and other vegetation were limited to little more than the area within the Project fence. The existing characterization of wetland and other vegetation does not cover even one-half the area that might reasonably be expected to be impacted by disruption of the existing hydrology. Around the tailings basin virtually no wetland delineation has taken place although wetland impacts from inundation are likely to occur. The Army Corps is developing a workplan to assess impacts to these additional wetlands but this workplan has not been finalized or implemented. Given the importance of this work in assessing potentially significant impacts to wetlands, it is the position of the tribal cooperating agencies that this work should be included in the DEIS to allow for a full public review.

Id.

According to the Draft EIS, the proposed mine would directly impact 854.2 acres of wetlands. DEIS, 4.2-9. This includes 55 wetlands, totaling 804.3 acres, at the mine site. *Id.* "At the Mine Site overall, approximately 99 percent of the directly impacted wetlands are rated as high quality wetlands." DEIS, 4.2-16. Additionally, according to the Draft EIS, "direct wetland impacts at the Tailings Basin would total approximately 39.4 acres," and "[t]he treated water pipeline corridor and improvements to Dunka Road would require that approximately 10.2 acres of wetlands be directly impacted by construction involving 10 wetlands." DEIS, 4.2-17. The Draft EIS also states that there would be 667.9 acres of "indirect wetlands impacts," for a "total predicted impact of 1,522.1 acres." DEIS, 4.2-24.

The Center agrees with the Tribal cooperating agencies that "the work needed to properly assess indirect wetland impacts at the mine site and at the plant site has not been completed," and that this work should be completed and presented to the public within a supplemental Draft EIS. DEIS, 4.2-17, n. 16. Moreover, as recognized by the Tribal cooperating agencies, there is no data based evidence or analysis to support the Draft EIS conclusion that wetlands would not be affected by mine related water quality changes. DEIS, 4.2-19; *see* 40 C.F.R. 1502.24 (requiring federal agencies to insure the scientific integrity of the discussions and analyses in an EIS). As further set forth in comments by the Tribal cooperating agencies,

Tribal cooperating agencies have suggested a more conventional method for indirect wetland impact estimation to the lead agencies (Methods for evaluating indirect hydrologic impacts to wetlands, March 26, 2009). This method could be applied at both the mine site and the plant site. The method proposed by tribal cooperating agencies was developed by a consultant for the Army Corps for use in another sulfide mine project EIS

(Crandon Mine Project Environmental Impact Statement: Wetlands Technical Memorandum, 2003). In addition to having been developed by the Army Corps, this method has been presented by tribal technical staff at professional conferences (Society of Wetland Scientists Conference, 2009 and 55th Annual Meeting of the Institute of Lake Superior Geology, 2009). Tribal cooperating agencies do not agree that the unconventional method described above can produce defensible results for indirect hydrologic impacts to wetlands. A more robust method should be used and the analysis presented in the DEIS so the public can review a science based assessment of potential impacts.

DEIS, 4.2-22, n. 27.

The Draft EIS fails to demonstrate that there is no practicable alternative which would have less adverse impact and does not have other significant adverse environmental consequences. The proposed mine is clearly not a “water-dependent project,” and thus the Corps must assume that practicable alternatives exist unless the applicant clearly demonstrates otherwise. *National Wildlife Federation*, 27 F.3d at 1344 (quoting 40 C.F.R. § 230.10(a)(3); *see also* 7050.0186(4) (prudent and feasible alternatives that do not involve wetlands are presumed to be available unless clearly demonstrated otherwise by the permit applicant). “This presumption of practicable alternatives ‘is very strong.’” *National Wildlife Federation*, 27 F.3d at 1344. The Draft EIS falls far short in demonstrating that there are no practicable alternatives that would have less severe impacts to wetlands. 40 C.F.R. § 230.10(a). As commented by the Tribal cooperating agencies, “[o]ther alternatives that were not considered in the DEIS (e.g. underground mining) would pose less harm to high quality wetlands, and may be less damaging to aquatic resources.” DEIS, 4.2-25, n. 33; *see also* DEIS, 4.2-25, 26 (finding that Mine Site and Tailings Basin alternatives would reduce impacts to wetlands).

The proposed mine will cause and contribute to violations of state water quality standards, and therefore a Section 404 permit cannot be issued. 40 C.F.R. § 230.10(b)(1); *see also, id.* § 230.10(c) (not allowing permit to be issued if the proposal “will cause or contribute to significant degradation of waters of the United States”). As explained below in more detail, the Draft EIS acknowledges the following:

West Pit overflow is predicted to “initially” exceed water quality standards. DEIS, S-8. Modeling predicts “that three parameters (i.e., arsenic, cobalt, and selenium) would exceed surface water quality standards when the West Pit overflows” and an “uncertainty analysis” “predicted exceedances of surface water standards for cobalt, copper, and nickel.” DEIS, 4.1-113. “The modeling results suggest that perhaps as many as five parameters (i.e., arsenic, cobalt, copper, nickel, and selenium) could exceed surface water quality standards, in addition to the relatively high sulfate concentrations.” *Id.*

Groundwater seepage at the tailings basin would not be recovered and would eventually impact surface water quality in the Embarrass River.

DEIS, 4.1-117-18. Modeling predicts that the proposed mine “would increase sulfate concentrations” to as high as 146 mg/L during low flow conditions. DEIS, 4.1-120.

Wild rice grows on the lower Partridge River, and therefore the wild rice sulfate water quality standard applies; and the proposed PolyMet discharge would not meet this standard. DEIS, 4.1-187, n. 80.

The proposed project, in combination with other past, present, and reasonable foreseeable future projects “have resulted in a significant increase in sulfate concentrations from baseline conditions of approximately 5 mg/L to the existing concentration of 149 mg/L . . . , which is expected to increase further as a result of the NorthMet and Mesabi Nugget Phase II projects.” DEIS, 4.1-189.

Sulfate concentrations in the St. Louis River are sometimes elevated due, most likely, to mining related sulfate releases. DEIS, 4.1-194. Moreover, “[t]he activities included in this cumulative effects assessment, which include several mining projects, have the potential to increase sulfate concentrations.” *Id.*

In addition, EPA’s comments indicate water quality standard violations for aluminum in the Embarrass River and Colby Lake. July 31, 2009 EPA comments at 3. This includes violations that could impact the drinking water supply of Hoyt Lakes. *Id.*

See also Table 4.1-68, DEIS, 4.1-129.

As explained above, the proposed mine would also directly result in the destruction and adverse modification of critical habitat for Canada lynx and gray wolves, and therefore a Section 404 permit cannot be issued. 40 C.F.R. § 230.10(b)(3).

The proposed mine does not include all appropriate and practicable measures to minimize potential harm, and therefore a Section 404 permit cannot be issued. 40 C.F.R. § 230.10(d).

The Draft EIS fails to provide sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the Corps’ Guidelines for permit issuance, and therefore a Section 404 permit cannot be issued. In fact, the agencies admit within the Draft EIS that “[r]elatively high sulfate concentrations in seepage from the Tailings Basin would be released to wetlands north of the Tailings Basin and lakes downstream on the Embarrass River that represent ‘high risk situations’ for mercury methylation,” and there is “uncertainty as to whether the West Pit overflow would meet the Lake Superior mercury standard.” DEIS, S-9; *see also* DEIS, 4.1-124 (stating “there is some uncertainty as to whether the West Pit overflow would meet the Great Lakes Initiative standard for mercury and additional analysis of this issue is recommended”); DEIS, 4.2-194 (“[i]t is unclear to what extent increased sulfate loadings may have on mercury methylation within the downgradient wetlands and downstream lakes,” and the project “may contribute to cumulative effects on methylmercury concentrations in downstream lakes that are already on the 303(d) list”).

In addition, as stated, the permit applicant must also provide compensatory mitigation for unavoidable wetlands impacts, and if compensatory mitigation is accomplished by restoration or creation, the replacement wetland must be of the same type and in the same watershed as the impacted wetland, to the extent prudent and feasible. Minn. R. 7050.0186(6). For the proposed project, nearly all wetland compensation would occur *outside* of the St. Louis River watershed. DEIS, 4.2-36, 37. The applicant and agencies, however, have failed to sufficiently demonstrate that replacement wetlands of the same type and in the same watershed as the impacted wetlands is not prudent or feasible. Federal and state wetland mitigation requirements are clear that the preference for mitigation is within the same watershed where the impacts will occur, and it is not simply up to the permittee to decide whether opportunities within the watershed would be too expensive. The Corps and DNR must require that PolyMet restore wetlands within the St. Louis River watershed if an appropriate location can be found, regardless of the added cost to the mining proponent.

Additionally, just because the amount of wetlands that would be affected by the project proposal is so large should of course not mean that the permittee can look outside of the watershed for the required mitigation. The opposite should be true – that the larger the amount of wetlands to be impacted, the more important it is for the project proponent to mitigate the loss within the same watershed.

Moreover, there is no assurance that the wetlands to be restored at the Aitkin and Hinckley sites are of the same quality of the wetlands that would be destroyed at the mine site, as required. Because the proposed Aitkin and Hinckley sites are located so far away and to the south, these restored wetlands would not provide the same habitat that would be lost for wildlife species such as moose, lynx, wolves and other species that are not found that far to the south.

In addition, the amounts of wetlands that are proposed to be created or restored falls far short of the amount necessary to compensate for the wetlands that would be directly and indirectly affected by the proposed project. The Draft EIS claim that additional compensatory mitigation would be addressed later fails to comply with NEPA. 40 C.F.R. 1500.1(b) (“NEPA procedures must insure that environmental information is available to public officials *and citizens* before decisions are made and before actions are taken) (emphasis added); see also DEIS, 4.2-39 n. 37 (stating that “unless the mitigation for the additional 475 wetland acres is identified in the DEIS, or there is a detailed statement of how the permit conditions would address the needed acres, the impacts must be considered unmitigated for purposes of the DEIS”).

The Draft EIS also fails to comply with NEPA by failing to disclose, address and respond to the credible scientific evidence strongly indicating that the wetland mitigation will be ineffective. See 40 C.F.R. § 1502.9(b) (agencies must discuss “any responsible opposing view”); *South Fork Band Council v. U.S. Dept. of Interior*, 2009 WL 4360798 (9th Cir. (Nev.)) at *6-7 (stating that an essential component of a reasonably complete mitigation discussion is an assessment of whether the proposed mitigation measures can be effective). As summarized by the Forest Service, “[f]urther analysis is needed to disclose how effective and reliable the [constructed] wetlands will perform in the field.” September 2, 2009 Forest Service Comments.

For instance, in a 2001 report, the National Research Council found that “the literature on compensatory mitigation suggests that required mitigation projects often are not undertaken or fail to meet permit conditions.” Attachment 3 (“Compensating for Wetland Losses under the Clean Water Act”); see also, 1992 report by the National Academy of Sciences, concluding that “many [mitigation] projects fall short of the goal of returning ecosystems to the predisturbance condition, and there is indeed considerable controversy over whether or not wetlands can actually be restored”). The National Research Council further found that “[s]ome wetland types – in particular, fens and bogs – cannot be effectively restored with present knowledge.” *Id.* Moreover, because the legal and financial mechanisms for assuring long-term protection of wetland mitigation sites are often absent, especially for permittee-responsible mitigation, the National Research Council recommended that compensatory mitigation should be in place concurrent with, and preferably before, the permitted activity. *Id.*

Similarly, the U.S. Government Accountability Office has found that the Corps has performed very limited oversight to determine the status of the required compensatory mitigation. Attachment 4 (“Wetlands Protection, Corps of Engineers Does Not Have an Effective Oversight Approach to Ensure that Compensatory Mitigation is Occurring”). Because many projects do not receive any oversight, the Corps cannot definitively assess whether the required compensatory mitigation has even been performed. *Id.* The Corps has thus consistently failed to ensure that the mitigation it has required as a condition of obtaining a 404 permit has been completed. *Id.*

Last, as noted by the Tribal cooperating agencies, the public notice issued by the Corps for the Section 404 permit must be reissued, and MPCA afforded another opportunity to analyze and make a determination under Section 401 of the CWA, because significant changes have been made to the proposed action since the May, 2005 public notice. DEIS, 4.2-1, n. 1.

B. Section 301 of the Clean Water Act and State Water Quality Standards

Congress enacted the CWA, 33 U.S.C. § 1251, *et seq.*, to “restore and maintain the chemical, physical, and biological integrity of the nation's waters” by eliminating the discharge of pollutants into those waters. 33 U.S.C. § 1251(a). In order to attain this mission, the CWA requires states to establish water quality standards that are sufficient to “protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter.” 33 U.S.C. § 1313(c)(2)(A). Water quality standards include designated uses, and the criteria necessary to ensure the protection of the designated uses. The state water quality standards must be established taking into consideration the value of the standards for “public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.” *Id.* Minnesota has promulgated water quality standards as enunciated in Minnesota Rules, chapter 7050.

Each state must also develop an antidegradation policy. *See* 40 C.F.R. § 131.12(a). The antidegradation policy must, at a minimum, be consistent with the

following: (1) existing instream water uses and the level of water quality necessary to protect the existing uses must be maintained and protected; (2) where water quality exceeds levels necessary to support designated uses, that quality must be maintained and protected at the present level, except in limited circumstances; and (3) for waters designated as outstanding resource waters, the existing water quality must be maintained and protected at the current level, with no exceptions. *Id.*

The CWA also requires states to identify and prioritize the waters within the state that, despite the implementation of technical pollution controls, do not meet the state water quality standards. *Am. Canoe Ass'n v. United States Env'tl. Prot. Agency*, 289 F.3d 509, 511 (8th Cir. 2002) (citing 33 U.S.C. § 1313(d)). These waters are called water quality limited segments ("WQLSs"). Once the WQLSs are identified, the state must rank the identified waters based on the severity of the pollution and the use of the waters. 33 U.S.C. § 1313(d). Based on this ranking, the state must develop a total maximum daily load ("TMDL") for the pollutants identified by EPA for each WQLS. *See Sierra Club, North Star Chapter v. Browner*, 843 F. Supp. 1304, 1307 (D. Minn. 1993) (describing TMDL procedure). The TMDL sets the maximum allowable load allocation of a pollutant to a waterbody so that water quality standards will not be exceeded. 40 C.F.R. § 130.2(i).

The discharge of any pollutant into a waterbody is prohibited unless the discharge is in compliance with a NPDES permit. 33 U.S.C. 1311. This includes the discharge of pollutants to dry land or groundwater where pollutants would eventually enter surface waters. *See Washington Wilderness Coalition v. Hecla Mining Co.*, 870 F. Supp. 983, 990 (E.D. Wash. 1994). No NPDES permit may be issued if the imposition of conditions cannot ensure compliance with the applicable water quality standards. 40 C.F.R. 122.4(d). In addition, no permit may be issued to a new source or new discharger if the discharge would cause or contribute to a violation of water quality standards. *Id.* 122.4(i).

A nondegradation analysis under Minn. Rules 7050.0180 or 7050.0185 must be completed. Additionally, all surface waters of Minnesota within the Lake Superior Basin are designated as outstanding international resource waters, and additional nondegradation standards and requirements apply. Minn. Rule 7052.0300; Draft EIS, 4.1-31. Existing uses and the level of water quality to protect existing uses must be maintained and protected. *Id.* 7052.300(2). Where designated uses of the waterbody are already impaired, there must be no lowering of the water quality with respect to the pollutants causing the impairment. *Id.*

Both the Partridge and Embarrass Rivers flow into the St. Louis River, which is currently listed as impaired under the CWA due to "mercury in fish tissue" impairment. DEIS, 4.1-33. Colby Lake and Whitewater Reservoir are also on Minnesota's 303(d) list because of mercury concentrations in fish tissue. *Id.*, 4.1-37. Moreover, several lakes downstream of the proposed project through which the Embarrass River flows are also listed as impaired under the CWA for mercury in fish tissue impairment. *Id.*, 4.1-40. "These lakes and the St. Louis River are not covered by the Statewide Mercury TMDL, but are impaired waters and are still in need of a TMDL pollution reduction study." *Id.* "These waters are not included in Minnesota's regional mercury TMDL because the mercury concentrations in the fish are too high to be returned to Minnesota's mercury

water quality standard through reductions in atmospheric mercury deposition alone.” *Id.*

It is apparent from the Draft EIS that the proposed NorthMet project would violate state water quality standards. For instance, for water quality in the Upper Partridge River, the Draft EIS states that West Pit overflow is predicted to “initially” exceed water quality standards. DEIS, S-8. According to the Tribal cooperating agencies, “the west pit is predicted to violate surface water standards for all years that predictions were made.” DEIS, 4.1-129, n. 45. And according to EPA, this overflow “clearly exceeds several water quality standards.” July 31, 2009 EPA comments at 3. Indeed, modeling predicts “that three parameters (i.e., arsenic, cobalt, and selenium) would exceed surface water quality standards when the West Pit overflows” and an “uncertainty analysis” “predicted exceedances of surface water standards for cobalt, copper, and nickel.” DEIS, 4.1-113. “The modeling results suggest that perhaps as many as five parameters (i.e., arsenic, cobalt, copper, nickel, and selenium) could exceed surface water quality standards, in addition to the relatively high sulfate concentrations.” *Id.*; see DEIS, 4.5-16 (stating that “[t]he West Pit is expected to overflow around Year 65,” and that “[t]he initial overflow is currently predicted to exceed surface water standards for as many as four parameters (i.e., arsenic, cobalt, nickel, and selenium) . . .”). Furthermore, as noted by the Tribal cooperating agencies, “because of continued inputs from stockpiles, the tailings basins, and the pit walls, the pit lake could exceed water quality standards for thousands of years.” DEIS, 4.1-115, n. 35; see also September 2, 2009, Forest Service Comments (stating that additional “information/analysis/conclusions regarding the ability of the West Pit overflow’s to meet the Great Lakes Initiative should be included in the DEIS”).

Furthermore, the Draft EIS acknowledges that groundwater seepage at the tailings basin would not be recovered and would eventually impact surface water quality in the Embarrass River. DEIS, 4.1-117-18. Modeling predicts that the proposed mine “would increase sulfate concentrations” to as high as 146 mg/L during low flow conditions. DEIS, 4.1-120; see also DEIS, 4.1-64 (“[T]he total unrecovered NorthMet groundwater seepage from the Tailings Basin is expected to range from approximately 1,600 gpm in Year 1 to approximately 2,900 gpm in Year 20”). “The analysis indicates that groundwater seepage . . . would be the primary input of sulfate to the Embarrass River during low flows in all mine years.” *Id.* As recognized by the Tribal cooperating agencies, the limiting data indicate that surface waters already adversely impacted by past and ongoing mining activity, and “because the Embarrass River already exceeds water quality standards, it would be difficult to permit the addition of additional contamination from new or expanded sources.” DEIS, 4.1-120, n. 37-38. Modeling suggests that the proposed project would cause manganese, aluminum, and sulfate to exceed water quality standards. *Id.*

In addition, mercury concentrations in fish sampled from downstream lakes already triggers advice to limit fish consumption, and an increase in mercury bioavailability “would be counter to the state-wide efforts to reduce mercury concentrations in fish.” DEIS, 4.1-122. As disclosed within the Draft EIS:

The groundwater seepage rate from the Tailings Basin during mine operations would greatly exceed the groundwater flux capacity of the aquifer, which would result in significant upwelling of groundwater with elevated sulfate concentrations. This upwelling would inundate portions of the wetlands found north of the Tailings Basin, introduce relatively high sulfate concentrations to the wetlands and downstream lakes on the Embarrass River that represent high risk situations for mercury methylation, and could affect sulfate concentrations in downstream waters that contain wild rice.

DEIS, 4.1-129.

As further disclosed in the Draft EIS, “[r]elatively high sulfate concentrations in seepage from the Tailings Basin would be released to wetlands north of the Tailings Basin and lakes downstream on the Embarrass River that represent ‘high risk situations’ for mercury methylation,” and there is “uncertainty as to whether the West Pit overflow would meet the Lake Superior mercury standard.” DEIS, S-9; *see also* DEIS, 4.1-124 (stating “there is some uncertainty as to whether the West Pit overflow would meet the Great Lakes Initiative standard for mercury and additional analysis of this issue is recommended”); DEIS, 4.1-125 (acknowledging that the proposed mine “would result in increased sulfate loadings via groundwater to both the Partridge and Embarrass rivers”); DEIS, 4.1-126 (“increasing the sulfate load from the Tailings Basin could increase the potential for mercury methylation both in wetlands north of the Tailings Basin and at the downstream lakes”); DEIS, 4.1-127 (“seepage from the Tailings Basin would introduce elevated sulfate concentrations to a high risk situation for mercury methylation”). As recognized by the Tribal cooperating agencies, this “further analysis” must be presented within a Supplemental Draft EIS to allow this significant and directly relevant information to be reviewed by the public and other agencies. DEIS, 4.1-124, n. 39. Similarly, the “additional sampling” being conducted by PolyMet “to help better understand mercury dynamics in the Project area” is similarly directly relevant and highly significant information that must be presented to the public within a Supplemental Draft EIS. DEIS, 4.1-126.

According to the Tribal cooperating agencies, wild rice grows on the lower Partridge River, and therefore the wild rice sulfate water quality standard applies; and the proposed PolyMet discharge would not meet this standard. DEIS, 4.1-187, n. 80. The agencies must fully respond to this comment and explain how the proposed project would comply with the wild rice sulfate water quality standard.

Minn. R. 7050.0224 sets a standard for sulfates of 10 mg/L, which is applicable to all waters used for the production of wild rice. The Draft EIS fails to demonstrate how the proposed project would meet this standard not only in project area streams, but also downstream in the St. Louis River.

The Draft EIS acknowledges that the proposed NorthMet project, in combination with other past, present, and reasonable foreseeable future projects “have resulted in a significant increase in sulfate concentrations from baseline conditions of approximately 5 mg/L to the existing concentration of 149 mg/L . . . , which is expected to increase further as a result of the NorthMet and Mesabi Nugget Phase II projects.” DEIS, 4.1-

189. Additionally, the NorthMet and Mesabi Nugget Phase II projects “have the greatest potential to affect sulfate, and potentially methylmercury, concentrations in the Partridge River.” *Id.* The Draft EIS, fails to explain, however, how the cumulative impacts of these and other past, present, and reasonably foreseeable future projects will still comply with all applicable water quality standards, including the state’s nondegradation policy.

It is simply not credible for the agencies to acknowledge that numerous waterbodies in the project area are already in exceedance of mercury standards, with many not even included in the state’s regional mercury TMDL because mercury concentrations are too high, but then claim that major activities including NorthMet and Mesabi Nugget Phase II are “not expected to contribute to additional cumulative effects on mercury concentrations in water or fish tissue.” DEIS, 4.1-190. Substantially more information is required to fully explain what caused these waterbodies to be already severely impaired for mercury, as well as why the acknowledged addition of significant amounts of sulfates will somehow not result in additional mercury pollution.

Similarly, for the Embarrass River, the Draft EIS acknowledges that seepage from the Tailings Basin “would introduce additional sulfate to several high risk situations for mercury methylation.” DEIS, 4.1-194. The agencies claim, however, that “[i]t is unclear to what extent increased sulfate loadings may have on mercury methylation within the downgradient wetlands and downstream lakes,” and that the project “may contribute to cumulative effects on methylmercury concentrations in downstream lakes that are already on the 303(d) list.” *Id.* Minnesota’s water quality standards and nondegradation policy are not merely aspirational goals that polluters are encouraged to obtain through trial and error as a project moves forward. Rather, there are mandatory, enforceable standards, and the agencies must not permit a project to proceed until the project proponent and the agencies can demonstrate actual compliance with these standards. *See e.g.*, 40 C.F.R. § 122.4(d); 40 C.F.R. § 122.4(i); *see also* DEIS, 4.5-22, n. 11 (Tribal cooperating agencies, recognizing that “any new discharges that would result in further degradation to waters with an existing water quality impairment would not be legally permissible under the Clean Water Act (see *Friends of Pinto Creek v. EPA* (9th Cir.), known as the Carlota Decision”).

The Draft EIS further indicates additional water quality violations downstream in the St. Louis River, which discharges into Lake Superior. According to the Draft EIS, “[i]t has long been known that sulfate concentrations in the St. Louis River are sometimes elevated due, most likely, to mining related sulfate releases.” DEIS, 4.1-194. Moreover, “[t]he activities included in this cumulative effects assessment, which include several mining projects, have the potential to increase sulfate concentrations.” *Id.* The St. Louis River is already listed on the 303(d) list due to mercury in fish tissue, and this expected increase in sulfate is not allowed. *See e.g.*, 40 C.F.R. § 122.4(d); 40 C.F.R. § 122.4(i).

In addition, EPA’s comments indicate water quality standard violations for aluminum in the Embarrass River and Colby Lake. July 31, 2009 EPA comments at 3. This includes violations that could impact the drinking water supply of Hoyt Lakes. *Id.* As stated by EPA, to conclude that predicted levels (which significantly exceed water quality standards) ‘would not pose any human health risk’ needs verification and

supporting documentation,” and the fact “that predicted levels could be almost three times the standard should be discussed in the DEIS.” *Id.*

According to the Forest Service, nitrates are another constituent that is commonly exceeded for water quality at mine sites due to blasting agents utilized, and the Draft EIS must adequately explain how the proposed NorthMet mine would not result in water quality standard violations for nitrates. *See* September 2, 2009, Forest Service comments.

In sum, these numerous predicted water quality exceedances are not allowed under the CWA (*see e.g.*, 33 U.S.C. 1311; 40 C.F.R. § 122.4(d); 40 C.F.R. § 122.4(i)), and the EIS must more thoroughly assess and disclose the extent to which water quality violations are likely to occur.

The Draft EIS also fails to disclose that Cliffs Erie currently holds NPDES permits at the NorthMet proposed site in which ongoing discharges are already violating their permit and the CWA. The Draft EIS is wholly inadequate in analyzing how the NorthMet mine can be expected to add massive amounts of waste on top of the unlined and already leaking tailings basin, in which CWA violations are already occurring, and somehow expect to maintain or exceed all applicable water quality standards. *See e.g.*, DEIS, 4.1-63 (stating that “the Proposed Action would result in increased seepage from the Tailings Basin relative to existing legacy LTVSMC seepage, including both surface seepage through the Tailings Basin embankment and groundwater seepage through the base of the LTVSMC tailings”).

The Draft EIS is also deficient in failing to adequately explain and demonstrate why no NPDES permits would apparently be required for the proposed NorthMet mine. As stated by the Tribal cooperating agencies, there will be surface water discharge to the Embarrass River, as there is a direct surface water connection between the northwest corner of cell 2W and the Embarrass River. DEIS, 4.1-107. “Aerial photos show that water discharging from the tailings basin follows a natural channel westward, through existing wetlands and intersects a channel that leads directly to the Embarrass River.” *Id.*

Moreover, the Draft EIS fails to demonstrate compliance of the proposed mining project with Minnesota’s antidegradation policy and requirements. In fact, the Draft EIS discloses “uncertainty” as to whether the proposal would or would not comply with the antidegradation requirements. DEIS, 4.1-128 (stating that “there is some uncertainty whether mercury concentrations in the West Pit, or the ultimate discharge to the Partridge River when the West Pit begins to overflow around Year 65, would meet Great Lakes Initiative water quality standards”). Instead of stating that the project cannot go forward until compliance with water quality standards and the antidegradation policy are demonstrated, however, the agencies simply state in the Draft EIS that mercury monitoring is recommended to determine if there are elevated mercury concentrations. *Id.* There is no support within the CWA or Minnesota’s regulations for the approval of a project that may in fact violate water quality standards and the antidegradation policy by simply recommending monitoring by the project applicant. To the contrary, the proposed project cannot be approved until full

compliance with water quality standards, including the antidegradation policy - is demonstrated through a detailed and objective environmental analysis.

Moreover, the Draft EIS admits that the proposed project “would degrade surface water quality by raising ambient concentrations of several parameters, primarily metals (e.g., antimony, arsenic, copper, nickel, and zinc).” DEIS, 4.1-191. The Draft EIS, fails to explain how this admitted degradation will somehow not violate the state’s antidegradation policy.

Last, the Draft EIS is wholly deficient in its failure to analyze and predict impacts to Lake Superior. The simple statement that little information is available on the extent of methylmercury formation in the Lake Superior estuary is no substitute for the required environmental analysis, especially where it is acknowledged both that the project area waterbodies and the St. Louis River are already impaired for mercury, and that the NorthMet and other proposed projects would increase sulfate levels which would likely increase methylmercury. A comprehensive, cumulative effects assessment on the potential impacts to Lake Superior is required.

C. Section 401 of the Clean Water Act

Applicants for federal licenses and permits must obtain Section 401 Certification from the state “before a federal license or permit can be issued for activities that may result in any discharge into intrastate navigable waters.” *PUD No. 1 of Jefferson County v. Wash. Dep’t of Ecology*, 511 U.S. 700, 707 (1994). The triggers for the Section 401 certification requirement are 1) a request for a federal license or permit authorizing 2) any activity that may result in the discharge of pollutants into navigable waters. No federal licenses or permits, including a Section 404 permit, can be issued for the proposed NorthMet mine without the proper Section 401 Certification. And the required 401 Certification must demonstrate that the proposed project will comply with all water quality standards at all times. *See Hells Canyon Preservation Council v. Haines*, 2006 WL 2252554 (D. Or. 2006).

In another mining case, the State of Washington Pollution Control Hearings Board (PCHB) vacated a previously-issued 401 certification largely because the water in the mine pit is predicted to violate water quality standards. *See Okanogan Highlands Alliance v. State of Washington*, Case No. 97-146, Final Findings of Fact, Conclusions of Law and Order of the Washington Pollution Control Hearings Board (1/19/2000), <http://www.eho.wa.gov/searchdocuments/2000%20Archive/pchb%2097-146%20final.htm>, *on reconsideration*: <http://www.eho.wa.gov/searchdocuments/2000%20Archive/pchb%2097-146%20reconsideration.htm>. (final agency action denying Mine’s water rights and finding that there is no reasonable assurance that the Mine will comply with state water quality standards).

Here, because the Draft EIS acknowledges that numerous water quality standards will be violated at some point, the State cannot issue the 401 Certification and thus the Corps cannot issue the 404 permit.

V. The Draft EIS Fails to Disclose and Discuss Past Failures of Similar Mines, in Violation of NEPA

NEPA requires that environmental information of high quality be provided to public officials and citizens before decisions are made. 40 C.F.R. § 1500.1(b). The purpose of NEPA is to help public officials make decisions that are based on an understanding of the potential environmental consequences, and to take actions that protect, restore, and enhance the environment. *Id.* § 1500.1(c). Moreover, an EIS must disclose and respond to “any responsible opposing view.” *Id.* § 1502.9(b); *see also Seattle Audubon Society v. Moseley*, 798 F. Supp. 1473, 1479 (W.D. Wa. 1992), *aff’d Seattle Audubon Society v. Espy*, 998 F.2d 699 (9th Cir. 1993) (“[a]n EIS that fails to disclose and respond to ‘the opinions held by well respected scientists concerning the hazards of the proposed action ... is fatally deficient.’”); *Earth Island Institute v. U.S. Forest Service*, 442 F.3d 1147, 1172-73 (9th Cir. 2006) (FEIS failed to respond “explicitly and directly” to conflicting views, and agency violated NEPA requirement to take a hard look and provide a full and fair discussion allowing informed public participation and informed decision-making).

The proposed NorthMet mine would be the first ever copper nickel mine in the state. To comply with NEPA’s disclosure requirements and the underlying purpose of NEPA, the agencies must fully disclose to the public the long-history of past failures and severe environmental harm caused by hard rock and copper mines across the country and world wide. Few if any activities have had more persistent, permanent and significant environmental impacts to water quality and other resources, and the Draft EIS violates NEPA by failing to objectively and openly disclose this legacy of environmental pollution from the hard rock mining industry. Before permitting this type of mining in the state, the agencies must plainly and openly disclose that, according to EPA, 40% of the headwaters of all western waterways have sections that are polluted by mining, and that EPA ranks the mining industry as the nation’s top toxic polluter, reporting more toxic releases annually than any other industry sector.

Moreover, in the scientific reports “Comparison of Predicted and Actual Water Quality at Hardrock Mines,” and “Predicting Water Quality Problems at Hardrock Mines: Methods and Models, Uncertainties, and State-of-the-Art,” prepared by Jim Kuipers, P.E., and geochemist Ann Maest, Ph.D., the authors analyzed water quality predictions and outcomes at 25 representative metal mines permitted in the United States during the last 25 years. *See* Attachment 2. The reports found that faulty water quality predictions, mitigation measures and regulatory failures result in the approval of mines that create significant water pollution problems. *Id.* Despite assurances from government regulators and mine proponents that mines would not pollute clean water, the researchers found that 76 percent of studied mines exceeded water quality standards, polluting rivers, and groundwater with toxic contaminants, such as lead, mercury, arsenic and cyanide, and exposing taxpayers to huge cleanup liabilities.

Among the researchers’ findings for the 25 mines examined in depth:

- 76 percent of mines exceed groundwater or surface water quality standards
- 93 percent of mines that are near groundwater and have elevated potential for acid drainage or contaminant leaching exceeded water quality standards[1]
- 85 percent of mines that are near surface water and have elevated potential for acid drainage or contaminant leaching exceeded water quality standards
- Water quality standards for toxic heavy metals, such as lead, mercury, cadmium, copper, and zinc, were exceeded at 63 percent of mines.
- Mitigation measures predicted to protect clean water failed at 64 percent of the mines.

Id. The researchers also found that mines located near surface or groundwater that tapped ore bodies with high potential for acid-generation or contaminant leaching, and near water resources were at high-risk of resulting in water pollution. *Id.* This finding in particular has serious implications for the proposed NorthMet mine.

The reports have been extensively peer-reviewed and presented at major conferences, including: U.S. EPA's Hardrock 2006 Conference in Tucson, Arizona; Society for Mining, Metallurgy, and Exploration's 2006 Annual Meeting in St. Louis; and the Mine Design, Operations and Closure Conference in Fairmont Hot Springs, Montana, also in 2006. These reports and their findings and conclusions must be fully and objectively disclosed and considered within the EIS for the PolyMet mine.

VI. The Draft EIS Analysis of Impacts to Air Quality and Greenhouse Gas Emissions is Inadequate

As indicated by EPA in its July 31, 2009, comments, the Draft EIS must accurately describe and plainly disclose the toxic and harmful air pollutants that would be emitted from the proposed mine. This analysis must include the predicted local deposition of pollutants and their impact on local waterbodies, including potential contributions to water quality standard violations. Any conclusions that no significant deposition of pollutants is likely to occur must be supported by actual, objective analysis, and must include comparisons to other similar mines and their impacts. *See Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1150 (9th Cir. 1998) (holding that NEPA does not allow an agency to rely on expert opinion unsupported by hard data and objective analysis); 40 C.F.R. 1502.24.

Moreover, the agencies must prepare a comprehensive, cumulative impacts analysis concerning air pollution in the region. As explained by EPA:

In order to accurately assess cumulative impacts of the proposed project, including those impacts to Class I and Class II areas, the DEIS air quality analyses (increment and visibility modeling) should consider all current and reasonably foreseeable projects occurring in the area. The air quality modeling analyses do not include a comprehensive inventory of existing and planned sources impacting regional air quality. In particular, the analysis does not appear to include the proposed Mesaba Energy power

plant, the Mesabi Nugget Phase II projects, or the Keetac Expansion project. There may be additional projects that have emerged since the modeling was completed. We recommend revising the air quality analysis to include all reasonably foreseeable projects in the area.

July 31, 2009, EPA Comments, p. 1; *see also* DEIS, 4.6-42, n. 8 & 9 (Tribal cooperating agencies commenting that Draft EIS analysis did not factor in any emissions from the Keetac Expansion Project or the Essar Steel Expansion project, and that “the full cumulative effects may lead to violations of the PM_{2.5} NAAQS standard”). This analysis must include a discussion of how this proposal and other reasonably foreseeable projects in the region would affect the ability to satisfy state, national, and international standards and goals regarding the reduction of mercury and other emissions.

The Clean Air Act analysis, including the cumulative impacts analysis, must include PM_{2.5} emissions, which is recognized as a harmful Criteria Air Pollutant under the Clean Air Act. *See* EPA PM_{2.5} Rule, 72 Fed. Reg. 20586 (April 25, 2007). By failing to fully analyze PM_{2.5} baseline levels and emissions (including the emissions of other toxic or harmful air pollutants), any conclusion that the Project complies with air quality standards and requirements is contrary to NEPA and the Clean Air Act. PM_{2.5} emissions, also known as “fine particle” emissions, can cause serious health impacts. According to the U.S. EPA:

Fine particles and precursor pollutants are emitted by ... burning or combustion-related activities. Health effects that have been associated with exposure to PM_{2.5} include premature death, aggravation of heart and lung disease, and asthma attacks. Those particularly sensitive to PM_{2.5} exposure include older adults, people with heart and lung disease, and children.

72 Fed. Reg. 20586 (April 25, 2007). *See also* EPA PM_{2.5} NAAQS Implementation Webpage, http://www.epa.gov/ttn/naaqs/pm/pm25_index.html; Attachment 8 (Vermont Dept. of Environmental Conservation, “Fine Particles, the Microscopic Menace”).

Additionally, as stated by the Tribal cooperating agencies, the Draft EIS cumulative effects analysis is incomplete because the 24-hour PM_{2.5} modeling needs to account for emissions from the Keetac Expansion Project. DEIS, 4.6-42, n. 9. “Furthermore the Tribal cooperating agencies feel that the full cumulative effects may lead to violations of the PM_{2.5} NAAQS standard. *Id.*”

The Draft EIS is also deficient in its analysis of greenhouse gas emissions and climate change impacts, including a complete lack of a cumulative impacts analysis for greenhouse gas emissions. As stated in the Draft EIS, the state of Minnesota has committed to long-term greenhouse gas reduction targets of 60-80% below 2005 emission levels as part of the Midwestern Greenhouse Gas Reduction Accord in 2007. DEIS, 4.6-30. Moreover, in May, 2008, the Governor

signed legislation requiring the tracking of greenhouse gas emissions and directing that interim reduction recommendations be developed, including a 15% reduction target for 2015 and a 30% reduction target for 2025. *Id.* The interim goals are designed as milestones towards meeting the state's goal of reducing greenhouse gas emissions to a level at least 80% below 2005 levels by 2050. *Id.*

The Draft EIS acknowledges that the emissions resulting from the proposed project would be approximately 776,650 metric tons per year of carbon dioxide. DEIS, 4.6-31. What is missing, however, is any meaningful discussion as to how this and other reasonably foreseeable projects under consideration in northeastern Minnesota will affect the state's ability to meet its goals and obligations under the Midwestern Greenhouse Gas Reduction Accord and related legislation. *See* DEIS, 4.6-32, n. 4 ("The Tribal cooperating agencies' position is that these emissions will have an effect on the Midwestern Greenhouse Gas Reduction Accord and their impact needs to be analyzed as to that effect"). Even the inadequate cumulative effects that was prepared and disclosed in the Draft EIS for air pollutants inexplicably neglects to include any assessment of the overall cumulative effects from greenhouse gas emissions. With such a high number of major proposals under evaluation in northeastern Minnesota (*see e.g.*, Table 4.6-22; DEIS, 4.6-50,51; Table 4.6-24), this lack of a cumulative effects analysis for this critically important issue violates NEPA. *See Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 809-10 (9th Cir. 1999) (NEPA requires EIS to consider cumulative impacts of a project, requiring detailed information "describing the cumulative effects of a proposed action with other proposed actions"); 40 C.F.R. §§ 1508.7, 1508.25(a)(2).

VII. The Draft EIS Analysis of Impacts to Cultural Resources is Inadequate

The National Historic Preservation Act ("NHPA") includes provisions that apply to Native American Tribes. 16 U.S.C. § 470a(d)(6); *Muckleshoot Indian Tribe*, 177 F.3d at 805. Under the NHPA, properties of traditional religious and cultural importance to a Tribe may be determined to be eligible for inclusion in the National Register, and in carrying out its responsibilities under Section 106 of the NHPA, federal agencies must consult with any Native American Tribe that attaches religious and cultural significance to these properties. *Id.*; 36 C.F.R. § 800.1. The proposed NorthMet mine site and plant site are located within the 1854 Treaty Ceded Territory where the Bois Forte Band of Chippewa, Fond du Lac Band of Lake Superior Chippewa, and Grand Portage Band of Chippewa retain hunting, fishing, and gathering rights under the Treaty of 1854. Thus, in considering the potential impacts to cultural resources, the Corps must consult closely with the affected Tribes and Tribal members.

As acknowledged in the Draft EIS, "the Project may affect historic properties of religious and cultural significance to the Ojibwa Bands on and off

reservation, or tribal lands.” DEIS, 4.8-3. The Corps, however, is once again placing the cart before the horse by releasing the Draft EIS for public comment before this consultation occurs. *Id.* (stating that “a significant amount of consultation and survey work remains to be completed”); *see also* DEIS, 4.8-13 (stating that “[t]he identification of historic properties of religious and cultural significance to the Ojibwa is the subject of ongoing consultation between the [Corps] and the Ojibwa Bands,” and that “[t]he potential impacts to any historic properties identified will need to be assessed”); DEIS, 4.8-15 (“[t]he cumulative impacts of past, present, and future mining projects to Ojibwa culture are unknown, but may be very significant”).

Similarly, as explained by EPA, the Draft EIS “has not described all impacts to tribes and tribal uses in the mine site area.” July 31, 2009, EPA Comments, p. 5. EPA thus “continues to recommend” that the Draft EIS “include an evaluation of impacts to tribal uses, insofar as the DEIS should disclose impacts to the environment and to the public from the project and provide pertinent information to all decision makers.” *Id.*

One of the primary purposes of NEPA is to allow meaningful public involvement in the environmental analysis, and this cannot occur where the analysis is simply described as ongoing and not disclosed for public comment in the Draft EIS. As set forth in the Draft EIS,

It is the positions of the Ojibwa Bands that this chapter cannot be completed without significant additional consultation with the Tribal cooperating agencies, development of full, Tribal surveys of historic properties of religious and cultural significance to tribes, proper evaluations of natural and cultural resources based upon the recently-defined (and much expanded) APE, and much more research. Therefore, the Tribal cooperating agencies take the position that even with the inclusion of all earlier changes and comments, the chapter will be far from ready for publication in the Draft EIS. The Tribal cooperating agencies expressly condition their comments on this position and maintain the position that Section 106 consultation is incomplete and inadequate, as to nearly every section.

DEIS, 4.8-15. The Center agrees with this position of the Tribal cooperating agencies. In order to comply with NEPA’s public disclosure and involvement requirements, a Supplemental Draft EIS will need to be prepared and released for public comment in order to properly address this and other issues.

Last, impacts to cultural resources again indicate why the proposed land exchange between PolyMet and the Forest Service is a connected action that must be analyzed together in a single EIS. *See* July 31, 2009, EPA Comments, p. 5 (noting that “some direct impacts to tribal uses are related to the transfer of

public land out of the Ceded Territory,” and questioning “how assessing the impacts of this connected action can be deferred to a separate analysis”).

VIII. The Draft EIS’s Analysis of Environmental Justice Issues is Inadequate and Misleading

The Draft EIS attempts to brush aside any environmental justice concerns by stating that the affected community does not have a significant Native American population. What the analysis fails to consider and address, however, is that the affected Native American population has an increased interest in the natural resources that would be adversely affected, polluted, and destroyed by this mining proposal, as their culture is dependent on continued access to these natural resources, and in fact their current access to these resources is protected by treaty rights. When considered along with the related land exchange, there is no question that the adverse environmental consequences and related impacts resulting from this proposal would disproportionately affect the Native American Tribes and Tribal members. This is therefore a classic environmental justice issue in which a more privileged segment of society is making decisions that would benefit themselves – through jobs and the end products that would be produced – to the detriment of Tribal members in the region.

As just one example of environmental justice issues that must be addressed and disclosed in considerably more detail, *see* DEIS, 4.5-22, n. 11 (Tribal cooperating agencies explaining that “the potential impacts to tribal members of a significant increase in mercury in fish harvested in on-Reservation and ceded territories waters has not been adequately addressed”).

IX. The Draft EIS Fails to Provide Necessary Information Pertaining to the Closure Plan and Financial Assurance

The Draft EIS explicitly defers its discussion and analysis regarding financial assurance. DEIS, 2-6 (stating that “[t]he amount of financial assurance associated with reclamation actions cannot be estimated until these actions are understood at a more detailed level of design” and thus “discussion of financial assurance figures and instruments are not included in the DEIS”); *id.*, 3-38 (stating that details regarding the amount of financial assurance cannot be estimated until these actions “are understood at a deeper level of design detail”).

As explained by EPA, the information regarding financial assurance must be included in the Draft EIS “because one key component to determining the environmental impacts of a mine is the effectiveness of reclamation and closure activities.” July 31, 2009, EPA comments at 5. Further, “EPA as found the amount and viability of financial assurance are critical factors in determining the effectiveness of closure and reclamation and therefore the significance of environmental impacts.” *Id.*; *see also* DEIS, 3-49, n. 13 (explaining that “[b]ecause of its experience in expensive cleanups of contamination from many defunct or bankrupt sulfide mines, EPA Region 9

has strongly urged other Regions over the past two years to require financial assurance disclosure in the NEPA process,” and that new national rules for financial assurance are under development by EPA because “Given the history of adverse environmental effects resulting from some hard rock mines, and the expenditure of public funds used in some cases to address environmental problems caused by mining, EPA believes it is necessary to analyze these factors in the DEIS (from InsideEPA.com, Tuesday, August 25, 2009”).

Indeed, in a comprehensive analysis and report prepared in 2003, it was found that the amount of financial assurances provided by mining companies usually falls far short of the actual reclamation and closure costs. Attachment 5 (“Putting a Price on Pollution, Financial Assurance for Mines Reclamation and Closure”). The report found that the mining industry and regulating agencies regularly fail to accurately estimate reclamation costs, potential for acid drainage generation, long-term treatment needs, and the effects of pollutants such as cyanide, mercury, and selenium that present expensive and potentially long-term reclamation issues. *Id.*

The Tribal cooperating agencies agree that the long-term environmental impacts of the proposed project cannot be meaningfully evaluated without additional disclosure of the closure plan and financial assurance. DEIS, 3-49, n. 13 (“It is the position of the tribal cooperating agencies that financial assurance should be fully explored in the DEIS. This is especially important given the potential for very long-term/perpetual treatment, maintenance and monitoring that may be needed for the Proposed Action”); *id.*, 4.1-131 (“Tribal cooperating agencies note that there is no up to date closure plan for the proposed project. It is the tribal cooperating agencies’ position that a closure plan is needed to evaluate long term environmental impacts and to inform calculations of financial assurance that would be needed for the project”).

The required analysis and disclosure for financial assurance must also take into the account the high likelihood that perpetual treatment would be needed for this proposed mine to insure no future violations of water quality standards. And as noted by mining expert David Chambers, if a prediction of an end date on which treatment will no longer be required cannot be made with a reasonable degree of certainty, then the discharge and the mine should not be allowed to begin. Attachment 6 (“A Position Paper on Perpetual Water Treatment for Mines”).

Minnesota law requires that a mine operator provide financial assurance to cover the contingency reclamation costs prior to receiving a permit. Minn. R. 6132.1200(4)(B). The Draft EIS must include a discussion and analysis of the full closure plan, the necessary reclamation costs, as well as the contingency reclamation costs that would be covered by financial assurance, including the financial assurance mechanism that would be used to meet this requirement. Without full disclosure and analysis of the closure plan, with sufficient assurance that there will be a sufficient amount of funds available to address the closure costs, there is no way to for the decisionmaker or the public and other agencies to meaningful understand and address the long-term environmental impacts of the mining proposal.

Moreover, because it appears that perpetual treatment would be required to prevent violations of water quality standards and other future harms, the Draft EIS must explain how PolyMet could provide sufficient financial assurance to cover the expected costs in perpetuity. See Minn. R. 6132.1200. Because this does not appear possible, the proposed mine cannot be permitted if, as currently proposed, treatment may indeed be required for hundreds to thousands of years.

X. The Draft EIS Fails to Include Sufficient Information to Satisfy NEPA

A primary purpose of NEPA is to “guarantee that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and implementation of that decision.” *Robertson v. Methow Valley Citizens*, 490 U.S. 332, 349 (1989). “[T]he broad dissemination of information mandated by NEPA permits the public and other government agencies to react to the effects of a proposed action at a meaningful time.” *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989). Agencies must therefore “make information on the environmental consequences available to the public, which may then offer its insight to assist the agency’s decision-maker through the comment process.” *Dubois v. U.S. Dept. of Agriculture*, 102 F.3d 1273, 1285 (1st Cir. 1996). “Because of the importance of NEPA’s procedural and informational aspects, if the agency fails to properly circulate the required issues for review by interested parties, then the EIS is insufficient even if the agency’s actual decision was informed and well-reasoned.” *Id.* at 1287.

As set forth above, for a number of issues including wetlands, water quality, cultural resources and financial assurance, the Draft EIS acknowledges that the agencies are still compiling information and that additional analyses have yet to occur, with much of this required analysis apparently deferred until later permitting. This includes, but is not limited to, directly relevant information pertaining to the proposed land exchange between PolyMet and the Forest Service, the results of consultation with the U.S. Fish and Wildlife Service pertaining to impacts to threatened and endangered species, the results of consultation with the affected Tribes and Tribal members concerning impacts to cultural resources, much more precise wetland delineation throughout the project area and beyond, a description and assessment of all required wetland mitigation/compensation, more detailed information pertaining to wild rice that may be affected by the proposal, and information pertaining to financial assurances.

As expressed by EPA, “[w]e note instances where there is incomplete information about impacts and mitigation or where impacts were simply not evaluated.” July 31, 2009, EPA Comments, p. 6. EPA further states that the Draft EIS “appears to defer some impact assessments to a future permit stage,” and that therefore the Draft EIS “may not be entirely sufficient to meet federal expectations of impact assessment and disclosure.” *Id.* EPA’s examples of where additional information appears to be needed include mine site overburden, wild rice occurrence, predicted mercury concentrations in the West Pit overflow and whether the discharge meets the Great Lakes Initiative standard for mercury, whether overflow from the West Pit will exceed water quality standards and require treatment, and the discharge of wastewater from the Tailings

Basin to the Partridge River either during operation or post-closure. *Id.*, pp. 6-7. Additionally, EPA notes additional issues in need of additional analysis, including storm water management, West Pit overflows, liner cover thickness for waste stockpiles, sulfate seepage, passive wetlands treatment at the West Pit outflow, stockpile amendment, and additional monitoring measures that should be included. *Id.*, p. 7-8.

Indeed, releasing a Draft EIS for public review and comment prior to the completion of much of the required environmental analysis plainly violates NEPA. As set forth in the CEQ NEPA regulations:

The draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements in section 102(2)(C) of the Act. If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion.

40 C.F.R. § 1502.9(a).

Similarly, the CEQ NEPA regulations further require:

To the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.,) and other environmental review laws and executive orders.

40 C.F.R. § 1502.25(a); *see also* 42 U.S.C. § 4332 (“Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved”); *Trout Unlimited v. Minnesota Dept. of Agriculture*, 528 N.W.2d 903, 909 (Minn. Ct. App. 1995) (proper environmental review cannot be deferred to some regulatory event or “phase” in the future); *Dead Lake Association v. Otter Tail County*, 2005 WL 221773 (Minn. Ct. App. 2005) (while the county or state may be able to regulate boating and thereby mitigate or lessen environmental impacts in the future, such ability to regulate does not relieve the county or government agency conducting review from a full analysis of all potential impacts from boating and a full analysis of how those impacts can be mitigated); *Kern v. U.S. Bureau of Land Management*, 284 F.3d 1062, 1068-1070 (9th Cir. 2002) (reference to other regulatory or guidance documents, especially where those do not go through environmental review, is inadequate under NEPA). For the NorthMet proposal, there is no indication whatsoever as to why it was not “possible” for the agencies to wait on the release of the Draft EIS until the relevant consultations and other directly relevant information was also able to be released to the public for review and comment. It is

therefore clear from the Draft EIS itself that a revised Draft EIS must be prepared and released for additional public comment.

XI. The Agencies Have Failed to Explain Why Additional Analysis and Information Could Not Be Provided Within the Draft EIS

As stated and set forth above, for a number of issues including wetlands, water quality, cultural resources and financial assurance, the Draft EIS acknowledges that the agencies are still compiling information and that additional analyses have yet to occur. Additionally, many of the potential impacts of the proposal are unknown due to a lack of the necessary data and information. The CEQ NEPA regulations include a detailed regulation regarding “incomplete and unavailable information,” which has been ignored for the NorthMet proposal. 40 C.F.R. § 1502.22.

According to the NEPA regulations, where there is incomplete or unavailable information, the agency must first make clear that such information is lacking. 40 C.F.R. § 1502.22. Moreover, “[i]f the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.” *Id.*, § 15022(a). The agencies have provided no information to indicate that it would have been an exorbitant cost to obtain any of the missing data or information that are relevant to the project’s environmental impacts. The agencies for the most part instead simply proclaim that such information and data will continue to be gathered during the permitting processing.

Furthermore, even if the costs of obtaining the data and information are determined by the agencies to be exorbitant, the environmental impact statement must still disclose (1) a statement that such information is incomplete or unavailable; (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment; (3) a summary of the existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the environment; and (4) the agency’s evaluation of such impacts based on theoretical approaches or research methods generally accepted in the scientific community. 40 C.F.R. § 1502.22(b). The agencies have entirely failed to comply with this NEPA regulation concerning the missing data and information for the NorthMet proposal.

XII. The Draft EIS Fails to Provide Sufficient Information to Demonstrate that the Tailings Basin Design Will Prevent Catastrophic Failure

PolyMet proposes to use the existing LTV tailings basin, which is known to already be leaking. The Draft EIS fails to demonstrate that this tailings basin will be adequately designed to prevent a catastrophic failure and severe contamination of the Embarrass River. In fact, the Draft EIS indicates that inadequate slope stability at the LTV tailings basin could result in release of the impounded tailings and process water,

which could contaminate an extended reach of the Embarrass River down-gradient of the basin. The Draft EIS fails to provide disclosure and analysis regarding the severe adverse environmental consequences if such a failure occurs during or after operation of the proposed mine. The proposed project should not be allowed to proceed without a tailings basin design that is proven to be sufficient to prevent slope instability, catastrophic failure and the release of tons of impounded wastes and process water.

XIII. Technologies upon which PolyMet Relies to Treat Contaminated Water, Prevent Release of Contaminants and Leaching of Sulfuric Acid are Unspecified, Untested and/or Unreliable

PolyMet proposes to rely on a wastewater treatment facility ("WWTF") to treat contaminated water. The Draft EIS, however, provides no description of the proposed WWTF, or any information that would allow the public and other agencies to determine the effectiveness of the WWTF for treating the polluted waters. *See e.g.*, July, 2009, MPCA comments ("it would be helpful to the reader to insert a paragraph that describes the proposed WWTF in moderate detail – at least in more detail than in the VERY brief description here . . . this is appropriate since use of the WWTF for treatment of various wastewaters factors in so prominently throughout the [Draft EIS] document and in the supporting modeling and prediction efforts."); September 2, 2009, Forest Service comments (stating that "[t]here is very little information on the waste water treatment facility," and that "[t]his is a critical facility for water quality protection and should be clearly described").

For example, information is not provided regarding the volume of water expected to be treated, the methods by which water would be treated, which constituents would be treated, the levels of chemical constituents in water which treatment would seek to attain, the way in which chemicals extracted through treatment would be disposed of or any data supporting the effectiveness of proposed treatment at the WWTF. As a result, there is no basis by which one could determine the amount or extent of potential environmental harm and pollution that will and will not be mitigated through the proposed WWTF, or whether reliance on WWTF treatment is reasonable.

Waste rock stockpiles are another substantial component of the proposed mine. Over the twenty year operations of the mine, 394 million tons of waste rock and lean ore would be stockpiled, with the maximum height of waste rock stockpiles at 240 feet and a total footprint of over 750 acres. The Draft EIS fails to provide a sufficient analysis of the potential environmental consequences of this mountain of created waste rock, including the potential for large scale slope instability, the movement of waste rock off the proposed area, the potential release of contaminants, and the significant mitigation that would be necessary for the massive stockpiles post closure.

In addition, despite the widely recognized concern of long-term acid mine drainage from sulfide mines, PolyMet's plan to prevent long-term acid mine drainage by covering acid-generating rock is an unproven technology that is insufficiently addressed in the Draft EIS.

PolyMet's proposal to treat future discharges through constructed wetlands is similarly unsupported, would likely require perpetual maintenance, and must be much more significantly analyzed through the NEPA process to demonstrate its effectiveness.

As currently described in the Draft EIS, critical components of the proposed mine are unspecified, untested and unproven. Before either the environmental review or permitting process moves forward, PolyMet and the agencies must demonstrate that the proposed methods of waste disposal, treatment of contaminated water and prevention of discharge and acid mine drainage after closure are thoroughly developed, assessed and validated with objective data and analysis. *See Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1150 (9th Cir. 1998) (holding that NEPA does not allow an agency to rely on expert opinion unsupported by hard data and objective analysis); 40 C.F.R. § 1502.24.

XIV. The Proposed Mine Would Significantly Increase Mercury in Local Fish, Causing and Contributing to Human Health Risks that Are Not Properly Assessed and Disclosed in the Draft EIS

The proposed mining project would increase the accumulation of mercury in the food chain within streams within and downstream from the project area, in which current levels of mercury in fish are already unsafe. This increased bioavailability of mercury would violate water quality standards and the state's antidegradation policy, and may pose a substantial health risk that has not been properly analyzed or disclosed to the public.

Waterbodies within and downstream from the project area already have unsafe levels of mercury in fish, and are subject to fish consumption advisories because the mercury concentrations in fish tissue pose a hazard to human health. Mercury levels are in fact so high that many of these streams were not included in the statewide mercury TMDL, as even the actions identified in the TMDL would not be sufficient to bring mercury to safe levels. The proposed mine would further increase these mercury levels, further harming fish and further increasing the health risk to those eating fish from these streams.

More specifically, the proposed mine would result in the increased discharge of sulfates, which would increase the methylation of mercury. Mining operations are predicted to stimulate methylmercury production and thereby enhance the bioaccumulation of mercury both onsite and offsite as a result of increased sulfate or mercury concentrations in water draining from the site.

In addition, the hydrologic changes and water level fluctuations from the proposed mine would likely further increase mercury methylation and mercury concentrations in the food chain. Similarly, the flooding of wetlands can also result in a significant increase in mercury concentrations in fish. And the destruction of peat bogs and wetlands by the project would release stored mercury.

Individually and collectively these factors may significantly increase the potential

for the bioaccumulation of mercury in fish by increasing the production and bioavailability of methylmercury. The Draft EIS violates NEPA by failing to meaningfully analyze the environmental consequences to fish and human health risks to humans caused by this increase of mercury in fish tissue. And these undisclosed environmental and health risks may be severe, as methylmercury is recognized as a highly toxic substance that may cause a number of health risks to humans and other species. See EPA, Integrated Risk Information System, Methylmercury, CASRN 22967-92-6; EPA, Mercury Health Effects, <http://www.epa.gov/mercury/effects.htm>.

XV. The Draft EIS Fails To Adequately Analyze and Disclose Impact to Domestic Wells

The Draft EIS is also inadequate by failing to adequately analyze and disclose the likely environmental consequences from the proposed mine on drinking water wells located near the project area. The agencies must supplement or revise the Draft EIS to much more thoroughly assess and disclose the location of domestic wells, the contamination to these wells already being caused by the LTV tailings basin, the current water quality of these well sites, and a detailed analysis of the potential additional contamination of these wells resulting from the proposed mining project.

XVI. The Draft EIS Fails to Demonstrate Compliance with the Superior Forest Plan and All Applicable Forest Service Regulations

The Draft EIS acknowledges that the mine site is on the Superior National Forest, and yet there is no mention of the applicable Forest Plan standards and guidelines, or Forest Service regulations. The agencies must demonstrate compliance and consistency with the Forest Plan standards and applicable regulations before this project could proceed. See e.g., 16 U.S.C. § 1604(i).

The Draft EIS states that according to the Forest Service, the mineral rights leased to PolyMet “do not include the right to open pit mine the National Forest System land.” Draft EIS, p. S-1. The proposed mine therefore would also violate PolyMet’s mineral lease and related laws and regulations.

XVII. The Draft EIS Cumulative Effects Analysis is Inadequate

In accord with NEPA, the Forest Service must “consider” cumulative impacts. 40 C.F.R. § 1508.25(c); *Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1998). “To ‘consider’ cumulative effects, some quantified or detailed information is required.” *Neighbors of Cuddy Mountain*, 137 F.3d at 1379. “Without such information, neither the courts nor the public, in reviewing the [agency’s] decisions, can be assured that the [agency] provided the hard look that it is required to provide.” *Id.* “General statements about ‘possible’ effects and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.” *Id.* at 1380. “Nor is it appropriate to defer consideration of cumulative impacts to a future date,” *id.*, as NEPA requires consideration of the potential impact of an action *before* the action takes place. 40 C.F.R. § 1500.1(b).

The Draft EIS provides a very general, mostly non-quantified analysis for some resources, which falls short of the detailed analysis required by NEPA. In fact, in a major mining and NEPA decision, the United States Court of Appeals for the Ninth Circuit has rejected a similar cumulative effects analysis. In *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 971-974 (9th Cir. 2006), the court struck down the agency's reliance on the same sort of acreage listing and brief, generalized descriptions of mining impacts in the region. The court required the agency to include "mine-specific ... cumulative data." *Id.* at 973. Relying on prior cases, the court highlighted the need for a "quantified assessment of [other projects] combined environmental impacts" and "objective quantification of the impacts." *Id.* at 972. Here, the Draft EIS fails to provide this necessary analysis.

More specifically, there are a number of additional deficiencies with the cumulative effects analysis for various resources within the Draft EIS. First, the Draft EIS fails to include in its analysis a number of reasonably foreseeable proposals in the region. As stated by the Forest Service, "[a] list of reasonably foreseeable (including existing) projects should be included," including the expansion of the Peter Mitchell pit, the Forest Service "Tracks" project, a Pellet Transfer Facility, Mesabi Nugget Phase II, and a proposed highway connection. September 2, 2009, Forest Service Comments.

The Draft EIS also fails to explain that PolyMet fully intends for the Plant Site to be utilized for future copper-nickel mining projects in this region, as it would only be operating at approximately one-third capacity through the NorthMet project. The additional use of this Plant Site for additional mining proposals would presumably significantly increase the amount of waste that would be deposited into the LTV tailings basin, which again is already leaking from past mining. This would also greatly increase the amount of vehicle traffic and other disturbances in the immediate project area, as well as downstream.

The cumulative effects analysis is also significantly inadequate for a number of resources, including greenhouse gas emissions; water quality, including mercury and sulfate levels; wild rice impacts; wildlife; aquatic resources; and wetlands. *See e.g.*, DEIS, 4.14-2, n. 2. For example, as set forth above, despite the large number of ongoing and future projects within this region, including Minnesota Steel, the Keetac Expansion Project and other expansion of taconite mines, the Essar Steel Expansion project, Mesabi Nugget, the Excelsior coal gasification plant, Franconia Minerals Birch Lake proposal, Duluth Metals Nokomis proposal, the Teck Cominco Mesaba mine proposal, the widespread mineral exploration, there is no quantifiable, detailed, or objective assessment of the overall amount of greenhouse gas emissions that will be caused by these projects, nor an assessment as to how this will impact the State's ability to meet goals and standards that it has committed to achieve. There is also a lack of a cumulative effects analysis regarding the amount and importance of the peat that would be destroyed, which serves an important carbon sink and also sequesters mercury; and the importance of the destroyed wetlands both as important carbon sinks and areas where wildlife will seek refuge during this era of unprecedented climate change. *Id.*

Similarly, even though most project area waterbodies are already water quality impaired due to mercury pollution, with a TMDL already in place for some waterbodies and others too impaired for the TMDL to even be applied (see e.g., DEIS, 4.5-19, 20), the Draft EIS fails to include an adequate cumulative effects assessment regarding the amount of increased sulfates, mercury and other pollutants that will be produced cumulatively by these numerous projects and how these significant increases will somehow meet all applicable water quality standards and requirements. As explained, in order to consider cumulative effects, some quantified or detailed information is required, and general narrative statements about “possible effects” and “some risk” are insufficient. *Neighbors of Cuddy Mountain*, 137 F.3d at 1379-80. The proposed mine “would result in the release of sulfate to a high risk situation for mercury methylation” (DEIS, 4.5-21), and this “high risk situation” of one proposal must be considered cumulatively along with all other past, present, and reasonably foreseeable proposals to determine and disclose the overall risks to water quality, fish, wildlife species that prey on aquatic species, and human fish consumption. Significantly, this cumulative impacts analysis for sulfates and mercury cannot be limited to only project area streams, but must include downstream areas including the St. Louis River, the St. Louis River estuary, and Lake Superior; and must include an analysis of the potential impacts to the aquatic species present in these downstream rivers, streams and Lake Superior.

The cumulative effects analysis for wildlife must also include and address the impacts being caused by ongoing climate change, and how this will likely affect wildlife and plants during the 20 year period of this proposed mine. Lynx are already threatened with extinction in the lower 48 states, the state’s moose population is already in decline, and vegetation patterns are predicted to be altered, but there is no assessment of this significant impact in the Draft EIS.

The Draft EIS also fails to include moose in its discussion of the few remaining wildlife corridors in the region, and in its cumulative impacts assessment for wildlife and wetlands impacts. As noted by the Tribal cooperating agencies, the Minnesota wildlife advisory committee studying the decline of the moose population in northeastern Minnesota has recommended preserving wetlands as sanctuaries for moose from heat stress, and the yet PolyMet is proposing the largest direct wetland fill ever permitted in this region, with the proposed wetland mitigation located outside of the St. Louis River watershed and 1854 ceded territory. The proposed project will thus clearly contribute to cumulatively significant effects on the state’s moose populations and Tribal harvest in the 1854 ceded territories, which the Draft EIS has failed to assess or disclose.

Additionally, the Draft EIS cumulative effects analysis is inadequate by failing to consider cumulative impacts to bird species, which are currently in decline due to habitat losses and fragmentation. See e.g., Lind, J.; Danz, N.; Jones, M.T.; Hanowski, J.M.; *2001 Annual Update Report: Breeding Bird Monitoring in Great Lakes National Forests 1991-2001* (NRRI 2001); Birds Of Conservation Concern, 2002 (identifies species and subspecies and populations of birds “in need of additional conservation action”; follows up and expands on a 1995 list of migratory nongame birds that are likely to become candidates for ESA listing without additional conservation actions. The report identifies species that are of the highest priority for conservation efforts and

attempts to include all species thought to be at risk in order to focus conservation attention on them "well in advance of a possible or plausible need" for ESA protection); available on line at <http://migratorybirds.fws.gov/reports/BCC2002.pdf>

Water quality within the St. Louis River watershed has already been degraded by past and present mining activities. Additional discharges of sulfate, mercury and other metals will contribute to the cumulatively significant effects on water quality in the St. Louis River watershed. As noted by the Tribal cooperating agencies, an Antidegradation Analysis for the Lake Superior Basin must be conducted for several contaminants in addition to mercury, and the results of this analysis must be included in a revised DEIS.

The Draft EIS must assess the cumulative impacts of past actions, including past mining activities, on affected aquatic species in considerable more detail than what is presented, including ongoing adverse impacts resulting from the pollution occurring at the LTV site. *See e.g.*, DEIS, 4.5-9, n. 4 (Tribal cooperating agencies comments, stating "there is no evidence to support a conclusion that low species richness in either the macroinvertebrate or fish communities is solely a manifestation of poor habitat, and not also potentially a result of previous mining impacts in the watershed").

The cumulative effects analysis also fails to adequately address the overall cumulative impacts on the numerous ongoing and proposed projects within this region on wild rice, a significant Tribal and public resource which is already on decline throughout the 1854 ceded territory.

Additionally, the Draft EIS cumulative effects analysis fails to address the amphibole or asbestos-like mineral fibers, which have been identified as existing pollutants in the Hoyt Lakes community water supply and thus their presence must be identified and analyzed in the DEIS.

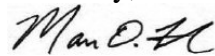
XVIII. The Draft EIS Alternatives Section is Inadequate

The alternatives section is the heart of an environmental impact statement. 40 C.F.R. 1502.14. Agencies must therefore rigorously explore and evaluate all reasonable alternatives. *Id.* at 1504.14(a); *see also Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 812-13 (9th Cir. 1999). An agency may not define a project so narrowly that it forecloses a reasonable consideration of alternatives. *Fuel Safe Washington v. Federal Energy Regulatory Commission*, 389 F.3d 1313, 1324 (10th Cir. 2004). The alternatives analysis for an EIS requires full examination of a "no-build" alternative (meaning status quo in an undeveloped state) and examination of a spectrum of "real" options, not just those tailored to the desires of the project proposer. *See Fuel Safe Washington*, 389 F.3d at 1324 (10th Cir. 2004); *Custer County Action Association v. Garvey*, 256 F.3d 1024, 1040 (10th Cir. 1002); *Muckleshoot Indian Tribe*, 177 F.3d at 812-13. For the proposed NorthMet project, both smaller scale proposals and underground mining alternatives should have been included in the alternatives analysis.

CONCLUSION

Due to the numerous and significant violations of state water quality standards, the Endangered Species Act, and other state and federal laws and requirements, as identified and explained above, the proposed NorthMet project cannot be permitted to proceed. And due to the numerous and significant problems with the Draft EIS, as identified and explained above, a revised Draft EIS must be prepared if the agencies decide to continue consideration of the proposed NorthMet mine. Thank you for the opportunity to provide comments on the Draft EIS, and please keep me on the mailing list regarding this proposed project.

Sincerely,



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