

1 **8.0 MAJOR DIFFERENCES OF OPINION**

2 **8.1 SUMMARY**

3 This chapter discloses major differences of opinion Tribal Cooperating Agencies identified with
4 the analysis presented in the SDEIS. This information is provided to ensure that EIS reviewers
5 are aware that major differences of opinion exist between the Co-lead Agencies and the Bois
6 Forte Band of Chippewa (Bois Forte), the Grand Portage Band of Lake Superior Chippewa
7 (Grand Portage), the Fond du Lac Band of Lake Superior Chippewa (Fond du Lac), the Great
8 Lakes Indian Fish & Wildlife Commission (GLIFWC), and the 1854 Treaty Authority regarding
9 the impacts of the proposed project on the environment. The Co-lead rationale for the analysis as
10 presented in the SDEIS is also provided. In addition, a brief list of the locations in the SDEIS
11 where the relevant concepts are discussed is provided for ease of tracking.

12 The USEPA is also a Cooperating Agency. The USEPA did not identify major differences of
13 opinion during preparation of the SDEIS.

14 **8.2 INTRODUCTION**

15 In developing the NorthMet Mining Project and Land Exchange EIS, the Co-lead Agencies
16 invited Bois Forte, Grand Portage, and Fond du Lac to be Cooperating Agencies in preparation
17 of the EIS. Other Tribal entities participating in the EIS process include the 1854 Treaty
18 Authority and GLIFWC. In addition, Tribal Historic Preservation Officers and staff from the
19 1854 Ceded Territory Bands have been, and continue to be involved in Section 106 consultation
20 with the Co-lead Agencies regarding potential effects to historic properties in the proposed
21 project area as directed in 36 CFR 800.

22 Throughout the development of the SDEIS, Cooperating Agency staff have participated in
23 various technical teams in areas of their special expertise as described in 40 CFR Part 1501.6,
24 including acting as technical review staff in various EIS-related activities. In particular, the
25 impact assessment planning (IAP) process for air, water (both surface and ground), and wetland
26 resources included opportunities for all Cooperating Agencies to provide input for Co-lead
27 Agencies' consideration of the need for new data, analyses, and/or modeling beyond that
28 conducted to support the DEIS. Similarly, all Cooperating Agencies provided comments on the
29 accuracy and completeness of the Preliminary SDEIS resulting from their review.

30 The EIS process anticipates comment and input from the Tribal Cooperating Agencies in the
31 development of the SDEIS, and the NorthMet Project EIS Communications and Coordination
32 Plan (CCP) commits the Co-lead Agencies to actively seek input from the Bands on how
33 potential effects of the proposed project to natural and cultural resources will affect the Bands'
34 traditional cultural practices, and identify and disclose where differences exist between the
35 parties. In addition, the CCP notes for the MDNR in its capacity as Responsible Governmental
36 Unit, Minnesota Rules part 4410.2300, item H, states: "The EIS shall identify and briefly discuss
37 any major differences of opinion concerning significant impacts of the proposed project on the
38 environment." For the USACE and USFS, in their capacity as federal Lead Agencies, 40 C.F.R.
39 Sections 1502.9 and 1503.4, notes they are obligated to work with the Cooperating Agencies to

40 obtain their comments and “shall make every effort to disclose and discuss at appropriate points
41 in the draft statement all major points of view on the environmental impacts of the alternatives
42 including the proposed action.”

43 ***8.3 MAJOR DIFFERENCES OF OPINION***

44 Consistent with the CCP and state and federal regulations, comments from the Cooperating
45 Agencies on the Preliminary SDEIS were evaluated by the Co-lead Agencies to determine if they
46 do or do not represent major differences of opinion concerning environmental impacts.
47 Following review of the Preliminary SDEIS, the Cooperating Agencies provided comments for
48 consideration by the Co-lead Agencies. The Co-Leads worked diligently with the Cooperating
49 Agencies to resolve their concerns, but ultimately 18 issue areas were not resolved and
50 determined to represent major differences of opinion. Supporting documentation and
51 independent analyses were also provided by the Tribal Cooperating Agencies (see Section 8.4).
52 Although this information was considered, ultimately the Co-lead Agencies determined that the
53 analysis and supporting documentation presented in the SDEIS is valid and, in their opinion, best
54 discloses potential environmental impacts as directed by NEPA and MEPA.

55 Table 8-1 documents the comments provided by the Tribal Cooperating Agencies by providing:

- 56 • the 18 issue areas;
- 57 • the Tribal Major Difference of Opinion Summary;
- 58 • the Tribal agency(ies) holding the major difference of opinion;
- 59 • the Co-lead Agencies’ response on the issue; and
- 60 • the location in the SDEIS or reference material supporting the Co-lead Agencies’ opinion on
61 the issue.

62 **Table 8-1 Major Differences of Opinion (MDOs)**

MDO #	Specific Major Difference of Opinion Area	Tribal MDO Summary	Co-lead Position on MDO
1	Impacts to flow in Embarrass and Partridge Rivers	Grand Portage, Fond du Lac, and GLIFWC believe that projected reductions in average stream flows in the Partridge and Embarrass Rivers, and subsequent impacts to aquatic habitat in these same systems, results in measurable impacts. They believe that the interaction of the project’s impacts with natural variability in precipitation would be more adverse than reported in the SDEIS. This is because effects of climatic variability are additive to the project-related change, which would be especially true for drier periods. The agencies believe there is very little understanding of the hydrology of the Upper Partridge River, and the XP-SWMM model used to extrapolate flow data is flawed and does not produce usable results. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.	The Co-lead Agencies believe that the SDEIS adequately predicts impacts to flow in the Embarrass and Partridge Rivers. Impact assessment methodologies are presented in SDEIS section 5.2.2.2.2 and provide readers with specific information and cited reference documents that support the basis for the Co-leads’ position. In addition, monitoring and adaptive management methods are presented in SDEIS section 5.2.2.3.5 for permitting agencies to consider requiring such that if actual project impacts were found to be higher than predictions, then steps could be taken to reduce those impacts to acceptable levels.
2	Predicted decrease in mercury loading	Fond du Lac, Grand Portage, and GLIFWC do not believe the proposed project will result in a decrease in mercury loading to the Embarrass and Partridge River aquatic systems. For the Embarrass River, they do not believe that: 1) the tailings basin will function as a mercury sink; and 2) mercury methylation would decrease due to projected reductions in sulfate contributions. For the flows for the Partridge River, Embarrass River, or their tributaries, they disagree that the project would not significantly impact flow and water level fluctuations, thus leading to increased mercury methylation and bioaccumulation, which taken together may be sufficient to impact habitat leading to alterations of species composition, food web structure, and ultimately mercury bioaccumulation. Potential mercury contributions from peat stored at the Overburden Laydown and Storage Area have also not been addressed. Mercury-related concerns are present for created wetlands at the East Pit and mercury concentrations in water discharged from the West Pit. Air-related mercury emissions do not account for sources from energy generation of vehicle use at the site. For the Lake Superior watershed, any additional mercury releases to the environment are exacerbating already existing impairments including fish advisories set for recreational fishing. Increased fish mercury levels will also have direct impacts on both the cultural and recreational resources of the region. Appendix C provides additional	The Co-lead Agencies believe that the SDEIS adequately predicts that the NorthMet Project would result in a decrease in mercury loading to the Embarrass and Partridge Rivers. Impact assessment methodologies are presented in SDEIS section 5.2.2.1.2 and provide readers with specific information and cited reference documents that support the basis for our position. Also see SDEIS section 5.2.2.3.4 about mercury impacts from the NorthMet Project. In addition, water monitoring and adaptive management methods are presented in SDEIS section 5.2.2.3.5 for permitting agencies to consider requiring such that if actual project impacts were found to be higher than predictions, then steps could be taken to reduce those impacts to acceptable levels.

MDO #	Specific Major Difference of Opinion Area	Tribal MDO Summary	Co-lead Position on MDO
		<p>information from these agencies on this major difference of opinion revealed in the development of the SDEIS.</p>	
3	<p>Wild rice standard regulatory applicability determinations and areas of production</p>	<p>Grand Portage, Fond du Lac, GLIFWC, and The 1854 Treaty Authority disagree with the MPCA’s draft staff recommendations about the applicability determination of the wild rice 10 mg/L sulfate surface water standard to the NorthMet Project. These agencies do not agree with a seasonal application of the standard, or the reaches of waters determined as for the production of wild rice, and compliance points for the sulfate standard, nor do they agree with basing a determination of a wild rice production water on the density of wild rice found growing there. The 1854 Treaty Authority states that it is arbitrary to define how much rice presence is required, especially given the lack of long-term monitoring data on a given water. Embarrass Lake is considered a water used for the production of wild rice under current MPCA draft staff recommendations; water quality is not meeting the wild rice water quality standard there and wild rice is also found further upstream in the Embarrass River because it is an existing use defined by the Clean Water Act. Grand Portage states that the wild rice sulfate standard for waters used in the production of wild rice applies in the Embarrass River. The 1854 Treaty Authority notes that research and evaluation of the standard are ongoing, and that application of the standard may change. All believe the State’s application of the wild rice standard is not in compliance with the Clean Water Act.</p> <p>This difference of opinion is directed at an element of the State’s water quality regulatory program, but is offered in the SDEIS because the effects analysis presented in the SDEIS is based on the regulatory program. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.</p>	<p>The Co-lead Agencies believe the MPCA’s project-specific guidance on the applicability of the wild rice standard is a relevant and appropriate water quality impact criterion to use in the SDEIS. The wild rice standard is based in rule where applicability is determined by the MPCA. Any future regulatory determinations and basis for applicability of the wild rice standard is outside of the scope of this SDEIS. The Co-lead Agencies also note there will be opportunities for Grand Portage, Fond du Lac, GLIFWC, and The 1854 Treaty Authority to engage MPCA in these regulatory determinations outside of this project-specific EIS, which is the more appropriate venue to raise these concerns.</p> <p>The Co-lead Agencies understand that MPCA’s project-specific guidance may change as their NPDES/SDS permitting process progresses. If their guidance does change in the future, it will be considered for use in the FEIS.</p>
4	<p>Impaired waters list regulatory designation should be made for Embarrass River watershed</p>	<p>Grand Portage and Fond du Lac believe that sulfate concentrations should be a criteria used for designation of an impaired wild rice water. They note that no wild rice waters in the state have been designated impaired by the MPCA. Grand Portage states that all segments of the Embarrass River that are identified as wild rice waters by MPCA are impaired due to water quality exceedances for sulfate. Grand Portage further notes waters where wild rice historically occurred, all exceed the 10 mg/L sulfate standard and therefore should be on the impaired waters list because it is known that wild rice previously grew in these waters. These agencies contend the Embarrass River is already impaired so any sulfate additions constitute cumulative effects.</p>	<p>The Co-lead Agencies believe it is reasonable to rely on MPCA’s Clean Water Act Section 303(d) Draft 2012 List of impaired waters in the SDEIS. The Co-lead Agencies recognize that there are segments of the Embarrass River on the Draft 2012 List, but give regulatory deference to the MPCA and USEPA’s process for determining the basis for, and finalizing, the impairments assigned to a given reach of water on the draft list. The Draft 2012 List is a work</p>

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		<p>This difference of opinion is directed at the MPCA’s impaired waters regulatory program, but is offered in the SDEIS because the effects analysis impact criteria presented in the SDEIS are based on information developed with respect to this regulatory program. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.</p>	<p>in progress where the Co-lead Agencies believe that how listing determinations are reached is outside the scope of this EIS.</p> <p>Furthermore, the Co-lead Agencies will continue to rely on MPCA’s project-specific guidance on the applicability of the wild rice standard as a relevant and appropriate water quality impact criterion to use in the SDEIS.</p>
5	Underground Mining analysis	<p>GLIFWC believes that the Underground Mine Alternative has been prematurely eliminated from consideration in the NorthMet Project SDEIS and it would provide significant environmental benefits when compared to the proposed project. An underground mine would largely eliminate impacts to wetlands, and would substantially limit water quantity and quality impacts for surface- and ground water resources. GLIFWC concurs that underground mining is technically feasible and available at the site, leaving only the lack of economic feasibility as the rationale used by the Co-lead Agencies to eliminate the alternative. On this GLIFWC’s opinion is that the Co-lead Agencies did not fully assess information on economic feasibility provided by the proposer. Deficiencies noted by GLIFWC are related to the: error term for economic projections; rates on return on investment; costs of the land exchange; environmental goods and services provided by natural systems; economic impact and inconsistency with state mineland reclamation program goals regarding perpetual maintenance and water treatment at the site. Appendix C provides additional information from this agency on this major difference of opinion revealed in the development of the SDEIS.</p>	<p>The Co-lead Agencies believe that adequate consideration was given to the Underground Mining Alternative prior to eliminating it from further consideration for the SDEIS.</p> <p>Both the SDEIS section 3.2.3.4.1 and the Co-lead position paper (Appendix B) disclose that an underground mine would result in a smaller footprint, thus offering certain environmental benefits such as reduced effects on wetlands, vegetation, and wildlife habitat.</p> <p>However, both the SDEIS and the Co-lead position paper also disclose that underground mining costs would be so high that underground mining of the NorthMet deposit would not be economically viable. Therefore it found to not be a reasonable alternative and was eliminated from further consideration.</p>
6	West Pit backfill option analysis	<p>GLIFWC believes that the West Pit Backfill option has been prematurely eliminated from consideration in the NorthMet Project SDEIS. They believe the potential environmental benefits to long term water quality have not been fully assessed and mineral encumbrance issues can be avoided. This alternative meets the purpose and need, is available, and is technically and economically feasible. By limiting the consideration of environmental benefits to only a screening-level analysis, the full effect of the alternative on the environment is not known, especially for water quality and potential need for perpetual treatment (contrary to state mineland reclamation program goals). The issue of</p>	<p>The Co-leads believe that the West Pit Backfill option was not prematurely eliminated, because adequate consideration was given prior to eliminating it from further consideration for the SDEIS.</p> <p>Both the SDEIS section 3.2.3.4.2 and the Co-lead Memo on the West Pit Backfill Alternative disclose that backfilling the West Pit with</p>

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		<p>mineral encumbrance is raised as proposer concern, but is avoided by employing standard underground mining techniques from other locations. GLIFWC’s opinion is that economic considerations of a future mine expansion are the only concrete reasons for not conducting a full analysis, and every available option that might improve long term impacts should be explored regardless of mineral lease commitments. Appendix C provides additional information from this agency on this major difference of opinion revealed in the development of the SDEIS.</p>	<p>Category 1 rock would affect the water quality in the West Pit by increasing constituent loads, so additional mechanical treatment of water in the West Pit may be required for a certain timeframe following backfilling. Long term treatment of the water from the West Pit would be required under both the backfilled alternative and the NorthMet Project Proposed Action, so there would be no measurable benefit on the effect on surface water quality discharged to the environment. The opportunity to reclaim wetlands and vegetation at the Category 1 Stockpile footprint area (after mining has ended) would be the only measurable environmental benefit offered by backfilling the Category 1 Stockpile into the West Pit. However, because of the temporal effect that the stockpile would have, those effects would be required to be mitigated regardless of future backfilling or not. Furthermore, the potential environmental benefit is moot or outweighed because encumbrance is not allowed in PolyMet’s private mineral leases and because the costs associated with backfilling, additional water treatment (rates), and encumbrance royalties determined in revised lease agreements, may affect the ability of PolyMet to secure financing. As such, the option to backfill the West Pit was eliminated from further consideration in the SDEIS.</p>
7	Partridge River baseline base flow and XP-SWMM model calibration	Grand Portage, Fond du Lac, and GLIFWC believe that basic site surface water flow hydrology at the Mine Site is inadequately characterized. The XP-SWMM model predictions may have underestimated baseflow conditions in the Partridge River by a factor of five (5). If true, this mis-characterization might affect water quality compliance projections in that although more baseflow might mean more dilution of contaminants, it could also mean	The Co-lead Agencies believe that the SDEIS adequately predicts Partridge River baseline baseflow and that the XP-SWMM model calibration was appropriate. Impact assessment methodologies are presented in SDEIS section 5.2.2.2.2 and provide readers with specific

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		<p>transport of greater quantities of pollutants or drawdown for the Partridge River. They also contend that XP-SWMM’s projections, which are based on data from 17 miles away collected from 1978 to 1987, do not align with the rating curve from new MDNR winter monitoring data, or the results of GLIFWC’s own projections taken from two years of new data from the Dunka Road gage. Because XP-SWMM’s low estimates of baseflow are used in the calibration of the MODFLOW model, it will influence many aspects of the baseline site characterization and impact prediction. These include pit inflow, dewatering impacts to the Partridge River and wetlands, water treatment needs, groundwater flow rates, contaminant transport times and concentrations, and contaminant dilution in the Partridge River watershed. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.</p>	<p>information and cited reference documents that support the basis for the Co-leads’ position. In addition, water monitoring and adaptive management methods are presented in SDEIS section 5.2.2.3.5 for permitting agencies to consider requiring such that if actual project impacts were found to be higher than predictions, then steps could be taken to reduce those impacts to acceptable levels.</p>
8	<p>Analog method to assess indirect impacts from mine dewatering</p>	<p>Grand Portage, Fond du Lac, GLIFWC, and The 1854 Treaty Authority believe that the Co-lead Agencies’ proposed analog method of assessing potential indirect impacts from mine site pit dewatering is not rigorous, and as such should not be the sole means of indirect impact assessment for the SDEIS. Resource assessment areas of concern include wetlands, groundwater, and surface waters. All these agencies consider the impact zones and distances to be somewhat arbitrary, and also challenge the automatic exclusion of ombotrophic wetlands from potential drawdown effects. Accounting for these factors GLIFWC conducted an independent assessment using the same methods as the Co-lead Agencies, along with additional analog data from other mining-impacted sites, which found an estimated total of 5719.75 acres of wetlands would be potentially susceptible to severe indirect impacts from mine pit drawdown. These agencies are of the opinion that the USACE should require up front mitigation for all severely impacted wetlands, but at a minimum up front mitigation should be required for wetlands occurring in zone 1. They also contend that additional up front mitigation should be considered for wetlands that are classified in the moderate to severe category, with robust monitoring being required for wetlands in the moderate category. These agencies also note that the upper Partridge River is located in Zone 2; GLIFWC’s independent analysis estimated drawdowns of 3 to 5 feet under the river, which would severely reduce baseflow in the channel, indirectly impact riparian wetlands downstream, and affect other surface water features. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.</p>	<p>The Co-lead Agencies believe that the SDEIS adequately uses the analog method to assess potential indirect impacts from mine dewatering. Impact assessment methodologies for the analog evaluation are presented in SDEIS sections 5.2.2.3.2 and 5.2.3.1.2. These sections provide readers with specific information and cited reference documents that support the basis for our position. In addition, water monitoring and adaptive management methods are presented in SDEIS sections 5.2.2.3.5 and 5.2.3.3 for permitting agencies to consider requiring such that if actual project impacts were found to be higher than predictions, then steps could be taken to reduce those impacts to acceptable levels or to require compensatory mitigation off site.</p>

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9	Mine Site groundwater impact travel times	Grand Portage and GLIFWC believe that assumed groundwater pollutant travel times at the mine site are underestimated. They contend that relevant literature and data suggest otherwise, and this has not been captured in the modeling of bedrock aquifer transport of pollutants from the mine pit to surface water features. Grand Portage further disagrees with the Co-lead Agencies' assumption that the Duluth Complex would remain highly competent with extremely low hydraulic conductivities post-blasting. If true, resulting groundwater travel times through bedrock would be shorter than predicted in the SDEIS. They recommend conducting a greater characterization of the entire Partridge River watershed and mine site. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.	The Co-lead Agencies believe that the SDEIS adequately predicts groundwater impact travel times at the Mine Site. Impact assessment methodologies are presented in SDEIS section 5.2.2.2.1 and provide readers with specific information and cited reference documents that support the basis for the Co-leads' position. In addition, water monitoring and adaptive management methods are presented in SDEIS section 5.2.2.3.5 for permitting agencies to consider requiring such that if actual project impacts were found to be higher than predictions, then steps could be taken to reduce those impacts to acceptable levels.
10	No Action Alternative analysis	Fond du Lac, Grand Portage and GLIFWC believe CEQ guidance require that water quality modeling of a No Action alternative should include activities that will occur under the existing Cliffs Consent Decree. The consent decree requires mitigation for water quality exceedances from Area Pit 5, the LTVSMC tailings basin, and the Dunka Pit, all of which under the No Action alternative would cause compliance with all water quality standards with no additional reductions in flows. Further, they contend the current modeling of the "continuation of existing conditions," which omits the dilution effect of precipitation on the water quality of the basin, is not appropriate. Claims that the basin's water quality has stabilized and that current conditions will not change over time is based on pond water sampling for only 4 years (2001-2004). If precipitation since 2004 has not influenced water quality by further diluting water chemistry in the pond, then more recent data on basin pool water chemistry is needed to support the assumption. These agencies are of the opinion while the CEQ makes it clear that a blind "continuation of existing conditions" model is inappropriate as a No Action alternative, a "continuation of existing conditions" model that ignores simple environmental processes such as precipitation is even less appropriate. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.	The Co-lead Agencies believe that the SDEIS adequately analyzes effects to water resources under the No Action Alternative as required by NEPA/MEPA. Future remedial actions that would be required at the LTVSMC Tailings Basin under the consent decree and other permits are not established so it is not possible to model those conditions. The No Action Alternative is described in SDEIS section 5.2.2.4.
11	Cumulative Effects to groundwater	Grand Portage, Fond du Lac, GLIFWC, and The 1854 Treaty Authority disagree with the Final SDD and SDEIS conclusion that no cumulative effects to groundwater resources are expected. They note bedrock and surficial ground	The Co-lead Agencies believe that the SDEIS accurately predicts cumulative effects to groundwater and surface water quality and

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	and surface water quality and quantity	water pollution is already documented at the old LTVSMC site (i.e., plant site; area pits 5, 6, and 9S) and the Dunka Pit. Cumulative effects at these locations should be assessed with the proposed project along with potential groundwater pollution from the Peter Mitchell Pit, Laskin Energy, Arcelor-Mittal, United Taconite, and US Steel Minntac. They suggest a future action that should be considered in a cumulative effects analysis is any potential future backfill of Virginia Formation waste rock for in-pit disposal at the Cliffs Peter Mitchell Pit. And they contend that potential dewatering-related interaction effects between the proposed NorthMet Project and the Peter Mitchell Pit should be evaluated for cumulative effects. Appendix C provides additional information on this major difference of opinion revealed in the development of the SDEIS.	quantity. Cumulate effects impact assessment methodologies are presented in SDEIS section 6.2.3.3 and provide readers with specific information and cited reference documents that support the basis for our position. In addition, water monitoring and adaptive management methods specific to the NorthMet Project are presented in SDEIS section 5.2.2.3.5 for permitting agencies to consider requiring such that if actual effects were found to be higher than predictions, then steps could be taken to reduce those effects to acceptable levels.
12	CEAA for Partridge and Embarrass Rivers	Fond du Lac, Grand Portage, GLIFWC, and The 1854 Treaty Authority believe that limiting the cumulative effects analysis area (CEAA) for water resources to the Partridge and Embarrass River watersheds is too small. Rather, they contend the analysis should be expanded to include the St. Louis River. Impacts associated with United Taconite’s proposal for 1,200 acres of wetland destruction to build a new tailings basin should be considered. More broadly, they contend the project would add to the load of pollutants that are already causing an excursion from the water quality standards in the St. Louis River and would reduce tributary flows to the river. If true, then project-related impacts that may occur due to the project could be underestimated (due to modeling concerns), and would not stop before reaching the St. Louis River. This would mean that any added impact from the project to the St. Louis River would in turn impact Lake Superior, so this should be the scale to analyze cumulative effects. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.	The Co-lead Agencies believe that the SDEIS uses an appropriate cumulative effects assessment area. The basis for using this area is presented in SDEIS section 6.2.3.3.1 and that provide readers with specific information that supports the basis for the Co-leads’ position. In addition, water monitoring and adaptive management methods specific to the NorthMet Project are presented in SDEIS section 5.2.2.3.5 for permitting agencies to consider requiring such that if actual effects were found to be higher than predictions, then steps could be taken to reduce those effects to acceptable levels.
13	Effects on groundwater and surface water hydrology	Fond du Lac, Grand Portage, and GLIFWC disagree with the conclusion that the Proposed Project is not predicted to result in any significant effects on groundwater or surface water hydrology. XP-SWMM relies on antiquated data from far downstream, which means the model’s projection of hydrologic effects cannot be supported. They believe GoldSim cannot reliably predict whether the 28 solutes modeled at both the plant and mine sites would meet the Minnesota water quality standards. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.	Similar and related to MDO’s #1 and #7 above, the Co-lead Agencies believe that the SDEIS adequately predicts effects on groundwater and surface water hydrology. Overall water Impact assessment methodologies are presented in SDEIS section 5.2.2.2 and provide readers with specific information and cited reference documents that support the basis for the Co-leads’ position. In addition, water monitoring

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			and adaptive management methods are presented in SDEIS section 5.2.2.3.5 for permitting agencies to consider requiring such that if actual project impacts were found to be higher than predictions, then steps could be taken to reduce those impacts to acceptable levels.
14	GoldSim not able to replicate Tailings Basin water/Partridge River under the No Action Alternative	GLIFWC believes that the GoldSim model does not accurately predict existing water quality conditions, such as the existing exceedance of the aluminum standard in the Embarrass River, or existing conditions in the Partridge River. The agency contends that if a model is unable to accurately predict current conditions, then it is even less likely to accurately predict future project conditions. GLIFWC notes that for many parameters at several water bodies, the No-Action P50 model of annual average value is substantially different than the observed average under existing conditions. The GoldSim model(s) need to be better calibrated to existing conditions. Without new calibrations, the GoldSim model's projections are not adequate to ensure protection of water resources. Appendix C provides additional information from this agency on this major difference of opinion revealed in the development of the SDEIS.	The Co-lead Agencies believe that the GoldSim model did adequately replicate Tailings Basin water and the Partridge River under the Continuation of Existing Conditions modeling scenario for the SDEIS. GoldSim model set up and calibration information is presented in SDEIS section 5.2.2.2.3. Model predictions are also reliable and are presented in the "GoldSim Model Operations and Output" and "Application of Evaluation Criteria to Probabilistic Modeling Results" subsections in SDEIS section 5.2.2.2.3.
15	Mineral fibers	Fond du Lac, Grand Portage, and 1854 Treaty Authority believe the risks associated with exposure to mineral fibers are greater than portrayed in the SDEIS. Fond du Lac disagrees that 9% amphibole fibers identified by PolyMet testing can be considered a "small" percentage of the fibers identified, while Grand Portage notes chrysotile fibers that would be expected to be found in the NorthMet deposit are not considered. Grand Portage and Fond du Lac indicate that information cited from studies in this section is outdated and that the section should be updated to rely on the most recent reports (i.e.; U of M study released in April 2013). The Bands contend that one year of monitoring as currently proposed is not adequate to account for the variability and unpredictable mineralogy in the rock to be mined, and that monitoring for mineral fibers should be conducted for the duration of the mining operation. Fond du Lac identifies that risks associated with ingestion should be considered in addition to inhalation; risks from ingestion are not discussed in the air quality section or the human health risk section of the document. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.	The Co-lead Agencies believe that the SDEIS adequately describes the minor risks associated with mineral fibers and also includes monitoring and mitigation measures described in section 5.2.7.5.
16	Rail car spillage	GLIFWC disagrees that the amount of ore that could escape from rail cars	The Co-lead Agencies believe that the SDEIS

MDO #	Specific Major Difference of Opinion Area	Tribal MDO Summary	Co-lead Position on MDO
	and dust	would be small because the rail cars proposed for use are not sealed. GLIFWC states that, given the design and current condition of rail cars proposed for transport, an ecologically significant amount of spillage could occur into streams, wetlands, and their watersheds. GLIFWC believes that fugitive dust escaping through gaps in the rail cars is also a concern. GLIFWC does not believe that the method described to segregate fines in the center of the rail car, away from the gaps, is realistic. Further, GLIFWC does not believe that monitoring of the creeks along the rail line will be effective in preventing or minimizing impacts because once detected in monitoring, the impact will have already occurred. GLIFWC states that cleanup of ore dust in an aquatic environment is a long and difficult process. Appendix C provides additional information from this agency on this major difference of opinion revealed in the development of the SDEIS.	adequately predicts the rail car spillage and potential environmental effects. Estimates of potential spillage are presented in SDEIS section 5.2.2.3.2, and potential effects are presented in sections 5.2.2.3.2, 5.2.3.2.2, and 5.2.7.1.3. These sections provide readers with specific information and cited reference documents that support the basis for the Co-leads' position. In addition, water and air monitoring and adaptive management methods are presented in SDEIS sections 5.2.2.3.5 and 5.2.7.4.2 for permitting agencies to consider requiring such that if actual project impacts were found to be higher than predictions, then steps could be taken to reduce those impacts to acceptable levels.
17	Use of cumulative effect water evaluation criteria vs. water quality standards	Fond du Lac and Grand Portage do not agree with statements in the document that indicate there is "no impact" when that assertion is based on not exceeding an evaluation criteria. They believe the SDEIS should acknowledge where there is a change, regardless if a criteria or standard is exceeded. With regard to the water quality effects analysis, Grand Portage and GLIFWC note that evaluation criteria are not equivalent to water quality standards. Grand Portage further notes that some evaluation criteria are high enough to cause human health impacts and evaluation criteria are not equal to or a substitute for water quality standards compliance. GLIFWC notes that in some areas, for example the cumulative effects section for the Partridge River, the text states all water evaluation criteria would be met, though water quality standards would be exceeded for several constituents. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.	The Co-lead Agencies believe that the SDEIS appropriately considers cumulative effects to water, including the impact criteria specific to the NorthMet Project, and discloses that the evaluation criteria differ from water quality standards (for some constituents). As described in the SDEIS, the evaluation criteria do use the standards, but interpret the standards from a probabilistic perspective. Cumulative effect water evaluation criteria are described in SDEIS section 6.2.3.3.4.
18	Loss of "High Biodiversity Significance Values" sites	Fond du Lac, GLIFWC, and Grand Portage believe that native plant communities identified by the Minnesota Biological Survey will be impacted by the proposed mine site and related transportation and utility corridor without appropriate mitigation for their landscape-scale and ecosystem values. There are two MBS sites of high biodiversity significance (18.8 acres) located within the transportation and utility corridor, including the 100 mile swamp and the upper Partridge River. They state that forty-one percent of the mine	The Co-lead Agencies believe that the SDEIS appropriately discloses potential effects (loss) to high biodiversity significant sites as listed in the Minnesota Biological Survey characterization data. There is no policy or requirement to mitigate impacts to MBS sites of high biodiversity significance for those

MDO #	Specific Major Difference of Opinion Area	Tribal MDO Summary	Co-lead Position on MDO
		site consists of imperiled/vulnerable communities, but there is no proposed mitigation. Fond du Lac and Grand Portage’s opinion is that there will be a net loss to the federal estate of these MBS communities that would not be compensated with equivalent MBS land exchange parcels gained through the USFS land exchange. Appendix C provides additional information from these agencies on this major difference of opinion revealed in the development of the SDEIS.	attributes. SDEIS section 4.2.4 discloses these MBS sites and sections 3.2.2 and 5.2.4 also describes mine reclamation that would be completed as part of the NorthMet Project, some of which may allow such MBS sites to re-establish.

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63 **8.4 TRIBAL AGENCY APPENDIX – SUPPORTING INFORMATION**
64 **FOR TRIBAL COMMENTS**

65 The Co-lead Agencies committed to allow the Tribal Cooperating Agencies to place comments
66 and supporting documentation representing a major difference of opinion in an appendix to the
67 SDEIS. Additional information such as existing literature or data will be included in the
68 administrative record for the project. The information and submittals in the appendix are Tribal
69 views and have not been validated or approved by the Co-lead Agencies. See Appendix C for
70 comments and supporting documentation from Bois Forte, Grand Portage, Fond du Lac,
71 GLIFWC, and the 1854 Treaty Authority for their verbatim comments representing a major
72 difference of opinion concerning significant impacts of the proposed project on the environment.

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