

**Response to Public Scoping Comments  
PolyMet Mining, Inc., NorthMet Project  
October 25, 2005**

The DNR prepared and issued for public review and comment a Scoping Environmental Assessment Worksheet (EAW) and Draft Scoping Decision Document, both prepared in accordance with MN Rules Ch. 4410.2100. The Notice of Availability for review of the Scoping EAW and Draft Scoping Decision Document was published in the EQB Monitor (Vol. 29, No. 14) on June 6, 2005, thereby beginning a mandatory 30-day public review and comment period. The U.S. Army Corps of Engineers issued a Notice of Intent (NOI) to prepare an EIS on July 1, 2005. The DNR and the U.S. Army Corps of Engineers issued press releases about the availability of the Scoping EAW, Draft Scoping Decision Document, and the public meeting to local area newspapers.

On Wednesday, June 29, 2005, the DNR held a public scoping meeting, as required by Minnesota Rules Part 4410.2100, Subpart 3B, at the Hoyt Lakes Arena in Hoyt Lakes, MN from 6:30 PM to 9:30 PM. Approximately 70 people attended the meeting. The attendees received information about the Minnesota Environmental Review Program, the project, the proposed EIS contents, and were given an opportunity to ask questions about the project and the EIS process. The DNR provided a comment form for submitting written comments on the proposed EIS scope.

The DNR received twenty-nine (29) comment letters on the Scoping EAW and Draft Scoping Decision Document during the 30-day review and comment period, which concluded July 6, 2005 per MN Rules Ch. 4410.2100, Subpart 3A. Comments were received from:

Allan Bier, United States Department of Agriculture, Forest Service  
Dennis A. Gimmestad, State Historic Preservation Office  
Kevin Proescholdt, The Izaak Walton League of America  
Lori Anderson  
Janette K. Brimmer, Minnesota Center for Environmental Advocacy  
Kenneth A. Westlake, United States Environmental Protection Agency  
Darren Vogt, 1854 Authority  
Jane Reyer, National Wildlife Federation  
Richard D. Gitar, Fond du Lac Reservation (2)  
Howard Heath  
Katherine and Robert Winkler  
James A. Mohler  
Sarah Strommen and Kyle Meng, Friends of the Boundary Waters Wilderness  
Fern Arpi  
Clyde Hanson, Sierra Club North Star Chapter  
Debby Ortman  
Leonard Anderson  
LeRoger Lind, Save Lake Superior Association  
Elanne Palcich  
John Finnegan  
Glada Kermeen  
Dan Stinnett, United States Fish and Wildlife Service  
Charles M. Wooley, United States Fish and Wildlife Service  
Edward Addy

Marlene Pospeck, Hoyt Lakes City Council  
Ed Williams, Nelson-Williams Linings, Inc.  
Mitchel C. Robertson, Tritec  
Anonymous

Verbal comments recorded (stenographer) at the June 29<sup>th</sup> Public Scoping Meeting: Clyde Hanson and James Watson

The comments relating to the EIS scope are condensed and summarized below. In some cases, similar comments were submitted in multiple letters; these are treated as one. Copies of the comment letters are attached for reference. Some comments primarily address issues already proposed for some degree of EIS inclusion in the Draft Scoping Decision. Other comments necessitated additions to, or clarification of, information in the scoping documents. The responses identify substantive comment-based revisions to the Draft Scoping Decision Document.

### **AIR QUALITY**

**Comment:** (AQ-1)Traffic minimization should be included in BACT analysis.

**Response:** Global positioning systems are commonly used in the mining industry for ensuring that the desired ore is moved efficiently. The systems are also used to track the movements of the haul trucks between the mining location and the loading pocket. Therefore, a considerable effort currently goes into efficient use of haul vehicles. Given this and the price of fuels, there is, and will likely continue to be, considerable incentive to minimize traffic in the mines and further analysis is unnecessary.

**Change in EIS Scope:** None.

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**Comment:** (AQ-2)The EIS should include information on approximately how many unpaved roads and paved roads there will be, in terms of percentage or mileage.

**Response:** Because the results of the ambient air impact analysis will be included in the EIS, and this information will be relied upon for the analysis, this information will be included in the EIS. This information will also be included in the air emissions permit application.

**Change in EIS Scope:** None.

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**Comment:** (AQ-3)In addition to rotoclones, the EIS should describe whether the material transfer points in the crushing equipment also have enclosures to minimize airborne dust.

**Response:** Because the results of the ambient air impact analysis will be included in the EIS, and this information will be relied upon for the analysis, this information will be included in the EIS. This information will also be included in the air emissions permit application.

**Change in EIS Scope:** None.

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**Comment:** (AQ-4) The EIS should clarify whether dust collection systems, such as rotoclones, will be installed on the drilling equipment.

**Response:** A description of air emissions sources and potential control technologies will be included in the EIS (See Section 3.2.3 of the Scoping Decision Document).

**Change in EIS Scope:** None.

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**Comment:** (AQ-5) We request that the calculations used to determine the air emission control efficiencies, as well as the Potential-to-Emit figures in Table 23-2 and 23-3, be available at the time of the EIS, either as an appendix or as a separate technical report.

**Response:** This information will be available as part of the EIS or air emissions permit application, which will be available at the time of the EIS.

**Change in EIS Scope:** None.

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**Comment:** (AQ-6) "... Rainbow Lake Wilderness (approximately 90 miles south)." Comment: Is this the wilderness in the Chequamegon National Forest? If so, it would be more than 90 miles east, not south.

**Response:** Rainbow Lake Wilderness is approximately 90 miles to the south-southeast of the proposed project.

**Change in EIS Scope:** None. However the corrected location will be used for evaluation of impacts.

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**Comment:** (AQ-7) It will be important to gather applicable test data on point source process plant emissions so that particulate matter can be properly speciated in the dispersion model.

**Response:** Agreed.

**Change in EIS Scope:** None.

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**Comment:** (AQ-8) It is unclear what analysis or data is used to conclude on pg 120 that "emissions from criteria pollutants are not a significant issue" and "Class I area impacts are expected to be minimal, ...." The document acknowledges that these issues have not been investigated yet.

**Response:** The EIS will thoroughly investigate the impact of air emissions on Class I areas and will confirm or refute the statement that the expected impact is minimal.

**Change in EIS Scope:** None.

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**Comment:** (AQ-9) The EIS should address air impacts irrespective of the NAAQS.

**Response:** As stated in the Scoping Environmental Assessment Worksheet (question 23, under Discussion of Project Impacts on Air Quality), the National Ambient Air Quality Standards (NAAQS) “are set at levels that are intended to be protective of human health (including sensitive groups) and the environment.” Because it is recognized that the NAAQS do not evaluate the estimated impact of all pollutants, the proposer has already completed an Air Emissions Risk Analysis (AERA) to evaluate the ambient impact of air toxics anticipated to be emitted from the proposed project. It is anticipated that the project plan will change between the time of completion of the AERA and the time of submitting the EIS and air emission permit application. For this reason, the AERA will be re-evaluated during the EIS to determine if the original analysis was valid.

**Change in EIS Scope:** None.

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**Comment:** (AQ-10) The EIS should evaluate impacts from CO<sub>2</sub> emissions both for the project and cumulatively.

**Response:** The primary contributors to human-induced flows of carbon dioxide are the combustion of fossil fuels and land-use change, primarily tropical deforestation. Carbon dioxide is emitted by numerous sources into the atmosphere from every part of the earth in massive quantities (approximately 6.3 gigatons (Gt) from fossil-fuel combustion and 1.6 Gt from deforestation in the 1990s). The effects of the emission of CO<sub>2</sub> are global. The effects emissions from a single facility or even a number of sources in an area are very small and difficult to predict on the local or regional level. There is no evidence to suggest that the proposed project would contribute significantly to global CO<sub>2</sub>. However, the EIS will include an estimate of vehicle emissions to verify this assumption.

**Change in EIS Scope:** Section 3.2.2 identifies that vehicle related air emissions will be assessed in the EIS.

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**Comment:** (AQ-11) The EIS should include an explanation and data to support reported low mercury emissions.

**Response:** This data will be provided as part of the EIS. As stated in the Scoping EAW, under question 18 – Water quality: wastewaters, [a]s part of the EIS, water and chemical

mass balances for the processing an hydrometallurgical circuits will be calculated.”  
The mercury mass balance will include both air and water releases of mercury.

**Change in EIS Scope:** None.

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**Comment:** (AQ-12) The EIS should include an assessment of impacts to human health.

**Response:** The proposer has already completed an Air Emissions Risk Analysis (AERA) to evaluate the ambient impact of air toxics anticipated to be emitted from the proposed project. It is anticipated that the project plan will change between the time of completion of the AERA and the time of submitting the EIS and air emission permit application. As part of the EIS, the AERA will be re-evaluated to determine if the original analysis was valid.

**Change in EIS Scope:** None.

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**Comment:** (AQ-13) Mine equipment should be included in vehicle related air emissions.

**Response:** It is believed that emissions from mine vehicles are not a significant portion of the emissions from the entire source. However, the EIS will include an estimate of vehicle emissions to verify this assumption.

**Change in EIS Scope:** Section 3.2.2 identifies that vehicle related air emissions will be assessed in the EIS.

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**Comment:** (AQ-14) The EIS should include evaluation of PM<sub>10</sub> impacts.

**Response:** The EIS will include the results of ambient air quality modeling for Class I and Class II areas, which includes PM<sub>10</sub> impacts.

**Change in EIS Scope:** None.

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**Comment:** (AQ-15) The public should have involvement in Class I air modeling.

**Response:** The Draft EIS will include the Class I modeling, it will be placed on public notice and comments will be accepted.

**Change in EIS Scope:** None.

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**Comment:** (AQ-16) Comment proposes that additional materials be included in source-specific air dispersion modeling.

**Response:** The AERA evaluated all chemicals to be emitted for which the Minnesota Department of Health has promulgated an Inhalation Health Benchmark (IHB). As reported in the AERA, the chemicals listed in the comment were evaluated and determined to not be risk drivers. Given that accidents and spills are not permitted activities and the unpredictable nature of these events, spills are not analyzed under the AERA process.

**Change in EIS Scope:** None.

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**Comment:** (AQ-17) Fibers and mercury should be included in Class I and Class II increment analysis.

**Response:** Neither fibers nor mercury are pollutants for which an increment is defined. Therefore, an increment analysis cannot be completed.

**Change in EIS Scope:** None.

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## **ALTERNATIVES**

**Comment:** (ALT-1) These comments focus on the need to include alternatives in three categories of alternatives identified in EQB rules Chapter 4410, alternative sites, alternative technologies, and alternative scale/magnitude. One comment specifically requested that the EIS include an evaluation of using Cyanide Leach technology for processing the ore.

**Response:** The EIS will evaluate several site locations for waste rock and tailings (See section 2.3). It will not evaluate alternative sites for the mine site or the processing plant. An alternative mine site would not meet the purpose of the project which is to mine for production of copper, nickel, cobalt and precious metals. The location of the mine is limited to the area where the deposit is located. An alternative site for the processing plant has not been identified that would likely have significant environmental benefits over the proposed site.

The EIS will not evaluate any ore processing technology alternatives. Cyanide leach processing would definitely not have significant benefits over the proposed technology, and if the proposer did want to switch to a different (more/different environmental impacts) technology, a separate environmental review would be needed. In addition, the Platsol process that is proposed is the only single process that can generate copper, nickel, cobalt, and precious metals. There are other processes that can be used to generate the desired products individually, however construction and operation of several processing technologies would not be feasible and thus not meet the purpose of the project.

The project is proposed as an open pit mine. There could be environmental benefits to using underground mining technology to mine the ore deposit. However there is some uncertainty about whether or not this type of technology is feasible for the

project. Due to this uncertainty the EIS will evaluate the feasibility of using underground mining technology. If this technology proves to be feasible the EIS will evaluate the environmental impacts of this alternative.

The Scoping Decision Document does not propose to evaluate alternative scale or magnitude of the project. Although there may be environmental benefits from smaller amounts of mine waste associated with a smaller scale project, the cost of operating a smaller mine and ore processing facility for the diffuse ore body will impact the feasibility of the project. As part of project development, the proposer evaluated various mill feed rates to estimate the economic feasibility of the project. The 32,000 tpd scale was ultimately selected, however an 18,000 tpd scale was evaluated and determined that the return on investment for this lower scale was not feasible. There is some variability in the 32,000 tpd scale that would still be economically feasible, but the environmental benefits associated with a reduction in scale of this amount would not produce significant environmental benefits. The DNR and the USACE have determined that an alternative scale or magnitude would not feasibly meet the purpose of the project.

**Change in EIS Scope:** Section 2.4.1 of the Scoping Decision Document identifies that an underground mining technology alternative will be evaluated in the EIS. The feasibility of this alternative will be evaluated first. If it is determined feasible, environmental impacts and benefits will be compared to the proposed and no action alternatives.

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**Comment:** (ALT-2) Commenter is concerned that the alternative section (Section 2.7) about incorporation of mitigation measures identified through public comments indicates that state and federal agencies will rely solely on public input to develop mitigation measures.

**Response:** Incorporation of mitigation measures identified through public comments is a specific type of alternative identified in EQB rules Chapter 4410.2300 Subpart G that must be included for evaluation. Inclusion of this category does not and has not precluded development of mitigation measures by state and federal agencies.

**Change in EIS Scope:** None

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**Comment:** (ALT-3) Concern about inclusion of economic considerations causing the purpose and need statement to be narrowly construed as to prevent a full evaluation of alternatives.

**Response:** Comment is noted. There was no attempt to preclude a full evaluation of alternatives. However, as the commenter points out some of the language in the purpose and need statement may not be appropriate for the underlying purpose of the project. The purpose of the proposal will be revised to avoid confusion.

**Change in EIS Scope:** Purpose and Need Statement in Section 1.3 of the Scoping Decision Document has been reduced to a brief statement of the proposal's purpose.

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**Comment:** (ALT-4) The commenter indicates that a "contract miner" would be a non-union miner and this would cause the proposed action to be like the no action alternative with respect to socio-economic impacts because the contract miner would not hire former LTVSMC employees.

**Response:** Whether the project goes forward under a contract miner or not, the same amount of employees will be needed. Presumably, any contract miner would also need to hire the employees to meet its contracted obligation. The presence or absence of a union is outside the scope of environmental review.

**Change in EIS Scope:** None

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**Comment:** (ALT-5) Is the project as proposed an alternative under consideration?

**Response:** Section 2.1 of the Scoping Decision Document identifies that the EIS will evaluate the environmental and socio-economic impacts of the proposed project.

**Change in EIS Scope:** None

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**Comment:** (ALT-6) Comment is concerned about lack of identification of specific wastewater treatment alternatives, and makes note that the cost of each alternative should be included in the EIS.

**Response:** Section 2.5 Describes the use of Technical Design Evaluation Reports in the EIS. To ensure that there is clarity with respect to these reports, the scope of work for each report will be developed and provided in the Final Scoping Decision Document. This will include wastewater treatment technology alternatives to be considered

**Change in EIS Scope:** Scopes of work for Technical Design Evaluation Reports are included as an appendix to the Scoping Decision Document.

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**Comment:** (ALT-7) Comment requests inclusion of technical design reports for design failure mitigation response, noise, odors, and post mining reclamation.

**Response:** The Scoping Decision Document identifies that the EIS will evaluate noise and post mining reclamation as EIS Issues (See Sections 3.2.6 and 3.3.9).

The EIS will not address corrective action for design failure. Corrective action is prescriptive under various permitting authorities, and would be carried out under those authorities. Odors will not be addressed in the EIS because there are no



potentially significant odor issues associated with the project. It is appropriate to not consider those issues, which are not likely to be significant.

**Change in EIS Scope:** None

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**Comment:** (ALT-8) The comments identify portions of the proposal that should be considered for evaluation of modified designs or layouts. The identified portions include the mine pit, tailings basin, waste rock stockpiles, mine site reclamation, ore transportation, and wastewater treatment.

**Response:** With the exception of ore transportation, the EIS will evaluate alternatives to all the identified portions, although not all are identified under modified designs/layouts. No alternative ore transportation has been identified that is likely to provide significant environmental benefits over what is proposed. Section 2.5.2 identifies a two mine pit with backfill alternative. Section 2.3 and Technical Design Evaluation Reports propose to evaluate a variety of tailings basin alternatives. Sections 2.3 and 2.5.3 as well as a Technical Design Evaluation Report propose to evaluate various waste rock stockpile alternatives. Section 2.5.4 and a technical design report propose to evaluate alternative wastewater treatment. Mine site reclamation is not addressed under alternatives, but Section 3.3.9 does propose to evaluate various mineland reclamation strategies.

**Change in EIS Scope:** Two mine pit alternative added to Section 2.5.2.

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**Comment:** (ALT-9) The comment is concerned that mitigation measures are being dismissed in the Scoping Decision Document. The comment also provides a list of potential mitigation measures that should be evaluated.

**Response:** Mitigation measures were not being dismissed as part of the Draft Scoping Decision Document. This document was merely identifying the process by which mitigation measures will be evaluated and explains that any dismissed measures will be explained in the EIS.

The following discussion addresses each of the proposed mitigation measures and whether they are being carried forward to the EIS.

- Public education on metal mining and processing social and environmental costs to reduce metal use. *Would not meet the purpose of the project, not being carried forward.*
- Design standards to increase the lifecycle of products with sulfide metals. *Would not meet the purpose of the project, not being carried forward.*
- Increase in recycling to reduce demand for metal mining. *Would not meet the purpose of the project, not being carried forward.*

- Research and development of alternatives to metals associated with sulfide deposits—like fiber optic cables instead of copper, steel jewelry instead of gold. *Would not meet the purpose of the project, not being carried forward.*
- Limiting sulfide mining in MN to the one site with the lowest environmental impact. *Would not meet the purpose of the project, not being carried forward.*
- New regulations to lower environmental risks and gain faster and more significant compliance when failures occur. *Outside the scope of environmental review, not being carried forward.*
- Holding the permit to mine until the project proposer can document that another sulfide mine has a) operated for 10 years with no impacts and b) been closed for 10 years with no acid mine drainage. *The proposed mitigation measure does not provide for additional mitigation or protection from environmental impacts, but rather contends that some other mine should be used as proof that the project can be done without acid mine drainage prior to permitting of the project. While the EIS will not determine permit decisions, the information developed as part of the EIS will be used to guide and inform permit decisions. If the result of the EIS were that there would be significant unavoidable environmental impacts from acid mine drainage, the DNR Division of Lands and Minerals will take that into consideration during evaluation of the permit to mine. The specific suggestion of withholding a permit is not being carried forward.*
- Personal guarantees of environmental performance by the project's engineers, just like the engineers have made a guarantee that the hydrometallurgical equipment will perform as specified. *PolyMet Mining is incorporated and thus the corporation holds all liability, not individuals within the corporation. Personal guarantees would not likely provide significant environmental benefits, not being carried forward.*
- Require ISO 14001 certification of the proposer's compliance with the air, water and mining permits with review by public stakeholders. *No significant environmental benefit, not being carried forward.*
- Rapid response conditions added to the permit to mine so pollution is stopped and cleaned up quickly and not delayed by company appeals or litigation. *This is already part of DNR and PCA permits.*
- Water tight perimeter wall around waste rock and tailings ponds attached to bedrock with monitoring wells. *Although the specific wording of this proposed mitigation is problematic, (i.e. water tight and attached to bedrock) the intent behind the mitigation is advisable and is already proposed for waste rock stockpiles and the mine area. Mitigation and monitoring measures to prevent the release reactive runoff and monitor compliance will be assessed in the EIS.*
- An independent stormwater permit is needed and stormwater design standards must be very conservative, for 10-20 year storms. *PCA will address stormwater permitting and design standards under the NPDES permit for the entire project. In addition the facility will be required to obtain a construction stormwater permit from the MPCA that will address management of stormwater during the construction phase of the project. Not carried forward.*
- Monitoring of stormwater runoff for a baseline, during and after mining. *Baseline, operational, and closure monitoring will be evaluated in the EIS and described in detail for the Permit to Mine.*

- Immediate closure and reclamation of the old LTVSMC tailings ponds. *The Cliffs Erie closure plan in being implemented on an approved schedule. No significant environmental benefits, not carried forward.*

**Change in EIS Scope:** The EIS will include Technical Design Evaluation Reports on Tailings Basin Modifications and Reactive Residue and PolyMet Flotation Tailings Facility Design and Location, which will evaluate containment and monitoring.

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## **BLASTING**

**Comment:** (B-1) Comment questions the accuracy that blasting impacts will be small compared to surrounding taconite mines, and thus is insignificant.

**Response:** The relevance of blasting impacts from other mining operations to blasting impacts from this project is indeed questionable. Regardless, the need to adhere to blasting standards and the remote location of the mine site will prevent significant adverse impacts.

**Change in EIS Scope:** None.

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## **CULTURAL RESOURCES**

**Comment:** (CR-1) Comment points out that 1854 ceded territory was not identified in the document and the need to include an analysis of Tribal impacts.

**Response:** The Scoping Decision Document has been revised to include analysis of Tribal impacts as it relates to the 1854 ceded territory.

**Change in EIS Scope:** Section 3.2.10 of Scoping Decision Document includes review of Tribal rights as a result of 1854 ceded territory and identification of impacts to those rights by the proposal.

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**Comment:** (CR-2) Comment asks where and what is Knot Camp?

**Response:** One site, 21SLmn (01-314 [Knot Camp]) has been reported (not field checked) within the lease area (but outside the proposed mining impact areas). Site 21SLmn (01-314) is listed as a logging camp site. Staff of the Superior National Forest observed the site, on a 1937 aerial photograph in Section 12, T59N, R13W.

**Change in EIS Scope:** None

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**Comment:** (CR-3) Comments point out that all resources in the area with potential historic significance need to be evaluated for National Register eligibility.

**Response:** These will be evaluated as part of the EIS (see Section 3.2.5).

**Change in EIS Scope:** None

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**Comment:** (CR-4) Comment is concerned about the Scoping EAW indicating that there are no designated parks, recreation areas, or trails in the proximity of the project. The specific concern was given about the Superior National Forest, which includes the Boundary Waters Canoe Area (BWCA).

**Response:** The BWCA is over 15 miles from the project site. Section 3.2.3 identifies Class I areas, which includes the BWCA, for evaluation with respect to air emissions. See response to Comment LU-1 for relationship to Superior National Forest.

**Change in EIS Scope:** None

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### **CUMULATIVE EFFECTS**

**Comment:** (CE-1) Comment suggests the geographic scope for cumulative analysis of mercury deposition include areas outside Minnesota.

**Response:** It is anticipated that the majority of the mercury emitted by the PolyMet facility will be in the elemental form. As such, it is anticipated that it will largely not be deposited locally, that is it will be added to the "global pool" of mercury and will be dispersed and deposited across the globe. At an estimated annual emission rate of mercury of approximately 1.75 pounds, the PolyMet facility would increase Minnesota's total mercury emissions by approximately 0.05 percent. If it is assumed that all of the mercury is elemental, this additional contribution to the global pool would be extremely small. This would make it extremely difficult or impossible to estimate, with any accuracy, the incremental contribution of this source to any area's mercury deposition rate or to the global pool of mercury.

**Change in EIS Scope:** None.

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**Comment:** (CE-2) Comment suggests an analysis of project emissions of potential sulfur and nitrogen is appropriate.

**Response:** Section 3.3.8.1 identifies that the EIS will assess cumulative impacts of NO<sub>x</sub> and SO<sub>2</sub> in Class II Areas.

**Change in EIS Scope:** None

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**Comment:** (CE-3) Comment states that cumulative effects analysis of Embarrass and Partridge Rivers should include existing discharges from mining operations and wastewater treatment plant.

**Response:** Cumulative effects analysis for water quality and quantity do propose to include existing discharges from mining operations and wastewater treatment plants. See Section 3.3.8.10

**Change in EIS Scope:** None.

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**Comment:** (CE-4) Comment requests cumulative effect analysis for wildlife habitat includes “habitat barrier effect”.

**Response:** Cumulative effect analysis for wildlife habitat has been revised, and it includes habitat landscape barrier as part of the analysis.

**Change in EIS Scope:** Section 3.3.8.8 includes analysis of habitat landscape barriers.

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**Comment:** (CE-5) Comment requests cumulative analysis of potential 303d listing as a result of the project and any TMDL limitations to USFS that would result from the listing.

**Response:** The goal of PCA water quality permitting is to prevent the project from impairing the water quality such that it would cause a 303d listing. If in the future a 303d listing occurs and a TMDL is proposed, the USFS will be able to participate in that public process. It is unknown what a future TMDL would require until that process has played out.

**Change in EIS Scope:** None.

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**Comment:** (CE-6) Comments request that cumulative analysis of acidification include areas besides Class I areas.

**Response:** The assessment of cumulative effects of ecosystem acidification is not limited to Class I areas. Section 3.3.8.3 of the Scoping Decision Document identifies that the cumulative assessment of ecosystem acidification will consider the statewide emission cap and deposition standard for all Minnesota aquatic ecosystems.

**Change in EIS Scope:** None.

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**Comment:** (CE-7) Comment requests the ability to review preliminary reports and provide data to the Class I increment analysis.

**Response:** The commenter (USFS) has entered into a Memorandum of Understanding (MOU) as a cooperating agency for development of the EIS. Review of preliminary reports is appropriate and expected under the MOU.

**Change in EIS Scope:** None.

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**Comment:** (CE-8) The comment points out that the DNR is re-evaluating the Timber Harvest GEIS as part of a project specific EIS for a paper mill expansion, and that this should be taken into consideration when using the GEIS for information in assessing cumulative wildlife habitat impacts as part of the PolyMet project.

**Response:** The EIS will consider relevant, available information in its assessment of potential impacts and mitigation consistent with the Environmental Quality Board rules. This information may include that gathered in other available EISs, for example, the Minnesota GEIS on Timber Harvesting and Forest Management or the UPM/Blandin Paper Thunderhawk Project EIS.

**Change in EIS Scope:** None.

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**Comment:** (CE-9) Comments are concerned that all reasonable foreseeable future projects have not been identified. Some comments have specific suggestions for inclusion, others are more general.

**Response:** Two important factors are used to decide whether or not a future project is included in the cumulative analysis. The first factor is whether or not the project is reasonably foreseeable. This is important as it would be inappropriate to include speculative projects, but the distinction of what is speculative is important. Submission of permit applications or other submittals to governmental units are being used as an indicator of something more than speculative, and thus reasonably foreseeable. The following list of actions was identified from public comments. The agencies response to whether or not the action will be considered cumulatively is also included:

| <b>Actions</b>               | <b>Response</b>  |
|------------------------------|--|
| Minntac wastewater discharge | An alternative may include a discharge in the same major watershed as PolyMet, however, the discharge would be in a geographically separate and sufficiently remote sub-watershed so as not to warrant inclusion in the cumulative analysis. |
| Minntac Air Permit           | Permit action is related to existing emissions that are included in past and present condition.  |

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| Mesabi Nugget                    | Impacts that are in geographic area of analysis will be included.  |
| Excelsior Energy                 | Is too far away for Class II Area analysis, and will be included for other Class I Area analyses.  |
| Minnesota Steel                  | Is too far away for Class II Area analysis, and will be included for other Class I Area analyses.  |
| Increased car/truck traffic      | Potential cumulative effects from increased traffic are not expected to be significant, especially considering previous traffic when LTVSMC was operating.               |
| Wetland filling on private lands | Too small and/or speculative to include in analysis.   |
| Logging                          | To the extent that impacts are foreseeable and within the geographic scope, they will be included.   |
| ATV impacts                      | The size and nature of ATV impacts are too small to include in proposed cumulative effects analysis.   |
| New powerline corridor           | To the extent that corridors are foreseeable and within the geographic scope, they will be included.   |
| Residential development          | To the extent that development is foreseeable and within the geographic scope, they will be included.  |
| Highway 1 and 61 upgrades        | The size and nature of highway upgrades are too small to include in the proposed cumulative effects analysis.  |
| Northshore Mining                | To the extent that impacts are within the geographic area, they will be included. The EAW identified these impacts under expansion of existing taconite facilities.      |
| Birch Lake Shaft mine            | Impacts from bulk sample are outside of geographic scope. Mining project is too speculative as results of bulk sample are needed to determine if shaft mine is feasible. |
| Canisteo Pit                     | Impacts are outside of geographic scope.   |

**Change in EIS Scope:** None.

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**Comment:** (CE-10) Comment asserts cumulative analysis of plant species should include all plants, not just threatened and endangered.

**Response:** Potential cumulative impacts to all non-listed plant species is not anticipated to be significant, thus it is appropriate they be scoped out of the analysis.

**Change in EIS Scope:** None.

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**Comment:** (CE-11) Comments request cumulative analysis of wildlife habitat include impacts to Canadian Lynx and Boreal Owls.

**Response:** There has been some revision to the wildlife habitat cumulative analysis, and it does include impacts to wildlife habitat. It does not however propose a direct evaluation of cumulative impacts to Canadian Lynx or Boreal Owls. Although not called out directly the habitat will be identified and to the extent it is used by Canadian Lynx and Boreal Owls, the impact will be included.

**Change in EIS Scope:** Section 3.3.8.8 of the Scoping Decision Document includes an assessment of cumulative wildlife habitat impacts.

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**Comment:** (CE-12) Comments are concerned about cumulative impacts to wetlands

**Response:** Comment acknowledged, section 3.3.8.7 includes evaluation of cumulative impacts to wetlands.

**Change in EIS Scope:** None.

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**Comment:** (CE-13) Comment asserts cumulative impact analysis of traffic is needed due to Mesabi Nugget truck hauling.

**Response:** Cumulative truck hauling impacts are not expected to be significant.

**Change in EIS Scope:** None.

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**Comment:** (CE-14) Comment asserts cumulative impacts to forestry are significant and an analysis should be included. The term forestry is not used as management for timber harvest, but rather intrinsic value of the forest itself.

**Response:** The cumulative analysis of wildlife habitat will address a portion of the concerns raised by the comment. The Scope of the EIS is being revised to include project specific assessment of compatibility with the USFS Forest Management Plan. Although this is not a cumulative analysis, it will address concerns about impacts to the forest.

**Change in EIS Scope:** Section 3.2.7 identifies assessment of compatibility with USFS Forest Management Plan.



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**Comment:** (CE-15) Comment asserts cumulative impacts to wildlife habitat should include habitat degradation from pollution.

**Response:** Cumulative impacts to wildlife habitat identified in Section 3.3.8.8 are limited to direct physical loss of habitat. However, cumulative assessment of individual types of pollution will assess impacts to wildlife and wildlife habitat from pollution. Section 3.3.8.3 and Section 3.3.8.4 will assess impacts to aquatic ecosystems from acidification and mercury deposition respectively. Section 3.3.8.10 will assess water quality impacts with respect to chronic aquatic toxicity-based standards for receiving waters within the geographic scope of the assessment.

**Change in EIS Scope:** None

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**Comment:** (CE-16) Comment asserts that the geographic scope of Socio-economic impact needs to be enlarged to include all of Northeastern Minnesota.

**Response:** While increasing the geographic area of the analysis will include more impacts, the relative impact to the geographic area can be masked. Extending the socio-economic impact analysis to all of northeastern Minnesota would result in masking too many impacts.

**Change in EIS Scope:** None.

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## **ENVIRONMENTAL REVIEW**

**Comment:** (ER-1) Comment requests documentation of compliance with NEPA Scoping requirements.

**Response:** Section 1.4 of the Scoping Decision Document identifies NEPA compliance.

**Change in EIS Scope:** Section 1.4 of the Scoping Decision Document documents compliance with NEPA scoping requirements.

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**Comment:** (ER-2) Comment asks if there is an appeal process for scoping decisions.

**Response:** Appeal of final decisions under Minnesota Rules Chapter 4410.0400 Subpart 4 identifies that the need for an EAW, the need for an EIS, and EIS adequacy determinations may be reviewed by declaratory judgment action initiated within 30 days of the RGU's decision.

**Change in EIS Scope:** None

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**Comment:** (ER-3) Comment states that EQB Rules Chapter 4410.2100 Subp. 6E requires the Scoping EAW to list alternatives that will be evaluated in the EIS. The underlying concern for this statement could be that specific sites for offsite waste rock and tailings basin alternatives have not been identified.

**Response:** The EQB Rules Chapter 4410.2100 Subp 6 requires that Scoping Decisions must include alternatives that will be addressed in the EIS. The Final Scoping Decision Document identifies specific sites that will be evaluated as alternatives.

**Change in EIS Scope:** Section 2.3 and Figure 1 identify the specific sites that will be evaluated.

---

**Comment:** (ER-5) Comment requests that permit applications and draft permits be included in the EIS.

**Response:** To the extent that such information is applicable, available, and helpful as part of the EIS, they will be included as Appendices to the EIS.

**Change in EIS Scope:** None

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**Comment:** (ER-6) Commenter requests additional time beyond the 30-days for review and comment on the Draft EIS.

**Response:** This EIS is being conducted as a joint state/federal EIS. The National Environmental Policy Act requires a 45 day review and comment period for Draft EISs. The Draft EIS will have a 45-day comment period.

**Change in EIS Scope:** None

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**Comment:** (ER-7) Commenter was concerned about the time allowed to review and provide comments on the Scoping EAW and Draft Scoping Decision Document.

**Response:** The comment seemed to be mainly concerned about the time from the public meeting until the end of the comment period. The Scoping EAW and Draft Scoping Decision Document were available and noticed for 30-days. EQB rules require that the public meeting be held not sooner than fifteen days after notice of availability. The EQB procedure for scoping has been established to allow review of documents prior to the public meeting, clarification on issues at the meeting, and finalization of comments after the meeting. The procedure is not intended for complete review in the time period after the public meeting and before the end of the comment period.

**Change in EIS Scope:** None

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## **EROSION AND SEDIMENTATION**

**Comment:** (ES-1) Comments question the classification of Erosion and Sedimentation as a minor topic in the EIS.

**Response:** The concern is more related to classification of impact areas, rather than a substantive omission in the proposed EIS scope. The potential for runoff from the mine site and tailings basin are major issues that are proposed to be evaluated in the EIS.

**Change in EIS Scope:** Section 3.3.5 identifies erosion and sedimentation as a potentially significant issue that will be addressed in the EIS.

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## **FISH AND WILDLIFE**

**Comment:** (FW-1) Comment requests additional information about wildlife surveys that have been conducted.

**Response:** The EIS will include additional information on the surveys that were conducted (See Section 3.3.1 of the Scoping Decision Document).

**Change in EIS Scope:** None.

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**Comment:** (FW-2) Comment requests additional information in the EIS about the 100-mile Swamp.

**Response:** Section 3.3.1 of the Scoping indicates that existing information will be used to describe wildlife habitat at the mine site. This information includes the 100 mile Swamp. Additionally, the wetland delineations described in Section 3.3.3 will provide information on the wetlands, which would include portions of the 100-mile swamp.

**Change in EIS Scope:** None.

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**Comment:** (FW-3) Comment points out that the proposal may reduce habitat of USFS Management Indicator Species.

**Response:** Potential impact to Management Indicator Species will be included in the EIS.

**Change in EIS Scope:** Section 3.3.1 identifies the consideration of impacts to USFS Management Indicator Species.

---

**Comment:** (FW-4) Comment identifies need to include how project may allow increased spread of non-native invasive species.

**Response:** EIS will include discussion of non-native invasive species.

**Change in EIS Scope:** Section 3.2.1 identifies that the EIS will include a discussion of non-native invasive species.

---

**Comment:** (FW-5) Several comments about including information on impacts to other wildlife species besides state and federal threatened and endangered species.

**Response:** The EIS will evaluate impacts to wildlife by assessment of impacts to wildlife habitat. This assessment will include the specific species that use those habitats regardless of federal/state protection status. However, additional emphasis will be given to USFS Management Indicator Species and any species of significance to Tribal hunting and fishing rights of the 1854 ceded territory.

**Change in EIS Scope:** Section 3.3.1 identifies that the EIS will consider impacts to USFS Management Indicator Species.

---

**Comment:** (FW-6) Comments request information about formal Endangered Species Act (ESA) consultation.

**Response:** The U.S. Army Corps of Engineers (USACE) will conduct formal ESA consultation with the U.S. Fish and Wildlife Service for the Bald Eagle, Grey Wolf, and Canadian Lynx. The EIS will include information to support consultation decisions.

**Change in EIS Scope:** None.

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**Comment:** (FW-7) Comments point out that increasing habitat “edge” can cause a significant habitat fragmentation impact.

**Response:** Comment acknowledged. The impact of habitat fragmentation is included in the scope of the EIS. The affect will be addressed as a cumulative effect rather than only project specific. Individual impacts to habitat are generally dismissed as not being significant, due to the large amount of forest and other wildlife habitat in northeastern Minnesota. However, there is a potential for a series of or multiple projects resulting in a more significant impact to wildlife habitat. For this reason it is appropriate to address the issue as a cumulative effect.

**Change in EIS Scope:** None.

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**Comment:** (FW-8) Comment requests the use of Range of Natural Variability as a tool to assess habitat impacts.

**Response:** The EIS will identify those affected habitats that are not well represented in the Ecological Subsection as it relates to natural variability, to the extent that information is available to support that assessment.

**Change in EIS Scope:** Section 3.3.1 indicates that the EIS will assess habitat types identified at the mine site and compare those to existing studies of the Range of Natural Variability for Ecological Subsections in the project area. Habitat types (forest age classes) not well represented in the Ecological Subsections, but present in the project area will be identified.

---

**Comment:** (FW-9) Comment is concerned about potential water quality impacts to fisheries.

**Response:** The Scoping Decision Document has identified potential impacts to water quality that will be evaluated. Any impacts to water quality will be identified and discussed with respect to aquatic resources, including fisheries.

**Change in EIS Scope:** None

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**Comment:** (FW-10) Comment indicates that primary studies on impacts to wolf and lynx habitat are needed, as well as rare plant and animal surveys at appropriate times of the year.

**Response:** The Minnesota County Biological Survey (MCBS) for this portion of St. Louis County has not been completed, therefore these data are unavailable for use in this EIS. However, a search of the Minnesota Natural Heritage Database was completed and field surveys for rare plant species suspected to occur in the area were conducted.

The EIS will include a winter track survey for the Canadian Lynx to assist in getting a better understanding of potential numbers of lynx that are present in the area.

**Change in EIS Scope:** Section 3.3.2 identifies that a winter track survey will be completed for the Canadian Lynx.

---

**Comment:** (FW-11) Comment indicates that the EIS needs to include evaluation of impacts to the wood turtle.

**Response:** The EIS will include evaluation of impacts to the wood turtle.

**Change in EIS Scope:** Section 3.3.2 of the Scoping Decision Document identifies that potential impacts to the Wood Turtle will be addressed in the EIS.

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## **INFRASTRUCTURE AND PUBLIC SERVICES**

**Comment:** (IPS-1) Comments request analysis about source/location of the workforce and any associated impacts to public services from increase population in the area.

**Response:** These potential impacts are proposed to be evaluated under cumulative effects (See Sections 3.3.8.10 and 3.3.8.11).

**Change in EIS Scope:** None

---

**Comment:** (IPS-2) Comment requests that the EIS evaluate impacts from increased power needs due to the project.

**Response:** Any additional power projects are not connected actions to this proposal as this project would not justify an additional power plant, neither a new power plant or this project are prerequisite of each other, and this project and any new power plant would be justified by itself. Because any new power plant is not a connected action, there will be no evaluation in the EIS of additional power sources. However, it is understood that there are power projects existing and proposed in the area, and these will be considered as part of the cumulative effects analysis.

**Change in EIS Scope:** None.

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## **LAND USE**

**Comment:** (LU-1) Many comments requesting additional information about U.S.F.S. land use management and how the project would affect those management plans.

**Response:** The Scoping Decision Document has been revised to assess the compatibility of the project with the USFS Superior National Forest Management Plan.

**Change in EIS Scope:** Section 3.2.7 identifies that the EIS will include information about the relationship of USFS land management and the compatibility of the project with the management plans.

---

**Comment:** (LU-2) Comment is concerned about compatibility of project with St. Louis County Land Use Plan, Forest Resource Council Plan, and Water Conservation District Plan.

**Response:** Comment acknowledged. The project area is actually subject to St. Louis County, City of Babbitt and City of Hoyt Lakes land use plans. The compatibility of the project to these plans was included in the Scoping EAW on page 130.

**Change in EIS Scope:** Section 3.2.7 identifies that the EIS will include information about the project's relationship to the Forest Resource Council Plan, and the Water Conservation District Plan.

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### **MINELAND RECLAMATION**

**Comment:** (MR-1) Comment requests that the EIS include proposed mitigation to account for loss of ongoing reclamation of existing tailings basin.

**Response:** Although some reclamation is occurring, it is not at stage that provides significant habitat or ecosystem value. Section 3.2.1. will address changes in cover type from existing conditions through operation and into reclamation.

**Change in EIS Scope:** None

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**Comment:** (MR-2) Comment requests that the EIS include examples of reactive waste rock reclamation.

**Response:** This is included in Section 3.3.9 Reclamation and under various alternatives in Sections 2.3.1, 2.3.2, and 2.5.3.

**Change in EIS Scope:** None

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**Comment:** (MR-3) Many comments about including details of financial assurance in mineland reclamation rules included costs for corrective action.

**Response:** Estimates of financial assurance for reclamation are identified in Section 3.3.9. These estimates will not consider corrective action, as this financial assurance is not developed until after a needed corrective action has been identified.

**Change in EIS Scope:** Section 3.3.9 of the Scoping Decision Document includes additional detail about how financial assurance will be incorporated into the EIS.

---

**Comment:** (MR-4) Comments request that the EIS account for assumptions and uncertainty in environmental review and permitting analysis by including appropriate operational monitoring and contingency plans.

**Response:** The EIS will consider uncertainty in evaluations and propose potential mitigation and monitoring to deal with uncertainty in predictions

**Change in EIS Scope:** Section 7.0 of the Scoping Decision Document identifies that the EIS will assess potential mitigation and monitoring measures.

---

**Comment:** (MR-5) Comment indicates the scoping documents must contain stormwater standards and design goals as it relates to sulfide mining.

**Response:** Minnesota Rules Chapter 6132 for nonferrous metallic mineral mining distinguish between runoff from “reactive waste” and “non-reactive waste”. The scoping documents have echoed this distinction. Reference to the standards and goals for handling stormwater from both of these sources is included in the Scoping EAW.

**Change in EIS Scope:** None

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### **MISCELLANEOUS**

**Comment:** (MISC – 1) Comments request clear definitions of terms used in environmental review documents. Examples of terms that were mentioned include the various types of stockpiles, and words such as reasonably, and minimize.

**Response:** The EIS will include a glossary of terms to define terms that have specific meaning for the document, but may have different meanings in the general English language. Any terms not included in the glossary will be defined by standard dictionary definition. The DNR will use plain language in the EIS to encourage clear presentation of the environmental impacts of the project.

**Change in EIS Scope:** None

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**Comment:** (MISC-2) Comment points out that ground disturbance may quicken the spread of invasive species.

**Response:** EIS will include discussion of non-native invasive species.

**Change in EIS Scope:** Section 3.2.1 identifies that the EIS will include a discussion of non-native invasive species.

---

**Comment:** (MISC-3) Comments concerned with economic viability of PolyMet and their ability and willingness to accept costs and responsibility of project impacts.

**Response:** Financial assurance for mineland reclamation is a requirement of Minnesota Dept. of Natural Resources Permit to Mine. Estimates for financial assurance will be included in the EIS.

**Change in EIS Scope:** Section 3.3.9 of the Scoping Decision Document includes additional detail about how financial assurance will be incorporated into the EIS.

---

**Comment:** (MISC-4) Comments concerned about state government having a conflict of interest that would prevent unbiased evaluation of the proposal.



**Response:** The Responsible Governmental Unit (RGU) for this EIS is the DNR. The Mission of the DNR is to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life. This mission statement is applicable to PolyMet EIS as it identifies the need for an appropriate balance between commercial use (the proposal) and creating a sustainable quality of life (preventing significant adverse environmental impacts). The DNR shall strive to reach this balance in the EIS as part of an open public process and with close coordination with the U.S. Army Corps of Engineers and the Minnesota Pollution Control Agency.

**Change in EIS Scope:** None

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**Comment:** (MISC-5) Comments concerned with broad range of issues, but did not identify specific concerns or how the issue should be scoped for inclusion in the EIS. The identified issues include cumulative impacts, international ramifications, historical/cultural resources, odors, toxic metals, proprietary process chemicals, acid mine drainage, water recreation, autoclave process, and air emissions.

**Response:** Some of these issues can be correlated with issues identified in the Draft Scoping Decision Document and will be included in the EIS. These issues include cumulative impacts, historical/cultural resources, toxic metals, acid mine drainage, autoclave process and air emissions.

The issues of odors and water recreation will not be included in the EIS because the project is not likely cause significant adverse impacts related to odors and water recreation.

There are no proprietary process chemicals proposed to be used as part of the project, so there is no need to include any discussion in the EIS related to such process chemicals.

The issue of international ramifications is outside the scope of analysis for both state and federal environmental review, and will not be included as part of the EIS.

**Change in EIS Scope:** None

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**Comment:** (MISC-6) Comments provide various reasons why individuals, companies, or communities support the project.

**Response:** Letters of support are not applicable to environmental review. However, the cumulative economic impact of the project is proposed to be evaluated (See Section 3.3.8.11).

**Change in EIS Scope:** None

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**Comment:** (MISC-7) Comments associated with concern about the presence of asbestiform fibers in the ore deposit and health impacts that could result exposure to these fibers. Comments also question the validity of previous analysis on the deposit for the presence of asbestiform fibers and request additional information about the analysis.

**Response:** Although previous tests did not locate the presence of asbestiform fibers, additional analysis of deposit samples will be conducted and the results will be provided in the EIS.

**Change in EIS Scope:** Section 3.2.9 of the Scoping Decision Document includes additional detail on testing method for ore, tailings, and process water.

---

**Comment:** (MISC-8) Comments are concerned about the U.S. Army Corps public notice for a Section 404 permit for the project prior to completion of the EIS. Comments also request a public hearing prior to issuance of the permit.

**Response:** The U.S. Army Corps of Engineers had no intent to issue the Section 404 Permit prior to completion of the EIS. The public notice was used as part of communication strategy to inform the public about the project prior to the state's formal scoping notice. The EIS will be used to inform the U.S. Army Corps of Engineers about project impacts. The information will be used by the U.S. Army Corps of Engineers when making its Section 404 permit decision. The U.S. Army Corps of Engineers in coordination with DNR will consult with individuals requesting a public hearing and make a determination about whether or not to conduct a public hearing.

**Change in EIS Scope:** None

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**Comment:** (MISC- 9) Concern about ethical use of technology.

**Response:** Comment does not suggest additional issues or information to be included in the EIS.

**Change in EIS Scope:** None

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**Comment:** (MISC-10) Concern about production of additional cancer causing substances.

**Response:** Comment does not suggest additional issues or information to be included in the EIS.

**Change in EIS Scope:** None.

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**Comment:** (MISC –11) Comment asks if PolyMet is a subsidiary company and its track record in the western United States.

**Response:** PolyMet Mining Corp. based in Vancouver, British Columbia (formerly Golden, Colorado) is a publicly-traded mine development company listed on the Toronto Venture Exchange. PolyMet Mining, Inc. is a wholly-owned Minnesota subsidiary of PolyMet Mining Corp. (PolyMet). PolyMet is not a subsidiary or affiliated in any way with any other mining company.

The NorthMet deposit in northeastern Minnesota is PolyMet’s principal asset. While PolyMet the company does not have any other mining operations from which to derive revenue, the management and project development team is highly experienced and has a proven track record in all aspects of responsible project development.

**Change in EIS Scope:** None

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**Comment:** (MISC-12) Comment asks about the cost/benefit relationship of the proposal with respect to human/environmental impacts and economic gain.

**Response:** While a specific cost benefit analysis is not proposed for inclusion in the EIS, the EIS will provide some indirect information about costs and benefits. Significant adverse environmental impacts of the project will need to be avoided, mitigated or minimized. This information can be compared to the estimated economic gain in the form of employment, state/local taxes, and indirect economic growth that are identified in Sections 3.3.8.11 and 3.3.8.12.

**Change in EIS Scope:** None.

---

**Comment:** (MISC-14) Comment asks how the findings of the 1979 Copper-Nickel Study will be used?

**Response:** The proposed EIS Scope identifies that the Copper-Nickel study will be used as background data for water quality and wildlife. The EIS contractor will assemble the Copper-Nickel Study for use in development of the EIS.

**Change in EIS Scope:** None

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**Comment:** (MISC-15) Comment asks how much will be paid to landowners for leasing the land.

**Response:** Context of the comment is not within the scope of environmental review.

**Change in EIS Scope:** None

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**Comment:** (MISC-16) Comment is concerned about usage of words like “strive” and “minimize” that do not commit to a specific value, and thus can be a moving target.

**Response:** The context of the comment is in regard the Purpose and Need Statement. The intent of these descriptions was to give some idea of how the proposer intends to operate the project. This section may not be appropriate for the Purpose and Need Statement, and should be removed.

**Change in EIS Scope:** Purpose and Need Statement is reduced to a brief statement of the proposal's purpose.

---

**Comment:** (MISC-17) Comment is concerned about residents of Northern Minnesota not being fully aware of the hazards associated with sulfide mining.

**Response:** One of the purposes of environmental review is to provide information to the public about proposals and how they will be affected. The Draft EIS will provide information to the public about any hazards and proposed mitigation of those hazards. A public informational meeting will also be held after the Draft EIS is published.

**Change in EIS Scope:** None

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**Comment:** (MISC-18) Comment is concerned about agency staff not having enough experience in sulfide mining operations.

**Response:** We are confident in our staff's capability to understand and analyze issues associated with sulfide mining. However, it should be pointed out that an EIS consultant will be engaged to assist in development of the EIS. This consultant will need to have specialized experience in sulfide mining.

**Change in EIS Scope:** None

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**Comment:** (MISC-19) EIS should evaluate New Zealand standards performance for non-ferrous mining.

**Response:** There very well could be some benefit in gaining an understanding of previous/existing non-ferrous mining. However, the project will be evaluated with respect to state and federal standards, so it is unlikely that international standards will be applicable to the proposal.

**Change in EIS Scope:** None

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**Comment:** (MISC-20) Concern about use of old LTVSMC buildings.

**Response:** The use of existing structures will require refurbishment and updates to accommodate the proposed new uses. Any hazards identified with existing structures

will be identified and resolved through the Saint Louis County building permit approval process. Any buildings not proposed for use in the project will be demolished as per Cliffs Erie's closure plan.

**Change in EIS Scope:** None

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**Comment:** (MISC-21) Concern about using old mining techniques to enter a new world market.

**Response:** The proposal does not necessarily propose old mining techniques, but rather proposes conventional mining techniques. Alternatives for handling and treatment of reactive waste rock will be included in the EIS to ensure the proposal uses the most suitable technology. See Section 2.0 of the Scoping Decision Document.

**Change in EIS Scope:** None

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### **NOISE**

**Comment:** (N-1) Comments are concerned that proposed analysis of noise impacts is insufficient.

**Response:** The proposer conducted noise modeling to evaluate potential levels of impact. This modeling indicated low levels of impact to sensitive receivers. However, Section 3.2.4 does identify that these models will be evaluated as part of the EIS, as well as identification of mitigation if impacts are significant.

**Change in EIS Scope:** None.

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### **PERMIT TO MINE**

**Comment:** (PTM-1) Comment is concerned about environmental information being deferred to Minnesota State Permit to Mine, rather than being included in the EIS. A specific example about stockpile construction and management was given.

**Response:** There is no intent to defer environmental information to permitting processes. There is however interest in developing permitting information as part of the EIS process. In many cases throughout the Scoping EAW it indicates additional information will be provided as part of the permit application. This information will also be included in the EIS if it is available within the time period for EIS preparation.

**Change in EIS Scope:** None

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### **SOLID WASTE**

**Comment:** (SW-1) Comment states that the EIS needs to evaluate structural stability of the existing tailings basin for proposed additions, including the reactive residue facility and removal of tailings for construction purposes.

**Response:** Section 2.5 identifies a Technical Design Evaluation Report for Tailings Basin Geotechnical that proposes to evaluate structural stability of existing tailings basin. The description of this proposed report focuses on dam stability for additional tailings placement. The proposed report will be modified to include the entire tailings basin with proposed alterations.

**Change in EIS Scope:** Include evaluation of entire basin in Tailings Basin Geotechnical Design Evaluation Report.

---

**Comment:** (SW-2) Comment requests that the EIS include evaluation of how well acid generation from buried hornfels was prevented, and how will potential future releases to groundwater be distinguished between the hornfels and project activities.

**Response:** The existing water quality from the tailings basin will be assessed in the EIS. This will include available information about the buried hornfels. Since PolyMet has proposed to site some of their facilities above the hornfels, the impact of these facilities on the hornfels will be addressed in the EIS. PolyMet will be responsible for all water leaving the former LTV tailings basin and will have to comply with all future permit requirements. The EIS will discuss mitigation and monitoring to prevent impacts and monitor compliance with potential permit conditions.

**Change in EIS Scope:** Section 7.1 of the Scoping Decision Document identifies that mitigation and monitoring will be included in the EIS.

---

**Comment:** (SW-3) Comment requests identification of nuclear containing devices and standards for disposal.

**Response:** The nuclear containing devices referred to are nuclear density gages that are typically used in mill process control systems. The installation, operation and disposal of these devices are regulated by the Nuclear Regulatory Commission (NRC). Typically the devices are disposed by returning to the manufacturer. There may be standards used to calibrate the devices. If there are, they also will be regulated by the NRC.

**Change in EIS Scope:** None

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**Comment:** (SW-4) Comment is concerned with the sources of railroad ballast contamination identified as potentially needing remediation as part of mine closure and reclamation.

**Response:** The potential for railroad contamination is referring to previous and potential future petroleum contamination associated with train operations hauling ore from the mine to the processing plant.

**Change in EIS Scope:** None

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**Comment:** (SW-5) Many comments were received about concerns and/or the need to further characterize waste rock (reactive and non-reactive), lean ore, tailings, and reactive residue.

**Response:** Waste characterization is an important part of the EIS as well as Permit to Mine requirements. Waste characterization is included in the Scoping Decision Document (See Section 3.3.4) and ongoing waste characterization will be required as a part of the Permit to Mine requirements. Available waste characterization data will be used to model effluent water quality from stockpiles and tailings. The project is proposed to control and collect runoff of potentially reactive material. To mitigate for any uncertainty associated with characterization of the tailings, PolyMet has proposed to develop 5-years of lined tailings storage on top of Cell 2W. During that time additional waste characterization data can be generated for the tailings. If tailings are determined to be reactive, Cells 1E and 2E would be lined to continue to control and collect water. If tailings are determined to be non-reactive, Cells 1E and 2E will be used without a liner. Environmental Impacts from both scenarios will be assessed in the EIS.

**Change in EIS Scope:** Section 2.7.2 of the Scoping Decision Document describes the lined tailings basin mitigation measure.

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**Comment:** (SW-6) Comment requests the EIS include an estimation of the amount of de-mineralization sludge.

**Response:** Section 3.3.4 of the Scoping Decision Document indicates the identification, handling and facility design for other waste will be included in the EIS. This includes de-mineralization sludge.

**Change in EIS Scope:** None

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**Comment:** (SW-7) EIS should include information on explosives as hazardous substances.

**Response:** Comment acknowledged. Section 3.3.7 will be revised to include identification and handling of hazardous substances in the EIS.

**Change in EIS Scope:** Section 3.3.7 includes identification and handling of hazardous substances in the EIS.

---

**Comment:** (SW-8) Comment asserts that dust from haul roads and railroad must be considered reactive.

**Response:** The material comprising the haul roads and railroad beds will not be constructed of reactive material. This will prevent dust from these sources from having reactive characteristics.

**Change in EIS Scope:** None

---

**Comment:** (SW-9) Comment asks if results from pilot plant testing will be applicable to project operations given the significant increase in scale between the two.

**Response:** The pilot plant test will provide useful information that can be helpful in evaluating the project at operational scale. There will however be a need to monitor operations to ensure that predictions were accurate.

**Change in EIS Scope:** None

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## **TRAFFIC**

**Comment:** (T-1) Comment requests the EIS include additional analysis of traffic impacts due to the project.

**Response:** Proposed traffic increases are less than traffic that was associated with former LTVSMC operations and the project will use the same traffic infrastructure. There are no significant impacts anticipated with traffic and it is appropriate to scope out issues that are not significant.

**Change in EIS Scope:** None.

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## **VISIBILITY**

**Comment:** (V-1) Comments are concerned about no additional analysis on visibility. These concerns are based on increased light glare and height of stockpiles. Comments request an analysis of visibility impacts in the EIS.

**Response:** Visibility impacts from lighting will be included in the EIS.

**Change in EIS Scope:** Section 3.2.6 identifies that visibility will be assessed in the EIS under significant impacts not expected, but additional information beyond what was provided in the EAW will be included. This section will evaluate lighting visibility impacts and propose mitigation as warranted.

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**Comment:** (V-2) This comment is similar to V-1 except that it specifically calls out potential impacts to Partridge River Recreation as being impacted.

**Response:** Comment acknowledged. Visibility impacts from stockpiles will be included in the EIS.

**Change in EIS Scope:** Section 3.2.6 identifies that visibility will be assessed in the EIS under significant impacts not expected, but additional information beyond what was provided in the EAW will be included. This section will evaluate visibility impacts of stockpiles and propose mitigation as warranted.

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## **WATER QUALITY**

**Comment:** (WQL-1) Comment is concerned about limited amount of data available to characterize existing water quality of area streams.

**Response:** The Scoping EAW indicates that other existing sources of water quality data will be used to help describe background conditions in addition to ongoing data collection efforts. Examples of other data sources include the Regional Copper-Nickel Study, AMAX test shaft, Teck Cominco bulk sample, and Northshore mining operations.

**Change in EIS Scope:** None

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**Comment:** (WQL-2) Comment is concerned about statement in Scoping EAW that states current water runoff from the site is likely similar to current water quality of the Partridge River, when it is believed that the Partridge River is influenced by mining activities. Essentially how can an undisturbed site have the same water quality of a river that receives runoff from disturbed areas.

**Response:** The intent of the statement was to characterize the proposed mine site run-off as typical of other forested sites in the watershed.

**Change in EIS Scope:** None.

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**Comment:** (WQL-3) Comment requests the EIS identify the water quality standards and assess the projects ability to meet those standards

**Response:** The EIS will describe the water quality standards that apply to potential receiving waters as identified in Minnesota Rules Chapters 7050 and 7052. The EIS will also estimate the effluent limits that will likely apply for the discharges from the project and will evaluate how discharges meeting these limits would affect the water quality of the receiving waters. This information will be developed to aid in the processing of the NPDES permit application(s). Finalization of effluent limits, monitoring requirements and other water quality related operational requirements will take

place during the NPDES permitting process, which also includes its own public involvement process.

**Change in EIS Scope:** Section 3.3.6 identifies how the project will be evaluated with respect to meeting water quality standards.

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**Comment:** (WQL-4) Comment asserts that a water quality non-degradation analysis must be included in the EIS.

**Response:** A non-degradation analysis will be part of the separate NPDES permitting process. The EIS will develop and evaluate information on the water quality of the discharges from the proposed project and what the impact of discharges will be on receiving waters. The information so developed in the EIS will then be used to aid the non-degradation analysis that will be conducted during the permitting process. The EIS itself will not include this non-degradation analysis.

**Change in EIS Scope:** None

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**Comment:** (WQL-5) Comment is concerned about apparent discrepancy between statements of water not needing to be discharged from the tailings basin and needing to discharge water for water quality purposes. The comment also requests evaluation of discharges from the tailings basin considering expansion of the project beyond the 20- year proposal.

**Response:** It is acknowledged that in order to maintain suitable water quality in the basin, periodic treatment and discharge of tailings basin water will be needed. Evaluation of plant-tailing basin water management will be included in the EIS.

The EIS will not evaluate speculative expansion of the tailings basin. Any expansion or additional use of the basin beyond what is currently proposed will need separate environmental review and permit modifications.

**Change in EIS Scope:** Section 3.3.6 identifies how potential discharges will be evaluated.

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**Comment:** (WQL-6) Comments assert need to evaluate probability of meeting the mercury standard, requirements of any potential variance, and environmental impacts from mercury.

**Response:** An assessment of mercury levels in the discharge(s) will be included in the EIS.

**Change in EIS Scope:** Section 3.3.6 identifies how mercury impacts will be evaluated including the potential eligibility of applying for a variance from the mercury water quality standard.

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**Comment:** (WQL-7) Comment asserts that suitability and upgrade needs of existing wastewater treatment plants will need to be evaluated if these plants are proposed to be used by the project for water treatment.

**Response:** Existing wastewater treatment plants that are alternatives will be evaluated including the suitability and upgrade needs of the facilities (See Section 3.2.8 of the Scoping Decision Document).

**Change in EIS Scope:** None.

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**Comment:** (WQL-8) Comments assert that EIS must evaluate impacts to downstream waters as it relates to reactive and non-reactive sources, including information on collection systems.

**Response:** Sections 3.3.5 and 3.3.6 propose to include this information in the EIS.

**Change in EIS Scope:** None.

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**Comment:** (WQL-9) Comment asserts need to evaluate pit lake water quality and post-closure monitoring.

**Response:** Section 3.3.6 identifies that an analysis of pit lake water quality will be included in the EIS.

**Change in EIS Scope:** None.

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**Comment:** (WQL-10) Comment requests evaluation of increased sulfate causing methylation of mercury.

**Response:** Section 3.3.6 identifies methylation of mercury due to increases in sulfate as an issue that will be addressed in the EIS.

**Change in EIS Scope:** None.

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**Comment:** (WQL-11) Comment requests that the EIS include a discussion of the impaired water status of receiving waters.

**Response:** Section 3.3.5 (Surface water Runoff) identifies that the EIS will include information on the existing water quality, including impairment status, of water bodies potentially affected by the project.

**Change in EIS Scope:** None.

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**Comment:** (WQL-12) Comment asserts need to evaluate groundwater quality impacts at the mine site and tailings basin.

**Response:** Section 3.3.6 identifies that models will be used to predict water quality at the mine site and tailings basin. The specific resource of groundwater was not identified, but it was intended to be included.

**Change in EIS Scope:** Section 3.3.6 identifies groundwater quality as an issue to be analyzed in the EIS.

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**Comment:** (WQL-13) Comment requests that the EIS include an analysis of bioaccumulation of toxic metals.

**Response:** Water quality standards were developed to be protective of key environmental indicators for each water quality constituent. If bioaccumulation of a toxic metal was the most sensitive indicator for a specific constituent, the water quality standard accounted for that. As the project will be required to meet water quality standards, it will be protective for bioaccumulation of toxic metals.

**Change in EIS Scope:** None.

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## **WATER QUANTITY**

**Comment:** (WQN-1) Comment points out that predictions of mine pit inflow can be difficult and should receive close attention.

**Response:** Section 3.3.4 describes the phase I and phase II hydrogeology investigation that will be used to predict mine pit inflow.

**Change in EIS Scope:** Section 3.3.2 provides details on the phase I and phase II hydrogeology study.

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**Comment:** (WQN-2) Comments request that the EIS evaluate mine pit dewatering impacts on local groundwater table.

**Response:** The EIS will evaluate potential impacts on the local groundwater table associated with the unconsolidated surficial aquifer. The deeper aquifers will not be evaluated as there is no potential for significant impacts to wells or land surface expressions of these aquifers.

**Change in EIS Scope:** None

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**Comment:** (WQN-3) Comment is concerned about water release patterns during and after the project to protect downstream aquatic resources. Comment also asserts flow patterns to the Partridge River should be restored to pre-mining condition in the watershed.

**Response:** The EIS will evaluate potential impacts to streams from changes in hydrology. However, it is unlikely that this analysis will result in mitigation that restores pre-mining condition in the watershed. The existing Peter Mitchell mine pit has changed the hydrology of the watershed, and there is little that the PolyMet project could do to regain the natural hydrology. Existing downstream aquatic resources will be considered as part of the analysis and any impacts will be identified as well as potential mitigation.

**Change in EIS Scope:** None

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## **WETLANDS**

**Comment:** (WET-1) Comments are concerned about proposed approach to wetland delineation, mitigation, and permitting. Underlying concern is associated with ability to properly identify total impacts and ensure appropriate mitigation.

**Response:** The quantity and content of these comments makes it clear that the description of how wetland impacts will be evaluated was largely misunderstood. Significant effort is being expended to ensure that potential wetland impacts are appropriately identified and accounted for. All potentially impacted wetlands will be delineated and the results of the delineation will be included in the EIS. The EIS will provide a complete understanding of the wetland impact and feasibility of mitigation strategies. Permitting of wetland impacts will require detailed delineations and associated mitigation.

**Change in EIS Scope:** Section 3.3.3 identifies that all project wetlands will be delineated and included for impact assessment.

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**Comment:** (WET-2) Comments point out need to evaluate indirect wetland impacts.

**Response:** Section 3.3.3 identifies that indirect wetland impacts will be evaluated in the EIS.

**Change in EIS Scope:** None

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**Comment:** (WET-3) Comment asserts that wetland impacts cannot be replaced.

**Response:** It is acknowledged that ecological functions of wetlands are difficult to replace. This is taken into consideration as part of wetland fill permitting programs such as the USACE Section 404 Permit. Mitigation for wetland impacts will be required as part of the Section 404 permitting.

**Change in EIS Scope:** None.

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**Comment:** (WET-4) Comment suggest that a mitigation strategy of payment to state or county government for wetland enhancement purposes.

**Response:** Mitigation for wetland impacts is preferred to occur prior to or concurrent with the wetland impacts. In-Lieu Fees are not a preferred method for mitigation of wetland impacts, as it does not account for replacement of specific functions and values lost as a result of project wetland impacts. In-Lieu Fees also increase the temporal loss of wetlands, as these programs can take some time to develop.

**Change in EIS Scope:** None

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**Comment:** (WET-5) Comment points out the wetland soils on the mine site will be destroyed.

**Response:** Mitigation of wetland impacts will restore and create wetlands. This will include hydrology that will create wetland soils.

**Change in EIS Scope:** None