

2.0 EIS DEVELOPMENT

2.1 INTRODUCTION

This section describes the development of the EIS for the NorthMet Project from when it was first proposed in 2005, through development of this FEIS. It includes a discussion of the EIS development from scoping to publishing; public, tribal, and government agency comments; the Co-lead Agencies' deliberations and decisions; incorporation of the Land Exchange Proposed Action as a connected action, and subsequent development of the SDEIS and FEIS. An overview of this process is shown in Figure 2.1-1.

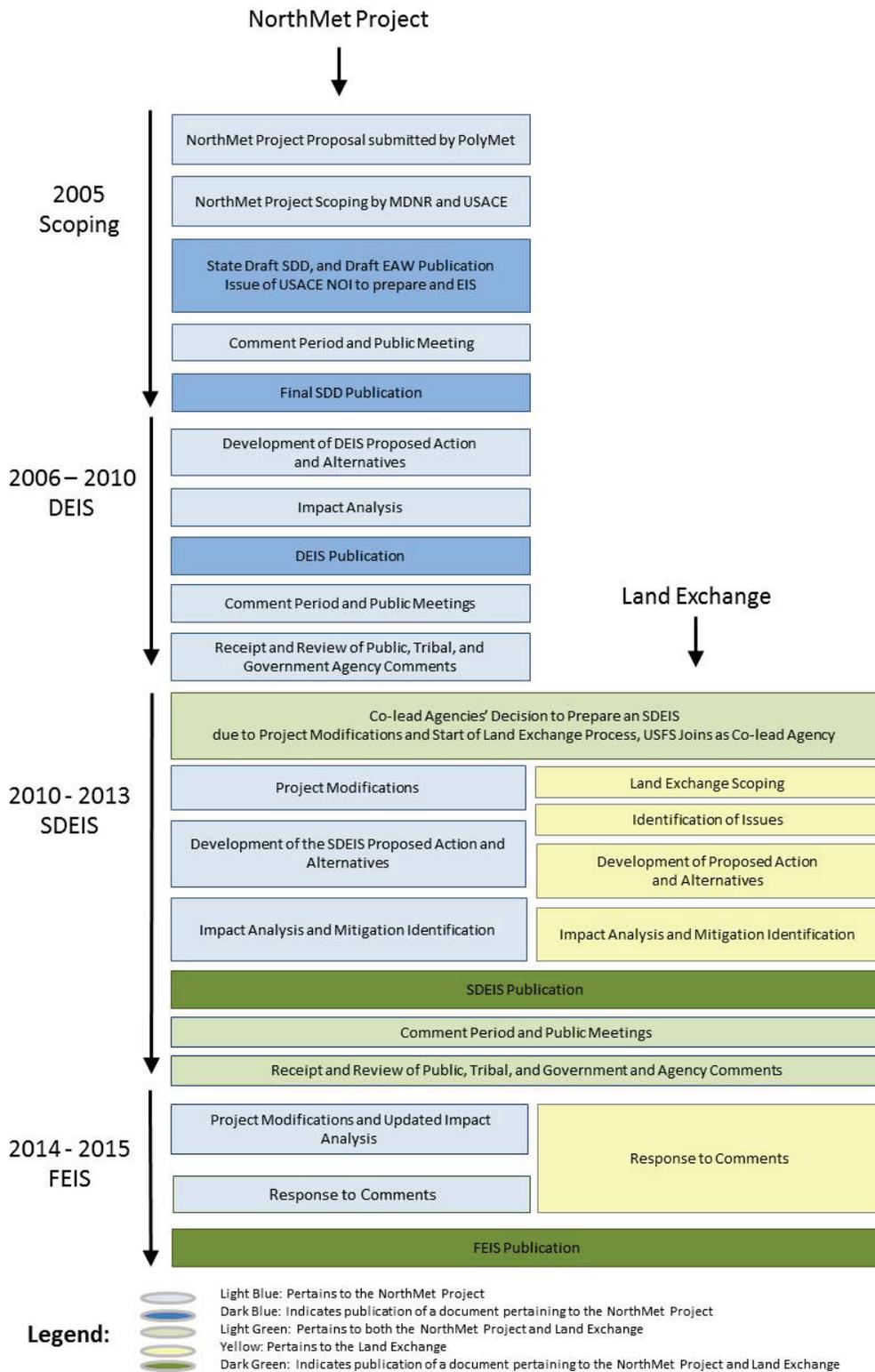


Figure 2.1-1 NorthMet Mining Project and Land Exchange EIS Development Process

2.2 DEIS DEVELOPMENT

2.2.1 NorthMet Project Scoping

In early 2005, the USACE received a permit application from PolyMet to discharge fill material to waters of the United States, including wetlands, in order to develop the NorthMet Project, requiring the preparation of an EIS pursuant to NEPA. The preparation of a state-level MEPA EIS would also be mandatory for the NorthMet Project.

Scoping is required by both NEPA and MEPA. The scoping process in Minnesota includes all procedural and substantive requirements to satisfy scoping for preparation of a federal EIS under NEPA. As the RGU for this EIS, the MDNR was responsible for administering the state's scoping process.

The DEIS scoping for the NorthMet Project, as originally proposed, involved the preparation of the following three documents:

- the state Scoping Environmental Assessment Worksheet (EAW);
- the state Draft Scoping Decision Document (SDD); and
- the state Final SDD.

After the Draft SDD and Scoping EAW were issued via the Environmental Quality Board (EQB) Monitor on June 6, 2005, comments were collected during a 30-day comment period that concluded on July 6, 2005. A public scoping meeting was held in Hoyt Lakes, Minnesota, on June 29, 2005. This meeting was hosted by the MDNR and USACE. Comments were addressed in the Response to Public Scoping Comments issued with the Final SDD on October 25, 2005. The USACE issued a Notice of Intent (NOI) to prepare an EIS in the Federal Register (FR) on July 1, 2005 (Volume 70, Number 126).

2.2.2 Identification of Issues

The scoping process was used to identify potentially significant issues that would trigger detailed analysis of effects and the development of potential alternatives and mitigation measures.

As discussed in the Final SDD, potentially significant effects included those on fish and wildlife resources, threatened and endangered species, water resources, water appropriations, surface water runoff and erosion/sedimentation, wastewater, and solid waste, as well as cumulative impacts. These impacts required a more detailed discussion than had been provided in the Scoping EAW; as a result, they were discussed in detail in the DEIS.

Other issues identified during scoping that were discussed in detail in the DEIS included vegetation cover types, point and non-point source air emissions, noise, cultural resources, visibility, compatibility with land use plans and regulations, infrastructure, amphibole mineral fibers, and tribal concerns regarding access to lands within the 1854 Ceded Territory.

Additional issues were also considered but eliminated from detailed analysis in the DEIS because they were determined to have no significant predictable effect or had been adequately discussed in the Scoping EAW. These issues included land use conflicts, water-related land use management, surface water use, geologic hazards and soil conditions, traffic, and odors.

2.2.3 DEIS Proposed Action and Alternatives

The proposed action analyzed in the DEIS called for surface mining and mineral processing of approximately 228 million (short) tons of copper-nickel-PGE ore over an approximate 20-year mine life. Proposed mining would occur at the NorthMet Deposit, which is located on undeveloped federal land. Existing infrastructure would be utilized to transport the ore approximately 8 miles to the west for processing at the former LTVSMC processing plant, which would be refurbished if necessary.

In accordance with NEPA and MEPA, a number of project alternatives were identified through scoping. After consideration, the following were evaluated in the DEIS (refer to Section 3.2.3):

- Proposed Action,
- No Action Alternative,
- Mine Site Alternative, and
- Tailings Basin Alternative.

The DEIS included provisions for a surface use permit from the USFS to use its lands for the mine. PolyMet and the USFS had been exploring options to avoid a conflict between the use of the surface (federal) and subsurface (private) estates. One option was to exchange the federally owned surface land necessary for the proposed mine with other private lands in the area. However, no agreement was reached and the DEIS did not include a land exchange.

2.2.4 Impact Analysis

Potential effects of the NorthMet Project Proposed Action and alternatives were determined using baseline data, predictive modeling programs, GIS and spatial data analysis, and other impact assessment methods both qualitative and quantitative. The predicted effects and potential mitigation measures were discussed in Chapter 4 of the DEIS.

2.2.5 DEIS Publication

The DEIS was made available to the public through notification in the November 2, 2009 EQB Monitor (Volume 33, Number 22) and November 6, 2009 FR (Volume 74, Number 214). The notification informed the public that paper copies of the DEIS were available for review at MDNR offices and public libraries in Grand Rapids, Hibbing, Hoyt Lakes, Duluth, Minneapolis, and St. Paul. Summary versions of the document and compact disks containing the full version of the DEIS were provided upon request, and the entire document was also made available via the MDNR's website. Summary versions or full copies on paper or disk were distributed to parties on the MEQB distribution list as well as additional interested parties.

2.2.6 Comment Period and Public Meetings

The MEQB and FR notification also identified that the 90-day comment period would end on February 3, 2010. Instructions and contact information were provided for submittal of public comments.

Following the release of the DEIS, public meetings were held in Aurora, Minnesota, on December 9, 2009 and Blaine, Minnesota, on December 10, 2009, to gather public comments on the DEIS.

2.2.7 Receipt and Review of Public and Agency Comments

Public and agency comments on the DEIS were collected during the 90-day comment period. Submissions came from government agencies (federal, state, and local), tribal entities, local businesses, non-governmental organizations, private individuals, and PolyMet. Approximately 3,800 comment submissions were received.

The comments were analyzed, and the key issues identified included effects on cultural resources, air quality, wetlands, geotechnical stability, socioeconomics, and water resources. Topic-focused workgroups were assembled from members of the Co-lead and Cooperating Agencies to further consider these issues.

2.3 SDEIS DEVELOPMENT

2.3.1 Co-lead Agencies' Decision to Prepare an SDEIS

In mid-2010, the Co-lead Agencies decided to prepare an SDEIS that would incorporate a Land Exchange (see Section 2.3.1.1), Cooperating Agency and public comments, evolving MPCA guidance, and project refinements made by PolyMet (see Section 2.3.2.1). The USACE and USFS published a NOI on October 13, 2010 in the FR (Volume 75, Number 197) indicating the intent to prepare the SDEIS. The NOI identified that scoping would be conducted only for the Land Exchange, with no additional scoping for the proposed NorthMet Project because the issues regarding the mine had not changed. The MDNR published a Notice of Amendment to the Scoping Decision in the EQB Monitor on November 1, 2010.

The SDEIS included analyses of both the NorthMet Project Proposed Action and the Land Exchange Proposed Action as a connected action.

2.3.1.1 Addition of the Land Exchange

The USFS determined that an EIS would be required to analyze the Land Exchange Proposed Action. Since the Land Exchange constitutes a connected action to the NorthMet Project Proposed Action, it has been incorporated into the NorthMet Mining Project EIS. The USFS subsequently joined the USACE and MDNR as a Co-lead Agency.

2.3.2 NorthMet Project

2.3.2.1 Project Modifications

Several key decisions made by the Co-lead Agencies following the DEIS prompted PolyMet to make project modifications, which further supported the need for an SDEIS to assess effects resulting from the proposed NorthMet Project.

Starting in January 2010, PolyMet made a number of modifications to the original mine plan. These modifications addressed issues identified in DEIS comments and during agency deliberations. The changes were detailed in a series of documents prepared by PolyMet for the

Co-lead Agencies' consideration and were incorporated to the Project Description through the Draft Alternative discussed below.

In June 2010, the MPCA issued draft staff recommendations on the site-specific application of the wild rice standard, which states that 10 milligrams per liter (mg/L) of sulfate be applied to waters used for production of wild rice; this standard applies from April 1 to August 31 each year for the Partridge and Embarrass river systems. The recommendations were updated in March and June 2011. The MPCA guidance also included Tailings Basin performance requirements regarding seepage discharges, limitations to sulfate contributions in surface waters, and monitoring requirements. In August 2012, the recommendations were updated to apply the seasonal application to just the Partridge River. The recommendations also suggest continuation of monitoring of wild rice. PolyMet is not intending to seek a water quality permit with a seasonal discharge sulfate component.

Topic-focused workgroups were established to discuss key issues that needed to be closely examined in the SDEIS. Workgroup participation was varied and included representatives from the Co-lead Agencies, other regulating agencies, and/or the Cooperating Agencies and PolyMet. These groups participated in the impact assessment planning (IAP) process, which led to the development of work plans for data packages and management plans (MDNR et al. 2011). The workgroups discussed evaluation criteria, methodologies for analysis, potential effects, and possible mitigation measures. Topics addressed by the workgroups included geotechnical stability, wetlands, air resources, and water resources. The water resources group was further divided into four subgroups to address evaluation criteria, groundwater issues, surface water issues, and geochemistry. A socioeconomics workgroup was also established to address tribal concerns regarding potential socioeconomic effects on the Bands from the NorthMet Project Proposed Action.

A Co-lead Agencies workgroup was also established to discuss issues related to the project modifications, alternatives (predominantly the Mine Site and Tailings Basin Alternatives addressed in the DEIS), the wild rice standard, and various mitigation measures identified by the topic-focused workgroups. The discussions, in consultation with PolyMet, resulted in development of the Draft Alternative. In January 2011, the Co-lead Agencies briefed the Cooperating Agencies and other involved agencies on the Draft Alternative. Due to changes in the project, the Draft Alternative was updated, recirculated, and released again in March 2011 and October 2011.

In October 2011, PolyMet incorporated the Draft Alternative into its Proposed Action for the NorthMet Project. As discussed in Section 3.2.3, a full range of reasonable alternatives was evaluated in developing the Draft Alternative.

2.3.2.2 Revised Proposed Action and Alternatives

As described in Section 2.3.2.1 above, the NorthMet Project Proposed Action was modified following the DEIS as a result of input from the public, Cooperating Agencies, and the Co-lead Agencies via the workgroups, and additional modeling and impact analyses. Project modifications incorporated additional mitigation measures designed to meet applicable regulatory standards over the life of the mine.

Given the changes to the NorthMet Project Proposed Action, some previously considered alternatives were deemed no longer valid because:

- they have been incorporated into the current NorthMet Project Proposed Action;
- they do not correspond to the current design of the NorthMet Project Proposed Action; or
- they do not correspond to effects under the current NorthMet Project Proposed Action.

Thus, only those previously considered alternatives that were still relevant were rescreened in the SDEIS. The Underground Mining Alternative and backfilling the West Pit with Category 1 waste rock were deemed necessary for reconsideration and are discussed in Section 3.2.3. Other previously considered alternatives screened throughout the EIS process, including during scoping and development of the DEIS and SDEIS, are also discussed in Section 3.2.3.

2.3.2.3 Impact Analysis

Similar to the analysis in the DEIS, potential effects of the revised NorthMet Project were determined using probabilistic and/or deterministic modeling programs, GIS and spatial data analysis, and other impact assessment calculations. These predicted effects are described in Chapter 5.

2.3.3 Land Exchange

The USFS and PolyMet developed a Land Exchange proposal by which the federal surface lands at the proposed Mine Site would be transferred to PolyMet ownership in exchange for non-federal lands (to be owned by PolyMet) that would meet the USFS criteria identified in the Forest Plan. Alternatives to the Land Exchange proposal, including the No Action Alternative, were developed and analyzed in the SDEIS.

A feasibility analysis, completed by the USFS in November 2009, assessed the potential for a land exchange between the USFS and PolyMet that would involve the federally owned parcel on which the NorthMet Project Mine Site is proposed. The feasibility analysis evaluated one federal tract (encompassing much of the proposed Mine Site) and two non-federal tracts for conformance with the Forest Plan, which included current and future uses of the land tracts. A preliminary monetary valuation indicated that additional parcels would be needed to bring the market value of federal and non-federal lands within the limits required for an exchange. The analysis also determined that additional parcels would be needed to supplement the amount of wetland acres being exchanged in order to meet the requirements of EO 11990. Three non-federal tracts were subsequently added for consideration in the Land Exchange Proposed Action. These tracts were evaluated for conformance by the same criteria used in the feasibility analysis.

2.3.3.1 Land Exchange Scoping

As discussed in Section 2.3.1, the USACE and USFS published an NOI to prepare an SDEIS; this NOI discussed both the intent to prepare an SDEIS, which would supplement the DEIS, and the inclusion of the Land Exchange Proposed Action as a connected action. The NOI identified that the comment period would be held for 45 days and provided notification that scoping comments were limited to the Land Exchange Proposed Action.

Open house scoping sessions were held in Aurora, Minnesota on October 26, 2010 and in New Brighton, Minnesota, on October 27, 2010. At each open house, representatives from the USFS, USACE, MDNR, PolyMet, and the Co-lead Agencies' third-party consultant provided information on the NEPA process, the NorthMet Project Proposed Action and Land Exchange Proposed Action, and how to provide scoping comments.

2.3.3.2 Identification of Issues

Similar to the scoping for the DEIS, the Land Exchange scoping process was used to identify potentially significant issues, less significant issues, and issues considered but eliminated from further consideration as discussed in Appendix G of the May 2011 Detailed Scoping Report for the PolyMet Land Exchange (USFS 2011n).

Potentially significant issues identified included the development of exchange alternatives, tribal access rights, and federal trust obligations. These issues are discussed in detail in Chapter 5 of the FEIS.

Other issues identified in scoping for the Land Exchange included air quality, climate change, cultural/tribal concerns, cumulative effects, ecological functions and values, forest resources, hazardous materials, market value and legal implications, conformance with the Forest Plan, socioeconomics, threatened and endangered species, vegetation and wildlife habitat, water resources, and wetland effects.

Issues considered but eliminated from further consideration included mining-related effects, as these would be discussed as part of the mining action; corporate profits resulting from the Land Exchange; land value disclosures; and adequacy of scoping materials.

2.3.3.3 Proposed Action and Alternatives

A Proposed Action for the Land Exchange was developed that identified potential lands for exchange (see Section 3.3.2 for a description of the federal and non-federal parcels).

Several alternatives to the Land Exchange Proposed Action were identified, including the No Action Alternative required by NEPA and MEPA. The USFS evaluated these alternatives for detailed analysis in the SDEIS based on criteria including conformance with the Purpose and Need statements from the project proponent and Co-lead Agencies, technical and economic feasibility, land availability, and potential environmental benefits. Further detail on the screening process is available in Section 3.3.3.

Along with the No Action Alternative, only the Land Exchange Alternative B met these criteria and is fully analyzed in the FEIS. The remaining alternatives—exchange of a single contiguous non-federal parcel, underground mining and other alternative methods of mineral extraction, exchange of other non-federal parcels, and full land exchange with deed restrictions—did not meet these criteria and were eliminated from detailed analysis in the EIS.

2.3.3.4 Impact Assessment

The USFS identified resource topic-specific issues, effects, area(s) of analysis, impact indicators, data needs, and analysis methods for assessment of the Land Exchange. These topics, along with assessment results, are discussed in Chapter 5.3 of the FEIS.

2.3.4 SDEIS Publication

The SDEIS was made available to the public through notification in the December 9, 2013 EQB Monitor (Volume 37, Number 25) and December 13, 2013 FR (Volume 78, Number 240). The notification informed the public that paper copies of the SDEIS were available for review at MDNR offices and public libraries in Grand Rapids, Hibbing, Hoyt Lakes, Babbitt, Duluth, Minneapolis, and St. Paul. Executive Summaries of the document and compact disks containing the full version of the SDEIS were provided upon request, and the entire document was also made available via the MDNR's website. Executive Summaries or full copies on paper or disk were distributed to parties on the MEQB distribution list as well as additional interested parties.

2.3.5 Comment Period and Public Meetings

The MEQB and FR notification also identified that the 90-day comment period would end on March 13, 2014. Instructions and contact information were provided for submittal of public comments.

Following the release of the SDEIS, public meetings were held in Duluth, Minnesota, on January 16, 2014, Aurora, Minnesota, on January 22, 2014, and St. Paul, Minnesota, on January 28, 2014, to gather public comments on the SDEIS.

2.3.6 Receipt and Review of Public and Agency Comments

Public and agency comments on the SDEIS were collected during the 90-day comment period. Submissions came from federal, state, and local government agencies, tribal entities, local businesses, non-governmental organizations, private individuals, and PolyMet. Approximately 58,000 comment submissions were received by the Co-lead Agencies during the 90-day comment period.

Each submission was reviewed and individual unique comments were identified. The comments were then grouped into relevant topic areas and further categorized into comment themes. This process is described in more detail in Appendix A.

2.4 FEIS DEVELOPMENT

2.4.1 Consideration of Public Comments Received on the SDEIS

The SDEIS comments were considered and addressed through FEIS text edits and clarifications, project design modifications, and updated analysis where deemed appropriate. The comment themes and each individual Cooperating Agency comment received were also responded to. A description of the process taken to consider, manage, and respond to the submissions, comments, and themes, as well as copies of the comments, themes, and responses are provided in Appendix A.

2.4.2 NorthMet Project Modifications

Comments received on the SDEIS highlighted some areas where project modifications could be made to enhance the environmental performance of the NorthMet Project Proposed Action. Under advisement from the Co-lead Agencies, PolyMet made several engineering design

modifications to the NorthMet Project Proposed Action based on updated business needs, and to address comments received on the SDEIS. The project modifications were:

- adding a water containment system on the east side of the Tailings Basin to capture potential future seepage in that area;
- adding in semi-autonomous grinding (SAG) mill to the plant site for more energy efficient ore grinding process;
- adding cement deep soil mixing component to strengthen the existing LTVSMC Tailings Basin prior to using that facility for the NorthMet tailings;
- removing the coal ash landfill located within the proposed Tailings Basin footprint;
- treating water from Colby Lake prior to its use as stream augmentation; and
- adding bedrock groundwater monitoring wells north of the Mine Site to understand bedrock groundwater flow direction.

These project modifications were considered by the Co-lead Agencies as being generally beneficial to the environmental performance of the NorthMet Project Proposed Action and did not represent a significant change in the project design.

2.4.3 Changes to the SDEIS and Preparation of the FEIS

Consistent with NEPA and MEPA, the Co-lead Agencies revised the SDEIS to address substantive comments received on the draft statement and minor project modifications made by the proposer, described in Section 2.4.2, which resulted in updated data and analyses for the FEIS. These changes, however, are not considered to be substantial and have not resulted in new conclusions or resulted in any new significant impacts. The methodology used for the analysis was consistent with that in the SDEIS. These predicted effects are described in Chapter 5 for direct and indirect impacts of the NorthMet Project Proposed Action and Land Exchange Proposed Action and in Chapter 6 for cumulative impacts. Appendix A of the FEIS contains the SDEIS public comments, comment themes, and theme responses, as well as the responses to the DEIS comment themes.

2.5 ADEQUACY DETERMINATION/RECORDS OF DECISION

Following release of the FEIS:

- The MDNR will make a determination on the adequacy of the FEIS, per *Minnesota Rules*, Part 4410.2800. This determination will be included in the MDNR's Adequacy Decision.
- The USACE will issue a ROD on the applicant's Section 404 Department of the Army (DA) permit application in accordance with their regulation found at 33 CFR Part 320-332. Comments on the FEIS will be addressed in the USACE ROD only if substantive issues are raised that have not been addressed in the FEIS.

- The USFS will issue a ROD on the Land Exchange once any objections filed per 36 CFR 218 (updated from the previous appeals process per 36 CFR 215) are resolved. Individuals and entities who provide specific written comment as defined in § 218.2 during scoping or the comment period will be eligible to participate in the objection process. For more information on the objection process, see www.fs.usda.gov/goto/superior/projects.

2.6 PROJECT PERMITTING AND APPROVALS

Information (data, analyses, and assessments) being generated during the EIS process is an integral part of the permitting process. There are multiple permit applications for the NorthMet Project and they would be processed in various timeframes and under various procedures, often including detailed information beyond that required in an EIS. Deeming an EIS adequate does not guarantee issuance of the permits. In general, once the permitting authority receives its complete permit application, proposed projects are described in a public notice for review and comment. Following public comment periods, meetings and/or hearings, permit determinations could be made by the permitting authorities.

Permits and approvals for the NorthMet Project would involve detailed review of regulatory compliance with local, state, and federal rules, statutes, and guidance. Below are some of the major permitting efforts and coordination and consultation processes required for the NorthMet Project:

- MDNR:
 - Permit to Mine
 - Water Appropriations
 - Dam Safety
 - Wetland Replacement Plan
 - An evaluation of state rules related to the transfer or other administration of portions of existing Cliffs Erie (former LTVSMC) permits.
- MPCA:
 - NPDES/SDS Permit covering the Mine Site and Plant Site that addresses state and federal permitting rules, that at a minimum includes the following components:
 - “reasonable potential” analyses for applicable discharges;
 - development of effluent limits for applicable discharges taking into account applicable water quality standards for immediate receiving waters and downstream waters;
 - a non-degradation analysis, where applicable;
 - monitoring requirements for wastewater discharges, groundwater, surface water, and internal wastewater streams, as appropriate;
 - Industrial stormwater requirements; and

- an evaluation of state and federal rules related to the transfer or other administration of portions of existing Cliffs Erie (former LTVSMC) permits.
- Air Emission Permit
- NPDES Construction Storm Water Permit
- Storage Tank Permit
- Solid Waste Permit
- Section 401 Certification (water quality)
- USACE:
 - Section 404 CWA Permit (wetlands)
 - Section 106 Consultation
 - Section 7 Endangered Species Act
- USFS:
 - Land Exchange
 - Section 106 NHPA Consultation
 - Section 7 Endangered Species Act
- USFWS:
 - Section 7 Endangered Species Act

2.7 FINANCIAL ASSURANCE

Per the State Permit to Mine, financial assurance would be required to ensure a source of funds that could be used by the MDNR in the event that PolyMet fails to complete closure and reclamation activities. Reclamation and post-reclamation cost estimates must be updated on an annual basis to account for the activities completed during the previous year. Estimates must be made for the contingency funds required in the event of unplanned closure during the course of the year.

Per *Minnesota Rules*, part 6132.1200, subparts 4 and 5, the financial assurance instruments for the NorthMet Project Proposed Action must be approved by the MDNR and be available to the MDNR when needed. The level of engineering design and planning required to calculate detailed financial assurance amounts is typically made available during the permitting process. Section 3.2.2.4.2 provides further discussion on the applicable financial assurance for the NorthMet Project.

Additionally, financial assurance for wetland mitigation may be required. Section 5.2.3 presents additional information relative to such mitigation measures.