



NorthMet Project

Permit to Mine
Annual Report 2018

Version 1

Issue Date: March 29, 2019

This document was prepared for Poly Met Mining, Inc.
by Barr Engineering Co.

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Contents

Table of Contents

Acronyms, Abbreviations, and Units.....	i
1.0 Introduction	1
2.0 Mining and Reclamation Completed in Year 2018.....	2
2.1 Mining Activities.....	2
2.1.1 Types, Amounts, Sequence, and Schedule of Mining.....	2
2.1.2 Mine Management Dispatch System.....	2
2.1.3 Beneficiation Process	3
2.1.4 Tailings Management	3
2.1.5 Residue Management	3
2.1.6 Exploration and Drilling.....	3
2.2 Reclamation Activities	3
2.2.1 Reclamation Research	4
2.2.2 Reclamation Methods and Sequence.....	4
2.2.2.1 Areas of Concern	4
2.2.3 Corrective Actions.....	4
2.3 Status of Ongoing Postclosure Maintenance Activities	4
2.4 Scope and Schedule Changes from the Approved Mining and Reclamation Plan	4
2.4.1 Changes to the Approved Mining Plan	5
2.4.2 Changes to Approved Reclamation Plan.....	5
2.4.2.1 New Areas of Concern (if applicable)	5
2.5 Characterization of New Rock Types or Formations	5
2.6 Ownership or Organizational Structure Changes.....	5
2.7 Land Control Changes.....	6
2.8 Wetland Replacement Activities	6
2.9 Annual Monitoring Summary	6
2.10 Additional Reports, Documents, and As-built Drawings (if necessary)	8
3.0 Operating Plan – Mining and Reclamation Planned for the Upcoming Year 2020	9
3.1 Anticipated Rate of Mining and Mining Activities.....	9
3.1.1 Mine Site Development.....	9
3.1.2 Plant Site Development	11
3.1.3 Transportation and Utility Corridors Development	12

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Contents

3.1.4	Colby Lake Pipeline Corridor Development.....	12
3.1.5	Types, Amount, Sequence, and Schedule of Mining	12
3.1.6	Beneficiation Process	12
3.1.7	Tailings Management	12
3.1.8	Residue Management	12
3.2	Anticipated Reclamation Activities.....	13
3.2.1	Reclamation Research	13
3.2.2	Reclamation Methods and Sequence.....	13
3.3	Notification of Intent to Close a Mining Area or Portion of a Mining Area.....	13
3.4	Anticipated Scope and Schedule Changes from the Approved Mining and Reclamation Plan for Year 2020	14
3.4.1	Anticipated Changes to the Approved Mining Plan.....	14
3.4.2	Anticipated Changes to the Approved Reclamation Plan	14
3.5	Category 1 Waste Rock Stockpile Cover Analysis (if applicable)	14
3.6	Environmental Liability Insurance.....	14
3.6.1	Analysis of Potential Environmental Liabilities	14
3.6.2	Analysis of Potential Future Environmental Liabilities (if applicable)	15
3.7	Anticipated Changes in Ownership or Organizational Structure	15
3.8	Anticipated Changes in Land Control	15
3.9	Wetland Replacement Plan	15
4.0	Contingency Reclamation Plan	16
4.1	Anticipated Closure Activities	16
4.2	Contingency Monitoring Plan	16
4.3	Maps and Cross Sections.....	16
4.4	Cost Estimates and Financial Mechanisms	17
4.4.1	Cost Estimates	17
4.4.2	Financial Instruments	17
5.0	Corrective Action Plan (if necessary)	18
5.1	Corrective Actions Completed in Year 2018	18
5.2	Anticipated Corrective Actions for Year 2020.....	18
5.3	Corrective Actions Cost Estimate for Year 2020.....	18
6.0	Maps	19
6.1	Mining and Reclamation Maps for Year 2018.....	19



Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Contents

6.2 Mining and Reclamation Maps for Year 2020	19
7.0 References	20
List of Tables	21
List of Figures	21
List of Appendices	21

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page i

Acronyms, Abbreviations, and Units

Acronym	Stands For
AOC	Area of Concern
DMR	Discharge Monitoring Report
DNR	Minnesota Department of Natural Resources
FTB	Flotation Tailings Basin
HRF	Hydrometallurgical Residue Facility
MPCA	Minnesota Pollution Control Agency
MPP	Mine to Plant Pipelines
MSFMF	Mine Site Fueling and Maintenance Facility
NPDES	National Pollutant Discharge Elimination System
OSLA	Overburden Storage and Laydown Area
PTM	Permit to Mine
SDS	State Disposal System
SPCC	Spill Prevention, Control, and Countermeasure
SWPPP	Stormwater Pollution Prevention Plan



Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 1

1.0 Introduction

Nonferrous Metallic Mineral Mining Rules (Minnesota Rules, part 6132.1300) require permittees to submit an Annual Mining and Operating Report to the Minnesota Department of Natural Resources (DNR). The purpose of the report is to document actual mining and reclamation completed in the past calendar year (2018), to describe the mining and reclamation activities planned for the upcoming year (2020), and to provide a contingency reclamation plan to be implemented if operations cease in the upcoming year. The NorthMet Mining Project Nonferrous Permit to Mine (PTM) was issued to PolyMet Mining Corp. and Poly Met Mining, Inc. (PolyMet) on November 1, 2018. As such, in this document, all discussions of activities in 2018 include just the period from November 1st through December 31st of 2018. If any corrective actions were required by the Project, in accordance with Minnesota Rules, part 6132.3100, subpart 2, a corrective action plan will be included as part of this annual report; however, there were no corrective actions required. This Annual Mining and Operating Report will be submitted to the DNR by March 31 of each calendar year of operation starting with the first March after the PTM issuance.

In addition to the content requirements for the Annual Mining and Operating Report, the following additional information is tabulated and attached as follows:

Table 1 Changes to PolyMet Personnel Contact Information

Table 2 Permits Held and Permit Status

Table 3 Flotation Tailings Basin Dam Height Status for Year 2018 and Planned at the End of the Construction Phase

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 2

2.0 Mining and Reclamation Completed in Year 2018

(Minnesota Rules, part 6132.1300, subpart 2 and NorthMet Mining Project PTM Special Condition 17)

This section describes the mining activities conducted, the reclamation and corrective actions conducted (if any), changes to the approved mining and reclamation plan¹ and how they were proactively addressed with the DNR (if any), new rock types or formations encountered (if any), changes in ownership or organizational structure (if any), and wetland replacement activities that occurred in 2018. It also describes monitoring activities and results. In future annual reports, an updated GIS data package depicting the annual progression of the footprints of each mine feature will be included as a separate submittal with this annual report, as required by PTM Special Condition 17.

2.1 Mining Activities

(Minnesota Rules, part 6132.1300, subpart 2, item A and NorthMet Mining Project PTM Special Conditions 4b, 72, and 91a)

2.1.1 Types, Amounts, Sequence, and Schedule of Mining

(Minnesota Rules, part 6132.1300, subpart 2, item A(1))

There was no mining nor stockpiling of materials associated with mining (ore, lean ore, or waste rock) conducted in 2018. In future annual reports, this section will describe types, amounts, sequence, and schedule of mining the ore body and stockpiling materials.

Future annual reports will also summarize the mining rates and schedule for the various materials mined and produced in Table 4, and provide additional waste rock stockpile and pit backfill activity information in Table 5; in this annual report, Table 4 and Table 5 are provided as placeholders for subsequent years.

2.1.2 Mine Management Dispatch System

(NorthMet Mining Project PTM Special Condition 4b)

There was no mining or reclamation completed in 2018 and as such, the Mine Management/Dispatch System is not in place. In future annual reports once operations begin, this section will present summary statistics and analysis of the performance of the tracking

¹ The mining and reclamation plan approved with issuance of the NorthMet Mining Project PTM consisted of “Sections 7-11 and 15 along with related appendices of the Permit to Mine application” (Reference (2)). A standalone Mining and Reclamation Plan (Reference (1)) has been created from these portions of the PTM Application and will be submitted along with this annual report.

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 3

and success of material delivery to the correct destination from the Mine Management/Dispatch System.

2.1.3 Beneficiation Process

(Minnesota Rules, part 6132.1300, subpart 2, item A(2))

No beneficiation took place in 2018. In future annual reports, this section will describe any changes in the beneficiation process.

2.1.4 Tailings Management

(NorthMet Mining Project PTM Special Condition 91a)

No Flotation Tailings were produced, nor placed, in 2018. In future annual reports once operations begin, this section will document the sulfur content of the Flotation Tailings, the total tons of Flotation Tailings placed in the Flotation Tailings Basin (FTB) from the start of operations through the past year and remaining planned capacity, and any changes to the Flotation Tailings waste characterization program.

2.1.5 Residue Management

(NorthMet Mining Project PTM Special Condition 91a)

No residues were produced, nor placed, in 2018. In future annual reports once the Hydrometallurgical Plant is operational, this section will document current chemical characterization of the Residue, the total tons of Residue placed in the Hydrometallurgical Residue Facility (HRF) from the start of operations through the past year and remaining planned capacity, and any planned changes in operations that could impact reclamation and postclosure.

2.1.6 Exploration and Drilling

(NorthMet Mining Project PTM Special Condition 72)

No exploration drilling or monitoring well installation was undertaken between November 1, 2018 (PTM issuance) and December 31, 2018.

In future annual reports, this section will present a summary of any exploration drilling and monitoring well installation that occurred during the previous year.

2.2 Reclamation Activities

(Minnesota Rules, part 6132.1300, subpart 2, item B and NorthMet Mining Project PTM Special Condition 60)

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 4

No reclamation activities nor corrective actions were performed in 2018. In future annual reports, this section will describe reclamation activities and corrective actions (if any) performed.

2.2.1 Reclamation Research

No reclamation research was conducted during 2018. In future annual reports, this section will describe any reclamation research conducted as well as any grants provided for such research or reclamation.

2.2.2 Reclamation Methods and Sequence

No reclamation activities were performed in 2018. In future annual reports, this section will describe reclamation methods applied and sequencing of such activities.

Future annual reports will also provide a summary of reclamation activities in Table 7; in this annual report, Table 7 is provided as a placeholder for subsequent years.

2.2.2.1 Areas of Concern

(NorthMet Mining Project PTM Special Condition 60)

There were no changes to Areas of Concern (AOCs) within the mining area in 2018. In future annual reports, this section will discuss any changes to AOCs within the mining area.

2.2.3 Corrective Actions

There were no corrective actions conducted in 2018. In future annual reports, this section will describe any corrective actions conducted.

2.3 Status of Ongoing Postclosure Maintenance Activities

(Minnesota Rules, part 6132.1300, subpart 2, item C and NorthMet Mining Project PTM Special Condition 20a)

No postclosure maintenance activities were conducted in 2018. In future annual reports, this section will describe any ongoing postclosure maintenance activities conducted.

Additionally, the Plant Site Utility Tunnels must be inspected every five years during operations, in accordance with NorthMet Mining Project PTM Special Condition 20a, with the resulting report addressing any needed repairs included with the annual report.

2.4 Scope and Schedule Changes from the Approved Mining and Reclamation Plan

(Minnesota Rules, part 6132.1300, subpart 2, item D and NorthMet Mining Project PTM Special Conditions 22 and 60 (as applicable))

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 5

2.4.1 Changes to the Approved Mining Plan

No changes to the approved mining plan (Reference (1)) occurred during 2018. In future annual reports, this section will discuss any changes to the approved mining plan that occurred.

2.4.2 Changes to Approved Reclamation Plan

The only changes to the approved reclamation plan (Reference (1)) that occurred during 2018 was the inclusion of storage tanks that require demolition or site reclamation. The required demolition and site reclamation for these tanks has also been included in the updated financial assurance calculations (the 2019 NorthMet Financial Assurance Estimate Update submitted concurrently with this Annual Report).

2.4.2.1 New Areas of Concern (if applicable)

(NorthMet Mining Project PTM Special Condition 60)

No new AOCs were identified within the mining area in 2018. In future annual reports, this section will discuss any new AOCs identified within the mining area.

2.5 Characterization of New Rock Types or Formations

(Minnesota Rules, part 6132.1300, subpart 2, item E and NorthMet Mining Project PTM Special Condition 45)

No new rock types or formations were encountered during 2018. In future annual reports, this section will describe new rock types or formations encountered.

2.6 Ownership or Organizational Structure Changes

(Minnesota Rules, part 6132.1300, subpart 2, item F)

No changes in PolyMet Mining Corp. and Poly Met Mining, Inc.'s ownership structure occurred in 2018 [as compared to the information provided in Section 2 of the PTM Application (Reference (2))].

Related to PolyMet's organizational structure, there were no changes to the general management or management level of the environmental or mining teams in 2018. However, two new staff members were added to the environmental department under supervision of Christie Kearney, Environmental Site Director:

- Cameron Trembath, Environmental Manager
- Rory Oberhelman, Environmental Specialist



Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 6

Contact information for these environmental staff are presented in Table 1.

2.7 Land Control Changes

(NorthMet Mining Project PTM Special Condition 5b)

As part of the arrangements relating to the recording of deeds between Cliffs Erie L.L.C. (Cliffs Erie) and PolyMet after the closing of the transactions on November 1, 2018, PolyMet obtained title to an additional 40-acre parcel consisting of the northeast ¼ of the northwest ¼ of Section 15, T59N, R13W. PolyMet's PTM Application had identified that parcel as being owned by Allete; however, PolyMet subsequently learned that Cliffs Erie owned it. Cliffs Erie conveyed the parcel to PolyMet with the recording of the deed on December 7, 2018. A portion of this parcel is part of PolyMet's Nonferrous PTM Mining Area, and the remainder of the land is part of PolyMet's Ferrous Closure Mining Area.

2.8 Wetland Replacement Activities

(Minnesota Rules, part 6132.1300, subpart 2, item G)

No wetland impact activities nor wetland replacement activities associated with impacts from the approved Wetland Replacement Plan occurred in 2018. In future annual reports, this section will describe wetland impact activities and wetland replacement activities that occurred.

In future annual reports, a summary of wetland impacts and wetland replacement activities will be provided on Table 8 and Table 9; in this annual report Table 8 and Table 9 are provided as placeholders. The approved Wetland Replacement Plan for these impacts is included as Appendix 1 of the Mining and Reclamation Plan (Reference (1)).

2.9 Annual Monitoring Summary

(NorthMet PTM Application Section 14.2 and NorthMet Mining Project PTM Special Conditions 16 and 57)

A summary of the annual monitoring required by the PTM, as well as an update on waste characterization, is summarized below. No related appendices are provided for 2018; however, in future annual reports, additional details may be provided in appendices.

An update on waste characterization is provided in a memo from SRK Consulting and MineraLogic LLC to PolyMet with the subject "Update and Recommendations for Kinetic Test Program, NorthMet Project", which is submitted concurrently with this Annual Report.

No monitoring activities were conducted in 2018 for the following topics:

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 7

- Mine pit monitoring (not applicable because mine pits do not yet exist)
- Stockpile monitoring (not applicable because stockpiles do not yet exist)
- Transportation and Utility Corridors monitoring (not applicable because ore cars are not yet in use)
- FTB monitoring (not applicable because the FTB does not yet exist)
- HRF monitoring (not applicable because the HRF does not yet exist)
- Flotation Tailings monitoring (not applicable because Flotation Tailings have not yet been generated)
- Dust control and the Fugitive Emission Control Plans (not applicable until commencement of operations under the Air Individual Permit 13700345-101)

Pertaining to the requirement to provide surface water or groundwater quality data as required by other permits in accordance with NorthMet Mining Project PTM Special Condition 16:

- The NorthMet Project's National Pollutant Discharge Elimination System (NPDES)/ State Disposal System (SDS) Permit No. MN0071013 did not require monitoring to begin until January 1, 2019; thus, there was no associated surface water or groundwater quality data to be submitted for 2018. For future annual reports, the submittal of this data to the DNR will be satisfied through submittal via the Minnesota Pollution Control Agency's (MPCA's) Discharge Monitoring Report (DMR) system.
- Legacy NPDES/SDS Permit No. MN0054089 for the Hoyt Lakes Tailings Basin Area was transferred from Cliffs Erie to PolyMet on November 1, 2018. Submittal of associated surface water and groundwater quality data collected in 2018 to the DNR has been satisfied through submittal via the MPCA's DMR system.
- The NorthMet Project's Section 401 Water Quality Certification 1999-55528-JKA includes conditions requiring monitoring of wetland water quality (monthly from May to October) and stream water quality (quarterly). This certification was issued on December 20, 2018; thus, no associated water quality monitoring was required or occurred in 2018.

The annual wetland monitoring reports will be provided to the DNR for WCA under separate submittal. Dam stability monitoring will be provided to the DNR as part of Dam Safety Permit requirements.

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 8

2.10 Additional Reports, Documents, and As-built Drawings (if necessary)

(NorthMet Mining Project PTM Special Condition 36, 37, 56, 70, 83b)

PolyMet submitted three industrial Stormwater Pollution Prevention Plans (SWPPPs) to the MPCA on August 31, 2018; these SWPPPs have not been updated since. NorthMet Mining Project PTM Special Condition 36 requires that PolyMet submit an electronic copy of these documents to the DNR when they are submitted to the MPCA. Since the August 2018 submittal was prior to the issuance of the PTM, electronic copies of the industrial SWPPPs were not provided concurrently to the DNR. Electronic copies of these three industrial SWPPPs (focusing on the Mine Site, Plant Site, and Transportation and Utility Corridors) are being submitted to the DNR with this Annual Report.

PolyMet's Spill Prevention, Control, and Countermeasure (SPCC) Plan was submitted to the DNR on November 30, 2018. NorthMet Mining Project PTM Special Condition 37 requires PolyMet to submit any revisions to this plan with the annual report. PolyMet's SPCC Plan has not been updated since it was submitted.

In future annual reports, this section will describe any Project-related documents that were developed or updated and are required to be provided to the DNR as a result, as required by NorthMet Mining Project PTM Special Conditions 36, 37, 56, 70, and 83b. Such documents include industrial SWPPPs, SPCC plans, as-built drawings for facilities listed in PTM Application Table 3-2 (Reference (2)), a report on pit shell contours and pit slope stability for any mine pit that has reached its final pit shell contour, and, at least one year prior to the anticipated start of the East Pit backfill, a plan to amend the backfill for the East Pit.

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 9

3.0 Operating Plan – Mining and Reclamation Planned for the Upcoming Year 2020

(Minnesota Rules, part 6132.1300, subpart 3)

This section describes the planned mining and reclamation activities, intention to close a mining area or portion of an area, changes to the approved mining and reclamation plan² and how they will be proactively addressed with the DNR (if any), evidence of liability insurance, anticipated changes in ownership or organizational structure (if any), and planned wetland replacement activities for 2020. An updated GIS data package depicting the anticipated progression of the footprints of each mine feature is included as a separate submittal with this annual report, as required by PTM Special Condition 17.

Operations during 2020 are anticipated to be part of the construction phase. PolyMet is currently in financing and anticipates construction to start in the second half of 2019 and extend through 2021. The final construction schedule will be defined in detailed design. Although required reporting is through 2020, because detailed design is not yet complete, for ease of reporting, this Annual Report describes the anticipated development through the end of the construction phase (through 2021).

3.1 Anticipated Rate of Mining and Mining Activities

(Minnesota Rules, part 6132.1300, subpart 3, items A and B and NorthMet Mining Project PTM Special Conditions 91a)

The focus of the work associated with the construction phase, including the work conducted in 2020, will be development of the Mining Area at the Mine Site, Plant Site, Transportation and Utility Corridors, and Colby Lake Pipeline Corridor. There will be no Duluth Complex or Virginia Formation rock blasted within the mine pits. Beneficiation processing will not begin at the Plant Site, and therefore no nonferrous tailings will be deposited in the FTB.

The following provides an overview of anticipated site development activities within the Mine Site, Plant Site, Transportation and Utility Corridors, and Colby Lake Pipeline Corridor through the end of construction (anticipated to be through 2021).

3.1.1 Mine Site Development

Mine Site development through 2021 is anticipated to include the clearing of trees and woody vegetation and the construction of:

² The mining and reclamation plan approved with issuance of the NorthMet Mining Project PTM consisted of “Sections 7-11 and 15 along with related appendices of the Permit to Mine application” (Reference (2)). A standalone Mining and Reclamation Plan (Reference (1)) has been created from these portions of the PTM Application and will be submitted along with this annual report.

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 10

- approximately 22,000 feet of the haul roads
- the Overburden Storage and Laydown Area (OSLA)
- the stockpile footprints:
 - approximately 13 acres of Category 1 Waste Rock Stockpile foundation and Groundwater Containment System
 - approximately 63 acres of Category 2/3 Waste Rock Stockpile foundation, underdrain system, if necessary, liner system, and overliner drainage system
 - approximately 29 acres of Category 4 Waste Rock Stockpile foundation, underdrain system, if necessary, liner system, and overliner drainage system
 - approximately 32 acres of Ore Surge Pile foundation, underdrain system, if necessary, liner system, and overliner drainage system
- stormwater ponds A, B, C-East, and D and related ditches and dikes
- the Equalization Basin Area, including the Construction Mine Water Basin, High Concentration Equalization Basin, Low Concentration Equalization Basins, the Central Pumping Station, and Construction Mine Water Pumping Station
- mine water management system infrastructure, including sumps, ponds, pipelines, and pumping systems
- approximately 127,000 linear feet of Mine to Plant Pipelines (MPP) and associated mechanical and electrical controls
- stripping of approximately 95 acres of overburden from the East Pit footprint
- the Mine Site power distribution system
- the Mine Site Fueling and Maintenance Facility (MSFMF)
- the Railroad Spur

These features are shown on Figure 1. Table 4 summarizes the planned handling of blasted rock (outside of the mine pit footprints) and saturated mineral overburden at the Mine Site for these activities. Table 5 provides additional anticipated waste rock stockpile and pit backfill activity.

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 11

3.1.2 Plant Site Development

Plant Site development will include the clearing of trees and woody vegetation as well as the following construction and refurbishment (repair/upgrade of existing infrastructure) activities:

- construction of the Waste Water Treatment System and Lined Pretreatment Basin
- refurbishment of the existing buildings to accommodate Project ore beneficiation processes and production schedule
- construction of the Beneficiation Plant Flotation and Reagent Buildings
- construction of the Concentrate Dewatering, Concentrate Storage, Concentrate Loadout, and Limestone Preparation Buildings
- refurbishment of maintenance and shop buildings in the Process Plant and at Areas 1 and 2 Shops
- construction of the first lift of the FTB buttress and dams and associated underdrain and emergency overflow
- construction of the Flotation Tailings discharge system and return water system installation and refurbishment
- construction of approximately 24,000 linear feet of FTB Seepage Containment System, including access road, cutoff wall, piping, valves, pumps, and other mechanical and electrical systems
- construction of stormwater management system (ponds, ditches, culverts, and dikes)
- construction of the Sewage Treatment System
- refurbishment of raw water, potable water, and fire water systems and Plant Reservoir for plant operations
- refurbishment of power distribution systems across the Plant Site
- refurbishment and construction of rail line and roads

These features are shown on Figure 2.

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 12

3.1.3 Transportation and Utility Corridors Development

Transportation and Utility Corridors infrastructure construction will occur during the construction phase, including construction of approximately 11,000 linear feet of new rail (Connection Track) and power distribution system between the Mine and Plant Sites, and refurbishment of the railroad track along the Railroad Corridor (mainline railroad), as needed. The MPP will also be constructed and upgrades to Dunka Road will commence.

These features are shown on Figure 3.

3.1.4 Colby Lake Pipeline Corridor Development

The Colby Lake Pipeline infrastructure refurbishment will occur during the construction phase, and will include the refurbishment of the pipeline and Colby Lake Pump house.

3.1.5 Types, Amount, Sequence, and Schedule of Mining

No mining nor stockpiling of materials associated with mining (ore, lean ore, or waste rock) is anticipated to be conducted in 2020. In future annual reports, this section will describe types, amounts, sequence, and schedule of mining the ore body and stockpiling materials.

Future annual reports will also summarize the anticipated mining rates and schedule for the various materials mined and produced in Table 4, and provide additional anticipated waste rock stockpile and pit backfill activity information in Table 6; in this annual report, Table 4 and Table 6 are provided as placeholders for subsequent years.

3.1.6 Beneficiation Process

No beneficiation is anticipated to occur in 2020. In future annual reports, this section will describe any anticipated changes in the beneficiation process.

3.1.7 Tailings Management

(NorthMet Mining Project PTM Special Condition 91a)

No Flotation Tailings are anticipated to be produced or placed in 2020. In future annual reports once operations begin, this section will document the anticipated tons of Flotation Tailings to be placed in the FTB and remaining planned capacity, and any planned changes in operations that could impact reclamation and postclosure.

3.1.8 Residue Management

(NorthMet Mining Project PTM Special Condition 91a)

No residues are anticipated to be produced or placed in 2020. In future annual reports once the Hydrometallurgical Plant is operational, this section will document the document the

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 13

anticipated tons of Residue to be placed in the HRF and remaining planned capacity, and any planned changes in operations that could impact reclamation and postclosure.

3.2 Anticipated Reclamation Activities

(Minnesota Rules, part 6132.1300, subpart 3, item C)

Reclamation during the construction phase, including during 2020, will generally include restoring areas disturbed during construction and temporary laydown areas associated with site development that are no longer needed. Reclamation methods and sequencing are described further in Section 3.2.2.

3.2.1 Reclamation Research

No reclamation research is currently planned for 2020. In future annual reports, this section will describe any reclamation research planned as well as any grants provided for such research or reclamation.

3.2.2 Reclamation Methods and Sequence

Reclamation will be progressively completed as construction of site features advances. Areas disturbed by construction and temporary laydown areas will be graded, scarified, and seeded according to the Reclamation Seeding and Mulching Plan (Attachment 1 of Appendix 14 of Reference (2)). During construction of FTB dams, the exterior face of the dams will be amended with a bentonite layer to limit oxygen infiltration into the Flotation Tailings as indicated on Drawing FTB-024 of Appendix 6 of Reference (1). The bentonite amendment will entail addition of granulated bentonite (approximately 3% by dry weight) to an 18-inch-thick layer of the dam construction material, overlain by an additional 30-inch layer of dam construction material. The exterior dam faces will be permanently vegetated by a qualified reclamation contractor according to Minnesota Rules, part 6132.2700, and requirements of the Reclamation Seeding and Mulching Procedure (Attachment 1 of Appendix 14 of Reference (2)). In addition, the pit rim overburden backslopes and associated pit rim berms and exclusion dikes will be reclaimed once portions reach their final extents. The overburden portions of the pit walls will be sloped and graded (refer to Drawing EW-008 of Appendix 3 of Reference (1)). The sloped areas and other areas disturbed will be vegetated to conform to Minnesota Rules, part 6132.2700.

Not all locations that will require reclamation during the construction phase are known at this time, as these will be determined during final design and construction. However, anticipated areas for reclamation are shown on Figure 4 and Figure 5.

3.3 Notification of Intent to Close a Mining Area or Portion of a Mining Area

(Minnesota Rules, part 6132.1300, subpart 3, item D)

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 14

No portions of the Mining Area are planned to be closed in 2020. In future annual reports, this section will provide notice of intent for any Mining Area or portion of a Mining Area that PolyMet plans to close in the upcoming year.

3.4 Anticipated Scope and Schedule Changes from the Approved Mining and Reclamation Plan for Year 2020

(Minnesota Rules, part 6132.1300, subpart 3, item E)

3.4.1 Anticipated Changes to the Approved Mining Plan

No changes to the approved mining plan (Reference (1)) are planned to occur in 2020. In future annual reports, this section will discuss any planned changes to the approved mining plan.

3.4.2 Anticipated Changes to the Approved Reclamation Plan

No changes to the approved reclamation plan (Reference (1)) are planned to occur in 2020. In future annual reports, this section will discuss any planned changes to the approved reclamation plan.

3.5 Category 1 Waste Rock Stockpile Cover Analysis (if applicable)

(NorthMet Mining Project PTM Special Condition 71)

Not applicable; 2020 is neither five years after the first waste rock is placed in the Category 1 Waste Rock Stockpile nor the year when 75 million tons of rock will have been placed in the stockpile. When one of the aforementioned milestones is anticipated to be reached, the applicable future annual report will include a required analysis of the size of the stockpile.

3.6 Environmental Liability Insurance

(Minnesota Rules, part 6132.1300, subpart 3, item F and NorthMet Mining Project PTM Attachment 1, Special Condition 8)

Evidence that PolyMet's environmental liability insurance policy remains in force is provided in Appendix A.

3.6.1 Analysis of Potential Environmental Liabilities

(NorthMet Mining Project PTM Attachment 1, Special Condition 8)

Current environmental liabilities to the NorthMet Project are described in the Legacy Closure Plan (Appendix 15.1 of Reference (2)). Because there has been no construction, no mining, no stockpiling of materials, nor production or deposition of tailings, there is no change in the potential environmental liabilities in the mining area from the time of permit issuance when

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 15

\$10,000,000 of environmental liability insurance was purchased, as directed by the DNR. Thus, no additional analysis was performed of potential environmental liabilities.

3.6.2 Analysis of Potential Future Environmental Liabilities (if applicable)

(NorthMet Mining Project PTM Attachment 1, Special Condition 9)

Not applicable; 2020 will not be one year after tailings are first deposited in the tailings basin. When the aforementioned milestone is anticipated to be reached, the applicable future annual report will include evaluation and report on the future environmental liability insurance premium costs that the State of Minnesota could incur in the event of unplanned closure of the Project.

3.7 Anticipated Changes in Ownership or Organizational Structure

(Minnesota Rules, part 6132.1300, subpart 3, item G)

No changes in PolyMet's ownership structure are anticipated to occur in 2020 [as compared to the information provided in Section 2 of the PTM Application (Reference (2))].

Related to organizational structure, PolyMet does not anticipate changes to the general management or management level of the environmental or mining teams in 2020. PolyMet does anticipate hiring additional team members in 2019 and 2020, but these staff are not yet known.

3.8 Anticipated Changes in Land Control

(NorthMet Mining Project PTM Special Condition 5b)

No changes are anticipated in 2020 to land control for the lands within the mining area that could result in changes to closure.

3.9 Wetland Replacement Plan

(Minnesota Rules, part 6132.1300, subpart 3, item H)

Minor changes to the approved Wetland Replacement Plan (Appendix 1 of Reference (1)) are anticipated due to revisions to the wetland delineations by the U.S. Army Corps of Engineers (as noted in the NorthMet Project – Wetland Conservation Act Notice of Decision Condition 3). No changes to the wetland activities for 2020 are anticipated. In future annual reports, this section will provide a description of any changes anticipated to the Wetland Replacement Plan or activities.

Table 10 provides a summary of anticipated wetland impacts, and Table 11 provides a summary of anticipated wetland replacement activities.

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 16

4.0 Contingency Reclamation Plan

(Minnesota Rules, part 6132.1300, subpart 4)

The goal of the Legacy Closure Plan and Construction Contingency Reclamation Plan, as provided in Appendix 15.1 and 15.2 of Reference (2), respectively, is to identify reclamation actions that would need to be performed by the state in the event PolyMet were to cease management of the facility during construction (which includes 2020).

4.1 Anticipated Closure Activities

(Minnesota Rules, part 6132.1300, subpart 4, item A)

The Legacy Closure Plan (Appendix 15.1 of Reference (2)) and Construction Contingency Reclamation Plan (Appendix 15.2 of Reference (2)) includes:

- demolition and removal of ferrous and nonferrous buildings and structures
- reclamation of haul roads and OSLA
- reclamation of stockpile footprints
- reclamation of the stormwater systems and mine water management systems
- reclamation of the Equalization Basin Area
- reclamation of the power distribution systems
- reclamation of the MSFMF and Railroad Spur
- reclamation of the tailings basin

4.2 Contingency Monitoring Plan

(NorthMet Mining Project PTM Special Condition 16b)

The Contingency Monitoring Plan that is associated with the Legacy Closure Plan and the Construction Contingency Reclamation Plan is included as Appendix B. This plan coincides with the contingency reclamation plans and describes the water quality monitoring that would need to be conducted if PolyMet were to cease management of the facility during the construction phase before Mine Year 1.

4.3 Maps and Cross Sections

(Minnesota Rules, part 6132.1300, subpart 4, item B)



Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 17

Figures of the activities associated with the Legacy Closure Plan and Construction Contingency Reclamation Plan are included in Appendix 15.1 and 15.2 of Reference (2), respectively.

4.4 Cost Estimates and Financial Mechanisms

(Minnesota Rules, part 6132.1300, subpart 4, item C and NorthMet Mining Project PTM Special Condition 22 (as applicable))

4.4.1 Cost Estimates

The 2019 NorthMet Financial Assurance Estimate Update is submitted concurrently with this Annual Report.

4.4.2 Financial Instruments

There is no change to the financial instruments for the NorthMet Project based on the 2019 NorthMet Financial Assurance Estimate Update.



Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 18

5.0 Corrective Action Plan (if necessary)

(Minnesota Rules, part 6132.1300, subpart 5)

5.1 Corrective Actions Completed in Year 2018

(Minnesota Rules, part 6132.1300, subpart 5, item A)

No corrective actions were necessary or completed in 2018. In future annual reports, this section will describe any completed corrective actions.

5.2 Anticipated Corrective Actions for Year 2020

(Minnesota Rules, part 6132.1300, subpart 5, item B)

PolyMet does not foresee violations of the PTM during 2020. As such, no corrective actions are anticipated in 2020 and thus none are included here. In future annual reports, this section will describe any anticipated corrective actions.

5.3 Corrective Actions Cost Estimate for Year 2020

(Minnesota Rules, part 6132.1300, subpart 5, item C)

Not applicable; no corrective actions are anticipated in 2020. In future annual reports, this section will provide a cost estimate for any anticipated corrective actions.

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 19

6.0 Maps

(Minnesota Rules, part 6132.1300, subpart 6)

6.1 Mining and Reclamation Maps for Year 2018

No mining, construction, reclamation, or water modifications occurred in 2018, thus there are no updates to be provided.

6.2 Mining and Reclamation Maps for Year 2020

Maps showing the development of the Mining Area planned for the construction phase, which includes 2020, are attached as follows:

- Figure 1: Mine Site Development at End of Construction Phase
- Figure 2: Plant Site Development at End of Construction Phase
- Figure 3: Transportation and Utility Corridors Development at End of Construction Phase
- Figure 4: Mine Site Reclamation at End of Construction Phase
- Figure 5: Plant Site Reclamation at End of Construction Phase
- Figure 6: Watershed Modifications at End of Construction Phase

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 20

7.0 References

1. **Poly Met Mining, Inc.** Mining and Reclamation Plan: NorthMet Project. March 2019.
2. **Barr Engineering Co.** Permit to Mine Application (v3). Prepared for Poly Met Mining, Inc. NorthMet Project. December 2017.

Date: March 29, 2019	NorthMet Project Permit to Mine Annual Report 2018
Version: 1	Page 21

List of Tables

Table 1	Changes to PolyMet Personnel Contact Information since the last Annual Report
Table 2	Permits Held and Permit Status as of March 1, 2019
Table 3	Flotation Tailings Basin Dam Height Status for Year 2018 and Planned at the End of the Construction Phase
Table 4	Mining Rates and Production Summary for Year 2018 and Planned at the End of the Construction Phase
Table 5	Stockpile and Pit Backfill Activity for Year 2018
Table 6	Stockpile and Pit Backfill Activity Planned at the End of the Construction Phase
Table 7	Reclamation Summary for Year 2018
Table 8	Wetland Impacts Summary for Year 2018
Table 9	Wetlands Mitigation Summary for Year 2018
Table 10	Planned Wetlands Impacts at the End of the Construction Phase
Table 11	Planned Wetlands Mitigation Summary at the End of the Construction Phase

List of Figures

Figure 1	Mine Site Development at End of Construction Phase
Figure 2	Plant Site Development at End of Construction Phase
Figure 3	Transportation and Utility Corridors Development at End of Construction Phase
Figure 4	Mine Site Reclamation at End of Construction Phase
Figure 5	Plant Site Reclamation at End of Construction Phase
Figure 6	Watershed Modifications at End of Construction Phase
Figure 7	Planned Wetland Impacts at the Mine Site in 2020
Figure 8	Planned Wetland Impacts at the Plant Site in 2020

List of Appendices

Appendix A	2019 Insurance Update, Policy FEI-EIL-25551-00
Appendix B	Contingency Monitoring Plan

Tables

Table 1 **Changes to PolyMet Personnel Contact Information since the last Annual Report**

Position	Name	Phone number	Email Address
Environmental Manager	Cameron Trembath	(218) 471-2178	ctrembath@polymetmining.com
Environmental Specialist	Rory Oberhelman	(218) 471-2150	roberhelman@polymetmining.com

Table 2 Permits Held and Permit Status as of March 1, 2019

Type of Permit	Permit Number	Date Issued	Date of Expiration	Permit Status (in compliance, under SOC, etc.)	Additional Information
Permit to Mine	--	11/01/2018	N/A	In Compliance	For NorthMet Mining Project
Permit to Mine	--	11/01/2018	N/A	In Compliance	For Ferrous Closure
Wetland Conservation Act Approval	--	11/01/2018	N/A	In Compliance	For NorthMet Mining Project
Dam Safety Permit	2016-1380	11/01/2018	10/31/2045	In Compliance	For the Flotation Tailings Basin
Dam Safety Permit	2016-1383	11/01/2018	10/31/2045	In Compliance	For Hydrometallurgical Residue Facility
Dam Safety Permit	1981-2100	11/01/2018	10/31/2045	In Compliance	For the existing tailings basin
Water Appropriation Permit	2016-1363	11/01/2018	N/A	In Compliance	For East Pit Dewatering
Water Appropriation Permit	2016-1364	11/01/2018	N/A	In Compliance	For Central Pit Dewatering
Water Appropriation Permit	2016-1365	11/01/2018	N/A	In Compliance	For West Pit Dewatering
Water Appropriation Permit	2016-1367	11/01/2018	N/A	In Compliance	For Mine Processing and Mine Site Infrastructure
Water Appropriation Permit	2016-1369	11/01/2018	N/A	In Compliance	For Mine Processing and Plant Site Infrastructure
Water Appropriation Permit	2017-0260	11/01/2018	N/A	In Compliance	For Colby Lake for Mine Processing Make-up Water
Takings Permit	23235	11/01/2018	N/A	In Compliance	For NorthMet Mining Project
Public Waters Work Permit	2017-2077	11/01/2018	11/01/2023	In Compliance	For Dunka Road Upgrade Culvert Extension at Unnamed Tributary to Wyman Creek

Type of Permit	Permit Number	Date Issued	Date of Expiration	Permit Status (in compliance, under SOC, etc.)	Additional Information
Air Individual Permit, Part 70 Permit	13700345-101	12/20/2018	12/20/2023	In Compliance	For NorthMet Project
Section 401 Water Quality Certification	1999-5528-JKA	12/20/2018	N/A	In Compliance	For NorthMet Project
Corps of Engineers 404 Permit	MVP-1999-05528-JKA	3/22/2019	12/31/2034	In Compliance	For NorthMet Project
NPDES/SDS Permit	MN0071013	12/20/2018	11/30/2023	In Compliance	For NorthMet Project
NPDES/SDS Permit and Consent Decree	MN0054089	11/01/2018 (modified: 12/01/2018)	11/30/2005	In Compliance	For the existing tailings basin
Minnesota Industrial Stormwater NPDES/SDS General Permit Coverage	Permit # MNR050000, Permit ID MNR053DMW	08/31/2018	04/05/2020	In Compliance	For the Transportation and Utility Corridors
Minnesota Industrial Stormwater NPDES/SDS General Permit Coverage	Permit # MNR050000, Permit ID MNR053DNH	08/31/2018	04/05/2020	In Compliance	For the Mine Site
Minnesota Industrial Stormwater NPDES/SDS General Permit Coverage	Permit # MNR050000, Permit ID MNR053DNJ	08/31/2018	04/05/2020	In Compliance	For the Plant Site
Minnesota Solid Waste Facility Permit	Permit #SW-619	8/26/2010 (modified 1/15/2019)	8/26/2015	In Compliance	For the landfill

Note: This table does not include the separate permits held for the geotechnical program underway at the Mine Site and Plant Site for installation of monitoring wells and geotechnical drilling. A listing of those permits has been provided to the DNR separate from this annual report./

Table 3 Flotation Tailings Basin Dam Height Status for Year 2018 and Planned at the End of the Construction Phase

Dam Segment Location	Figure Reference ⁽¹⁾	Permitted Dam Height ⁽²⁾	2018	End of Construction Phase
			Dam Height (ft MSL) ⁽²⁾	Planned Dam Height (ft MSL) ⁽²⁾
Cell 2E North Dam	Drawings FTB-008 and FTB-010	1,732	1,580 (+2 ft)	1,602
Cell 1E/2E East Dam	Drawings FTB-011 and FTB-012	1,732	N/A ⁽³⁾	N/A ⁽³⁾
Cell 1E/2E South Dam	Drawings FTB-013 and FTB-014	1,732	1,670 (+15 ft)	1,670 (+15 ft)

Notes:

N/A – not applicable

See Flotation Tailings Basin and FTB Seepage Containment and Stream Augmentation Systems Permit Application Support Drawings (Appendix 6 of Reference (1)) which shows the Dam Segment Locations.

(1) Elevations of tailings basin dams/dikes are in feet, relative to Mean Sea Level (MSL). Elevations shown or for the end of the calendar year.

(2) Cell 1E/2E East Dam is not needed until Mine Year 7.

Table 4 Mining Rates and Production Summary for Year 2018 and Planned at the End of the Construction Phase

Facility ⁽¹⁾	2018 (Actual)				End of Construction Phase (Planned)			
	Ore		Concentrate		Ore/feed		Concentrate	
	short tons	cubic yards ⁽³⁾	Cu	Ni	short tons	cubic yards ⁽³⁾	Cu	Ni
			short tons	short tons			short tons	short tons
East Pit Ore	0	0	N/A	N/A	0	0	N/A	N/A
Central Pit Ore	0	0	N/A	N/A	0	0	N/A	N/A
West Pit Ore	0	0	N/A	N/A	0	0	N/A	N/A
Plant	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

Waste Rock ⁽²⁾	2018		End of Construction Phase	
	short tons	cubic yards ⁽³⁾	short tons	cubic yards ⁽³⁾
Stockpiled	0	0	1,030,000	540,000
Used in Construction	0	0	0	0
Total	0	0	1,030,000	540,000

Flotation Tailings	2018		End of Construction Phase	
	short tons	cubic yards	short tons	cubic yards
Total	0	0	0	0

Saturated Mineral Overburden	2018		End of Construction Phase	
	short tons	cubic yards ⁽⁴⁾	short tons	cubic yards ⁽⁴⁾
Total	0	0	1,800,000	1,210,000

Hydromet Residue	2018		End of Construction Phase	
	short tons	cubic yards	short tons	cubic yards
Total	0	0	0	0

Unsaturated Mineral Overburden	2018		End of Construction Phase	
	short tons	cubic yards ⁽⁴⁾	short tons	cubic yards ⁽⁴⁾
Total ⁽⁵⁾	0	0	2,580,000	1,730,000

Notes:
N/A – not applicable
(1) Tracking includes both ore feed and concentrate; therefore, "facility" can be either a pit or the plant.
(2) Total waste rock including all categories. See Table 5 and Table 6 for breakdown by waste rock category.
(3) Cubic yards based on conversion factor of 1.9 short tons per cubic yard for ore and waste rock.
(4) Cubic yards based on conversion factor of 1.5 short tons per cubic yard for saturated and unsaturated mineral overburden.
(5) Unsaturated mineral overburden need only be tracked when extracted from its original location, not when moved again, per NorthMet Mining Project Special Condition 91.

Table 5 Stockpile and Pit Backfill Activity for Year 2018

Stockpile Name and Location	Waste Rock to In-pit Disposal	2018 (Actual)			
	(Y/N)	Average Sulfur Content %	Amount of Material (short tons)	Amount Surface Storage Used (CY)	Amount Surface Storage Remaining ⁽¹⁾ (CY)
Category 1 Waste Rock Stockpile					
Waste Rock	N	N/A	0	0	N/A
Unsaturated Mineral Overburden or Peat	N/A	N/A	0	0	
Total	N	N/A	0	0	90,530,000
Category 2/3 Waste Rock Stockpile					
Waste Rock	N	N/A	0	0	N/A
Overburden	N/A	N/A	0	0	
Total	N	N/A	0	0	31,890,000
Category 4 Waste Rock Stockpile					
Waste Rock	N	N/A	0	0	N/A
Overburden	N/A	N/A	0	0	
Total	N	N/A	0	0	7,890,000
Ore Surge Pile					
Ore	N/A	N/A	0	0	1,620,000

Notes:

"In-pit" indicates whether rock is placed in one of the waste rock stockpiles on the surface or within the East and Central Pits in later years.

CY = cubic yards

Y/N = yes/no

N/A = not applicable

(1) Amount surface storage remaining is based on the total capacity of the stockpile in tons and the density of placed rock.

Table 6 Stockpile and Pit Backfill Activity Planned at the End of the Construction Phase

Stockpile Name and Location	Waste Rock to In-pit Disposal	End of Construction Phase (Planned)		
	(Y/N)	Amount of Material (short tons)	Amount Surface Storage Used (CY)	Amount Surface Storage Remaining ⁽¹⁾ (CY)
Category 1 Waste Rock Stockpile				
Waste Rock	N	0	0	90,530,000
Category 2/3 Waste Rock Stockpile				
Waste Rock	N	0	0	31,890,000
Category 4 Waste Rock Stockpile				
Waste Rock	N	1,030,000	540,000	7,350,000
Saturated Mineral Overburden (Planned)⁽²⁾				
Overburden	N/A	1,800,000	1,210,000	N/A
Unsaturated Mineral Overburden (Planned)⁽³⁾				
Overburden	N/A	2,580,000	1,730,000	N/A
Ore Surge Pile				
Ore	N/A	0	0	1,620,000

Notes:

"In-pit" indicates whether rock is placed in one of the waste rock stockpiles on the surface or within the East and Central Pits in later years.

CY = cubic yards

Y/N = yes/no

N/A = not applicable

(1) Amount surface storage remaining is based on the total capacity of the stockpile in tons and the density of placed rock.

(2) Saturated Mineral Overburden is included as a separate "location" for planned amounts of materials needing storage. Saturated Mineral Overburden will be placed on lined stockpiles or disposed of in-pit.

(3) Unsaturated Mineral Overburden is included as a separate "location" for planned amounts that will be used as general construction material. Unsaturated Mineral Overburden will not be stockpiled beyond a temporary basis prior to use during construction.

Table 7 Reclamation Summary for Year 2018

Name	GPS Coordinates Entry Point	Figure Reference	Area (acres)	Landform Type ⁽¹⁾	Physical Alterations ⁽²⁾	Seed Mix Composition	Amendments ⁽³⁾	Additional Comments ⁽⁴⁾
Temporary Reclamation								
Not applicable; no temporary reclamation activities were performed in 2018								
Permanent Reclamation								
Not applicable; no permanent reclamation activities were performed in 2018								

(1) Landforms include stockpile, pit, tailings basin, dike, reclaimed road, etc.
(2) Physical alterations include sloping, discing, crimping, application of overburden, or other physical alterations.
(3) Amendments include biosolids, fertilizer, mulch, etc. If this includes fertilizer, include the type of fertilizer, pounds per acre, NPK ratio, timing, and method of application in the comments.
(4) Include any acceptable research or innovative reclamation grant information in comments.

Table 8 Wetland Impacts Summary for Year 2018

Wetlands Impacted – 2018 (Actual) ⁽¹⁾										
Mining Area	Wetland ID	Dominant Circular 39 Community	Total Wetland Area within the Mining Area (acres)	Direct Wetland Impacts (acres)	Fragmentation Impacts (acres)	Remaining Wetland Area (acres)	Dominant Eggers and Reed Wetland Community	Wetland Quality	Type of Impact(2)	Reason for Impact
Not applicable; no wetland impact activities occurred in 2018										
TOTAL										

(1) In future annual reports, figures will be included showing the wetland impacts.
(2) The types of wetland impact are excavation (E), fill (F), fragmentation (Fr), and seepage containment system (C).

Table 9 Wetlands Mitigation Summary for Year 2018

Wetland Mitigation – 2018 (Actual)⁽¹⁾				
Wetland	Direct Wetland Impacts (acres)	Bank Credits Required⁽²⁾	Bank Credits Purchased	Remaining Bank Credits after 2018
Type 2 Fresh (Wet) Meadow	Not applicable (N/A); no wetland impact activities nor wetland mitigation activities occurred in 2018	N/A	---	---
Type 2 Sedge Meadow	N/A	N/A	---	---
Type 3 Shallow Marsh	N/A	N/A	---	---
Type 4 Deep Marsh	N/A	N/A	---	---
Type 5 Shallow, Open Water	N/A	N/A	---	---
Type 6 Shrub-Carr	N/A	N/A	---	---
Type 6 Alder Thicket	N/A	N/A	---	---
Type 7 Hardwood Swamp	N/A	N/A	---	---
Type 7 Coniferous Swamp	N/A	N/A	---	---
Type 8 Open Bog	N/A	N/A	---	---
Type 8 Coniferous Bog	N/A	N/A	---	---
Wetland Total	N/A	N/A	1,400 credits	1,400

(1) See Table 8, which shows the wetland impacts.

(2) Per Minnesota Rules 8420.0522 Subp. 4.A.(1), the replacement ratio for withdrawal of existing wetland bank credits from within the Project bank service area (#1) is 1:1 for a greater than 80% area.

Table 10 **Planned Wetlands Impacts at the End of the Construction Phase**

Mining Area	Wetland ID	Dominant Circular 39 Community	Dominant Eggers and Reed Wetland Community	Total Wetland Area within the Mining Area ⁽²⁾ (acres)	Permitted Wetland Impacts		Wetlands to be Impacted – End of Construction Phase (Planned) ⁽¹⁾			
					Direct Wetland Impacts (acres)	Fragmentation Impacts (acres)	Direct Wetland Impacts (acres)	Fragmentation Impacts (acres)	Type of Impact(3)	Reason for Impact
Mine Site	8	2	Sedge meadow	6.80	6.80	0	6.80	0	F,E	Construction
Mine Site	9	3	Shallow marsh	1.80	0.07	0	0.07	0	F	Construction
Mine Site	13	4	Deep marsh	5.03	0.09	0	0.09	0	F	Construction
Mine Site	14	2	Wet meadow	0.33	0.33	0	0.33	0	F	Construction
Mine Site	19	3	Shallow marsh	1.68	0.05	0	0.05	0	E	Construction
Mine Site	24	6	Alder thicket	0.80	0.39	0	0.39	0	E	Construction
Mine Site	27	8	Coniferous swamp	1.07	1.07	0	1.07	0	E	Construction
Mine Site	32	8	Coniferous bog	73.36	70.99	2.37	13.74	0	F,E, Fr	Construction
Mine Site	43	6	Alder thicket	8.39	6.39	0	6.39	0	F	Construction
Mine Site	44	6	Alder thicket	3.55	2.27	0	2.27	0	E	Construction
Mine Site	47	8	Open bog	0.54	0.40	0.14	0.40	0.14	F, Fr	Construction
Mine Site	48	8	Coniferous bog	88.16	27.30	1.86	22.85	1.86	F,E, Fr	Construction
Mine Site	48A	7	Coniferous swamp	2.65	2.19	0.02	2.19	0.02	F, Fr	Construction
Mine Site	51	6	Alder thicket	7.47	7.45	0.02	7.45	0.02	F, Fr	Construction
Mine Site	52	6	Alder thicket	3.88	3.88	<0.01	3.88	<0.01	F,E, Fr	Construction
Mine Site	68	7	Coniferous swamp	24.22	10.89	0.09	8.66	0.09	F,E, Fr	Construction
Mine Site	76	8	Coniferous bog	3.92	2.21	0	2.21	0	E	Construction
Mine Site	77	8	Coniferous bog	13.31	0.94	<0.01	0.94	<0.01	F,E, Fr	Construction
Mine Site	78	8	Coniferous bog	2.41	2.41	0	0.76	0	F	Construction
Mine Site	81	7	Coniferous swamp	1.68	1.44	0.24	1.44	0.24	F,E, Fr	Construction
Mine Site	85	8	Coniferous bog	1.41	1.41	0	1.41	0	E	Construction
Mine Site	88	8	Coniferous bog	5.58	2.84	0	2.84	0	F	Construction
Mine Site	90	8	Coniferous bog	166.79	25.6	0	4.46	0	F,E	Construction
Mine Site	95	8	Coniferous swamp	2.54	2.54	0	2.54	0	E	Construction
Mine Site	96	8	Coniferous bog	17.54	13.20	0	0.27	0	F,E	Construction
Mine Site	97	8	Coniferous bog	4.46	2.57	1.89	2.57	1.00	F,E, Fr	Construction
Mine Site	99	8	Coniferous bog	1.40	0.49	0	0.49	0	F,E	Construction
Mine Site	100	8	Coniferous bog	176.19	102.96	3.44	59.81	2.66	F,E, Fr	Construction

Mining Area	Wetland ID	Dominant Circular 39 Community	Dominant Eggers and Reed Wetland Community	Total Wetland Area within the Mining Area ⁽²⁾ (acres)	Permitted Wetland Impacts		Wetlands to be Impacted – End of Construction Phase (Planned) ⁽¹⁾			
					Direct Wetland Impacts (acres)	Fragmentation Impacts (acres)	Direct Wetland Impacts (acres)	Fragmentation Impacts (acres)	Type of Impact(3)	Reason for Impact
Mine Site	100A	6	Alder thicket	1.66	1.66	0	1.66	0	F	Construction
Mine Site	101	8	Coniferous bog	14.45	11.97	0.08	10.44	0.08	F,E, Fr	Construction
Mine Site	103	8	Coniferous bog	118.84	109.97	8.86	8.95	5.58	F,E, Fr	Construction
Mine Site	104	8	Coniferous bog	3.57	1.82	0.10	1.82	0.10	F, Fr	Construction
Mine Site	107	8	Coniferous bog	40.92	31.63	0.10	0.95	0	F,E, Fr	Construction
Mine Site	107B	3	Shallow marsh	4.51	2.89	0	0.24	0	F,E	Construction
Mine Site	120	3	Shallow marsh	0.58	0.12	0	0.12	0	E	Construction
Mine Site	200	7	Hardwood swamp	6.36	6.36	0	0.34	0	F	Construction
Mine Site	202	8	Open bog	3.11	3.11	0	2.81	0	F	Construction
Mine Site	552	8	Coniferous bog	8.72	8.72	0	7.13	0	F	Construction
Mine Site	567	3	Shallow marsh	1.40	1.40	0	1.40	0	F	Construction
Mine Site	2009	6	Alder thicket	0.20	0.20	0	0.20	0	F	Construction
Mine Site	2010	7	Coniferous swamp	0.47	0.47	0	0.47	0	F	Construction
Mine Site	2015	6	Alder thicket	0.26	0.26	0	0.02	0	F	Construction
Mine Site	2017	6	Alder thicket	0.25	0.25	0	0.25	0	F	Construction
Railroad Connection Corridor	1038	7	Coniferous swamp	0.07	0.07	0	0.07	0	F	Construction
Railroad Connection Corridor	R-3	6	Shrub-carr	0.10	0.10	0	0.10	0	F	Construction
Railroad Connection Corridor	R-4	6	Alder thicket	0.20	0.20	0	0.20	0	F	Construction
Railroad Connection Corridor	R-5	3	Shallow marsh	0.07	0.07	0	0.07	0	F	Construction
Dunka Road and Utility Corridor	22B	3	Shallow marsh	0.34	0.34	0	0.34	0	F	Construction
Dunka Road and Utility Corridor	22C	6	Alder thicket	0.38	0.38	0	0.38	0	F	Construction
Dunka Road and Utility Corridor	54A	7	Coniferous swamp	0.60	0.60	0	0.60	0	F	Construction
Dunka Road and Utility Corridor	54B	6	Alder thicket	0.13	0.13	0	0.13	0	F	Construction
Dunka Road and Utility Corridor	54D	7	Coniferous swamp	0.09	0.09	0	0.09	0	F	Construction

Mining Area	Wetland ID	Dominant Circular 39 Community	Dominant Eggers and Reed Wetland Community	Total Wetland Area within the Mining Area ⁽²⁾ (acres)	Permitted Wetland Impacts		Wetlands to be Impacted – End of Construction Phase (Planned) ⁽¹⁾			
					Direct Wetland Impacts (acres)	Fragmentation Impacts (acres)	Direct Wetland Impacts (acres)	Fragmentation Impacts (acres)	Type of Impact(3)	Reason for Impact
Dunka Road and Utility Corridor	390	6	Alder thicket	0.41	0.41	0	0.41	0	F	Construction
Dunka Road and Utility Corridor	392	6	Alder thicket	0.14	0.14	0	0.14	0	F	Construction
Dunka Road and Utility Corridor	394	7	Coniferous swamp	0.64	0.64	0	0.64	0	F	Construction
Dunka Road and Utility Corridor	395	7	Coniferous swamp	0.01	0.01	0	0.01	0	F	Construction
Dunka Road and Utility Corridor	396	6	Alder thicket	0.65	0.65	0	0.65	0	F	Construction
Dunka Road and Utility Corridor	400	8	Coniferous bog	0.14	0.14	0	0.14	0	F	Construction
Dunka Road and Utility Corridor	553	7	Coniferous swamp	0.09	0.09	0	0.09	0	F	Construction
Dunka Road and Utility Corridor	554	7	Coniferous swamp	0.11	0.11	0	0.11	0	F	Construction
Dunka Road and Utility Corridor	569	6	Alder thicket	0.68	0.68	0	0.68	0	F	Construction
Dunka Road and Utility Corridor	716	6	Alder thicket	0.02	0.02	0	0.02	0	F	Construction
Dunka Road and Utility Corridor	814	8	Coniferous bog	0.75	0.75	0	0.75	0	F	Construction
Dunka Road and Utility Corridor	862	6	Alder thicket	0.78	0.78	0	0.78	0	F	Construction
Dunka Road and Utility Corridor	1034	6	Alder thicket	0.02	0.02	0	0.02	0	F	Construction
Dunka Road and Utility Corridor	1035	6	Alder thicket	0.16	0.16	0	0.16	0	F	Construction
Dunka Road and Utility Corridor	1124	6	Alder thicket	0.44	0.44	0	0.44	0	F	Construction
Dunka Road and Utility Corridor	R-7	3	Shallow marsh	0.18	0.18	0	0.18	0	F	Construction
FTB	251	6	Alder thicket	1.43	1.43	0	1.43	0	C	Construction
FTB	272	4	Deep marsh	1.11	1.10	0.01	1.10	0.01	C, Fr	Construction
FTB	278	6	Alder thicket	1.04	0.23	0	0.23	0	C	Construction

Mining Area	Wetland ID	Dominant Circular 39 Community	Dominant Eggers and Reed Wetland Community	Total Wetland Area within the Mining Area ⁽²⁾ (acres)	Permitted Wetland Impacts		Wetlands to be Impacted – End of Construction Phase (Planned) ⁽¹⁾			
					Direct Wetland Impacts (acres)	Fragmentation Impacts (acres)	Direct Wetland Impacts (acres)	Fragmentation Impacts (acres)	Type of Impact(3)	Reason for Impact
FTB	279	6	Alder thicket	4.84	3.33	<0.01	3.33	<0.01	C, Fr	Construction
FTB	282	3	Shallow marsh	14.25	7.42	0	7.42	0	C	Construction
FTB	284	6	Alder thicket	2.92	2.51	0	2.51	0	C	Construction
FTB	290	7	Coniferous swamp	0.48	0.37	0.02	0.37	0.02	F,E, Fr	Construction
FTB	292	4	Deep marsh	1.71	1.71	0	1.71	0	C	Construction
FTB	307	3	Shallow marsh	0.78	0.78	0	0.78	0	C	Construction
FTB	308	4	Deep marsh	7.17	2.91	0	2.91	0	C	Construction
FTB	309	2	Wet meadow	0.02	0.02	0	0.02	0	C	Construction
FTB	312	6	Shrub-carr	1.98	1.33	0	1.33	0	C	Construction
FTB	314	3	Shallow marsh	24.87	6.01	0	6.01	0	C	Construction
FTB	572	4	Deep marsh	7.33	0.02	0	0.02	0	C	Construction
FTB	582	4	Deep marsh	27.49	8.11	0	8.11	0	C	Construction
FTB	586	4	Deep marsh	1.89	1.53	0	1.53	0	C	Construction
FTB	587	3	Shallow marsh	0.97	0.17	0	0.17	0	C	Construction
FTB	590	3	Shallow marsh	5.43	5.38	0	5.38	0	C	Construction
FTB	591	4	Deep marsh	2.71	0.70	0	0.70	0	C	Construction
FTB	593	4	Deep marsh	9.80	8.47	0.15	8.47	0.15	C, Fr	Construction
FTB	811	7	Coniferous swamp	0.20	0.20	0	0.20	0	C	Construction
FTB	968	7	Coniferous swamp	13.76	11.37	0	11.37	0	C	Construction
FTB	1134	3	Shallow marsh	14.45	8.73	0.02	8.73	0.02	C, Fr	Construction
FTB	1139	3	Shallow marsh	20.25	2.54	0	2.54	0	C	Construction
FTB	1155	3	Shallow marsh	0.55	0.41	0.15	0.41	0.15	C, Fr	Construction
FTB	1156	3	Shallow marsh	14.49	11.08	0.06	11.08	0.06	C, Fr	Construction
FTB	1159	3	Shallow marsh	0.05	0	0.05	0	0.05	Fr	Construction
FTB	T14	4	Deep marsh	45.20	45.20	0	45.20	0	E	Construction
TOTAL				1,066.63	620.26	19.67	333.43	12.25		

(1) See Figure 7 and Figure 8, which show the wetland impacts.

(2) Wetland acreages are based on the USACE 2018 revised delineation.

(3) The types of wetland impact are excavation (E), fill (F), fragmentation (Fr), and seepage containment system (C).

Table 11 **Planned Wetlands Mitigation Summary at the End of the Construction Phase**

Wetland Type	Direct Wetland Impacts ^(1,2,3)		Wetland Mitigation		
	Permitted (acres)	At the End of Construction Phase (acres)	Bank Credits Required ⁽⁴⁾	Bank Credits Purchased	Remaining Bank Credits at the End of Construction Phase
Type 2 Fresh (Wet) meadow	15.80	0.35	0.35	---	---
Type 2 Sedge meadow	23.93	6.80	6.80	---	---
Type 3 Shallow marsh	70.45	45.27	45.27	---	---
Type 4 Deep marsh	75.67	70.00	70.00	---	---
Type 5 Shallow, Open Water	0	0	0	---	---
Type 6 Shrub-carr	4.03	1.43	1.43	---	---
Type 6 Alder thicket	112.64	34.04	34.04	---	---
Type 7 Hardwood swamp	14.06	0.34	0.34	---	---
Type 7 Coniferous swamp	86.16	30.29	30.29	---	---
Type 8 Open bog	7.64	3.35	3.35	---	---
Type 8 Coniferous bog	517.78	153.81	153.81	---	---
Wetland Total	928.16	345.68	345.68	1,400 credits	1,054.32

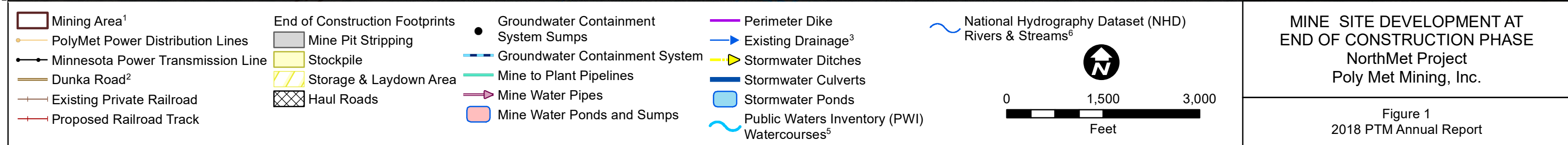
(1) Includes wetlands impacted by fragmentation.

(2) See Table 10, which shows the wetland impacts.

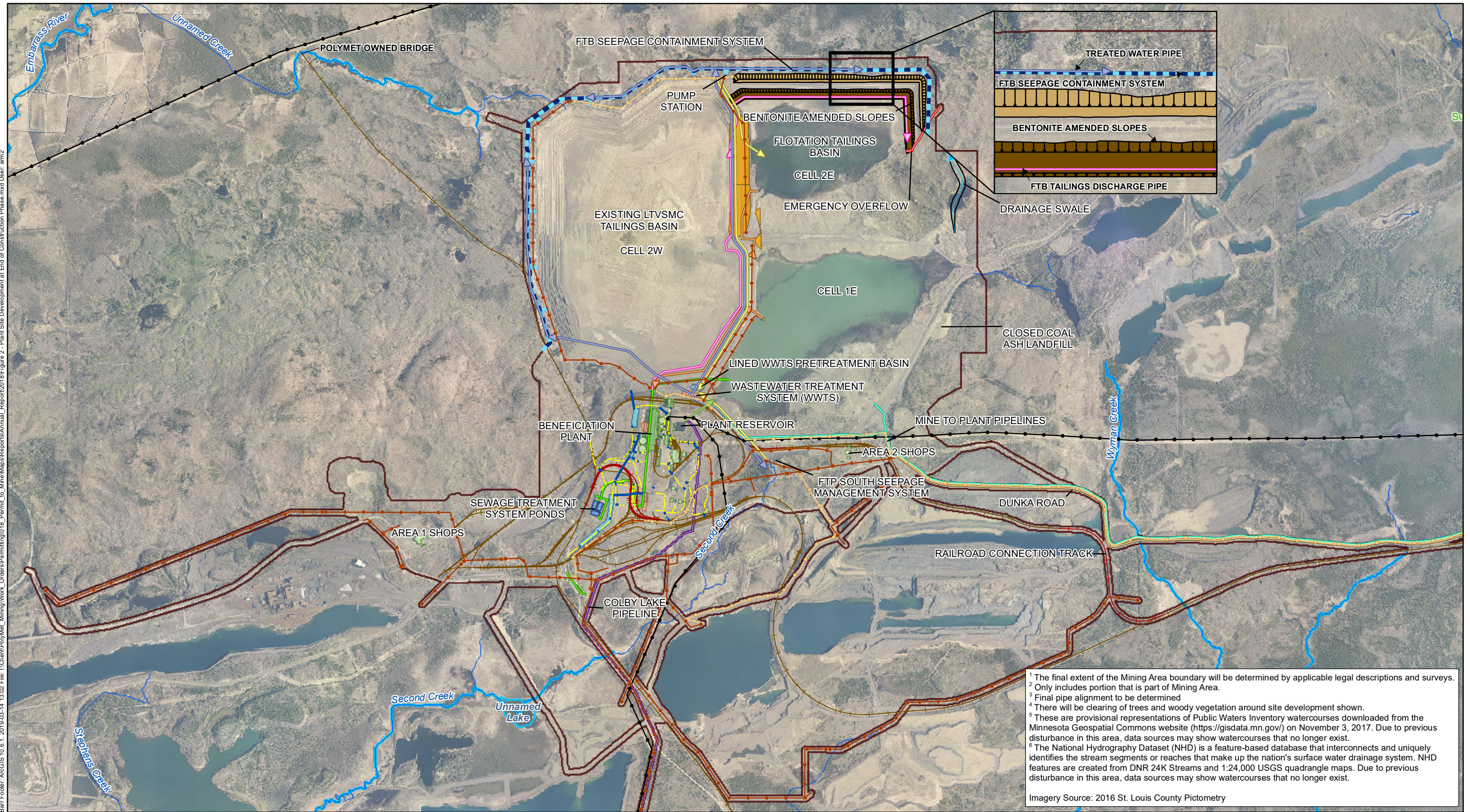
(3) Wetland acreages are based on the USACE 2018 revised delineation.

(4) Per Minnesota Rules 8420.0522 Subp. 4A.(1), the replacement ratio for withdrawal of existing wetland bank credits from within the project bank service area (#1) is 1:1 for a greater than 80% area.

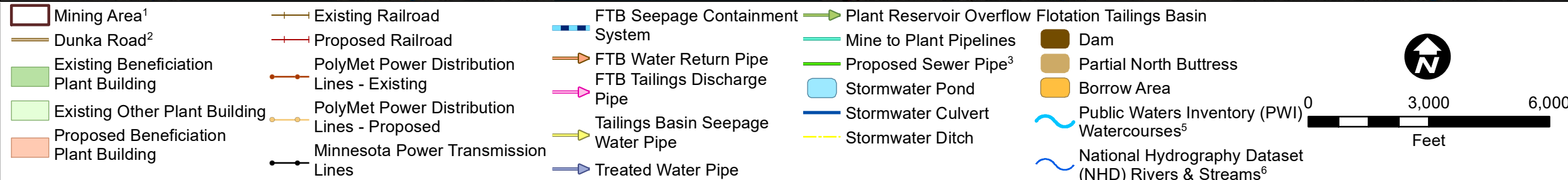
Figures



Barr Footer: ArcGIS 10.6.1, 2019-03-14 13:02 File: I:\Client\PolyMet_Mining\Work_Orders\Permitting\018_Permitt_to_Mine\Maps\Reports\Annual_Report\2018\Figure 2 - Plant Site Development at End of Construction Phase.mxd User: am2



¹ The final extent of the Mining Area boundary will be determined by applicable legal descriptions and surveys.
² Only includes portion that is part of Mining Area.
³ Final pipe alignment to be determined
⁴ There will be clearing of trees and woody vegetation around site development shown.
⁵ These are provisional representations of Public Waters Inventory watercourses downloaded from the Minnesota Geospatial Commons website (<https://gisdata.mn.gov/>) on November 3, 2017. Due to previous disturbance in this area, data sources may show watercourses that no longer exist.
⁶ The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the nation's surface water drainage system. NHD features are created from DNR 24K Streams and 1:24,000 USGS quadrangle maps. Due to previous disturbance in this area, data sources may show watercourses that no longer exist.
Imagery Source: 2016 St. Louis County Pictometry

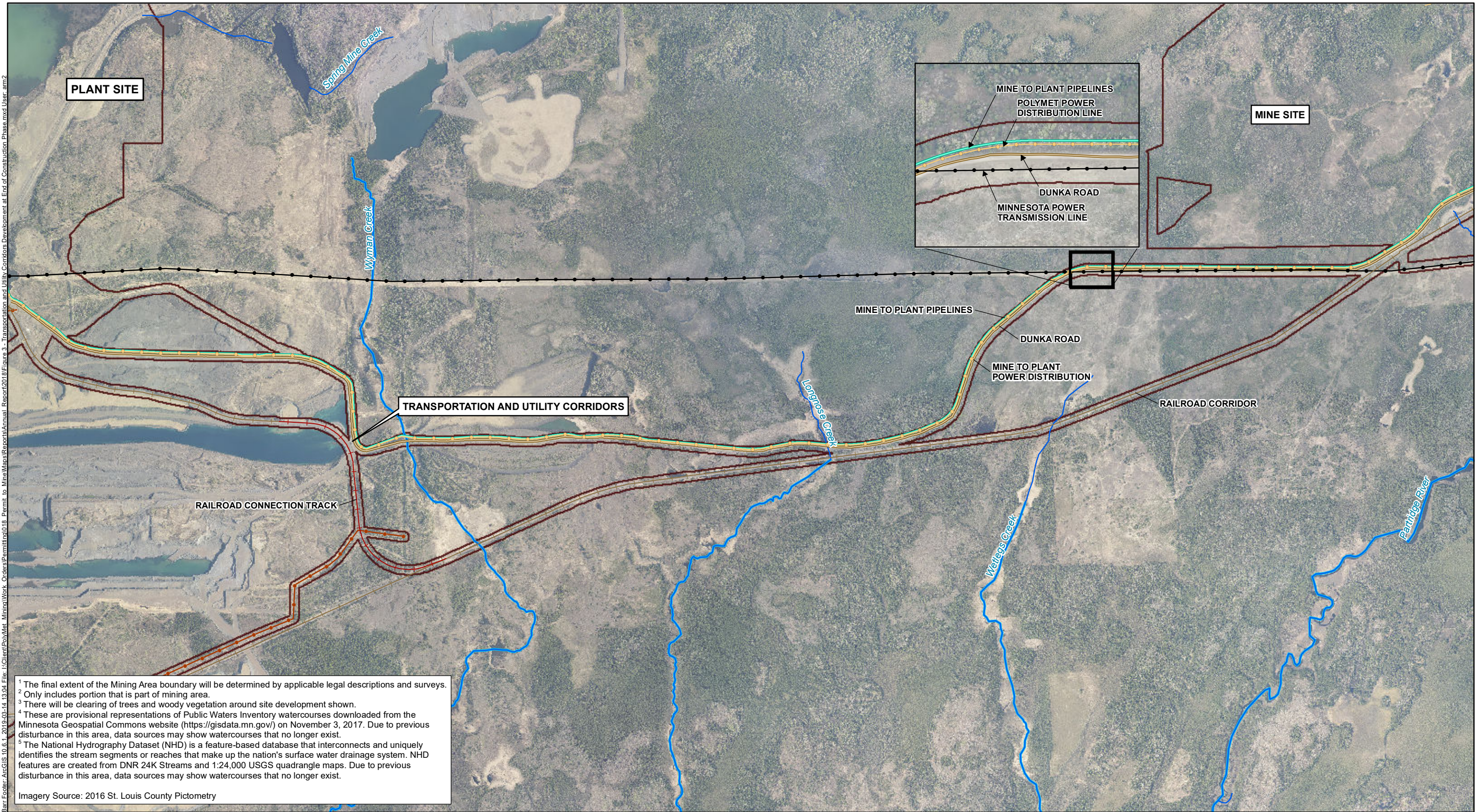


3,000
6,000
Feet

**PLANT SITE DEVELOPMENT AT
END OF CONSTRUCTION PHASE**
NorthMet Project
Poly Met Mining, Inc.

Figure 2
2018 PTM Annual Report

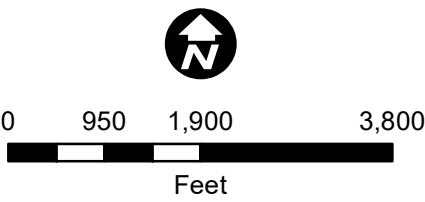
Bar Footer: ArcGIS 10.6.1 2019-03-14 13:04 File: I:\Client\PolyMet_Mining\Work_Orders\Permitting\018_Permitt to Mine\Maps\Reports\Annual_Report\2018\Figure 3 - Transportation and Utility Corridors Development at End of Construction Phase.mxd User: am2



¹ The final extent of the Mining Area boundary will be determined by applicable legal descriptions and surveys.
² Only includes portion that is part of mining area.
³ There will be clearing of trees and woody vegetation around site development shown.
⁴ These are provisional representations of Public Waters Inventory watercourses downloaded from the Minnesota Geospatial Commons website (<https://gisdata.mn.gov/>) on November 3, 2017. Due to previous disturbance in this area, data sources may show watercourses that no longer exist.
⁵ The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the nation's surface water drainage system. NHD features are created from DNR 24K Streams and 1:24,000 USGS quadrangle maps. Due to previous disturbance in this area, data sources may show watercourses that no longer exist.

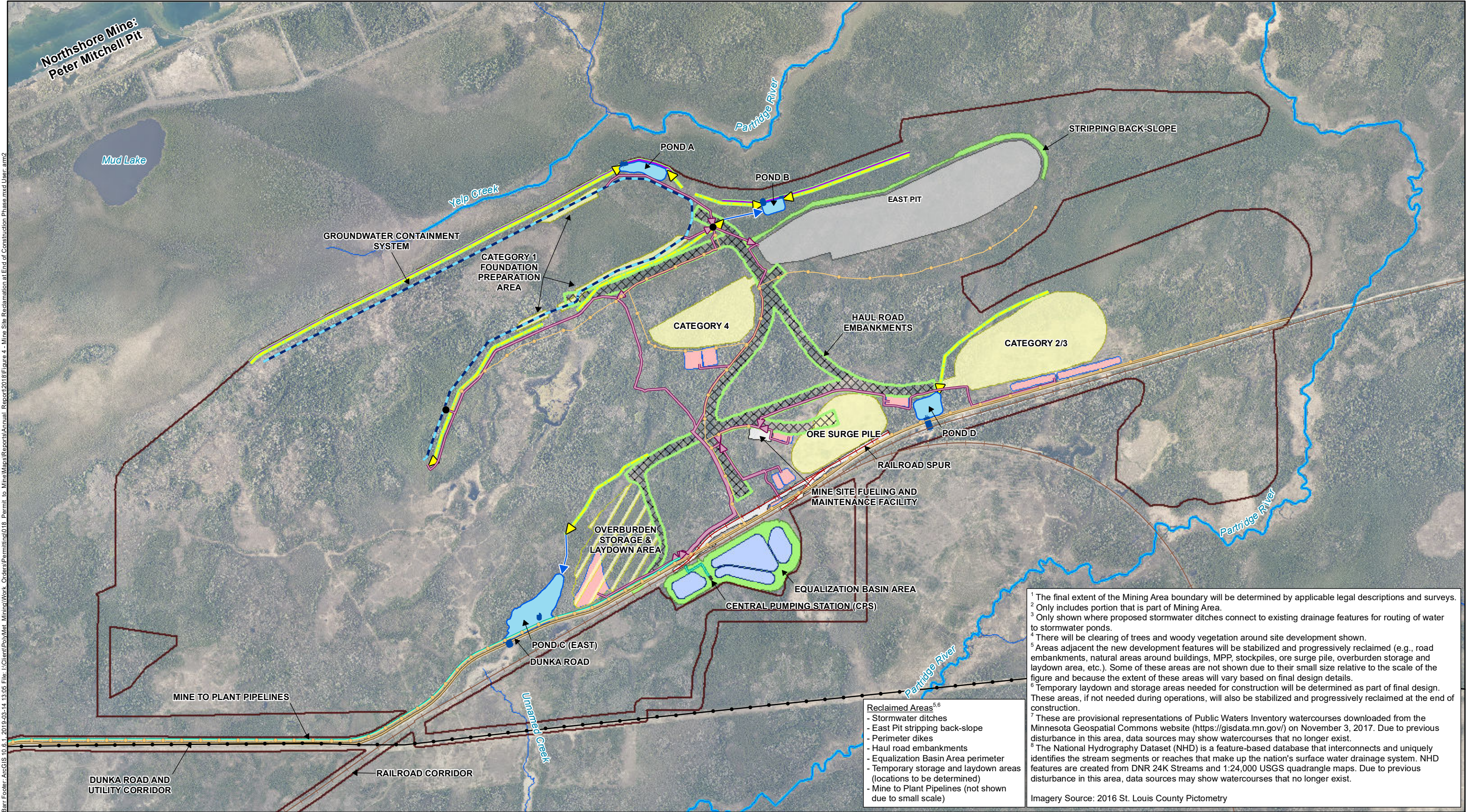
Imagery Source: 2016 St. Louis County Pictometry

- | | |
|---|---|
| <div><div></div> Mining Area¹</div> <div><div></div> Dunka Road²</div> <div><div></div> Existing Private Railroad</div> <div><div></div> Proposed Railroad Track</div> <div><div></div> PolyMet Power Distribution Lines - Existing</div> <div><div></div> PolyMet Power Distribution Lines - Proposed</div> <div><div></div> Minnesota Power Transmission Line</div> | <div><div></div> Mine to Plant Pipelines</div> <div><div></div> Public Waters Inventory (PWI) Watercourses⁴</div> <div><div></div> National Hydrography Dataset (NHD) Rivers & Streams⁵</div> |
|---|---|



TRANSPORTATION AND UTILITY
CORRIDORS DEVELOPMENT AT END OF
CONSTRUCTION PHASE
NorthMet Project
Poly Met Mining, Inc.

Figure 3
2018 PTM Annual Report



Bar Footer: ArcGIS 10.6.1 2019-03-14 13:05 File: I:\Client\PolyMet_Mining\Work_Orders\Permitting\018_Permitt to Mine\Maps\Reports\Annual_Report\2018\Figure 4 - Mine Site Reclamation at End of Construction Phase.mxd User: arm2

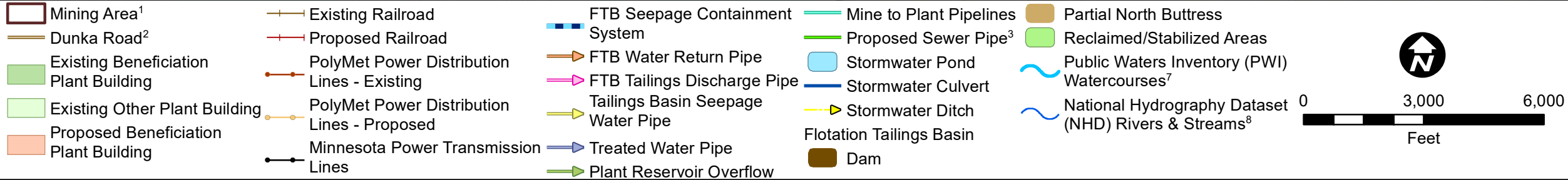
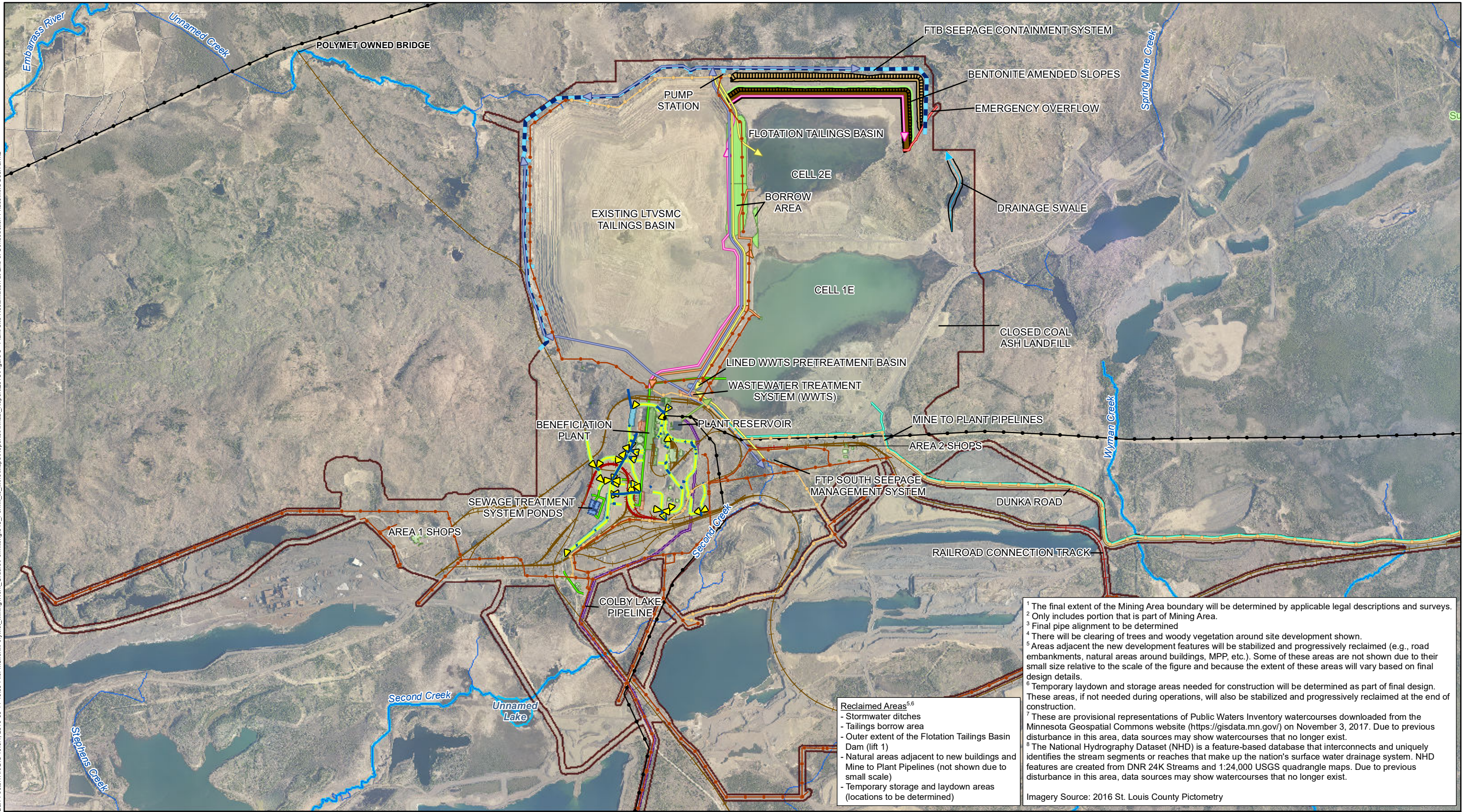
¹ The final extent of the Mining Area boundary will be determined by applicable legal descriptions and surveys.
² Only includes portion that is part of Mining Area.
³ Only shown where proposed stormwater ditches connect to existing drainage features for routing of water to stormwater ponds.
⁴ There will be clearing of trees and woody vegetation around site development shown.
⁵ Areas adjacent the new development features will be stabilized and progressively reclaimed (e.g., road embankments, natural areas around buildings, MPP, stockpiles, ore surge pile, overburden storage and laydown area, etc.). Some of these areas are not shown due to their small size relative to the scale of the figure and because the extent of these areas will vary based on final design details.
⁶ Temporary laydown and storage areas needed for construction will be determined as part of final design. These areas, if not needed during operations, will also be stabilized and progressively reclaimed at the end of construction.
⁷ These are provisional representations of Public Waters Inventory watercourses downloaded from the Minnesota Geospatial Commons website (<https://gisdata.mn.gov/>) on November 3, 2017. Due to previous disturbance in this area, data sources may show watercourses that no longer exist.
⁸ The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the nation's surface water drainage system. NHD features are created from DNR 24K Streams and 1:24,000 USGS quadrangle maps. Due to previous disturbance in this area, data sources may show watercourses that no longer exist.
Imagery Source: 2016 St. Louis County Pictometry

<div><div></div> Mining Area¹</div> <div><div></div> PolyMet Power Distribution Lines</div> <div><div></div> Minnesota Power Transmission Line</div> <div><div></div> Dunka Road²</div> <div><div></div> Existing Private Railroad</div> <div><div></div> Proposed Railroad Track</div>	<div>End of Construction Footprints</div> <div><div></div> Mine Pit Stripping</div> <div><div></div> Stockpile</div> <div><div></div> Storage & Laydown Area</div> <div><div></div> Haul Roads</div>	<div><div></div> Groundwater Containment System Sumps</div> <div><div></div> Groundwater Containment System</div> <div><div></div> Mine to Plant Pipelines</div> <div><div></div> Mine Water Pipes</div> <div><div></div> Mine Water Ponds and Sumps</div> <div><div></div> Perimeter Dike</div>	<div><div></div> Existing Drainage³</div> <div><div></div> Stormwater Ditches</div> <div><div></div> Stormwater Culverts</div> <div><div></div> Stormwater Ponds</div> <div><div></div> Reclaimed/Stabilized Areas</div> <div><div></div> Public Waters Inventory (PWI) Watercourses⁷</div>	<div>National Hydrography Dataset (NHD) Rivers & Streams⁸</div> <div><div></div></div> <div><div></div></div> <div>01,5003,000</div> <div>Feet</div>
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MINE SITE RECLAMATION AT
END OF CONSTRUCTION PHASE
NorthMet Project
Poly Met Mining, Inc.

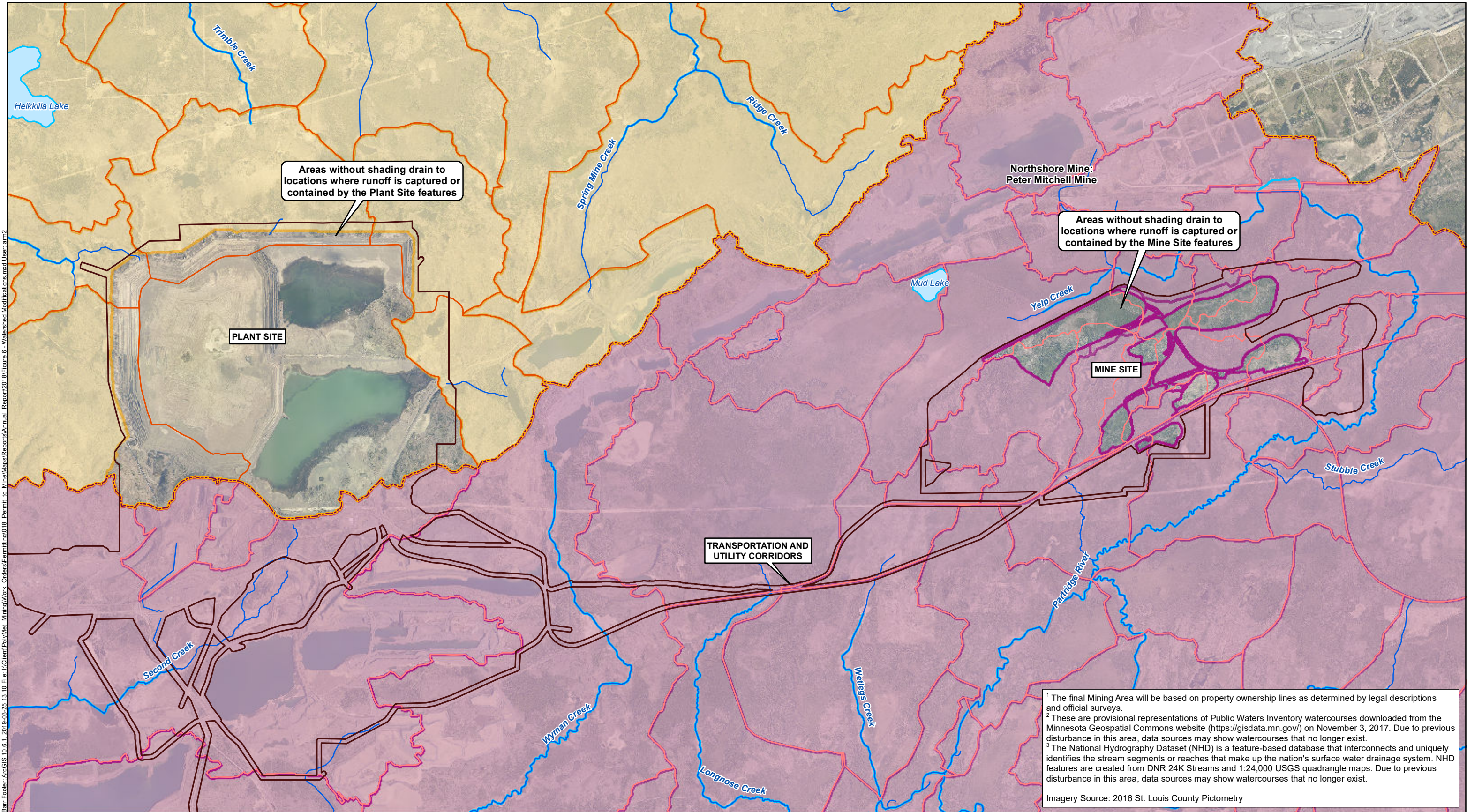
Figure 4
2018 PTM Annual Report

Barr Footer: ArcGIS 10.6.1, 2019-03-14 13:09 File: I:\Client\PolyMet_Mining\Work_Orders\Permitting\018_Permitt to Mine\Maps\Reports\Annual_Report\2018\Figure 5 - Plant Site Reclamation at End of Construction Phase.mxd User: arm2

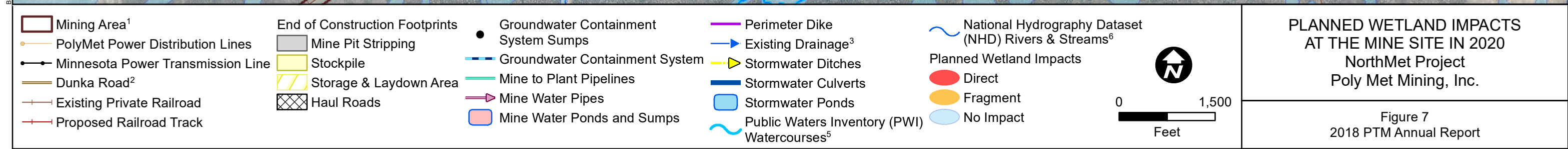
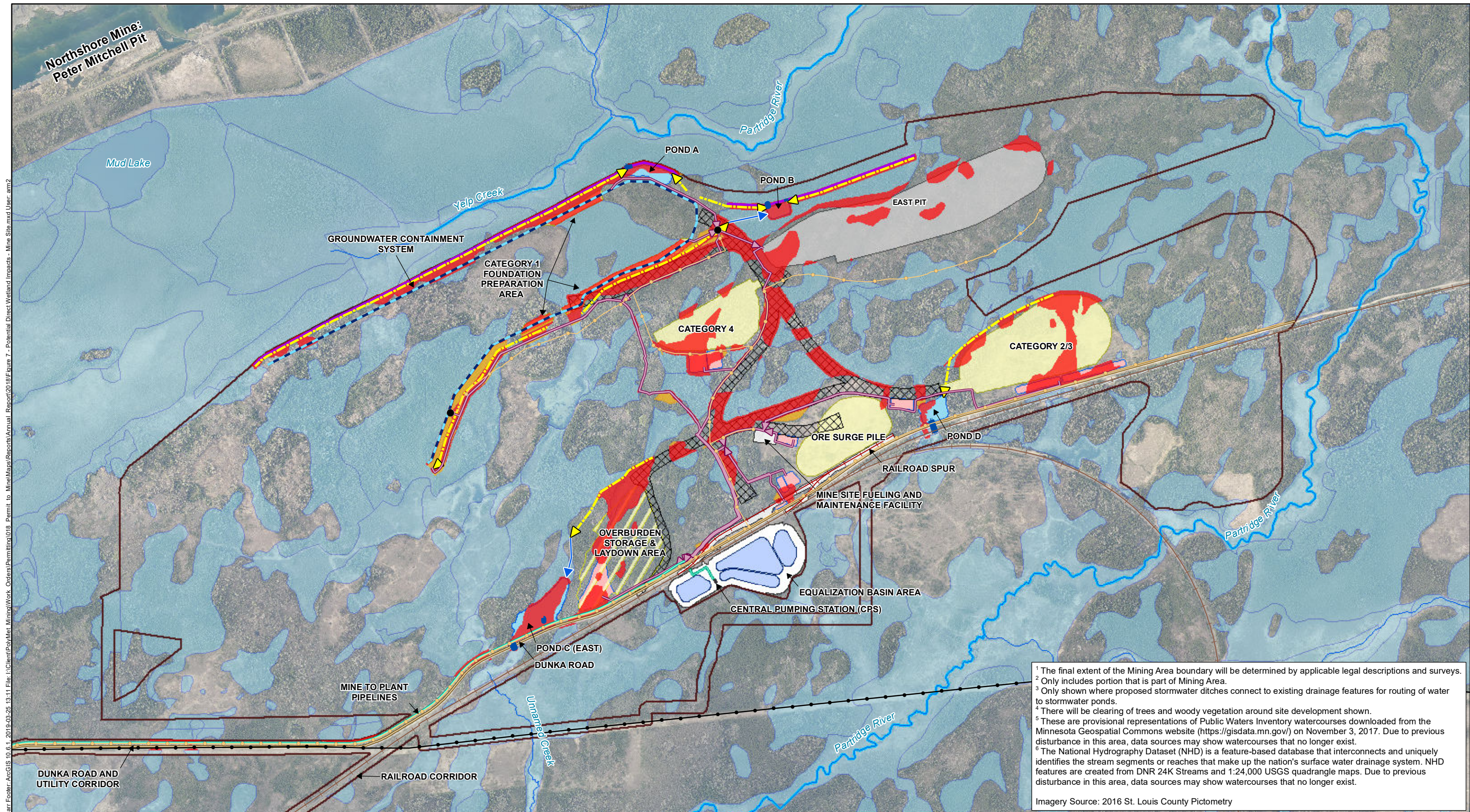


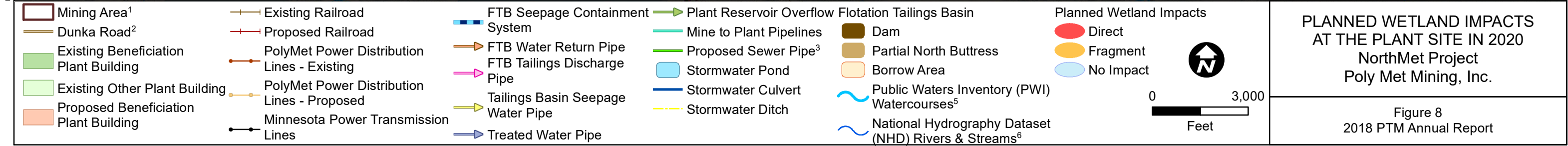
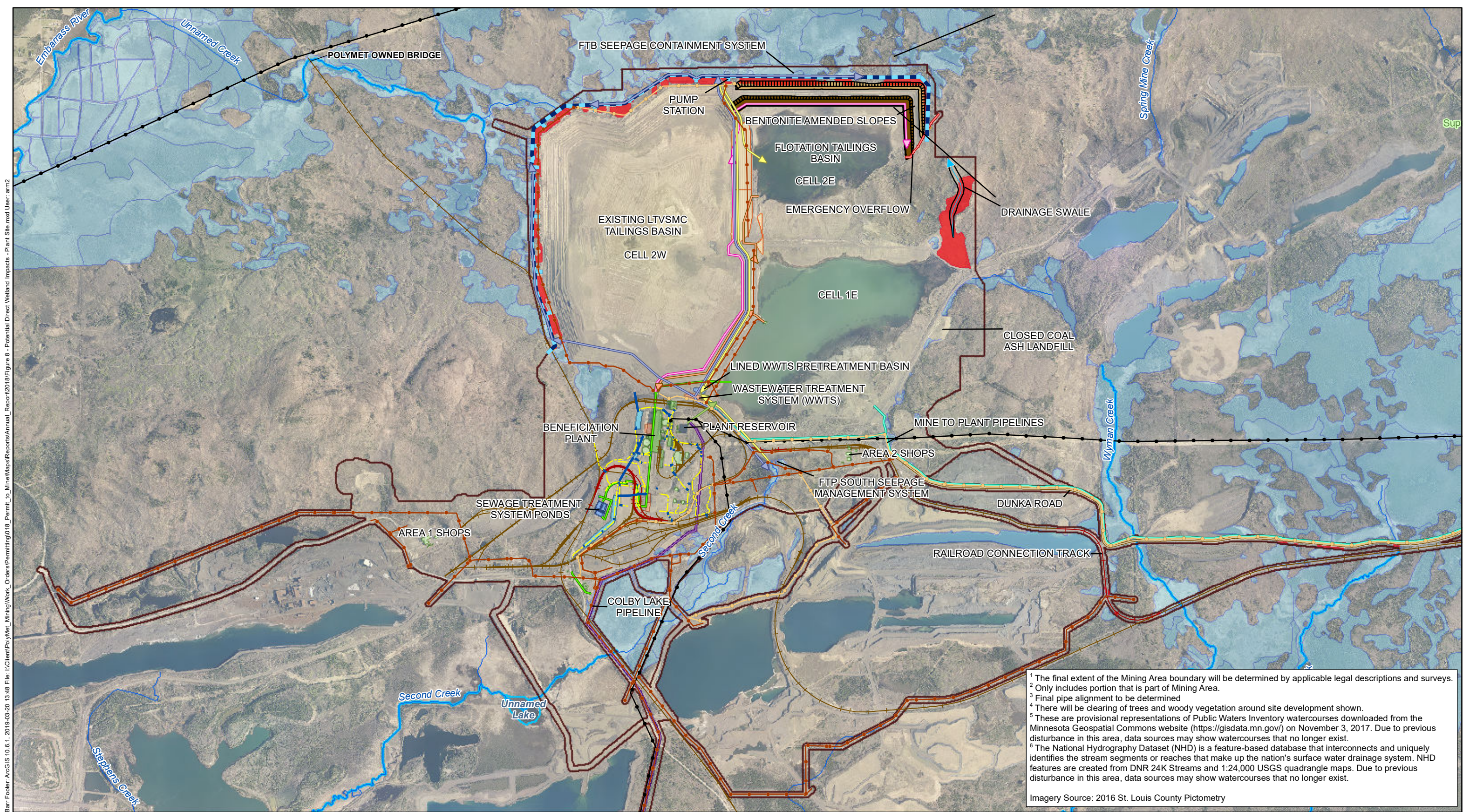
PLANT SITE RECLAMATION AT
END OF CONSTRUCTION PHASE
NorthMet Project
Poly Met Mining, Inc.

Figure 5
2018 PTM Annual Report



<p>End of Construction Phase</p> <ul style="list-style-type: none"> Watershed Divide Embarrass River Subwatersheds Partridge River Subwatersheds Area Drains to Plant Site Features Area Drains to Mine Site Features 	<p>Existing Conditions</p> <ul style="list-style-type: none"> Partridge River Subwatersheds Embarrass River Subwatersheds 	<p>Mining Area¹</p> <ul style="list-style-type: none"> Public Waters Inventory (PWI) Basins Public Waters Inventory (PWI) Watercourses² National Hydrography Dataset (NHD) Rivers & Streams³ 	<p>0 2,000 4,000 8,000</p> <p>Feet</p> <p>Imagery Source: 2016 St. Louis County Pictometry</p>	<p>WATERSHED MODIFICATIONS AT END OF CONSTRUCTION PHASE</p> <p>NorthMet Project</p> <p>Poly Met Mining, Inc.</p>
<p>Figure 6</p> <p>2018 PTM Annual Report</p>				





Appendices

Appendix A

2019 Insurance Update, Policy FEI-EIL-25551-00



Admiral Insurance Company

Policy Number: FEI-EIL-25551-00
Renewal Of: Not Applicable

Item 1

First Named Insured:

PolyMet Mining, Inc.
444 Cedar Street, Suite 2060
St. Paul, MN 55101

Program Administrator:

Freberg Environmental, Inc.
2000 S. Colorado Blvd., Tower II Suite 800
Denver, Colorado 80222

Form of Business: Corporation

Item 2

Policy Period:

From: 11/1/2018

To: 11/1/2020

At 12:01 am Standard Time at your mailing address shown above

Item 3

Policy Premium	
This policy consists of the following Coverage Parts as indicated:	Premium
Environmental Impairment Liability	
Total Coverage Part Premium	
Terrorism Premium	
Total Premium	
State Fee	

FORMS APPLICABLE TO ALL COVERAGE PARTS: See Schedule of Forms and Endorsements and attached State specific Surplus Lines Warning where applicable.

These declarations together with the common policy conditions, coverage part declarations, coverage part coverage forms(s) and forms and endorsements, if any, issued to form a part thereof, complete the above numbered policy.

By: Authorized Representative

Issue Date:
10/30/2018



Policy Number: FEI-EIL-25551-00
Renewal Of: Not Applicable

Item 4

Coverage Parts Attached (indicated with "X"):

Coverage Part		Policy Type
X	Environmental Impairment Liability	Claims Made Form

Item 5

Environmental Impairment Liability Coverages Included (indicated with "X"):

X	Coverage A. Onsite Cleanup Costs
X	Coverage B. Offsite Cleanup Costs
X	Coverage C. Property Damage or Bodily Injury to Third Parties

See Item 10 Schedule of Forms and Endorsements for additional Coverages added by Endorsement.

Item 6

Limits of Insurance:

Regardless of the number of Coverages Parts or Coverages written under this policy or applicable to any one *Claim or Pollution Condition*, the Limits of Insurance shown below apply once for the entire policy, and not separately for each Coverage Part or Coverage.

Applicable to Environmental Impairment Liability Coverage Parts Only:

\$10,000,000 Per Pollution Conditions Limits

\$10,000,000 Aggregate Pollution Condition Limits

Note: With respect to the Environmental Impairment Liability Coverage Parts only, *Defense Expense(s)* reduce the Limits of Insurance unless otherwise specifically endorsed onto this Policy.

Item 7

Deductible or Self Insured Retention (SIR):

Coverage	Amount	Type
Environmental Impairment Liability		Per Pollution Condition SIR

Item 8

Retroactive Dates:

Coverage	Retroactive Date
Environmental Impairment Liability	None

Item 9

Rate and Premium Schedule:

Estimated Annual Gross Receipts: N/A	Rate: Flat
Policy Period Minimum Earned Premium:	Minimum Earned Premium:



Policy Number: FEI-EIL-25551-00
Renewal Of: Not Applicable

Item 10

Schedule of Forms and Endorsements

The following forms and endorsements are made part of this policy:

JA1001 1016	Signature Page
EIL-1001-0316	Environmental Impairment Liability - Claims Made Form
ECC-327-0917	Minimum Premium Endorsement
PN-0002-1215	Trade or Economic Sanctions Endorsement
EIL-1093-0316	Mold-Legionella Exclusion Endorsement
ECC-322-0713	Claims Notice Document
PN-0001 00107	OFAC
EIL-1031-0316	Coverage D Transportation Pollution Liability - 3rd Party Carriers
EIL-1135-0316	Coverage E Transportation Pollution Liability - First Party
EIL-1096-0316	Coverage F NonOwned Locations Coverage Endorsement
EIL-1003-0316	Additional Insured Endorsement
EIL-1026-0316	Choice of Law Condition Amendment Endorsement
EIL-1047-0316	Disclosed Document(s) Endorsement
EIL-1049-0316	Engineering-Institutional Controls Exclusion
EIL-1051-0618	Coverage A. Onsite Cleanup Costs Limited to Governmental Mandate
EIL-1060-0316	Intended Use Endorsement
EIL-1067-0316	Known Conditions Exclusion
EIL-1167-0418	Other Insurance (Primary) Endorsement
EIL-1MAN-0316	Self Insured Retention Amendment Endorsement – Manuscript: (To be provided post-binding)
CG 21 90 01 06	Exclusion of Terrorism
ECC-326-0712	Service of Suit
Minnesota Notice	Minnesota State Surplus Lines Notice Attachment

Item 11

Scheduled Locations:

Location 1 - Northmet Mining Project, per map on file, St. Louis County, MN

IN CONSIDERATION OF THE PAYMENT OF THE PREMIUMS, AND SUBJECT TO ALL THE TERMS, CONDITIONS AND EXCLUSIONS OF THIS POLICY, THE COMPANY AGREES TO PROVIDE THE INSURED WITH THE INSURANCE AS STATED IN THIS POLICY.

THESE DECLARATIONS TOGETHER WITH THE APPLICATION, POLICY AND ENDORSEMENTS ISSUED TO FORM A PART THEREOF, COMPLETE THE ABOVE REFERENCED POLICY.



Signature Page

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under this Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

IN WITNESS WHEREOF, we have caused this Policy to be executed and attested, and, if required by state law, this Policy shall not be valid unless countersigned by a duly authorized representative of the Company.

A handwritten signature in black ink, appearing to read "D. J. A. M. D.", written over a horizontal line.

Secretary

A handwritten signature in black ink, reading "Scott R Bauch", written over a horizontal line.

President and CEO

THIS POLICY PROVIDES CLAIMS-MADE AND REPORTED COVERAGE.

Throughout this Policy the words “the Company” refer to the insurance company identified in the Declarations that is providing this insurance. Defined terms, other than headings, appear in italics. Refer to Section II.

DEFINITIONS.

This Policy has certain provisions and requirements unique to it and may be different from other policies the *Insured* may have purchased. Various provisions in this Policy restrict coverage. Please read this entire form carefully to determine rights, duties and what is and is not covered.

This Policy provides coverage on a discovery and/or claims-made and reported basis. Coverage provided herein under the Insuring Agreement only applies to a *Pollution Condition* first discovered or a *Claim* first made against the *Insured*, and reported to the Company during the *Policy Period*, or any applicable *Extended Reporting Period*.

In consideration of payment of the premium and the undertaking of the *Insured* to pay the Self-Insured Retention as described herein, and in reliance upon all representations and warranties contained in the application submitted to the Company and made a part of this Policy, including any addendum or addenda, and subject to all provisions of this Policy subsequently set forth herein, the Company agrees with the *Insured* as follows:

I. INSURING AGREEMENT

1. COVERAGES

The coverages described below shall apply only if scheduled in Item 5 of the Declarations, or specifically added by endorsement attached to this Policy. Each of the following coverages is subject to the Section IV. LIMITS OF INSURANCE AND SELF-INSURED RETENTION as set forth in the Declarations.

Coverage A. Onsite Cleanup Costs

The Company shall pay, on behalf of the *Insured*:

1. *Cleanup Costs* incurred by the *Insured* resulting from a *Pollution Condition* on, at, upon, within or under a *Scheduled Location*, provided that the *Pollution Condition* is first discovered by a *Responsible Insured* and is reported to the Company during the *Policy Period*.
2. *Cleanup Costs* the *Insured* becomes legally obligated to pay resulting from a *Pollution Condition* on, at, upon, within or under a *Scheduled Location*, provided that a *Claim* for such *Cleanup Costs* is first made against the *Insured* and is reported to the Company during the *Policy Period*, or any applicable *Extended Reporting Period*.

Coverage B. Offsite Cleanup Costs

The Company shall pay, on behalf of the *Insured*:

1. *Cleanup Costs* incurred by the *Insured* resulting from a *Pollution Condition* migrating from and extending beyond the boundaries of a *Scheduled Location*, provided that the *Pollution Condition* is first discovered by a *Responsible Insured* and is reported to the Company during the *Policy Period*.
2. *Cleanup Costs* the *Insured* becomes legally obligated to pay resulting from a *Pollution Condition* migrating from and extending beyond the boundaries of a *Scheduled Location*, provided that a *Claim* for such *Cleanup Costs* is first made against the *Insured* and is reported to the Company during the *Policy Period*, or any applicable *Extended Reporting Period*.

Coverage C. Bodily Injury or Property Damage to Third Parties

The Company shall pay, on behalf of the *Insured*, for *Loss* the *Insured* becomes legally obligated to pay for *Bodily Injury* or *Property Damage* to a third party resulting from a *Pollution Condition* on, at, upon, within, under or migrating from a *Scheduled Location*, provided that a *Claim* is first made against the *Insured* and is reported to the Company during the *Policy Period*, or any applicable *Extended Reporting Period*.

2. COVERAGE PROVISION APPLICABLE TO COVERAGES A, B, AND C

The coverage provided under Coverages A, B, and C only applies to a *Pollution Condition* which first commenced on or after the *Retroactive Date*, if any, or during the *Policy Period*.

3. DEFENSE EXPENSE(S) FOR THIRD PARTY CLAIMS

The Company shall have the right and the duty to defend the *Insured* against any *Claim* to which this Policy applies, and shall have no duty to defend the *Insured* against any *Claim* to which this Policy does not apply. The Company's duty to defend or continue defending any such *Claim(s)*, and to pay any such *Claim(s)* or *Defense Expense(s)*, shall cease once the applicable Per Pollution Condition Limit and/or the Aggregate Limit for All Pollution Conditions, as set forth in Item 6 of the Declarations and in Section IV. LIMITS OF INSURANCE AND SELF-INSURED RETENTION, have been exhausted by payment of *Cleanup Costs*, *Loss* and/or *Defense Expense(s)*.

II. DEFINITIONS

1. Aboveground Storage Tank System(s)

Aboveground Storage Tank System(s) means any storage tank that is used to contain an accumulation of regulated substances, the volume of which is more than ninety percent (90%) above the ground surface, and any onsite connected piping, ancillary equipment or containment system.

2. Auto

Auto means a land motor vehicle, trailer or semitrailer designed for travel on public roads, mobile equipment, or off-road motor vehicle, including any machinery or equipment attached thereto.

3. Biological Hazards

Biological Hazards means human blood or human bodily fluids.

4. Bodily Injury

Bodily Injury means:

- a. Physical injury, sickness or disease, including death resulting therefrom, and any medical monitoring associated with these physical injuries, sicknesses or diseases; and/or
- b. Mental anguish, emotional distress or shock.

5. Carrier

Carrier means any person or entity, other than the *Insured* or any parent, subsidiary or affiliated company of the *Insured*, engaged by or on behalf of the *Insured* to transport goods, products or wastes by a *Conveyance*, provided that such person or entity is properly licensed to transport such material and is in the businesses of transporting property for hire.

6. Claim(s)

Claim(s) means the written demand, notice or assertion received by the *Insured* from a third party, alleging liability or responsibility on the part of the *Insured* for *Bodily Injury*, *Property Damage* and/or *Cleanup Costs*.

Claim(s) shall include, but shall not be limited to *Suit(s)* or orders issued by a regulatory agency or governmental entity, which are filed against the *Insured*.

7. Cleanup Costs

Cleanup Costs:

- a. Means reasonable and necessary costs incurred for the investigation, testing, sampling, monitoring, cleanup, removal, remediation, treatment, disposal, neutralization or immobilization of a *Pollution Condition* to the extent:
 - i. Required by *Environmental Law(s)*, including state voluntary cleanup;
 - ii. Recommended, in writing, by an *Environmental Professional*, in the absence of *Environmental Law(s)*; or
 - iii. Actually incurred by a third party, including a regulatory agency duly acting under the authority of *Environmental Law(s)*.
- b. Includes related reasonable and necessary:
 - i. Legal expenses incurred with the Company's prior written consent;
 - ii. *Restoration Costs*;
 - iii. *Emergency Response Costs*; and
 - iv. Expenses incurred for the preparation of customary reports related to *Cleanup Costs*.

Cleanup Costs shall not include *Property Damage*.

8. Conveyance

Conveyance means *Auto*, aircraft, watercraft or rolling stock.

9. Defense Expense(s)

Defense Expense(s) means all reasonable and necessary attorney fees, costs, charges and expenses incurred in the investigation, appraisal, adjustment, litigation, defense, *Mediation*, settlement or appeal of any *Claim*, including court costs.

Defense Expense(s) shall not include the salaries of the Company's employees.

10. Emergency Response Costs

Emergency Response Costs means the reasonable and necessary costs, charges and expenses, incurred by the *Insured* to take emergency action to contain, control or mitigate a *Pollution Condition* that is an imminent and substantial endangerment or threat to the public, human health or the environment. *Emergency Response Costs* must be incurred within seventy-two (72) hours of the discovery of such *Pollution Condition*, or as approved by the Company in writing.

11. Environmental Law(s)

Environmental Law(s) means any federal, state, provincial, foreign or local laws, including, but not limited to statutes, rules, regulations, ordinances, guidance documents, and governmental, judicial or administrative orders and directives that are applicable to *Pollution Condition(s)*.

12. Environmental Professional

Environmental Professional means an individual designated by the Company who is duly certified or licensed in a recognized field of environmental science by a state board, professional association, or both. At the *First Named Insured's* request, the Company shall consult with the *First Named Insured* with respect to the selection of the *Environmental Professional*. The Company may require that the *Environmental Professional* meet certain minimum qualifications, possess appropriate professional experience and maintain adequate errors and omissions insurance.

13. Extended Reporting Period

Extended Reporting Period means either:

- a. The Automatic *Extended Reporting Period* as described in Section VI. EXTENDED REPORTING PERIOD, Paragraph 3;
- b. The Optional *Extended Reporting Period* as described in Section VI. EXTENDED REPORTING PERIOD, Paragraph 4; or
- c. The Automatic Renewal *Extended Reporting Period* as described in Section VI. EXTENDED REPORTING PERIOD, Paragraph 5;

whichever is applicable, following the termination or renewal of coverage as described in Section VI. EXTENDED REPORTING PERIOD, in which to report a *Claim(s)*.

14. First Named Insured

First Named Insured means the *Named Insured* that is listed in Item 1 of the Declarations.

15. Insured(s)

Insured(s) means the following:

- a. The *Named Insured*;
- b. Any present or former director, officer, partner, member, manager, trustee or employee of the *Named Insured*, including a *Temporary Worker* or *Leased Worker*, while acting within the scope of his/her duties as such;
- c. In the case of an individual or partnership, the current spouse, including a party to a civil union or domestic partnership recognized under the applicable law of the jurisdiction having authority, of any current owner or partner of the *Named Insured*, but solely with respect to the liability of each *Insured* as otherwise covered by this Policy;
- d. The heirs, executors, administrators, guardians and legal representatives of each *Insured* in the event of death, incapacity or bankruptcy, but solely with respect to the liability of each *Insured* as otherwise covered by this Policy; and/or
- e. Any person or organization acting as the *Insured's* real estate manager.

No person or organization is an *Insured* with respect to the conduct of any current or past partnership, joint venture or any other entity, unless such entity is specifically added to this Policy as a *Named Insured* set forth in the Declarations or by endorsement.

16. Insured Contract(s)

Insured Contract(s) means a contract or agreement, submitted to and approved by the Company and scheduled on the Insured Contract(s) Endorsement.

17. Leased Worker

Leased Worker means a person leased to the *Insured* by a labor leasing firm under an agreement or contract between the *Insured* and the labor leasing firm, to perform duties related to the conduct of the *Insured's* business.

Leased Worker shall not include *Temporary Worker*.

18. Loss

Loss means:

- a. Monetary judgments, awards or settlements of compensatory damages, arising out of *Claim(s)* for *Bodily Injury* or *Property Damage*; and
- b. Punitive, exemplary or multiple damages, where insurable by law, or civil fines, penalties or assessments for such *Bodily Injury* or *Property Damage*.

19. Low-Level Radioactive Waste and Material

Low-Level Radioactive Waste and Material means:

- a. Waste as defined in Title 10 Code of Federal Regulations, Part 61.2, and any subsequent amendments thereto; and/or
- b. Material regulated by the United States Nuclear Regulatory Commission or an Agreement State under a Type A, B or C Specific License of Broad Scope as defined in Title 10 Code of Federal Regulations, Part 33.11, and any subsequent amendments thereto.

20. Mediation

Mediation means the non-binding intervention of a neutral third-party to effect resolution of a *Claim*.

21. Misdelivery

Misdelivery means the delivery of any liquid product or waste into a wrong receptacle or to a wrong address, or the erroneous delivery of one liquid product or waste for another by an *Auto*.

22. Mold Matter

Mold Matter means mold, mildew, or any type or form of fungus, including mycotoxins, or by-products produced or released by fungi.

23. Named Insured

Named Insured means the *First Named Insured* or any person(s) or entity(ies) expressly added as a *Named Insured* by endorsement to this Policy.

24. Natural Resource Damage

Natural Resource Damage means physical injury to or destruction of, including the resulting loss of value of, land, fish, wildlife, biota, air, water, groundwater, drinking water supplies and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the fishery conservation zone established by the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §§ 1801 et seq.)), any state or local government, any foreign government, any Native American tribe or, if such resources are subject to a trust restriction on alienation, any member of any Native American tribe.

25. Non-Owned Location(s)

Non-Owned Location(s) means:

- a. Any location that is not owned, occupied, rented, managed, or operated by or on behalf of any *Insured* or any subsidiary or affiliate thereof, and is specifically scheduled on the Coverage F. Non-Owned Location(s) Coverage Endorsement if attached to this Policy; or
- b. Any treatment, storage, transfer, disposal or recycling site or facility located within the United States of America which receives or has received, the *Insured's* waste for disposal, provided that such site or facility:

- i. Was never is not owned, occupied, rented, managed, or operated by or on behalf of any *Insured* or any subsidiary or affiliate thereof;
- ii. Was properly permitted and licensed pursuant to *Environmental Law(s)* to accept the *Insured's* waste at the time of such disposal;
- iii. Was not owned or operated by any person(s) or entity(ies) that was in bankruptcy at the time the *Insured's* waste was received for disposal; and
- iv. Was not, at the time the *Insured's* waste was received for disposal, identified on the United States EPA National Priorities List under Section 105(a)(8)(B) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), or pursuant to any functional equivalent of that list made by Federal, state, commonwealth, municipal or other local government agency or body with applicable jurisdiction pursuant to *Environmental Law*.

26. Policy Period

Policy Period means the period set forth as such in Item 2 of the Declarations, or any other such period as may be amended by endorsement or a result of cancellation of this Policy.

27. Pollutant(s)

Pollutant(s) means:

- a. Any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals, hazardous substances, waste materials, including materials to be recycled, reconditioned or reclaimed, including but not limited to, medical, infectious and pathological waste, *Low-Level Radioactive Waste and Material*, silt, sedimentation, petroleum hydrocarbons, methamphetamines, electromagnetic fields and *Legionella pneumophila*, at levels in excess of those naturally occurring; and
- b. *Mold Matter*.

Pollutant(s) shall not include "Source Material," "Special Nuclear Material" or "Byproduct Material" as such terms are defined in the Atomic Energy Act of 1954.

28. Pollution Condition(s)

Pollution Condition(s) means any of the following:

- a. The emission, discharge, dispersal, seepage, migration, release, or escape of *Pollutant(s)* from, into or upon, land, any structure on land, the atmosphere, or any watercourse or body of water, including groundwater. The entirety of any such emission, discharge, dispersal, seepage, migration, release, or escape of *Pollutant(s)* or any related series of associated, repeated, or continuous emissions, discharges, releases or escapes shall be deemed to be one *Pollution Condition*;
- b. *Mold Matter*, *Legionella pneumophila*, methamphetamines or other chemicals associated with methamphetamines on, at, under, within or migrating from a *Scheduled Location*; and
- c. The illicit abandonment of *Pollutant(s)* at a *Scheduled Location* during the *Policy Period*, provided that such abandonment was committed by a person(s) or entity(ies) other than the *Insured* and without the knowledge or consent of the *Insured*.

29. Property Damage

Property Damage means:

- a. Physical injury to, or destruction of real property or tangible personal property of third parties, including the resulting loss of use thereof;
- b. Loss of use of such property of third parties that is not physically injured or destroyed;
- c. Diminution in value of such property of third parties; and
- d. *Natural Resource Damage*.

Property Damage shall not include *Cleanup Costs*.

30. Responsible Insured

Responsible Insured means one or more of the following:

- a. Any officer, director, partner, manager or member of the *Insured*;
- b. Any employee of the *Insured* responsible for environmental affairs, control or compliance; and
- c. Any manager of a *Scheduled Location* who is employed by the *Named Insured*.

31. Restoration Costs

Restoration Costs means the reasonable and necessary costs incurred by the *Insured* to restore real or personal property to substantially the same condition it was in prior to being damaged, but only if such damage occurs in the course of incurring *Cleanup Costs*. *Restoration Costs* shall not exceed the actual cash value of such real or personal property of the *Scheduled Location* prior to incurring *Cleanup Costs* as a result of a *Pollution Condition*.

32. Retroactive Date

Retroactive Date means the date set forth in Item 8 of the Declarations or any applicable endorsements, which is the earliest date that a *Pollution Condition* can first commence for coverage to apply under this Policy.

33. Scheduled Location(s)

Scheduled Location(s) means the locations identified as such in Item 11 of the Declarations or any additional locations expressly added as *Scheduled Location(s)* by endorsement to this Policy.

34. Suit

Suit means a civil proceeding in which damages are alleged because of *Bodily Injury*, *Property Damage*, and/or *Cleanup Costs* to which this insurance applies. *Suit* includes:

- a. An arbitration proceeding in which such damages are claimed and to which the *Insured* must submit or does submit with the Company's consent; and
- b. Any other alternative dispute resolution proceeding in which such damages are claimed and to which the *Insured* submits with the Company's consent.

35. Temporary Worker

Temporary Worker means a person who is furnished to the *Insured* to substitute for a permanent employee on leave or to meet seasonal or short-term workload conditions.

Temporary Worker shall not include *Leased Worker*.

36. Transportation

Transportation means the movement by *Conveyance* of the *Insured's* goods, products or wastes beyond the boundaries of a *Scheduled Location* or a *Non-Owned Location* and includes the loading or unloading of such goods, products or waste. *Transportation* also includes *Misdelivery*.

37. Underground Storage Tank System(s)

Underground Storage Tank System(s) means any storage tank that is used to contain an accumulation of regulated substances, the volume of which is ten percent (10%) or more beneath the ground surface, and any connected piping, or ancillary equipment or containment system.

Underground Storage Tank System(s) does not include either:

- a. Any flow-through process tank, including, but not limited to, a septic tank, oil/water separator, sump, or any stormwater or wastewater collection/treatment vessel or system; or
- b. Any storage tank located in an underground structure that is installed entirely on or above the floor and can be visually inspected.

III. EXCLUSIONS

Unless otherwise specified, these exclusions are applicable to all coverages provided under this Policy, including any *Claim(s)*, *Cleanup Costs*, *Loss* or *Defense Expense(s)*, arising out of, relating to, resulting from, or based upon:

1. Asbestos

The existence of asbestos or asbestos containing materials in, on, or applied to any building or other structure, unless specifically endorsed onto this Policy. This exclusion shall not apply to *Cleanup Costs* resulting from asbestos or asbestos containing materials in soil, groundwater, or surface water.

2. Biological Hazards

The existence of *Biological Hazards*. This exclusion shall not apply to Coverage I . Onsite Cleanup of Biological Hazards if such coverage is provided by endorsement attached to this Policy.

3. Compliance Actions and Improvements

Funds spent for additions, equipment, upgrades or physical improvements to a *Scheduled Location* of the *Insured* undertaken voluntarily or to assure future compliance with applicable laws, rules or regulations.

4. Contractual Liability

The liability of others assumed by the *Insured* in a contract or agreement, unless such liability would exist in the absence of that contract or agreement or the contract or agreement is an *Insured Contract*.

5. Fines, Penalties and Assessments

Any criminal fine, criminal penalty or criminal assessment.

6. Insured versus Insured

Any *Claim* by one *Insured* against another *Insured* under this Policy. This exclusion shall not apply to a *Claim* by an additional *Insured* added by endorsement to this Policy against any *Insured* under this Policy.

7. Intentional or Illegal Acts

Any *Responsible Insured's*:

- a. Intentional, willful, or deliberate non-compliance with any statute, regulation, ordinance, administrative complaint or notice of violation, notice letter, executive order or instruction of any governmental agency or body; or
- b. Dishonest, illegal, fraudulent or criminal act.

8. Internal Costs

Any costs, charges or expenses incurred by the *Insured* for goods supplied or services performed by the salaried staff and employees of the *Insured*, or its parent, subsidiary, or affiliate, unless such costs, charges or expenses are incurred with the prior written consent of the Company, which shall not be unreasonably withheld.

This exclusion shall not apply to *Emergency Response Costs*.

9. Non-Disclosed Known Conditions

Any *Pollution Condition(s)* in existence and reported to or known by a *Responsible Insured* and not affirmatively disclosed, in writing, to the Company:

- a. Prior to the *Policy Period*; or
- b. Solely with respect to *Scheduled Location(s)* added to this Policy by endorsement, if any, prior to the effective date of coverage for such *Scheduled Location(s)*.

This exclusion shall not apply to a *Pollution Condition* that is disclosed, in writing, to the Company and not otherwise excluded under this Policy.

10. Lead-Based Paint

The existence, required removal or abatement of lead-based paint in, on, or applied to any building or other structure unless specifically endorsed onto this Policy. This exclusion shall not apply to *Cleanup Costs* resulting from lead-based paint in soil, groundwater or surface water.

11. Material Change in Use

A change in the use of, or operations at, a *Scheduled Location* from the use or operations as of the date such *Scheduled Location* became insured by this Policy, if that change materially increases the likelihood or severity of a *Pollution Condition* or *Claim*.

12. Products Liability

Goods or products manufactured, sold, handled, distributed, altered or repaired by the *Insured* or by others trading under the *Insured's* name, including any container thereof, any failure to warn, or any reliance upon a representation or warranty made at any time with respect thereto.

This exclusion shall not apply:

- a. To such goods or products while they remain on or at a *Scheduled Location* or a *Non-Owned Location*;
- b. During the course of *Transportation* if such coverage is provided by endorsement attached to this Policy; or
- c. To Coverage H. Products Pollution if such coverage is provided by endorsement attached to this Policy.

13. Property Damage to a Conveyance

Property Damage to any *Conveyance* utilized during *Transportation*; however, this exclusion does not apply to a *Claim* made by a *Carrier* for such *Property Damage* arising from the *Insured's* negligence.

14. Property Damage to Insured's Property

Property Damage to real or personal property owned by, leased to, rented by, occupied by, operated by, or loaned to the *Insured*, or otherwise in the care, custody or control of any *Insured*.

This exclusion shall not apply to damage to personal property of others in the *Insured's* care, custody or control for the purpose of sale, storage, safekeeping, or for the purpose of having operations performed on such property on the *Insured's* behalf.

15. Subsequent to Property Transfer

A *Pollution Condition* on, at, upon, within, under or migrating from a *Scheduled Location* that first commences subsequent to the time the *Insured* sells, gives away, abandons or otherwise transfers such *Scheduled Location*, or such *Scheduled Location* is condemned.

16. Underground Storage Tank System(s)

The existence of any *Underground Storage Tank System(s)* at a *Scheduled Location*, but only if a *Responsible Insured* had discovered the existence of such *Underground Storage Tank System(s)* prior to the inception of this Policy.

This exclusion does not apply to any *Underground Storage Tank System(s)*:

- a. That was removed, closed or abandoned in place in accordance with *Environmental Law(s)* prior to the inception of this Policy; or
- b. That is endorsed onto this Policy as a *Scheduled Underground Storage Tank System(s)*.

17. War

Any consequence, whether direct or indirect, of war, invasion, hostilities, whether war be declared or not, civil war, rebellion, revolution, insurrection or military or usurped power, strike, riot or civil commotion.

18. Workers' Compensation/Employer's Liability

Any obligation of the *Insured* under a Workers' Compensation, disability benefits, unemployment compensation, employee benefits, pension sharing, ERISA law or any similar law, including *Claim(s)* for *Bodily Injury* to:

- a. Any employee, director, officer, partner, member or manager, *Temporary Worker* or *Leased Worker* of any *Insured* or its affiliates if such injury occurs during and in the course of employment; or
- b. The spouse, party to a civil union or domestic partnership recognized under the applicable law of the jurisdiction having authority, child, parent, brother, sister, personal representative, guardian or other party authorized to act on behalf of the injured party as a consequence of the injury.

IV. LIMITS OF INSURANCE AND SELF-INSURED RETENTION

1. The Limits of Insurance

The Limits of Insurance shown in the Declarations and the other applicable limits set forth in this section below will be the most the Company will pay regardless of the number of:

1. *Insured(s)*;
2. *Scheduled Location(s)*;
3. *Claim(s)* made;
4. Persons or organizations making *Claim(s)*;
5. Actual or alleged *Pollution Condition(s)*; and/or
6. *Loss*.

2. Aggregate Limit for All Pollution Conditions

The “Aggregate Limit for All Pollution Conditions” amount shown in Item 6 of the Declarations is the maximum amount the Company will pay in excess of any Self-Insured Retention amount shown in the Declarations or specifically endorsed onto this Policy, on behalf of the *Insured*, for the sum of all *Cleanup Costs*, *Loss* or *Defense Expense(s)* incurred, and any other coverages afforded under this Policy or any endorsements attached thereto.

3. Per Pollution Condition Limit

The “Per Pollution Condition Limit” amount shown in Item 6 of the Declarations is the maximum amount the Company will pay in excess of any Self-Insured Retention amount shown in the Declarations or specifically endorsed onto this Policy, on behalf of the *Insured*, under this Policy for all *Cleanup Costs*, *Loss* or *Defense Expense(s)* incurred, and any other coverages afforded under this Policy or any endorsements attached thereto, arising out of the same or related *Pollution Condition*.

For the purposes of this Policy, a related *Pollution Condition* is that which arises out of, is based on, relates to or is in consequence of, the same facts, circumstances or situations.

4. Self-Insured Retention

The Self-Insured Retention shall apply to this Policy as shown in Item 7 of the Declarations or specifically endorsed onto this Policy. The Company shall pay for *Cleanup Costs*, *Loss* or *Defense Expense(s)* incurred, and any other coverages afforded under this Policy or any endorsements attached thereto in excess of the Self-Insured Retention amount set forth in the Declarations.

The Self-Insured Retention is the obligation of the *First Named Insured* and is not to be insured by the Company unless set forth in the Declarations or specifically endorsed onto this Policy. The Self-Insured Retention shall apply to all *Cleanup Costs*, *Loss*, *Defense Expense(s)* incurred, and any other coverages afforded under this Policy or any endorsements attached thereto arising out of the same or related *Pollution Condition(s)*.

Where the Company provides advance payment of part or all of the Self-Insured Retention, and upon notification of such payment made, the *First Named Insured* shall promptly reimburse the Company. Payment within the Self-Insured Retention will not create any obligations or be construed as a waiver or estoppel of the Company’s rights under this Policy.

5. Multiple Coverages

If this Policy and any other policy providing coverage issued by the Company or any affiliate of the Company apply to the same *Pollution Condition* or related *Pollution Condition(s)*, the maximum amount payable under

all of such policies combined shall be limited to the amount of the highest applicable Per Pollution Condition Limit payable under any one of the policies.

6. Multiple Policy Periods and Claims

In the event that the Company, or an affiliate of the Company, issues a claims-made pollution liability policy to the *Insured* in one or more policy periods, and if:

- a. A *Pollution Condition* is first discovered by the *Insured* and reported to the Company during the *Policy Period*, and a related or continuous *Pollution Condition* is first discovered by the *Insured* and reported to the Company during a subsequent policy period, all such *Pollution Condition(s)* shall be deemed to be one *Pollution Condition* and to have been first discovered by the *Insured* and reported to the Company during the *Policy Period*, and shall be subject to the applicable Per Pollution Condition Limit and Self-Insured Retention set forth in the Declarations of this Policy; or
- b. A *Claim* is first made against the *Insured* and reported to the Company during the *Policy Period*, and a *Claim* arising from the same, related or continuous *Pollution Condition* is first made against the *Insured* and reported to the Company during a subsequent policy period, then all such *Claim(s)* shall be deemed to have been first made against the *Insured* and reported to the Company during the *Policy Period* and to arise from one *Pollution Condition*, and shall be subject to the applicable Per Pollution Condition Limit and Self-Insured Retention set forth in the Declarations of this Policy.

Coverage under this Policy for such *Pollution Condition(s)* or for such *Claim(s)* shall not apply unless, at the time such *Pollution Condition(s)* were first discovered and reported, or a *Claim* was first made and first reported, the *Insured* has maintained with the Company, or an affiliate of the Company, a claims-made pollution liability policy providing substantially the same as or broader coverage than this Policy on a continuous, uninterrupted basis since the point in time at which the *Pollution Condition* was discovered and reported to the Company, or since the first such *Claim* was made against the *Insured* and reported to the Company.

V. INVESTIGATION, DUTY TO DEFEND, SETTLEMENT AND MEDIATION CREDIT

1. Investigation and Duty to Defend

The Company has the right and the duty to assume control of the investigation, defense, or settlement of any *Claim*. The Company may, in its sole discretion, investigate any *Pollution Condition* regardless of whether any *Claim* has been made. The Company shall have the absolute right to designate legal counsel for the investigation, adjustment and defense of any *Claim*. If requested by the *First Named Insured*, the Company shall consult with the *First Named Insured* on the selection of counsel.

With respect to any *Claim* that the Company defends, the Company shall pay *Defense Expense(s)* for the investigation, contest or defense of a specific claim.

Defense Expense(s) shall be subject to the terms and conditions of this Policy and shall erode the Limits of Insurance and any applicable Self-Insured Retention. The Company's duty to defend the *Insured* shall terminate when the Company establishes either: (i) the absence of coverage under the terms and conditions of this Policy; or (ii) the applicable Per Pollution Condition Limit and/or the Aggregate Limit for All Pollution Conditions as set forth in the Declarations and in Section IV. LIMITS OF INSURANCE AND SELF-INSURED RETENTION, have been exhausted by payment of *Cleanup Costs*, *Loss* and/or *Defense Expense(s)*. In such circumstances, the Company shall take reasonably appropriate steps to transfer control of any existing defense to the *First Named Insured*.

2. Settlement

The *Insured* shall not admit or assume liability or settle or negotiate to settle any *Claim* without the prior written consent of the Company. The *Insured* must notify the Company of all settlement offers and the Company will in turn present all settlement offers to the *Insured*.

The Company shall not settle any *Claim* without the consent of the *Insured*. If, however, the *Insured* refuses to consent to any settlement recommended by the Company and elects to contest the *Claim* or continue any legal proceedings in connection with such *Claim*, then the Company's liability for that *Claim* shall not exceed the amount for which the *Claim* could have been settled plus related *Defense Expense(s)* incurred up to the date of such refusal, less the Self-Insured Retention or the outstanding Self-Insured Retention balance, if any.

3. Independent Counsel

If, by mutual agreement or by law, the *Insured* is entitled to select defense counsel to defend any *Claim* at the Company's expense, the reasonable and necessary attorney fees and all other related litigation expenses that the Company must pay to that counsel are limited to the rates the Company would actually pay to counsel that it retains in the ordinary course of business in the defense of a similar *Claim* in the community where the *Claim* arose or is being defended. The Company shall have the right to require that such counsel have certain minimum qualifications with respect to competency, including experience in defending claims similar to the one pending against the *Insured*, and to require such counsel to have errors and omissions insurance coverage. The *Insured* agrees that such independent counsel will timely respond to the Company's reasonable requests for information regarding any *Claim*.

4. Mediation Credit

If the *Named Insured* and the Company agree to utilize *Mediation* as a means to resolve a *Claim* made against the *Insured*, and if such *Claim* is resolved as a direct result of the *Mediation*, the *Named Insured's* Self-Insured Retention obligation shall be reduced by fifty percent (50%), subject to a maximum reduction of twenty-five thousand dollars (\$25,000). As soon as practicable following the conclusion of such *Mediation*, the Company shall reimburse the *First Named Insured* for any reimbursable Self-Insured Retention payment made by the *First Named Insured* prior to the *Mediation*.

VI. EXTENDED REPORTING PERIOD

1. The *Insured* shall be entitled to an Automatic *Extended Reporting Period*, and the *First Named Insured* shall be entitled to purchase an Optional *Extended Reporting Period*, if this Policy is cancelled or non-renewed for any reason other than non-payment of the premium, fraud or material misrepresentation, and the *Insured* has not purchased other insurance to replace this Policy. If this Policy is renewed, the *Insured* shall be entitled to an Automatic Renewal *Extended Reporting Period*, as set forth below in Paragraph 5.
2. An *Extended Reporting Period* neither extends the *Policy Period*, nor changes the scope of coverage provided by this Policy. An *Extended Reporting Period* shall not modify, reinstate or increase the Limits of Insurance of this Policy, and any payment made by the Company during an *Extended Reporting Period* shall reduce the available Limits of Insurance.
3. **Automatic Extended Reporting Period**

The Automatic *Extended Reporting Period* is a ninety (90) day period, which begins on the effective date of termination of this Policy. The *Insured* shall be entitled to an Automatic *Extended Reporting Period* for no additional premium charge.

The Automatic *Extended Reporting Period* shall apply as follows:

- a. A *Claim* first made against the *Insured* during the *Policy Period* and reported to the Company, in writing, during the *Automatic Extended Reporting Period* will be deemed to have been made and reported on the last day of the *Policy Period*, provided that such *Claim* is otherwise covered under this Policy.
- b. A *Claim* first made against the *Insured* and reported to the Company, in writing, during the *Automatic Extended Reporting Period* will be deemed to have been made and reported on the last day of the *Policy Period*, provided that such *Claim* arises from a *Pollution Condition* which commenced prior to the effective date of termination of this Policy and is otherwise covered under this Policy.

If the *Optional Extended Reporting Period* is purchased, then the *Automatic Extended Reporting Period* shall not apply.

4. Optional Extended Reporting Period

The *First Named Insured* may purchase an *Optional Extended Reporting Period* of up to thirty-six (36) months beginning on the effective date of termination of this Policy for an additional premium, provided that:

- a. The *First Named Insured* makes a request, in writing, for such *Optional Extended Reporting Period*, which is received by the Company within thirty (30) days of the effective date of termination of this Policy;
- b. The Company will determine the additional premium, which shall not exceed 200% of the full Policy premium stated in the Declarations or specifically endorsed onto this Policy; and
- c. The *First Named Insured* shall pay the Company the additional premium within sixty (60) days of the effective date of termination of this Policy, and once paid, such premium shall be fully earned.

The *Optional Extended Reporting Period* shall apply as follows:

- a. A *Claim* first made against the *Insured* during the *Policy Period* and first reported to the Company, in writing, during the *Optional Extended Reporting Period* will be deemed to have been made and reported on the last day of the *Policy Period*, provided that such *Claim* is otherwise covered under this Policy.
- b. A *Claim* first made against the *Insured* and reported to the Company, in writing, during the *Optional Extended Reporting Period* will be deemed to have been made and reported on the last day of the *Policy Period*, provided that such *Claim* arises from a *Pollution Condition* which commenced prior to the effective date of termination of this Policy and is otherwise covered under this Policy.
- c. Once purchased, an *Optional Extended Reporting Period* cannot be cancelled.

5. Automatic Renewal Extended Reporting Period

Provided that the *First Named Insured* has renewed this Policy with the Company or an approved affiliate of the Company, the *Insured* shall have the right to the following: a period of sixty (60) days following the expiration of the *Policy Period* in which to provide written notice to the Company of *Claim(s)* first made against the *Insured* within thirty (30) days prior to the expiration of the *Policy Period*.

A *Claim* first made against the *Insured* within thirty (30) days prior to the expiration of the *Policy Period* and reported to the Company within the *Automatic Renewal Extended Reporting Period* shall be deemed to have been made and reported on the last day of the *Policy Period* of this Policy.

VII. CONDITIONS

1. Assignment

The *First Named Insured* may assign this Policy with the Company's written consent, which shall not be unreasonably withheld or delayed; however, no assignment shall bind the Company until it has issued an endorsement that is made a part of this Policy.

2. Bankruptcy or Insolvency

Bankruptcy or insolvency of the *Insured* or of the *Insured's* estate will not relieve the Company of its obligations under this Policy.

3. Cancellation

- a. The *First Named Insured* may cancel this Policy by mailing or delivering advanced written notice to the Company stating when such cancellation shall be effective.
- b. The Company may cancel this Policy for the following reasons:
 - i. Non-payment of premium;
 - ii. Fraud or material misrepresentation by an *Insured*;
 - iii. A change in either the intended use of or the operations at a *Scheduled Location* during the *Policy Period* that materially increases a risk covered under this Policy; or
 - iv. The *Insured's* failure to comply with the terms and conditions under this Policy,by mailing to the *First Named Insured*, at the last known address, written notice of not less than ten (10) days of the effective date of cancellation if cancellation is for reason (i) above, or thirty (30) days if cancellation is for reasons (ii), (iii), or (iv), set forth above. If notice is mailed, proof of mailing will be sufficient proof of notice.
- c. If this Policy is cancelled, the Company will send the *First Named Insured* any premium refund owed subject to the Minimum Earned Premium identified by endorsement. If the Company cancels, the refund will be pro rata. If the *First Named Insured* cancels, the refund may be less than pro rata. The cancellation will be effective even if the Company has neither offered nor made a refund.

4. Changes

The terms of this Policy shall not be amended, waived or otherwise changed, except by endorsement issued by the Company and made a part of this Policy.

5. Choice of Law

All matters arising hereunder including questions relating to the validity, interpretation, performance and enforcement of this Policy shall be determined in accordance with the law and practices of the State of New York.

6. Concealment or Fraud

This entire Policy shall be voidable if, whether before or after *Cleanup Costs, Loss* and/or *Defense Expense(s)* are incurred or a *Claim* is first made, the *Insured* has wilfully concealed or misrepresented any fact or circumstance material to the granting of coverage under this Policy.

7. Cooperation

Each *Insured* shall fully cooperate with the Company and offer all reasonable assistance in the investigation, defense, settlement, arbitration or appeal of any *Claim*. The Company may require that the *Insured* submit to examination under oath, and attend hearings, depositions and trials. During the course of investigation or

defense, the Company may require written statements of the *Insured's* attendance at meetings with the Company. Each *Insured* shall assist the Company in effecting settlement, securing and providing evidence, and obtaining the attendance of witnesses.

This provision shall not be construed to require the *Insured* to share documents or information in a manner that would result in the waiver of any legally sanctioned privilege.

No *Insured* shall be indemnified for loss of earnings incurred in such cooperation or assistance, unless specifically provided by endorsement, nor shall such loss of earnings apply towards the satisfaction of the Self-Insured Retention.

8. Emergency Response Costs

The *Insured* shall make all reasonable efforts to abate, stop, prevent or reduce *Cleanup Costs* or *Loss* caused by a *Pollution Condition*. These efforts must commence immediately after a *Responsible Insured* discovers a *Pollution Condition*, and must be undertaken even in the absence of a *Claim*.

The prior written approval of the Company shall not be required to take any action in the event of a *Pollution Condition* that presents an immediate, dangerous and significant threat to human health or the environment where any delay by the *Insured* would cause further injury to persons or damage to property or significantly increase the cost of responding to a potential *Claim*. At any time after the Company receives notification of a *Claim*, the Company may require its prior written approval before the *Insured* may incur any additional *Cleanup Costs* or other costs or expenses.

9. Headings

The descriptions in the headings of this Policy are solely for convenience and form no part of the Policy terms and conditions.

10. Inspection

The Company has the right, but not the obligation, upon reasonable advance notice, to inspect the *Scheduled Location(s)* at any time. Neither the Company's right to inspect the *Scheduled Location(s)*, any actual inspection performed pursuant to this right, nor any report resulting from any such inspection shall constitute an undertaking, on behalf of the *Insured* or any other party, to determine or warrant that the property or operations are safe, healthful or in compliance with any federal, state, or U.S. local laws, rules or environmental regulations. The *Insured* shall provide appropriate assistance to the Company during any inspection.

11. First Named Insured as Agent

The *First Named Insured* shall be deemed the agent of each *Insured* with respect to all matters involving this Policy, including but not limited to, the payment or return of any premium, payment of any Self-Insured Retention, receipt and acceptance of any endorsement issued to form a part of this Policy, giving and receiving notice of cancellation or non-renewal, and exercising the rights set forth in Section VI. EXTENDED REPORTING PERIOD.

12. No Action Against Company

No person or organization, other than the *Insured*, has a right under this Policy:

- a. To join the Company as a party or otherwise bring the Company into a *Suit* against any *Insured*; or
- b. To sue the Company under this Policy, unless all of the terms of this Policy have been fully complied with.

A person or organization may sue the Company to recover on an agreed settlement or on a final judgement against the *Insured*; however, the Company shall not be liable for amounts that are not payable pursuant to the

terms of this Policy or that are in excess of the applicable Limits of Insurance. An agreed settlement means a settlement and release of liability signed by the Company, the *Named Insured* and the claimant or the claimant's legal representative.

13. Non-Renewal

The Company may non-renew this Policy by mailing a written notice of non-renewal to the *First Named Insured* at the last known address appearing in the Company's records. Written notice shall be mailed at least thirty (30) days before the end of the *Policy Period*. The notice of proof of mailing shall be sufficient proof that such notice was mailed.

14. Notice of Pollution Condition(s) and Claim(s)

The *Named Insured* shall, as soon as practicable, provide written notice of any *Pollution Condition* discovered or any *Claim* received. Such written notice:

- a. Shall be given to the Company as set forth in the Claims Notice Endorsement attached to this Policy; and
- b. Shall contain complete details regarding the *Pollution Condition* or *Claim*, including but not limited to:
 - i. The exact date the *Pollution Condition* was discovered or the *Claim* was made;
 - ii. The nature and location, and circumstances giving rise to such *Pollution Condition* or *Claim*;
 - iii. All information relating to the cause of the *Pollution Condition*, including, the *Bodily Injury*, *Property Damage* or *Cleanup Costs* that have resulted from or may result from such *Pollution Condition*;
 - iv. All engineering information available on the *Pollution Condition*;
 - v. All demands, summonses, notices or other related documents filed with a court of law, administrative agency or an investigative body;
 - vi. The names and addresses of all parties asserting a *Claim* and all persons with knowledge of the *Claim* and related *Pollution Condition*;
 - vii. All other information in the possession of the *Insured* or its affiliates regarding the *Pollution Condition*, the discovery and the *Claim*; and
 - viii. Any other information pertinent to the *Pollution Condition* or *Claim* that the Company deems reasonably necessary.

The duties of the *Insured* herein may not be delegated. Nothing contained herein shall relieve the *Insured* from any obligation, including any notification requirements it may have pursuant to applicable laws, rules or regulations.

15. Other Insurance

If any part of *Cleanup Costs*, *Loss*, *Defense Expense(s)* or other coverage afforded by endorsement attached to this Policy, is insured under this Policy and any other policy not issued by the Company or an affiliate of the Company, this Policy shall be excess insurance and shall not contribute with the other insurance, unless:

- a. Such other insurance is also excess insurance, in which case this Policy shall provide coverage for such *Cleanup Costs*, *Loss*, *Defense Expense(s)* or other coverage afforded by endorsement attached to this Policy, in proportion to the applicable Limits of Insurance of this Policy and those of such other policy or policies; or
- b. Such other insurance is expressly written to be excess of this Policy, in which case this insurance is primary.

16. Representations, Warranties and Covenants

The *Named Insured* acknowledges and agrees that:

- a. The representations, warranties and information contained in the application and all supplemental documents submitted by the *Insured* are true, correct and complete;
- b. The Company has issued this Policy in specific reliance upon the truth and accuracy of the representations and warranties contained in the application; and
- c. A signed copy of the application is kept on file by the Company.

17. Separation of Insureds

Except with respect to the Limits of Insurance and Self-Insured Retention set forth in Section IV. and Exclusion, 5. Insured versus Insured, set forth in Section III., and any rights or duties specifically assigned in this Policy to the *First Named Insured*, this Policy applies:

- a. As if each *Insured* were the only *Named Insured*; and
- b. Separately to each *Insured* against whom a *Claim* is made.

Any misrepresentation, act or omission that is in violation of a term, duty or condition under this Policy by one *Insured* shall not, by itself, affect coverage for another *Insured* under this Policy. This condition shall not apply to the *Insured* who is a parent, subsidiary, or affiliate of the *Insured* which committed the misrepresentation, act or omission above.

18. Subrogation

In the event that the Company pays any amount under this Policy, the Company shall be subrogated to all of each *Insured's* rights of recovery against any person, firm or organization. All *Insureds* shall execute and deliver instruments and papers and do whatever else is reasonably necessary to secure such rights. No *Insured* shall do anything to waive or prejudice such rights. Any monies recovered as a result of subrogation proceedings shall accrue first to the *Insured* to the extent of any payments the *Insured* made in excess of the Limits of Insurance, then to the Company to the extent of its payment under the Policy, and then to the *Insured* to the extent of its payment of the Self-Insured Retention. Expenses incurred in such subrogation proceedings shall be apportioned amongst the *Insured* and the Company in the proportion that each interested party's share in the recovery bears to the total recovery.



Minimum Earned Premium Endorsement

This endorsement, effective 11/1/2018 attaches to and forms a part of Policy Number FEI-EIL-25551-00. This endorsement changes the Policy. Please read it carefully.

This endorsement modifies insurance provided under the following:

If this Policy is cancelled at the request of the *Insured*, the total retained by the Company shall not be less than [REDACTED] of the premium shown in the Declarations.

All other terms and conditions under the Policy remain unchanged.



TRADE OR ECONOMIC SANCTIONS ENDORSEMENT

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This insurance does not apply to the extent that trade or economic sanctions or other laws or regulations prohibit the Company from providing insurance, including, but not limited to, the payment of claims. All other terms and conditions of policy remain unchanged.

Mold/Legionella Exclusion Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

It is agreed that the following changes are made to the Policy:

1. **Section II. DEFINITIONS, 27. Pollutant(s) and 28. Pollution Condition(s)** are deleted in their entirety and replaced with the following definitions:

27. Pollutant(s)

Pollutant(s) means any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals, hazardous substances, waste materials, including materials to be recycled, reconditioned or reclaimed, including but not limited to, medical, infectious and pathological waste, low-level radioactive materials, silt, sedimentation, petroleum hydrocarbons, methamphetamines, electromagnetic fields, or *Biological Hazard*, at levels in excess of those naturally occurring.

Pollutant(s) shall not include "Source Material," "Special Nuclear Material" or "Byproduct Material" as such terms are defined in the Atomic Energy Act of 1954.

28. Pollution Condition(s)

Pollution Condition(s) means any of the following:

- a. The emission, discharge, dispersal, seepage, migration, release, *Misdelivery*, or escape of *Pollutant(s)* from, into or upon, land, any structure on land, the atmosphere, or any watercourse or body of water, including groundwater. The entirety of any such emission, discharge, dispersal, seepage, migration, release, *Misdelivery*, or escape of *Pollutant(s)* or any interrelated series of associated, repeated, or continuous emissions, discharges, releases or escapes shall be deemed to be one *Pollution Condition*; and
- b. The illicit abandonment of *Pollutant(s)* at a *Scheduled Location* during the *Policy Period*, provided that such abandonment was committed by a person(s) or entity(ies) other than the *Insured* and without the knowledge or consent of the *Insured*.

2. **Section III. Exclusions**, is amended by the addition of the following exclusion:

Mold Matter and Legionella

The existence of, exposure to, required removal or abatement of *Mold Matter* or existence of *Legionella pneumophila*.

All other terms and conditions under the Policy remain unchanged.



CLAIM NOTICE

THIS ENDORSEMENT CHANGES THE POLICY, PLEASE READ IT CAREFULLY.

In the event of claim to which this policy may apply, please give notice in accordance with the terms and conditions of the policy form and in any of the following ways, to:

Claims

Berkley Custom Insurance Managers
3 Stamford Plaza
301 Tresser Blvd., 8th Floor
Stamford, CT 06901

E-mail: feiclaims@berkleycustom.com

Fax: 855-999-0797

Toll Free Phone: 855-597-7616

E-mail is the preferred method of receiving claim notice information, but any of the above methods of notification will generate an acknowledgement of receipt of claim with a claim number and all of the claim adjusters' contact information.



U. S. TREASURY DEPARTMENT'S OFFICE OF FOREIGN ASSETS CONTROL ("OFAC") NOTICE TO POLICYHOLDERS

No coverage is provided by this Policyholder Notice nor can it be construed to replace any provisions of your policy. You should read your policy and review your Declarations page for complete information on the coverages you are provided.

This Notice provides information concerning possible impact on your insurance coverage due to directives issued by OFAC. **Please read this Notice carefully.**

The Office of Foreign Assets Control (OFAC) administers and enforces sanctions policy, based on Presidential declarations of "national emergency". OFAC has identified and listed numerous:

- Foreign agents;
- Front organizations;
- Terrorists;
- Terrorist organizations; and
- Narcotics traffickers;

as "Specially Designated Nationals and Blocked Persons". This list can be located on the United States Treasury's website – <http://www.treas.gov/ofac>.

In accordance with OFAC regulations, if it is determined that you or any other insured, or any person or entity claiming the benefits of this insurance has violated U.S. sanctions law or is a Specially Designated National and Blocked Person, as identified by OFAC, this insurance will be considered a blocked or frozen contract and all provisions of this insurance are immediately subject to OFAC. When an insurance policy is considered to be such a blocked or frozen contract, no payments nor premium refunds may be made without authorization from OFAC. Other limitations on the premiums and payments also apply.



Coverage D. Transportation Pollution Liability – Third Party Carriers Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

In consideration of an additional premium of \$0, it is agreed that the following change is made to the Policy:

Section I. INSURING AGREEMENT, Section 1. COVERAGES, is amended by the addition of the following coverage:

Coverage D. Transportation Pollution Liability – Third Party Carriers

The Company shall pay, on behalf of the *Insured*, for *Cleanup Costs* and/or *Loss for Bodily Injury or Property Damage* to a third party that the *Insured* becomes legally obligated to pay resulting from a *Pollution Condition* beyond the boundaries of a *Scheduled Location* or *Non-Owned Location* to the extent that such *Pollution Condition* results from *Transportation* by a *Carrier*, provided that a *Claim* for such *Cleanup Costs, Bodily Injury or Property Damage* is first made against the *Insured* and is reported to the Company during the *Policy Period*, or any applicable *Extended Reporting Period*.

The coverage provided under Coverage D. only applies to a *Pollution Condition* which first commenced on or after the *Retroactive Date* shown in the following schedule, or during the *Policy Period*.

The Self-Insured Retention applicable to Coverage D. is as shown in the following schedule:

Schedule

<i>Retroactive Date:</i>	11/1/2018
<i>Self-Insured Retention:</i>	

All other terms and conditions under the Policy remain unchanged.



Coverage E. Transportation Pollution Liability – First Party Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under this Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY

In consideration of an additional premium of \$0, it is agreed that the following change is made to the Policy:

Section I. INSURING AGREEMENT, Section 1. COVERAGES, is amended by the addition of the following coverage:

Coverage E. Transportation Pollution Liability – First Party

The Company shall pay, on behalf of the *Insured*, for *Cleanup Costs* and/or *Loss* for *Bodily Injury* or *Property Damage* to a third party that the *Insured* becomes legally obligated to pay resulting from a *Pollution Condition* beyond the boundaries of a *Scheduled Location* or *Non-Owned Location* to the extent that such *Pollution Condition* results from *Transportation* by the *Insured*, provided that a *Claim* for such *Cleanup Costs*, *Bodily Injury* or *Property Damage* is first made against the *Insured* and is reported to the Company during the *Policy Period*, or any applicable *Extended Reporting Period*.

The coverage provided under Coverage E. only applies to a *Pollution Condition* which first commenced on or after the *Retroactive Date* shown in the following schedule, or during the *Policy Period*.

The Self-Insured Retention applicable to Coverage E. is as shown in the following schedule:

Schedule

<i>Retroactive Date:</i>	11/1/2018
<i>Self-Insured Retention:</i>	

All other terms and conditions under the Policy remain unchanged.



Coverage F. Non-Owned Location(s) Coverage Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

In consideration of an additional premium of \$0, it is agreed that the following change is made to the Policy:

1. **Section I. INSURING AGREEMENT, Section 1. COVERAGES**, is amended by the addition of the following coverage:

Coverage F. Non-Owned Location(s)

The Company shall pay, on behalf of the *Insured*, *Cleanup Costs* or *Loss* for *Bodily Injury* or *Property Damage* to a third party that the *Insured* becomes legally obligated to pay resulting from a *Pollution Condition* on, at, upon, within, under or migrating from a *Non-Owned Location*, provided that a *Claim* for such *Cleanup Costs*, *Bodily Injury* or *Property Damage* is first made against the *Insured* and is reported to the Company during the *Policy Period*, or any applicable *Extended Reporting Period*.

The Self-Insured Retention applicable to Coverage F. is as follows:

Self-Insured Retention:	
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For *Non-Owned Location(s)* specifically listed in the Schedule of *Non-Owned Location(s)* below, the coverage provided under Coverage F only applies to a *Pollution Condition* which first commenced on or after the *Retroactive Date* set forth below in the Schedule of *Non-Owned Location(s)*, or during the *Policy Period*.

For *Non-Owned Location(s)* not specifically listed in the Schedule of *Non-Owned Location(s)* below, the coverage provided under Coverage F only applies to a *Pollution Condition* which first commenced on or after the *Non-Owned Location(s) Retroactive Date* shown below, or during the *Policy Period*.

<i>Non-Owned Location(s) Retroactive Dates:</i>	11/1/2018
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All other terms and conditions under the Policy remain unchanged.



2. **Section III. EXCLUSIONS**, is amended by the addition of the following:

Claims from Site Owners, Operators or Contractors

Loss for Bodily Injury or Property Damage to a third party as a result of a *Claim* against an *Insured* by an owner or operator of a *Non-Owned Location* or their contractors or employees. This exclusion shall not apply to a *Claim* arising from the *Insured's* negligence.

Schedule of Non-Owned Location(s)

Name	Address	City	State	Zip	Retroactive Date
Not Applicable					

All other terms and conditions under the Policy remain unchanged.



Additional Insured(s) Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

In consideration of an additional premium of \$0, it is agreed that the following change is made to the Policy:

Section II. DEFINITIONS, is amended by the addition of the following definition:

Additional Insured(s)

Additional Insured(s) means any person(s) or entity(ies) listed below and endorsed onto this Policy as an *Additional Insured(s)*, but solely as respects to *Claim(s)* arising out of the *Named Insured's* ownership, occupation, development, operation, maintenance or use of the *Scheduled Location(s)* to which this insurance applies.

Additional Insured(s)

PolyMet Mining Corporation
6500 County Road 666
Hoyt Lakes, MN 55750

Minnesota Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155

All other terms and conditions under the Policy remain unchanged.



Choice of Law Condition – Amendment Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

It is agreed that the following change is made to the Policy:

Section VII. CONDITIONS, 5. Choice of Law is deleted in its entirety and replaced by the following condition:

5. Choice of Law

All matters arising hereunder including questions relating to the validity, interpretation, performance and enforcement of this Policy shall be determined in accordance with the law and practices of the State of Minnesota.

All other terms and conditions under the Policy remain unchanged.

Disclosed Documents Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

The Company hereby agrees that the documents listed in the Schedule of Disclosed Documents below were disclosed, in writing, to the Company:

- a. Prior to the *Policy Period*; or
- b. As respects documents pertaining to a *Scheduled Location* added to this Policy by endorsement, prior to the effective date of coverage for such *Scheduled Location*.

Pollution Condition(s), if any, referenced in the Schedule of Disclosed Documents below shall be deemed to be discovered:

- a. As of the inception date of this Policy; or
- b. As respects a *Scheduled Location* added to this Policy by endorsement, on the effective date the *Scheduled Location* was endorsed onto this Policy.

The Company further agrees that the documents listed in the following Schedule of Disclosed Documents are incorporated into and made a part of this Policy. Copies of such documents shall be kept on file by the Company.

Schedule of Disclosed Documents

- Final Environmental Impact Statement, NorthMet Mining Project and Land Exchange; Prepared by Minnesota Department of Natural Resources, United States Army Corps of Engineers, and US Forest Service; Dated November 2015.
- Record of Decision; Prepared by Minnesota Department of Natural Resources; Dated 3/3/2016.
- Northmet Technical Report, NI 43-101; Prepared by M3 Engineering & Technology Corporation; Dated 3/26/2018
- Underwriting information (permits, fact sheets, etc.) made available electronically on Polymet's website: www.polymetmining.com

All other terms and conditions under the Policy remain unchanged.

Engineering Controls/Institutional Controls Exclusion Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

It is agreed that the following changes are made to the Policy:

1. **Section II. DEFINITIONS**, is amended with the addition of the following definitions:

a. **Engineering Controls**

Engineering Controls means physical modifications to a *Scheduled Location* to reduce or eliminate the exposure to known *Pollution Condition(s)*.

b. **Institutional Controls**

Institutional Controls means legal or administrative restrictions, including but not limited to deed or zoning restrictions or environmental covenants, on the use of or access to a *Scheduled Location* which are designed to reduce or eliminate the exposure to known *Pollution Condition(s)*.

2. **Section III. EXCLUSIONS**, is amended with the addition of the following exclusion:

Engineering Controls/Institutional Controls

Any *Insured's* material violation of or non-compliance with any *Engineering Controls* and/or *Institutional Controls*.

3. **Section VII. CONDITIONS**, is amended with the addition of the following condition:

Compliance with Engineering Controls/Institutional Controls

The *Named Insured* agrees to comply with any and all applicable *Engineering Controls* and *Institutional Controls*. Furthermore, the *Named Insured* understands and acknowledges that this Policy is issued in reliance upon such agreement and compliance.

All other terms and conditions under the Policy remain unchanged.

Coverage A. Onsite Cleanup Costs Limited to Governmental Mandate Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

It is agreed that the following change is made to the Policy and amends the coverage solely as it applies to the *Scheduled Location(s)* listed below. This endorsement shall not apply to *Scheduled Location(s)* not specifically listed below.

1. **Section I. INSURING AGREEMENT, 1. COVERAGES, Coverage A. Onsite Cleanup Costs** is deleted in its entirety and replaced with the following:

Coverage A. Onsite Cleanup Costs

The Company shall pay, on behalf of the *Insured*, *Cleanup Costs* the *Insured* becomes legally obligated to pay resulting from a *Pollution Condition* on, at, upon, within or under a *Scheduled Location*, provided that a *Claim* for such *Cleanup Costs* is first made against the *Insured* and is reported to the Company during the *Policy Period*, or any applicable *Extended Reporting Period*.

2. Solely with respect to **Coverage A. Onsite Cleanup Costs** as set forth above and the coverage afforded by this endorsement, **Section II. DEFINITIONS, 6. Claim(s)** is deleted in its entirety and replaced with the following:

6. Claim(s)

Claim(s) means a written directive, order or requirement of a governmental agency of the United States or any of its territories, or Canada or any of its Provinces, or political subdivisions duly acting under the authority of *Environmental Law(s)* to an *Insured* to clean-up, remediate or mitigate any *Pollution Condition(s)* at a *Scheduled Location*.

Scheduled Location(s)

All scheduled locations.

All other terms and conditions under the Policy remain unchanged.



Intended Use Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

It is agreed that the following change is made to the Policy:

The intended use of the *Scheduled Location(s)* during the *Policy Period* is as shown in the following Intended Use Schedule:

Intended Use Schedule

Copper, nickel or platinum surface mining

If at any time after signing the application, the *Named Insured* becomes aware of any change in either the intended use of or the operations at the *Scheduled Location(s)* during the *Policy Period* that materially increases a risk covered under this Policy, the *Named Insured* shall provide notice to the Company, in writing, of such change as soon as practicable, but no more than sixty (60) days after becoming aware of such change.

If such notice as set forth above is not provided to the Company, the *Scheduled Location(s)* where the change in intended use or operations occurs shall no longer be a *Scheduled Location* covered under the this Policy as of the first day of such change in use or operations.

Upon receipt of such notice of a change in the intended use or operations of a *Scheduled Location*, the Company may, at its sole discretion, amend this Policy's terms and conditions, including but not limited to charging additional premium or cancelling the Policy.

All other terms and conditions under the Policy remain unchanged.



Specified Known Conditions Exclusion Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

It is agreed that the following change is made to the Policy:

Section III. EXCLUSIONS, is amended with the addition of the following exclusion:

Specified Known Conditions

Any *Pollution Condition(s)* or their degradation products that are listed or referenced in the documents, reports or assessments in the Schedule below.

Schedule of Specified Known Conditions

Twenty-nine (29) of the sixty-two (62) Areas of Concern (AOC) for which the Insured has assumed responsibility as discussed in the "Final Environmental Impact Statement, NorthMet Mining Project and Land Exchange," Prepared by Minnesota Department of Natural Resources, United States Army Corps of Engineers, and US Forest Service, dated November 2015.

For the 29 individual AOCs for which the Insured has assumed responsibility, this exclusion may be evaluated for removal or amendment upon receipt and review by the Company of a No Further Action determination (or equivalent) from the applicable environmental regulatory agency. Such removal or amendment shall not be unreasonably withheld.

All other terms and conditions under the Policy remain unchanged.

Other Insurance (Primary) Endorsement

This endorsement, effective 11/1/2018, attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

In consideration of an additional premium of \$0, this endorsement modifies insurance provided under the following:

Section VII. CONDITIONS, 15. Other Insurance is deleted in its entirety and replaced by the following:

15. Other Insurance

If any part of *Cleanup Costs, Loss, Defense Expense(s)* or other coverage afforded by endorsement attached to this Policy, is insured under this Policy and any other policy not issued by the Company or an affiliate of the Company, the Company's obligations are limited as follows:

1. This insurance is primary, and the Company's obligations are not affected unless any other insurance is also primary. In that situation, the Company will share with all such other insurance by the method described in Paragraph 2 below as follows:
2. If all of the other insurance permits contribution by equal shares, the Company will also follow this method. In this approach, each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first. If any of the other insurance does not permit contribution by equal shares, the Company will contribute by limits. In contribution by limits, each insurer's share is based upon the ratio of its applicable limit of insurance bears to the total applicable limits of insurance of all insurers.

All other terms and conditions under the Policy remain unchanged.



Manuscript Endorsement

This endorsement, effective 11/1/2018 attaches to and forms a part of Policy Number FEI-EIL-25551-00. It modifies insurance provided under the Environmental Impairment Liability Policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

In consideration of additional premium of \$0, it is agreed that the following changes are made to the Policy:

Self Insured Retention Amendment Endorsement (to be provided post-binding)

All other terms and conditions under the Policy remain unchanged.

Exclusion Of Terrorism

This endorsement, effective 11/1/2018 attaches to and forms a part of Policy Number FEI-EIL-25551-00. This endorsement changes the Policy. Please read it carefully.

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
OWNERS AND CONTRACTORS PROTECTIVE LIABILITY COVERAGE PART
CONTRACTORS POLLUTION LIABILITY COVERAGE PART
ENVIRONMENTAL IMPAIRMENT LIABILITY COVERAGE PART
RAILROAD PROTECTIVE LIABILITY COVERAGE PART
STORAGE TANK ENVIRONMENTAL IMPAIRMENT LIABILITY COVERAGE PART

- A. The following definitions are added and apply under this endorsement wherever the term terrorism, or the phrase any injury or damage, are enclosed in quotation marks:
1. "Terrorism" means activities against persons, organizations or property of any nature:
 - a. That involve the following or preparation for the following:
 - (1) Use or threat of force or violence; or
 - (2) Commission or threat of a dangerous act; or
 - (3) Commission or threat of an act that interferes with or disrupts an electronic, communication, information, or mechanical system; and
 - b. When one or both of the following applies:
 - (1) The effect is to intimidate or coerce a government or the civilian population or any segment thereof, or to disrupt any segment of the economy; or
 - (2) It appears that the intent is to intimidate or coerce a government, or to further political, ideological, religious, social or economic objectives or to express (or express opposition to) a philosophy or ideology.
 2. "Any injury or damage" means any injury or damage covered under any Coverage Part or Policy to which this endorsement is applicable, and includes but is not limited to "bodily injury", "property damage", "personal and advertising injury", "injury" or "environmental damage" as may be defined in any applicable Coverage Part or Policy.

- B. The following exclusion is added:

EXCLUSION OF TERRORISM

We will not pay for "any injury or damage" caused directly or indirectly by "terrorism", including action in hindering or defending against an actual or expected incident of "terrorism". "Any injury or damage" is excluded regardless of any other cause or event that contributes concurrently or in any sequence to such injury or damage. **But this exclusion applies only when one or more of the following are attributed to an incident of "terrorism":**

1. The "terrorism" is carried out by means of the dispersal or application of radioactive material, or through the use of a nuclear weapon or device that involves or produces a nuclear reaction, nuclear radiation or radioactive contamination; or
2. Radioactive material is released, and it appears that one purpose of the "terrorism" was to release such material; or
3. The "terrorism" is carried out by means of the dispersal or application of pathogenic or poisonous biological or chemical materials; or
4. Pathogenic or poisonous biological or chemical materials are released, and it appears that one purpose of the "terrorism" was to release such materials; or
5. The total of insured damage to all types of property exceeds \$25,000,000. In determining whether the \$25,000,000 threshold is exceeded, we will include all insured damage sustained by property of all persons and entities affected by the "terrorism" and business interruption losses sustained by owners or occupants of the damaged property. For the purpose of this provision, insured damage means damage that is covered by any insurance plus damage that would be covered by any insurance but for the application of any terrorism exclusions; or
6. Fifty or more persons sustain death or serious physical injury. For the purposes of this provision, serious physical injury means:
 - a. Physical injury that involves a substantial risk of death; or
 - b. Protracted and obvious physical disfigurement; or
 - c. Protracted loss of or impairment of the function of a bodily member or organ.

Multiple incidents of "terrorism" which occur within a 72-hour period and appear to be carried out in concert or to have a related purpose or common leadership will be deemed to be one incident, for the purpose of determining whether the thresholds in Paragraphs **B.5.** or **B.6.** are exceeded.

With respect to this Exclusion, Paragraphs **B.5.** and **B.6.** describe the threshold used to measure the magnitude of an incident of "terrorism" and the circumstances in which the threshold will apply, for the purpose of determining whether this Exclusion will apply to that incident. When the



Exclusion applies to an incident of "terrorism", there is no coverage under this Coverage Part or Policy.

In the event of any incident of "terrorism" that is not subject to this Exclusion, coverage does not apply to "any injury or damage" that is otherwise excluded under this Coverage Part or Policy.



Service of Suit

This endorsement, effective 11/1/2018 attaches to and forms a part of Policy Number FEI-EIL-25551-00. This endorsement changes the Policy. Please read it carefully.

The *Named Insured* and the *Company* agree to the following:

In the event of the failure by the *Company* to pay any amount claimed to be due under this policy, the *Company* will, at the *Named Insured's* request, submit to the jurisdiction of any court of competent jurisdiction within the United States of America and will comply with all requirements necessary to give the Court jurisdiction. Nothing in this endorsement constitutes or should be understood to constitute a waiver of the *Company's* rights to commence an action in any court of competent jurisdiction in the United States, to remove an action to a United States District Court or to seek a transfer of a case to another court as permitted by the laws of the United States or of any state in the United States. In a suit instituted against the *Company* under this contract, the *Company* agrees to abide by the final decision of the court or of any appellate court in the event of an appeal.

Pursuant to any statute of any state, territory or district of the United States of America which makes a provision therefore, the *Company* will designate the Superintendent, Commissioner or Director of Insurance or other officer specified for that purpose in the statute, or his successor or successors in office, as the *Company's* true and lawful attorney upon whom may be served any lawful process in any action, suit or proceeding instituted by or on behalf of the *Named Insured* or the *Named Insured's* beneficiary arising out of this contract of insurance.

The officer named below is authorized and directed to accept service of process on the *Company's* behalf:

Reneé A. Miller
Freberg Environmental Insurance, Inc.
2000 South Colorado Boulevard, Tower II, Suite 800
Denver, CO 80222

Having accepted service of process on the *Company's* behalf, the officer is authorized to mail the process or a true copy to:

Claims
Berkley Custom Insurance Managers
3 Stamford Plaza
301 Tresser Blvd., 8th Floor
Stamford, CT 06901



THIS INSURANCE IS ISSUED PURSUANT TO THE MINNESOTA SURPLUS LINES INSURANCE ACT. THE INSURER IS AN ELIGIBLE SURPLUS LINES INSURER BUT IS NOT OTHERWISE LICENSED BY THE STATE OF MINNESOTA. IN CASE OF INSOLVENCY, PAYMENT OF CLAIMS IS NOT GUARANTEED.

Appendix B

Contingency Monitoring Plan



Contingency Monitoring Plan NorthMet Project

March 2019



Contingency Monitoring Plan NorthMet Project

March 2019



Date: March 29, 2019	Contingency Monitoring Plan
Version: 1	Contents

Table of Contents

1.0	Introduction	1
2.0	Tailings Basin Water Quality Monitoring	1
2.1	NPDES/SDS Permit MN0054089 Monitoring	1
2.2	Consent Decree Monitoring.....	2
3.0	Aquatic Toxicity Monitoring.....	3
4.0	Wild Rice Monitoring	3
5.0	Mine Site Monitoring.....	3
6.0	Transportation and Utility Corridors Monitoring	3
	References.....	3



Date: March 29, 2019	Contingency Monitoring Plan
Version: 1	Page 1

1.0 Introduction

This Contingency Monitoring Plan describes the water quality monitoring that coincides with the contingency reclamation plans for use by the Minnesota Department of Natural Resources (DNR) if Poly Met Mining Inc. were to cease management of the facility during the construction phase before Mine Year 1. It includes water quality monitoring described in the Legacy Closure Plan (Appendix 15.1 of Reference (1)). There was no additional water quality monitoring identified in the Construction Contingency Reclamation Plan (Appendix 15.2 of Reference (1)).

The Legacy Closure Plan discussed three different types of monitoring associated with water quality, including tailings basin water quality monitoring, aquatic toxicity monitoring, and wild rice monitoring, in accordance with a memorandum from the Minnesota Pollution Control Agency (MPCA) to the DNR (Attachment O of Appendix 15.1 of Reference (1)). These are discussed in more detail below along with Mine Site monitoring and Transportation and Utility Corridors Monitoring.

2.0 Tailings Basin Water Quality Monitoring

Tailings basin water quality monitoring is designed to monitor the effects of the legacy ferrous tailings basin. It incorporates monitoring required by the NPDES/SDS Permit MN0054089 (Legacy NDPES/SDS Permit) and Consent Decree associated with NPDES/SDS Permit MN0054089.

This monitoring will continue until MPCA issues a release of these permit obligations to the Permittee.

2.1 NPDES/SDS Permit MN0054089 Monitoring

Table 1 lists the stations for which groundwater, surface water, and discharge will be monitored at the frequencies and for the analytes required in NPDES/SDS Permit MN0054089. Monitoring stations GW002 and SW003 are included in NPDES/SDS Permit MN0054089 but not shown on Table 1, because they are instead shown on Table 2.



Date: March 29, 2019	Contingency Monitoring Plan
Version: 1	Page 2

Table 1 Monitoring With Frequency and Analytes Required in NPDES/SDS Permit MN0054089

Groundwater Monitoring Stations	Surface Water Monitoring Stations	Discharge Monitoring Stations
GW001	SW004	SD001
GW003	SW005	SD002
GW004		
GW005		SD004
GW006		SD005
GW007		SD006
GW008		SD026

2.2 Consent Decree Monitoring

The Draft Long-Term Mitigation Evaluation and Implementation Plan (Draft Long-Term Plan) was developed in support of the Consent Decree associated with NPDES/SDS Permit MN0054089. It includes the monitoring required in support of the Consent Decree for the period of time between issuance of NorthMet Permits prior to the start of NorthMet operations. The Draft Long-Term Plan includes monitoring at select groundwater and surface water monitoring stations downgradient of the Tailings Basin and specifies that they be monitored in accordance with NPDES/SDS Permit MN0071013. Table 2 lists the stations for which groundwater and surface water will be monitored at the frequencies and for the analytes required in NPDES/SDS Permit MN0071013.

Table 2 Monitoring with Frequency and Analytes Required in NPDES/SDS Permit MN0071013

Groundwater Monitoring Stations	Surface Water Monitoring Stations
GW002	SW003
GW009	SW005
GW010	SW006
GW015	SW007
GW016	
GW017*	

*GW017 is not included in NPDES/SDS Permit MN0071013, but for the Contingency Monitoring Plan would be monitored at the same frequency and for the same analytes as the other groundwater monitoring wells listed on Table 2.



Date: March 29, 2019	Contingency Monitoring Plan
Version: 1	Page 3

3.0 Aquatic Toxicity Monitoring

Biological monitoring will be conducted in support of the information needed for MPCA's implementation of a site-specific water quality standard or use attainability analysis, if MPCA elects to proceed with this process.

4.0 Wild Rice Monitoring

Wild rice monitoring will be conducted in support of the information needed for MPCA's implementation of a site-specific water quality standard or use attainability analysis, if MPCA elects to proceed with this process.

5.0 Mine Site Monitoring

No mining will have occurred at the Mine Site, and the Construction Contingency Reclamation Plan specifies that Mine Site monitoring wells will be abandoned. Therefore, there will be no groundwater or surface water monitoring conducted at the Mine Site.

6.0 Transportation and Utility Corridors Monitoring

No mining nor movement of ore will have occurred along the Transportation and Utility Corridors. Therefore, no groundwater or surface water monitoring will be conducted along the Transportation and Utility Corridors.

References

1. **Barr Engineering Co.** Permit to Mine Application (v3). Prepared for Poly Met Mining, Inc. NorthMet Project. December 2017.