



LAND USE RESOURCE REPORT

TWIN METALS MINNESOTA PROJECT

Environmental Review Support Document

Prepared for Twin Metals Minnesota, LLC
Prepared by

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**TWIN METALS MINNESOTA PROJECT
LAND USE
RESOURCE REPORT**

Environmental Review Support Document

REVISION RECORD

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REVISION NARRATIVE

DISCLAIMER

This document is a working document. This document may change over time because of new information, or further analysis or deliberation.

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LIST OF ABBREVIATIONS, ACRONYMS, AND SYMBOLS

TMM	Twin Metals Minnesota, LLC
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1.0 INTRODUCTION

The Twin Metals Minnesota, LLC (TMM) Project (Project) is focused on designing, permitting, constructing, and operating an underground copper, nickel, cobalt, platinum, palladium, gold, and silver mining project. Located approximately nine miles (14 kilometers [km]) southeast of Ely, Minnesota, and 11 miles (18 km) northeast of Babbitt, Minnesota, the Project targets valuable state, federal, and private minerals within the Maturi deposit, which is a part of the Duluth Complex geologic formation.

All potential Project infrastructure locations presented herein are considered preliminary and are undergoing further design and engineering evaluations which will dictate final design and locations. Further information about TMM and the Project is located at <http://www.twin-metals.com/>.

The purpose of this document is to provide necessary information for the environmental review and permitting process. TMM retained [insert Consultant name] (insert abbreviated Consultant name) to complete [insert text].

2.0 SUMMARY

This report will:

- Describe the proposed action and alternatives;
- Establish the area where baseline conditions of land use need to be assessed;
- Define the methodology used to assess the baseline conditions;
- Describe the baseline conditions;
- Describe the methodology used to assess the impacts;
- Defining the area of effects of the impacts;
- Establish the indicators of effects to the baseline conditions;
- Describe the impacts of the proposed action and alternatives on the baseline conditions; and
- Reference relevant sections of the FSDD, SEAW, and / or federal documents to remind the reader there is a defined scope that is being followed.

3.0 PROPOSED ACTION AND ALTERNATIVES

3.1 Proposed Action

- Reference the TMM Project Description and Alternatives document and indicate the proposed action is defined within this document.

3.2 Alternatives to the Proposed Action

- Reference the TMM Project Description and Alternatives document and indicate the alternatives to the proposed action are defined within this document.

3.3 No Action Alternative

- Reference the TMM Project Description and Alternatives document and indicate the no action alternative is defined within this document.

4.0 REGULATORY FRAMEWORK

Establish regulatory framework that is applicable to land use. This include state, federal, or tribal federal statutes or regulations and NEPA / MEPA requirements. This should also include regulatory definitions and how they are used by the Project. Specifically this resource report should discuss:

- The following six land use management plans that geographically overlap with the Project area:
 - Lake County Comprehensive Plan and Land Use Ordinance (Lake County, 2017)
 - Lake County Local Water Management Plan (Lake County, 2012)
 - St. Louis County Comprehensive Land Use Plan (St. Louis County, 2019)
 - St. Louis County Comprehensive Water Management Plan (St. Louis County, 2010)
 - City of Babbitt Comprehensive Plan (Arrowhead Regional Development Commission [ARDC] Regional Planning Division, 2014)
 - SNF Land and Resource Management Plan (USFS, 2004)
 - Northern Superior Uplands Section Forest Resource Management Plan (MDNR, 2015a Draft)
- Four zoning authorities associated with the Project area:
 - Lake County
 - MDNR
 - St. Louis County
 - Babbitt
- Federal and state land use regulations.
- Shoreland zoning requirements:
 - Birch Lake reservoir
 - Keeley Creek
 - Denely Creek
 - Stony River

5.0 AFFECTED ENVIRONMENT

The affected environment will be deconstructed by features and / or activities of the proposed action and alternatives that would cause the potential effects to land use.

5.1 Area of Analysis

Area of analysis will be determined based on areas where there are potential impacts to land use from the Project. Area of analysis will consider the construction limits, project features, and phases of the proposed action and alternatives.

- The area of analysis for the proposed action would be determined by the construction limits of the proposed action and alternatives.

5.2 Methods

Description of the methods used to identify, quantify, and qualify baseline conditions of land use within the area of analysis.

Evaluation of current local plans will be completed to analyze concurrence with the plans. Data sources may include the following:

- Land use plans.
 - Lake County Comprehensive Plan and Land Use Ordinance
 - Lake County Local Water Management Plan
 - St. Louis County Comprehensive Land Use Plan
 - St. Louis County Comprehensive Water Management Plan
 - City of Babbitt Comprehensive Plan
 - Superior National Forest Land and Resource Management Plan
 - Northern Superior Uplands Section Forest Resource management Plan
- Zoning authorities associated with the Project area.
 - Lake County
 - MDNR
 - St. Louis County
 - Babbitt
- Shoreland Zoning Provisions
- 1854 Treaty Area Management

5.3 Existing Conditions

Discuss the baseline conditions of land use, including:

- Land use plans provide a vision for the land management a framework for decisions to use as the baseline

- Comprehensive map of current local zoning and management areas
- Current private land parcels subject to local land or water management plans
- Identify the nearest residences, which are associated with the South Kawishiwi Association (SKA)
- Identify federal parcels of land subject to the SNF Land and Resource Management plan

6.0 IMPACT ASSESSMENT CRITERIA

6.1 Area of Analysis

Area of analysis will be determined based on areas where there are impacts to land use by the proposed action and alternatives. Area of analysis should be the equal to or smaller than the area of analysis discussed in Section 5.1.

The area of analysis for the proposed action would be determined by the construction limits of the proposed action and the management plans or zoning currently in place in each area.

6.2 Methodology and Evaluation Criteria

Describe rationale for how impacts will be assessed by the implementation of the proposed action or alternatives.

6.3 Indicators

This section will discuss how indicators were selected and what the indicators are.

- Changes in land use.
- Changes in conformity of land with management plans or zoning ordinances.
- Discuss conformity or conflicts with existing BLM land use authorizations.
- Discussion of restricted access due to the proposed action.
- Discussion of restricted or modified future land use as a result of the proposed action.

6.4 Timeline for Analysis

Timeline for analysis of the impacts to land use will be during Project construction, operation, and any closure / post-closure depending on any permanent changes to land use.

7.0 ENVIRONMENTAL CONSEQUENCES

Provide a high level summary of what is presented in the environmental effects. Section summarizes what environmental effects are and the effects of the proposed action and alternatives.

7.1 Discussion of Environmental Effects

Using the affected environment and the impact assessment an assessment of impacts to land use will be conducted and described within this section.

The following items will be assessed and described for the proposed action, alternatives to the proposed action, and the no action alternative:

- Planned land use – compatibility with current plans:
 - Lake County Comprehensive Plan and Land Use Ordinance
 - Lake County Local Water Management Plan
 - St. Louis County Comprehensive Land Use Plan
 - St. Louis County Comprehensive Water Management Plan
 - City of Babbitt Comprehensive Plan
 - Superior National Forest Land and Resource Management Plan
 - Northern Superior Uplands Section Forest Resource management Plan
- Zoning and Management Codes – compatibility with current ordinances
 - Lake County
 - MDNR
 - St. Louis County
 - Babbitt
- 1854 Treaty Area Management.
- Impacts assessment will need to incorporate a regional scale and Project scale for recreational uses that is defined in the text.

7.1.1 Proposed Action

Impacts associated with the proposed action will be described in this section.

7.1.2 Alternatives to the Proposed Action

Impacts associated with the alternatives to the proposed action will be described in this section.

This discussion will focus on differences in impacts between the alternatives and proposed action. Impacts that are the same between the proposed action and alternatives will be noted but not discussed in detail.

7.1.3 **No Action Alternative**

Impacts associated with the no action alternative will be described in this section.

8.0 **AVOIDANCE, MINIZATION, MITIGATION, AND MONITORING MEASURES**

Highlight environmental protection measures, best management practices, and mitigation plans that the proposed action and alternatives would reduce the potential for impacts from the Project. Information should be pulled from the TMM Project Description and Alternatives document.

8.1 **Proposed Action**

Avoidance, minimization, mitigation, and monitoring measures associated with the proposed action will be described in this section.

- Surficial Project infrastructure was designed to minimize impact.

8.2 **Alternatives to the Proposed Action**

Avoidance, minimization, mitigation, and monitoring measures associated with the alternatives to the proposed action will be described in this section.

9.0 **REFERENCES**



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FIGURES



APPENDICES



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APPENDIX [#A, B, C, D]

[APPENDIX TITLE]



APPENDIX [#A, B, C, D]

[APPENDIX TITLE]

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