



VISUAL RESOURCES VOL 2 IMPACT INDICATORS AND METHODS

TWIN METALS MINNESOTA PROJECT Environmental Review Support Document

Prepared for Twin Metals Minnesota, LLC
Prepared by

Document No. TMM-ES-025-0149-02
Revision 0A
November 20, 2020

REVISION RECORD

Revision	Date	Description	EDMS Download Date	Project Configuration Version
0A	11-20-2020	Submitted for Agency Review – TOC		

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

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

- Provide a high level summary of what is presented within this report.
- Describe a rationale for selection of indicators.
- Describes methods and approach in development of impact criteria.
- Describes rationale and approach for selection of the area of analysis.
- Describe how this report volume relates to the other volumes.
 - Indicate regulatory framework and proposed action and alternatives are defined in other volumes of the *Visual Resources Data Package*.
- 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 IMPACT ASSESSMENT CRITERIA

3.1 Impact Assessment Indicators and Methods

Indicators and methods for assessing direct and indirect impacts will be described within this section including the following:

- Changes from the desired scenic resource conditions.
 - General Forest
 - Recreation use in a Scenic Environment
- Potential changes to the landscape (views from Birch Lake).
 - Visual Simulation

- Potential changes to direct line of sight from possible key observation points (KOP).
 - Viewshed analysis
- Potential light pollution.
- Forest Plan Standards S-SC-1 requires management actions that result in the characterizations for an Unacceptably Low SIO are prohibited. How do we ensure this is not the case?
- Maintain the BWCAW dark sky sanctuary status.

3.2 Area of Analysis

A discussion will be provided to describe the area of analysis.

- The area of analysis for the proposed action consists of those areas within approximately eight miles of the surface infrastructure, primarily plant site and tailings management site with potential visibility of the proposed Project facilities and lighting.

4.0 REFERENCES



TABLES



FIGURES



APPENDICES



APPENDIX [#A, B, C, D]

[APPENDIX TITLE]

APPENDIX [#A, B, C, D]

[APPENDIX TITLE]

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