



# **VISUAL RESOURCES VOL 3 ENVIRONMENTAL EFFECTS AND MITIGATION**

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## **TWIN METALS MINNESOTA PROJECT** Environmental Review Support Document

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**Prepared for Twin Metals Minnesota, LLC**  
**Prepared by**

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**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.*



## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2.0</b>	<b>SUMMARY.....</b>	<b>1</b>
<b>3.0</b>	<b>ENVIRONMENTAL CONSEQUENCES .....</b>	<b>1</b>
<b>3.1</b>	<b>IMPACT ASSESSMENT INDICATORS AND METHODS.....</b>	<b>1</b>
<b>3.2</b>	<b>IMPACT ASSESSMENT.....</b>	<b>1</b>
3.2.1	Proposed Action .....	2
3.2.2	Alternatives to the Proposed Action .....	2
3.2.3	No Action Alternative .....	2
<b>4.0</b>	<b>AVOIDANCE, MINIMIZATION, MITIGATION, AND MONITORING MEASURES .....</b>	<b>2</b>
<b>4.1</b>	<b>PROPOSED ACTION.....</b>	<b>2</b>
<b>4.2</b>	<b>ALTERNATIVES TO THE PROPOSED ACTION .....</b>	<b>3</b>
<b>5.0</b>	<b>REFERENCES.....</b>	<b>3</b>

## TABLES

## FIGURES

## APPENDICES

## 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 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 ENVIRONMENTAL CONSEQUENCES**

### **3.1 Impact Assessment Indicators and Methods**

- Describe the impact assessment indicators and methods at a high level using other volumes of the *Visual Resources Data Package* and indicate where additional details can be found within this document.
- Describe and show within figures the area of analysis. Describe at a high level using other volumes of the *Visual Resources Data Package* and indicate where additional details can be found within this document.

### **3.2 Impact Assessment**

Utilizing the impact assessment methods and area of analysis summarized in the other volumes of the *Visual Resources Data Package*, an assessment of direct and indirect impacts will be conducted and described within this section. The following

items, in addition to the indicators summarized in the other volumes of the *Visual Resources Data Package*, will be assessed and described for the proposed action, alternatives to the proposed action, and the no action alternative:

- Infrastructure visibility.
- Light visibility at night.
- Evaluation of the following:
  - Potential visual impacts in the context of the desired scenic resource conditions outlined in the SNF land and Resource Management Plan (USFS, 2004);
  - Visual Simulation; and
  - Viewshed Analysis.
- Detailed light management plan.

### **3.2.1 Proposed Action**

Direct and indirect impacts associated with the proposed action will be described in this section along with a detailed lighting management plan. The impacts are summarized as follows:

- Temporary / Permanent.
- Reversibility.
- Extent.

### **3.2.2 Alternatives to the Proposed Action**

Direct and indirect impacts associated with the alternatives will be discussed 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.

### **3.2.3 No Action Alternative**

Direct and indirect impacts associated with the no action alternative will be described in this section.

## **4.0 AVOIDANCE, MINIMIZATION, MITIGATION, AND MONITORING MEASURES**

### **4.1 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 through several design practices.
- Standards have been designed into the Project to reduce light visibility.

#### **4.2 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.

#### **5.0 REFERENCES**



**TWIN METALS MINNESOTA PROJECT**  
**VISUAL RESOURCES VOL 3**  
**ENVIRONMENTAL EFFECTS AND MITIGATION**

Environmental Review Support Document

---

**TABLES**



**TWIN METALS MINNESOTA PROJECT  
VISUAL RESOURCES VOL 3  
ENVIRONMENTAL EFFECTS AND MITIGATION**

Environmental Review Support Document

---

## **FIGURES**



**TWIN METALS MINNESOTA PROJECT  
VISUAL RESOURCES VOL 3  
ENVIRONMENTAL EFFECTS AND MITIGATION**

Environmental Review Support Document

---

## **APPENDICES**



**TWIN METALS MINNESOTA PROJECT  
VISUAL RESOURCES VOL 3  
ENVIRONMENTAL EFFECTS AND MITIGATION**

Environmental Review Support Document

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**APPENDIX [#A, B, C, D]**

**[APPENDIX TITLE]**



## **APPENDIX [#A, B, C, D]**

### **[APPENDIX TITLE]**

*[Insert page break for each additional appendix.]*