Appendix D

Studies

CULTURAL RESOURCES LITERATURE SEARCH FOR THE CANISTEO HVTL PROJECT, ITASCA COUNTY, MINNESOTA

Two Pines Resource Group No. 13-04

Prepared for:
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September 2013

MANAGEMENT SUMMARY

In September of 2013, Two Pines Resource Group, LLC (Two Pines) completed a cultural resources literature search for the route of the Canisteo High Voltage Transmission Line (HVTL) Project in Itasca County, Minnesota. The Canisteo HVTL Project is being undertaken by Minnesota Power, a division of ALLETE, Inc., in order to supply power to a proposed magnetation mining project that is expected to bring significant economic development to the area. The Canisteo HVTL Project will build two, approximately 5-mile long, 115 kilovolt (kV) high voltage transmission lines and a new substation called the Canisteo Substation. This literature search was performed on behalf of Minnesota Power.

The purpose of this literature search is to determine if there are any previously recorded cultural resources within the study area that are listed in, or have been determined eligible for listing in, the National Register of Historic Places (National Register). The study area for the literature search is a 1-mile (1.6-km) buffer around the proposed project area. Background research was conducted at the State Historic Preservation Office (SHPO) in order to gather information on previously identified cultural resources within this one-mile buffer. The study area encompasses portions of Township 56N Range 24W, and Township 56N Range 25W in Itasca County. Dr. Michelle Terrell served as the Principal Investigator.

Archaeological Resources

The literature search found that the Canisteo HVTL Project route has not yet undergone an archaeological survey, nor have any archaeological sites or archaeological site leads been previously recorded within one mile of the project's proposed route.

Architecture-History Properties

The literature search found that a portion of one (1) historic district, and part or all of four (4) of the 14 architecture-history properties that contribute to that district have been previously inventoried within the study area.

The Holman-Cliffs Iron Mining Landscape Historic District (Holman-Cliffs Historic District) and its contributing resources are considered eligible for (CEF) listing in the National Register. The proposed route of the Canisteo HVTL Project passes within a half mile of the boundary of the Holman-Cliffs Historic District. While the proposed project may not have an impact on the eligible district, effects to this resource cannot be assessed without further study.

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INTRODUCTION

The Canisteo High Voltage Transmission Line (HVTL) Project in Itasca County, Minnesota is being undertaken by Minnesota Power, a division of ALLETE, Inc., in order to supply power to a proposed magnetation mining project that is expected to bring significant economic development to the area. The Canisteo HVTL Project will build two, approximately 5-mile long, 115 kilovolt (kV) high voltage transmission lines and a new substation called the Canisteo Substation.

The purpose of this literature search was to determine if there are any previously recorded cultural resources within the study area that are listed in, or have been determined eligible for listing in, the National Register of Historic Places (National Register). The study area for the literature search is a 1-mile (1.6-km) buffer around the proposed transmission route (Figure 1). The study area encompasses portions of Township 56N Range 24W, and Township 56N Range 25W in Itasca County (Table 1). The project area is located in the Central Lakes Coniferous – Central archaeological sub-region.

The approximate UTM (NAD 83, Zone 15) coordinates for the study area are: north extent – 469488E 5246340N; west extent – 463296E 5239077N; south extent – 464951E 5236968N; and east extent – 471399E 5242256N.

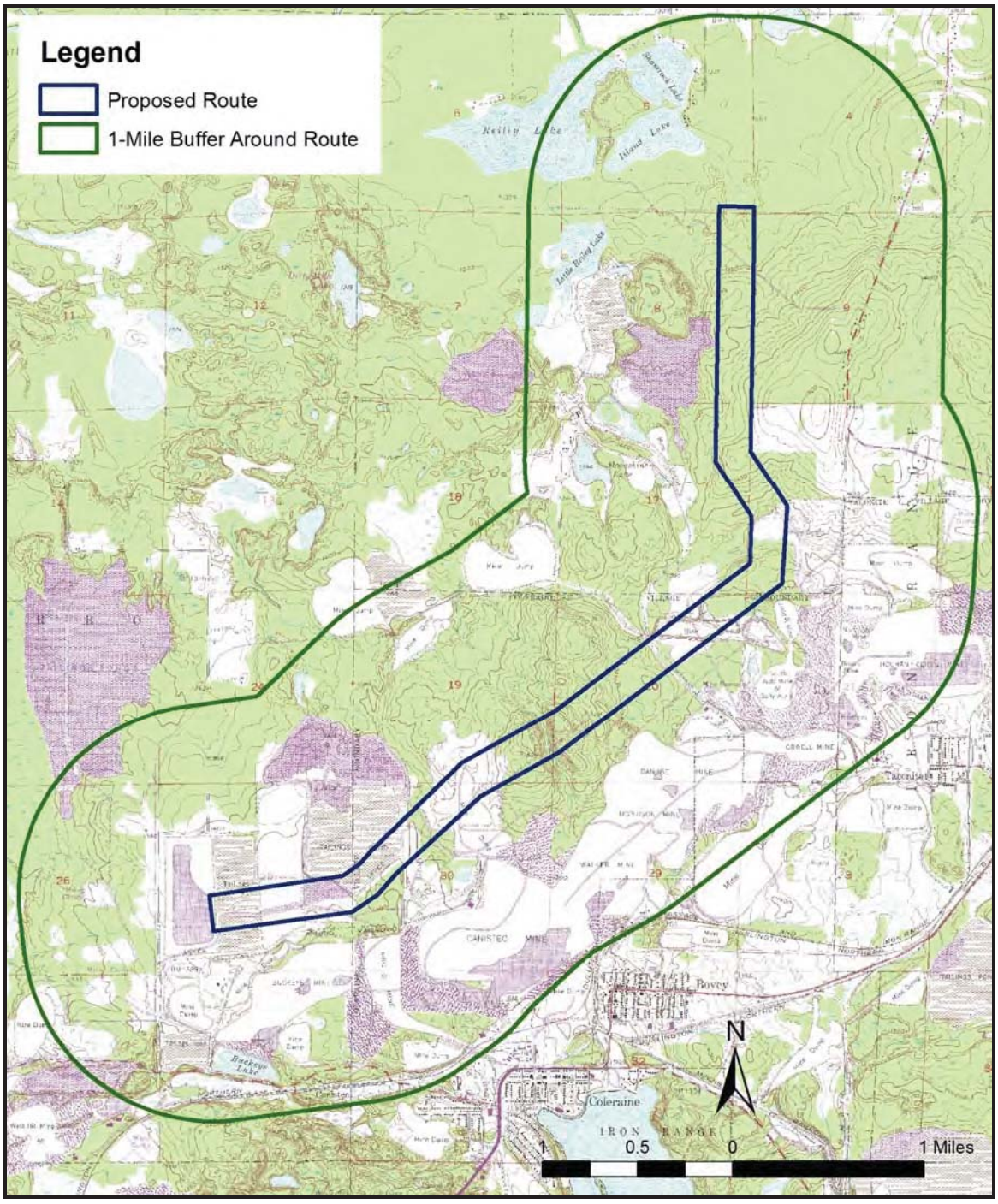

FIGURE 1. PROJECT AREA OVERVIEW

(PORTION OF BOVEY 1969, 7.5' USGS QUADRANGLES)

TABLE 1. LEGAL LOCATIONS FOR THE CANISTEO PROJECT STUDY AREA

Township	Range	Section	Quarter Sections
56N	24W	4	SW, SE, NW, SW-NE, SE-NE, NW-NE
56N	24W	5	SW, SE, NW, NE
56N	24W	6	E-SE
56N	24W	7	E-NE, E-SE
56N	24W	8-9	SW, SE, NW, NE
56N	24W	10	SW-SW
56N	24W	15	W-NW, W-SW
56N	24W	16-17	SW, SE, NW, NE
56N	24W	18	S-SW, SE, E-NE
56N	24W	19-20	SW, NW-SE, NW
56N	24W	21	SW, NW, NE, NW-SE, NE-SE, SW-SE
56N	24W	22	NW-SW, W-NW
56N	24W	28	SW-NW, NW-NW, NE-NW
56N	24W	29	SW, NW, NE, NW-SE
56N	24W	30	SW, SE, NW, NE
56N	24W	31	NW, NE, N-SW
56N	24W	32	NW-NW
56N	25W	23	NE-SE, SE-SE, SW-SE
56N	25W	24	SW, SE, SW-NE, SE-NE, NE-NE
56N	25W	25	SW, SE, NW, NE
56N	25W	26	SE, NE, E-NW, E-SW
56N	25W	35	NE, E-NW, N-SE, SE-SE
56N	25W	36	SW, NW, NE, SW-SE, N-SE

RESEARCH DESIGN

OBJECTIVES

The purpose of the literature search for the Canisteo Project is to determine if there are any previously recorded cultural resources within a 1-mile (1.6-km) study area around the project that are listed in, or have been determined eligible for listing in, the National Register. In order for a property to be listed in the National Register, it must meet at least one of the criteria summarized below and retain sufficient integrity to convey its historical significance.

Criterion A	association with events that have made a significant contribution in our past;
Criterion B	association with the lives of persons significant in our past;
Criterion C	embodiment of the distinctive characteristics of a type, period, or artistic values; or representation of the work of a master; possession of high artistic values; or representation of a significant and distinguishable entity whose components may lack individual distinction; or
Criterion D	potential to yield information important to prehistory or history (National Park Service 2002).

METHODS

All work was conducted in accordance with the *SHPO Manual for Archaeological Projects in Minnesota* (Anfinson 2005), the *State Archaeologist's Manual for Archaeological Projects in Minnesota* (Anfinson 2011), and *The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (National Park Service 2002).

A database query was submitted to the SHPO on September 10, 2013. This request was for information on inventoried cultural resources within the study area. Data was received from the SHPO in the form of a Microsoft® Word table. This database was vetted against the hard copies of the property inventory forms on file at the SHPO. Each property's locational information and its current eligibility status were reviewed.

RESULTS

This chapter presents the results of the literature search. The study area for the literature search is a 1-mile (1.6-km) buffer around the proposed project. The literature search found that a portion of one (1) historic district, and part or all of four (4) of the 14 architecture-history properties that contribute to that district have been previously inventoried within the study area (Figure 2).

NATIONAL REGISTER-LISTED AND ELIGIBLE PROPERTIES

The National Register is the nation's list of properties deemed worthy of preservation. The National Register is directed by the National Park Service of the U.S. Department of the Interior and administered in Minnesota by the SHPO. To date, there are no properties that have been listed in the National Register within a 1-mile (1.6-km) radius of the project.

One historic district, the Holman-Cliffs Iron Ore Mining Landscape Historic District (Holman-Cliffs Historic District), which is considered eligible for (CEF) listing in the National Register, is partially located within the study area. In the case of a property of this status, the SHPO and a federal agency have concurred that the resource is eligible for listing in the National Register, but a nomination form for the property has not yet been completed. For compliance purposes, the property is treated as if it is listed in the National Register.

The Holman-Cliffs Historic District is a cluster of landscape features associated with the mining operations of the Holman-Cliffs group of mines created between 1907 and 1958. The resources encompassed by the district include mines, associated stripping and lean ore dumps, the Village of Taconite, concentrator plant sites and associated dumps and tailings piles, segments of two railroads, and access roads (Summit Envirosolutions 2008). The proposed route of the Canisteo HVTL Project passes within a half mile of the boundary of the Holman-Cliffs Historic District.

LOCALLY-DESIGNATED HISTORIC PROPERTIES

A municipality with a Heritage Preservation Commission (HPC) has the formal ability through city ordinance to designate local properties as historically significant. However, because none of the communities within the study area have established a HPC, there are no locally-designated historic properties present within the study area.

MINNESOTA STATE HISTORIC SITES AND PLACES

The Minnesota Historic Sites Act (MS 138.661-138.669) establishes the State Historic Site Network and the State Register of Historic Places. No resources on either list are present within the study area.

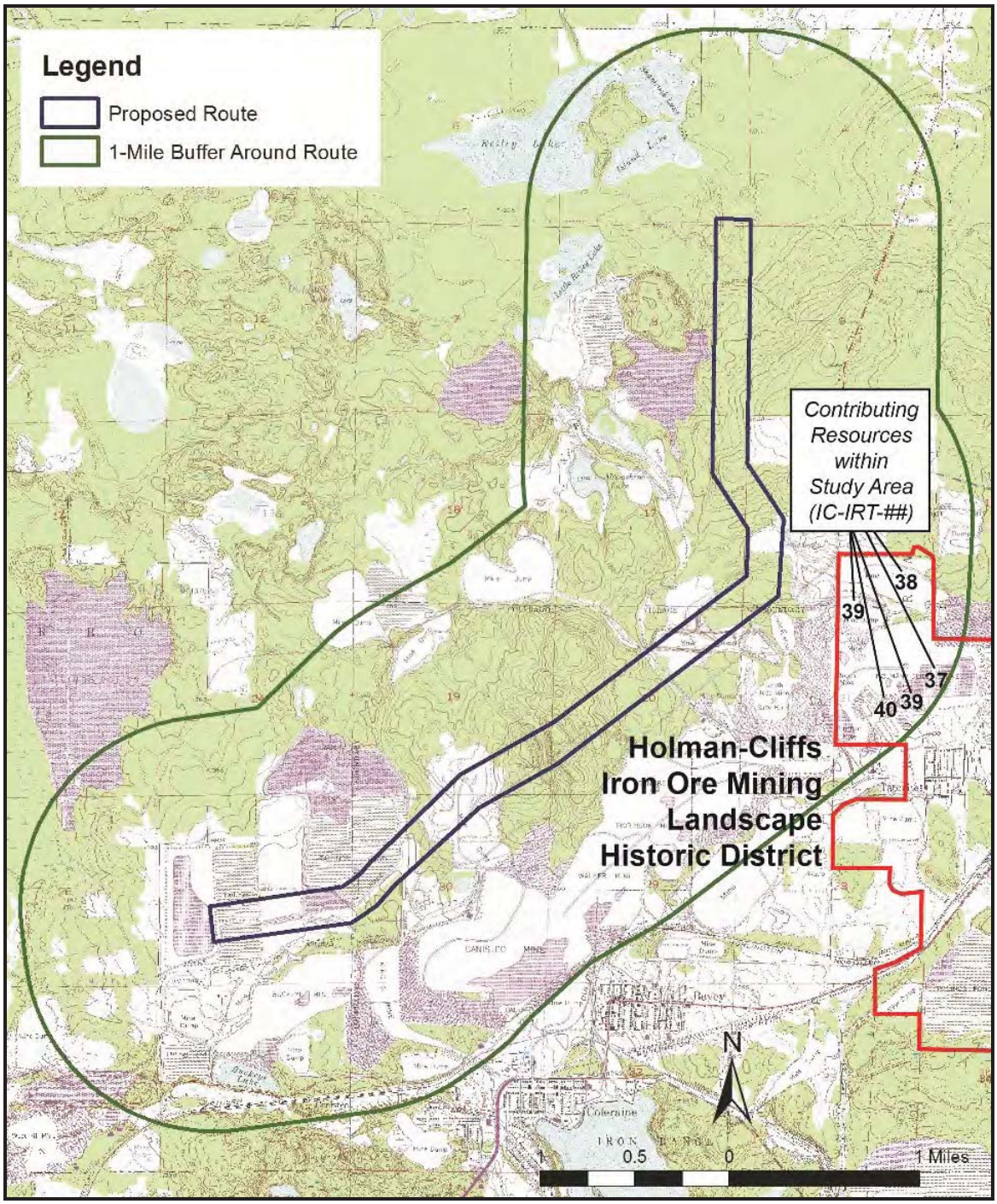

FIGURE 2. CULTURAL RESOURCES RECORDED WITHIN 1 MILE

PREVIOUSLY RECORDED ARCHITECTURE-HISTORY PROPERTIES

Two Pines found that four individual architecture-history properties have been previously inventoried within the study area (Table 2). Three of the four properties are contributing resources to the Holman-Cliffs Historic District, which, as previously discussed, is considered eligible for (CEF) listing in the National Register. The fourth property is the former site of the now razed Cleveland-Cliffs Concentrator Plant (IC-IRT-40). This potential archaeological site would be considered a contributing element to the district should an archaeological survey demonstrate that the site retains sufficient integrity. However, at this time the site of the Cleveland-Cliffs Concentrator Plant (IC-IRT-40) has not been formally evaluated for listing in the National Register.

TABLE 2. ARCHITECTURE-HISTORY PROPERTIES WITHIN ONE MILE OF THE PROJECT

Inventory Number	Name	T	R	S	Q	NRHP Status
IC-IRT-037	Holman-Cliffs Mine Pit	56N	24W	21	SE-NE	Considered Eligible for Listing (CEF)
		56N	24W	22	S-NW	
IC-IRT-038	Mesaba-Cliffs Lean Ore Dump	56N	24W	16	S-SE	Considered Eligible for Listing (CEF)
IC-IRT-039	Mesaba-Cliffs Stripping Dump	56N	24W	21	NW-NE and NE-SE	Considered Eligible for Listing (CEF)
IC-IRT-040	Cleveland-Cliffs Concentrator Plant Site	56N	24W	21	NW-NE-SE	Considered Eligible for Listing (CEF), pending survey

PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES AND SITE LEADS

The literature search found that the Canisteo HVTL Project route has not yet undergone an archaeological survey, nor have any archaeological sites or archaeological site leads been previously recorded within one mile of the project's proposed route.

SUMMARY AND RECOMMENDATIONS

In September of 2013, Two Pines Resource Group, LLC (Two Pines) completed a cultural resources literature search for the route of the Canisteo High Voltage Transmission Line (HVTL) Project in Itasca County, Minnesota. The purpose of this literature search was to determine if there are any previously recorded cultural resources within the study area that are listed in, or have been determined eligible for listing in, the National Register. The study area for the literature search was defined as a 1-mile (1.6-km) buffer around the proposed project.

Archaeological Resources

The literature search found that the Canisteo HVTL Project route has not yet undergone an archaeological survey, nor have any archaeological sites or archaeological site leads been previously recorded within one mile of the project's proposed route. As the Canisteo HVTL Project route has not yet undergone an archaeological survey, there is a potential for unrecorded archaeological resources to be present within the project area.

Architecture-History Properties

The literature search found that no architecture-history properties have been identified along the proposed route of the Canisteo HVTL Project, however, a portion of one (1) historic district, and part or all of four (4) of the 14 architecture-history properties that contribute to that district, have been previously inventoried within a 1-mile radius of the proposed project.

The Holman-Cliffs Iron Mining Landscape Historic District (Holman-Cliffs Historic District) and its contributing resources are considered eligible for (CEF) listing in the National Register. In the case of properties of this status, the SHPO and a federal agency have concurred that the resource is eligible for listing in the National Register, but a nomination form for the property has not yet been completed. For compliance purposes, the property is treated as if it is listed in the National Register. The proposed route of the Canisteo HVTL Project passes within a half mile of the boundary of the Holman-Cliffs Historic District. While the proposed project may not have an impact on the eligible district, effects to this resource cannot be assessed without further study.

Because the route of the Canisteo HVTL Project has not been encompassed by previous architectural-history resource studies, there is a potential for yet unidentified properties, including landscape features, of 50 years of age or older to exist within the project area.

Recommendation

It is recommended that Area of Potential Effects (APE) be determined for the Canisteo HVTL Project and that a survey of the APE for archaeological and architecture-history resources be completed. A survey will confirm that all potential cultural resources have been identified, evaluated, if applicable, and potential impacts mitigated. Avoidance of historically-significant cultural resources is the preferred mitigation measure.

REFERENCES CITED

Anfinson, S. F.
2011 *State Archaeologist's Manual for Archaeological Projects in Minnesota*. Office of the State Archaeologist, St. Paul.

2005 *SHPO Manual for Archaeological Projects in Minnesota*. July 2005. State Historic Preservation Office, St. Paul.

National Park Service
2002 *The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation*. Current version available online at http://www.cr.nps.gov/local-law/arch_stnds_0.htm. National Park Service, Department of the Interior, Washington, D.C.

Summit Envirosolutions, Inc.
2008 Historic Resources Survey of the Holman-Cliffs Iron Ore Mining Landscape for the Mesaba Energy Project West Range Site, Itasca County, Minnesota. Prepared for Excelsior Energy, Inc. IC-2008-3H. Report on file at the Minnesota State Historic Preservation Office, St. Paul.

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Memorandum

To: Lisa Joyal, MDNR Ecological Services

From: Shanna Braun and Daniel Tix, Ph.D.

Subject: Work Plan – Rare Plant Survey

Project: Minnesota Power Canisteo Transmission Line Project – Itasca County

Date: September 25, 2013

Barr Engineering Company (Barr) is planning to conduct rare plant surveys for Minnesota Power (MP) as part of the Canisteo Transmission Line (Project) in Itasca County, Minnesota. The Project would include construction of two approximately five-mile 115 kilovolt (kV) high voltage transmission lines and a new substation called the Canisteo Substation. The Project corridor is located north of the cities of Coleraine and Bovey, as shown on **Figure 1**. A Route Permit is currently being prepared to the Minnesota Public Utilities Commission (PUC) and will be submitted before this survey occurs.

Prior to initiating this survey, Barr is providing the Minnesota Department of Natural Resources (MDNR) with this work plan that outlines our approach to ensure that the survey and report are based on MDNR-approved methods.

Proposed Work Plan

The proposed work plan for conducting rare plant surveys within the project corridor has four basic components – pre-field research, field studies, post-field verifications, and documentation of results.

Pre-field research and preparation

Rare plant surveys will be completed prior to construction of the Project for plant species identified in Barr's review of the Natural Heritage Information System (NHIS). The surveys will be focused on potential habitat for four NHIS-identified plant species:

- Pale moonwort (*Botrychium pallidum*) - Endangered
- Mingan moonwort (*Botrychium minganense*) – Special Concern
- Least moonwort (*Botrychium simplex*) – Special Concern

- Matricary grapefern (*Botrychium matricariifolium*) – Not listed, tracked

Potentially suitable habitat will be identified from desktop review of aerial photos, soil maps, and wetland data. Information will be compiled on the preferred habitats, plant associations, phenology, and key-identifying characteristics for other non-target sensitive species known to occur in the area.

The survey areas will be determined from desktop habitat review and limited to areas with potential suitable habitats where the Project may directly affect NHIS-tracked plant species. The project alignment is expected to be finalized before field surveys and it is expected to occur within the proposed route corridor shown in Figure 1. Field surveys for rare plants will occur in areas with potential suitable habitats within the final alignment, expected to be 160-feet wide.

Aerial photo-based field maps will be prepared containing information on topography, soils, and other applicable information to make preliminary estimates of the habitats and species potentially present on the site. Much of the Project corridor occurs within areas previously impacted by mining operations (Figure 1), some of which may support appropriate habitat for rare plant species.

Botanical surveys

The habitat assessments and botanical surveys will be conducted in May through July by qualified botanists currently listed on the MDNR's "List of Botanical Consultants for Hire." Within each habitat surveyed, the ecologists will utilize random-intuitive search patterns to search for target species and to evaluate the site's potential for supporting these target species. Surveyors will focus on the specific habitats and plant associations of the target species.

Sensitive plant species located by the survey will be documented using the following procedures:

1) The locations of rare plant species will be flagged using bright fluorescent tape. A six-letter species code (e.g. BOTMIN for *Botrychium minganense*), the date, and the botanist's initials will be written on the flagging.
2) A handheld GPS unit will be used to obtain UTM coordinates of the site. Standard quarter-quarter section legal descriptions will also be recorded.
3) At least two digital photographs of the species will be taken.
4) Habitat, associated species, population size, phenology, and other pertinent data will be recorded.
5) Collection of samples will follow the MDNR's "Techniques for Collecting and Preserving Vascular Plant Specimens." Representative samples of above-ground portions of plants will be collected from populations where at least 20 individuals are present. No full-plant collections

(roots and above-ground portions) will be made from populations smaller than 100 individuals. In populations of less than 20, a photograph will be taken, and a leaf or portion of a leaf may be collected at the botanist's discretion.

Botrychium species will be identified using "Ophioglossaceae C. Agardh" in Flora of North America, Volume 2: Pteridophytes and Gymnosperms (Wagner and Wagner 1993). Orchid species will be identified using Sheviak (*Platanthera*) and Magrath (*Liparis*) in Flora of North America, Vol. 26: Agavaceae, Aloaceae, Burmanniaceae, Dioscoreaceae, Haemodoraceae, Iridaceae, Liliaceae, Orchidaceae, Pontederiaceae, Smilacaceae and Stemonaceae. Sedges (family Cyperaceae) will be identified following Flora of North America, Volume 23: Magnoliophyta: Commelinidae (in part): Cyperaceaeae. Other species will be identified following published Flora of North America volumes and Manual of Vascular Plants of the Northeastern United States and Adjacent Canada (Gleason and Cronquist 1991).

During the course of the botanical survey, a list of vascular plants observed on the site will be kept. This is not intended to be a complete floristic study of the site; rather, it will provide additional background information on the project area. The general vegetation communities of the site will be characterized and mapped using the Ecological Classification System (ECS) described in the MDNR Field Guide to the Native Plant Communities of Minnesota: The Laurentian Mixed Forest Province.

Post field verification of samples

Where verification of target species is required and where populations are of sufficient size, a collected specimen will be checked against herbarium specimens at the University of Minnesota Bell Herbarium. Verification of species from populations smaller than 20 individuals will be made by taking detailed notes and measurements of key characters, along with digital photographs. The notes and photos will be compared against herbarium specimens. Collected specimens will be prepared with an herbarium label and sent to Welby Smith at MDNR.

Documentation of Results

A draft Sensitive Species Survey Report will be sent to MDNR for review and comment. The report will provide the following information and data:

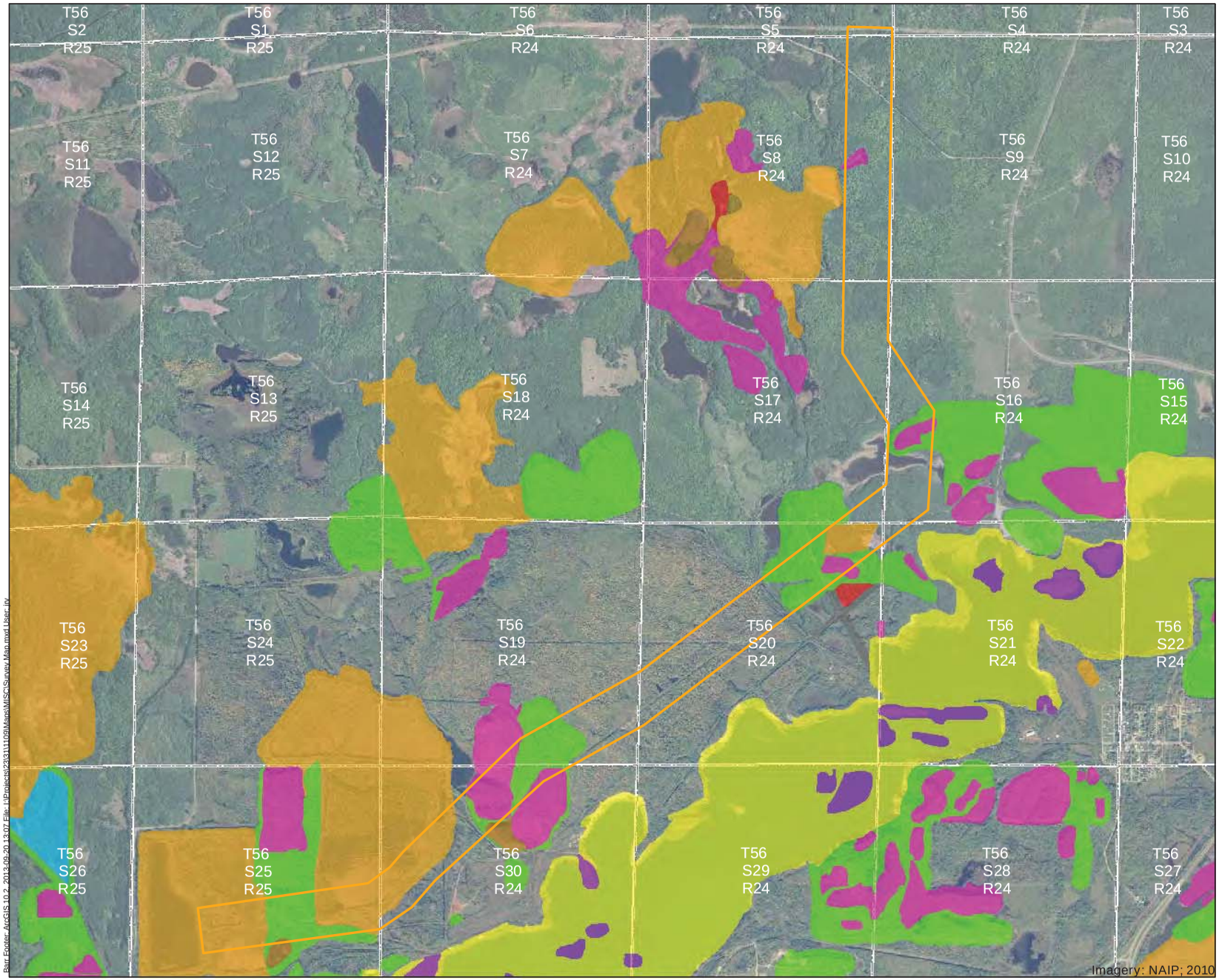
- Locations (UTM coordinates, legal description and map) of sensitive species identified during the field survey;
- Habitat conditions and plant associations of located sensitive species;

- General vegetation community composition of the areas surveyed in the field, including ECS classifications for native plant communities;
- General desktop classification of the whole project area to identify areas not surveyed and reasons for the area not being selected;
- Discussion of methods; and
- Species list of vascular plants, birds, and other animals observed during survey

Following MDNR review and comment on the draft Sensitive Plant Species Report, a final version will be prepared and submitted to MDNR.

Schedule

Barr will conduct all surveys and habitat assessments in May through July 2014. We will provide a Sensitive Species Report to MDNR within 60 days of survey completion. Barr will coordinate with MDNR to obtain their concurrence with the findings of the report.



Proposed Route Corridor
Native Plant Community
PLS Sections

Mine Features

Coarse Tailings Stockpile
Haul Road
Natural Ore Pit
Natural Ore Tailings Basin
Reservoir or Settling Basin
Rock In-pit Stockpile
Rock Stockpile
Surface Overburden Stockpile
Undisturbed/Natural Ground Surface

N

Feet
0 2,000 4,000

BARR

SURVEY MAP
Proposed 115 kV
HVTL and Substation
Minnesota Power
Itasca County, MN

CERTIFICATE OF SERVICE

IN THE MATTER OF THE APPLICATION OF MINNESOTA POWER FOR A ROUTE PERMIT UNDER THE ALTERNATIVE PERMITTING PROCESS FOR THE PROPOSED MINNESOTA POWER CANISTEO PROJECT- ITASCA COUNTY, MINNESOTA

MPUC DOCKET NUMBER: E015/TL-13-805

Jill N. Yeaman certifies that on the 9th day of October, 2013, she filed a true and correct copy of the **APPLICATION FOR A ROUTE PERMIT BY MINNESOTA POWER** by posting the same on www.edockets.state.mn.us. Said document is also served via U.S. Mail or email as designated on the Service List on file with the Minnesota Public Utilities Commission in the above-referenced docket.

*/s/ Jill N. Yeaman*_____
Jill N. Yeaman

IN THE MATTER OF THE APPLICATION OF MINNESOTA POWER FOR A ROUTE PERMIT UNDER THE ALTERNATIVE PERMITTING PROCESS FOR THE PROPOSED MINNESOTA POWER CANISTEO PROJECT- ITASCA COUNTY, MINNESOTA	MPUC DOCKET NUMBER: E015/TL-13-805

[NO SERVICE LIST EXISTS FOR ABOVE-CAPTIONED DOCKET
AS OF OCTOBER 9, 2013 AT 9:30 A.M., CENTRAL STANDARD TIME]