

# Appendix K

## Combined Phase I and Traditional/Tribal Cultural Resources Survey

In accordance with Minnesota Rules, part 7829.0500, and Minnesota Statutes Chapter 13, Plummer Solar has designated portions of Appendix K as **NONPUBLIC DATA–NOT FOR PUBLIC DISCLOSURE** because it contains sensitive cultural resource and natural heritage information. The Minnesota State Historic Preservation Office Manual for Archaeological Projects in Minnesota provides for restricted access to sensitive cultural resource information. Similarly, the natural heritage information is nonpublic under Minnesota Statutes § 84.0872. Given the need to include nonpublic information, Plummer Solar has prepared and is electronically filing both **NONPUBLIC** and public versions of Appendix K.

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## Phase I Archaeological Investigation

*Plummer 130 MW Solar Project*

*Plummer, MN*

Prepared for  
Enbridge Energy

December 2022

## Phase I Archaeological Investigation

December 2022

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Certification

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December 14, 2022

Date

## 1 Executive Summary

In response to a request from Enbridge Energy, Limited Partnership (Enbridge), Barr Engineering Co. (Barr) completed a Phase I archaeological reconnaissance survey for the Plummer Solar Project, located southeast of Plummer, Minnesota. Enbridge is proposing to develop a 130 Megawatt Alternating Current (MWac) solar facility (Project) adjacent to their existing Plummer Station. The Project is cited over an area measuring 854 acres (or the "Project Area"). The Project is located in Sections 14 and 15, Township 115N, Range 42W on the Plummer and Oklee, Minnesota 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps.

The Project would require a Site Permit from the Minnesota Public Utilities Commission ("PUC" or "Commission"). Typically, as part of the permit conditions, the Project must analyze potential impacts to and propose mitigation measures for cultural and archaeological resources under Minnesota Administrative Rules Chapter 7854.0500 Subp. 7, Environmental Impacts. Consultation with the Minnesota State Historic Preservation Office (SHPO) and Office of the State Archaeologist (OSA) would occur in the event that a cultural or archaeological resource is encountered.

Barr conducted background research in April 2022 and found that the western portion of the Project Area was surveyed for archaeological and historic architectural resources between 2014 and 2019. These investigations resulted in the identification of one archaeological site located within the current Project Area. Site 21RL0033 consists of a historic homestead remnant previously recommended not eligible for the National Register of Historic Places (NRHP). A historic architectural investigation completed in 2019 for the Enbridge Line 3 Replacement Project identified 10 historic architectural resources within current Project boundaries (RL-EMD-002, RL-EMD-005, RL-EMD-006, RL-EMD-007, RL-EMD-008, RL-EMD-009, RL-EMD-010, RL-EMD-011, RL-EMD-012, and RL-EMD-013). Each of these historic architectural resources was recommended not eligible for the NRHP.

At the time of the Phase I archaeological reconnaissance, Enbridge also commissioned the completion of a Tribal Cultural Resources Survey (TCRS). The TCRS was conducted by Dirt Divers Cultural Resources Management (DDCRM) to identify resources in the Project Area of significance to tribal communities. The TCRS was conducted by Ojibwe band members of the Leech Lake Band and other tribally affiliated individuals. These results are discussed in a separate report prepared by DDCRM.

As a result of the Phase I archaeological reconnaissance, previously recorded site 21RL0033 was reidentified and documented. Its condition was found to be nearly identical to the prior site delineation completed in 2015. No additional archaeological resources were identified within the Project Area.

Traditional/Tribal cultural resources identified within the Project Area include rocks, plants and wildlife traditionally and currently used for food, medicine, arts, ceremony and/or materials. Additionally, the delineated wetlands within the Project Area provide the type of habitat for food and other natural resources that are traditionally and currently used by Tribes ancestral to this area.

Based on the findings presented in this report of investigations, site 21RL0033 remains not eligible for the NRHP. As no other archaeological resources were identified, Barr recommends that no further archaeological work be required within the area investigated for the Project to proceed as planned.

The TCRS found that because the Project Area consists primarily of agricultural fields, there is a low probability for impacts to Tribal Cultural Resource sites. No additional Tribal Cultural Resource investigations are recommended; however, DDCRM recommends a tribal monitor during any future ground disturbance for the Project.

## 2 Introduction

In response to a request from Enbridge Energy, Limited Partnership (Enbridge), Barr Engineering Co. (Barr) conducted a Phase I archaeological records review and reconnaissance (Phase I), and Dirt Divers Cultural Resource Management LLC (DDCRM) completed a Tribal Cultural Resources Survey (TCRS) prior to proposed construction activities in Red Lake County, Minnesota. Based on information provided by Enbridge, the Project consists of the development of a 130-megawatt alternating current (MWac) solar project adjacent to their existing Plummer Station in Emardville Township, Red Lake County, Minnesota. The Project is located in Sections 14 and 15, Township 115N, Range 42W on the Plummer and Oklee, Minnesota 7.5' U.S. Geological Survey (USGS) topographic quadrangle maps (Figure 2-1).

The Project requires a site permit from the Minnesota Public Utilities Commission (PUC) pursuant to the Minnesota Power Plant Siting Act (Minnesota Statutes, chapter 216E) and Minnesota Rules, chapter 7850 for proposed projects meeting the definition of "large electric power generating plants" and "high voltage transmission lines". Minnesota Rules 7850.1900, Subpart 3 requires that an applicant for a site permit include "a description of the effects of the facility on archaeological and historic resources"<sup>1</sup>. As a result, a Phase I and TCRS were completed within the Project Area to determine whether significant cultural resources are present.

Barr conducted background research in April 2022 focused on a 1.6-kilometer (km) (1-mile [mi]) study area around the Project footprint. Barr gathered information about previously conducted cultural resource investigations and documented cultural resources as well as the environmental and cultural context of the region to assess the potential for additional undocumented cultural resources in and around the Project Area.

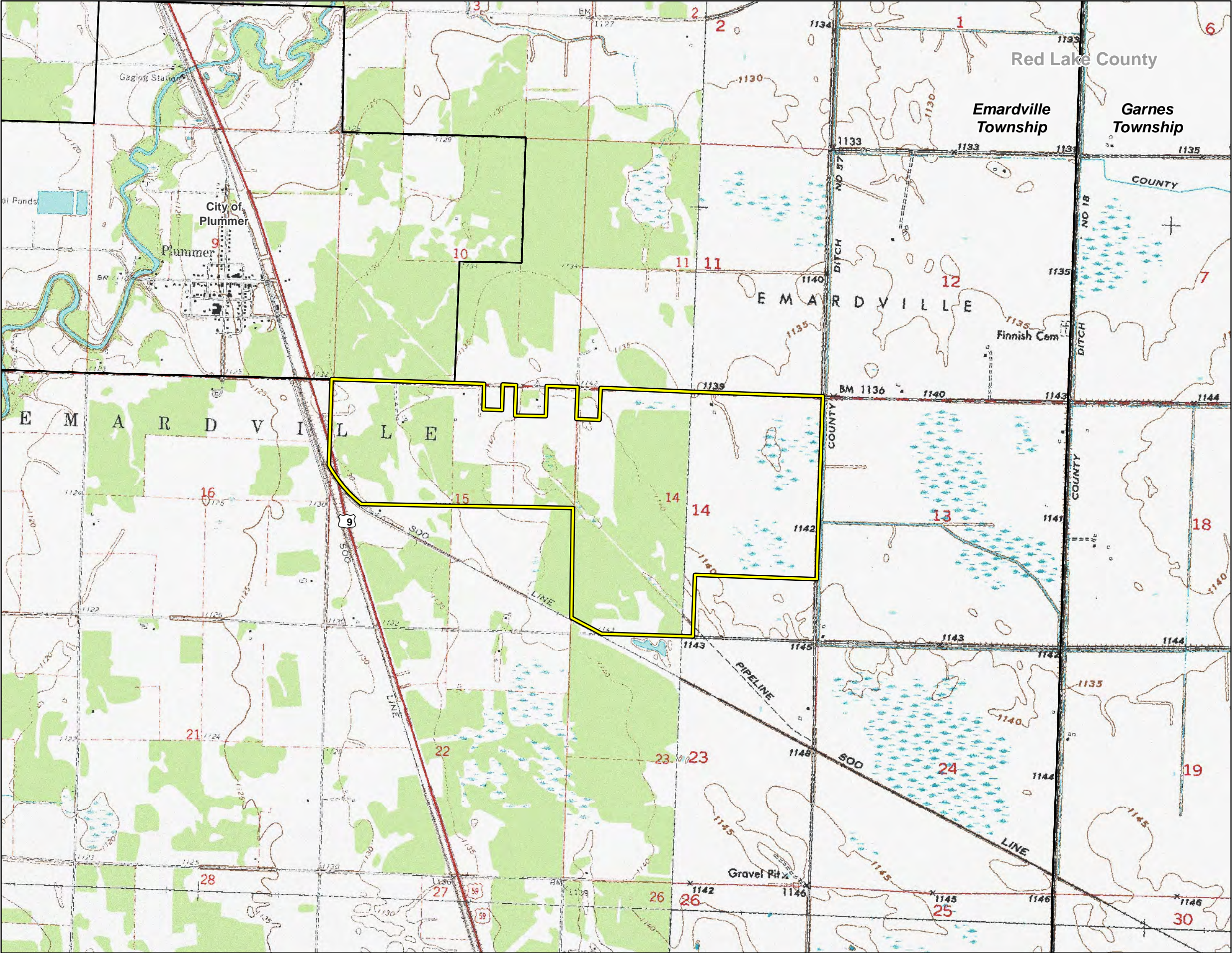
Key personnel committed to the Project include archaeological Principal Investigator Veronica Parsell of Barr; Field Director Jim Jones of DDCRM; Field Supervisors Charles Jones, James P. Jones, Christian Taylor-Johnson, and Sage Rojas of DDCRM; and Field Technicians Isaiah Redday, Tim Smith, Darrius Curry, and Taysha Curry. Mr. Eddie Anderson created the report graphics.

This report presents the research design and results of the background research in Section 3.0. Section 4.0 outlines the field methods used during the survey. Section 5.0 discusses the results of the field investigation, followed by the conclusions and recommendations in Section 6.0. The references cited in this report appear in Section 7.0. Appendix A includes historic maps and aerial photographs, Appendix B contains the TCRS report prepared by DDCRM, Appendix C includes photographs documenting the Phase I, and Appendix D contains the artifact catalog.

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<sup>1</sup> [7850.1900 - MN Rules Part](#)





Project Area Boundary

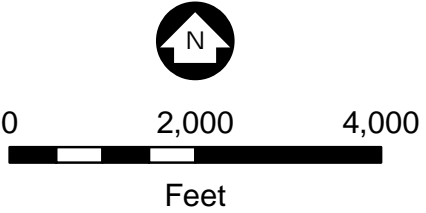


Figure 2-1  
Plummer - Solar  
PROJECT LOCATION  
Solar Environmental Permitting  
Enbridge Energy, L.P.





### 3 Background Research

The objective of the current archaeological investigation is to identify and evaluate any archaeological or cultural resources present within the Project Area for listing in the National Register of Historic Places (NRHP), as well as assess the effects of the Project on these resources, if identified. The Project also included a TCRS, to identify cultural sites important to the Leech Lake Band of Ojibwe and other Tribal communities within the Project Area.

For the purposes of this investigation, archaeological resources may include any site location that contains material remains of past human life or activities, or other places and/or items that possess cultural importance to individuals or a group. Tribal Cultural Resources are defined as locations of significance to members of Tribal communities, including cultural corridors, seasonal activity sites, natural resource collection places such as sugar maple stands or family netting camps, and other sites of cultural and religious significance to Tribes within the Project Area. Tribal cultural resources can also include sites established and used by Tribes within the last 50 years.

Once identified through documentary research and/or fieldwork, these resources are evaluated for NRHP eligibility based on the following criteria.

*"The quality of significance in American history, architecture, archaeology, engineering and culture is present in the districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:*

- a. That are associated with the events that have made a significant contribution to the broad patterns of our history; or*
- b. That are associated with the lives of persons significant in our past; or*
- c. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
- d. That have yielded or may be likely to yield, information important in prehistory or history"* (36 CFR 60.4)."

The purpose of this section is to provide a basic context through which to evaluate the results of Barr's Phase I investigation. This section briefly outlines the environmental and cultural background of the region in and around Red Lake County, Minnesota.

#### 3.1 Literature Review

The literature review was directed toward identifying previously recorded archaeological sites, historic structures, and other cultural resources. Barr requested data from the Minnesota State Historic Preservation Office (SHPO) on April 21, 2022, to identify previously recorded archaeological sites and

historic structures located within one mile of the Project Area. The Minnesota OSA Portal for archaeological sites was also reviewed on April 24, 2022. Barr focused on previously recorded resources within 1.6 km (1 mi) of the Project Area, but also examined the larger region where appropriate. For the literature review, Barr consulted the following resources:

- National Historic Landmark list;
- NRHP list;
- Archaeological Site Files;
- Historic Architectural Inventory;
- Available Cultural Resource Management reports;
- Historic maps and aerial photographs.

The data provided by SHPO and viewed through the OSA portal indicate 10 historic architectural resources and one archaeological site are located within the Project Area. In addition, three archaeological sites and 16 historic architectural resources are located within approximately 1.6 km (1 mi) of the Project Area [REDACTED].

### **3.1.1 National Historic Landmarks List**

There are no National Historic Landmarks located within 1.6 km (1 mi) of the Project Area.

### **3.1.2 National Register of Historic Places (NRHP)**

No properties listed in or determined eligible for the NRHP are located within 1.6 km (1 mi) of the Project Area.

### **3.1.3 Archaeological Site Files**

The data provided by SHPO and supplemented through a review of the OSA portal indicate that four archaeological sites are located within the 1.6 km (1 mi) study area [REDACTED]. Of these, one is within the current Project boundaries (Table 3-1). The site within the Project Area consists of a historic homestead remnant that has an "undetermined" NRHP eligibility status as listed on the site record available through OSA. However, the site was recommended not eligible for the NRHP by a qualified professional archaeologist, as detailed in the Phase I archaeological reconnaissance that resulted in the identification of the site (Lange Mueller and Terry 2015).



Table 3-1 Archaeological Sites Located within the 1.6 km (1 mi) Study Area

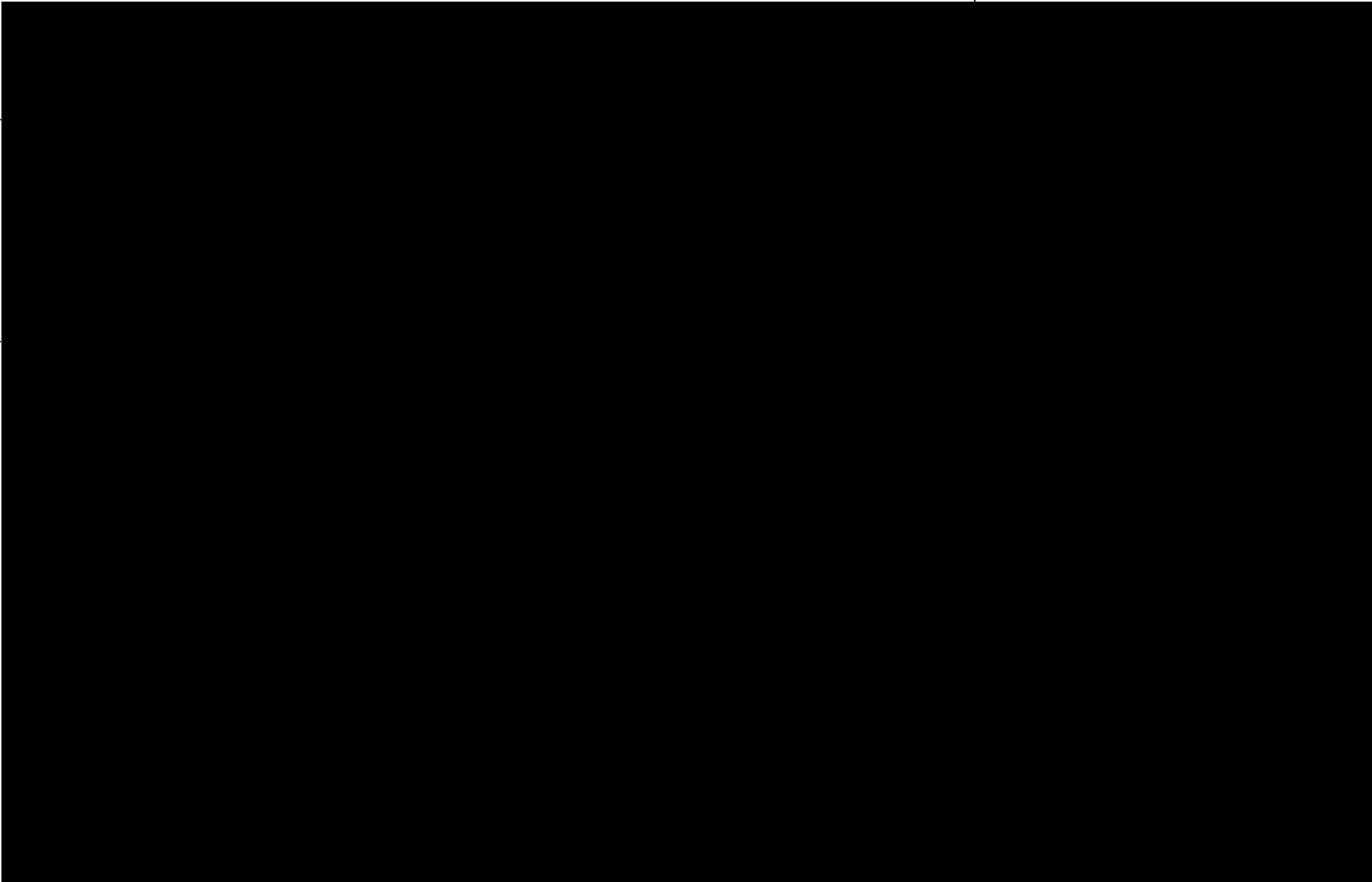
Site Number	Site Type	NRHP Eligibility	Location
21RL0032	Prehistoric Isolate	Recommended Not Eligible	in 1.6 km (1 mi) study area
21RL0033	Historic, mid-twentieth century homestead remnant	Recommended Not Eligible	in Project Area
21RL0035	Prehistoric Isolate	Recommended Not Eligible	in 1.6 km (1 mi) study area
21RL0036	Historic, mid-twentieth century homestead remnant	Undetermined	in 1.6 km (1 mi) study area

### 3.1.4 Historic Architectural Inventory

A review of the historic architectural data provided by the Minnesota SHPO indicates there are 26 documented historic architectural resources within approximately 1.6 km (1 mi) of the Project Area [REDACTED]. The majority of these resources are located in the Town of Plummer; however, ten resources have been documented within the Project Area. Of these, nine resources represent a single farmstead at 21371 180th St SE and each of its associated outbuildings (Table 3-2). Historic architectural resources RL-EMD-002, RL-EMD-005, RL-EMD-006, RL-EMD-007, RL-EMD-008, RL-EMD-009, RL-EMD-010, RL-EMD-011, RL-EMD-012, and RL-EMD-013 were previously recommended not eligible for the NRHP (Rainka et al. 2019).

Table 3-2 Historic Architectural Resources within the Project Area

Inventory Number	Property Name	Address	NRHP Eligibility
RL-EMD-002	Plummer Pump Station	Not Provided	Recommended Not Eligible
RL-EMD-005	Farmstead	21371 180th St SE	Recommended Not Eligible
RL-EMD-006	Wood Frame Outbuilding with Shed Addition	21371 180th St SE	Recommended Not Eligible
RL-EMD-007	Poultry House	21371 180th St SE	Recommended Not Eligible
RL-EMD-008	Implement Shed	21371 180th St SE	Recommended Not Eligible
RL-EMD-009	House	21371 180th St SE	Recommended Not Eligible
RL-EMD-010	Metal Clad Outbuilding	21371 180th St SE	Recommended Not Eligible
RL-EMD-011	Front-Gabled Equipment Shed	21371 180th St SE	Recommended Not Eligible
RL-EMD-012	Pole Barn East	21371 180th St SE	Recommended Not Eligible
RL-EMD-013	Pole Barn West	21371 180th St SE	Recommended Not Eligible



### 3.1.5 Previous Cultural Resource Investigations

Data available through the Minnesota OSA indicates that the western half of the Project Area was previously surveyed for cultural resources (Figure 3-2). Four previous archaeological reconnaissance surveys have been completed within portions of the Project Area, resulting in the identification of one archaeological site. Studies relevant to the Project Area are summarized below.

In 2007 and 2008, the 106 Group completed a Phase I archaeological reconnaissance of the Southern Lights and Alberta Clipper pipelines for Enbridge Energy (Bielakowski et al. 2007; Doperalski and Van Vleet 2008). A portion of the current Project Area overlaps the Alberta Clipper pipeline. Within the portion of the Alberta Clipper line that crosses the current Project Area, no archaeological sites were identified.

In 2013, Commonwealth Cultural Resources Group, Inc. (CCRG) completed a Phase I archaeological reconnaissance in advance of the Enbridge Line 67 Mainline Enhancement Project (Watson 2014). Two archaeological sites were identified as a result of this investigation, neither are located within the Project Area. Both sites were recommended not eligible for inclusion in the NRHP (Watson 2014).

In 2014 and 2015, Merjent completed a Phase I archaeological reconnaissance for the Enbridge Line 3 project (Lange Mueller and Terry 2015). Within the current Project Area, Merjent identified one historic farmstead remnant during their investigation for Line 3. Documented as an archaeological site, 21RL0033 consists of a historic homestead location that appears to have been constructed circa 1939 and was demolished between 1997 and 2007 (Lange Mueller and Terry 2015). Merjent recommended the site not eligible for the NRHP (Lange Mueller and Terry 2015). Merjent completed an addendum investigation in 2016 that included a portion of the current Project Area. The boundary of site 21RL0033 was expanded as a result of this investigation; however, no new archaeological sites were identified in Red Lake County (Lange Mueller et al. 2016)

### 3.1.6 Historic Maps and Aerials

Several available historic maps and aerial photographs were referenced for information pertaining to the historic use of the Project Area between 1877 and 1976 (BLM 1877; George A. Ogle & Co. 1911; Hixson 1916; Regents of the University of Minnesota 2015; USGS 1953, 1963, 1964, 1972, 1976) (Appendix A).

#### 3.1.6.1 Historic Maps

The 1877 General Land Office (GLO) map for Township 151N, Range 42W indicates that the Project Area consists largely of open space. The eastern end of the Project, in Section 14, is forested (BLM 1877). Several wetlands are also visible on this map, to the north and south of the Project Area (BLM 1877). By 1911, at least one homestead has been constructed within the Project Area (George A. Ogle & Co. 1911). This residence is located in the northwest quarter of Section 15, on land owned by R.O. Gordon, and appears to correspond to historic architectural resource RL-EMD-005. A ditch is also depicted running parallel to present-day Highway 1, along the northern boundary of the Project Area. The 1916 *Plat Book of the State of Minnesota* continues to show the R.O. Gordon residence as the only structure within the Project Area (Hixson 1916). The 1964 Plummer, Minnesota 7.5' USGS topographic map shows two residences, each with an associated outbuilding, within the Project Area. This map covers the western two-

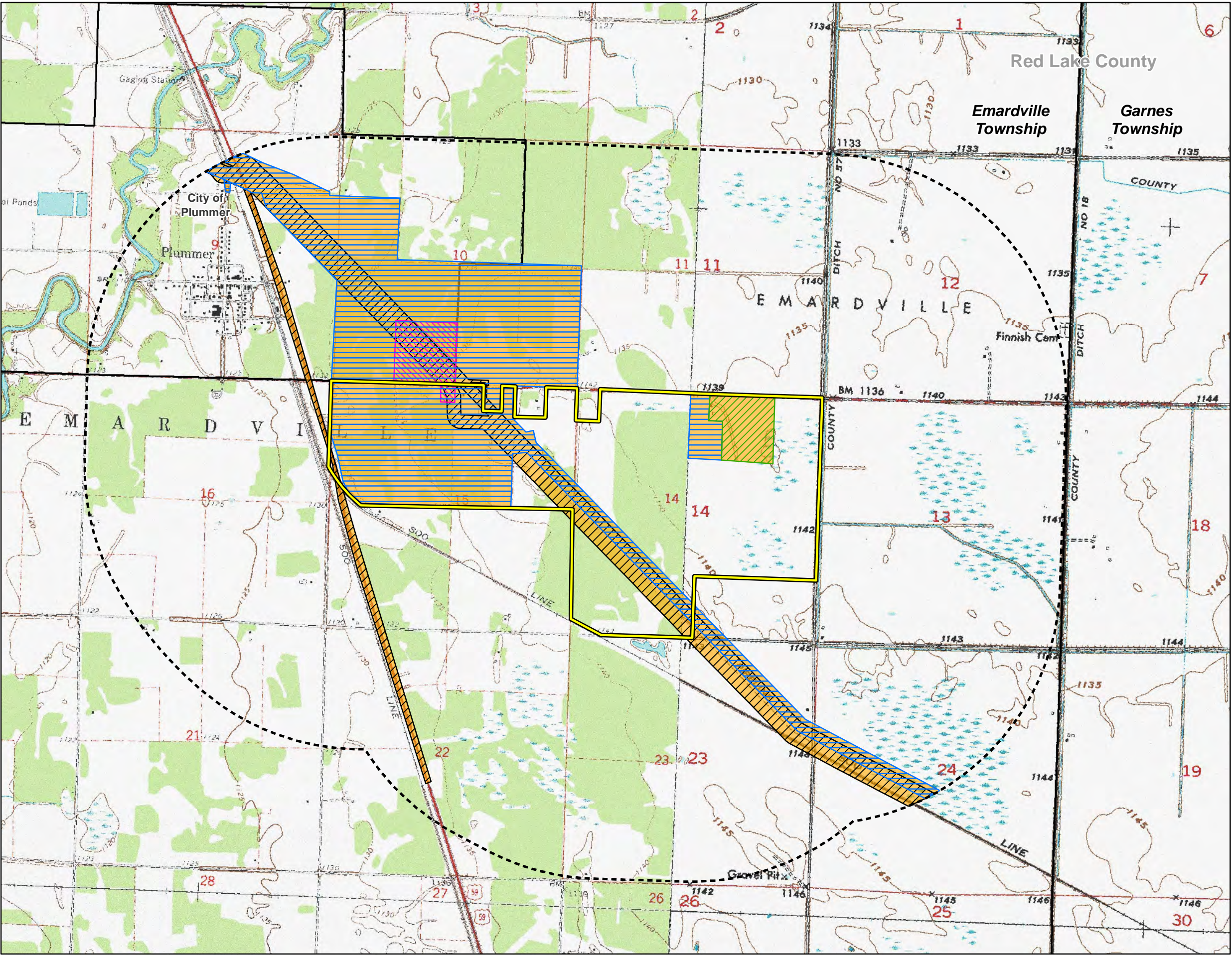
thirds of the Project Area (USGS 1964). The 1972 Oklee NW, Minnesota 7.5' USGS topographic map, which depicts the eastern one-third of the Project Area, shows one residence and an associated outbuilding within the Project Area (USGS 1972). This mapped resource corresponds to archaeological site 21RL0033. These maps also show that a large portion of the Project Area is wooded, and that some areas appear to have been cleared for agricultural purposes.

### **3.1.6.2 Historic Aerial Photographs**

Historic aerial photography from 1939, 1953, 1963, and 1976, as available through the University of Minnesota's Historical Aerial Photographs Online (Regents of the University of Minnesota 2015) and the USGS, were reviewed to gain an understanding of the Project Area from approximately 45 to 80 years ago (Appendix A).

The 1939 aerial imagery indicates that the Project Area is largely wooded and for the most part, has not yet been utilized for row crop agriculture (Regents of the University of Minnesota 2015). The Project Area appears much the same in 1953, though a pipeline scar is visible across the landscape (USGS 1953). The Project Area is somewhat more agricultural in 1963, particularly on the eastern end (USGS 1963). It appears much the same in 1976 (USGS 1976).





- Project Area Boundary
- 1-Mile Buffer
- Areas Previously Surveyed for Archaeological Resources
- Survey Dates**
  - Lange Mueller et. al., 2016
  - Lange Mueller and Terry, 2015
  - Watson, 2014
  - Bielakowski et al. 2007; Doperski and Van Vleet 2008

Data Source: Minnesota State Historical Preservation Office. Online request fulfilled April 2022.

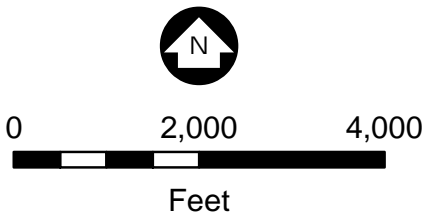


Figure 3-2  
Plummer - Solar  
PREVIOUS CULTURAL  
RESOURCE INVESTIGATIONS  
Solar Environmental Permitting  
Enbridge Energy, L.P.





## 3.2 Environmental Context

Barr reviewed Chapters 3 and 8 of the *MnModel, Phase 3*, prepared by the Minnesota Department of Transportation (MnDOT), for information pertaining to the Project Area's physiography, climate, and flora and fauna (Gibbon et al. 2002; Hobbs et al. 2002). The *MnModel Phase 3* indicates that the Project Area is located in the Northern Bog Archaeological Region (Region 7) (Gibbon et al. 2002). Following the Ecological Classification System utilized in *MnModel Phase 3*, the Project Area is further located within the Aspen Parklands subsection of the Lake Agassiz, Aspen Parklands Section (Gibbon et al. 2002; Hobbs et al. 2002).

The Aspen Parklands subsection is characterized by a low, level plain and extensive wetlands. It consists of glacial lake plain with topography that is level and low relief (Gibbon et al. 2002). Poorly drained soils are also present throughout, and there are few lakes in this subsection. The Aspen Parklands subsection represents the lake plain of Glacial Lake Agassiz. The Project Area is located in a water-worked till plain that has low relief due to wave action of Glacial Lake Agassiz (MN DNR 2022). Presettlement vegetation consisted of "aspen savanna, tallgrass prairie, wet prairie, and dry gravel prairie" (MN DNR 2022). Floodplain forests were also present along streams and rivers.

The climate of this region ranges from the mid-70s Fahrenheit in the summer to the mid- to low teens in the winter (Gibbon et al. 2002). The growing season is less than 120 days per year, and the region's average annual precipitation is between 20 and 26 inches (Gibbon et al. 2002).

Flora and fauna within the region would have historically included deer, moose, caribou, beaver, and black bear in the uplands and fish in Red Lake, Lake of the Woods, and the major rivers. Waterfowl would have also been seasonally abundant. Wild rice was also present, though not in abundance as with other regions further south (Gibbon et al. 2002).

### 3.2.1 Precontact Site Suitability

A review of the *MnModel Phase 4*, prepared by the MnDOT and available for reference through the OSA portal, indicates that portions of the Project Area have a low probability of containing prehistoric archaeological deposits. However, the majority of the Project Area is located in an area of unknown site potential, due to a lack of previous archaeological survey data in the region.

According to *MnModel Phase 4* as referenced through the OSA portal, the Project Area consisted mainly of prairie, with small areas of "permanently wet", "seasonally wet", "deciduous forest", and "deciduous woodland" interspersed throughout. Prehistoric hydrography indicates the majority of the Project Area consisted of wetland. Wet, low-relief areas would not have been conducive for prehistoric occupation, though they would have provided seasonal food sources.

### 3.2.2 Soils

The Project Area is located primarily within the Smiley soil series, with a small portion also located within the Reiner series. The smiley series consists of "very deep, poorly and very poorly drained soils formed in loamy glacial till on lake plains, till plains and moraines" (USDA 2015). The Rainer soil series consists of

"very deep, moderately well drained soils that formed in calcareous loamy glacial till on lake plains" (USDA 2003). Soils within the Project Area are depicted in Table 3-3 and Figure 3-3.

**Table 3-3 Soil Units in the Project Area**

Soil Type	Soil Characteristics	Drainage Type	Hydric
I19A	Foxhome sandy loam, 0 to 2% slopes	Moderately well drained	Predominantly non-hydric (1 to 33%)
I37A	Kratka and Strathcona soils, 0 to 1% slopes	moderately well and somewhat poorly drained (Strathcona series) to poorly and very poorly drained (Kratka series)	All hydric (100%)
I38A	Kratka fine sandy loam, loamy till substratum, 0 to 1% slopes	poorly and very poorly drained	Predominantly hydric (67% to 99%)
I39A	Linveltdt fine sandy loam, 0 to 2% slopes	moderately well drained	Predominantly non-hydric (1 to 33%)
I44A	Newfolden loam, 0 to 2% slopes	moderately well drained	Predominantly non-hydric (1 to 33%)
I45A	Northwood muck, 0 to 1% slopes	very poorly drained soils	All hydric (100%)
I50A	Reiner fine sandy loam, 0 to 2% slopes	moderately well drained	Predominantly non-hydric (1 to 33%)
I59A	Smiley loam, 0 to 1% slopes	poorly and very poorly drained	Predominantly hydric (67% to 99%)
I60A	Smiley mucky loam, 0 to 1% slopes	poorly and very poorly drained	All hydric (100%)
I61A	Strandquist loam, 0 to 1% slopes	poorly drained	Predominantly hydric (67% to 99%)



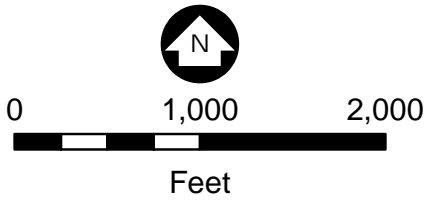
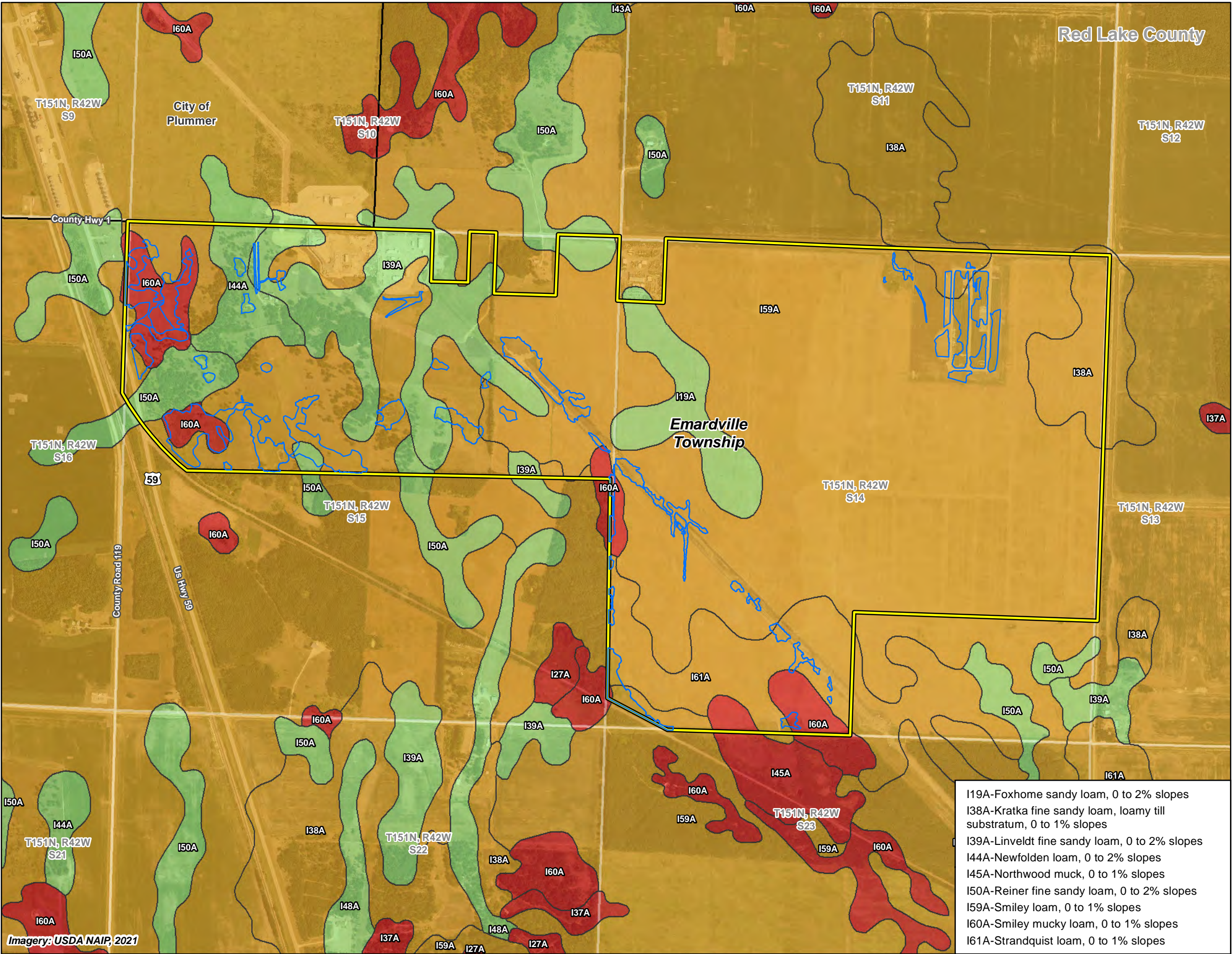


Figure 3-3  
Plummer - Solar  
PROJECT AREA SOILS  
Solar Environmental Permitting  
Enbridge Energy, L.P.





### 3.3 Cultural Contexts

The following summaries provide a context through which to examine the cultural history of the Project Area. These contexts are based on information found in *Archaeology of Minnesota: The Prehistory of the Upper Mississippi River Region*. (Gibbon 2012), a series of statewide historic contexts developed by the Minnesota SHPO (Dobbs 1990a; Dobbs 1990b; SHPO 1993), as well as available Euroamerican county and state histories (Blegen 1963; Boughton Jr. 1929; Brunt 1922;).

#### 3.3.1 Precontact Cultural Setting

The Project Area is located in a portion of Red Lake County with a low probability for long-term precontact settlement. Nevertheless, Red Lake County is located in a region containing aspen savanna, tallgrass prairie, wet prairie, dry gravel prairie, and floodplain forests along streams and rivers. These habitats would have provided abundant plants and animals for seasonal subsistence throughout history. Archaeological sites are not well documented in Red Lake County, with only 58 sites currently recorded (MDA State Archaeologist 2022a). Of these, 42 are precontact in nature (MDA State Archaeologist 2022a). The precontact occupation of northern Minnesota has been divided into three taxonomic periods, based on the material culture present at a site and the subsistence patterns interpreted from the artifact assemblage (Gibbon 2012). These are defined by geographic region in Minnesota and include Paleoindian, Archaic, and Woodland. Sites identified in Red Lake County represent only some of these occupational periods; however, the majority of the documented precontact sites do not contain diagnostic artifacts and therefore cannot be attributed to specific cultural occupations.

The Paleoindian period encompasses the cultural remains of the earliest recorded occupations in the region. Paleoindian sites date to early postglacial times, after 12,000 BP (years Before Present). Paleoindian sites are generally identified through the presence of fluted projectile points, a characteristic artifact type for the Paleoindian period. Although Paleoindian projectile points are some of the most widely distributed types across North America, they are underrepresented in Minnesota (Gibbon 2012). In Red Lake County, no Paleoindian sites have been documented (MDA State Archaeologist 2022a).

The Archaic period is identified by archaeologists as the timespan when more localized seasonal settlement and subsistence patterns replaced the broad seasonal migration patterns of the Paleoindian period. In Minnesota, the beginning of the Archaic period coincides with a warmer, drier postglacial environment. Spruce forests retreated north with the glaciers, and melting glacial ice formed large lakes and rivers. As a result, Archaic period subsistence included more aquatic resources, such as fish and shellfish, as well as smaller game and the foraging of wild plants (Gibbon et al. 2002). In Red Lake County, no Archaic sites have been documented (MDA State Archaeologist 2022a).

The innovation of ceramic technology and the emergence of burial mounds generally define the transition to the Woodland period. Woodland period sites are often identifiable through recovered pottery sherds, in addition to stylistic projectile points. In Red Lake County, five Woodland period sites have been documented (MDA State Archaeologist 2022a).

The remaining 15 recorded sites in Red Lake County are historic in nature, including one historic-period Native American site and one multicomponent site. There is also one site documented in Red Lake County from an unknown time period (MDA State Archaeologist 2022a).

### **3.3.2 Native American Cultural Setting**

The Project is located on land that was home to the Dakota and the Ojibwe, although other tribes were likely present as well (Fleming et al. 2018). Minnesota is the Dakota homeland. The confluence of the Minnesota River with the Mississippi River is known as *Bdote* in Dakota – “the point of origin and a center point for spirituality for Dakota people” (Fleming et al. 2018: p. 57).

Prior to Euroamerican settlement, the Dakota were plentiful and prosperous in Minnesota. As Euroamerican settlers expanded into these states, the Dakota were subjected to war and disease. Following the Dakota War in 1862, the Dakota underwent forced removal (MDA State Archaeologist 2022b).

The Ojibwe arrived in Minnesota hundreds of years ago, following a migration along the Great Lakes from the Atlantic Coast. They were led by a prophecy to go to “the land where food grows on water” and settled in the Mississippi Headwaters region in the mid-eighteenth century (Benton-Banai 1988). Between 1805 and 1867, a series of treaties between the federal government and tribes including the Dakota, Ojibwe, Ho-Chunk, Menominee, Sac, and Fox resulted in the opening of Minnesota to Euroamerican settlement (Minnesota Indian Affairs Council et al. 2011).

The Project Area is located within the boundaries of the 1863 Ceded Territory. The 1863 treaty, known also as the “Old Crossing treaty”, was a culmination of U.S. efforts that began in 1851 with the goal of obtaining the land in the Red River Valley (Minnesota Indian Affairs Council et al. nd). The Old Crossing Treaty was presented as an agreement to allow businesses to travel through Ojibwe territory. However, as written, the treaty actually ceded 11,000,000 acres in present-day Minnesota and North Dakota to the United States. The treaty included a 20-year annuity payment of \$20,000 to the Ojibwe while at the same time providing up to \$100,000 for “Indian traders” who worked in the territory (Minnesota Indian Affairs Council et al. nd). Before ratifying the 1863 treaty the U.S. Senate made significant changes to it, such that several Ojibwe signers refused to endorse it. In 1864 an Ojibwe delegation went to Washington to negotiate a new treaty, which resulted in increased annuity payments for the ceded territory (Minnesota Indian Affairs Council et al. nd).

While the following narrative focuses on historic Euroamerican activities within present-day Minnesota, it is important to acknowledge that Native American nations played a vital role in Minnesota’s history and continue to influence its culture today. Nations including the Dakota, Ojibwe, and others have demonstrated resilience and resistance in the face of concerted efforts to remove them from their land and culture. Despite these attempts at removal, many native peoples continued to return to their homeland. We acknowledge the circumstances that led to the forced removal of Native American tribal members in Minnesota and honor their history and resilience.

### **3.3.3 Historic Cultural Setting**

At the end of the American Revolution, the U.S. acquired all of the land east of the Mississippi River in the Second Treaty of Paris (Blegen 1963). This acquisition included the north-central, northeast, and east-central portions of Minnesota. In 1803, the United States acquired the majority of what was to become Minnesota from France as part of the Louisiana Purchase (Blegen 1963). After spending most of the first half of the nineteenth century changing hands between Spain, France, and the U.S., the region was formed into the Minnesota Territory in 1849. Nine years later it became the thirty-second state (Blegen 1963).

#### **3.3.3.1 Statehood**

As Minnesota entered the Union in 1858, tensions between the North and South were coming to a head over the issue of slavery. When the Civil War started in 1861, Minnesota largely supported the Union, and provided approximately 22,000 troops to the war effort (Blegen 1963). By the second year of the war, Minnesota was facing its own war: the Dakota War (Blegen 1963). The war was a result of growing tensions between the Dakota and the U.S. government over violations of the Treaty of Traverse des Sioux and the Treaty of Mendota, as well as unacceptable payments by Indian agents. Due to an impasse over negotiations, a Dakota hunting party attacked and killed five white settlers, leading to the attack of settlements throughout the Minnesota River valley (Blegen 1963). These battles continued for several months, until most of the Dakota were captured. Eventually, 38 Dakota were hanged, the largest one-day execution in U.S. history (Blegen 1963). By April of 1863, the remaining Dakota in the region were expelled to South Dakota and Nebraska (Blegen 1963).

After the Civil War, thousands of Americans came to Minnesota to take advantage of the state's cheap and fertile land (Brunt 1922). Largely due to advertisements by the railroad industry, the state's population quickly tripled (Brunt 1922). Many of these new settlers came to the area to farm and cut timber, becoming the backbone of the state's early economy (Brunt 1922). To further economic success, local Grange chapters were established (Brunt 1922). The organization had great political influence on important farming matters, and also provided education on new farming methods.

By the end of the nineteenth century, Minnesota's industrial development began to take shape (Clark 1989). The state became one of the first to develop hydroelectric power with the building of a hydroelectric power plant in Saint Anthony Falls. The discovery of iron in the Mesabi Range and the Vermilion Range near Lake Superior in the 1880s established Minnesota's iron mining industry (Clark 1989).

#### **3.3.3.2 Red Lake County**

Red Lake County formed in 1896 from a portion of Polk County. Its boundaries continued to change until 1910, when Pennington County was formed from what had been the northern half of Red Lake County (Boughton Jr. 1929). Red Lake County is located in the heart of the Red River Valley and known for its fertile soil. The confluence of Red Lake River and Clearwater River is located within the county, at present-day Red Lake Falls (Boughton Jr. 1929). A French trading post was established at the confluence of these two rivers in 1798 (MHN 2008). The first Euroamerican settlers arrived in the county in 1876, when 119 French Canadian families were brought to the area by Pierre Bottineau (MHN 2008). Scandinavian and German immigrant farmers began to settle the county in the 1880s and 1890s (Boughton Jr. 1929).

Lumber was the major economy of Red Lake County until 1911, when it was replaced by farming (MNH 2008). Small tract farming gave way to large grain farms, and as a result milling operations became a staple operation in the early twentieth century, particularly in Red Lake Falls (MNH 2008).

At the time of its organization in 1896, the Northern Pacific and the Great Northern railroads traversed Red Lake County. In 1904 the Minneapolis, St. Paul and Sault Ste. Marie Railroad, also known as the Soo Line, was built through the county, which resulted in the establishment of two new towns: Oklee and Plummer (Healy and Kankel 1976).

### 3.3.3.3 Emardville Township

Emardville Township is named after Pierre Emard, who held the first organizational town board meeting at his home on July 18, 1883 (Healy and Kankel 1976). This board meeting resulted in the election of townspeople to oversee the building of roads and bridges. Between 1887 and 1889 male members of Emardville Township were expected to volunteer time annually to help build roads throughout the township (Healy and Kankel 1976). In 1884, the town board organized school districts within the county, resulting in the creation of six separate districts. In 1911, Emardville Township grew in size, when 12 sections of land from Wyandotte Township were added to Emardville after the creation of Pennington County (Healy and Kankel 1976). The 2016-2020 American Community Survey, published by the U.S. Census Bureau, indicates that the population of Emardville Township, which has a total area of approximately 45 square miles, is 229<sup>2</sup>.

### *Plummer, MN*

The Town of Plummer formed following construction of the Soo Rail Line through Red Lake County, and is located off U.S. Highway 59, adjacent to the Soo Line (Boughton Jr. 1929). The Clearwater River travels just west of the town, which is named after C.A. Plummer, the first storekeeper in the town (Healy and Kankel 1976). Plummer was incorporated in 1906. Major enterprises within the town included the Thief River Falls Milling Company, which owned a large elevator in the town and the Emardville Creamery Association, who moved their creamery to the west side of the Clearwater River. The Soo Line Railroad also built a branch line from Plummer to Duluth in 1910, to support heavy lumbering activity in the area (Healy and Kankel 1976). The 2016-2020 American Community Survey indicates that the population of Plummer, Minnesota is 333<sup>3</sup>.

## 3.4 Summary and Discussion

This section presents the results of the cultural resources background research. The literature review indicates that four archaeological sites and 26 historic architectural resources are located within the

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<sup>2</sup> Data retrieved from the 2020 ACS 5-year Estimates Subject Table, Selected Characteristics of the Total and Native Populations, Table ID: S0601. <https://data.census.gov/cedsci/>

<sup>3</sup> Ibid.

1.6 km (1 mi) study area. Of these, one archaeological site and ten historic architectural resources are located within the Project Area.

The predictive model for precontact archaeological sites developed by the MnDOT suggests that the Project Area has low potential to contain precontact resources. However, the literature review suggests that historic sites may persist within the Project Area.

## 4 Methods

This section describes the regulations and guidelines governing archaeological fieldwork as well as the research design, field methods, and laboratory methods employed during the Phase I survey. The objective of the Phase I survey was to identify cultural resources that may be affected by the Project.

### 4.1 Applicable Regulations and Guidelines

The Project requires a site permit from the Minnesota PUC pursuant to the Minnesota Power Plant Siting Act (Minnesota Statutes, chapter 216E) and Minnesota Rules, chapter 7850 for proposed projects meeting the definition of “large electric power generating plants” and “high voltage transmission lines”. Minnesota Rules 7850.1900, Subpart 3 requires that an applicant for a site permit include “a description of the effects of the facility on archaeological and historic resources”<sup>4</sup>.

The Project is also subject to the Minnesota Historic Sites Act (MS 138.661-138.669), which requires that state agencies consult with the SHPO before undertaking or licensing projects that may affect properties on the State or National Registers of Historic Places.

Under the Minnesota Private Cemeteries Act (MS 307.08), if human remains are encountered during construction, construction at that location must be halted immediately and local law enforcement and the OSA must be contacted. Construction cannot proceed at that location until authorized by local law enforcement and the OSA.

### 4.2 Research Design

Barr based the research design on the results of the background research and in consideration of the requirements for archaeological and historic resources pursuant to the Minnesota Rules 7850.1900, Subpart 3. Barr’s methodology, therefore, was designed to complete a cultural resources survey of the entire Project Area to determine whether the Project will affect archaeological resources, historic resources, or resources significant to Native American tribes.

### 4.3 Field Methods

Barr conducted the archaeological fieldwork using methods consistent with Minnesota SHPO guidelines (Anfinson 2005). The Project Area consists of fallow agricultural fields. In fields with greater than 25 percent average ground surface visibility, a systematic pedestrian survey was completed in transects spaced at 15-meter intervals.

A small portion of the Project Area contained average ground surface visibility less than 25 percent; therefore, a shovel test survey was completed on a 15-meter grid. All soil recovered from shovel test units

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<sup>4</sup> [7850.1900 - MN Rules Part](#)

was screened through ¼-inch hardware mesh down to archaeologically sterile soil (typically the “B” horizon).

When artifacts were identified, the crew collected and bagged artifacts by individual provenience, recorded relevant information such as soils and depth of deposits (when applicable), mapped features with a Global Positioning System (GPS), and took photographs.

The TCRS consisted of a pedestrian walkover survey completed in transects spaced at 15-meter intervals by members of the Leech Lake Band of Ojibwe and other tribally affiliated individuals. The goal of the TCRS was to identify and document Tribal cultural resource locations including cultural corridors, known archaeological sites, cemeteries, water resources, seasonal activity sites and other places or items of cultural and religious significance. Relevant information was documented through photographs, measurements, and recorded with a GPS receiver.

The archaeological reconnaissance and TCRS was a collaborative effort between DDCRM and Barr.

## **4.4 Laboratory Methods**

Recovered archaeological material was cleaned, sorted, analyzed, cataloged, and photographed. Artifacts were also counted and measured as necessary.

### **4.4.1 Historic Artifacts**

Historic materials were identified according to material, manufacture, form, and function. Artifacts were first separated into broad material categories: ceramics, glass, metal, faunal, brick, and others. Although brick is a ceramic material in that it is fired clay, it does not represent a ceramic container, but rather a structural element. Therefore, for the purposes of this report, brick was categorized separately from other ceramic objects. For recovered ceramics, the classifications and chronologies formulated by Cushion (1980), Debolt (1994), Greer (1981), IMACS (1992), Ketchum (1983, 1991, 2000), Lehner (1988), Lofstrom et al. (1982), and Raycraft (1990) are among the sources used to identify and date ceramic artifacts for the current Project. Glass identification and temporal affiliation followed studies by Deiss (1979), Jones and Sullivan (1989), Ketchum (1975), Lorrain (1968), Putnam (1965), and Toulouse (1971). Bottle glass in particular was analyzed according to Lindsey’s (2022) classification, terminology, definitions, and chronology.

### **4.4.2 Curation**

Collected artifacts were transported to Barr’s laboratory in the Minneapolis office for cleaning and analysis. Following review and concurrence of the report by the Minnesota SHPO, artifacts will be returned to the landowner. A Minnesota archaeological site record update was completed for the reidentified archaeological site.



## 5 Results

Barr and DDCRM conducted the archaeological field work from July 18 through July 22, 2022. Weather was warm, with temperatures in the upper-70 degrees Fahrenheit. The Project Area consisted of a mix of fallow agricultural fields previously planted in soy and former pasture/homesteads (Plate 1). Ground surface visibility ranged between 25 and 40 percent in the fallow agricultural fields (Plate 2). Former pasture and homestead areas contained no ground surface visibility; however, the majority of this area was previously surveyed for archaeological resources. One former homestead remnant was previously documented as an archaeological site (21RL0033); therefore, shovel testing was conducted in this area to confirm site presence and reaffirm boundaries. Results of the TCRS are presented in *A Tribal Cultural Resources Survey and OSA Site Reinvestigation for Enbridge Solar Development in Red Lake County, Minnesota* (DDCRM 2022), included in Appendix B. Photographs of the field investigation are included in Appendix C.

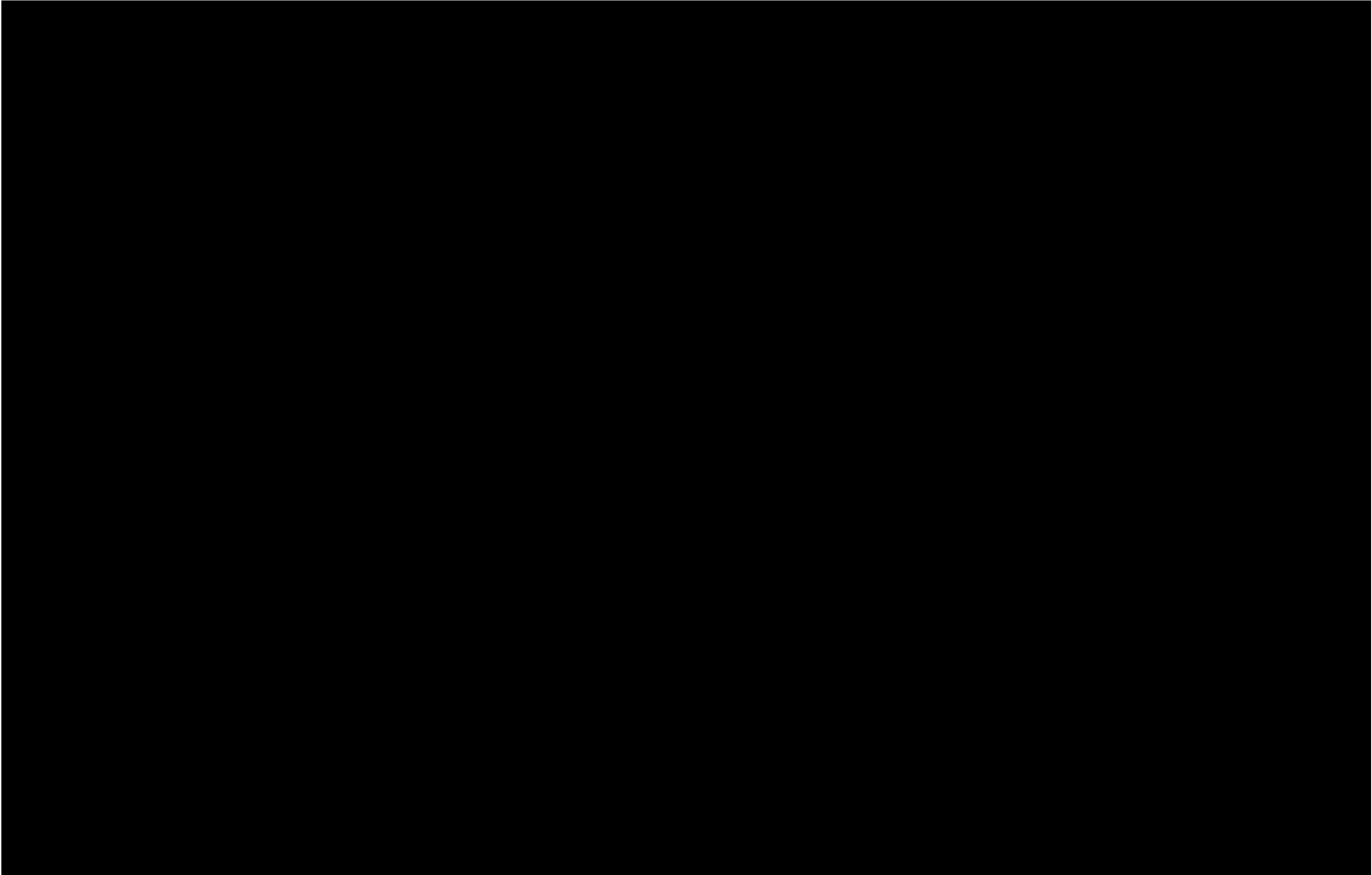


Plate 1. Project Area Overview



Plate 2. Example Ground Surface Visibility

As a result of the archaeological investigation, previously recorded site 21RL0033 was reidentified [REDACTED]. The previously documented historic architectural resources within the Project Area were also reidentified. Further discussion is included below.



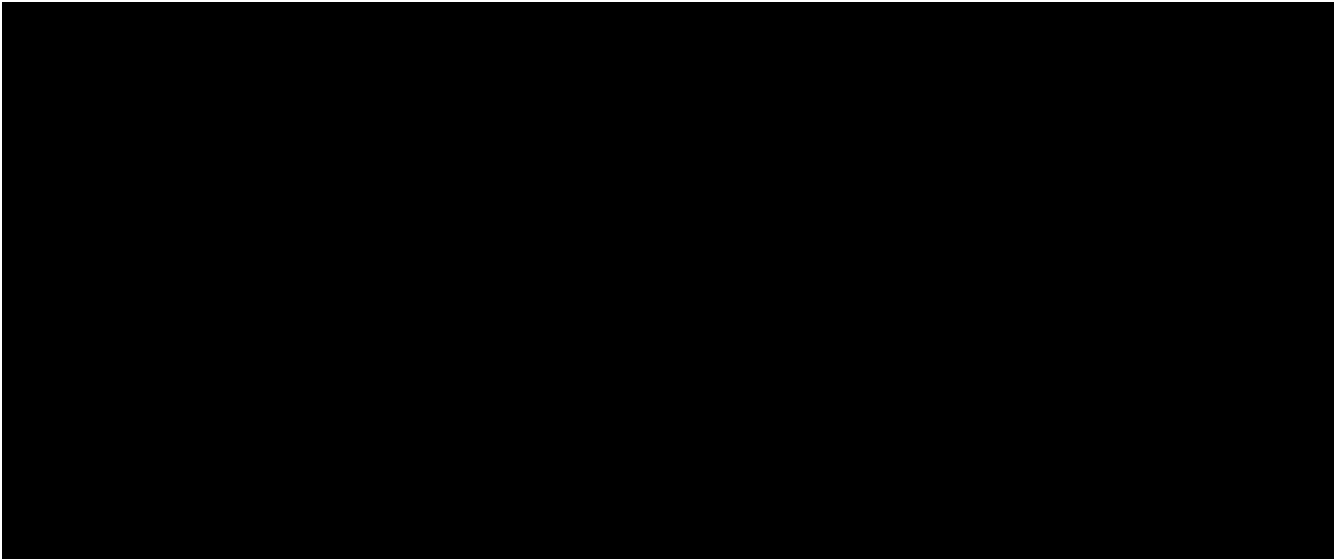
## 5.1 Site 21RL0033

Site 21RL0033 consists of the remains of a historic homestead. Site 21RL0033 was originally documented in 2014 and reinvestigated in 2015 in support of the Enbridge Line 3 Replacement Project (Lange Mueller and Terry 2015). The site was reidentified as part of the current investigation through shovel testing in an overgrown lot.

Site 21RL0033 is located [REDACTED]

[REDACTED]. The site consists of the sparse remains of a former homestead originally identified in 2014. The site measures 94m (307ft) north to south by x 78m (257ft) east to west. The soil on which the site is located is Smiley loam, 0 to 1% slopes (159A). A typical shovel test probe consisted of very dark grayish brown (10YR 3/2) silty clay loam over a dark gray (10YR 4/1) clay loam.

Historic maps and aerials were referenced in order to identify the approximate age of the homestead. Available historic maps for the area, including the 1877 GLO map, 1911 Atlas of Red Lake County, and 1916 Plat Book of the State of Minnesota show no buildings or structures in the site vicinity (BLM 1877; Geo. A. Ogle & CO. 1911; Hixson 1916). A 1939 aerial photograph available through the University of Minnesota's Historical Aerial Photographs Online (Regents of the University of Minnesota 2015) appears to indicate at least one structure in the vicinity of site 21RL0033 [REDACTED]. Historic aerial imagery from 1953, 1963, 1976, and 1991 continue to depict a homestead at the location of site 21RL0033 (Google Earth Pro 1991; USGS 1953, 1963, 1976). The 1963 aerial photograph indicates at least three structures associated with the site [REDACTED]. More recent plat maps from 1994 and 1997 show a structure at the location of site 21RL0033 (Farm & Home Publishers 1994, 1997). Aerial imagery indicates the structures appear to have been demolished by 2003 (Google Earth Pro 2003). Therefore, based on a review of historic maps and aerials, the homestead associated with site 21RL0033 was constructed sometime between 1916 and 1939, and was demolished between 1997 and 2003.



Artifacts recovered from site 21RL0033 consist primarily of wire nails, which postdate 1880 (Nelson 1968) (Plate 5). Nearly all the recovered artifacts were not temporally diagnostic to a specific time period; however, one recovered artifact dated from the mid-twentieth century. This consisted of a vitro agate Victory Marble which was manufactured from the 1940s through the 1950s (CAT 011; Block 2022) (Plate 6). Recovered artifacts are listed in Table 5-1 and a comprehensive artifact catalog can be found in Appendix D.



Plate 5. CAT No. 007



Plate 6. CAT No. 011

Barr investigated an area measuring 2.13 acres to determine whether previously documented site 21RL0033 was still present within the Project Area. As a result, shovel testing focused on determining the presence or absence of artifacts within the boundaries of the site as it was documented in 2015. Radial shovel test probes were not excavated off of positive shovel test units, as site boundaries had been previously established. Barr completed pedestrian survey within the portion of the site previously recorded in agricultural field. In total, 26 shovel tests were excavated within the previously determined site boundaries. Of these, 10 shovel test probes were positive for cultural material and 16 shovel test probes were negative [REDACTED]. A former driveway was identified running to the site, as well as four foundation

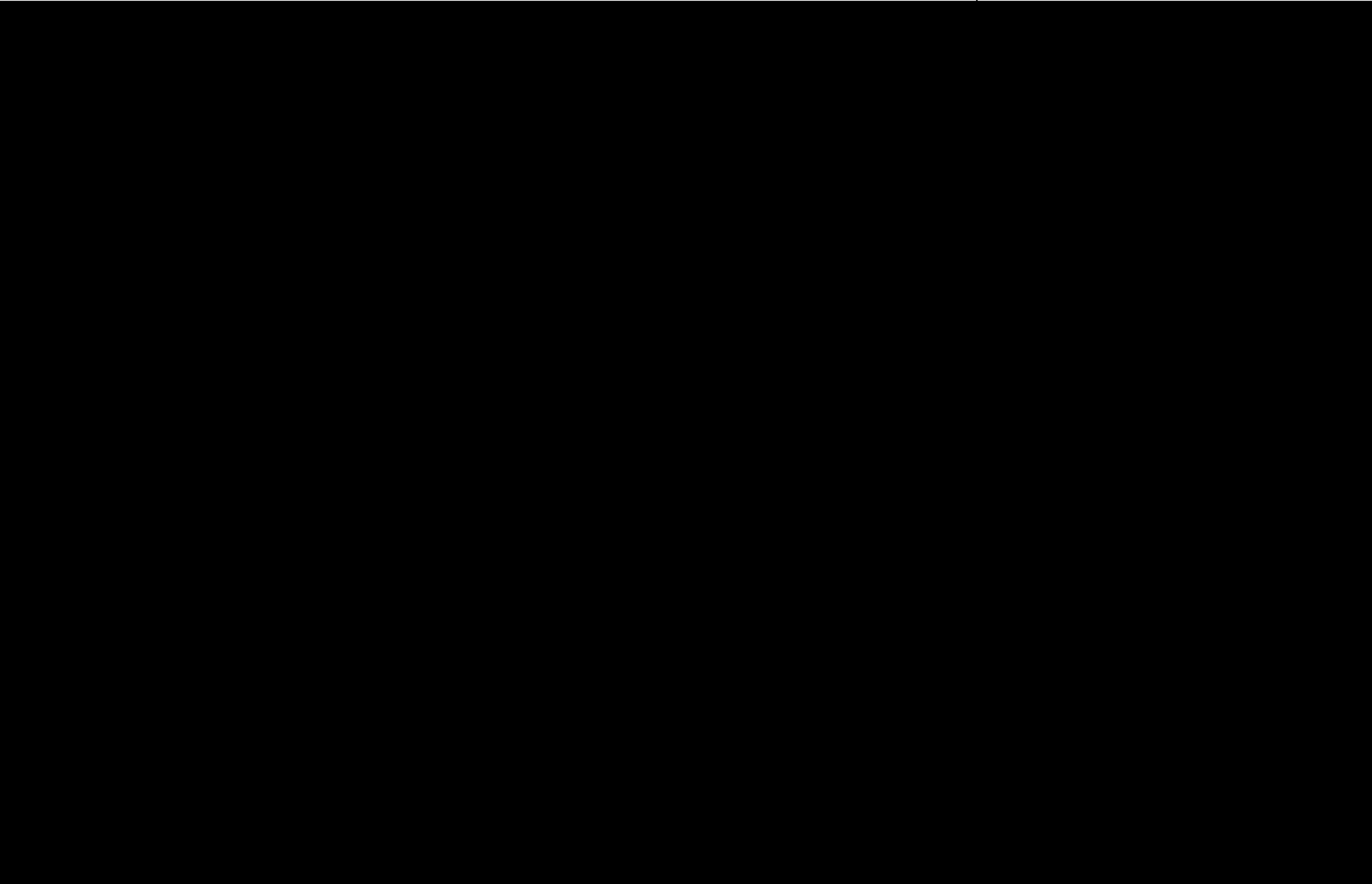
remnants and a well/cistern previously documented by Merjent. The circular depression previously identified by Merjent was also relocated, though no concrete pad was found adjacent to it. Visual inspection within site boundaries also reidentified the porcelain toilet bowl fragments, the porcelain insulator, the metal hinges, and the metal 55-gallon drum base. These were not collected.

**Table 5-1      Recovered Artifacts, Site 21RL0033**

Artifact Type	Count
Brass	1
Bullet Casing (post 1866)	1
Faunal	1
Undetermined fragment	1
Colorless Glass	3
Flat Glass	1
Unk., Body	2
Colorless and Blue Glass	1
Marble (1940s-1950s)	1
Fiberglass	1
Green	1
Metal	49
Bolt	1
Fragment (unk.)	12
Nail (Post 1880)	35
Strap	1
Porcelain	1
Hard Paste (Post 1850)	1
Grand Total	60

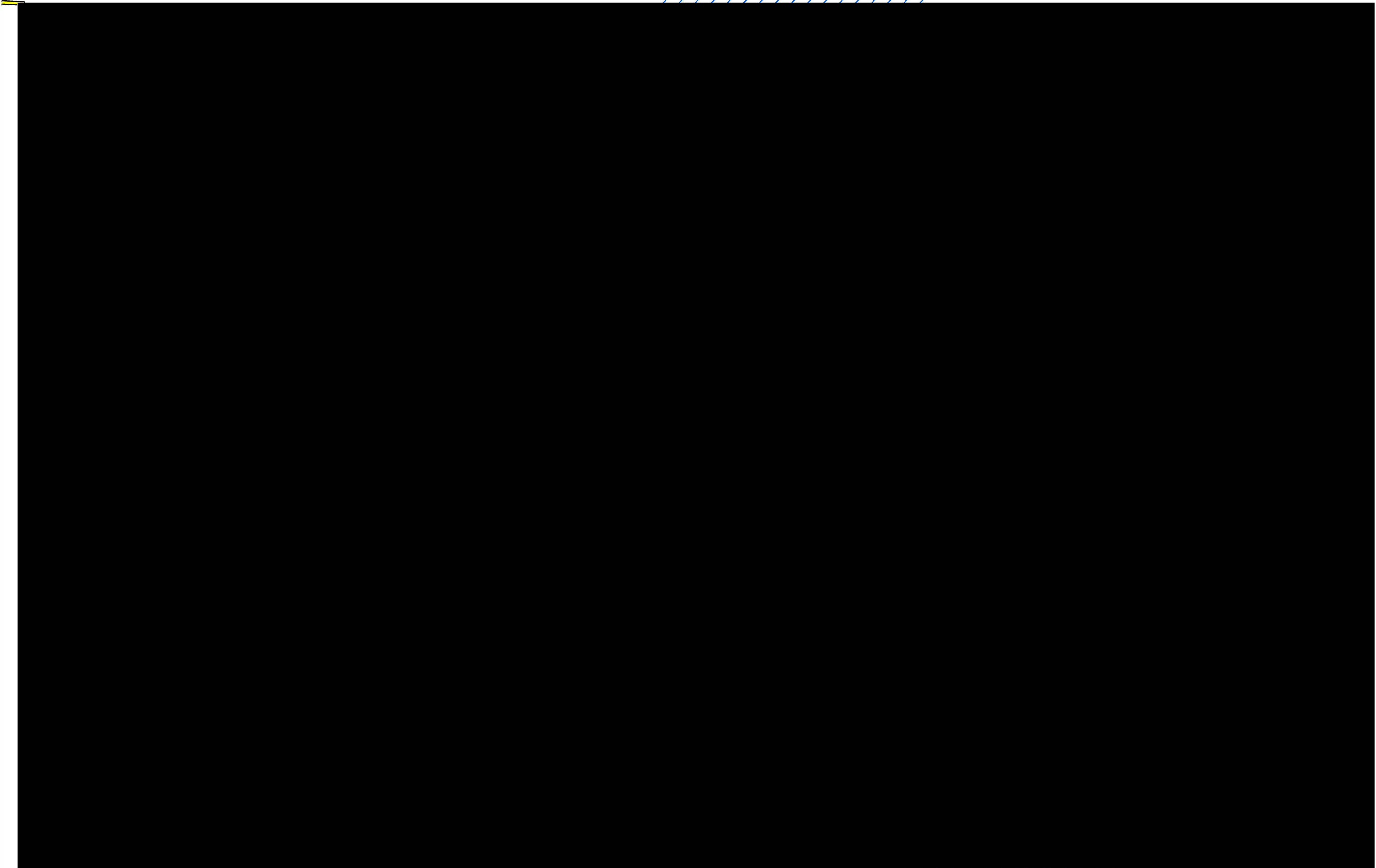
Site 21RL0033 appears to represent the limited remains of a former homestead that dates from the early to mid-twentieth century. The majority of material scattered throughout the site, though likely contemporaneous with the mid-century occupation, is still being manufactured today.

Site 21RL0033 cannot currently be directly associated with any significant persons or events in the region, nor does it appear to offer information important to the history of the region. The site was previously recommended not eligible for the NRHP (Lange Mueller and Terry 2015). Site 21RL0033, as it is currently defined, continues to remain not eligible for the NRHP and no further archaeological work is recommended.



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## 5.2 Previously Recorded Historic Architectural Resources

During a historic architectural survey for the Enbridge Line 3 Replacement Project completed in 2019, 10 resources were documented within the current Project Area (Rainka et al. 2019). These resources, which consist of a single farmstead and its associated outbuildings (RL-EMD-005, RL-EMD-006, RL-EMD-007, RL-EMD-008, RL-EMD-009, RL-EMD-010, RL-EMD-011, RL-EMD-012, and RL-EMD-013) as well as the Plummer station (RL-EMD-002), were revisited as part of current survey efforts.

The resources appeared to be in much the same condition as when they were originally documented (Plate 7 through Plate 10). Each of these historic architectural resources were previously determined not eligible for the NRHP; therefore, no additional work is recommended for the Project to proceed as planned.



Plate 7. RL-EMD-009 (House, Facing north)



Plate 8. RL-EMD-009 (House, Facing southeast)



Plate 9. RL-EMD-006 (Wood Frame Outbuilding with Shed Addition, Facing southwest)



Plate 10. RL-EMD-007 (Poultry House, Facing northeast)



## 6 Conclusions and Recommendations

Enbridge is proposing to develop a 130 MWac solar facility (Project) adjacent to their existing Plummer Station, southeast of Plummer, Minnesota. Barr, at the request of Enbridge, conducted a Phase I for the Project. This work was completed to ensure that no significant cultural resources would be impacted as a result of the Project.

### 6.1 Project Overview

The Project would be located within an area measuring up to 854 acres, on land that was primarily used for agriculture.

Background research conducted in April 2022 focused on the Project Area. The background research determined that a portion of the Project Area had been previously surveyed for cultural resources, which resulted in the identification of two cultural resources. These resources consist of one archaeological site and one historic architectural resource. The archaeological site consists of a former homestead remnant (21RL0033). The historic architectural resource represents an extant homestead (RL-EMD-005) with associated outbuildings (RL-EMD-006, RL-EMD-007, RL-EMD-008, RL-EMD-009, RL-EMD-010, RL-EMD-011, RL-EMD-012, and RL-EMD-013) which were previously recommended not eligible for the NRHP (Rainka et al. 2019).

Barr and DDCRM conducted the Phase I and TCRS fieldwork from July 18 through July 22, 2022. The goal of this survey was to identify cultural resources that may be affected by Project activities.

### 6.2 Summary of Results and Recommendations

As a result of the Phase I investigation, previously recorded archaeological site 21RL0033 was reidentified. Based on the findings presented in this report of investigation, site 21RL0033 remains not eligible for the NRHP. Barr recommends that no further archaeological work be required for the Project to proceed as planned.

Tribal cultural resources identified by DDCRM include rocks, wildlife, and plants traditionally and currently used for food, medicine, arts, ceremony, and/or materials. The delineated wetlands within the Project Area provide the type of habitat for food and other natural resources that are traditionally and currently used by Tribes ancestral to this area. DDCRM recommends that Tribal Monitors be present for any future ground disturbing activities that may impact cultural resources.

These determinations and recommendations are based on the current Project design. If during the course of construction the Project boundaries should change, additional work may be required.

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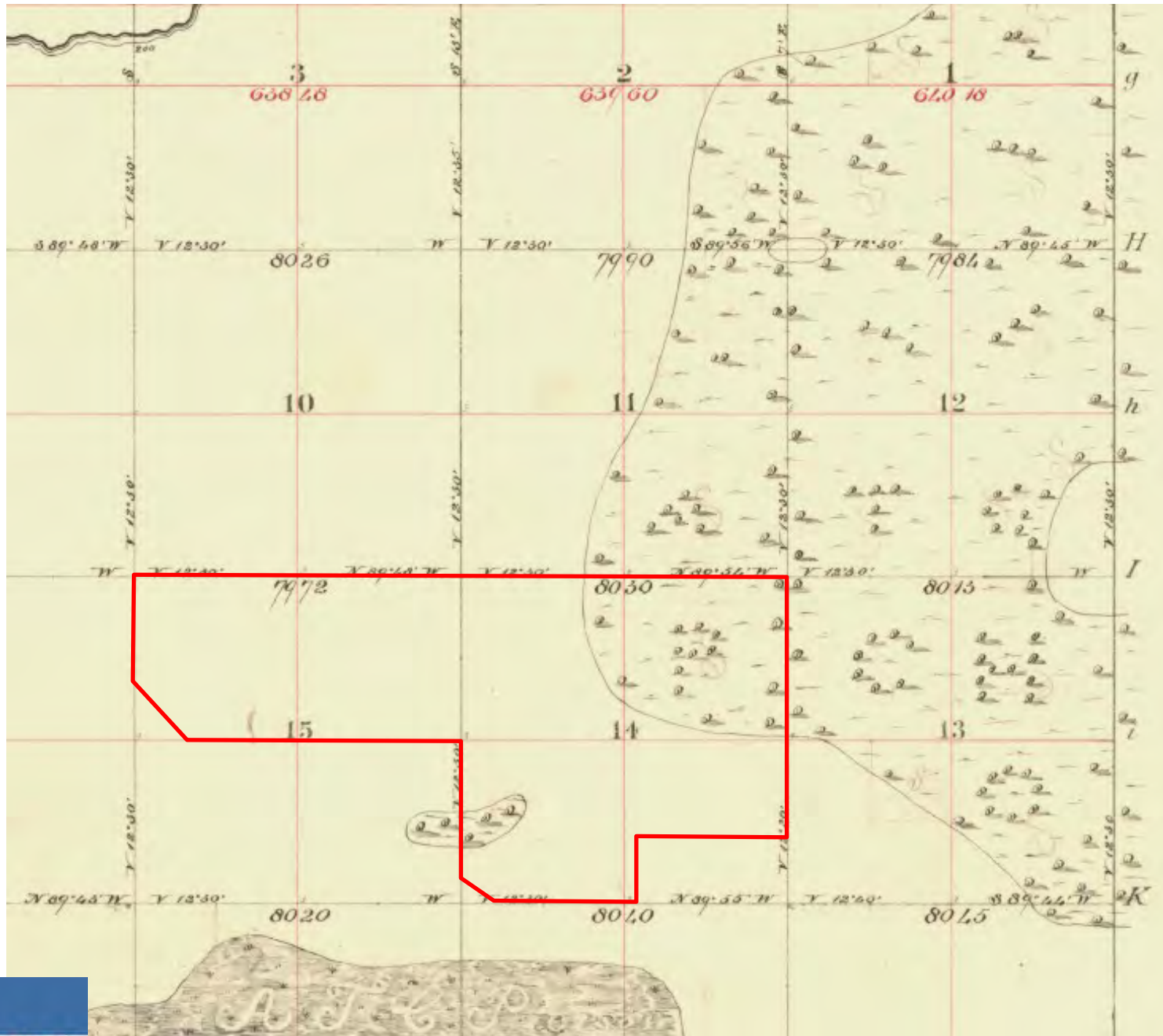
## [Appendices](#)




## Appendix A

### Historic Maps and Aerials

Appendix A   Historic Maps and Aerials

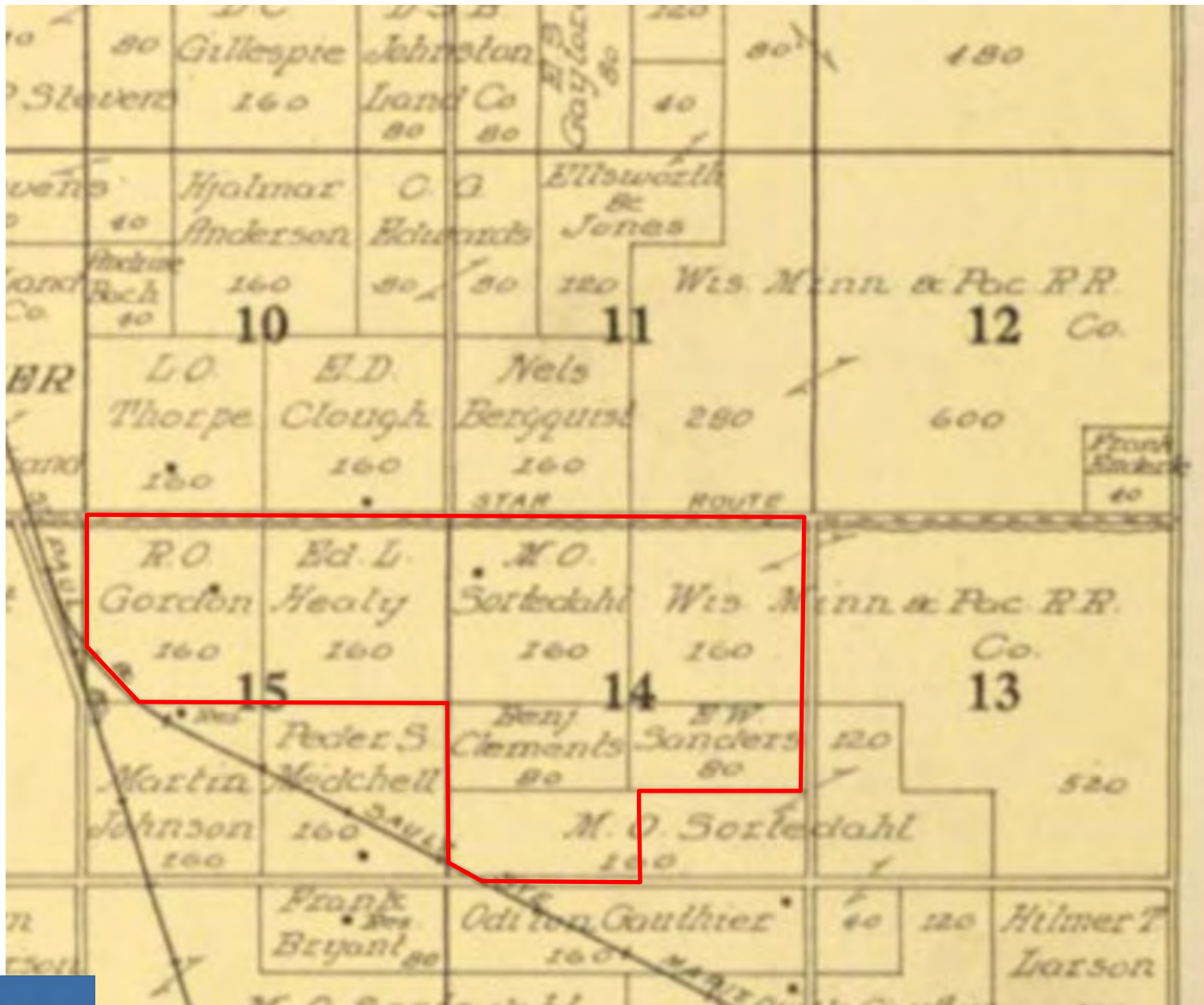



 Project Area,  
Approximate



1877 GLO MAP  
Plummer—Solar  
Enbridge Energy, L.P.  
Red Lake County, MN

FIGURE A1

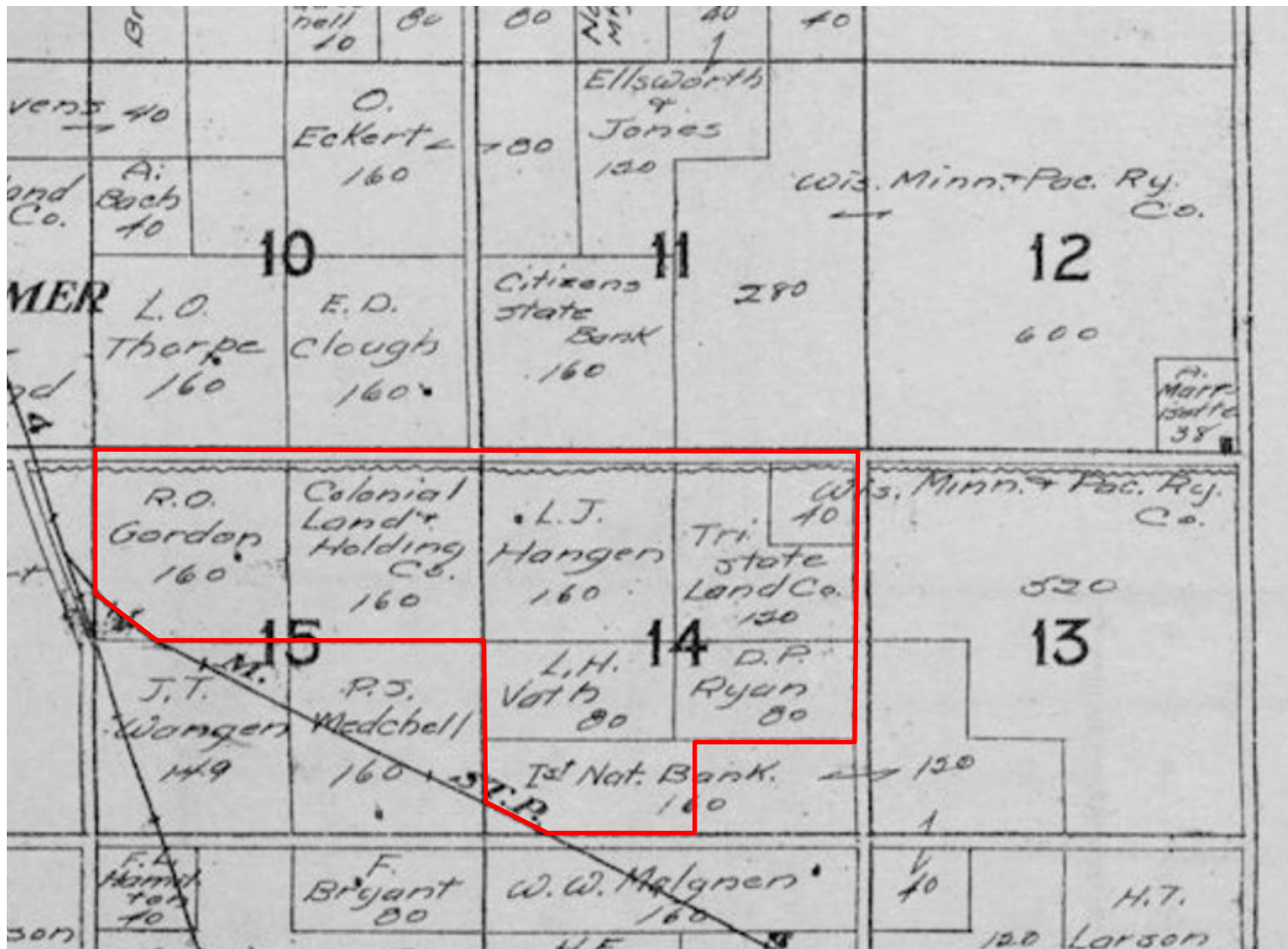



 Project Area,  
Approximate



1911 HISTORIC MAP  
Plummer—Solar  
Enbridge Energy, L.P.  
Red Lake County, MN

FIGURE A2



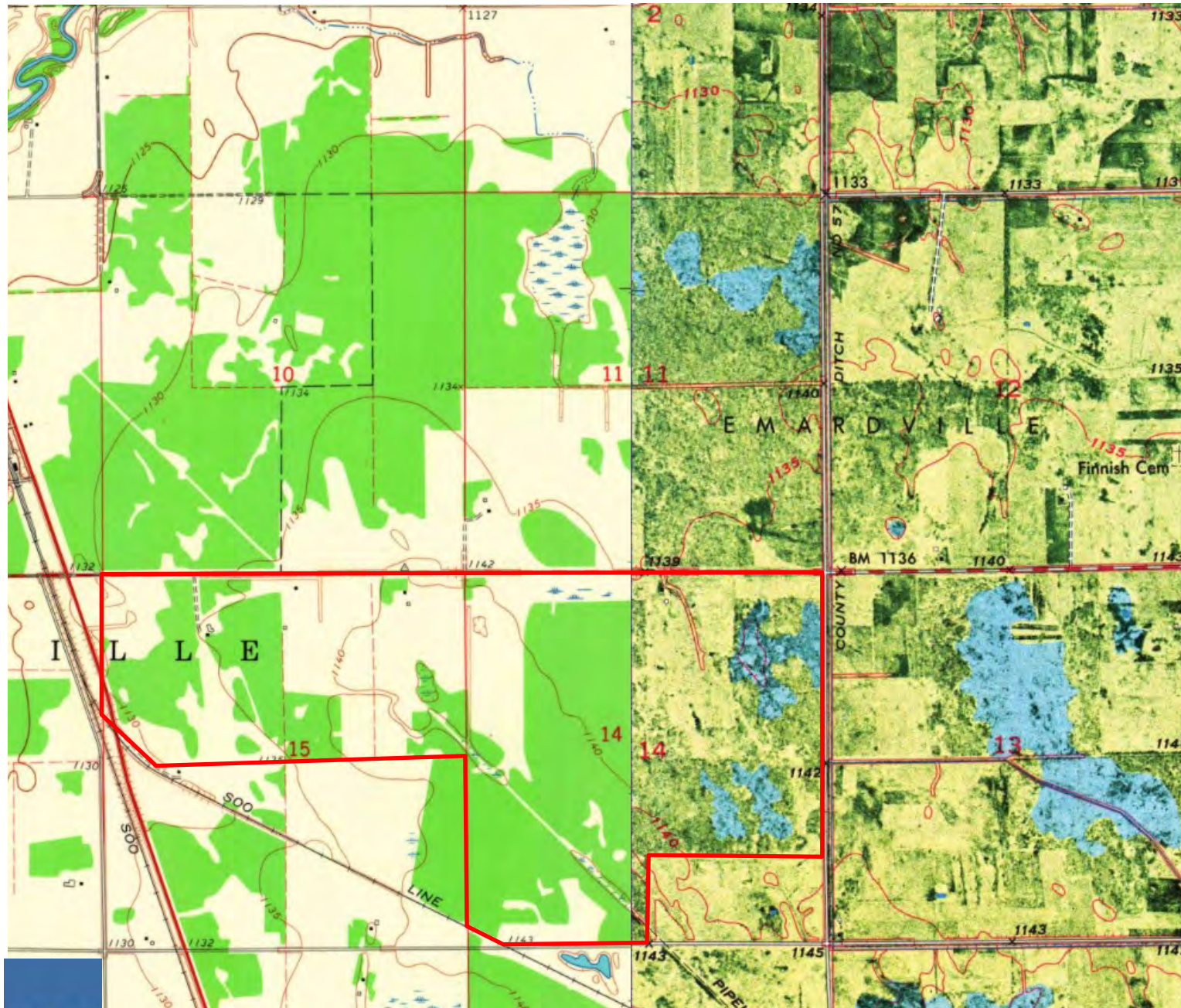
 Project Area, Approximate




1916 HISTORIC MAP  
Plummer—Solar  
Enbridge Energy, L.P.  
Red Lake County, MN

FIGURE A3





 Project Area, Approximate

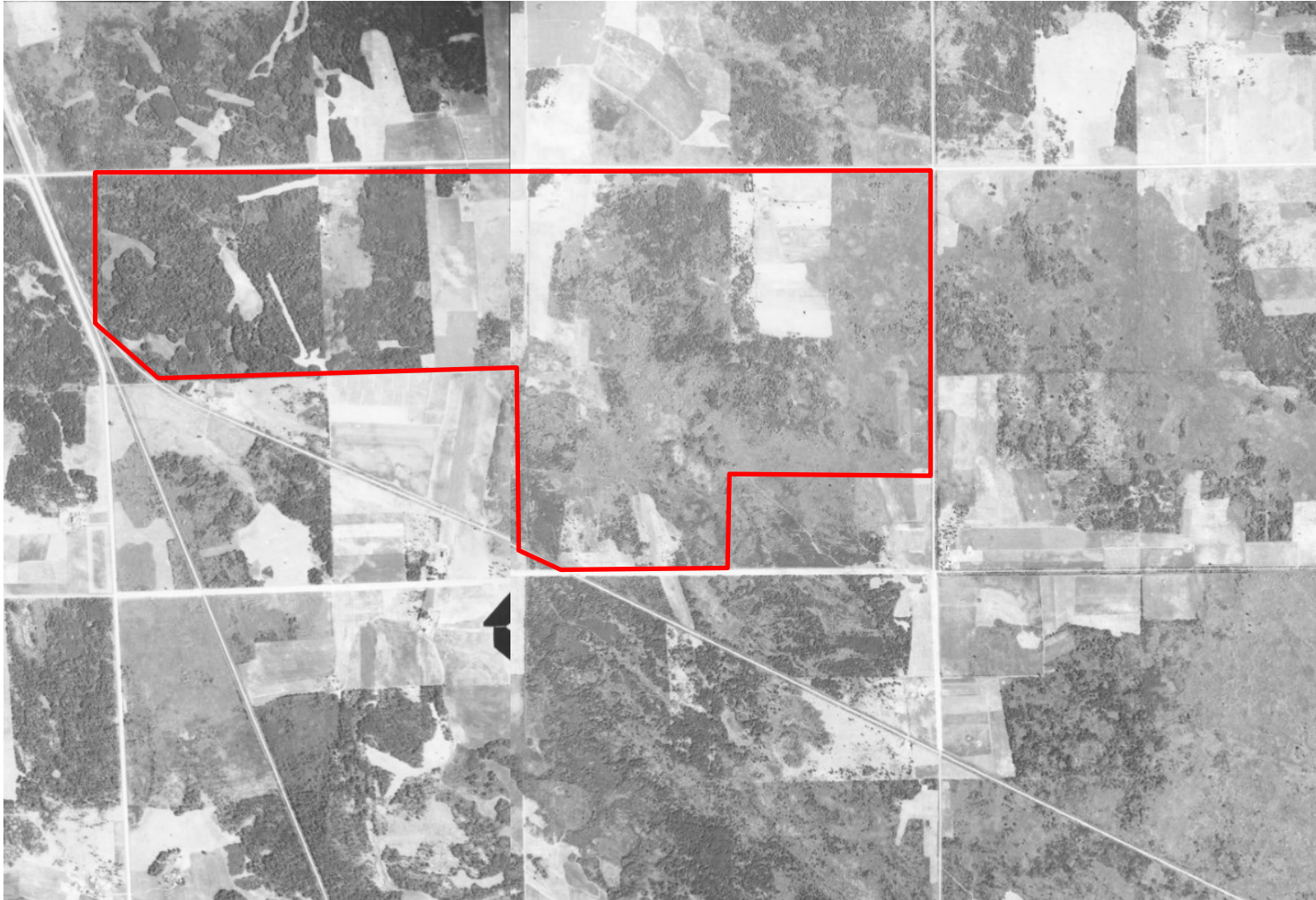



1964 & 1972 TOPO MAPS  
Plummer—Solar  
Enbridge Energy, L.P.  
Red Lake County, MN

BARR

FIGURE A4



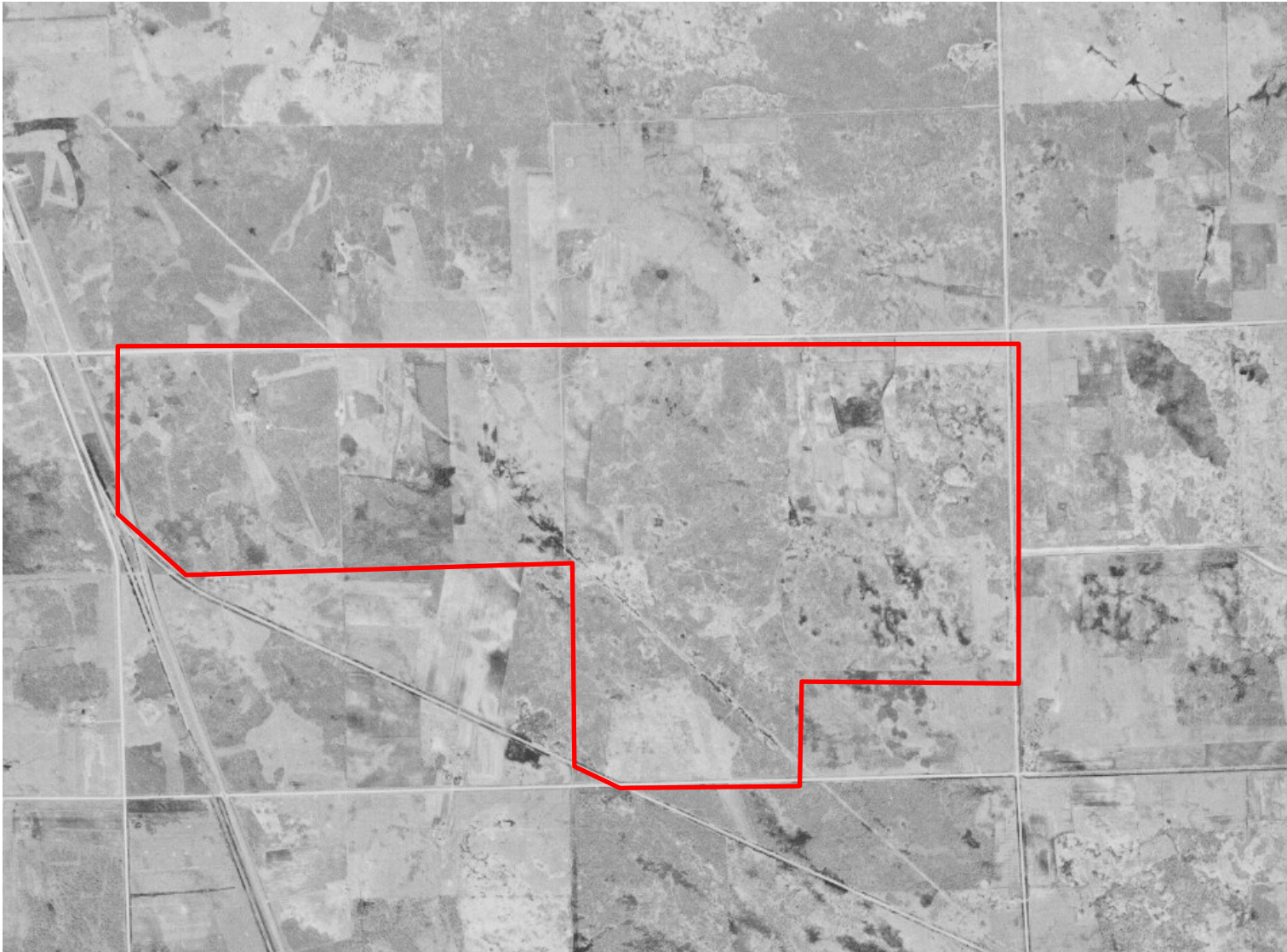



 Project Area,  
Approximate



1939 AERIAL  
Plummer—Solar  
Enbridge Energy, L.P.  
Red Lake County, MN

FIGURE A5



 Project Area,  
Approximate




1953 AERIAL  
Plummer—Solar  
Enbridge Energy, L.P.  
Red Lake County, MN

FIGURE A6





 Project Area,  
Approximate




1963 AERIAL  
Plummer—Solar  
Enbridge Energy, L.P.  
Red Lake County, MN

FIGURE A7





 Project Area,  
Approximate



1976 AERIAL  
Plummer—Solar  
Enbridge Energy, L.P.  
Red Lake County, MN

FIGURE A8



## Appendix B

### Photographs Documenting the Phase I

Appendix B Tribal Cultural Resource Survey Report

# A Tribal Cultural Resources Survey and Phase I Archaeological Investigation for Enbridge Solar Development

Plummer, Minnesota 130 Megawatt Enbridge Solar Project

Prepared for: Barr Engineering  
Principal Investigator, Veronica A. Parsell

Submitted by: Dirt Divers Cultural Resource Management (DDCRM)  
October 2022

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## **1 Executive Summary**

Enbridge Energy, Limited Partnership (Enbridge) commissioned Dirt Divers Cultural Resource Management LLC (DDCRM) to conduct a Tribal Cultural Resources Survey (TCR Survey) and Barr Engineering Co. (Barr) to conduct a Phase I archaeological records review and reconnaissance (Phase I), in preparation for the construction of a solar facility (Project) in Red Lake County, Minnesota. The Project encompasses an area measuring 854 acres (Project Area).

Key personnel of the TCR Survey crews included Ojibwe band members of the Leech Lake Band and other tribally affiliated individuals. DDCRM conducted a pedestrian survey of the Project Area to identify cultural resources important to Tribal communities. A Secretary of the Interior qualified archaeologist from Barr accompanied the TCR Survey. Tribal cultural resources identified by the TCR Survey included rocks, plants and wildlife traditionally and currently used for food, medicine, arts, ceremony and/or materials. Additionally, the delineated wetlands within the Project Area provide the type of habitat for food and other natural resources that are traditionally and currently used by Tribes ancestral to this area. DDCRM recommends that Tribal Monitors be present for any future ground disturbing activities for the Project.

The Phase I reidentified and documented previously recorded OSA Site 21RL0033. No additional archaeological resources were identified. Based on the findings presented in the Phase I archaeological investigation report, submitted by Barr October 2022, Site 21RL0033 remains not eligible for the National Register of Historic Places. Barr recommends no further archaeological work be required within the Project Area.



## 2 Introduction

Enbridge Energy, Limited Partnership (Enbridge) commissioned Dirt Divers Cultural Resource Management LLC (DDCRM) to complete a Tribal Cultural Resources Survey (TCR Survey) and Barr Engineering Co. (Barr) to complete a Phase I archaeological records review and reconnaissance for the reinvestigation of OSA Site 21RL0033 (Phase I), in preparation for the construction of a 130 Megawatt Alternating Current solar facility (Project).

The Project encompasses an area measuring 854 acres (Project Area) and includes four parcels of land near existing Enbridge pipeline facilities that are within the 1863 Ceded Territory, southeast of Plummer, Minnesota, approximately one mile east and south of the Clearwater River.

During the week of 7/18/22-7/22/22, DDCRM conducted the TCR Survey in conjunction with Barr. Tribal makeup of the TCR Survey crews included Ojibwe band members of the Leech Lake Band and other tribally affiliated individuals. DDCRM conducted a pedestrian survey of the Project Area to identify cultural resources important to the Leech Lake Band of Ojibwe and other Tribal communities. A Secretary of the Interior qualified archaeologist from Barr accompanied the TCR Survey and carried out the Phase I.

This report provides the research design and methods used in Section 3. Section 4 provides the background research results. Section 5 provides the field results with photographs and Section 6 presents the conclusions and recommendations followed by the references cited in Section 7.

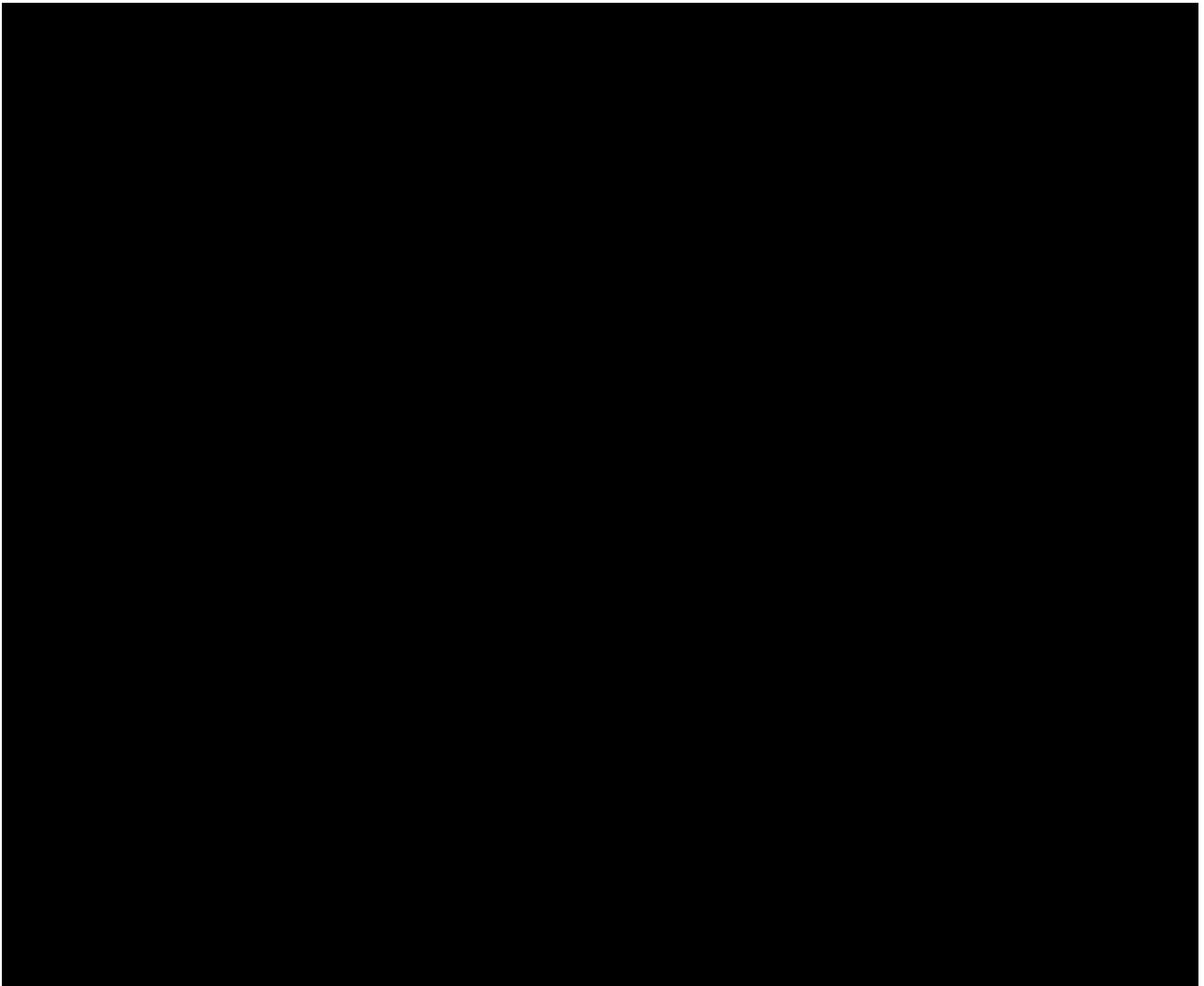
### 2.1 Project Location

The Project Area is within the 1863 Ceded Territory southeast of Plummer, Minnesota and encompasses four parcels of land measuring 854 acres [REDACTED]. Additional locational information is provided in Table 1.

**Table 1: Project location**

Parcel Tract ID	Ceded Territory	State	County	Township Name	Township	Range	Section
T-804	1863	MN	Red Lake	Emardville	151N	42W	15
T-802	1863	MN	Red Lake	Emardville	151N	42W	14
T-805	1863	MN	Red Lake	Emardville	151N	42W	15
T-805B	1863	MN	Red Lake	Emardville	151N	42W	15

The construction and installation of solar facilities involves ground-disturbing activities that have the potential to disturb cultural sites. Some of these sites may be archaeological, and some Tribal cultural sites may also have been established in the last 50 years.



## **2.2 Project Personnel**

During the TCR Survey, Barr personnel worked under the direction of DDCRM Field Supervisors and the Project Manager. Barr provided archaeological consultation and made recommendations when requested. The following individuals were part of the TCR Survey Team:

- James L. Jones, Jr. - Project Manager and Field Director
- Veronica A. Parsell - Principal Investigator
- Charles Jones - Field Supervisor
- James P. Jones - Field Supervisor
- Christian Taylor-Johnson – Field Supervisor
- Sage Rojas – Field Supervisor
- Isaiah Redday – Field Crew
- Tim Smith – Field Crew
- Darrius Curry – Field Crew
- Taysha Curry – Field Crew

Successful completion of the TCR Survey and OSA site reinvestigation would not have been possible without the hard work and knowledge of all crew members.

## **2.3 Curation**

No items were collected in the field during the course of the TCR Survey. All records (field notebooks, GPS data, photographs, etc.) will be organized and stored long-term by DDCRM.

# **3 Research Design and Methods**

## **3.1 TCR Survey and Phase I Objectives**

Objectives of the surveys included:

- Attempting to identify and summarize known Tribal historic properties, archaeological sites, historic cemeteries, and other features within, or immediately adjacent to, the Project.
- Attempting to identify previously unrecorded Tribal cultural resource places, cultural corridors, seasonal activity sites, natural resource collection places such as sugar maple stands or family netting camps, and other sites of cultural and religious significance to Tribes within the Project Area.
- The objective of the Phase I is to identify and evaluate any archaeological or cultural resources present within the Project Area for listing in the National Register of Historic Places (NRHP), as well as assess the effects of the Project on these resources, if identified.
- Provide recommendations to guide Project planning and methods to mitigate or minimize adverse effects on all, if any, Tribal historic properties, and other Tribal sites of cultural and religious significance and/or newly discovered archaeological sites within the Project Area.

## **3.2 Project Methods: TCR Survey**

The TCR Survey consisted primarily of pedestrian walkover survey. The TCR Survey was carried out and led by DDCRM employees using a maximum survey interval of 15 meters. DDCRM personnel sought to identify and document Tribal cultural resource locations including cultural corridors, known archaeological sites, cemeteries, water resources, seasonal activity sites and other places

of cultural and religious significance. Documentation methods included taking photographs, measurements, and collecting locations with a GPS receiver.

### **3.3 Project Methods: Archaeological Field Support and Phase I**

Barr provided archaeological field support and carried out the Phase I reinvestigation of OSA Site 21RL0033. This support was conducted simultaneously with or subsequent to the TCR Survey. Barr recorded field notes and took photographs. Documentation methods included taking photographs, measurements, and collecting locations with a GPS receiver.

## **4 Background Research**

### **4.1 Literature Review**

A literature search was conducted to identify all recorded cultural resources within one mile of the Project Area. Historic and environmental contexts were also considered when evaluating the potential for archaeological or cultural sites.

Sources consulted for this research included, but are not limited to, the following:

- The Minnesota Office of the State Archaeologist (OSA) archaeological site files
- The State Historic Preservation Office historic site files
- The National Register of Historic Places (NRHP)
- United States General Land Office (GLO) survey maps and notes
- Trygg composite maps
- Modern and historic aerial photographs
- Regional historical and archaeological overviews
- Previous archaeological survey reports

Further, the TCR Survey benefited from the deep knowledge of local history and contemporary land use held by DDCRM staff members and crew. All of these individuals grew up and/or currently live within or near the Leech Lake Reservation and have extensive networks of family and friends who also live here. This diverse first-hand knowledge was invaluable in identifying locations of significance to members of the Leech Lake Band of Ojibwe and other Tribal communities.

### **4.2 Cultural Corridor**

The Project Area falls within the 1863 Ceded Territory approximately 18 miles west of Red Lake Reservation and 25 miles north of White Earth Reservation. On the western side of Red Lake County, the making and signing of the Old Crossing Treaty occurred October 2, 1863, at the "Old Crossing" of the Red Lake River, today known as Huot, MN. This location was a resting place used by the Red River ox carts. By 1863, business interests had been attempted to secure the fertile Red River Valley for more than a decade. The United States treaty negotiators misrepresented the purpose and presented the Old Crossing Treaty as an agreement to allow businesses to pass through Ojibwe territory. The treaty as written, however, ceded eleven million acres of the most fertile land in the world, in present-day Minnesota and North Dakota to the United States. In exchange, the Ojibwe were to receive \$20,000 per year for 20 years. Before ratifying the 1863 treaty, the U.S. Senate made amendments which several Ojibwe signers refused to endorse. In

1864, a delegation travelled to Washington D.C. to negotiate, which increased annuity payments for the ceded territory. In subsequent actions, the Red Lake Ojibwe ceded nearly three million additional acres. Their remaining land comprises the Red Lake Reservation, held in common by Red Lake band members today ([www.treatiesmatter.org](http://www.treatiesmatter.org)).

At the turn of the century the townsite of Plummer, MN. was located west of the Clearwater River Dam. In 1904 the Soo Ste. Marie Railroad (Soo Line) built through Emardville Township of Red Lake County and a town soon grew close to the railroad east of Plummer. The first freight train passed through town in 1904 (Red Lake County History.org). The western edge of the Project is proximal to the railroad (Figure 2).

The Project location is within a mile east and south of the Clearwater River which supports a wide range of plants and wildlife that have played an essential role in the cultural importance of the region. The strategic juncture of the Red Lake River and Clearwater River (Section 15, T151N, R44W) in Red Lake Falls, has a long history of human habitation long before the first white explorers and fur traders came to the area. This crossroads was a favored Indian camp and village site ([Red Lake County Historical Society – Minnesota's Historic Northwest \(mnhistoricnw.org\)](http://RedLakeCountyHistoricalSociety-Minnesota'sHistoricNorthwest.mnhistoricnw.org)).

#### 4.3 Geologic Setting

Red Lake County contains moraines and outwash deposits associated with the Des Moines lobe of the Wisconsin glaciation. This includes the Erskine moraine association which is generally clayey because of reworked lake sediment, lake-modified till, sand, and gravel.

Soils include the Smiley series, which consist of very deep, poorly, and very poorly drained soils formed in loamy glacial till on lake plains, till plains and moraines. The Kratka series consists of very deep and poorly drained soils that formed in a mantle of sandy glacial lacustrine or outwash sediments over lacustrine sediments or loamy glacial till on glacial lake plains, glacial deltas of former glacial lakes, stream terraces, and moraines. The highest potential for prehistoric cultural properties is along high ground within 1,000 feet of lakes, streams, and wetlands.

#### 4.4 Historic Cemeteries

One historic cemetery was identified within one mile of the Project Area (Table 2 [REDACTED]).

**Table 2: Historic cemeteries within one mile of the Project Area**

Cemetery ID	Cemetery Name	Distance	Township	Range	Section	Township Name
82309	Finnish Cemetery	2,455' @ 270°	151N	42W	12	Emardville



#### 4.5 Known Archaeological Sites

The Minnesota archaeological site database maintained by the Office of the State Archaeologist (OSA) lists one archaeological site within the Project Area and four archaeological sites within one mile of the Project Area (Table 3 [REDACTED]).

**Table 3: Known archaeological sites within one mile of the Project Area**

Site #	Site Name	Distance	Township	Range	Section	Cultural/Temporal Affiliation	NRHP Eligibility
21RL0032	None	1,140' @ 0°	151N	42W	10	Not determined Lithic debitage	Undetermined
21RL0033	None	In Project Area	151N	42W	14	Historic	Not Eligible
21RL0035	None	3,220' @ 175°	151N	42W	24	Pre-contact Debitage	Undetermined
21RL0036	None	650' @ 333°	151N	42W	10	Historic homestead	Undetermined
21RL0038	None	1.09 miles @ 273°	151N	42W	8	Multi-component artifact scatter	Undetermined

## 4.6 Trygg Composite Historic Map

Trygg composite maps represent a unique compendium of 46 maps of the United States Land Surveyors' plats and field notes with land features as noted at the time of the original General Land Office (GLO) surveys from approximately 1832-1907. The Trygg composite map #20 illustrates the Project Area as prairie and marsh in the 1876 and 1891 surveys. No historic cultural features are illustrated in the Project Area on the Trygg map; however, there is a small settlement along the Clear Water River that is noted several miles to the northeast at the time of the General Land Office surveys.

## 5 Field Results

The TCR Survey consisted of pedestrian walkover survey. This survey was carried out and led by DDCRM employees using a maximum survey interval of 15 meters. The TCR Survey was conducted from 7/18/22 – 7/22/22 in conjunction with Barr.

### 5.1 Findings of the TCR Survey

#### 5.1.1 Plants and wildlife

Vegetation throughout the Project Area was mostly agricultural with some field delineated wetland areas. The TCR Survey observed wildlife and plants used traditionally and currently for food, medicine, arts, ceremony, and materials, listed in Table 4. Most all of the trees and plants that were observed are listed in *Ethnobotany of the Ojibwe Indians* by Huron H. Smith (1932).

**Table 4: Plants and wildlife observed**

Plants and trees observed	Wildlife and signs observed
Alder, Alfalfa, Aspen, Barley (large field), Birch, Birdsfoot trefoil, Black cherry bushes, Black-eyed susan, Blueberry, Box elder, Cattails, Clovers, Corn and husks, Cotton thistle, Dandelion, Fly honeysuckle, Forest growth (south end), Foxtail, Goldenrods, Green ash, Hawthorne, Hazelnut, Horse weed, Ironwort, Maple, Milkweed, Motherwort, Mushrooms, Mugwort, Oak, Poplar, Prickly lettuce, Pineapple weed, Pussy willow, Quaking aspen, Raspberries, Red clover, Rhubarb, Sage, Self-heal, Snowberry, Soybeans, Strawberries, Sunflower, Swamp tea (after tree line), Swamp milkweed, Sweetgrass (smell), Tansy, Thistles, Weed canary grass, Wheat grass, White clover, Willow, Yarrow, Yellow violets	Animal hip bone (still with blood), Animal holes and trails and bed down areas, Bear (at tree line), Bear tracks, Bees nest (broken), Butterflies, Cow pies and tracks, Deer fawn (south of fence), Deer, Deer tracks and trails and droppings, Deer stands, Field mice, Frogs, Grasshoppers, Ground hog, Grouse, Horse tracks, many bird nests on ground (some eggs hatched), Monarch butterflies (endangered), possible Moose tracks, Mosquitos, Owl sounds, Pheasant, Skunk (smell), Tree frog

#### 5.1.2 Water resources

To the Ojibwe People, water is sacred. It is the main constituent of the fluids of all living organisms. The Clearwater River flows within a mile west and north of the Project Area and supports a wide range of plants and wildlife that have played a central role in the cultural importance of the region. The Enbridge Line 3 pipeline intersects the Clearwater River in Section 9, T151N, R42W in the northern part of Plummer, MN. Additionally, the Project Area, particularly in Parcel Tract T-805, has delineated wetland areas that provide the type of habitat for food and other natural resources that are traditionally and currently used by Tribes ancestral to this area.

### 5.1.3 Photographs

Motherwort (*Leonurus cardiaca*) – medicinal and pollinator plant



Monarch Butterfly (endangered species) on Cotton thistle



Maple Trees – Food and medicinal uses

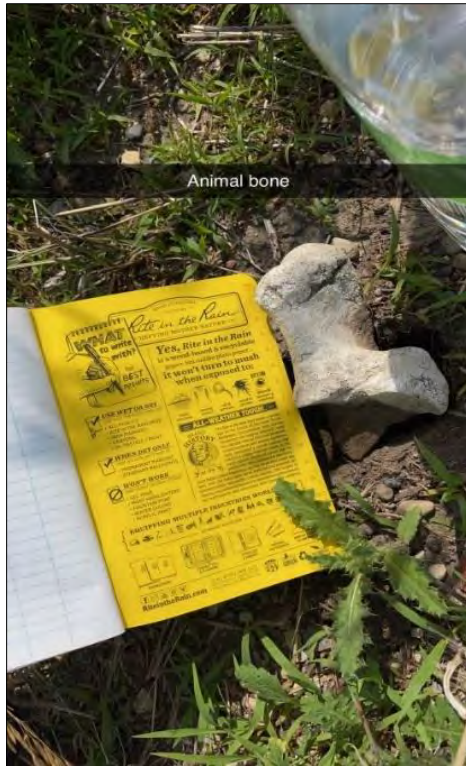


Quaking Aspen – Food and medicinal uses





Faunal remains



Faunal remains



Multiple Deer bedding areas



Ground bird nest with hatched eggs





Tongue River Silica - Used for flint knapping



Quartz crystal - Used for ceremony and healing



Possible fossil rock



Disturbed soil on top of mounded feature





Outbuilding related to RL-EM D-005



Shovel test pit



## 5.2 Summary of OSA Site 21RL0033 Reinvestigation

Barr Engineering conducted a Phase I archaeological records review and reconnaissance for the reinvestigation of OSA Site 21RL0033. Site 21RL0033 consists of the remains of a historic homestead that dates from the early to mid-twentieth century that was originally documented in 2014 and reinvestigated in 2015 in support of the Enbridge Line 3 Replacement Project. The site was reidentified as part of the current investigation through shovel testing where 26 shovel tests were excavated within the previously determined site boundaries, with assistance from DDCRM. Of these, 10 were positive for cultural materials. Artifacts recovered from Site 21RL0033 consist primarily of wire nails, which postdate 1880. A former driveway was identified running to the site, as well as four foundation remnants and a well/cistern previously documented by Merjent. Visual inspection within the site boundaries also reidentified the porcelain toilet bowl fragments, the porcelain insulator, the metal hinges and the 55-gallon drum base. In summary, previously recorded Site 21RL0033 was reidentified and documented and its condition was found to be nearly identical to the prior site delineation completed in 2015. No additional archaeological resources were identified within the Project Area.

For additional details see the *Phase I Archaeological and Tribal Cultural Resources Investigation* report prepared by Veronica A. Parsell, Barr Engineering Principal Investigator.

## **6 Conclusions and Recommendations**

During the week of 7/18/22 - 7/22/22 DDCRM conducted a TCR Survey in conjunction with Barr Engineering and completed surveys for the Project Area. There are several medicinal, edible and gatherable resources such as sage, berries, and maple trees that grow on the Project Area that were subject to TCR Survey.

### **6.1 Summary of Findings**

Tribal cultural resources identified by the TCR Survey included rocks, wildlife and plants traditionally and currently used for food, medicine, arts, ceremony and/or materials. The delineated wetlands within the Project Area provide the type of habitat for food and other natural resources that are traditionally and currently used by Tribes ancestral to this area. Additionally, known historic archaeological OSA Site 21RL0033 is within the border of Parcel Tract T-802 (Figure 1).

### **6.2 Tribal Cultural Recommendations**

DDCRM staff completed a TCR Survey for the Project Area. DDCRM recommends that Tribal Monitors be present for any future ground disturbing activities that may impact cultural resources.

### **6.3 Archaeological Recommendations**

Barr determined that OSA Site 21RL0033 does not appear to be eligible for the National Register of Historic Places (NRHP). No further actions are recommended.

### **6.4 Conclusion**

Both Tribal cultural and archaeological resources were identified during the course of this TCR Survey and reinvestigation of OSA Site 21RL0033. Tribal Monitors are recommended during any future ground disturbance.

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## Appendix C

### Artifact Catalog

Appendix C    Photographs Documenting the Phase I





Photo 1: Project Area Overview: central portion of Project, looking north.



Photo 2: Project Area Overview: central portion of Project, looking west.



Photo 3: Example Ground Surface Visibility: central portion of Project.



Photo 4: Project Area Overview: central portion of Project, looking north.





Photo 5: Project Area Overview: eastern portion of Project, looking east.



Photo 6: Example Ground Surface Visibility: eastern portion of Project.



Photo 7: Overview: Site 21RL0033, looking south.



Photo 8: Overview: Site 21RL0033, looking north.





Photo 9: Site 21RL0033: current view of Feature 2, looking west.



Photo 10: Site 21RL0033: current view of Feature 2, looking northeast.



Photo 11: Site 21RL0033: current view of Features 2 and 3, looking west.



Photo 12: Site 21RL0033: current view of Feature 1, looking east.





Photo 13: Site 21RL0033: example shovel test (A2), looking down.



Photo 14: Site 21RL0033: example shovel test (C2), looking down.



Photo 15: Site 21RL0033: example shovel test (B2), looking down.



Photo 16: Site 21RL0033: CAT. No. 015





Photo 17: Site 21RL0033: CAT. No. 016



Photo 18: Site 21RL0033: CAT. No. 006



Photo 19: Site 21RL0033: CAT. No. 026



Photo 20: Site 21RL0033: CAT. No. 001

## Appendix D

### Artifact Catalog

Site No.	Surface/ Shovel Test	PN No.	Cat. No.	Group	Material	Material Subtype	Artifact	Artifact Subtype	Attributes	Description	Comments	Pattern/ Embossing/ Makers Mark	Count	Date	References
21RL0033	Shovel Test	A1	001	Kitchen	Faunal	Bone	undetermined fragment		polished				2		
21RL0033	Shovel Test	A1	002	Misc	Metal	Iron	strap						1		
21RL0033	Shovel Test	B2	003	Activity	Metal	Brass	bullet casing	Rimfire Cartridge	.22 caliber		broken/fragmented		1	Post 1866	Miller et al. 2000
21RL0033	Shovel Test	B2	004	Architectural	Brick	Brick	Brick Fragment						1		
21RL0033	Shovel Test	B5	005	Architectural	Metal	Iron	bolt		1"				1		
21RL0033	Shovel Test	A2	006	Architectural	Metal	Iron	Nail	Wire Nail	8d		finishing, flooring, siding		6	Post 1880	Nelson 1968
21RL0033	Shovel Test	A2	007	Architectural	Metal	Iron	Nail	Wire Nail	9d		flooring, boarding, siding		7	Post 1880	Nelson 1968
21RL0033	Shovel Test	A2	008	Architectural	Metal	Iron	Nail	Wire Nail	7d		siding and wallboarding		4	Post 1880	Nelson 1968
21RL0033	Shovel Test	A2	009	Architectural	Metal	Iron	Nail	Wire Nail	5d		molding, finish work and ornamentation, shake and siding		3	Post 1880	Nelson 1968
21RL0033	Shovel Test	A2	010	Architectural	Metal	Iron	Nail	Wire Nail	fragment		broken nails		4		
21RL0033	Shovel Test	D3	011	Personal	Glass	Colorless and Blue	Marble	Victory Marble	machine made	colorless with opaque blue		Vitro Agate	1	1940s-1950s	Block 2022
21RL0033	Shovel Test	D3	012	Misc	Metal	Iron	fragment						1		
21RL0033	Shovel Test	D3	013	Unkown	Ceramic	Porcelain	Porcelain, Hard Paste		interior fragment, no glaze				1	Post 1850	Samford & Miller 2002
21RL0033	Shovel Test	C3	014	Kitchen	Faunal	Bone	undetermined fragment	cut bone	polished				1		
21RL0033	Shovel Test	D2	015	Architectural	Glass	Colorless	Flat Glass				2.1mm thickness		1		
21RL0033	Shovel Test	D2	016	Kitchen	Glass	Colorless	Unk., Body	body fragment					2		
21RL0033	Shovel Test	D2	017	Misc	Fiberglass	Green	Fiberglass		fragment				1		
21RL0033	Shovel Test	D2	018	Architectural	Metal	Iron	Nail	Wire Nail	4d		shingling and slating, cabinet work, clapboard siding		1	Post 1880	Nelson 1968
21RL0033	Shovel Test	C4	019	Architectural	Metal	Iron	Nail	Wire Nail	16d		studding rafters and heavy framing		1	Post 1880	Nelson 1968
21RL0033	Shovel Test	C4	020	Architectural	Metal	Iron	Nail	Wire Nail	9d		flooring, boarding, siding		1	Post 1880	Nelson 1968
21RL0033	Shovel Test	C4	021	Architectural	Metal	Iron	Nail	Wire Nail	8d		finishing, flooring, siding		1	Post 1880	Nelson 1968
21RL0033	Shovel Test	C4	022	Architectural	Metal	Iron	Nail	Wire Nail	7d		siding and wallboarding		4	Post 1880	Nelson 1968
21RL0033	Shovel Test	C4	023	Architectural	Metal	Iron	Nail	Wire Nail	3d		shingling, ceiling lath, thin tongue and groove paneling, lathing		1	Post 1880	Nelson 1968
21RL0033	Shovel Test	C4	024	Architectural	Metal	Iron	Nail	Wire Nail	fragment		broken nail		1		
21RL0033	Shovel Test	A5	025	Architectural	Metal	Iron	Nail	Wire Nail	10d		boarding, furring strips, flooring, sheathing and window trim		1	Post 1880	Nelson 1968
21RL0033	Shovel Test	E1	026	Misc	Metal	Iron	undetermined fragment						11		

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## Phase I Archaeological Investigation

### Addendum 1: Eastern Parcels

*Plummer 130 MW Solar Project*

*Plummer, MN*

Prepared for  
Enbridge Energy

July 2023

## Phase I Archaeological Investigation

July 2023

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Appendix C	Tribal Cultural Resources Report

Certification

Principal Investigator



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Veronica Parsell  
RPA #: 3532690

July 31, 2023

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Date

## 1 Executive Summary

In response to a request from Enbridge Energy, Limited Partnership (Enbridge), Barr Engineering Co. (Barr) completed a Phase I archaeological reconnaissance survey for two parcels added to the Plummer Solar Project, located southeast of Plummer, Minnesota. Enbridge is proposing to develop a 130 Megawatt Alternating Current (MWac) solar facility (Project) adjacent to their existing Plummer Station. A Phase I archaeological reconnaissance was completed in the Fall 2022 for an area measuring 854 acres. Subsequent to that investigation, Enbridge added two additional parcels to the Project area. These parcels total approximately 164 acres and are located in Sections 12 and 13, Township 115N, Range 42W on the Oklee NW, Minnesota 7.5' U.S. Geological Survey (USGS) topographic quadrangle map.

The Project would require a Site Permit from the Minnesota Public Utilities Commission ("PUC" or "Commission"). Typically, as part of the permit conditions, the Project must analyze potential impacts to and propose mitigation measures for cultural and archaeological resources under Minnesota Administrative Rules Chapter 7854.0500 Subp. 7, Environmental Impacts. Consultation with the Minnesota State Historic Preservation Office (SHPO) and Office of the State Archaeologist (OSA) would occur in the event that a cultural or archaeological resource is encountered.

Barr conducted supplemental background research in October 2022, which resulted in the identification of one archaeological site within one mile of the new Project parcels (previously recorded site 21RL0033), and no previously identified cultural resources within the new Project boundaries.

A Tribal Cultural Resources Survey (TCRS) was completed for the Project area concurrent to the archaeological investigation. The TCRS was conducted by Dirt Divers Cultural Resources Management (DDCRM) to identify resources of significance to tribal communities in the new Project Area. The TCRS was conducted by Ojibwe band members of the Leech Lake Band and other tribally affiliated individuals. These results are discussed in a separate report prepared by DDCRM and appended to this report.

As a result of the Phase I archaeological reconnaissance, two new cultural resources were identified and documented within the Project Area. Both resources appear to consist of omarolluk erratics that, in consultation with DDCRM, were identified as being utilized by precontact peoples and were therefore recorded as groundstone artifacts. DDCRM also indicated that these two new precontact sites, in addition to other known precontact sites within 1-mile of the new Project Area, demonstrate an extended history of Tribal cultural use of the area.

The TCRS also determined that numerous trees, plants, and wildlife traditionally and currently used by tribes for food, medicine, arts, ceremony and/or materials are present within the new Project Area. Additionally, delineated wetlands interspersed with cropland in the new Project Area provide the type of habitat for food and other natural resources that are traditionally and currently used by tribes ancestral to this area.

Based on the findings presented in this report of investigations, the two new identified archaeological sites, 21RL0041 and 21RL0042, are recommended not eligible for the National Register of Historic Places.



Barr recommends that no further archaeological work be required within the area investigated for the Project to proceed as planned. DDCRM recommends that Enbridge continue to consult with Tribal Resource Managers to ensure protection of irreplaceable cultural/natural resources for future generations. Additionally, DDCRM recommends that Tribal Monitors be present for any future Project-related ground disturbing activities.

## 2 Introduction

In response to a request from Enbridge, Barr conducted a Phase I archaeological reconnaissance (Phase I), and Dirt Divers Cultural Resource Management LLC (DDCRM) completed a Tribal Cultural Resources Survey (TCRS) prior to proposed construction activities in Red Lake County, Minnesota. Based on information provided by Enbridge, the Project consists of the development of a 130-megawatt alternating current (MWac) solar project adjacent to their existing Plummer Station in Emardville Township, Red Lake County, Minnesota. A Phase I archaeological reconnaissance was completed in the Fall 2022 for an area measuring 854 acres. Subsequent to that investigation, Enbridge added two additional parcels to the Project Area. These parcels total approximately 164 acres and are located in Sections 12 and 13, Township 115N, Range 42W on the Oklee NW, Minnesota 7.5' U.S. Geological Survey (USGS) topographic quadrangle map (Figure 2-1).

The Project requires a Site Permit from the Minnesota Public Utilities Commission (PUC) pursuant to the Minnesota Power Plant Siting Act (Minnesota Statutes, chapter 216E) and Minnesota Rules, chapter 7850 for proposed projects meeting the definition of "large electric power generating plants" and "high voltage transmission lines". Minnesota Rules 7850.1900, Subpart 3 requires that an applicant for a Site Permit include "a description of the effects of the facility on archaeological and historic resources"<sup>1</sup>. As a result, a Phase I and TCRS were completed within the added parcels to the Project Area, to determine whether significant cultural resources are present.

Barr conducted background research in April 2022 with a supplemental review completed in October 2022. The records check focused on a 1.6-kilometer (km) (1-mile [mi]) study area around the newly added portion of the Project Area. Barr gathered information about previously conducted cultural resource investigations and documented cultural resources as well as the environmental and cultural context of the region to assess the potential for additional undocumented cultural resources in and around the Project Area.

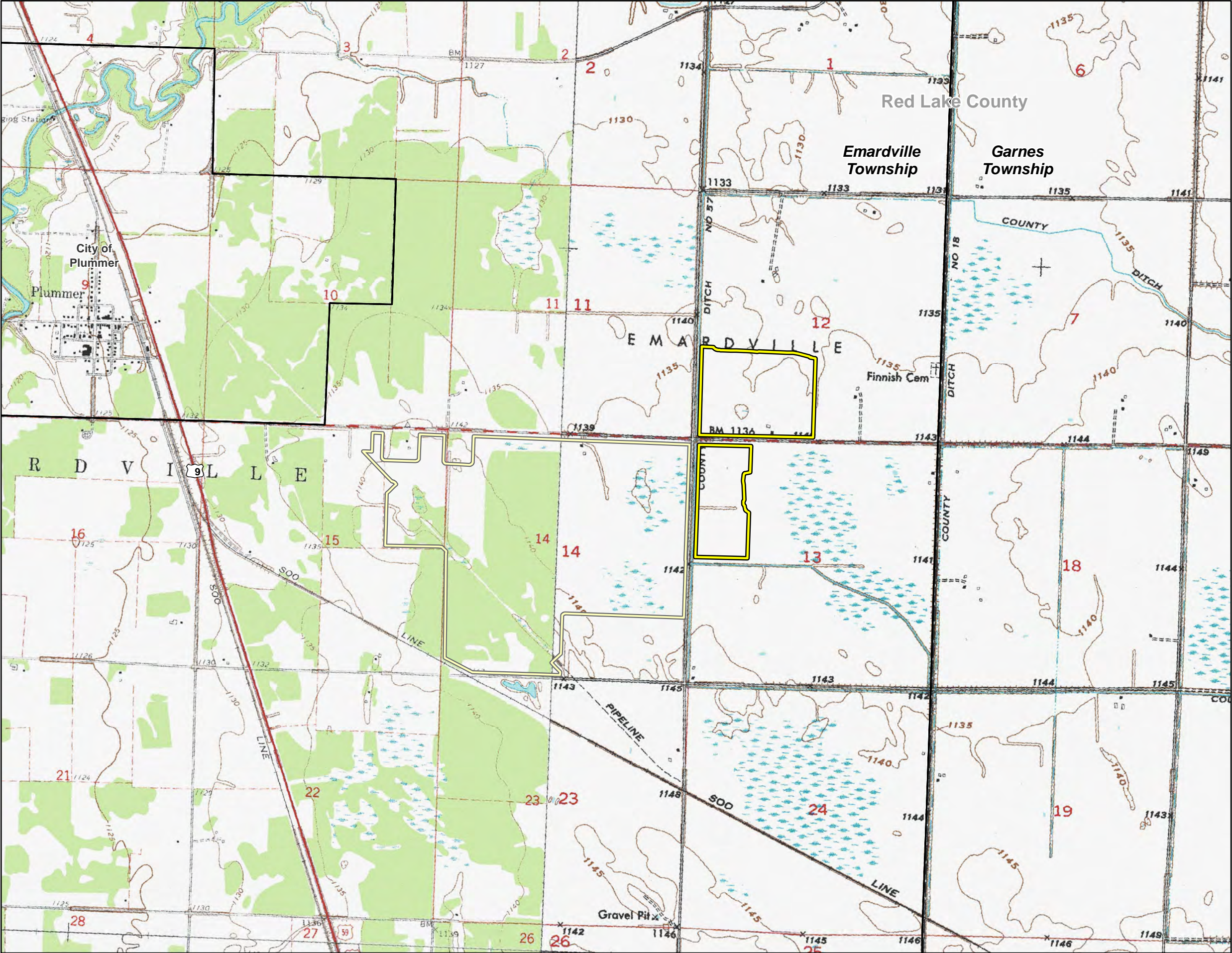
Key personnel committed to the Project include archaeological Principal Investigator Veronica Parsell. Mr. Eddie Anderson created the report graphics.

This report presents the research design and results of the background research in Section 3.0. Section 4.0 outlines the field methods used during the survey. Section 5.0 discusses the results of the field investigation, followed by the conclusions and recommendations in Section 6.0. The references cited in this report appear in Section 7.0. Appendix A includes historic maps and aerial photographs, Appendix B includes photographs documenting the Phase I, and Appendix C contains a copy of the Tribal Cultural Resource Survey Report prepared by Dirt Divers Cultural Resource Management (DDCRM).

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<sup>1</sup> [7850.1900 - MN Rules Part](#)





Newly Added Project Area  
Original Project Boundary

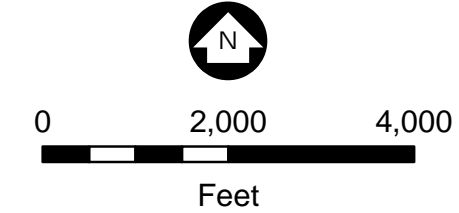


Figure 2-1  
Plummer - Solar  
PROJECT LOCATION  
Solar Environmental Permitting  
Enbridge Energy, L.P.





### 3 Background Research

The objective of the current archaeological investigation is to identify and evaluate any archaeological or cultural resources present within the updated Project Area for listing in the National Register of Historic Places (NRHP), as well as assess the effects of the Project on these resources, if identified. The Project also included a TCRS, to identify cultural sites important to the Leech Lake Band of Ojibwe and other Tribal communities within the Project Area.

For the purposes of this investigation, archaeological resources may include any site location that contains material remains of past human life or activities, or other places and/or items that possess cultural importance to individuals or a group. Tribal Cultural Resources are defined as locations of significance to members of Tribal communities, including cultural corridors, seasonal activity sites, natural resource collection places such as sugar maple stands or family netting camps, and other sites of cultural and religious significance to Tribes within the Project Area. Tribal cultural resources can also include sites established and used by Tribes within the last 50 years.

Once identified through documentary research and/or fieldwork, these resources are evaluated for NRHP eligibility based on the following criteria.

*"The quality of significance in American history, architecture, archaeology, engineering and culture is present in the districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:*

- a. That are associated with the events that have made a significant contribution to the broad patterns of our history; or*
- b. That are associated with the lives of persons significant in our past; or*
- c. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
- d. That have yielded or may be likely to yield, information important in prehistory or history"* (36 CFR 60.4)."

The purpose of this section is to provide a basic context through which to evaluate the results of Barr's Phase I investigation. This section briefly outlines the environmental and cultural background of the region in and around Red Lake County, Minnesota.

#### 3.1 Literature Review

The literature review was directed toward identifying previously recorded archaeological sites, historic structures, and other cultural resources. Barr requested data from the Minnesota State Historic Preservation Office (SHPO) on April 21, 2022, to identify previously recorded archaeological sites and



historic structures located within one mile of the Project Area. The Minnesota OSA Portal for archaeological sites was also reviewed on April 24, 2022 and October 10, 2022. Barr focused on previously recorded resources within 1.6 km (1 mi) of the Project Area, but also examined the larger region where appropriate. For the literature review, Barr consulted the following resources:

- National Historic Landmark list;
- NRHP list;
- Archaeological Site Files;
- Historic Architectural Inventory;
- Available Cultural Resource Management reports;
- Historic maps and aerial photographs.

The data provided by SHPO and viewed through the OSA portal indicate that no historic architectural resources and one archaeological site have been documented within approximately 1.6 km (1 mi) of the Project Area [REDACTED]. No cultural resources have been previously documented within the boundaries of the new Project Area.

### **3.1.1 National Historic Landmarks List**

There are no National Historic Landmarks located within 1.6 km (1 mi) of the Project Area.

### **3.1.2 National Register of Historic Places (NRHP)**

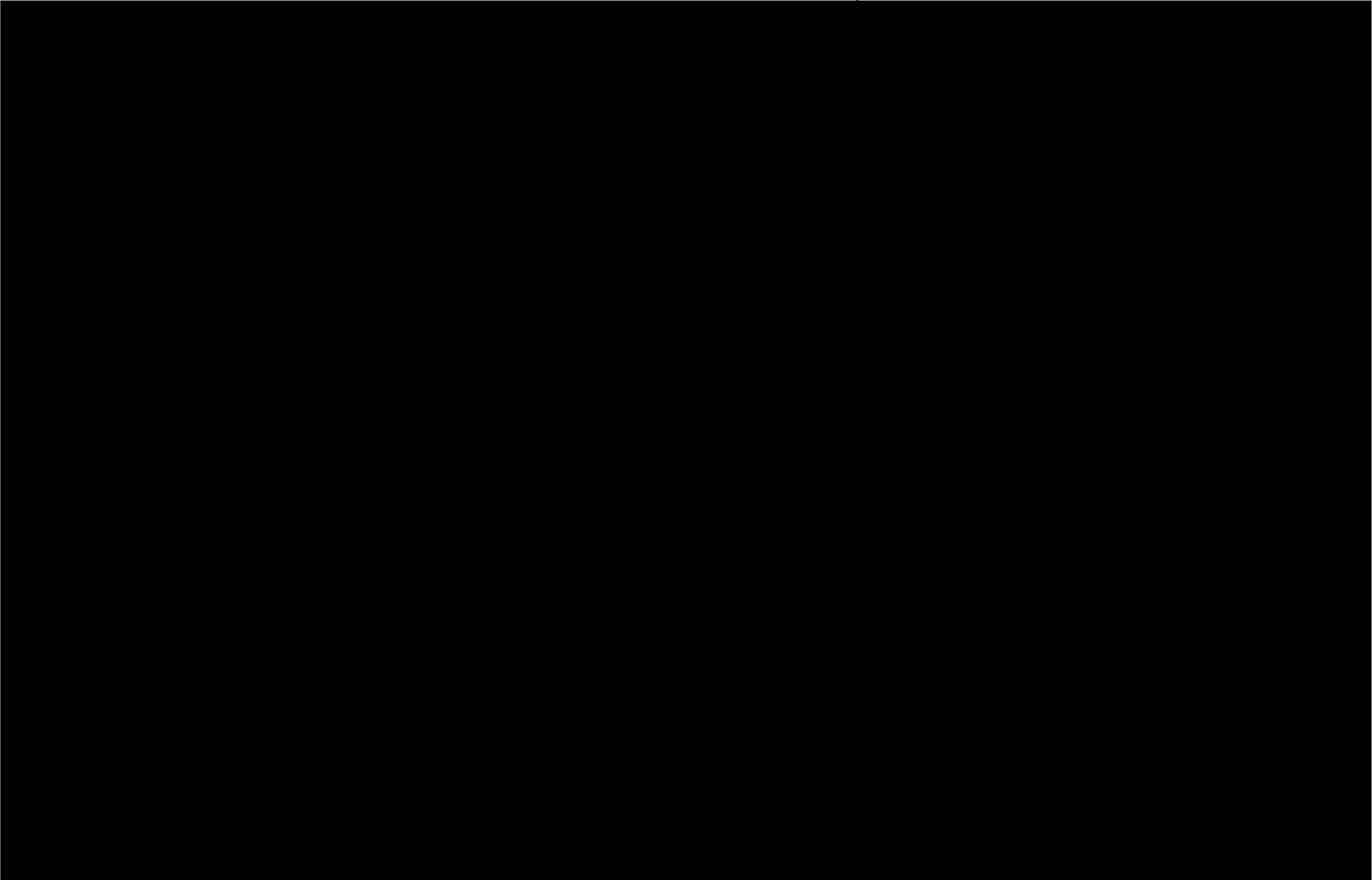
No properties listed in or determined eligible for the NRHP are located within 1.6 km (1 mi) of the Project Area.

### **3.1.3 Archaeological Site Files**

The data provided by SHPO and supplemented through a review of the OSA portal indicate that one archaeological site is located within the 1.6 km (1 mi) study area [REDACTED]. Site 21RL0033 consists of a historic homestead remnant that was previously recommended not eligible for the NRHP (Lange Mueller and Terry 2015).

### **3.1.4 Historic Architectural Inventory**

A review of the historic architectural data provided by the Minnesota SHPO indicates that no documented historic architectural resources have been documented within 1.6 km (1 mi) of the Project Area [REDACTED].



### 3.1.5 Previous Cultural Resource Investigations

Four previous archaeological reconnaissance surveys have been completed within 1.6 km (1 mi) of the Project Area (Figure 3-2).

In 2007 and 2008, the 106 Group completed a Phase I archaeological reconnaissance of the Southern Lights and Alberta Clipper pipelines for Enbridge (Bielakowski et al. 2007; Doperalski and Van Vleet 2008). A portion of the original Project Area overlaps the Alberta Clipper pipeline; however, this previous investigation is located near the edge of the 1.6 km (1 mi) Study Area for the additional parcels added to the Project Area.

In 2014 and 2015, Merjent completed a Phase I archaeological reconnaissance for the Enbridge Line 3 project (Lange Mueller and Terry 2015). Merjent identified one historic farmstead remnant during their investigation for Line 3 and documented it as an archaeological site 21RL0033 (Lange Mueller and Terry 2015). Merjent completed an addendum investigation for the project in 2016 for an expanded project area. The boundary of site 21RL0033 was expanded as a result of this investigation; however, no new archaeological sites were identified in Red Lake County (Lange Mueller et al. 2016).

In 2022, DDCRM and Barr completed a combined cultural resources and archaeological investigation of the main Project Area for the proposed 130-megawatt alternating current (MWac) solar project at Plummer Station (Parsell 2022) (Figure 3-2). This survey resulted in the reinvestigation of site 21RL0033, and upheld its previous NRHP recommendation of “not eligible”. No additional archaeological resources were identified during this investigation (Parsell 2022).

### 3.1.6 Historic Maps and Aerials

Several available historic maps and aerial photographs were referenced for information pertaining to the historic use of the Project Area between 1877 and 1976 (BLM 1877; George A. Ogle & Co. 1911; Hixson 1916; Regents of the University of Minnesota 2015; USGS 1953, 1963, 1964, 1972, 1976) (Appendix A).

#### 3.1.6.1 Historic Maps

The 1877 General Land Office (GLO) map for Township 151N, Range 42W indicates that the Project Area is undeveloped. Both parcels added to the Project Area appear to be forested (BLM 1877). By 1911, the Wisconsin Minnesota & Pacific Railroad Co. owns the land within and around the new Project Area (George A. Ogle & Co. 1911). A ditch is depicted running parallel to present-day Highway 1, between the two new Project parcels. The 1916 *Plat Book of the State of Minnesota* continues to show the Wisconsin Minnesota & Pacific Railroad Co. owning the land within the Project Area (Hixson 1916). The 1972 Oklee NW, Minnesota 7.5' USGS topographic map shows one wetland and no structures within the Project Area (USGS 1972). These maps also show that a portion of both new Project Area parcels appear to have been cleared for agricultural purposes.

#### 3.1.6.2 Historic Aerial Photographs

Historic aerial photography from 1939, 1953, 1963, and 1976, as available through the University of Minnesota's Historical Aerial Photographs Online (Regents of the University of Minnesota 2015) and the

USGS, were reviewed to gain an understanding of the Project Area from approximately 45 to 80 years ago (Appendix A).

The 1939 aerial imagery indicates that the Project Area is largely wooded and for the most part, has not yet been utilized for row crop agriculture (Regents of the University of Minnesota 2015). The Project Area continues to be undeveloped in 1953, and the southern-most Project parcel appears now to be open land instead of mostly wooded (USGS 1953). The Project Area appears more agricultural in 1963, particularly on the southernmost parcel (USGS 1963). It appears much the same in 1976 (USGS 1976).