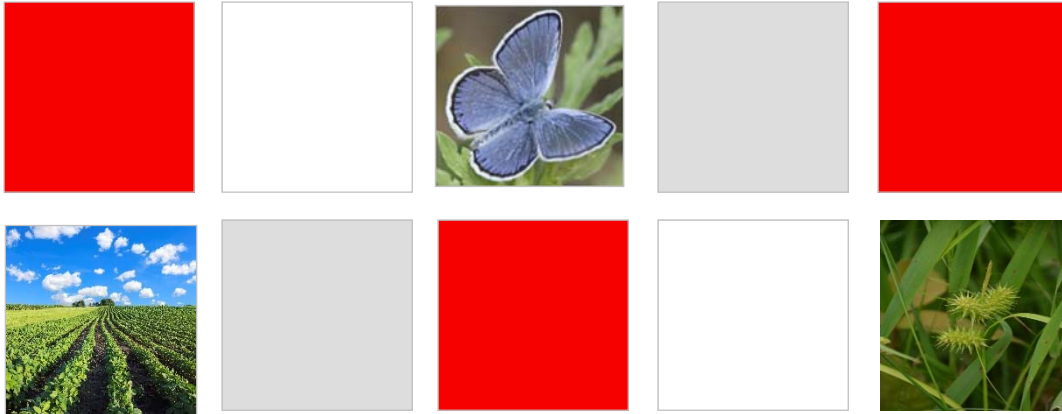


## **Appendix E: Cultural Resources Report**



## **Minnesota Power**

### **15 Line Reroute Project Phase 1 Archaeological Inventory Jay Cooke State Park, Carlton County, Minnesota**

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**Photograph 2:** Photo # 144990. Existing 15 Line transmission line corridor with Project Reroute Project APE in background. View to south.

## EXECUTIVE SUMMARY

Minnesota Power, an ALLETE company, owns and operates a 115 kilovolt (kV) electric transmission line called the 15 Line in the Duluth area. Minnesota Power is planning to reroute a 2,178-foot segment of its existing 15 Line near Fond du Lac Dam. A small portion of the reroute segment will be located on Jay Cooke State Park land, which will be a new parallel route, 160 feet wide, north of its existing easement and running east-west for approximately 575 feet, totaling 2.13 acres. In addition, Minnesota Power proposes to utilize a north-south access road that includes approximately 150 linear feet on Jay Cooke State Park land, entirely within the 2.13 acres. Because Jay Cooke State Park received federal funds from the Land and Water Conservation Fund (LAWCON), which is administered by the National Park Service (NPS), a new transmission line easement would be subject to review under Section 106 of the National Historic Preservation Act (NHPA). The 15 Line Reroute Project (Project) is in the NE $\frac{1}{4}$  NE $\frac{1}{4}$  SE $\frac{1}{4}$ , Section 1 of Township 48 North, Range 16 West, Carlton County, Minnesota.

Archaeological review consisted of archival research of existing site forms and previous inventory reports on file at the Minnesota State Historic Preservation Office (MnHPO) and the Consultant Portal maintained by the Office of the State Archaeologist (OSA). Merjent archaeologists also reviewed 19<sup>th</sup> century maps published by the General Land Office. Merjent archaeologists Kevin Mieras, Kevin Gubbels, and Mike Madson conducted pedestrian reconnaissance and shovel testing of an approximately 3.6-acre area on Jay Cooke State Park on May 17, 2018. The slightly larger survey area was proposed to enclose the entire Project easement including the overhead transmission line and the access road. In general, the topography sloped dramatically downward on either side of a north-south trending ridgeline, which was subject to 5 (five) shovel tests. No archaeological resources were identified during the archaeological inventory. Merjent recommends that construction of the Project, specifically within Jay Cooke State Park, would not likely adversely affect archaeological sites eligible for inclusion in the National Register of Historic Places.

## **1.0 INTRODUCTION**

Minnesota Power contracted Merjent, Inc. to complete a Phase 1 archaeological inventory to support the 15 Line Reroute Project (Project), a reroute of a 2,178-foot segment of its existing 15 Line near Fond du Lac Dam. The proposed Project is due to the concerns of failing slope conditions near the St. Louis River/Highway 210 corridor and the Minnesota Department of Transportation has requested that Minnesota Power adjust this segment of its 15 Line. Currently, the steep grade in which the existing line resides, is eroding and slope failure is evident. These conditions pose a significant threat to the lines reliability and it has become necessary to reroute the line. The Project is in the NE¼ NE¼ SE¼, Section 1 of Township 48 North, Range 16 West, Carlton County, Minnesota (Figure 1).

### **1.1 PROJECT DESCRIPTION**

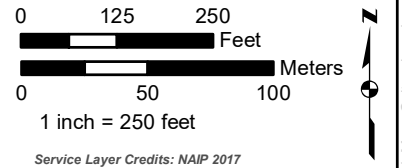
Minnesota Power proposes to relocate a segment of its 15 Line 115 kilovolt (kV) transmission line crossing Highway 210 near the St. Louis River and partially within Jay Cooke State Park in Carlton County, Minnesota (Figure 1). The new 15 Line segment will be constructed using two-pole H-frame structures. Minnesota Power is considering the new parallel route, 160 feet wide, immediately north of its existing easement and running east west for approximately 575 feet within Jay Cooke State Park (2.13 acres, encompassing the entire Project). In addition, Minnesota Power proposes to utilize a north-south access road which includes approximately 150 linear feet on Jay Cooke State Park, entirely within the 2.13 acres noted above. Merjent proposed an Area of Potential Effects (APE) that would encompass the entire Project easement including the new overhead transmission line and the access road component on Jay Cooke State Park. This APE was a rectangle that measured 250 feet wide (north-south) by 620 feet long (east-west, approximately 3.6 acres (Figures 1 and 2).

Because Jay Cooke State Park received federal funds from the Land and Water Conservation Fund (LAWCON), consideration of this new transmission line easement would be subject to review under Section 106 of the National Historic Preservation Act (NHPA). This technical report has been prepared to support the NHPA review and is specific to the portion of the Project within Jay Cooke State Park.












-  Shovel Test Location
-  Phase 1 Survey Area
-  Jay Cooke State Park Boundary

Figure 2

15 Line - Jay Cooke Project  
Phase I Field Map

Carlton County, Minnesota



For Environmental Review Purposes Only

Date: 6/12/2018 Source: Z:\Clients\M\_P\MIN\_Power\15\_Line\_Replacement\Field\_Data\CulturalReports\Line2018\Figure\_2\_15\_Line\_Field\_Map\_Cultural.mxd

## 1.2 REPORT CONTENTS

Merjent prepared this report on in accordance with the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 Code of Federal Regulations [CFR] 44716), the *SHPO Manual for Archaeological Projects in Minnesota* (Anfinson 2005), and the *State Archaeologist's Manual for Archaeological Projects in Minnesota* (Anfinson 2011).

Following this introductory section, this report includes:

- Archaeological literature and records review (Section 2.0);
- Field and analytic methods and National Register of Historic Places (NRHP) criteria for evaluation (36 CFR 60.4) (Section 3.0);
- Results of the field investigations (Section 4.0);
- Summary of the field effort (Section 5.0); and
- References (Section 6.0).

## 2.0 ARCHAEOLOGICAL LITERATURE AND RECORDS REVIEW

The composition and history of environmental landscapes is the backdrop to archaeological site locations (Gibbon et al. 2002). Examination of past and present geographic and ecological settings assisted Merjent in the interpretation of archaeological site formation processes throughout time, thereby aiding in the analysis of archaeological site significance. The following narrative briefly outlines the environmental and cultural setting of the Project area.

### 2.1 ENVIRONMENTAL AND CULTURAL BACKGROUND

The Project is in the Glacial Lake Superior Plain Subsection of the Southern Superior Uplands Section. The Glacial Lake Superior Plain Subsection is a glacial lake bed with a narrow band of lacustrine clays along the shores of Lake Superior. The regional topography is level to gently rolling, except along rivers and streams. Watercourses have cut deep valleys throughout the region; these include the nearby St. Louis River and tributaries. Presettlement vegetation consisted of forests dominated by white spruce, white pine, and aspen-birch, which is true of many areas today. Historic-period logging altered forests' composition and species distribution, but for the most part the Project vicinity retains this character (Photograph 1). The current setting is mixed hardwood forest covering a series of ridges separated by steep valleys and existing transmission line right-of-way (existing 15 Line).





Photograph 1: Photo # 112747. Typical Project Area. View to north along level ridge.

Culturally, the Project is within the Minnesota Archaeological sub-region 9s (Lake Superior Shore South). This region runs along the north shore of Lake Superior from Thunder Bay, Ontario to the southwest of Duluth, Minnesota and includes the eastern edges of Carlton, Cook, Lake, and St. Louis counties (Gibbon et al. 2002).

The archaeological record in the region shows evidence of prehistoric habitation starting as early as 8,500 years ago. Early prehistoric sites tend to exist along lake edges and rivers; some of these sites are now likely submerged beneath Lake Superior or controlled rivers like the St. Louis. Archaic sites generally occur on glacial lake beach ridges and/or major waterways and can contain native copper tools. Woodland occupations in the region can be identified along major waterways (Gibbon et al. 2002).

At the time of Euromerican contact, the Lake Superior Shore was occupied by the Ojibwa, who replaced Assiniboine and Cree in the 16th Century. By the mid-16th Century French missionaries and fur traders arrived in the region (Gibbon 2002). Trading posts and travel routes were constructed and utilized, including the Grand Portage of the St. Louis River. The Grand Portage was used by trappers and traders as an alternative to the unnavigable rapids of the St. Louis River. The Portage spans from the Fond du Lac dam toward Scanlon, MN and eventually to Big Sandy Lake in Aitkin County, MN (Radford and George 1990).

Jay Cooke State Park was established in 1915 after the donation of 2,350 acres of land by the St. Louis Power company. The park contains three separate districts listed on the NRHP. These districts include the Picnic Grounds, the Rustic Style district, and the Service Yard. The Civilian Conservation Corps (CCC) occupied and developed the park on two separate occasions, although nearby CCC camps continued development in the interim. The first camp arrived in 1933 and began work on projects such as picnic grounds and the Swinging Bridge; a 200-foot-long suspension bridge over the St. Louis River. Due to declining enrollment this camp was abandoned

in 1935. A second CCC camp arrived in 1939. This camp is most notably known for constructing the River Inn; a kitchen and dining area structure built from local stone and timber (MNHS 2018). None of these locations are within 1 mile of the Project area.

Merjent archaeologists reviewed the 1858 General Land Office survey map for the Project vicinity to further understand pre-settlement conditions. The survey map, based on survey notes generated in March 1858, shows the Project area generally between a creek and what appears to be a faintly drawn trail, perhaps drawn in after the map was published (as it does not have the same line weight as most of the illustrations). This line may represent an attempt to bridge a gap, between the clearly marked “trail” in Section 6 of Township 48 North, Range 15 West in St. Louis County and the road or trail segment clearly shown in Section 2 to the west. This likely represents an alignment of the Grand Portage which winds through the Project vicinity.

## 2.2 PREVIOUSLY REPORTED ARCHAEOLOGICAL SURVEYS AND SITES

Merjent archaeologists conducted a literature and archival review of the APE and the surrounding area. Michael Madson conducted the literature review research on May 15, 2018 at the Minnesota State Historic Preservation Office (MnHPO). Merjent reviewed five previously prepared archaeological site inventories within 1 mile of the APE, i.e. study area (Table 1). In addition, Merjent identified Minnesota Site Inventory Forms for 10 previously recorded archaeological sites within the same study area (Figure 1 and Table 2).

**Table 1. Previous Archaeological Inventories on File at MnHPO within the Project Study Area**

Report Number	Report Title	Report Author(s)/Year	Comments
Mult-90-12	<i>Report on Stage I Cultural Resources Survey for the St. Louis River Hydroelectric Project in Northeastern Minnesota</i>	Mulholland et al. (1990)	Sites identified (in study area): 21CLd, 21Cle
CL-90-2	<i>Archaeological Survey on Submerged Portions of the Fond du Lac Pond, on the St. Louis River Carlton and St. Louis Counties, Minnesota</i>	Mulholland and Rapp (1990)	Sites identified (in study area): 21CL0011, 21CL0012
Unknown	<i>Minnesota State Park Cultural Resource Management Survey: 1993 Fieldseason. Minnesota Historical Society for DNR State Parks. David S. Radford and Douglas C. George.</i>	Radford and George (1994)	Site identified (in study area): 21CL0015
unknown	<i>Points and Pits: Archaeological Investigations In Minnesota's Region 9, The Lake Superior Shore, Carlton, Cook, Lake, And St. Louis Counties, Minnesota</i>	Mulholland et al. (2011)	Sites identified (in study area): 21CL0034, 21CL0039, 21CL0044
CL-14-2	<i>TH210 Repairs in Jay Cooke State Park: Phase I-II Historic and Archaeological Survey and Evaluation, Carlton County, Minnesota</i>	Arnott and Maki (2014)	Site identified (in study area): 21CL0050

Five reports were readily available in MnHPO files during the archival review (Table 1). These reports highlight the archaeological survey and research focus on the St. Louis impoundment margins and drawdown areas (Mulholland et al. 1990, Mulholland and Rapp 1990, and Mulholland et al. 2011), as well as the most recent work associated with reconstruction of TH 210 (Arnott and Maki 2014). The surveys employed a wide variety of archaeological investigative techniques ranging from pedestrian reconnaissance to intensive archival review to analysis of recent LiDAR

images. The range of work has been productive (with one or more sites identified during each survey) and illustrates the rich archaeological potential of the vicinity and the wide variety of pre-contact and historic-period archaeological site types field archaeologists could expect to identify during survey (Table 2).

**Table 2. Previously Identified Archaeological Sites on File at MnHPO within the Project Study Area**

Site Number	Site Name	Township	Range	Section	Site Type	Site Form Comments
21CLd	Grand Portage access point	48N	16W	1	Trail	Grand Portage access point as defined in Mulholland et al. (1990)
21Cle	Roche Galet Pause	48N	16W	1	Trail/	Roche Galet Pause point as defined in Mulholland et al. (1990)
21CL0011	n/a	48N	15W	6	pre-contact lithic scatter	n/a
21CL0012	n/a	48N	15W	6	historic/modern refuse	n/a
21CL0015	Little River Quarry Site	48N	16W	1	pre-contact/historic period quarry	n/a
21CL0034	Trail Rest Stop	48N	16W	1	pre-contact lithic scatter	n/a
21CL0039	Fond du Lac Pond 9	48N	16W	1	pre-contact (quartz) lithic scatter	n/a
21CL0044	Fond du Lac Pond 12	48N	16W	1	pre-contact habitation	n/a
21CL0050	n/a	48N	16W	1	petroglyph (possible)	n/a
21SL0983	Roussain Cemetery	48N	15W	6	historic cemetery	n/a

While no previously known archaeological sites are within the Project APE, the 10 archaeological sites and one historic-period cemetery previously identified in the study area highlight the variety of pre-contact and historic period sites possible in the Project vicinity. Work by Arnott and Maki (2014) provided the most detailed field examination of the Grand Portage and recommended several identified segments as eligible for inclusion on the NRHP. The other sites in the study area have not been formally evaluated but, although largely of indeterminate cultural association, they reflect the observations made in Gibbon et al. (2002). In short, the known archaeological site assemblage highlights the rich potential of the APE and vicinity to contain pre-contact and historic-period archaeological sites.

### 3.0 RESEARCH DESIGN

Merjent implemented an archaeological inventory method that best suited the field conditions and represented a reasonable effort to identify NRHP-eligible archaeological sites.

#### 3.1 FIELD METHODS

Merjent archaeologists located the APE utilizing Geographic Information System data in conjunction with a Trimble Geo7X series Global Positioning System unit and with the assistance of aerial maps. Ground surface visibility was assessed to determine the proper survey techniques. The surrounding landscape, including the APE, is covered extensively by hardwood and pine



forests which reduced ground visibility to below 25% and necessitated shovel testing in areas where slopes were less than 20 percent. Shovel tests were conducted according to MnHPO and Minnesota OSA guidelines (Anfinson 2005, Anfinson 2011), with a focus on sampling hilltops, terraces, and/or locations with expansive viewsheds. Shovel tests were placed at 15-meter intervals and all excavated soils were screened through ¼ inch mesh.

## 3.2 EVALUATION CRITERIA

The purpose of the Phase I archaeological inventory was to identify and record previously undocumented cultural resources located within the APE and to assess site eligibility for inclusion on the NRHP. Such sites and properties are those that meet the required eligibility criteria as established by the Secretary of the Interior and detailed in 36 CFR 60.4:

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

- A. that are associated with 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 history or prehistory.

## 4.0 ARCHAEOLOGICAL RECONNAISSANCE RESULTS

The Phase I reconnaissance survey was completed by Merjent archaeologists Michael Madson (Principal Investigator), Kevin Gubbels, and Kevin Mieras on May 17, 2018 (Figure 2). The entire APE was subject to surface collection techniques to assess the presence of exposed cultural materials and/or surface features. Areas with less than 20 percent slope were shovel tested at 15-meter intervals.

Level surfaces were identified during pedestrian survey and assessed to determine the maximum number of shovel tests that could be excavated. The Project APE is generally bisected east and west by a narrow north-south trending ridge bordered by very steep slopes (Figure 2). The existing 15 Line corridor runs north-south on the western portion of that ridge as the landform slopes down to the west. (Photograph 2). Merjent archaeologists placed three shovel tests on the level portion of the ridgeline just east of the existing 15 Line corridor.

Soils observed in three shovel tests were generally consistent with the typical Campia Silt Loam map unit, where soils are well drained silt loam or silty clay loams (USDA 1978). Rounded cobbles were observed in shovel tests, as well as dense tree root structures. No cultural materials were identified during pedestrian reconnaissance or shovel test excavations within the Project APE.



Photograph 2: Photo # 144990. Existing 15 Line transmission line corridor with Project APE in background. View to south.

## **5.0 SUMMARY AND RECOMMENDATIONS**

On May 17, 2018, Merjent conducted a Phase I archaeological survey within the Project APE. No archaeological sites were identified during the field investigations. The effort to identify archaeological deposits in the APE was appropriate to existing conditions. Merjent recommends that archaeological sites eligible for inclusion on the NRHP are not likely to exist within the APE and that no additional archaeological investigations are necessary within the APE. The Project should proceed as proposed.

While not expected, should archaeological materials be identified during Project construction activities, such activities should cease in the immediate area, a responsible person at Minnesota Power should be notified, and a professional archaeologist should be contacted to evaluate the identified archaeological site. In the event of a confirmed archaeological site, Minnesota Power should initiate steps for the recording and evaluation of the find, begin communication with applicable agencies and other authorities, and implement any procedures for treatment. In the event of unintended identification of human remains, the procedures as outlined in Minnesota Statute Chapter 307, "Private Cemeteries," must be followed.

## 6.0 REFERENCES CITED

- Anfinson, Scott F. 2005. SHPO Manual for Archaeological Projects in Minnesota. Minnesota Historical Society. St. Paul, Minnesota.
- Anfinson, Scott F. 2011. State Archaeologist's Manual for Archaeological Projects in Minnesota. Office of the State Archaeologist. St. Paul, Minnesota.
- Arnott, Sigrid and David Maki. 2014. *TH210 Repairs in Jay Cooke State Park: Phase I-II Historic and Archaeological Survey and Evaluation, Carlton County, Minnesota*. Sigrid Arnott Consulting, LLC, Minneapolis, Minnesota.
- Guy E. Gibbon, Craig M. Johnson, and Elizabeth Hobbs. 2002. Chapter 3 Minnesota's Environment and Native American Culture History, in Minnesota Statewide Archaeological Predictive Model. Electronic document, <http://www.dot.state.mn.us/mnmodel/P3FinalReport/chapter3.html#top>, accessed June 20, 2017.
- Mulholland, Susan, George Rapp, Jr., Stephen L. Mulholland, Walt Okstad, and Elizabeth Dahl. 1990. *Report on Stage I Cultural Resources Survey for the St. Louis River Hydroelectric Project in Northeastern Minnesota*. Archaeometry Lab, Duluth, Minnesota.
- Mulholland, Susan and George Rapp, Jr. 1990. *Archaeological Survey on Submerged Portions of the Fond du Lac Pond, on the St. Louis River Carlton and St. Louis Counties, Minnesota*. Archaeometry Lab, Duluth, Minnesota.
- Mulholland, Susan, Stephen L. Mulholland, Jennifer R. Hamilton, and Stacey Clark. 2011. *Points and Pits: Archaeological Investigations in Minnesota's Region 9, The Lake Superior Shore, Carlton, Cook, Lake, and St. Louis Counties, Minnesota*. Duluth Archaeology Center, Duluth, Minnesota.
- Radford, David S. and Douglas C. George. 1994. *Minnesota State Park Cultural Resource Management Survey: 1993 Fieldseason*. Minnesota Historical Society for DNR State Parks.
- USDA (United States Department of Agriculture). 1978 *Soil Survey of Carlton County, Minnesota*.