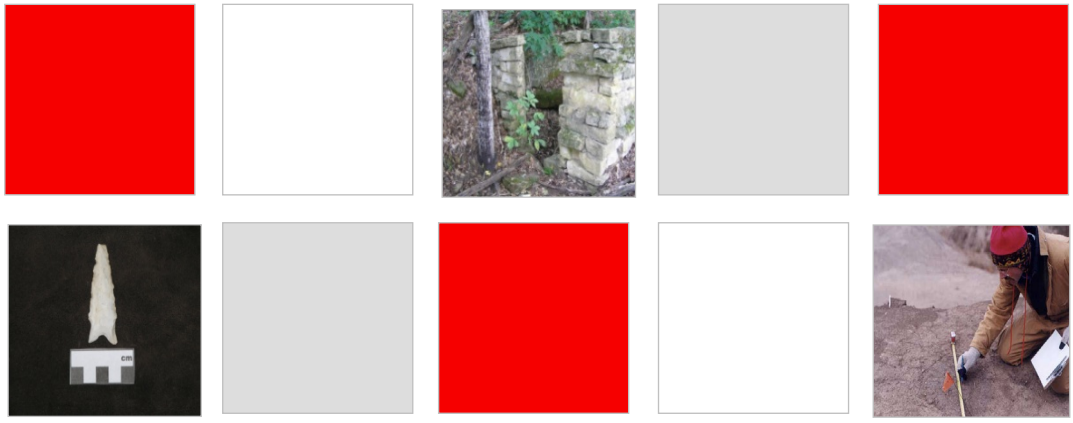
Appendix H

Phase Ia Literature Review and Natural Heritage Information System Review Request

A summary of findings is available in Sections 8.7 and 8.21 of the Application.

Northern States Power Company
Nobles Wind Farm Repower Project
Docket No. IP-6646/WS-09-584
February 2021

PUBLIC DOCUMENT - NONPUBLIC DATA HAS BEEN EXCISED



Xcel Energy, Inc.

Phase Ia Literature Search for the Nobles Wind Farm Repower Project

Nobles County, Minnesota

PREPARED BY

Merjent, Inc.
1 Main Street SE, Suite 300
Minneapolis, Minnesota 55414

Kevin Mieras

Michael Madson, MS, RPA
Principal Investigator

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ACRONYM LIST

BCE	Before the Common Era
BLM	Bureau of Land Management
CE	Common Era
GIS	Geographic Information System
GLO	General Land Office
LWECS	large wind energy conversion system
Merjent	Merjent, Inc.
MnDNR	Minnesota Department of Natural Resources
MnSHPO	Minnesota State Historic Preservation Office
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OSA	Office of the State Archaeologist
PLSS	public land survey system
Project	Nobles Wind Farm Repower Project
Project Area	The area within the Project boundary identified in Figure 1 of this report.
WHP	World History Project

EXECUTIVE SUMMARY

Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy is proposing to repower the currently operating 201-megawatt Nobles Wind Farm (Project) in Nobles County, Minnesota. The Project Area consists of approximately 23,912 acres of privately owned land located in southwestern Minnesota, five miles northwest of Worthington, Minnesota and generally north of Interstate 90 and west of Highway 25. The Project is a large wind energy conversion system (LWECS), as defined in the Wind Siting Act, Minnesota Statutes Chapter 216F and, as such, requires a Site Permit Amendment from the Minnesota Public Utilities Commission.

As part of the environmental review required for the Site Permit Amendment application, Xcel Energy contracted with Merjent, Inc. (Merjent) to conduct a Phase Ia literature search of the Project Area and 1-mile buffer consisting of 49,025 acres. In November 2020, Merjent conducted the literature review of cultural resources reports, archaeological sites, and historic architectural sites provided by the Minnesota State Historic Preservation Office, as well as 19th century General Land Office maps and historic aerial photography.

The literature review identified six cultural resources reports, 18 archaeological sites, two archaeological sites leads, and 75 historic architectural sites. Merjent recommends Phase I archaeological survey in all areas of proposed Project ground disturbance outside of areas that have been previously surveyed. Additionally, no impacts to historic architectural sites have been identified during the initial construction and continued operation of the existing wind farm. If there is physical alteration to a structure or building during the course of construction, then Merjent recommends that Xcel Energy sponsor a Phase II architectural survey of that structure or building to evaluate the resource.

1.0 PROJECT DESCRIPTION

Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy is proposing to repower the currently operating 201-megawatt Nobles Wind Farm (Project) in Nobles County, Minnesota. The Project Area consists of approximately 23,912 acres of privately owned land located in southwestern Minnesota, five miles northwest of Worthington, Minnesota and generally north of Interstate 90 and west of Highway 25. The Project is a large wind energy conversion system (LWECS), as defined in the Wind Siting Act, Minnesota Statutes Chapter 216F and, as such, requires a Site Permit Amendment from the Minnesota Public Utilities Commission.

2.0 LITERATURE REVIEW STUDY AREA

The proposed Project Area traverses Dewald, Olney, Summit Lake, and Larkin Townships in Nobles County, Minnesota (Figure 1). The literature search includes the proposed Project Area and a 1-mile extension around it; this area encompasses the entire Study Area. The public land survey system (PLSS) locations are listed in Table 2.0-1 and shown as the Study Area on Figure 1.

TABLE 2.0-1

Nobles Wind Farm Repower Project Study Area

Township Name	Township	Range	Sections included in Study Area
Dewald	102N	41W	1-23
Olney	102N	42W	1-4, 10-15, 23, 24
Elk	103N	40W	19, 30, 31
Summit Lake	103N	41W	6-11, 13-36
Larkin	103N	42W	1-4, 9-16, 21-28, 33-36

3.0 METHODOLOGY

This literature search constitutes an analysis of protected datasets on file at the Minnesota State Historic Preservation Office (MnSHPO) and the Minnesota Office of the State Archeologist (OSA). Merjent archaeologist Erika Eigenberger received the results of a request for data regarding known archaeological sites and historic structures within the Study Area from MnSHPO on November 4, 2020. Due to restricted access at the MnSHPO, data related to previous cultural resource surveys within the Study Area was limited to reports with known accession numbers. Currently, the only means to identify report accession numbers is to review known archaeological site data provided by MnSHPO. Cultural resource surveys where no sites were identified could not be accessed at this time. Ms. Eigenberger submitted a request for previous cultural resources reports within the Study Area to MnSHPO on November 10, 2020. MnSHPO provided the reports within the request on November 23, 2020. OSA maintains a secured online dataset of known and suspected archaeological sites, which is regularly updated and referenced (OSA Portal). Ms. Eigenberger reviewed the files of the OSA Portal and downloaded copies of all known sites within the Study Area.

Merjent also reviewed 19^{h} century General Land Office (GLO) maps and notes on file with the Bureau of Land Management (BLM, 2020) and aerial photographs from 1938 and 1954 file with the OSA.

Since geographic information system (GIS) shapefiles of archaeological survey locations and archaeological site boundaries are not available from MnSHPO or OSA, Ms. Eigenberger digitized

survey (Table 5.1-1) and site locations (Table 5.2-1) based on digital files provided by MnSHPO and available on the OSA portal. Merjent also received a list of historic architectural structures within the requested study area (Table 5.3-1). Merjent digitized structure locations and provides them with this report; however, locational information beyond the PLSS section number was not provided for five of the 75 properties. These properties are listed in Table 5.3-1 but not placed on the map. Finally, Merjent archaeologist Kevin Mieras reviewed background materials on file at Merjent, and publicly available data sources available online for information about Nobles County and the ecological setting of the Study Area.

4.0 ENVIRONMENTAL AND CULTURAL BACKGROUND

The Project Area is in the Coteau Moraines Subsection of the North Central Glaciated Plains Section of the Prairie Parkland Province (Minnesota Department of Natural Resources [MnDNR], 2020). The Coteau Moraines Province traverses part of a high glacial landform that stretches across southeastern South Dakota, southwestern Minnesota, and northwestern Iowa. The subsection contains two distinctive parts consisting of the middle coteau and outer coteau. The Coteau Moraines Subsection is bound by a steep escarpment on the northeast and a transition from shallow wind-blown silt deposits over glacial till to deep loess deposits in on the southwest.

4.1 TOPOGRAPHY

Topography within the Coteau Moraines Subsection varies between the middle and outer coteau. The middle coteau consists of rolling moraine edges. The outer coteau varies from gently to steeply rolling and hilly. Several streams have created straight, narrow ravines cut through the escarpment along the northwest edge of the subsection (MnDNR, 2020).

4.2 HYDROLOGY

The Coteau Moraines Subsection is primarily drained to the northeast into the Minnesota River and to the south into the Des Moines River. The middle coteau contains few lakes. The outer coteau contains more lakes and wetlands than the middle coteau due to a poorly developed drainage network (MnDNR, 2020).

4.3 GEOLOGY

Bedrock within the Coteau Moraines Subsection consists of cretaceous shale, sandstone, and clay covered by up to 800 feet of glacial till (MnDNR, 2020; Morey and Walton, 1976).

4.4 SOILS

Soils within the Coteau Moraines Subsection consist of primarily Mollisols, Aquolls, and Udolls with smaller areas of Borolls and Ustolls. These loamy soils are well-drained and have thick, dark surface horizons. Dry prairie soils are located on eroded or dissected topography while moist prairie soils are located on rolling end moraines within the outer coteau (Cummins and Grigal, 1981).

4.5 FLORA AND FAUNA

Few remnants of presettlement vegetation remain within the Coteau Moraines Subsection as agriculture is currently the predominant land use. Presettlement vegetation consisted of mostly tallgrass prairie. Wet prairies and forests were restricted to stream margins. Edible plants within

the subsection included acorns, ground plum, and prairie turnip in the uplands with cattails, water lilies, and limited wild rice within lacustrine areas.

Presettlement fauna were dominated by bison and occasional elk. White-tailed deer and small animals were abundant along river valleys. Wetlands and lakes within the outer coteau contain various species of waterfowl, aquatic mammals, and fish (MnDNR, 2020; Gibbon et al., 2002).

4.6 CULTURAL AND HISTORICAL OVERVIEW

Culturally, the Project is within the Minnesota Archaeological sub-regions 1 (Southwest Riverine Region) and 2s (Prairie Lakes Region South). The Southwest Riverine region covers the southwest corner of Minnesota in all or part of Rock, Pipestone, Nobles, Lincoln, and Murray counties. The Prairie Lakes Region South covers most of southwestern Minnesota and extends into southeastern South Dakota and Northwestern Iowa. Within Minnesota, the sub-region includes all or part of Lac qui Parle, Yellow Medicine, Lincoln, Lyon, Murray, Nobles, Redwood, Cottonwood, Jackson, Brown, Watonwan, Martin, Blue Earth, and Faribault counties (Gibbon et al., 2002).

4.6.1 Pre-Contact Period (10,900 BCE-1650 CE)

The first inhabitants of Minnesota are known as Paleo-Indians (10,900 to 7,500 years Before the Common Era [BCE]). These people were highly nomadic hunter-gatherers, moving in small bands in search of food and other subsistence resources; however, in the Late Glacial and Early Holocene forests of Minnesota, Paleo-Indians likely relied more on gathering and the hunting of a variety of smaller animals. Paleo-Indian sites are small and relatively ephemeral and are commonly identified with the recovery of distinctive spear tips that occur across much of North America (Gibbon et al., 2002).

The Paleo-Indian peoples were followed by Archaic Tradition hunter-gatherers. At the end of the Ice Age, around 10,000 years BCE, the climate became warmer and drier, which led to major changes in plant and animal communities. Spruce forests followed the retreating glacial ice northward and were replaced by a new landscape comprised of extensive lakes and rivers. Many large-game species became extinct. Archaic Tradition hunters-gatherers (7,500 to 500 BCE) adapted to this new environment, shifting their focus to smaller game such as deer and elk, the abundant fish and shellfish in the numerous lakes and rivers, and wild plants such as nuts and berries (Gibbon et al., 2002).

The Archaic peoples appear to have been less nomadic and lived in smaller household groups. Archaic sites are identified by large notched and stemmed projectile points. Immense sedimentation during the early part of the Archaic, corresponding with the Early and Middle Holocene periods, resulted in many Archaic Tradition sites being deeply buried under river valley deposits; therefore, these sites are not usually evident in surficial contexts (Gibbon et al., 2002).

The Woodland Tradition followed the Archaic Tradition. In Minnesota, the Woodland culture is separated into two periods, the earlier Initial Woodland period (ca. 500 BCE to 500 years into the Common Era [CE]), and the later Terminal Woodland period (500 to 1650 CE) (Gibbon et al., 2002).

The frequent surficial expression of Woodland site locations, coupled with burial mounds that frequently mark their place, has resulted in more frequent documentation and excavation of

Woodland sites. Due to this higher frequency of identification, many Woodland sites have also been grouped into specific regional archaeological cultures (Gibbon et al., 2002; Gibbon, 2012).

The Initial Woodland period is primarily marked by the emergence of Pre-contact ceramic traditions and burial mounds. Regional archaeological cultures of the Initial Woodland period include Howard Lake, Malmo, Elk Lake, and Laurel (Gibbon et al., 2002; Gibbon, 2012).

The Terminal Woodland period has been defined throughout eastern and central Minnesota, the Red River Valley, and portions of the Dakotas (Gibbon, 2012). During this time period, populations began to increase, which in turn led to an increase in size and number of Pre-contact sites. Burial mounds became more prevalent and the cultural material artifacts began shifting to smaller, unnotched triangular projectile points and thinner ceramic vessels that were more globular in shape. Agriculture and wild rice harvests also increased (Gibbon et al., 2002; Gibbon, 2012).

In the northern portion of the state, ceramic types and burial practices indicate specific regional archaeological cultures, including Kathio, Blackduck, and Psinomani. In the southern portion of the state, primarily comprised of deciduous forests and prairie, some cultures adopted the cultivation of maize and the construction of effigy burial mounds (Gibbon et al., 2002; Gibbon, 2012).

Around approximately 1,000 CE, Mississippian populations from Cahokia, near St. Louis, Missouri, began to extend their influence northward into the Upper Mississippi River Valley and evidence suggests that there were attempts at colonization. Archaeologists tend to regard some southern Minnesota Terminal Woodland cultures as the northern expression of a “Mississippian” lifeway, distinguished by distinctive ceramic styles, larger and more diverse artifact assemblages, and evidence of maize production. In southern Minnesota, three Mississippian complexes have been identified: Silvernale, Oneota, and Plains Village (Gibbon et al. 2002). It was the Mississippian peoples in the south, and the Terminal Woodland peoples in the north, who had contact with the first Europeans to explore Minnesota in the mid-17th century (Gibbon et al. 2002; Gibbon 2012).

4.6.2 Contact Period (1650-1837 CE)

The Contact Period includes American Indian and Euro-American contexts. The OSA subdivides the American Indian context into “Indeterminate” or “Eastern Dakota,” and the Euro-American context into “Indeterminate,” “French,” “British,” and “Initial US” (OSA, 2009). This section focusses on developing a context for those sites investigated during the project. The remaining information provides a temporal framework as a context.

Euro-American fur traders and settlers encountered the Dakota (also known as Sioux) and Ojibwe (also known as Chippewa) Native American peoples when they moved into traditional lands in what is now Minnesota. Several other Native American tribes, including the Assiniboine moved west in the early 1600s, soon after the explorers and traders entered the region (Holmquist, 1981). The Dakota lived in village-centered societies in the southern portion of Minnesota while the Ojibwe were organized into independent migratory bands in the northern portion of Minnesota. (Gibbon, 2012:205). Traditionally, Ojibwe individuals lived in bands and were members of a clan (Roy, 2018).

The first written European accounts about the Ojibwe appeared in Jesuit diaries, published in collected form as the *Jesuit Relations and Allied Documents 1610-1791* (Thwaites, 1898)

described by Roy (2018). The documents are so detailed in their descriptions of Native Americans and their cultures, they are considered ethnographic accounts. Following the Jesuits, French explorers and trappers traveled portions of Minnesota in the 17th century and established a fur trading economy with local native populations, including the Dakota and Ojibwe. Early trading posts were established along the lower Mississippi River and the first French fort was established in 1700 near present day Mankato. The fur trade resulted in the Ojibwe becoming reliant on traded goods rather than the clothing, utensils, and weapons they had traditionally constructed (Roy 2018).

In the early 18th century, the French began to move their fur trade north into Canada. Over the next 100 years, the Ojibwe and French established strong relationships and the French embraced Ojibwe culture, learned the language, and married into Ojibwe families. Territorial disputes, competition, and shifts in political alliances eventually led to the French and Indian War (1754-1763). The Ojibwe sided with the French against the British in the final Colonial War, fought between 1689 and 1763, which culminated with the French and Indian War. At the end of the French and Indian War, the 1763 Treaty of Paris resulted in the French ceding all land east of the Mississippi River in the New World to the British (Fond du Lac Band of Lake Superior Chippewa, 2018). The French had already ceded the land west of the Mississippi River to Spain with the 1762 Treaty of Fontainebleau, but the transfer was not publicly announced until 1764. The region was retroceded to France, under the terms of the 1800 Third Treaty of San Ildefonso and the 1801 Treaty of Aranjuez, then was transferred to the United States in 1803 by the Louisiana Purchase (World History Project, 2018). Although the United States purchased the land, the Dakota, Ojibwe, and several other Native American groups maintained sovereignty, resulting in numerous subsequent treaties with the United States.

After the Treaty of Paris in 1763, the British quickly set up fur trading posts throughout Minnesota. The British fur trading economy was centered at Grand Portage, where traders would bring their furs and leave with other valuable trade goods. Jonathon Carver explored the upper Mississippi River in the 1760s. After the Revolutionary War of 1776, competition between the United States and British companies intensified throughout Minnesota. In 1803, the Louisiana land purchase established United States lands extending from the Atlantic to the Rocky Mountains. The War of 1812 saw a demise in the British fur traders due to the United States denying business licenses to British traders.

Early British and United States citizens conducted the first fully documented land survey of Minnesota in the mid-18th and early 19th centuries. By 1806, Zebulon Pike had explored portions of the Mississippi River. Missionaries began to arrive in the early 19th century, primarily along the Minnesota River. The American Fur Company was founded by John Jacob Astor in 1811, after which numerous fur trading posts were quickly established throughout the state. At the confluence of the Minnesota and Mississippi River, Fort Snelling was constructed in 1819 to protect the new United States' investments in the area. Large-scale fur trade resulted in a major decline in the native beaver populations and by 1842, the fur trade in Minnesota came to an end when the American Fur Company came to its demise (Dobbs, 1989). After the passing of the fur trading industry, land was opened to Euro-American settlers.

5.0 LITERATURE REVIEW RESULTS

In November 2020, Merjent conducted a Phase Ia Literature Review for the Project Study Area. Merjent reviewed archaeological site forms, historic structure form, and cultural resource reports on file at MnSHPO and OSA. Additionally, nineteenth century GLO maps and historic aerial photography were reviewed.

5.1 PREVIOUS SURVEYS

Table 5.1-1 and Figure 2 indicate that six archaeological inventories or evaluation studies were conducted within the Study Area. These studies are associated with a county-wide archaeological survey sponsored by the Minnesota Historical Society and the development of wind energy projects. Gibbon (1980) conducted a survey of portions of counties in southwestern Minnesota, including portions of the Study Area. Specific survey locations were not provided within the report. Bastis and Rand (2009) presents the results of a Phase Ia literature review for the Nobles County Wind Farm. Wilcox (2009a and 2009b) and Doperalksi (2010) conducted Phase I archaeological inventories for the Nobles County Wind Farm. Blondo (2012) presents the results of a Phase I archaeological inventory for the proposed Community Wind South LWECS project. This report was identified within the OSA site form for site 21NO0071. The report number was not provided in the data provided by MnSHPO, therefore, a copy of the report was not provided, and specific survey locations could not be determined for this report.

TABLE 5.1-1

Previous Surveys within the Study Area

Report Number	Report Title	Author/Year
SAS-80-01	An Archaeological Survey of Nobles, Pipestone, and Rock Counties, Minnesota. Submitted to the Minnesota Historical Society in partial fulfillment of contracts, No. 80-0-645 and No. 79-0-558.	Gibbon/1980
NO-09-07/ NO-2009-2H	Cultural Resources Literature Review for the Nobles County Wind Farm Project. Nobles County, Minnesota	Bastis and Rand/2009
NO-09-05	Phase I Archaeological Survey for the Nobles County Wind Farm, Nobles County, Minnesota	Wilcox/2009
NO-09-06	Phase I Archaeological Survey for the Nobles County Wind Farm, Nobles County, Minnesota. Addendum I	Wilcox/2009
NO-10-03	Phase I Archaeological Survey for the Nobles County Wind Farm Project, Nobles County, Minnesota. Addendum II	Doperalski.2010
Unknown	An Archaeological Survey for the Proposed Community Wind South LWECS Project, Nobles County, Minnesota.	Blondo/2012

5.2 PREVIOUSLY RECORDED ARCHAEOLOGICAL SITES

Table 5.2-1 and Figure 2 show 18 documented archaeological sites and two site leads in the Study Area. These archaeological sites include eight precontact lithic scatters, seven precontact single artifact find spots, two precontact artifact scatters, and one multicomponent artifact scatter. The site leads include a ghost town, and precontact earthworks. The precise location of these site leads has not been confirmed. National Register of Historic Places (NRHP) eligibility for each site is provided in Table 5.2-1 below.

The Study Area is primarily within the Low Site Potential Layer of the Mn-Model (Phase 4) Survey Implementation Model (Minnesota Department of Transportation [MnDOT], 2020) with areas of High Site Potential along the East Branch Kanaranzi Creek Approximately 49,205 acres are within the Study Area; the overall site density in the Study Area is low and does not reflect the likely intense Native American or early Euro-American land use. The impacts of 150 years of cultivation, the general absence of archaeological survey in the Study Area, and artifact collection are possible reasons for this low density. Merjent expects that more archaeological sites are present near water sources within the Study Area should formal surveys occur outside of previously surveyed areas.

TABLE 5.2-1

Previously Recorded Archaeological Sites within the Study Area

Site Number	Site Name	Township	Range	Section	Context	Site Type	NRHP Status
21NO0022	The Accidental Site	102N	41W	6	Precontact	Lithic Scatter	Unevaluated
21NO0024	Robert Elsing	102N	42W	1	Precontact	Lithic Scatter	Unevaluated
21NO0028	Indian Hill II	103N	41W	18	Precontact	Lithic Scatter	Unevaluated
21NO0029	Indian Hill	103N	41W	18	Precontact	Lithic Scatter	Unevaluated
21NO0030	Elsing	103N	41W	31	Precontact	Artifact Scatter	Unevaluated
21NO0032	Croat	103N	42W	36	Precontact	Artifact Scatter	Unevaluated
21NO0033	Bottom	103N	102N	36	Precontact	Lithic Scatter	Unevaluated
21NO0061		102N	102N	1	Precontact	Single Artifact	Not Elig ble
21NO0062		103N	41W	33	Precontact	Single Artifact	Not Elig ble
21NO0063	Center Point Farm (Roskam Farmstead)	102N	41W	3	Euro-American/ Precontact	Artifact Scatter	Not Elig ble
21NO0064		103N	42W	36	Precontact	Single Artifact	Not Elig ble
21NO0065		102N	41W	16	Precontact	Lithic Scatter	Not Elig ble
21NO0066		102N	41W	9	Precontact	Single Artifact	Not Elig ble
21NO0067		102N	41W	9	Precontact	Single Artifact	Not Elig ble
21NO0068		102N	41W	9	Precontact	Lithic Scatter	Not Elig ble
21NO0069		103N	41W	31	Precontact	Single Artifact	Not Elig ble
21NO0070		103N	41W	22	Precontact	Single Artifact	Not Elig ble
21NO0071	Summit Lake	103N	41W	18	Precontact	Lithic Scatter	Unevaluated
21NOc	Dewald	102N	41W	20	Euro-American	Ghost Town	Unevaluated
21NOi		103N	42W	12	Precontact	Earthworks	Unevaluated

5.3 PREVIOUSLY RECORDED HISTORIC STRUCTURES

Table 5.3-1 and Figure 2 show 75 document historic architectural structures in the Study Area. These structures include 68 farmsteads, four bridges, a section of railroad grade, a township hall, and a water tower. The Lismore Water Tower is on file at MnSHPO as a considered eligible for inclusion on the NRHP, but not listed. The remaining 74 structures remain unevaluated. Locational information beyond the PLSS section number was not provided for five of the 75 properties, therefore, these properties are listed in Table 5.3-1 but not depicted on Figure 2.

TABLE 5.3-1

Previously Recorded Historic Architectural Sites within the Study Area

Site Number	Site Name	Township	Range	Section	NRHP Eligibility	Comments
NO-DEW-002	Bridge 53811	102N	41W	15	Unevaluated	Location not provided in MnSHPO digital files
NO-LRK-001	Larkin Township Hall	103N	42W	16	Unevaluated	
NO-LRK-003	Bridge No. L3517	103N	42W	21	Unevaluated	Location not provided in MnSHPO digital files
NO-LRK-004	Chicago, Rock Island and Pacific Railroad grade – Larkin Twp. Segment	103N	42W	34	Unevaluated	Location not provided in MnSHPO digital files
NO-LRK-005	Farmstead	103N	42W	26	Unevaluated	
NO-LRK-006	Farmstead	103N	42W	23	Unevaluated	

TABLE 5.3-1

Previously Recorded Historic Architectural Sites within the Study Area

Site Number	Site Name	Township	Range	Section	NRHP Eligibility	Comments
NO-LRK-007	Farmstead	103N	42W	25	Unevaluated	
NO-LRK-008	Farmstead	103N	42W	34	Unevaluated	
NO-LRK-009	Farmstead	103N	42W	27	Unevaluated	
NO-LRK-010	Farmstead	103N	42W	22	Unevaluated	
NO-LRK-011	Farmstead	103N	42W	15	Unevaluated	
NO-LRK-012	Farmstead	103N	42W	27	Unevaluated	
NO-LRK-013	Farmstead	103N	42W	22	Unevaluated	
NO-LRK-014	Farmstead	103N	42W	15	Unevaluated	
NO-LRK-015	Farmstead	103N	42W	36	Unevaluated	
NO-LRK-016	Farmstead	103N	42W	35	Unevaluated	
NO-LRK-017	Farmstead	103N	42W	24	Unevaluated	
NO-LRK-018	Farmstead	103N	42W	12	Unevaluated	
NO-LRK-019	Farmstead	103N	42W	12	Unevaluated	
NO-LRK-020	Farmstead	103N	42W	1	Unevaluated	
NO-LRK-021	Farmstead	103N	42W	11	Unevaluated	
NO-LRK-022	Farmstead	103N	42W	12	Unevaluated	
NO-LRK-023	Farmstead	103N	42W	11	Unevaluated	
NO-LRK-024	Farmstead	103N	42W	14	Unevaluated	
NO-LRK-025	Farmstead	103N	42W	13	Unevaluated	
NO-LRK-026	Farmstead	103N	42W	13	Unevaluated	
NO-LRK-027	Farmstead	103N	42W	14	Unevaluated	
NO-LRK-028	Farmstead	103N	42W	23	Unevaluated	
NO-LRK-029	Farmstead	103N	42W	24	Unevaluated	
NO-LRK-030	Farmstead	103N	42W	23	Unevaluated	
NO-LRK-031	Farmstead	103N	42W	24	Unevaluated	
NO-LSC-006	Lismore Water Tower	103N	42W	1	Considered Eligible, but not listed.	UTM location not provided in MnSHPO digital files
NO-OLN-003	Bridge 53809	102N	42W	15	Unevaluated	UTM location not provided in MnSHPO digital files
NO-OLN-004	Bridge 53824	102N	42W	13	Unevaluated	UTM location not provided in MnSHPO digital files
NO-SLT-002	Farmstead	103N	41W	36	Unevaluated	
NO-SLT-003	Farmstead	103N	41W	19	Unevaluated	
NO-SLT-004	Farmstead	103N	41W	19	Unevaluated	
NO-SLT-006	Farmstead	103N	41W	9	Unevaluated	
NO-SLT-007	Farmstead	103N	41W	9	Unevaluated	
NO-SLT-008	Farmstead	103N	41W	16	Unevaluated	
NO-SLT-009	Farmstead	103N	41W	16	Unevaluated	
NO-SLT-010	Farmstead	103N	41W	22	Unevaluated	
NO-SLT-011	Farmstead	103N	41W	21	Unevaluated	
NO-SLT-012	Farmstead	103N	41W	27	Unevaluated	
NO-SLT-013	Farmstead	103N	41W	22	Unevaluated	
NO-SLT-014	Farmstead	103N	41W	28	Unevaluated	
NO-SLT-015	Farmstead	103N	41W	34	Unevaluated	
NO-SLT-016	Farmstead	103N	41W	33	Unevaluated	

TABLE 5.3-1

Previously Recorded Historic Architectural Sites within the Study Area

Site Number	Site Name	Township	Range	Section	NRHP Eligibility	Comments
NO-SLT-017	Farmstead	103N	41W	33	Unevaluated	
NO-SLT-018	Farmstead	103N	41W	32	Unevaluated	
NO-SLT-019	Farmstead	103N	41W	32	Unevaluated	
NO-SLT-020	Farmstead	103N	41W	28	Unevaluated	
NO-SLT-021	Farmstead	103N	41W	21	Unevaluated	
NO-SLT-022	Farmstead	103N	41W	21	Unevaluated	
NO-SLT-023	Farmstead	103N	41W	16	Unevaluated	
NO-SLT-024	Farmstead	103N	41W	17	Unevaluated	
NO-SLT-025	Farmstead	103N	41W	8	Unevaluated	
NO-SLT-026	Farmstead	103N	41W	9	Unevaluated	
NO-SLT-031	Farmstead	103N	41W	8	Unevaluated	
NO-SLT-032	Farmstead	103N	41W	18	Unevaluated	
NO-SLT-033	Farmstead	103N	41W	18	Unevaluated	
NO-SLT-034	Farmstead	103N	41W	18	Unevaluated	
NO-SLT-035	Farmstead	103N	41W	17	Unevaluated	
NO-SLT-036	Farmstead	103N	41W	20	Unevaluated	UTM location not provided in MnSHPO digital files
NO-SLT-037	Farmstead	103N	41W	29	Unevaluated	
NO-SLT-038	Farmstead	103N	41W	20	Unevaluated	UTM location not provided in MnSHPO digital files
NO-SLT-039	Farmstead	103N	41W	29	Unevaluated	
NO-SLT-040	Farmstead	103N	41W	30	Unevaluated	
NO-SLT-041	Farmstead	103N	41W	30	Unevaluated	
NO-SLT-042	Farmstead	103N	41W	31	Unevaluated	
NO-SLT-043	Farmstead	103N	41W	32	Unevaluated	
NO-SLT-044	Farmstead	103N	41W	31	Unevaluated	
NO-SLT-045	Farmstead	103N	41W	32	Unevaluated	
NO-SLT-047	Farmstead	103N	41W	31	Unevaluated	
NO-XXX-001	Farmstead	103N	41W	30	Unevaluated	
		103N	42W	25	Unevaluated	

Merjent reviewed 19th century GLO maps and notes on file with the BLM (Figure 3; BLM, 2020). The 1867 GLO map within the Study Area, based on survey notes for Township 103 North, Range 42 West, shows the Madelia & Sioux Falls Road through sections 11, 14, 15, and 22. The remaining GLO maps show no cultural features within the Study Area.

Merjent also reviewed aerial photographs taken from 1938 and 1954 on file with the OSA. The Study Area is predominately agricultural fields and largely unchanged since 1939. By 1939, many of the present-day farmsteads, roads, and field drainages were already established. By 1954, a limited number of additional structures had been constructed.

6.0 SUMMARY AND RECOMMENDATIONS

The Phase Ia literature review for the Study Area identified six previous cultural resource investigations. Eighteen previously recorded archaeological sites, two archaeological site leads,

and 75 historic architectural sites were identified within the Study area. Although Project construction plans include limited ground disturbance outside of previously surveyed areas, the results of this literature review show there is potential for undiscovered archaeological sites within the literature review Study Area. Therefore, Merjent recommends Phase I archaeological survey be conducted in all areas of proposed Project ground disturbance that have not been previously surveyed.

No direct impacts to standing, historic-period structures were identified during the initial project build. In addition, no such impacts have been identified during operation of the Nobles Wind Farm. In the event that construction activities for the proposed Project would directly impact a standing, historic-period structure greater than 45 years old, Merjent recommends that Xcel Energy sponsor a Phase II architectural survey of that structure and evaluation of eligibility for inclusion on the NRHP. The evaluation should be provided to the MnSHPO to make a determination of effects and, if applicable, work with Xcel Energy through avoidance, minimization, or mitigation activities.

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APPENDIX A

Figures

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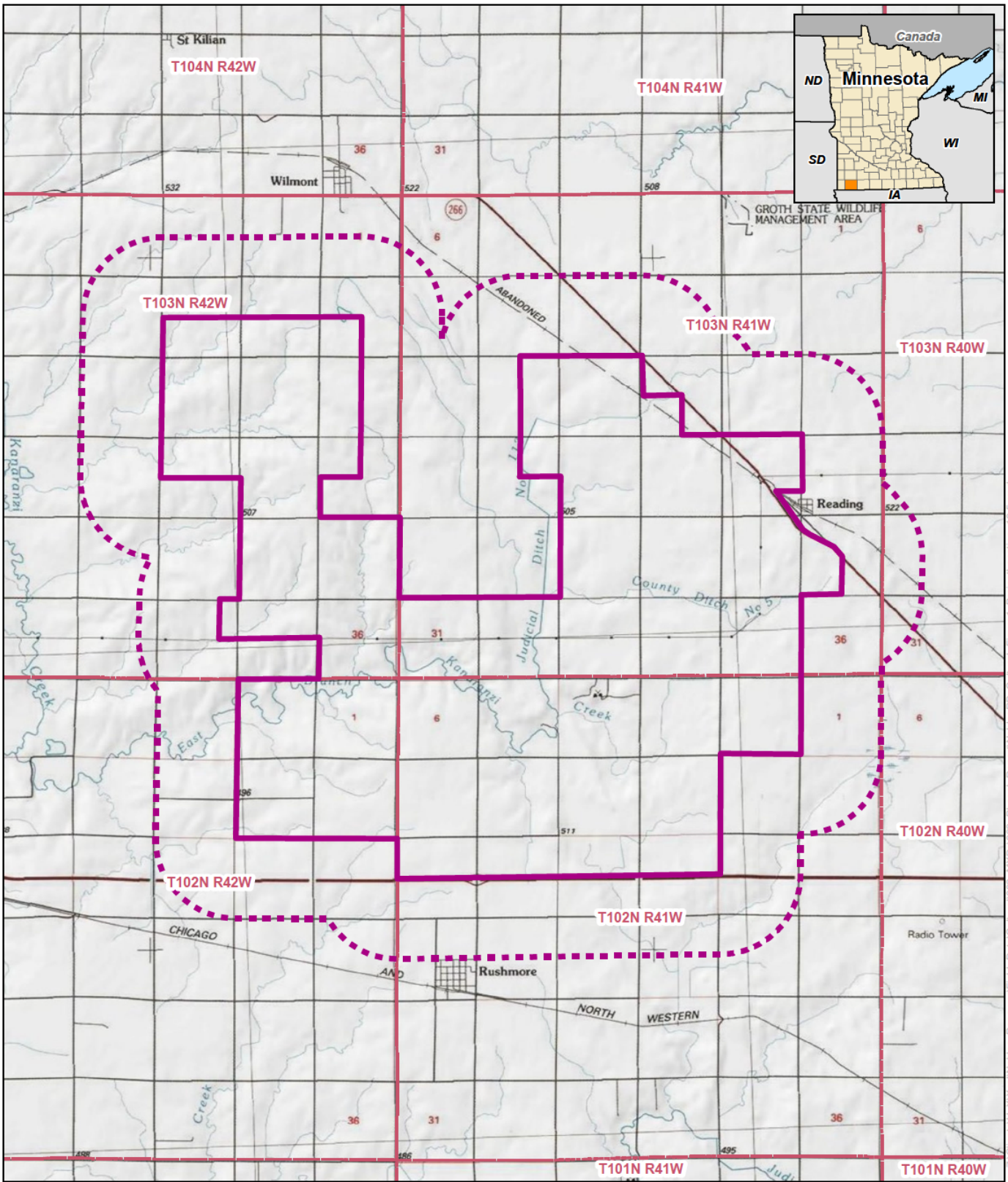

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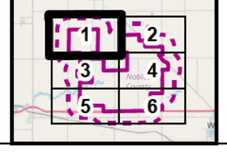

Figure 2.1: Previous Cultural Resources
Xcel Energy
Nobles Wind Farm Repower Project
Nobles County, Minnesota

Project Area
Literature Search Study Area
Turbine Location
Previous Survey
Previously Recorded Architectural Structure
Previously Recorded Archaeological Site
Township Boundary

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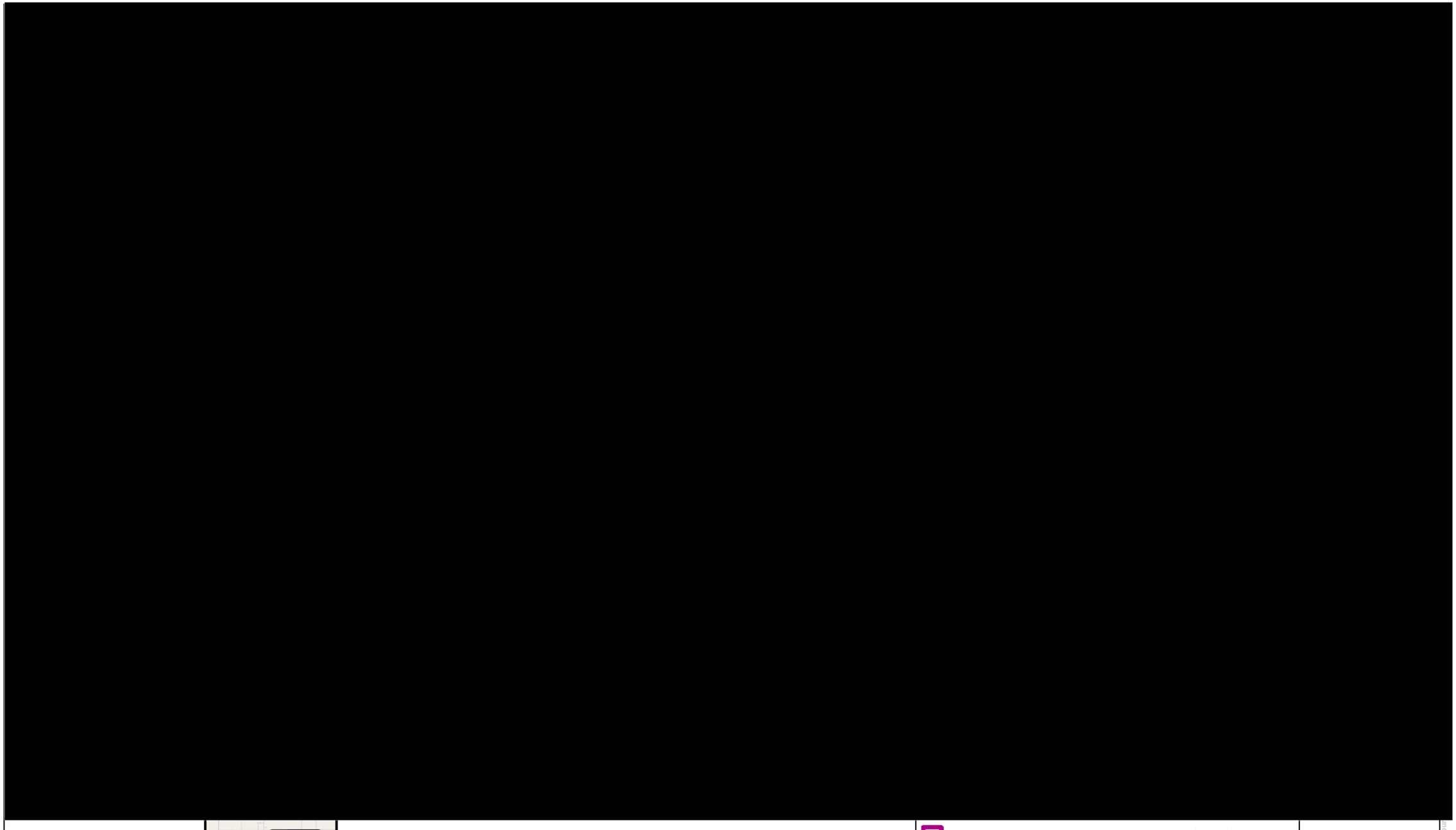
Source: Date (11/30/2020)



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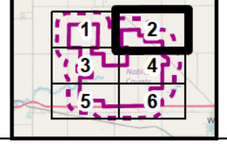

Figure 2.2: Previous Cultural Resources
Xcel Energy
Nobles Wind Farm Repower Project
Nobles County, Minnesota

Project Area
Literature Search Study Area
Turbine Location
Previous Survey
Previously Recorded Architectural Structure
Previously Recorded Archaeological Site
Township Boundary

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Date (11/30/2020)

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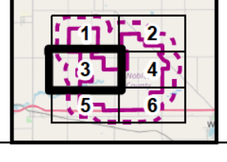

Figure 2.3: Previous Cultural Resources
Xcel Energy
Nobles Wind Farm Repower Project
Nobles County, Minnesota

Project Area
Literature Search Study Area
Turbine Location
Previous Survey
Previously Recorded Architectural Structure
Previously Recorded Archaeological Site
Township Boundary

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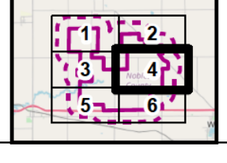

Figure 2.4: Previous Cultural Resources
Xcel Energy
Nobles Wind Farm Repower Project
Nobles County, Minnesota

- Project Area
- Literature Search Study Area
- Turbine Location
- Previous Survey
- Previously Recorded Architectural Structure
- Previously Recorded Archaeological Site
- Township Boundary

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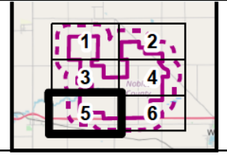

Figure 2.5: Previous Cultural Resources
Xcel Energy
Nobles Wind Farm Repower Project
Nobles County, Minnesota

Project Area
Literature Search Study Area
Turbine Location
Previous Survey
Previously Recorded Architectural Structure
Previously Recorded Archaeological Site
Township Boundary

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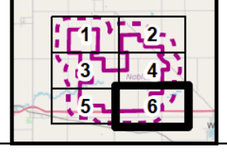

Figure 2.6: Previous Cultural Resources
Xcel Energy
Nobles Wind Farm Repower Project
Nobles County, Minnesota

Project Area
Literature Search Study Area
Turbine Location
Previous Survey
Previously Recorded Architectural Structure
Previously Recorded Archaeological Site
Township Boundary

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Figure 3.1: General Land Office Map

Xcel Energy
Nobles Wind Farm Repower Project
Nobles County, Minnesota

Project Area
Literature Search Study Area
Turbine Location
Previous Survey
Township Boundary

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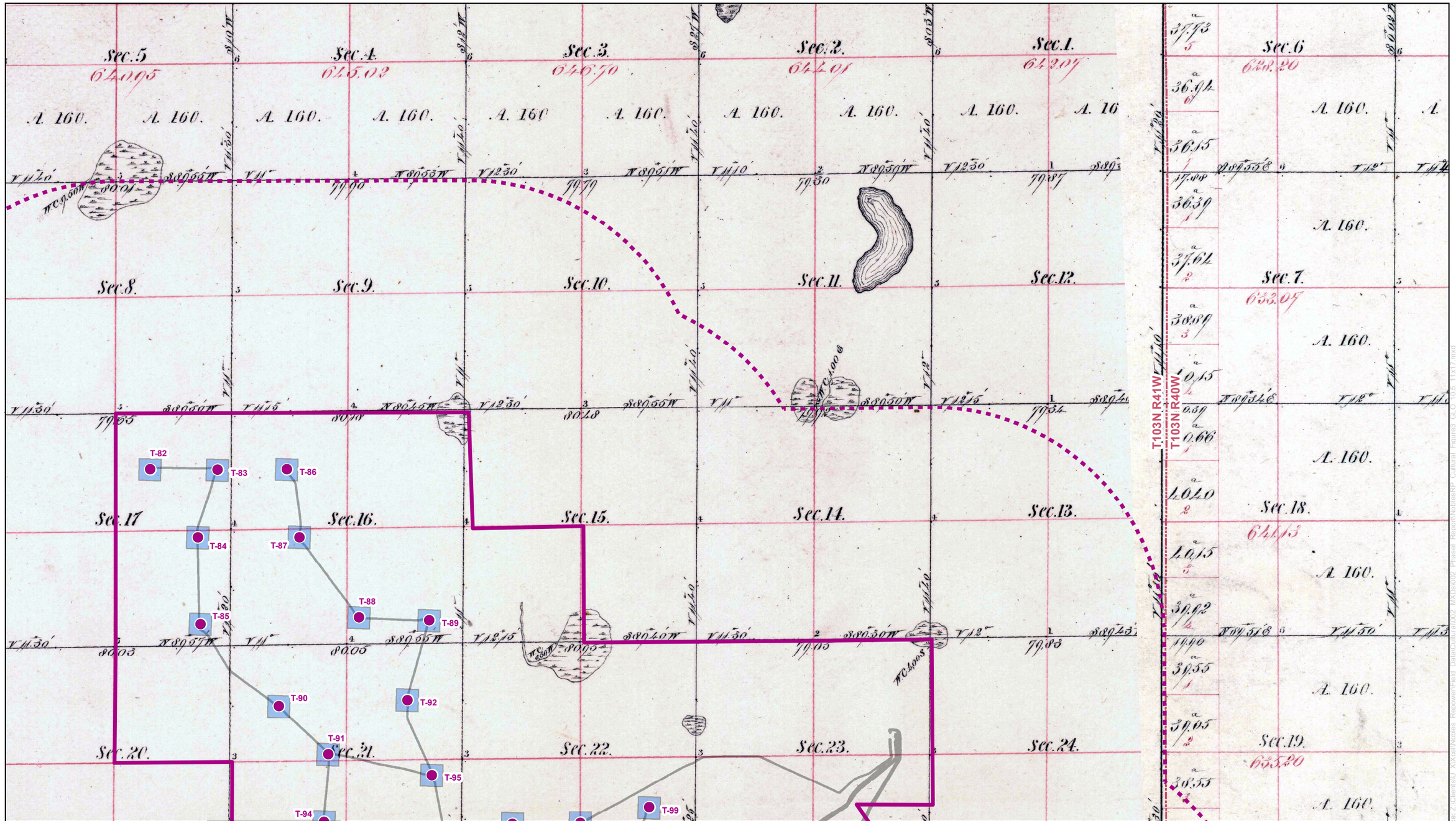

Figure 3.2: General Land Office Map

Xcel Energy

Nobles Wind Farm Repower Project

Nobles County, Minnesota

Project Area
Literature Search Study Area
Turbine Location
Previous Survey
Township Boundary

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