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APPENDIX E

Phase Ia Cultural Resources Literature Search

Phase Ia Cultural Resource Literature Review for the Walleye Wind Project, Rock County, Minnesota

JUNE 2020

PREPARED FOR

Environmental Consulting & Technology, Inc.

PREPARED BY

SWCA Environmental Consultants

PHASE IA CULTURAL RESOURCE LITERATURE REVIEW FOR THE WALLEYE WIND PROJECT, ROCK COUNTY, MINNESOTA

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June 2020

EXECUTIVE SUMMARY

At the request of Environmental Consulting & Technology, Inc. (ECT), and Walleye Wind, LLC (Walleye), SWCA Environmental Consultants (SWCA) completed a Phase Ia cultural resource literature review (Phase Ia) for the proposed development of the Walleye Wind Project (Project) in Rock County, Minnesota. The Project is situated on privately owned land within the approximately 31,103-acre Project area boundary. The Project area boundary is located in southwest Minnesota (State Historic Preservation Office [SHPO] Region 1), within the following townships in Rock County, Minnesota: Beaver Creek, Luverne, Martin, and Springwater. The Project area boundary also borders the Red Rock and Palisade Townships in Minnehaha County, South Dakota. For the purpose of this Phase Ia, a 2-mile radius around the Project area boundary—referred to as the 2-mile Project study area—is included and extends to portions of the Mound and Clinton Townships in Rock County, Minnesota, and the Valley Springs Township in Minnehaha County, South Dakota. The 2-mile Project study area for the Phase 1a provides a framework in which to evaluate the significance of future cultural resource discoveries and aids in the discussion of our understanding of the past in the area. For the Phase 1a, National Register of Historic Places (NRHP)-listed resource locations were researched within the 2-mile Project study area. The state archaeological files and the files of the Office of the State Archaeologist (OSA) and SHPO were searched for all other cultural resources on record within 1 mile of the Project area boundary.

A Large Wind Energy Conversion System (LWECS) site permit will be obtained from the Minnesota Public Utilities Commission (PUC). As summarized in Minnesota Administrative Rule 7854.0500 Subpart 7, Section E, the LWECS site permit application will include an analysis of impacts on historic, archaeological, and traditional cultural property (TCP) resources. As part of this process, SWCA will coordinate with the SHPO to determine impacts to resources eligible for, listed in, or unevaluated for the Minnesota State Historic Sites Network (MSHSN), the Minnesota State Register of Historic Places (MSRHP), or the NRHP. The Phase Ia was conducted in accordance with the *SHPO Manual for Archaeological Projects in Minnesota* (Anfinson 2005).

SWCA conducted the Phase Ia for the proposed Project by reviewing Minnesota SHPO and OSA records, NRHP records, available historic atlases, and historic maps. This review identified 29 cultural resource locations within the Project area boundary and within the 2-mile Project study area, including historic building and structure sites, archaeological sites, and historic cemeteries.

Four NRHP-listed resources are within the 2-mile Project study area. These resources are represented by one bridge and one commercial bank building located within the town of Beaver Creek in the Project boundary and, outside the Project boundary, one standing farmstead and one art sculpture. The Project will avoid physically impacting the four NRHP-listed resources located within the 2-mile Project study area. Ten other historic buildings or structures that remain unevaluated regarding their NRHP eligibility were also identified directly within (seven of the resources), or (three of the resources) within 1 mile of, the Project area boundary. Although these 10 historic buildings and structures are not listed in the NRHP, they will be avoided by physical impacts from the Project based on necessary setbacks of new Project developments from existing buildings and structures. The four NRHP-listed resources are over 0.5 mile from currently planned wind turbine generators and the 10 resources unevaluated for NRHP eligibility are over 0.25 from currently planned wind turbine generators. Potential visual impacts to standing buildings and structures are additionally evaluated in the LWECS site permit documentation in accordance with LWECS site application guidance for assessment of visual impacts (Minnesota Commerce Department 2019:Section 8.4). Potential visual impacts to these 14 historic resources are mitigated by setback distances from wind turbine generators, as well as by screening vegetation (tree growth) providing shelter belts around most standing buildings or as landscaping within towns or along riparian corridors.

SWCA's review identified 10 archaeological sites within the Project study area, eight within the Project area boundary and two within 1 mile of the Project area boundary. All 10 sites are currently unevaluated for NRHP eligibility. All of these archaeological sites are outside of the project construction areas and will be avoided by physical impacts from the Project at over a 0.25-mile distance at the closest currently planned wind turbine generators. Should on-going field surveys for cultural resources identify additional sites that are recommended for listing in the NRHP, MSRHP, or MSHSN, these sites are also recommended for avoidance from physical impacts by the Project; all will have construction area ground-disturbances excluded from the archaeological site boundary. Temporary construction fencing will be used to establish and maintain this avoidance if the archaeology site remains proximate to the construction footprint, e.g., within 100 feet. If any site cannot be avoided, mitigation of impacts in consultation with the PUC, SHPO, OSA, and concerned tribes is recommended as needed.

SWCA's review identified six cemeteries depicted on topographic maps within the Project study area. Four of the cemeteries—Palisades Cemetery, Pleasant View Cemetery, Beaver Valley Cemetery, and West Palisades Cemetery—are within the Project area boundary and two—Springwater Cemetery and Pleasant View Cemetery—are within the 2-mile Project study area. For clarity, there are two Pleasant View Cemeteries—one in the Project area boundary and one in the 2-mile Project study area. No Project use will occur within cemeteries or known burial locations (including archaeological site 21RK0065) pursuant to Minnesota Statute 307.08, which prohibits the molestation of human remains, burials, and cemeteries. Temporary construction fencing will be used at the cemetery or burial location to establish and maintain this avoidance should the construction footprint come within closer proximity to any such location, e.g., within 100 feet.

Once the Project infrastructure has been sited, the SHPO may request an additional cultural resource survey report on ground disturbance locations (wind turbine generators, access roads, collection lines, laydown yard, meteorological towers, etc.) for its review of the proposed Project.

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INTRODUCTION

Environmental Consulting & Technology, Inc. (ECT), and Walleye Wind, LLC (Walleye), requested that SWCA Environmental Consultants (SWCA) complete a Phase Ia cultural resource literature review (Phase Ia) for the proposed development of the Walleye Wind Project (Project) in Rock County, Minnesota. The Project has a proposed nameplate capacity of approximately 115 megawatts (MW) and will be located within the vicinity of the formerly decommissioned Walleye Wind Energy Facility. The Project layout will include approximately 40 new General Electric (GE) wind turbine generators (WTGs) and 11 alternates, for a total of 51 turbines. Redevelopment activities include the installation of turbines, collection lines, access roads, meteorological towers, a laydown yard, and other associated facilities.

As the Project is currently designed, no federal involvement is triggered for the Project that would require review under Section 106 of the National Historic Preservation Act. The Project is located entirely on private land and will not use state or federal funds. If Section 106 is triggered by a Project need for a federal permit, specific consultation related to Section 106 will be coordinated by the lead federal agency at that time.

PROJECT DESCRIPTION

The Project is located in southwest Minnesota, near the city of Luverne. It is situated on privately owned land within the approximately 31,103-acre Project area boundary. This area is located in State Historic Preservation Office (SHPO) Region 1, within the following townships in Rock County, Minnesota: Beaver Creek, Luverne, Martin, and Springwater. The Project area boundary also borders the Red Rock and Palisade Townships in Minnehaha County, South Dakota. For the purpose of this Phase Ia, a 2-mile radius around the Project area boundary is included, hereafter referred to as the 2-mile Project study area; this includes portions of Mound and Clinton Townships in Rock County, Minnesota, and Valley Springs Township in Minnehaha County, South Dakota. The 2-mile Project study area for the Phase 1a provides a framework in which to evaluate the significance of future cultural resource discoveries and aids in the discussion of our understanding of the past in the area. For the Phase 1a, National Register of Historic Places (NRHP)-listed resource locations were researched within the 2-mile Project study area. The state archaeological files and the files of the Office of the State Archaeologist (OSA) and SHPO were searched for all other cultural resources on record within 1 mile of the Project area boundary (hereafter the 1-mile Project study area). A depiction of the Project area boundary, the 1-mile Project study area, and the 2-mile Project study area is presented in Figure 1. Legal sections presented in Table 1 are intended only for sections in Minnesota because this report is intended to be used by the Minnesota Public Utilities Commission (PUC).

The Project will obtain a Large Wind Energy Conversion System (LWECS) site permit from the Minnesota PUC, under Minnesota Statute (MS) 216F, Wind Energy Conversion Systems. As summarized in Minnesota Administrative Rule 7854.0500 Subpart 7, Section E, the LWECS site permit application will include an analysis of cultural and archaeological impacts. The Minnesota Historic Sites Act (MS 138.665) requires coordination with the SHPO (formerly housed in the Minnesota Historical Society [MNHS]) for any state undertaking (including state funding or licensing of private projects) that will affect resources listed on the Minnesota State Historic Sites Network (MSHSN), the Minnesota State Register of Historic Places (MSRHP), or the NRHP. An unanticipated finds plan will be developed for the Project to address the Minnesota Damages; Illegal Molestation of Human Remains; Burials; Cemeteries; Penalty; Authentication Statute (MS 307.08), which protects known or suspected human burials and burial grounds regardless of land ownership status.

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Table 1. Legal Sections Intersected by the Project Area Boundary (Minnesota)

Township (North)	Range (West)	Section(s)
103	47	35, 36
	46	30, 31, 32, 34, 35, 36
102	47	1, 2, 11, 12, 13, 14, 23, 24, 25, 26, 35, 36
	46	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
	45	6, 30, 31
101	46	1, 2, 3, 12

ENVIRONMENTAL OVERVIEW

The Project is within the Interior Plains ecoregion of the Dissected Till Plains section of the Central Lowland physiographic province of the Great Plains (Fenneman 1928). The general topography of the area is undulating, rolling relief, ranging between roughly 1,500 and 1,700 feet above mean sea level. The Project is located in a rural area near the city of Luverne. Small farmsteads are scattered throughout the Project area boundary, and public roads are generally in a grid-like arrangement. The primary land use is agricultural cropland, with an extensive network of agricultural ditches and intermittent and ephemeral streams, many of which support herbaceous riparian buffers. The Project area boundary generally slopes southwest and for the most part is composed of loamy, well-drained soils with thick, dark surface horizons.

Southwest Riverine Archaeological Region

The Project is completely within the Southwest Riverine Archaeological Region (Anfinson 1990; Hudak et al. 2002). This region includes Rock County, a large part of Pipestone County, a large part of Nobles County, a small part of Lincoln County, and a small part of Murray County. Outside of Minnesota, the region extends into northwest Iowa and southeast South Dakota. In general, archaeological resource sites in this region are small and widely scattered, and they are primarily located near prominent landforms and/or by permanent water sources. Unfortunately, resources of traditional cultural and religious value to Native Americans (also known as traditional cultural properties [TCP]) associated with this region are not well defined or understood by archaeologists.

The general topography of southwest Minnesota is flat with minor swells from loess deposition. This landscape contains numerous small entrenched streams with few lakes, and the lakes that are present tend to be small and scattered. The soils found in the region tend to be fine silty loams.

The main topographic feature in the region is the Coteau des Prairies. The Coteau des Prairies is divided into an inner part and an outer part. Only the inner part is described here as this is the only part of the feature that is found in the state. The inner part (Wright 1972:576) is composed of a triangle shape of land covered with loess. The loess thickens toward the southwest and likely originated as wind-blown silt from the Big Sioux River outwash plain.

Glacial activity was the dominant force in shaping the outwash plain and loess deposits of this region. Around 75,000 year ago, the Wisconsin stage of glacial activity began, and, during this period, the Laurentide ice sheet fed the Des Moines lobe encouraging it to advance southeast across Minnesota, eventually reaching central Iowa, around Des Moines, approximately 14,000 years ago. Around 13,000 years ago, warmer weather initiated a general slow retreat of the glacial front with occasional advance

still occurring depending on climate micro-trends. Around 11,300 years ago, the Des Moines lobe completely disappeared from the area (Wright 1972).

Paleo-Environment

During the early Pleistocene Epoch, approximately 60,000 years before present (B.P.), southwest Minnesota experienced several glacial ice sheet advances and retreats that contributed to the formation of the landscape (Hudak et al. 2002). As a result of these glaciations, cumulative and extensive loess deposits covered the region. The Project area boundary is located within the most prominent topographic feature in the region, the Coteau des Prairies, or "highland of the prairie" (Hudak et al. 2002). The Coteau des Prairies formed as a result of reductive glacial activity. The thick accumulation of deposits almost entirely prevented glaciation from forming in the area of Pipestone County, which is north of Rock County, at the end of the Pleistocene (60,000–17,000 B.P.).

Following glacial retreat, water erosion dissected the landscape, creating a well-drained topography characterized by very gently rolling hills and valleys and virtually no lake development (Hudak et al. 2002). The Rock County area was generally covered by spruce forest, dominated by grasses and scattered conifer trees. Approximately 12,000 B.P., a deciduous forest dominated the region, followed by the rapid spread of oak-elm forests (Hudak et al. 2002). By 9,000 B.P., the forests in the region migrated far to the northeast, and prairie covered the region (Gibbon 2012).

In *Mn/Model Final Report Phases 1–3, 2002: A Predictive Model of Precontact Archaeological Site Location for the State of Minnesota*, Hudak et al. (2002) state that four biotic provinces have been used to understand the constantly changing environment from 30,000 to 3,000 B.P. in the state of Minnesota: boreal forest (spruce and pine), mixed hardwood forest (conifer/deciduous forest), deciduous forest (including oak savanna), and prairie (Hudak et al. 2002). From 8,000 to 3,000 B.P., the Project area boundary primarily consisted of prairie vegetation. Typical mammals found within the Project area boundary during this period included buffalo, elk, skunk, badger, jackrabbit, ground squirrel, gopher, and coyote. Scattered forests of oak and hickory were present along stream valleys, around lakes, and on some plateaus and low hills. The most common tree species were oak, sycamore, cottonwood, elm, hackberry, maple, basswood, and beech. Hunter-gatherers entered prairies seasonally to hunt buffalo, and small groups lived year-round on the prairies (Gibbon 2012).

Climate had a direct effect on the lifeways of pre-contact hunter-gatherers, dividing Minnesota by growing season length and generally determining the type of community associated with each region. The south half of the state sustained a frost-free environment, giving pre-contact hunter-gatherers the ability to also grow crops. The north half predominantly supported hunting and gathering of wild food resources (Gibbon 2012).

Modern Environment

From 3,000 B.P. to the present, tallgrass prairie encompassed much of the Project area boundary. Although there were narrow river-bottom forests and oak woods along the major river valleys and small patches of woodland in fire-protected areas (peninsulas, islands, isthmuses) at major lakes (Gibbon 2012), trees were scarce due to regular prairie fires and occasional droughts (Hudak et al. 2002). The climate of the province was moderate, with shorter winters, less snowfall, and longer, warmer summers than today.

The tallgrass prairie was inhabited by major game animals, such as bison and elk, and smaller upland mammals (Hudak et al. 2002). Although not a major resource in the prairie, fish and aquatic mammals,

muskrats, and waterfowl inhabited shallow lakes and river drainages within the province (Hudak et al. 2002). Few fish and waterfowl inhabited this region because of the lack of permanent waterbodies.

According to Hudak et al. (2002), there are significant soil variations within the Project area boundary that can generally be categorized as medium- to fine-textured prairie soils; bedrock outcrops are rare. Occasional deposits of Sioux quartzite and catlinite can be found in the region, especially at the Pipestone National Monument in Pipestone, Minnesota; however, these deposits are not known to exist within the Project area boundary. Catlinite is a soft, clay-rich stone that was used historically by multiple Native American groups to manufacture pipes, plaques, and other goods for use and trade.

When Euro-Americans began to settle in the region, much of the area was drained for agricultural purposes (Hudak et al. 2002). As a result of Euro-American expansion, the lakes and wetlands were often modified and lost some or all of their original characteristics. Today, the tallgrass prairie has been mostly replaced by agricultural fields and occasional pastureland used for livestock grazing.

CULTURAL HISTORY

The following cultural contexts are summarized from a previously conducted synthesis for the state of Minnesota and the upper Midwest (Dobbs 1990a, 1990b; Hudak et al. 2002; Gibbon 2012; Minnesota SHPO 1993). The pre-contact period is divided into four periods: Paleoindian, Archaic, Woodland, and Plains Village and Mississippian/Oneota. These periods are further defined by significant changes in how Native American communities exploited technology and food sources.

Paleoindian Period (ca. 12,000–8,000 B.P.)

This period is marked by the retreat of glacial ice and the draining of several lakes, including Lake Agassiz and Lake Superior. The Paleoindian occupations in Minnesota were of low population density, and often sites were short-term, specialized activity areas that resulted in a low archaeological profile. Paleoindians adapted to a nomadic lifestyle, living near game animals, sources of wood and chert, large streams, and other major water sources. The Paleoindians based their movements by season, availability of plants, and the migratory patterns of game animals.

Paleoindian period archaeological sites are often identified by isolated projectile points and scatters of a few lithic artifacts on the ground surface. Justice (1987) divides these projectile points into Early Paleoindian—fluted point pattern (Clovis, Gainey, and Folsom points)—and Late Paleoindian—non-fluted lanceolate point pattern (Plano and Cody complex points). Other lithic tool types associated with the patterns of the Paleoindian period in Minnesota include bifacially flaked knives, simple choppers, adzes, and large scrapers (Dobbs 1990a).

Archaic Period (8,000–2,800 B.P.)

The end of the Pleistocene marked the end of the last Ice Age and the beginning of the Archaic period. The retreating glaciers exposed new land surfaces unlike any in present-day Minnesota. Expanses of prairie began to displace the forests, expansive lakes, and large, swift rivers fed by glacial runoff. Human dietary and settlement patterns shifted in adaptation to environmental changes. More diverse plant and animal resources were used during the Archaic period, and the toolkit diversified to include ground and pecked stone tools, cold-hammered copper tools mined from sources in northern Minnesota, and a wider variety of projectile point types. The technology of the Archaic period is also notably characterized by a change in projectile point manufacture techniques. This shift, from large lanceolate points to smaller

notched and stemmed points, is a result of the invention and adoption of the atlatl, which allowed a hunter greater accuracy and range.

During the Archaic period, regional differences in material culture began to develop. Four distinct Archaic period contexts identified in Minnesota include the Shield Archaic, Lake Forest Archaic, Prairie Archaic, and Eastern Archaic (Dobbs 1990a). Research suggests that community size increased from previous Paleoindian populations, yet remained small, with day-to-day activities taking place at a series of small seasonal camps (Anfinson 1987). As with known Paleoindian sites, Archaic sites are relatively small and sparse.

Woodland Period (2,800 B.P.–A.D. 1650)

Throughout the Midwest, the Woodland period is generally divided into three periods: Early, Middle, and Late; however, Anfinson (1987) has suggested that a division into initial and terminal periods may be more appropriate in Minnesota. The climate during this period shifted from dry and warm to moist and cool, and it began to stabilize to resemble the climate that exists today (Anfinson 1990).

Woodland period cultures exhibit evidence of an increasingly sedentary lifestyle. This is evident in ceramic vessel manufacture, burial mound construction, and cultivation of specific plant species (Dobbs 1990a). The original divisions of Early, Middle, and Late Woodland were differentiated by their changes in technology. Ceramics during the Early Woodland period are normally thick and crude, with cord-marked decoration on the exterior. During the Middle Woodland, there is early evidence of earthen burial mounds. The Late Woodland period continues the tradition of ceramics and burial mounds, but ceramic decorations and styles become more regionalized (Anfinson 1990). Despite significant changes in many aspects of the Woodland culture, archaeological research indicates that life during the Woodland period remained similar to that of the Archaic period, with a dependence on a diverse, seasonal resource base of plants and animals (Anfinson 1987:222). Site types assigned to the Woodland period throughout the region range from small, limited-use sites to large village and habitation sites.

Plains Village and Mississippian/Oneota Periods (1,100 B.P.–A.D. 1650)

Archaeological sites in Minnesota exhibit significant changes in subsistence and settlement patterns during the time of the Plains Village and Mississippian/Oneota periods. Populations became larger and even more regionalized than was typical during previous periods. In addition, the level of artistry on ceramic vessels increased significantly, as ceramics were manufactured using a variety of techniques and decoration styles; agricultural cultivation intensified; and settlement patterns shifted to larger and more permanent villages (usually near river settings). In addition to exhibiting these cultural changes, the Plains Village and Mississippian/Oneota periods are split based on region: the Plains Village period is typical in the west part of the state, whereas the east part of the state typically exhibits the Mississippian period (Anfinson 1987). These periods existed from the end of the Terminal Woodland period to first contact with European explorers (Anfinson 1987).

Anfinson (1987) has suggested that the Plains Village and Mississippian/Oneota periods developed because of regionalization, which allowed for the creation of distinctive ideas and lifeways. Archaeological evidence suggests that Plains Village complexes developed out of an indigenous Late Woodland base; however, archaeologists are unsure how the Oneota complexes developed (Dobbs 1990a). Plains Village and Oneota site types are similar to those associated with the Woodland period. The archaeological remains of these complexes range from burial mounds to small, limited-use sites and extensive habitation sites. Site location remains consistent with the Woodland period, and depends on

numerous factors including the location of specific resources the people were using or the presence of a desirable environment.

Historic Period (A.D. 1650–Present)

The Historic period is categorized by Euro-American incursion into the interior of the continent, first with the rise of the fur trade and early commercial exploration, followed by the spread of Euro-American settlement and intensive land use.

Contact/Fur Trade (1630s–1858)

At the time of initial contact, several tribes—the Ojibwa, Yankton (Western Dakota), Teton, and Dakota/Lakota (Sioux)—occupied the southwest portion of Minnesota (MNHS 2019). The first fur trade contact in this state occurred when French explorers entered present-day Minnesota. In the following years, the number of explorers and fur tradesmen would continue to increase. The establishment and operation of economic exchange, especially by fur traders, spurred further Euro-American exploration into west Minnesota.

The French were interested in maintaining amicable relationships with various Native American tribes; these relationships initiated the French period of exploration and occupation in Minnesota, which lasted into the early 1760s (MNHS 2019). During this period of French influence, much of the state and the surrounding region was occupied with an extensive network of forts and fur trading posts.

The 1760s brought a half-century of British activity in Minnesota, after the French lost the Seven Year War (the French and Indian War) and ceded the territory east of the Mississippi to England (MNHS 2019). British companies began to compete with one another and brought further development of the fur trade industry, with more trading posts and, consequently, major changes in the distribution of Native American people in the region. By 1800, migrations of Native American populations from the east, and the depopulation of native peoples in certain areas because of introduced diseases and warfare, caused the gradual movement of the Ojibwa into north Minnesota and the Dakota into south Minnesota.

The fierce competition in the region led to over-trapping and the decimation of many fur-bearing animals, and it prompted traders to move farther west. In 1837, the Dakota, Winnebago, and Ojibwa signed treaties that opened east-central Minnesota to logging and settlement, and, by 1849, Minnesota had become organized as a Territory. When Minnesota gained statehood in 1858, Euro-American settlement increased, bringing a wave of new towns, cities, and non-fur trade-related enterprises.

Military Activity (1800–1890)

In the mid-nineteenth century, Minnesota territorial representatives appealed to the U.S. Congress to appropriate funds to build and maintain a series of five military roads within the state (Ginkel et al. 2016). The territory representatives argued these roads were justified on the grounds of frontier defense and would also aid in territorial settlement and commercial development. In July 1850, the territorial representatives secured funding for the development of these roads. Over the next decade, territorial representatives and the War Department's Corps of Topographical Engineers would oversee the creation of the five original roads and two additional roads. Although not all the roads were fully completed, the segments that were completed were used heavily by the local Euro-American population.

In 1862, growing tension between the Dakota and the U.S. Government escalated into violence. The eruption of violence occurred because of the U.S. Government's failure to keep its promise of annuities over several years, poor dealings with fur traders as the market for furs collapsed, and crop failure. Over a

6-week period the violence escalated, prompting a large-scale evacuation of settlement areas; and, even though hostilities ceased shortly thereafter, the U.S. Government rescinded all treaties signed with the Dakota and forcibly removed them from the state on December 26, 1862 (Ginkel et al. 2016).

The eruption of violence led to major military expeditions by the U.S. Government in 1863, 1864, and 1865 within the region. Battles occurred within the state and in the nearby states of North Dakota and South Dakota. While hostilities between the U.S. Government and the Dakota trailed off over the next decade, a strained relationship between the two existed well into the 1890s and, to some extent, still exists today.

Early Agriculture and Railroads (1840–1940)

Some of the earliest agricultural farming practices in the state occurred in southern Minnesota. Treaties with the Ojibwa and Dakota in the early and mid-nineteenth century allowed for European settlement in certain areas west of the Mississippi. Acts passed in the state in the mid-nineteenth century fostered an influx of settlers from the eastern states and Europe (Rose 1911). These initial settlers came by steamboat and followed the major rivers and tributaries into the interior of the state. Town sites focused on rivers as a source of transportation and power. Town sites often developed according to resource need, company/industry need, or via social/ethnic boundaries. Many towns developed into agricultural processing and distribution centers. Industries such as grain milling and brewing became widespread throughout southern Minnesota. The initial farming practice of the time was subsistence, but farmers in the state would be some of the first to practice large-scale farming, such as growing wheat as a cash crop.

After 1870, railroads were the single most important factor in the rapid growth of the agriculture industry in southern Minnesota, as their expansion onto the Great Plains expanded the market for cash crops (Rose 1911). New railroads in Minnesota opened tillable land to farmers, reduced dependence on risky water transportation, and allowed for the transportation of goods and services away from major river transportation corridors. Railroads had become the primary mover of crops by the late nineteenth century. After 1870, an agricultural land boom began in Minnesota as railroads, chambers of commerce, land colonization companies, real estate companies, the State Bureau of Immigration, and other private and public agencies encouraged settlement of the large expanses of land in southern Minnesota.

Rock County settlement was slower than other regions of the state; the first permanent settlement was at the current city of Luverne, on the Rock River, in 1867. In 1870, the state legislature finalized Rock County's organization and designated Luverne as the county seat. The expansion of the railroads into Rock County allowed for rapid growth in the late 1870s. Towns/cities, when established, were rail oriented, and most often railroad-controlled. The growth of the county was also a result of the developing agricultural economy and the towns' functions as agricultural service centers (Rose 1911).

Blue Mounds State Park (1937–Present)

Blue Mounds State Park (approximately 4.0 miles northeast of the Project area boundary) is a historically significant place in the southwest corner of Minnesota. The park has several buildings and structures that are significant for their association with the social, political, and economic impact of the Great Depression and the subsequent development of various Federal Relief programs. The Works Progress Administration (WPA) was responsible for the construction of the resources in the park (Minnesota Department of Natural Resources [DNR] 2020). In 1989, the WPA resources were listed in the NRHP as a 60-acre historic district (Minnesota DNR 2020). The district contains five contributing properties, which include four structures and one building—Upper Dam, Upper Mound Lake, Lower Dam, Lower Mound Lake, and a latrine. Blue Mounds State Park is also historically significant as an important link in the state park system that provided recreational facilities to the extreme southwest corner of Minnesota (Minnesota

DNR 2020). The park provides access to fishing, swimming, canoeing, hiking and camping. In addition, the park provides protection to an American bison herd that grazes on one of the state's largest prairie remnants.

RESEARCH GOALS

The research goals of the Phase Ia were to a) identify cultural resources within the Project area boundary or the Project study areas, as documented in Minnesota SHPO and OSA records; and b) provide Walleye with sufficient information so that preliminary infrastructure siting and design for the Project could avoid impacts to significant or potentially significant cultural properties. This research provides a framework in which to evaluate the significance of future cultural discoveries and aids in the discussion of our understanding of the past in the area.

RECORDS SEARCH AND LITERATURE REVIEW

Results of a record search and review of previously recorded cultural resources are presented in this section. SWCA archaeologist and principal investigator Stephen Sabatke, M.A., Secretary of the Interior Qualified Archaeologist, performed the Phase Ia file search at the SHPO in St. Paul on November 8, 2019. The methods used for the Phase Ia follow the *SHPO Manual for Archaeological Projects in Minnesota* (Anfinson 2005). The archaeologist performed the records search of NRHP-listed resources for the Project area boundary, surrounded by the 2-mile Project study area. An additional search was performed within the 1-mile Project study area to determine if state archaeological and historic site files are available from the OSA and SHPO. Records were obtained from the Minnesota OSA and SHPO only, and not from the State of South Dakota, because Project developments are entirely within Minnesota and this report is intended to be used by the Minnesota Public Utilities Commission (PUC). The 2-mile Project study area was determined to ensure that any known cultural resources of heightened sensitivity to visual impacts from wind turbine towers were considered based on an informal SHPO conversation with the project owners on November 21, 2019. Blue Mounds State Park, which is approximately 4 miles distant from the Project boundary, was specifically included in the Cultural History section and the project map (see Figure 1) of this report as a result of that conversation. To ensure coverage of the LWECS site application guidance (Minnesota Commerce Department 2019:Section 8.7), a 1-mile radius was determined for TCPs, archaeological resources, and architectural resources should the significant aspects of the resource (if any) be at risk of impact by the proposed Project.

State archaeological and historic site files available from the OSA and SHPO and the state historic architecture inventory (also available from SHPO) were reviewed for the 1-mile Project study area. Additionally, NRHP data available from the National Park Service (NPS) were reviewed for the 1-mile Project study area and the 2-mile Project study area. County and township histories; historic maps including Bureau of Land Management (BLM) maps, General Land Office (GLO) plat maps (BLM 2019), the county atlas (Geo. A. Ogle & Co. 1914), and the Andreas Atlas (Andreas 1874); and current and historic aerial photographs within the Project area boundary and 2-mile Project study area were also examined.

The record search indicated that four NRHP-listed resources are located within the 2-mile Project study area. These resources are represented by one bridge, one above-ground building located within the town of Beaver Creek, one farmstead, and one art sculpture. An additional 10 historic buildings and structures that have not been evaluated for NRHP eligibility were identified within the Project study area (seven of the resources) and (three of the resources) within the 1-mile Project study area. Ten archaeological sites

were identified within the Project study area (eight within the Project area boundary and two within the 1-mile Project study area).

Previous Cultural Resource Inventories

The results of the records search indicate that four previous cultural resource inventories have been conducted within the Project area boundary, none of which were completed in the past 10 years. These four previous inventories include two bridge survey projects and two highway and road construction projects (Table 2). It is likely that additional undocumented cultural resources, especially prehistoric and historic archaeological sites and historic resources (historic buildings/structures), could be located within the Project area boundary, because the previous inventories were only conducted along highway and road corridors within the Project area boundary. Additional cultural resource inventories have not been conducted within the 1-mile Project study area. Due to the small number of cultural resource inventories conducted in the Project area boundary, further cultural resource inventories may be necessary to further evaluate the presence/absence of cultural resources within the Project area boundary.

Table 2. Previous Cultural Resource Inventories

Report Number	Author	Title	Report Date
55699	David W. Nystuen	The Minnesota Trunk Highway Archaeological Reconnaissance Survey	1972
64364	Jeffrey A. Hess	Final Report of the Minnesota Historic Bridge Survey: Part 1	1988
93-1719 through 93-1733	The 106 Group Ltd.	Evaluation of 27 Bridges in Rock County, Minnesota, for the National Register of Historic Places	1994
95-0032	Kent Skaar and Jackie Sluss	Draft Phase I Cultural Resources Reconnaissance Survey Report Volume I: Technical Report	1994

Archaeological Resources

The file search identified eight archaeological sites within the proposed Project area boundary and two archaeological sites within the 1-mile Project study area. The eight sites located within the proposed Project area boundary include four pre-contact lithic find spots, two pre-contact lithic scatters, one post-contact burial, and one pre-contact camp. All eight sites are unevaluated for the NRHP, currently lacking sufficient information to determine NRHP eligibility. The sites located within the 1-mile Project study area include one pre-contact lithic scatter and one pre-contact artifact scatter. These sites are also unevaluated for the NRHP, currently lacking sufficient information to determine NRHP eligibility. Archaeological site 21RK0065 contains a cemetery/burial that is further subject to avoidance by the Project pursuant to MS 307.08, which prohibits the molestation of human remains, burials, and cemeteries. Table 3 provides additional information related to each archaeological site identified within the Project area boundary and the 1-mile Project study area.

Table 3. Previously Recorded Archaeological Sites

Site Number	Site Context	Site Type	Location	Site Status
21RK0017	Pre-Contact	Camp	Project area boundary	Unevaluated; Recommended Not Eligible
21RK0043	Pre-Contact	Lithic scatter	1-mile Project study area	Unevaluated; Recommended Not Eligible
21RK0044	Pre-Contact	Find spot	Project area boundary	Unevaluated; Recommended Not Eligible
21RK0045	Pre-Contact	Find spot	Project area boundary	Unevaluated; Recommended Not Eligible

Site Number	Site Context	Site Type	Location	Site Status
21RK0046	Pre-Contact	Lithic scatter	Project area boundary	Unevaluated; Recommended Not Eligible
21RK0047	Pre-Contact	Lithic scatter	Project area boundary	Unevaluated; Recommended Not Eligible
21RK0048	Pre-Contact	Find spot	Project area boundary	Unevaluated; Recommended Not Eligible
21RK0055	Pre-Contact	Find spot	Project area boundary	Unevaluated; Recommended Not Eligible
21RK0065	Post-Contact: 1870–1940	Cemetery/burial	Project area boundary	Unevaluated
21RK0075	Pre-Contact	Artifact scatter	1-mile Project study area	Unevaluated; Recommended Not Eligible

National Register of Historic Places-, Minnesota State Historic Sites Network-, and Minnesota State Register of Historic Places-Listed Properties

Four NRHP-listed resources are located within the 2-mile Project study area. Additional information related to each NRHP-listed resource identified within the 2-mile Project study area is provided in Table 4. One NRHP-listed resource within the 2-mile Project study area is located within Red Rock Township in South Dakota, two NRHP-listed resources are located within the city of Beaver Creek, and one NRHP-listed resource is located within Martin Township. These resources are significant for one or more of the following reasons: association with a significant event (Criterion A), association with a significant person (Criterion B), or association with a significant architectural style (Criterion C).

Table 4. NRHP-Listed Resources

Resource Number(s)	Name	Location	NRHP Criteria	NRHP Status
RK-BCC-01; NPS #80002148	Beaver Creek State Bank, First National Bank of Beaver Creek	Project area boundary	A, C	NRHP-Listed
RK-BCC-003; NPS #89001844	Bridge No. L-4646	Project area boundary	C	NRHP-Listed
NPS #80002149	Jacob Nuffer Farmstead	2-mile Project study area	A, B, C	NRHP-Listed
NPS #14001183	Valley Springs Rest Stop Tipi	2-mile Project study area	A, C	NRHP-Listed

The two NRHP-listed resources that are within the Project boundary are the Beaver Creek State Bank (RK-BCC-01; NPS #80002148) in the town of Beaver Creek and Bridge No. L-4646 (RK-BCC-003; NPS #89001844), on Spring Brook Road immediately at the east side of the town of Beaver Creek, Minnesota. The historic bank building is listed on the NRHP under Criterion A and C, significant within the developments of Beaver Creek history and for its architectural design. The historic bridge is listed in the NRHP under Criterion C, significant for its engineering design.

Historic Buildings and Structures

Seven historic buildings and structures that have not been evaluated for NRHP eligibility were identified within the Project area boundary. Three historic structures that have not been evaluated for NRHP eligibility were identified within the 1-mile Project study area. Although two additional resources within the 1-mile Project study area are listed in SHPO inventory files (First National Bank of Beaver Creek and Bridge No. L-4646), these are discussed in the previous section because they are also listed in the NRHP. The majority (n = 7) of the resources that remain unevaluated for NRHP eligibility consist of bridges; however, the remaining three resources include buildings (one church, one school, and one farmstead). Historic property inventory forms, which were reviewed for all of these resources, contain minimal

information beyond site names and photographs. Because these sites have not been fully documented, these 10 architectural resources are not currently evaluable for NRHP eligibility. Additional information related to each unevaluated historic building or structure resource identified within the 1-mile Project study area is provided in Table 5.

Table 5. Historic Buildings and Structures Unevaluated for NRHP Eligibility

Resource Number	Name	Location	NRHP Status
RK-BCC-004	Bridge No. 4662	1-mile Project study area	Unevaluated
RK-BCT-002	Palisades Lutheran Church	Project area boundary	Unevaluated
RK-BCT-003	Lois & Ralph Hansen Farmstead	Project area boundary	Unevaluated
RK-BCT-005	Bridge No. L2340	Project area boundary	Unevaluated
RK-BCT-006	Bridge No. 1090	Project area boundary	Unevaluated
RK-BCT-008	Bridge No. L2237	1-mile Project study area	Unevaluated
RK-BCT-011	Bridge No. L2033	Project area boundary	Unevaluated
RK-BCT-020	Bridge No. 9687	Project area boundary	Unevaluated
RK-MAR-003	Sunnyside School District No. 39	Project area boundary	Unevaluated
RK-MND-024	Bridge No. L2069	1-mile Project study area	Unevaluated

Historic Atlas and Map Review

Review of GLO record original survey maps from 1858 to 1870 (BLM 2019) did not depict any additional potential cultural resources within the Project area boundary or the 2-mile Project study area. Review of *An Illustrated Historical Atlas of Minnesota* (Andreas 1874) also did not identify additional historic buildings or structures within the Project area boundary or the 2-mile Project study area. SWCA reviewed the 1914 historic atlas for Rock County (Geo. A. Ogle & Co. 1914) and determined that residential buildings were evenly scattered throughout the Project area. The small city (approximately 80 acres) of Beaver Creek appears within the Project area boundary on the Rock County 1914 atlas. The larger (approximately 1,000 acres) city of Luverne is also depicted approximately 1 mile east of the 2-mile Project study area.

Review of relevant 1958, 1967, and 1978 U.S. Geological Survey (USGS) topographic maps (ESRI 2019) indicated that the Project area was sparsely populated in those years, with a generally well-established section-line county road network. Residential structures tend to be depicted with several outbuildings and on average are located over 100 feet from roads. Gravel pits are interspersed throughout the Project area. The USGS topographic maps were also reviewed to determine if cemeteries are located within the Project area boundary or 2-mile Project study area. Four cemeteries—Beaver Valley Cemetery, Palisades Cemetery, Pleasant View Cemetery, and West Palisades Cemetery—are depicted on the topographic maps within the Project area boundary. Two additional cemeteries—Springwater Cemetery and Pleasant View Cemetery—are located within the 2-mile Project study area. For clarity, there are two Pleasant View Cemeteries—one in the Project area boundary and one in the 2-mile Project study area. These cemeteries will not be impacted by proposed development within the Project area boundary.

RECOMMENDATIONS

SWCA conducted a Phase Ia cultural resource literature review of the Project area boundary and the Project study areas by reviewing NRHP, SHPO, and OSA records and available historic atlases and topographic maps. Based on the results of the Phase Ia, SWCA has the following recommendations.

- The four NRHP-listed resources are over 0.5 mile from currently planned wind turbine generators. Potential visual impacts to these four historic resources are mitigated by setback distances from wind turbine generators, as well as by screening vegetation (tree growth) providing shelter belts around most standing buildings or as landscaping within towns or along riparian corridors. Potential visual impacts to standing buildings and structures are additionally evaluated in the LWECS site permit documentation in accordance with LWECS site application guidance for assessment of visual impacts (Minnesota Commerce Department 2019:Section 8.4).
- Historic buildings and structures on private land or that are not NRHP-, MSHSN-, or MSRHP-listed resources are avoided by physical impacts from the Project based on necessary setbacks of new Project developments from existing buildings and structures. Each of the 10 recorded historic building and structures is unevaluated for NRHP, MSHSN, or MSRHP listing. Since these historic buildings or structures will not be physically impacted by the project, SWCA recommends they receive no further consideration. All 10 unevaluated historic building and structure sites are over 0.25 mile from currently planned wind turbine generators. Potential visual impacts to these 10 historic resources are mitigated by setback distances from wind turbine generators, as well as by screening vegetation (tree growth) providing shelter belts around most standing buildings or as landscaping within towns or along riparian corridors. Potential visual impacts to standing buildings and structures are additionally evaluated in the LWECS site permit documentation in accordance with LWECS site application guidance for assessment of visual impacts (Minnesota Commerce Department 2019:Section 8.4).
- All 10 of the previously archaeological sites are currently unevaluated for NRHP, MSRHP, or MSHSN listing. All of these archaeological sites are outside of the project construction areas and will be avoided by physical impacts from the Project at over a 0.25-mile distance at the closest. Should on-going field surveys for cultural resources identify additional sites that are recommended for listing in the NRHP, MSRHP, or MSHSN, these sites are also recommended for avoidance from physical impacts by the Project; all will have construction area ground-disturbances excluded from the archaeological site boundary. Temporary construction fencing will be used to establish and maintain this avoidance if the archaeology site remains proximate to the construction footprint, e.g., within 100 feet. If any site cannot be avoided, mitigation of impacts in consultation with the PUC, SHPO, OSA, and concerned tribes is recommended as needed.
- Archaeological site 21RK0065 also contains a cemetery/burial that specifically requires avoidance by the Project in accordance with MS 307.08, which prohibits the molestation of human remains, burials, and cemeteries.
- All cemeteries are avoided by the Project and will not be physically impacted by proposed development. SWCA specifically recommends that Project infrastructure avoid Beaver Valley Cemetery, Pleasant View Cemetery, Palisades Cemetery, West Palisades Cemetery, and 21RK0065 with a 100-foot buffer to avoid physical impacts to the cemeteries in accordance with MS 307.08. No Project use is planned within cemeteries or known burial locations. Temporary construction fencing will be used at the cemetery or burial location to establish and maintain this avoidance should the construction footprint come within closer proximity to any such location, e.g., within the 100-foot buffer.

Once the Project infrastructure has been sited, it is understood that the SHPO may request an additional report on the cultural resource survey of ground disturbance locations (WTGs, access roads, collection lines, substation, operations and maintenance building, meteorological towers, etc.).

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