# A Phase I Reconnaissance Survey of the Palmer's Creek Wind Project in Chippewa County, Minnesota

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# Abstract

Fagen Engineering (the Proponent) has contracted Beaver Creek Archaeology, Inc. (BCA) to complete a Phase I Reconnaissance Survey for the proposed Palmer's Creek Wind Project in Chippewa County, Minnesota. Western Area Power Administration (WAPA) is the lead agency on this project due to the interconnection between this project and WAPA's existing Granite Falls substation. This project is also subject to the jurisdiction of the Minnesota Department of Commerce and Minnesota Public Utilities Commission (MN PUC) because of the proponent's State Site Permit Application. The proposed project is located in the Minnesota State Historic Preservation Office (SHPO) Prairie Lakes Region (Archaeological region 2, sub-region 2N).

This report will discuss the two stages of the project. The original layout (Phase I) was surveyed and is described in the report and covers 352.3 acres of which 215.8 acres did not overlap with the final design. The final layout (Stage II) consists of 18 wind turbine locations, an O&M building, a substation, construction laydown areas, 15.28 miles of associated collector lines, 4.65 miles of access roads, and 8.82 miles of crane paths. A 5-acre block was typically centered on the turbine locations. Additional areas for assembling and dismantling cranes were included with seven turbines, resulting in blocks of up to 9 acres. The collector lines, access roads, and crane paths often ran parallel with one another. The lines were buffered 50' on either side of the proposed route, resulting in survey corridors ranging between 100' and 175' wide. The final project layout covers approximately 361.4 acres, with a total of 577.2 acres surveyed during both stages of the project.

The Area of Potential Effect (APE) is defined as the combined construction area of all project components, and the survey area encompassed the entire APE. At the time of inventory, vegetation within the APE consisted primarily of plowed agricultural fields with some rangeland as well as fallow grasslands. The proposed project location was identified using topographic and aerial maps, as well as Global Positioning System (GPS) hardware. Survey methods included intensive pedestrian survey and shovel tests. Wade Burns served as Principal Investigator for this project.

During the Stage I field inventory (November 14-17, 2016), BCA archaeologists identified two sites (21CP77 and 21CP78). In addition, three previously recorded mound sites (21CP9, 21CP10 and 21CP11) and one unidentifiable site lead 21CPa were located within the APE. Due to the presence of unevaluated mound sites in the APE, the project design was updated to avoid the sites, and BCA conducted further fieldwork. During the Stage II field inventory (February 15-16, 2017), one site (21CP79) was identified. One previously recorded site (21CP11) and one site lead (21CPa) were within the APE. The final design avoids all known eligible or unevaluated sites in the project area, but shovel tests need to be conducted in high probability areas, such as uplands overlooking stream crossings. The ground was frozen, so shovel tests were unable to be conducted. In addition, one turnout was submerged in water from melting snow and could not be surveyed.

Since shovel tests were not conducted and the inundated turnout was not surveyed, additional work is required to make a recommendation if the project will impact historic properties. As such, an addendum to this report including the turnout APE survey and shovel tests results will be submitted. In addition to the Phase I inventory, BCA will conduct an architectural inventory of historic properties near the project area and a viewshed analysis evaluating the potential visual impact to historic properties and tribally significant properties near the project area. The results of these studies will be included in separate reports.

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# Introduction

Fagen Engineering (Proponent) contracted Beaver Creek Archaeology, Inc. (BCA) to complete a Phase I Reconnaissance Survey of the Palmer's Creek Wind Project in Chippewa County, Minnesota (see Figure 17 and Appendix B: Maps). The Phase I included a cultural resource investigation, including a file search, Phase I Reconnaissance survey and cultural resource survey report. Western Area Power Administration (WAPA) is the lead agency on this project due to the interconnection between this project and WAPA's existing Granite Falls substation. This project is also subject to the jurisdiction of the Minnesota Department of Commerce and Minnesota Public Utilities Commission (MN PUC) because of the proponent's State Site Permit Application.

The final layout of the proposed project consists of 18 wind turbine locations, a substation, an operations and maintenance (O&M) building, crane paths, construction laydown areas, road turnouts, 15.28 miles of collector lines, 4.65 miles of access roads, and 8.82 miles of crane paths. Each wind turbine location was centered in a five acre survey block. Some turbine locations comprised an area larger than 5 acres when an additional equipment staging area was needed for assembling and disassembling the cranes. The collector lines, access roads and crane paths overlapped and ran parallel with one another. As such, the proposed routes were buffered 50' on either side of the lines resulting in a survey corridor that measured between 100' and 175' wide. The final project layout covers approximately 361.4 acres, with a total of 577.2 acres surveyed during both stages of the project.

The locations of the proposed project are presented in Table 1, below in tabular format as depicted on the USGS 7.5' Asbury and Granite Falls quadrangle maps.

**Table 1.** Proposed Project Location.

| Township | Range | Sections | USGS Quad. Map |
|---|---|---|---|
| *Stage I* | | | |
| 116N | 39W | 7, 8, 9, 15, 16, 17, 18, 20, 21, 22, 27, 28 | Asbury and Granite Falls (2003) |
| 116N | 40W | 12, 13 | |
| *Stage II* | | | |
| 116N | 39W | 7, 8, 9, 15, 16, 17, 18, 20, 21, 22, 27, 28 | Asbury and Granite Falls (2003) |
| 116N | 40W | 12, 13 | |

This report consists of the Phase I Reconnaissance survey for the proposed Palmer's Creek Wind project. Since the project layout changed while BCA was conducting fieldwork, the cultural resource inventories for the proposed Palmers Creed Wind project are divided into two stages. Stage I is the original, preliminary layout for which the Phase I Reconnaissance survey was performed in November 2016. Stage II is the final layout for which the Phase I Reconnaissance survey was conducted in February 2017. The individual phases are discussed in depth in the *Results* section of this report. The *Summary/Recommendation* section of the report will only discuss the final layout (Stage II).

# Project Description

The Area of Potential Effect (APE) is defined as the combined construction area of all project components. As such, the APE includes the location of the turbines, collector lines, access roads and turnouts, a substation, an operations and maintenance (O&M) building, and any additional work areas, such as construction staging areas and bore bell holes.

*Stage I*

The initial APE for Stage I consisted of 18 wind turbine locations, 13.97 miles of collector lines and 4.93 miles of access roads. The 18 wind turbines were inventoried with 5-acre survey blocks centered on each wind turbine location. Since the collector lines and access roads ran parallel with one another, the lines were buffered 50' on either side of the routes for a total survey corridor that measured 100' wide. The proposed substation encompassed an area of 9.1 acres adjacent to the existing WAPA substation. The O&M building and crane paths had not been determined. The total APE for the initial survey was approximately 352 acres and was inventoried for cultural resources. The breakdown of the APE acreage by project component is shown in Table 2.

**Table 2.** Phase I APE by project component.

| | Acres |
|---|---|
| Turbines | 90.0 |
| Substation | 9.1 |
| Collection Lines and Access Roads | 253.2 |
| **Total** | **352.3** |

*Stage II*

Due to the presence of mound sites within the APE, the wind project layout had to change in order to avoid these areas. There was also a change in substation location, as well as the O&M building, turnouts and crane paths which were added to the design layout. The final layout of the proposed project consists of the 18 wind turbines, an O&M building, a substation, 15.28 miles of collector lines, 4.65 miles of access roads, and 8.82 miles of crane paths. A 5-acre block was typically centered on the turbine locations. Additional area for assembling and dismantling cranes was required for seven turbines, resulting in blocks of up to 9 acres (WT-4, 5, 8, 12, 13, 17, and 18). The collector lines, access roads and crane paths overlapped and ran parallel with one another. As such, the proposed routes were buffered 50' on either side of the lines resulting in a survey corridor that measured between 100' and 175' wide. In addition, turnouts along existing roads were surveyed and included with the access road acreage calculation in the table below. The proposed project covers approximately 361.4 acres with a total of 224.9 acres surveyed during the current inventory. For the final layout, 136.5 acres were surveyed during Phase I. The breakdown of the APE acreage by project component is shown in Table 3.

**Table 3.** Phase II APE by project component.

| | Acres |
|---|---|
| Turbines | 107.4 |
| Substation | 0.6 |
| O&M Building | 5.0 |
| Collection Lines, Crane Paths and Access Roads | 248.4 |
| **Total** | **361.4** |

The Palmer's Creek Wind Project when completed will generate approximately 44.6 MW of electricity, and will consist of 18 turbines. Two will be 2.3MW GE generators while the turbines will have an 80 meter hub height (WT-14 and WT-15), and 16 will be 2.5MW GE generators with a 90 meter hub height for the rest of the turbines.

# Objective

WAPA is the lead agency on this project due to the interconnection between this project and WAPA's existing Granite Falls Substation (Western) transmission line. Due to WAPA's participation in the project, the applicant must comply with Section 106 of the National Historic Preservation Act (NHPA). The NHPA requires the applicant to consider what effects the undertaking will have on historic properties within the APE. The three central objectives of this study are to assist the proponent with their Section 106 compliance obligations, identify and assess project impacts to cultural resources located within the APE, and to provide National Register of Historic Places (NRHP) recommendations for historic properties encountered within the APE. Cultural resources consist of any historic and prehistoric district, site, building, structure, or object (usually) over 50 years of age.

The proposed project area was inventoried to comply with state and federal regulations to locate any historic properties within or around the proposed project area, which may be affected by the proposed project. This allows the Proponent to plan construction to minimize impact to any NRHP eligible historic properties.

# Project Environmental Setting

The Minnesota State Historic Preservation Office (SHPO) has divided the state into nine archaeological regions, which includes sub-sections of north (N), south (S), east (E) and west (W). The archaeological regions are defined by physical environmental characteristics, since the availability of natural resources affects the types and distribution of pre-contact sites (Arzigian 2008:4).

The survey area is located within archaeological region #2, known as the Prairie Lake Region. The region is split into two subsections: 2N and 2S. The Prairie Lake Region is located in southwestern and south central Minnesota, which lies between the Great Plains and the eastern Woodlands (Anfinson 1997:1). The region does extend into northeastern South Dakota and north-central Iowa. Ice sheets leaving thick mantles of drift covered the region. The landforms are the result of the most recent glaciation with numerous shallow lakes and tallgrass prairie vegetation. Trees are rare and located in river-bottoms along major river valleys, peninsulas, islands and isthmuses at major lakes (Gibbon 2002:3.4.2). There are small areas of marsh, wetland prairie and wet meadows.

The major topographic features are the Minnesota River trench and the scarp of the Prairie des Coteau highland in the west. Bedrock outcroppings are rare except for some deep cuts in the Minnesota River valley (Gibbon 2002:3.4.2). The climate has been relatively stable over the last 5,000 years in this region (Anfinson 1997:9). The climate is dry with low precipitation and dry westerly winds. These conditions made fires more frequent in pre-contact times. The northern portion (sub-section 2N) of the Prairie Lake region has deep-water sediment left by Glacial Lake Agassiz and more lakes than the southern region (sub-section 2S). The northern part is also heavily farmed. The southern part has few lakes but major rivers that include Lac Qui Parle, Yellow Medicine, and Redwood (Arzigian 2008). Due to the many shallow lakes in this region, there are extensive populations of muskrats, waterfowl, fish and edible plants such as water lilies and cattails. Wild rice was primarily limited to the Minnesota River valley and a few northern and eastern lakes (Gibbon 2002:3.4.2).

# Culture History Overview

The proposed project area is in the Prairie Lake Region (Region 2), which is in southwestern and south central Minnesota. The counties in this region include Big Stone, Blue Earth, Brown,

Carver, Chippewa, Cottonwood, Faribault, Freeborn, Jackson, Lac Qui Parle, Le Sueur, Lyon, McLeod, Martin, Nicollet, Redwood, Renville, Scott, Sibley, Stevens, Swift, Watonwan, and Yellow Medicine, as well as portions of Douglas, Grant, Kandiyohi, Lincoln, Meeker, Nobles, Otter Tail, Pipestone, Pope, Rice, Steele, Traverse, and Waseca counties. From a regional perspective, material cultural from any cultural period (Paleo-Indian to modern) could be expected to be encountered in any archaeological region.

The cultural periods describe different prehistoric and historic sites that are known from various times in the past in different parts of the state. They provide the comparative background information needed for the management of historic properties. Although not necessarily applicable to this particular project, the descriptions cover trends within the Prairie Lake Region as a whole with notable sites specific to the region. The general prehistoric and historical periods encountered in Minnesota are as follows.

***Native American Cultural Background:***

**Paleo-Indian Period (ca. 10,000 to 6,000 BCE)**

As glaciers receded from the Upper Midwest, migratory groups of people settled throughout the area's open woodlands and grasslands, hunting native herding animals such as bison and mastodon, and likely exploiting available small-game, fish and plant resources as well. In addition to distinctive, lanceolate projectile points (Clovis, Folsom and Plano types), the tool kits included large, bifacially flaked knives, simple choppers and large scrapers. Settlement patterns are virtually unknown due to the low amount of sites. There are very few Paleo-Indian sites found in Minnesota, but some notable sites within the prairie lake region are the Browns Valley site (21TR5) and the Hildahl site (21YM35) (Minnesota Office of State Archaeologist [MNOSA] n.d. and Anfinson 1997:30-31).

**Archaic Period (ca 6,000 to 800 BCE)**

Groups during this era continued to rely on large game hunting, along with increasingly diversified technologies associated with hunting, trapping, fishing, foraging, woodworking and plant processing. This diversification of culture and associated technologies reflects more highly regionalized adaptation to local environmental conditions as climatic trends shifted to a cooler, wetter configuration. Chipped stone tools, such as side-notched projectile points and ground stone implements were used. The use of copper tools is rare in the southwest part of the state but not uncommon in the northwest. Evidence of the exploitation of diverse floral and faunal resources suggests a season-round type subsistence-settlement system, with habitation areas often located along the margins of lakes and major rivers. There is one well-dated archaic site in the region, the Granite Falls Bison Site (21YM47). Over the course of several summer excavations, five bison, three projectile points, a hammer-stone, two basaltic chipping tools, and a lithic reduction area were discovered at this site. There was evidence of butchering marks on the bison limbs (MNOSA n.d. and Anfinson 1997:36-37).

**Woodland Period (ca. 800 BCE to 1650 A.D.)**

The Woodland period in Minnesota is defined by the presence of ceramics, burial mounds and plant cultivation, but intensive gathering provided the bulk of subsistence needs. Settlement patterns resembled those appearing previously, with particularly intense occupation of stream/lake junctions late in the period. The Woodland period complexes are predominantly identified by ceramics. In this region, it is the Fox Lake Phase and Lake Benton Phase. With the introduction of the bow and arrow during the Late Woodland period, lithics became smaller (known as arrowheads). Burial mounds are present all over Minnesota except the far northeast. Burial treatments were simple and often featured secondary burials (MNOSA n.d. and Anfinson 1997:88). There are significantly more Woodland period sites in this region than in the other time

periods. Notable sites include the Fox Lake Site (21MR2) and the Pederson site 21(LN2), which are the type sites for Fox Lake ceramics and Lake Benton ceramics. The Pederson site is also a multicomponent site that includes artifacts from numerous time periods (Arzigian 2008:72).

**Oneota/Plains Village Period (ca. 900 to 1650 A.D)**

A new subsistence and settlement pattern emerged with this time period. People were less mobile and started building semi-permanent villages, with many constructed on river valley terraces. Many of the villages were fortified with large storage/trash pits inside. Ceramics became globular and new styles emerged. Arrowheads were small and triangular, with or without notching (Anfinson 1997:89). Horticulture became prevalent as people had a more sedentary lifestyle and seeds as a food source became more important. However, in the prairie lakes region and northern Minnesota, permanent settlements are fewer and not as extensive (Anfinson 1997:119). The complexes associated with the Plains Village are Great Oasis, Cambria, Big Stone and Blue Earth Phase. There are numerous sites within the area but some notable sites are Great Oasis site (21MU2), Cambria site (21BE2) and Shady Dell site (21TR6). These sites are ceramic type sites or multiple component sites (Anfinson 1997).

**Historic Period (ca. 1650 to Present)**

Early in the historic period, western portions of the state were occupied by Yankton Dakota, while Santee Dakota occupied the east. Ojibwe peoples had largely displaced Dakota in the northeast by the mid-1700s. During the post-contact period, tribal lifeways changed dramatically as groups became involved with Europeans, first through trade and later through warfare (MNOSA n.d).

The region where the project is located was first home to the Dakota Oyate Nation, which they called the area Pejuhutazizi Kapi (the place where they dig for yellow medicine). They occupied the area until the US Dakota Conflict of 1862 when the Dakota people were exterminated, forcibly removed to reservations or voluntarily fled. Many who survived left the assigned reservations to return to the Minnesota River Valley. In 1938, 746 acres of land south of Granite Falls were returned to the Dakota Oyate Nation and the Upper Sioux Indian Community was created. An additional 654 acres was later added for a total of 1,440 acres to the Upper Sioux Community Reservation. (Upper Sioux Community 2017)

***Euro-American Cultural Background:***

**Historic Period (ca. 1650 to Present)**

The earliest Euro-Americans to venture into the region were fur traders and explorers. French fur traders had moved into the region by the late 1600s, to be succeeded, in turn, by English and American traders. These early traders depended heavily on the Ojibwe and Dakota peoples, who were the primary trappers. In turn, the European goods had a profound effect on traditional lifeways of the Ojibwe and Dakota. Fort Snelling was established in 1800s at the confluence of the Minnesota and Mississippi Rivers to control the fur trade in the region (Minnesota Historical Society n.d.).

Urban commercial centers formed around the water-powered mills of St. Anthony Falls and the northernmost navigable areas of the Mississippi. Agricultural communities were predominant in the south and west parts of the state, with lumbering the earliest industry in the east and north during the mid- to late 1800s (MNOSA n.d.).

Before the Civil War and US Dakota Conflict of 1862, there were relatively few European settlers in the region. The Homestead Act of 1862 and the development of railroads in the 1870s and 1880s spurred more Europeans to move into the region. Early farming in Minnesota was focused on wheat, with Minnesota leading production in the country in the 1890s. Farms diversified and

prospered from the 1890s until the Great Depression of the 1930s. Recovery of the agricultural economy in the region grew steadily thanks to New Deal programs and increasing demand during World War II. Today, the region still primarily depends on an agriculturally-based economy (MSOSA n.d.).

**Granite Falls (1889 to Present)**

Granite Falls, Minnesota became a city in 1889 and was named after the granite and gneiss outcroppings along the Minnesota River. Granite Falls is located in Yellow Medicine County and it is the county seat. Henry Hill is known as the founder of Granite Falls but it was his brother Thomas P. Hill who first laid claims to land on the west side of the river. By 1868, Thomas Hill deeded the claim to his brother Henry Hill who now owned land on the west and east of the river bluffs. H. Hill's home was on the east side of the river while he began work on a mill and dam on the west side of the river (City of Granite Falls, MN EDA 2016). H. Hill built a dam, reservoir and flouring mill. Mill operations started in 1872. The mill processed wheat from local farmers while the saw mill cut timber into building lumber. This attracted settlers and soon businesses and homes were booming (The USGen Web Project 2011).

However, crossing the Minnesota River was a big disadvantage. A ferry boat had been established but it was limited in capacity and took time to pull the boat along the ropes. A wagon bridge was built at the north end of town in 1876 and was replaced by a steel one in 1911. The steel bridge was used until 1975 when it was replaced by the bridge used today.

The best-known resident of Granite Falls is Andrew Volstead. Not originally from the town, Volstead moved to Granite Falls in 1886. Volstead was a lawyer, who served as the county attorney and mayor before he was elected to Congress in 1903. Volstead co-wrote the Capper-Volstead Act which allowed the creation of farm cooperatives and the National Prohibition Act (also known as the Volstead Act) to enforce the Eighteenth Amendment. The National Prohibition Act was ratified in 1920 beginning prohibition and was repealed in 1933 ending prohibition (City of Granite Falls, MN EDA 2016).

# Phase I Reconnaissance Survey

The report and fieldwork preparation included a review of previously identified cultural resources and intensive pedestrian survey of the APE. The layout of the windfarm changed during the course of fieldwork, and the results are split into the Stage I inventory (the original design), and the Stage II inventory (the updated design).

***Literature Search***

The file search was conducted at Minnesota SHPO from September 20-22, 2016. Records at the Minnesota SHPO were searched in order to identify all cultural resources and previous surveys within a one-mile radius of the survey area.

The literature search revealed 12 archaeological sites and 90 historical/architectural sites within a one-mile radius of the APE (see Appendix C for tables). Of these previously recorded sites, three archaeological sites, one site lead, and no historical/architectural sites were located within the Stage I APE. After the windfarm design was changed, one archaeological site, one site lead, and no historical/architectural sites were located within the Stage II APE.

The file search results did not reveal any previous archaeological inventories within a one-mile radius of the survey area. Architectural inventories are conducted independently from archaeological inventories, so the 90 historical/architectural sites would have been recorded during an inventory that was not found during the file search. The archaeological sites were recorded on the basis of published information, not from a previous field survey.

***Inventory Methodology***
The pedestrian survey was performed by lining crew members 10-15 meters apart walking in parallel transects across the APE. When an archaeological feature was identified, the location was marked with pin-flags and the surrounding area was intensely surveyed for additional historic properties to determine the size and nature of the resource. When the nature of the resource was determined, the appropriate site forms were filled out, and site boundaries and features were plotted with a GPS. These GPS points were later brought into GIS software where site maps and sketch maps were created.

Shovel tests were conducted in areas where ground surface visibility (GSV) dropped below 25% and in high probability areas where there was a good to moderate potential to contain archaeological sites. Shovel tests were not conducted in areas that are usually inundated or located on slopes greater than 20 degrees (Anfinson 2005:29). The shovel tests were situated at 15m intervals in areas with less than 25% visibility and/or in areas with a high probability for cultural resources. Since probes were placed at 15m intervals, radial probes around positive shovel probes were placed at 7.5m and 15m in the cardinal directions around a positive probe, with additional probes every 7.5m until two negatives were encountered. All dirt excavated was screened through ¼" mesh for cultural material.

***Field Notes***
Throughout the survey, field notes and overview pictures of the survey area were taken (see photos in Appendix A). Field observations were recorded as field notes in a bound notebook, portions of which were transcribed into sections of this report. Digital photographs were taken, are on file at Beaver Creek Archaeology, and are included in this report. Copies of maps, field notes, and photographs are located at the BCA main office in Bismarck, North Dakota. This report is printed on acid-free paper.

***Site Evaluation Criteria***
To be eligible for inclusion on the National Register of Historic Places (NRHP), a site must usually be more than fifty years old, retain its integrity of location, design, setting, materials, workmanship, feeling, and association and it must meet one of the following criteria:

(a) Associated with events that have made a significant contribution to the broad patterns of our history; or
(b) Associated with the lives of persons significant in our past; or
(c) Embody 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 distinctions; or
(d) Have yielded, or may be likely to yield, information important in prehistory or history.

***Project Personnel***
<u>*Stage I-*</u> BCA archaeologists and Tribal Cultural Specialists (TCS) conducted the Phase I Reconnaissance survey of the proposed project from November 14 to 17, 2016. Wade Burns is the Principal Investigator for the project. The BCA field crew consisted of Lindsey Reiners (Field Director), Catherine Bohner (Staff Archaeologist), and Tara Friend (Staff Archaeologist). Lindsey Reiners prepared the site forms while Gregory Erickson (GIS Coordinator) prepared the site form maps and project maps.

WAPA initiated tribal consultation with seven tribes; Prairie Island Indian Community, Upper Sioux Indian Community, Lower Sioux Indian Community, Spirit Lake Nation, Sisseton-Wahpeton Oyate Tribe, Flandreau Santee Sioux Tribe and Santee Sioux Tribe. In previous surveys, BCA has found that having tribal representatives participate in the archaeological survey

helps protect and avoid archaeologically and tribally important sites, so one Tribal Cultural Specialist (TCS) was invited from each consulting tribe to participate. Spirit Lake Nation was able to send one TCS, Ryan Longie. Since none of the other consulting tribes had an available TCS, BCA asked TCS from tribes with whom BCA had worked in the past who had a Sioux affiliation to participate in the survey. The TCS included Dylan Youpee and Colma 'Jason' Dupree from the Fort Peck Assiniboine and Sioux Tribes, and Russell Red Horn, an enrolled member of the Pine Ridge reservation who serves as a TCS for multiple Tribal Historic Preservation Offices in the area.

Tribal participation in the archaeological survey is not intended to substitute for the consultation process or for independent tribal survey. The consulting tribes will still have the right to pursue their own tribal inventories separately from the archaeological process.

*Stage II-* BCA archaeologists and a tribal monitor conducted the Phase I Reconnaissance survey of the proposed project from February 15 to 16, 2017. The field crew consisted of Lindsey Reiners (Field Director), Catherine Bohner (Staff Archaeologist), and Brittany Brooks (Staff Archaeologist). Lindsey Reiners and Brittany Brooks prepared the site forms while Gregory Erickson (GIS Coordinator) prepared the site form maps and project maps.

Dylan Youpee (Fort Peck) was the TCS for the Stage II survey. Owing to the short notice and narrow window of amenable conditions for the winter fieldwork, BCA invited one of the TCS who participated in the Stage I survey to return. Moreover, since the Stage II inventory was conducted in winter conditions, BCA did not anticipate completing shovel probes at the time due to the frozen conditions. BCA will invite the consulting tribes to participate in the addendum project, which will include the shovel probes needed to complete the Phase I inventory for the Stage II APE.

***Survey Conditions***

The project area is located in the rolling hills within the Prairie Lake Region of Minnesota. The elevation of the project area is approximately 1,040' AMSL. In November 2016 (Stage I), the weather conditions consisted of overcast and partly cloudy skies while the temperature was approximately 45°F. In February 2017 (Stage II), the weather conditions consisted of sunny and overcast skies while the temperature was approximately 37°F. The survey area is located in agricultural fields and rangeland. Vegetation in the area consists of corn, soybeans and native and non-native grasses, plants, forbs, trees and shrubs. The GSV ranged from 75-90% in the agricultural fields and 0-50% in rangeland. Shovel tests were dug in areas with 0-25% GSV or in an area with a high probability of cultural material.

# Results

***Stage I***

The Stage I survey covered a total of 352.3 acres. The location of the APE can be seen on the map in Appendix B. The APE consisted of 18 wind turbines, 13.97 miles of collector lines, and 4.93 miles of access roads. The substation was located in 116N 39W Section 28 located next to the existing substation. The O&M building and crane paths had yet to be determined. The Phase I Reconnaissance survey was conducted from November 14 to November 17, 2016. During the pedestrian survey, three previously recorded sites (21CP9, 21CP10 and 21CP11) and one site lead (21CPa) were revisited, and one additional site was recorded (21CP77). During the shovel testing, one new site was recorded (21CP78). While the pedestrian survey was completed, shovel tests in all of the high probability areas identified could not be finished, because work had to be ceased after a snowstorm on November 18, 2016.

Due to low GSV and high potential for archaeological sites, forty-nine shovel tests were implemented in five different areas within the APE, including uplands near stream crossings and fallow land along the bluffs overlooking the Minnesota River. Shovel tests were profiled when the soils changed. Four shovel tests were profiled (Appendix D). The soils were very consistent at each location, with two locations on the west edge end of the same drainage exhibiting similar soils despite being on different collector lines. The shovel test data is displayed below in tabular format (Table 4).

Only one of the 49 shovel tests was positive for cultural material. A single flake and two pieces of raw material were found within the first 10 cm. Six radials were dug and all radials were negative. Since no other artifacts or features were found, the site has been recommended not eligible for the NRHP. A site form was submitted to MN SHPO, and the flake location was recorded as site 21CP78.

**Table 4.** Shovel test data.

| ST # | Depth (cm) | Width (cm) | Cultural Materials | Location T-R-S | Profile | Archaeologist |
|---|---|---|---|---|---|---|
| 1 | 80 | 40 | negative | 116N-39W-9 | like profile #1 | C. Bohner & R. Longie |
| 2 | 80 | 40 | negative | 116N-39W-9 | like profile #1 | T. Friend & R. Red Horn |
| 3 | 40 | 35 | negative | 116N-39W-9 | like profile #1 | T. Friend & R. Red Horn |
| 4 | 42 | 35 | negative | 116N-39W-9 | profile #1 | C. Bohner & R. Longie |
| 5 | 40 | 38 | negative | 116N-39W-9 | like profile #1 | C. Bohner & R. Longie |
| 6 | 40 | 40 | negative | 116N-39W-9 | like profile #1 | T. Friend & R. Red Horn |
| 7 | 40 | 40 | negative | 116N-39W-9 | like profile #1 | C. Bohner & R. Longie |
| 8 | 35 | 40 | negative | 116N-39W-9 | like profile #1 | T. Friend & R. Red Horn |
| 9 | 60 | 40 | negative | 116N-39W-28 | profile #2 | T. Friend & R. Longie |
| 10 | 40 | 38 | negative | 116N-39W-28 | like profile #2 | C. Bohner & R. Red Horn |
| 11 | 58 | 44 | negative | 116N-39W-28 | like profile #2 | L. Reiners, D. Youpee, & C. Dupree |
| 12 | 40 | 30 | negative | 116N-39W-28 | like profile #2 | R. Red Horn |
| 13 | 41 | 39 | negative | 116N-39W-28 | like profile #2 | L. Reiners, D. Youpee & C. Dupree |
| 14 | 52 | 38 | negative | 116N-39W-28 | like profile #2 | L. Reiners, D. Youpee & C. Dupree |
| 15 | Not dug due to slope greater than 20 degrees | | | | | |
| 16 | 38 | 35 | negative | 116N-39W-28 | like profile #2 | L. Reiners, D. Youpee & C. Dupree |
| 17 | 50 | 37 | negative | 116N-39W-28 | like profile #2 | T. Friend & R. Longie |
| 18 | 40 | 36 | negative | 116N-39W-28 | like profile #2 | T. Friend & R. Longie |
| 19 | 30 | 30 | negative | 116N-39W-28 | like profile #2 | T. Friend & R. Longie |
| 20 | 40 | 40 | negative | 116N-39W-28 | like profile #2 | T. Friend & R. Longie |
| 21 | Not dug due to slope greater than 20 degrees | | | | | |
| 22 | Not dug due to slope greater than 20 degrees | | | | | |
| 23 | 30 | 30 | negative | 116N-39W-28 | like profile #2 | C. Bohner & R. Red Horn |
| 24 | 38 | 40 | negative | 116N-39W-28 | like profile #2 | L. Reiners, D. Youpee & C. Dupree |
| 25 | 32 | 35 | negative | 116N-39W-28 | like profile #2 | L. Reiners, D. Youpee & C. Dupree |
| 26 | 37 | 38 | negative | 116N-39W-28 | like profile #2 | T. Friend & R. Longie |
| 27 | 31 | 54 | negative | 116N-39W-28 | like profile #2 | C. Bohner & R. Red Horn |
| 28 | 44 | 34 | negative | 116N-39W-28 | like profile #2 | C. Bohner & R. Red Horn |
| 29 | 31 | 30 | negative | 116N-39W-28 | like profile #2 | C. Bohner & R. Red Horn |
| 30 | Not dug due to slope greater than 20 degrees | | | | | |
| 31 | Not dug due to slope greater than 20 degrees | | | | | |
| 32 | 38 | 33 | negative | 116N-39W-21 | like profile #2 | C. Bohner & R. Red Horn |
| 33 | 54 | 35 | negative | 116N-39W-20 | like profile #2 | L. Reiners, D. Youpee & C. Dupree |
| 34 | 40 | 40 | negative | 116N-39W-20 | like profile #2 | T. Friend & R. Longie |
| 35 | 55 | 40 | negative | 116N-39W-20 | profile #3 | T. Friend & R. Longie |
| 36 | 35 | 30 | negative | 116N-39W-21 | like profile #2 | C. Bohner & R. Red Horn |
| 37 | 41 | 37 | negative | 116N-39W-21 | like profile #2 | L. Reiners, D. Youpee & C. Dupree |
| 38 | 53 | 40 | negative | 116N-39W-21 | like profile #3 | T. Friend & R. Longie |
| 39 | 65 | 30 | negative | 116N-39W-21 | like profile #2 | L. Reiners, D. Youpee & C. Dupree |
| 40 | 48 | 40 | negative | 116N-39W-20 | like profile #4 | T. Friend & R. Longie |

| ST # | Depth (cm) | Width (cm) | Cultural Materials | Location T-R-S | Profile | Archaeologist |
|---|---|---|---|---|---|---|
| 41 | 50 | 38 | 1 flake | 116N-39W-20 | profile #4 | C. Bohner & R. Red Horn |
| 42 | 48 | 40 | negative | 116N-39W-20 | like profile #4 | L. Reiners, D. Youpee & C. Dupree |
| 43 | 47 | 37 | negative | 116N-39W-20 | like profile #4 | T. Friend & R. Longie |
| 44 | 38 | 40 | negative | 116N-39W-20 | like profile #4 | l. Reiners, D. Youpee, C. Dupree |
| 45 | 50 | 40 | negative | 116N-39W-20 | like profile #4 | T. Friend, R. Red Horn & R. Longie |
| 46 | 50 | 40 | negative | 116N-39W-20 | like profile #4 | T. Friend, R. Red Horn & R. Longie |
| 47 | 38 | 38 | negative | 116N-39W-20 | like profile #4 | L. Reiners, D. Youpee, C. Dupree |
| 48 | 34 | 36 | negative | 116N-39W-20 | like profile #4 | C. Bohner & R. Red Horn |
| 49 | 43 | 38 | negative | 116N-39W-20 | like profile #4 | T. Frined & R. Longie |

Five sites (21CP9, 21CP10, 21CP11, 21CP77 and 21CP78) and one site lead (21CPa) are located within the Stage I APE (Table 5). Previously recorded sites 21CP9 and 21CP10 are mound sites that are recommended unevaluated to the NRHP. Avoidance was recommended for both sites. Previously recorded site 21CP11 was a mound site that was destroyed by a substation. It is recommended not eligible to the NRHP, therefore no avoidance is necessary. Site lead 21CPa is a gravel pit that has been recommended unevaluated. Though the site lead is recommended unevaluated for the NRHP, no avoidance is necessary for the portion of the site lead located within the APE as no evidence of a gravel pit is located within the APE. Newly recorded site 21CP77 consists of six foundations and one barn, while newly recorded site 21CP78 consists of one flake. Although none of these newly recorded sites were formally evaluated for NRHP eligibility, BCA recommended sites 21CP77 and 21CP78 as not eligible to the NRHP, therefore no avoidance is recommended.

**Table 5.** Summary of sites and site lead within Stage I survey area.

| Site Number | Affiliation | Description | NRHP Evaluation | Avoidance Measures |
|---|---|---|---|---|
| 21CPa | Unknown | Site Lead: Gravel Pit NW of Granite Falls | Unevaluated | No avoidance necessary |
| 21CP9 | Unknown | Mounds | Unevaluated | Avoidance |
| 21CP10 | Unknown | Mounds | Unevaluated | Avoidance |
| 21CP11 | Unknown | Mounds | Ineligible | No avoidance |
| 21CP77 | Historic/ Architectural | Six foundations and one barn | Not eligible | No avoidance necessary |
| 21CP78 | Historic/ Architectural | One flake | Not eligible | No avoidance necessary |

In addition, some modern trash and historic machinery was located near existing farmsteads. Porcelain bath tub pieces were located in a plowed field and a abandoned manure spreader was found in a tree row. The manure spreader has steel wheels, suggesting a manufacture date between the 1920s-1940s. Following the MN SHPO site form instructions, the equipment was not recorded as it was not an exceptional artifact and it was not associated with historical archaeological features.

*Stage II*

Due to the presence of three mound sites located within the Stage I APE, the wind project layout was moved to avoid these locations. In addition, the updated design removed the collector line that ran along the high probability bluff overlooking the Minnesota River, the substation was relocated, and the O&M building location was determined.

The location of the Stage II APE can be seen on the map in Appendix B. The APE consisted of 18 wind turbines, 15.28 miles of collector lines, 4.65 miles of access roads, 8.82 miles of crane paths, a substation, turnouts and an O&M building. The Phase I Reconnaissance survey was conducted on February 15 and 16, 2017.

The Stage II inventory consisted of pedestrian survey only. One turnout was submerged in water from melting snow, so it was unable to be surveyed. No shovel probes could be implemented, since the ground remained frozen, but shovel probes will need to be placed at high-probability stream crossings where shovel probes were not conducted during the Stage I inventory. An addendum to this report including the turnout APE and shovel tests results will be submitted.

One previously recorded site and one previously recorded site lead are located within the Stage II APE: site lead 21CPa and site 21CP11. Site lead 21CPa is recorded as the possible location of a gravel pit NW of Granite Falls. No evidence of a gravel pit was seen and no avoidance is required for the site lead. Site 21CP11 was a mound site that was destroyed by the existing substation and has been recommended not eligible to the NRHP. No avoidance is recommended for the site. One site recorded during the Stage I survey is located adjacent to the Stage II APE. Site 21CP78 a single flake that has been recommended not eligible to the NRHP and no avoidance is required for this site.

As a result of the Stage II pedestrian inventory, one new historical and architectural site (21CP79) was recorded. The site has been recommended ineligible to the NRHP and no avoidance is required. In addition, a light scatter of historic cultural material and a piece of workable lithic raw material were found but were not recorded as sites, following MN SHPO site form instructions.

Historic cultural material was encountered south of a farmstead in an agricultural field. Four pieces of brown and clear bottle glass, a metal belt buckle, a piece of metal scrap, as well as modern plastic refuse. Per the MN SHPO site form instructions, thin scatters of historic cultural material in plowed fields without potential to yield significant data about the past do not warrant recordation on a site form.

A small piece of quartz was found in a rodent burrow in horse pasture. Though a knappable material, it did not show any clear signs that it had been worked. A significant amount of gravel was present in the rodent mounds, and the material was determined to be natural. Shovel probes will need to be conducted in the pasture, but the ground was frozen at the time of inventory.

# Summary/Recommendations

The Proponent has proposed the construction of a wind project in Chippewa County, Minnesota. In order to accomplish this, the Proponent hired BCA to conduct a file search, complete a Phase I reconnaissance cultural resource inventory, and write a cultural resource survey report for submittal to SHPO and WAPA.

The project design was changed while BCA was conducting the Phase I inventory. As such, the two layouts were designated Stage I and Stage II, with both APEs pictured on the map in Appendix B. Two unevaluated mound sites were located within the Stage I APE, and the Stage II layout was designed to avoid these cultural resources.

The literature search revealed 12 archaeological sites and 90 historical/architectural sites within a one-mile radius of the APE. Of these, one archaeological site (21CP11), one site lead (21CPa), and no historical/architectural sites were located within the final (Stage II) APE. A site consisting of a single flake (21CP78) that was recorded during the Stage I inventory was located within the Stage II APE. During the Stage II inventory, one additional historical/architectural site (21CP79)

was recorded. Sites 21CP11, 21CP78 and 21CP79 are recommended not eligible to the NRHP and avoidance is not required. As such, the Stage II APE avoids all known eligible or unevaluated cultural resources.

At the time of the Stage II inventory, the ground was frozen, so shovel tests were unable to be conducted. In addition, one turnout was submerged in water from melting snow and could not be surveyed. Consequently, additional work is required before BCA can make a recommendation if the project will impact historic properties. An addendum to this report including the turnout APE survey and shovel tests results will be submitted after the work is completed.

In addition to the Phase I inventory, BCA will conduct an architectural inventory of historic properties near the project area and a viewshed analysis evaluating the potential visual impact to historic properties and tribally significant properties near the project area. The results of these studies will be included in separate reports.

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# Appendix A: APE Photographs


**Figure 1.** Stage I overview photo of the APE in 116N 39W Section 17. View is to the west.


**Figure 2.** Stage I overview photo of the APE 116N 39W Section 8. View is to the west.


**Figure 3.** Stage I overview photo of the APE 116N 39W Section 7. View is to the northeast.


**Figure 4.** Stage I overview photo of the APE 116N 39W Section 8. View is to the northeast.


**Figure 5.** Stage I overview photo of the APE 116N 39W Section 16. View is to the north.


**Figure 6.** Stage I overview photo of APE 116N 39W Section 21. View is to the northwest.


**Figure 7.** Stage I overview photo of marsh area in APE 116N 39W Section 8. View is to the southwest.


**Figure 8.** Stage I and II overview photo of field clearing piles. View is to the south.


**Figure 9.** Stage I modern trash (bath tub pieces) located in 116N 39W Section 20 close to existing farmstead.


**Figure 10.** Stage I photo of manure spreader located in 116N 39W Section 18. View is to the north.

**Figure 11.** Stage II overview photo of O & M building. View is to the north.

**Figure 12.** Stage II overview photo of Substation. View is to the south.

**Figure 13.** Stage II overview of APE 116N 39W Section 21. View is to the northwest.


**Figure 14.** Stage II overview of APE 116N 39W Section 9. View is to the northwest.


**Figure 15.** Stage II overview photo of historic cultural material 116N 39W Section 17. One buckle and one scrap of metal.


**Figure 16.** Stage II overview photo of historic cultural material 116N 39W Section 17 Two pieces of bottle glass.

# Appendix B: Maps

**Beaver Creek**
ARCHAEOLOGY

**Palmers Creek Wind Project**
**Fagen Engineering**
**Project Located in:**
**Chippewa County, Minnesota**

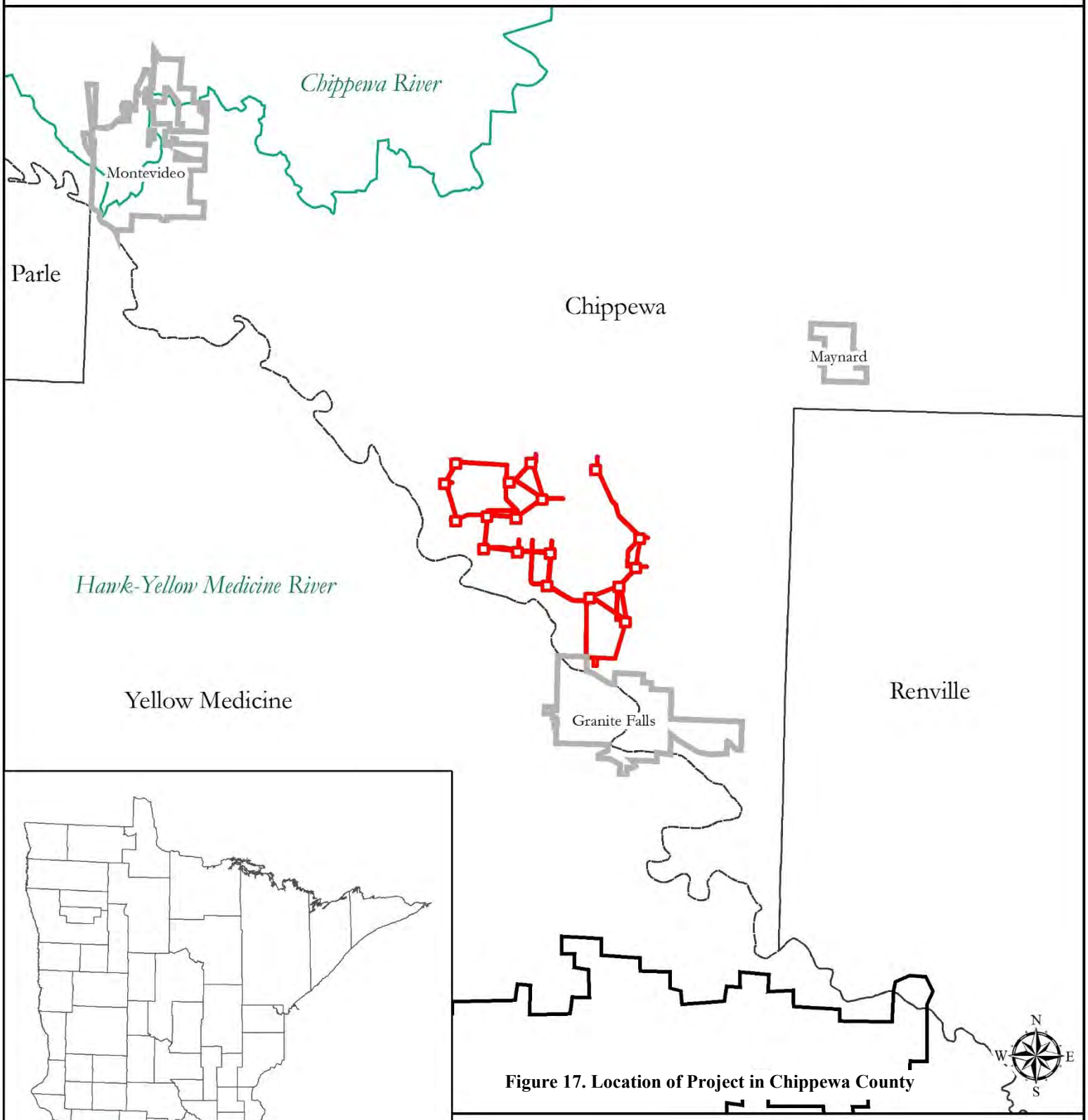



**Figure 17. Location of Project in Chippewa County**

0 1,200 2,400 4,800 7,200 9,600 Meters
0 0.75 1.5 3 4.5 6 Miles

**Base Map: USGS 7.5'**
**Scale:** 1:150,000
**UTM NAD83 Zone 15**

GE

# Palmers Creek Wind Project Area

For: Fagen Engineering

T116N R40W; T116N R39W

Asbury/Granite Falls Quad. Map

Hawk-Yellow Medicine Drainage

Chippewa County, Minnesota

## Legend

- Phase II Survey Area (361 acres)
- Not Surveyed-Under Water
- Turbines
- Substation/OM/Laydown
- 1 Mile Buffer
- Phase 1 Survey Area (352 acres)

**Cultural Resources**

- Eligible/Unevaluated Site
- Ineligible/Isolated Find
- Unevaluated Site Lead
- Historical/Architectural Sites

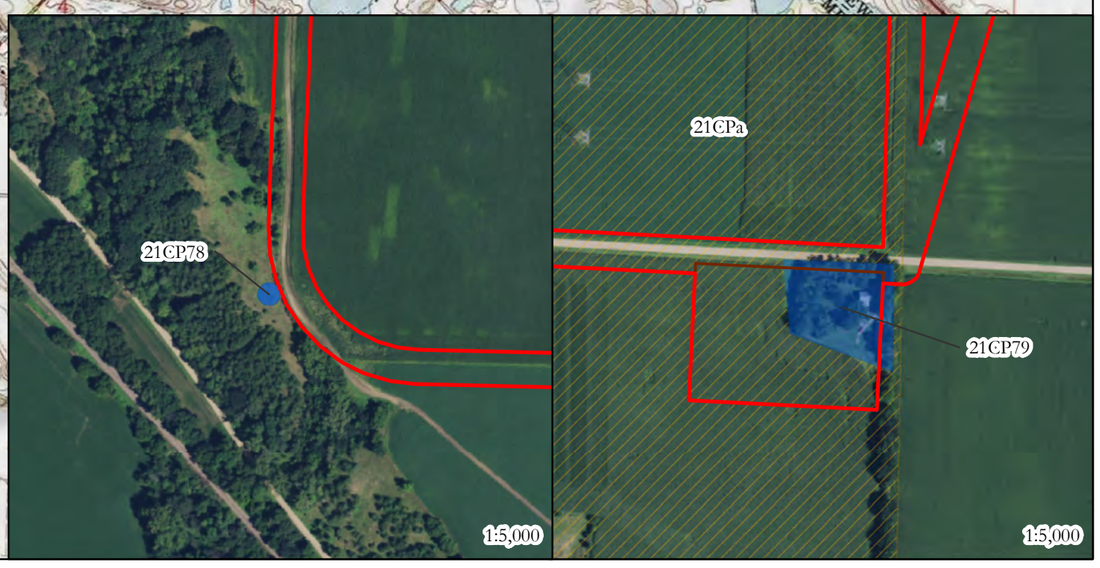
0 210 420 840 1,260 1,680 Meters

0 0.125 0.25 0.5 0.75 1 Miles

Figure 18. Project Map Showing Phase I and Phase II Survey Areas

Beaver Creek ARCHAEOLOGY

**Base Map: USGS 7.5'**
**Scale: 1:24,000**
**UTM NAD83 Zone 15**



# Appendix C: Site Tables

**Table 6.** Summary information on Historic/Architectural sites recorded within a one-mile radius of the survey area.

| SITS # | Location | | | Affiliation | Description | Recorder | NRHP Status |
|---|---|---|---|---|---|---|---|
| | Twp | R | S | | | | |
| CP-GRT-2 | 116 | 39 | 4 | Historical/Architectural | Christian Haakenson Farmstead | Unknown | Unevaluated |
| CP-GRT-3 | 116 | 39 | 6 | Historical/Architectural | Olof Swennson Farmstead | Unknown | Unevaluated |
| CP-GRT-4 | 116 | 39 | 6 | Historical/Architectural | Farmstead | Unknown | Unevaluated |
| CP-GRT-5 | 116 | 39 | 6 | Historical/Architectural | Farmstead | Unknown | Unevaluated |
| CP-GRT-6 | 116 | 39 | 6 | Historical/Architectural | Sparta First Norwegian Baptish Church | Unknown | Unevaluated |
| CP-GRT-7 | 116 | 39 | 27 | Historical/Architectural | Bernt Frederickson House | Unknown | Unevaluated |
| CP-GRT-8 | 116 | 39 | 10 | Historical/Architectural | Bridge | Unknown | Unevaluated |
| CP-GRT-9 | 116 | 39 | 16 | Historical/Architectural | Bridge | Unknown | Unevaluated |
| CP-LEE-10 | 117 | 39 | 33 | Historical/Architectural | Bridge | Unknown | Unevaluated |
| XX-BRI-8 | 116 | 39 | 28 | Historical/Architectural | Bridge | Unknown | Unevaluated |
| XX-RVR-8 | 116 | 39 | 19 | Historical/Architectural | Minnesota River Channerl Northwest of Granite Falls | Unknown | Unevaluated |
| | 116 | 39 | 33 | Historical/Architectural | 20 History/Architecture Inventory | | |
| | 116 | 39 | 34 | Historical/Architectural | 59 History/Architecture Inventory | | |

**Table 7.** Summary information on Archaeological sites recorded within a one-mile radius of the survey area.

| SITS # | Location | | | Affiliation | Description | Recorder | NRHP Status |
|---|---|---|---|---|---|---|---|
| | Twp | R | S | | | | |
| 21CPa | 116 | 39 | 28 | 1965 | Gravel Pit | Unknown | Unevaluated |
| 21CPb | 116 | 39 | 34 | 1965 | Granite Falls Mill, Henry Hill's Mill | Unknown | Unevaluated |
| 21CPi | 116 | 40 | 11 | Unknown | Earthworks | NA | Unevaluated |
| 21CP9 | 116 | 39 | 18 | Unknown | Earthwork, Mound (Harold Schuler) | NA | Unevaluated |
| 21CP10 | 116 | 39 | 21 | Unknown | Earthwork, Mound (Conard Tjosvold I) | NA | Unevaluated |
| 21CP11 | 116 | 39 | 28 | Unknown | Earthwork, 3 Mounds 2 Linear (Stanley Minsaas I), Destroyed | NA | Ineligible |
| 21CP12 | 116 | 39 | 28 | Unknown | Earthwork, Mounds and Habitation, Lithics (Stanley Minsaas II) | SAS/MHS | Unevaluated |
| 21CP13 | 116 | 39 | 21 | Unknown | Earthwork, Mound (Conard Tjosvold II) | NA | Unevaluated |
| 21CP60 | 116 | 39 | 16 | Pre-Contact (9500-1650 BC) | Isolated: Debitage | P. Trocki | Ineligible |
| 21CP61 | 116 | 39 | 16 | Pre-Contact (9500-1650 BC) | Isolated: Debitage | P. Trocki | Ineligible |
| 21CP62 | 116 | 39 | 16 | Pre-Contact (9500-1650 BC) | Isolated: Debitage | P. Trocki | Ineligible |
| 21YM104 | 116 | 39 | 29 | Pre-Contact (9500-1650 BC)/Post Contact | Lithic Scatter: Projectile Points' Folsom point-Paralledl Pointed (Site Destroyed) | K. Wolf & B. Koenen | Ineligible |

# Appendix D: Soil Profiles

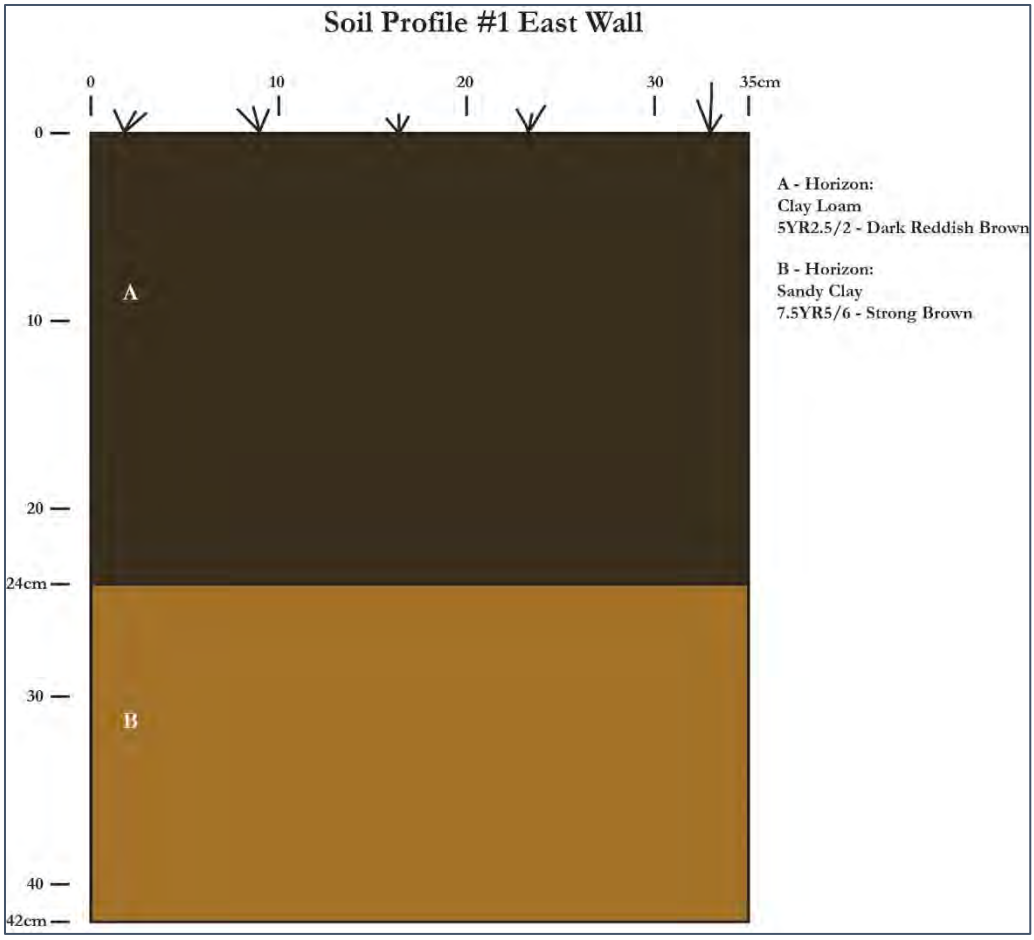



**Figure 19.** Soil profile #1 of the east wall.


**Figure 20.** Shovel profile #1 of the east wall.

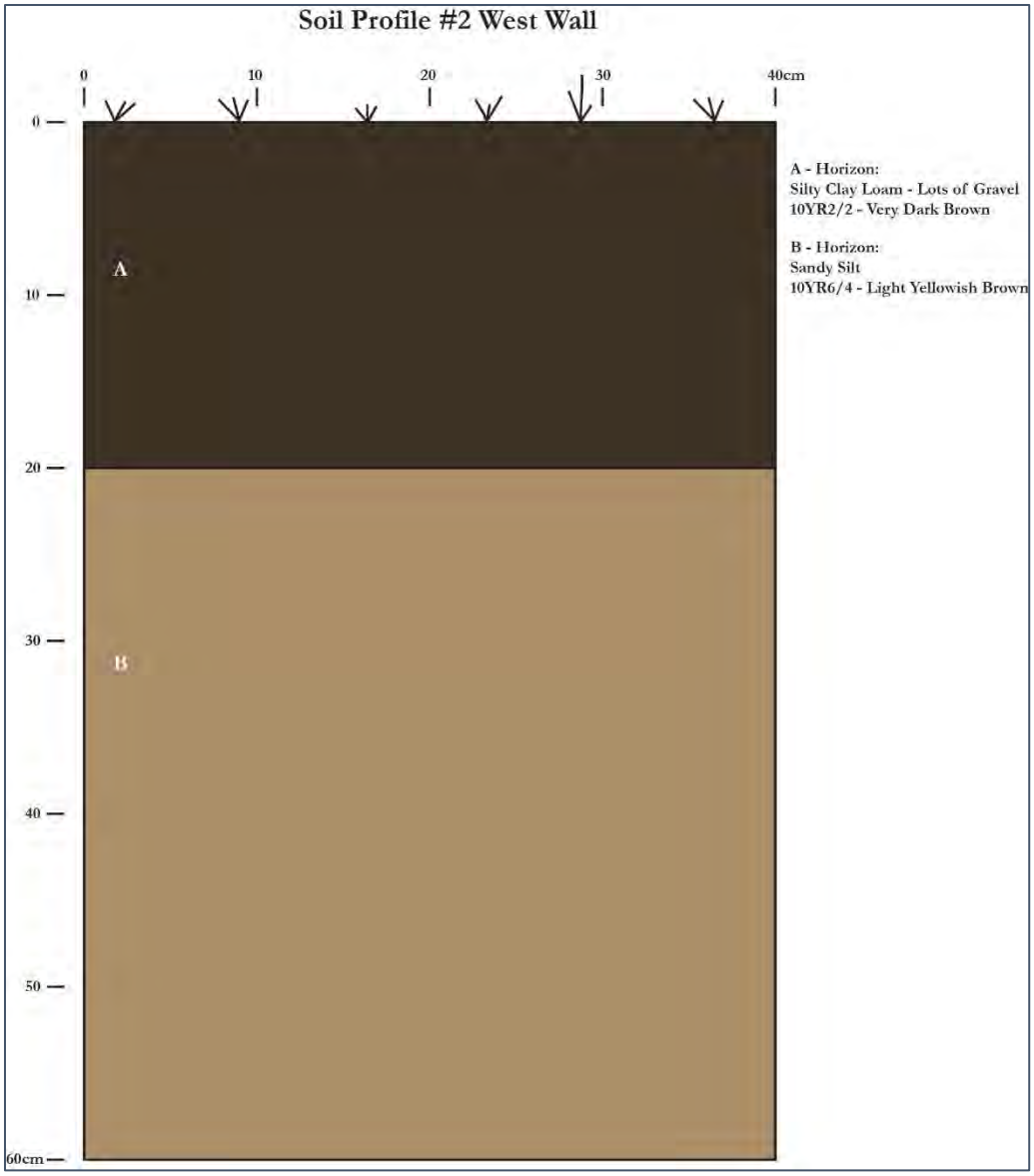



**Figure 21.** Soil profile #2 of the west wall.


**Figure 22.** Soil profile #2 of the west wall.

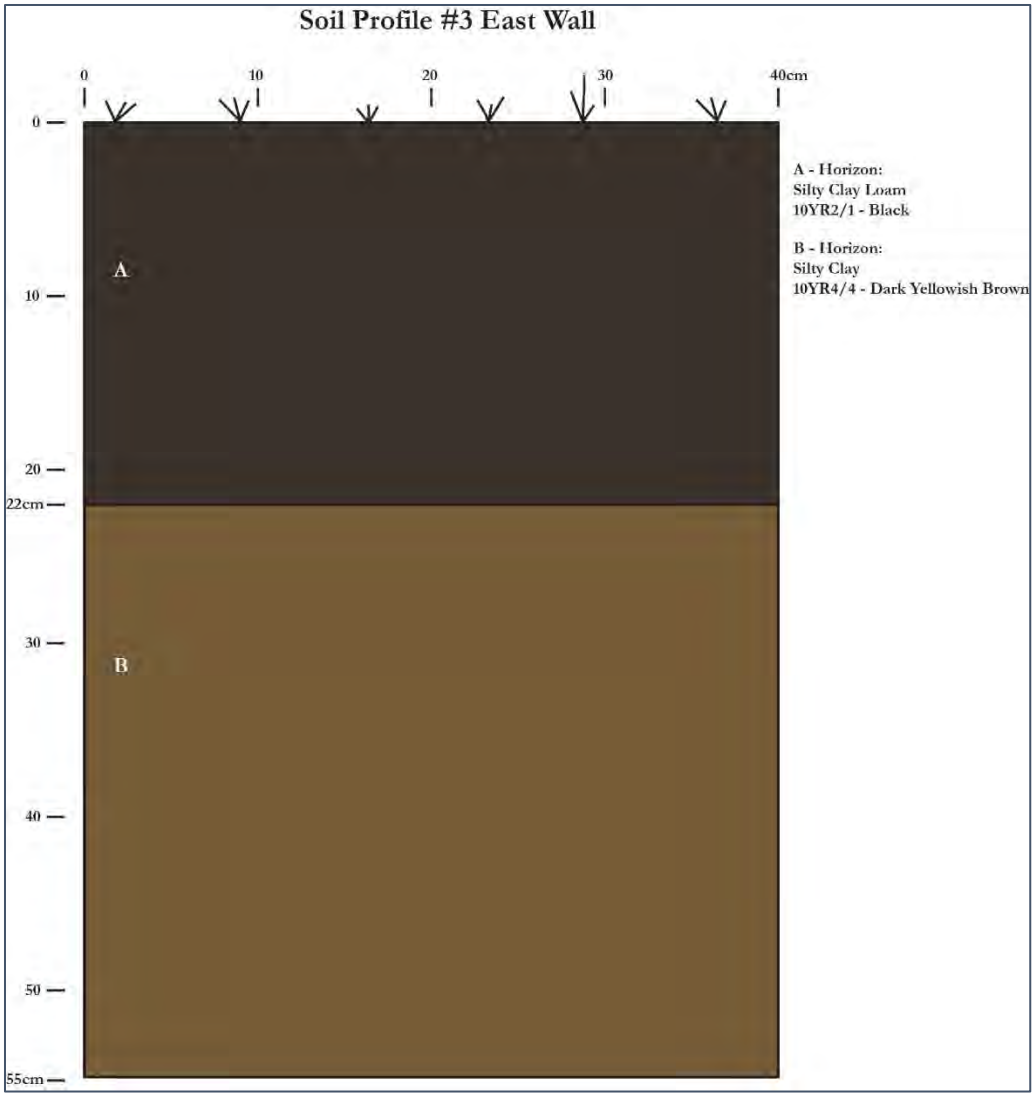



**Figure 23.** Soil profile #3 of the east wall.


**Figure 24.** Soil profile #3 of the east wall.

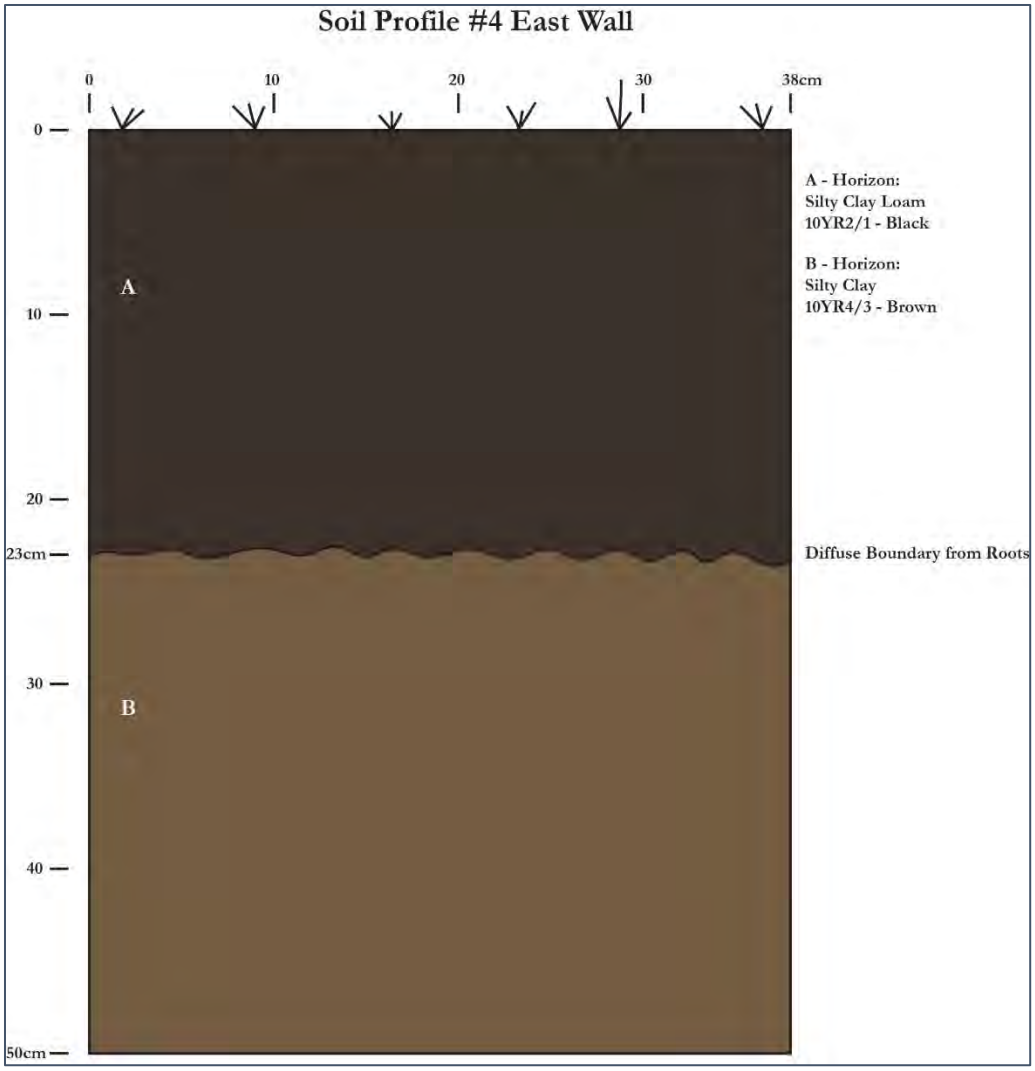



**Figure 25.** Soil profile #4 of the east wall.


**Figure 26.** Soil profile #4 of the east wall.

# Appendix E: Site Descriptions

**Previously Recorded Sites**

**Site 21CP9,** the Harold Schuler site, is the location of archaeological mounds based on a publication by Winchell from 1911. The site form consists of page 203 from Winchell's book with the legal location description and a United States Department of the Interior Geological Survey map of the site. No other information is included on the site form, and neither book title nor references were provided. The site is recommended unevaluated to the NRHP as it has not been fully evaluated.

During the current inventory, the site was noted to be in an agricultural field. Several small hills were located within the area, which may have been mounds that were obfuscated by continual plowing, but no definite mound features were observed. Plowing had exposed glacial till (the lighter color of soil in the photographs) on the hill tops. No cultural material or human remains were found on the surface. While no definite mound features could be confirmed, additional work would be needed to evaluate the site. Due to the archaeological and tribal significance of mounds, the site remains unevaluated to the NRHP and avoidance is recommended.

The proponent made changes to the APE, so this site will no longer be impacted by the proposed project.


**Figure 27.** Site 21CP9 overview to the northwest.

**Site 21CP10**, the Conrad Tjosvold I site, is a mound site that is based on a book reference by Winchell from 1911. The site form consists of page 203 from Winchell's book with the legal location description and a United States Department of the Interior Geological Survey map of the site. No other information is included on the site form, and neither book title nor references were provided. The site is recommended unevaluated to the NRHP as it has not been fully evaluated.

During the current inventory, the site was noted to be in an agricultural field on an upland plain. No cultural material, human remains or mounds were noted on the surface. While no definite mound features could be confirmed, additional work would be needed to evaluate the site. Due to the archaeological and tribal significance of mounds, the site remains unevaluated to the NRHP and avoidance is recommended.

The proponent made changes to the APE, so this site will no longer be impacted by the proposed project.


**Figure 28.** Site 21CP10 overview to the northwest.

**Site 21CP11**, the Stanley Minsaas I site, is a mound site that is based on a book reference by Winchell from 1911. A field check was conducted in May of 1978 and a power plant substation was noted in the located of the site. The substation covers most of quarter quarter section, and extensive disturbances including substantial leveling and filling for construction would have destroyed the features and any potential cultural material. As such, the site was recommended not eligible to the NRHP.

During the current inventory, the site location was revisited. The substation remains and is surrounded by agricultural fields. No cultural material or potential mound features were observed. The site remains not eligible to the NRHP and no avoidance is recommended.


**Figure 29.** Site 21CP11 overview to the northwest**.**

**Site 21CPa** is a site lead for a gravel pit northwest of Granite Falls. Its site name is Stanley Minsaas III and it is marked on a United States Department of the Interior Geological Survey map 1965. No other information is forth coming from the file search or the map. The site lead has been recommended unevaluated for the NRHP, until the entire site lead boundary area has been inventoried or the actual location of the gravel pit has been determined.

During the stage I and stage II surveys, no evidence of the site lead was found within the APE. The APE portions located within the site lead are agricultural fields. Though the site lead is recommended unevaluated for the NRHP, no avoidance is necessary for the portion of the site lead located within the APE.


**Figure 30.** Site 21CPa overview to the northwest.

**Newly Recorded Sites**

Site 21CP77 was recorded during the Stage I survey. The site is an abandoned farmstead located on a terrace overlooking the Minnesota River. There is an overgrown two-track that enters at the northeast end of the site. The site overall is heavily overgrown and the agricultural field to the north and west are starting to encroach on the site. The landowner, Chad Schuler, was contacted to ask the age of the site (landowner since 1990). All the information Mr. Schuler gathered is from bits and pieces his now deceased father told him over the years. Mr. Schuler estimated three structures, an old farmhouse, a dairy barn and a chicken coop were constructed between 1900 and 1920. All three structures were dilapidated beyond repair when Mr. Schuler acquired the property, and were burned at that time. At the time of the survey, all structures had been removed except the metal Quonset building, which Mr. Schuler estimated was constructed between 1955 and 1958. Mr. Schuler did not know when the farmstead was abandoned.

The site consists of seven features, five of which were overgrown, broken foundations. Features 1 and 5 are located in the northeast portion of the site, with a field clearing pile between the features. Feature 1 is a concrete foundation that was overgrown and partially torn up, with a considerable amount of burnt material in and around the feature. Feature 5 is a stone and concrete foundation, with a concrete slab west of the foundation and domestic refuse inside the foundation. Feature 3 is a trash pit located near features 1 and 5, which is filled with a variety of household refuse. Feature 2 is a concrete foundation that is located south of features 1, 3 and 5. A silo blower, wooden 2-by-4s, and corrugated metal were located adjacent to the feature. Features 4 and 7 were located at the west end of the site. Feature 4 is a concrete silo foundation and Feature 7, the only standing structure on the property, is a Quonset building. The Quonset building has two doors on the north side and a set of sliding doors on the west side. It has a concrete foundation and it is made of corrugated metal panels. It is in fair condition with weathering in various spots on the structure. Feature 6 is a stone and concrete foundation in the southern portion of the site. It is broken and overgrown, but the size and location suggests that it was the location of the former farmhouse. Cultural material within the site was relatively sparse and was concentrated within features. Cultural material included bottle glass, miscellaneous pieces of metal, bedsprings, recliners, an oven, stove, a laundry machine, a sink, a plastic bucket, car tires, a barn or garage door (corrugated metal), s silo blower, pieces of wood and fence/barbed wire.

Overall, the site condition is very poor. The site retains little integrity as all but one of the structures have been removed. Moreover, the standing structure has been built at a later date than the original, destroyed structures. There is very little cultural material, most of which is fragmented or burnt, and there are no discernable diagnostics. The foundations are broken and have been heavily disturbed by time and human activities. The standing structure is in fair condition, but such Quonset buildings are a common style and the building does not demonstrate any unique or unusual characteristics. There are no characteristics of the site that would suggest it is related to a significant event in history; therefore, it is not eligible under Criterion A. The results of the deed search did not reveal any significant persons associated with the site; therefore, it is not eligible under Criterion B. No features possess any qualities of a distinctive construction style, a masterful work, or artistic value; therefore, it is not eligible under Criterion C. All features have limited research value as the structures themselves have been removed and the remaining structure is not distinctive. The site is not likely to yield any information important to history; therefore, it is not eligible to the NRHP under Criterion D. As such, the site has been recommended not eligible to the NRHP.

The proponent made changes to the APE, so this site will no longer be impacted by the proposed project.

**Table 8.** Chippewa County deed search for site 21CP77

| Book | Page | Date | Grantor | Grantee | Deed Type |
|---|---|---|---|---|---|
| N | 43 | 3/10/1886 | USA | Gustav Johnson | Patent |
| G | 80 | 3/14/1904 | Gustav Johnson | Rakkel, Ole, Enander, Anna, Marius, & Albert Johnson | Decree of Distribution |
| 31 | 404 | 3/6/1905 | Rakkel Johnson, Anna (Johnson) & E. O. Minsaas, Marius & Mary Johnson, and Albert Johnson | Ole Johnson & Enander Johnson | Quit Claim Deed |
| 35 | 559 | 10/19/1905 | Ole & Enander Johnson | C. A. & Sarah Fosnes | WD |
| 35 | 560 | 10/20/1905 | C. A. & Sarah Fosnes | Chas H. Budd | WD |
| 31 | 429 | 2/20/1906 | Charles H. & Nellie M. Budd | C. A. Fosness | QCD |
| 36 | 63 | 2/20/1906 | C. A. and Sarah Fosness | Matt Swenson | WD |
| 59 | 128 | 8/19/1936 | Matt & Julianne Swenson | State of Minnesota | Foreclosure |
| 63 | 360 | 5/24/1943 | State of Minnesota | Edward Appleseith | Special WD |
| 72 | 352 | 11/3/1948 | Edward & Annie Appleseith | Robert H. & Lizzie Spies | WD |
| 128 | 189 | 3/11/1985 | Elizabeth aka Lizzie Spies | Spies Irrevocable Trust | QCD |
| 149 | 151 | 4/8/1992 | Delburt & Helen Manee | Spies Irrevocable Trust, Betty Lou Erickson & Dale D. Spies Trustees | QCD |
| 149 | 243 | 4/23/1992 | Betty Lou Erickson & Dale D. Spies, Trustees of Spies Irrevocable Trust | Chad H. and Randy T. Schuler | WD |
| 149 | 579 | 5/27/1992 | Elizabeth aka Lizzie Spies | Betty Lou Erickson & Dale D. Spies, Trustees of Spies Irrevocable Trust | Corrected QCD |
| 158 | 245 | 3/13/1995 | Anita Brightman aka Schuler | Chad H. & Randy Schuler | QCD |
| 160 | 613 | 2/29/1996 | Kathy Marie Schuler | Chad H. Schuler | QCD |
| 250473 | | 11/30/2001 | Randy and Lori Schuler | Chad H. Schuler | QCD |
| 275931 | | 8/20/2008 | Kathy Marie Fuerst aka Schuler | Chad H. Schuler | QCD |
| 283321 | | 4/6/2011 | Nina Schuler | Chad H. Schuler | Disposition Judgment |


**Figure 31**: Site 21CP77 overview to the north.


**Figure 32**: Site 21CP77 overview to the northeast.


**Figure 33.** Feature 1: Foundation overview to the north.


**Figure 34:** Feature 2: Foundation to the west.


**Figure 35**. Feature 3: Trash dump view to the east.


**Figure 36.** Feature 4 and Feature 7: Silo foundation and metal shed view to the southeast.


**Figure 37.** Feature 5: Foundation view to the northwest.


**Figure 38**. Feature 6: Fragmented foundation view to the west.


**Figure 39.** Feature 6: Close-up of south wall made of stones.


**Figure 40.** Feature 7: Metal shed view to the southwest.


**Figure 41.** Field clearing pile view to the south.


**Figure 42.** Green bottle glass by Feature 1.


**Figure 43.** Metal near Feature 1.

Beaver Creek
ARCHAEOLOGY

BCA16-1321-Site1
UTM: 295,196 E; 4,969,817 N
T116N R39W Sec. 18
Granite Falls Quad. Map
Hawk-Yellow Medicine Drainage
Chippewa County, Minnesota


Meters
0 25 50 75 100

## Legend

- Site Boundary (1.92 acres)
- Features
- Field Clearing Pile


0 0.25 0.5 0.75 1
Miles

Author:

**Site 21CP78** site consists of one flake and two pieces of raw material found within shovel test 41. Shovel tests were conducted due to low visibility within this portion of the APE. Moreover, the probes were located on a terrace overlooking the Minnesota River, which also makes the location conducive to finding an archaeological site. The site is located on a small patch of disturbed grassland west of a two-track road. Plowed fields are located on the east side of the road. The location combined with the vegetation, including smooth brome and quack grass, suggests that the area has been previously plowed and/or disturbed in the past.

Shovel tests were dug at 15m intervals in the survey area. When the positive shovel test was encountered, radials were conducted at 7.5m-intervals around the positive until two negatives were encountered. The distance of 7.5 m was selected in order to place the radials halfway between the shovel tests that were placed owing to the poor visibility.

The flake and raw material were found within the first 10 cm of shovel test 41. Six radials were dug and all radials were negative. The flake is small piece of KRF chipped stone flaking debris. The material appears workable but is not KRF and does not show clear signs of working. The single artifact was not associated with other cultural material or features. As such, the site was recommended not eligible to the NRHP.


**Figure 44:** Site 21CP0078 overview to the southwest.


**Figure 45:** Two fragments of raw material (left) and one flake (right).

# Beaver Creek ARCHAEOLOGY

BCA16-1321-Site2
UTM: 296,456 E; 4,968,943 N
T116N R39W Sec. 20
Granite Falls Quad. Map
Hawk-Yellow Medicine Drainage
Chippewa County, Minnesota


Meters
0 8.5 17 25.5 34

## Legend

- Site Boundary (.08 acres)
- Feature
- Shovel Probes


0 0.25 0.5 0.75 1
Miles

GE

**Site 21CP79** consists of a recently abandoned farmstead located on a bluff overlooking the railroad and the Missouri River to the southwest. The site is surrounded by a shelterbelt on three sites, which obscures the view towards the river. The site comprised of a sparse historic cultural material scatter and four features: one historical archaeological and three architectural structures.

Feature 1 is a 1½-story farmhouse with a basement that was likely built sometime in the 1940s.The structure has wood framing and horizontal metal siding. The farmhouse has a gable roof covered with asphalt shingles and a ridge top cinder block chimney. The farmhouse has been updated and additions were made.

Feature 2 is a 1-story garage/machine storage building that was likely built sometime in the 1940s. The structure has wood framing and horizontal wood siding. The building has a gable roof covered with asphalt shingles. The garage portion of the structure has a concrete slab foundation and the machine storage portion has a dirt floor and concrete wall foundation. The building has been updated and an addition was made.

Feature 3 is either a storm shelter or pump house that is most likely modern. The structure is semi-subterranean with cinder block walls. There is a gable roof covered with corrugated metal sheeting and some asphalt shingles under the gable ends.

Feature 4 is a concrete wall foundation. There is no remaining evidence of the structure that was once on the foundation. Within and surrounding the foundation the vegetation is overgrown; however, cultural material is still visible. Cultural material includes burned/rusted metal fragments, a burned air conditioning unit, burned masonry, a white plastic tarp, clothing, and other miscellaneous items. Based on the burned cultural material and charred trees to the west, it appears that the structure that was associated with the foundation was burned down.

Cultural material located along the interior edge of the shelterbelt include a microwave, approximately four lawn chairs, a metal drum barrel, two metal tubs or water troughs, three plastic buckets, several tires, metal fragments, and miscellaneous modern trash.

The site overall is in good condition, but most of the features are lacking integrity of materials, design and workmanship. Feature 1 and Feature 2 have been updated and additions were added, which has impacted the integrity of the features. All that remains of Feature 4 is a concrete foundation and burned historic material remains. Furthermore, Feature 3 is likely modern. The site does not meet any criteria of significance: it cannot be associated with a significant event (Criterion A) or person (Criterion B); none of the features are representative of a distinctive style or have artistic value (Criterion C); and the site has limited research value, as the standing structures are not distinctive and the structure associated with the foundation was destroyed by a fire (Criterion D). As such, the site has been recommended not eligible to the NRHP and no avoidance is recommended.

**Table 9.** Chippewa County deed search for site 21CP79

| Book | Page | Date | Grantor | Grantee | Deed Type |
|---|---|---|---|---|---|
| BLM GLO Records | | 1/10/1984 | USA: Litchfield Land Office | Charles E. Mattison | Patent |
| C | 50 | 10/23/1876 | J. M. Sevrens, Chippewa Co. Auditor | State of Minnesota | Auditor's Deed |
| C | 563 | 9/2/1878 | J. M. Sevrens, Chippewa Co. Auditor | J. W Hixon | Redemption Certificate |
| S | 220 | 5/25/1891 | John W. & Alice R. Hinson [sic] | De Archy McLarty | WD |
| T | 618 | 5/7/1897 | John W. & Alice R. Hixon and Nelson & Sarah Ole | United Trust Limited | Foreclosure |
| X | 386 | 11/5/1897 | United Trust Limited | Nelson & Sarah Ole | QCD |
| 27 | 434 | 2/6/1900 | Ole Nelson | Benjamin E., William, Eldy, & Lydie Nelson | Final Decree |
| G | 14 | 4/20/1900 | Ole Nelson | Sarah, Clarence, Carrol, Benjamin, Ole Jr., William, Eddy, & Lydie Nelson | QCD |
| 31 | 434 | 3/21/1906 | Lydie (Nelson) & Ernest C. Hawkins | Ole Nelson Jr. | QCD |
| 38 | 1 | 3/26/1906 | Nellie (Nelson) & Ole B. Thorpe | Ole Nelson Jr. | QCD |
| I | 550 | 3/10/1913 | Edward O. Nelson | Nellie Thorpe, Lydia L. Hawkins, & Benjamin E., William E., Ole E., Clarence O., & Carroll F. Nelson | Final Decree |
| 42 | 569 | 1/31/1916 | Lydia (Nelson) & E.C. Hawkins | Benjamin E. Nelson | QCD |
| 43 | 522 | 3/18/1916 | Nellie Thorpe, William E., Benjamin E., Ole E., Clarence O., & Carroll F. Nelson | John T. & Minnie Russell | WD |
| 45 | 562 | 3/1/1920 | John T. & Minnie Russell | William H. Bot | WD |
| 46 | 636 | 2/24/1923 | Sherriff Ole Borgendale | Ole E. Nelson | Foreclosure |
| 51 | 306 | 6/17/1926 | Ole E. Nelson | Nellie T. Hartwick | WD |
| 72 | 355 | 1/11/1949 | Nellie T. Hartwick & Ole E. Nelson | Juel G. & Ella Williams | WD |
| 78 | 12 | 9/26/1951 | Juel G. & Ella Williams | Henry Christensen | WD |
| 75 | 274 | 3/25/1952 | Henry & Beulah Christensen | Erwin C. & Vivian C. Ockwig | WD |
| I | 504 | 11/4/1953 | Erwin C. Ockwig | Vivian Ockwig | Affidavit of Survivorship |
| 82 | 144 | 6/26/1961 | Vivian Ockwig | Stanley A. Minsaas | WD |
| 154 | 185 | 10/11/1993 | Stanley A. & Vivian Minsaas | Zoe Ann Longworth | QCD |
| 154 | 187 | 10/11/1993 | Zoe Ann Longworth | Stanley A. & Vivian Minsaas | QCD |
| 268090 | | 3/24/2006 | Stanley A. Minsaas | Vivian Minsaas | Affidavit of Survivorship |
| 293306 | | 12/30/2014 | Vivian Minsaas | Fagen Farms | Contract for Deed |
| 293423 | | 1/5/2015 | Vivian Minsaas | Fagen Farms | WD |


**Figure 46.** Overview of site 21CP79 to the south-southwest.

**Figure 47.** Overview of site 21CP79 to the northeast.

**Figure 48.** Southeast corner angle of Feature 1. View to the northwest.

**Figure 49.** Northwest corner angle of Feature 2. View to the southeast.

**Figure 50.** Northwest corner angle of Feature 3. View to the southeast.

**Figure 51.** Feature 4. View to the northwest.

**Figure 52.** Feature 4. View to the west.

**Figure 53.** Vegetation overgrowth and burned cultural materials within Feature 4.

**Figure 54.** A burned air conditioning unit within Feature 4.

**Figure 55.** Modern gazebo. View to the southeast.

**Figure 56.** A modern concrete pad. View to the southwest.

**Figure 57.** Historic cultural material. View to the west.

Beaver Creek
ARCHAEOLOGY

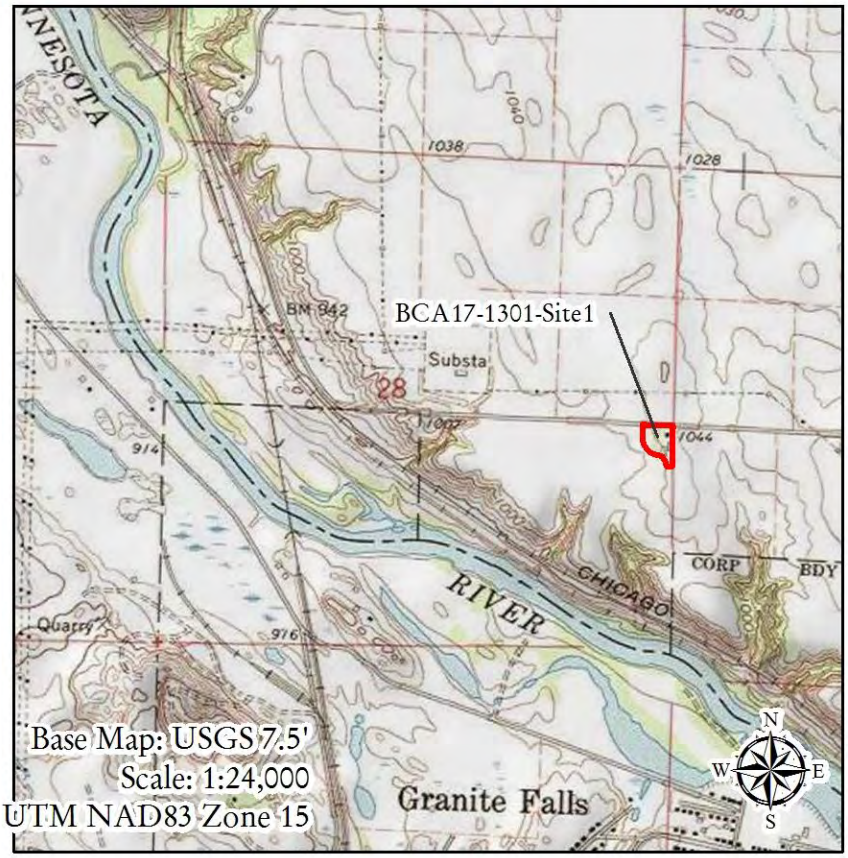
BCA17-1031-Site1
UTM: 298,805 E; 4,966,732 N
T116N R39W Sec. 28, Granite Falls Quad. Map, (1965)
Hawk-Yellow Medicine Drainage
Chippewa County, Minnesota


Meters
0 25 50 75 100

## Legend

Site Boundary (9,416 sq. meters)

Feature




Base Map: USGS 7.5'
Scale: 1:24,000
UTM NAD83 Zone 15

0 0.25 0.5 0.75 1
Miles

Author: