Results of a Phase I Archaeological Survey for a Proposed Change in Recreational Use of Approximately 80 Acres at South Park in Houston Houston County, Minnesota

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Archaeology Survey License 13-034



Report of Investigations No. 958 Mississippi Valley Archaeology Center University of Wisconsin-La Crosse

July 2013

Management Summary

In July 2013 the Mississippi Valley Archaeology Center (MVAC) conducted a Phase I reconnaissance survey of approximately 80 acres for a proposed change in use at South Park in Houston, Houston County, Minnesota. The project area is located on the south end of the Houston city limit. Katherine P. Stevenson of MVAC served as Principal Investigator. The majority of the project area consists of steep bluff lands with narrow ridgetops. The entire project area was surveyed for above ground cultural resources such as mounds, rock art and rock shelters. Systematic shovel testing was undertaken within the areas with slopes of less than 20 percent. No cultural resources were found within the project area and no further work is recommended.

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Project Description

In late July of 2013 personnel from the Mississippi Valley Archaeology Center (MVAC) at the University of Wisconsin-La Crosse undertook Phase I reconnaissance survey in South Park on the southern edge of the City of Houston, Houston County, Minnesota. The City of Houston is proposing to change the land use designation of approximately 80 acres of the park from non-motorized use, to allowing off-highway vehicles (OHV) on a designated trail system. The location of the trails have not been determined at this date, however, the change in designation requires an environmental review.

The project area is wooded with steep-sided, uplands and valleys. The majority of the project area has slopes over 20 percent with narrow ridgetops. The project is located in T103, R06, Section 4. The area of potential effect (APE) includes all 80 acres as a route has yet to be determined. All work conducted by MVAC conformed to Minnesota State Historic Preservation Office (SHPO) standards and all federal guidelines.

Research Design

Objectives

The objective of this study was to determine whether the proposed undertakings would have an effect on any cultural resources within the project area. If cultural resources were found, the location(s) would be mapped and an assessment made of potential adverse affect to these resources and possible avoidance. Both archival and field investigations were undertaken to address these questions, as will be described below.

Research Methods

Prior to field work results of a site search were obtained from the Minnesota SHPO, and it was determined that no archaeological sites had been previously reported in or around the project area. No previous archaeological investigations had taken place within the project area.

Phase I field survey is employed to determine the presence or absence of cultural resources within a project area. The purpose of this project was to determine whether prehistoric or historic cultural resources existed within the 80 acres proposed for a land use change. A systematic walkover was undertaken to check for the presence of prehistoric earthworks, historic structures, and other historic activity. Since the project area was not in cultivation, systematic shovel testing was also undertaken, except in areas that had slopes of greater than 20 degrees. Shovel tests were excavated at intervals of 15 meters or less following a grid-like pattern, and all soil was screened through ¹/₄-inch mesh.

Artifacts recovered during this project and all materials related to the project will be housed at the Minnesota Historical Society under Repository Agreement Number 595. Copies of documentation will be housed at the MVAC facility.



Figure 3: Location of the project area on the Houston and Sheldon, MN 7.5' topographic maps.

Literature Search

Archival research included review of the project areas on the 7.5 minute USGS topographic maps and digital orthophotoquads, historical and current aerial photographs, maps of current and presettlement vegetation, and geomorphic and soil maps. A site search was completed through the Minnesota SHPO, and no previously reported sites are located in or adjacent to the project area. There are six previously reported archaeological sites that are within one mile of the project area. 21HU31, the Skifton site, is located approximately one half miles southeast of the project area. The site is a lithic scatter of unknown age or cultural affiliation located on the Root River. 21HU32, the Wiste site, is located between one quarter and one half of a mile south of the project area. The site is a lithic scatter of unknown age or cultural affiliation located near CHT 4 at the base of the bluff. 21HU50, the Ask site, is located approximately three quarters of one mile east of the project area. The site is a lithic scatter of unknown age or cultural affiliation and is located on a terrace of the South Fork of the Root River. 21HU145, the Johnston site, is located around one mile east of the project area. The site is a lithic scatter of unknown age or cultural affiliation located on the east side of the South Fork of the Root River. 21HU163 is located approximately one mile northeast of the project area. The site is an artifact scatter of probable Middle Woodland affiliation. 21HU171 is located approximately one mile north of the project area and is a lithic scatter of unknown age or cultural affiliation on the south side of the Root River.

Environmental Setting

South Park is located on the south edge of the City of Houston, a small town in the Root River Valley and west of the Mississippi River. The Houston area is hilly and primarily agricultural land or wooded (particularly on steeper slopes). The Root River and its forks cut broad flat valleys through the area.

Ecological Land Classification: The Minnesota Department of Natural Resources (MNDNR) and the US Forest Service has developed an Ecological Classification System of Minnesota for landscape classification and ecological mapping (MNDNR 2013). This system takes into account biotic and environmental factors, including climate, geology, hydrology, and vegetation.

The project area falls within the Blufflands ecological subsection. This subsection is characterized by highly dissected landscapes associated with major rivers. Bluffs and deep stream valleys up to 500–600 feet are common (MNDNR 2013a). Along the Mississippi River glacial drift in the form of loess is thin and topography is bedrock controlled. Bedrock consisting of Ordovician dolomite, limestone, and sandstone is exposed in river and stream valleys. Presettlement vegetation was dominated by tall grass prairie and bur oak savanna on ridge tops and dry upper slopes. Red oak, white oak, shagbark hickory, and basswood forests were found on wetter slopes with red oak, basswood, and black walnut forests in protected valleys (Kratz and Jensen 1983). Today about 30 percent of the region is cropped, 20 percent is in pasture, and 50 percent is in woodland. The project area is located in steep woodland.

OAS/SHPO Regions Overview: Minnesota is divided into nine numbered archaeological regions (Anfinson 1984, 1990) based primarily on surface hydrology, largely based on the distribution of lakes. After their initial definition, several of these regions were later divided into subregions, with these designations currently included in the OSA/SHPO statewide site database coding. These designations will be used to describe the overall project environmental settings.

The project area is in the Southeast Riverine region and the Southeast Riverine-West (3w) subregion. The larger region corresponds roughly to the Rochester Till Plain. This region also corresponds to the area known as the "Driftless Area," a region in Wisconsin, Minnesota, Iowa, and Illinois that remained unglaciated during the Late Wisconsinian glaciations. The western subregion is located just west of the Mississippi River (interior) and is a rugged, deeply dissected area with numerous outcrops of Paleozoic sedimentary bedrock. The soils in the western subregion are medium-textured prairie and prairie-border soils that formed in loess over bedrock. There are many dendritic drainages in the deep valleys. The three principal rivers drain the western subregion; the Zumbro, Cannon, and Root Rivers (located north of the project area); and all drain to the Mississippi River. Pre-European vegetation of the area included floodplain forests in major valleys, a mix of prairies and forest vegetation in the uplands, and Big Woods forests along the Mississippi River (Arzigian and Stevenson 2003:245-246).

Cultural History

In the Upper Mississippi Valley, human occupation began when the glaciers retreated and the area became habitable. The region's first peoples, known to archaeologists as Paleoindians, were skilled hunters who killed mammoths, mastodon, and other large game and had a highly mobile way of life (Theler and Boszhardt 2003:53–68).

After the megafauna disappeared, subsequent Archaic hunter-gatherers (7000 to 500 B.C.; Theler and Boszhardt 2003:69–95) pursued smaller game and adapted more specifically to different regions, following an annual cycle that positioned them to acquire foods at the best locations and times of year. Cool-season living sites were in protected locations, including rockshelters, while warm-season camps were generally along rivers. Late Archaic Red Ocher and Old Copper cultures showed greater social complexity, including elaborate burial practices, long-distance trade in copper, shell, and stone, and early steps in plant domestication.

About 2,500 years ago, three developments marked the beginning of Woodland cultures throughout much of eastern North America: the addition of horticulture to a hunter-gatherer economy; pottery manufacture; and the construction of earthen burial mounds (Theler and Boszhardt 2003:97–156). Early Woodland cultures (500 B.C.–A.D. 100) reflect the early stages of this transformation. Middle Woodland cultures (A.D. 100–600) continued the trend toward complexity and included cultures linked to Hopewell, a pan-regional development marked by elaborate mound burials and long-distance trade. Early and Middle Woodland peoples still relied primarily on hunting and gathering and a flexible seasonal round, congregating in larger settlements during the warm season and dispersing into smaller groups for the winter.

Late Woodland cultures (A.D. 600–1050) reflect a gradual increase in population density, integration of corn horticulture into a diversified subsistence economy, and the introduction of the bow and arrow, with concomitant changes in hunting strategies. Mounds were created in various shapes, including animal-effigy forms that might have represented clans or mythic figures (Birmingham and Eisenberg 2000; Mallam 1976). Between A.D. 1000 and 1150, regional cultures were also affected by emissaries, traders, and/or emigrant Mississippian populations from Cahokia, a complex, stratified chiefdom-level society centered in the St. Louis area of the Mississippi Valley. Effigy-mound construction ceased about 950 years ago, and Effigy Mound peoples seem to have largely abandoned the region's interior hill country, perhaps because a growing population density disrupted seasonal mobility and confined the groups to individual

valleys year round, making them vulnerable to collapses in two crucial resources, firewood and white-tailed deer (Theler and Boszhardt 2006).

Beginning about A.D. 1300, Mississippian-influenced Oneota peoples practiced more intensive agriculture and lived in sprawling settlements along the major rivers near La Crosse (Boszhardt et al. 1994; Theler and Boszhardt 2003:157–182). Oneota peoples grew corn, beans, and squash and practiced ridged-field agriculture on a large scale, and they also hunted and collected a wide range of wild resources. Oneota groups abandoned La Crosse nearly 400 years ago and moved west, probably in response to disease, population displacement, and other contact-related changes that preceded the actual arrival of Europeans in the area.

European contact brought profound changes, including disease and depopulation; movement and removal of Native peoples; a changing economy, including the fur trade; the introduction of new technologies and raw materials (e.g., firearms, iron, brass, steel); and the introduction of the horse. Beginning with Jean Claude Nicolet's visit in 1634, French and English explorers, traders, and military personnel came to the Upper Mississippi Valley, and by the mid-1800s, widespread Euroamerican settlement was causing profound impacts, from formalization of land ownership to massive environmental changes. La Crosse became a focus for lumbering and river transport, and European farmers of various ethnicities settled the surrounding countryside (Ostergren and Vale 1997; The Wisconsin Cartographers' Guild 1998).

Work Summary

A Phase I archaeological survey of approximately 80 acres for a proposed change in land use at South Park in Houston, Houston County, Minnesota was carries out on July 23, 2013 by personnel from the MVAC under the direction of Principal Investigator Katherine Stevenson and Wendy Holtz-Leith. The project area is located on the south end of the Houston city limits and consists of steep bluff lands with narrow ridgetops (Figure 2). South Park was developed in 1974 with Land and Water Conservation Fund assistance with additional parcels added since then. The parkland today is 118-acres. The park currently has a non-vehicular trail system that begins on the north-end of the park where parking, primitive camping and facilities are located. The trails work their way up the steep sided bluff and follow along the narrow ridgetops. The City of Houston is proposing to change the land use of approximately 80-acres from strictly nonmotorized use to allow for OHV trail system. The proposed change in land use on property acquired or developed with assistance from the Land and Water Conservation Fund grant program (LAWCON) requires review by the State and the National Park Service, as part of this review a historical/archaeological review may be recommended by the State Historic Preservation Office (SHPO). In this case the Minnesota SHPO did require such a review (Appendix A). At this time no trail alignments have been designated, consequently the entire 80 acres was surveyed.



Figure 2: Close-up of project area on Houston, MN 7.5' topographic map.

The entire project area was surveyed for above ground cultural resources such as mounds, rock art and rock shelters. Systematic shovel testing was undertaken within the areas with slopes of less than 20 percent. The majority of the project area is steep bluff slopes with slope of over 20 percent (Figure 3). This area was visually inspected, but systematic survey was not undertaken based on the degree of slope (20 percent or greater). Shovel tests were excavated on flatter areas on the blufftop off of the existing trails at 15 meter intervals. Most of the shovel tests contained little soil and some points had no soil over the bedrock. Soil was screened through one-quarter inch hardware mesh.

The dominate soils in this area are mapped as La Crescent cobbly silty clay loam, 45-70 percent slope. These soils are found on the backslopes and shoulders of valleys. They are formed in loess or loess and loamy colluviums over loamy skeletal colluvium. Elbaville silt loam, 30-45 percent slope, soils are found on backslopes of hills. They are formed in loess and loamy colluviums. Plainfield sand, 25-50 percent slope, is found on backslope and footslopes of valleys and terraces. The soils are formed in sand and are excessively drained. Blackhammer-Southridge silt loams, 12-20 percent slope, eroded, are found on hogs backs and other ridgetops. These soils are formed in loess over stratified loamy and sandy erosional sediment over sandstone or limestone (USDA-NRCS 2013). This was the dominate soil type that was shovel tested. In some area no top soil remained and the rock surfaces were carefully inspected for cultural resources on the surface.



Figure 3: Photo showing slopes within project area, view southwest from southwest edge of project area.

Results

No prehistoric cultural resources were recovered within the project area. A combination of shovel testing and visual survey was employed to survey the 80 acres. No cultural resources were found. A limestone pinnacle called Indian Monument is located just west of the project area (Figure 4). This a natural feature that stands approximately 15 feet above the surrounding area. Although outside of the project area the pinnacle was thoroughly inspected for any cultural modifications. The limestone is heavily eroded and if Native American rock art had been present on the surface it would be very unlikely that it would survive the elements for this length of time.



Figure 4: Limestone pinnacle, Indian Monument, located just west of project area, view east.

Recommendations

An intense Phase I archaeological reconnaissance survey for a proposed change in land use of 80 acres in South Park, Houston County, Minnesota, found no cultural resources. There are no previously reported archaeological sites within or adjacent to the project area. Based on these findings no further work is recommended. In the slight chance that cultural resources are found during any ground disturbing activities all work should cease and the SHPOs office contacted.

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Appendix A: SHPO Letter



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Minnesota Historical Society STATE HISTORIC PRESERVATION OFFICE

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May 31, 2013

Ms. Andrea Moffatt WSB & Associates 701 Xenia Ave S, Suite 300 Minneapolis, MN 55416

RE: City of Houston South Park – LAWCON Land Use Change to Allow Motorized Vehicles T103 R6 S4 Houston, Houston County WSB Project Number: 1738-04 SHPO Number: 2013-2052

Dear Ms. Moffatt:

Thank you for the opportunity to comment on the above project. It has been reviewed pursuant to the responsibilities given to the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and implementing federal regulations at 36 CFR 800.

Under 36 CFR 800.4(b)-(c) it is the Federal agency's responsibility to identify and evaluate historic properties that may be affected by the proposed project. In absence of the Federal agency's finding and due to the nature and location of the proposed project, we recommend that an archaeological survey be completed. The survey must meet the requirements of the Secretary of the Interior's Standards for Identification and Evaluation. For your information, we have enclosed a list of consultants who have expressed an interest in undertaking such surveys.

We will reconsider the need for survey if the project area can be documented as previously surveyed or disturbed. Any previous survey work must meet contemporary standards. **Note:** plowed areas and right-of-way are not automatically considered disturbed. Archaeological sites can remain intact beneath the plow zone and in undisturbed portions of the right-of-way.

If you have any questions regarding our review of this project, please contact Kelly Gragg-Johnson at (651) 259-3455.

Sincerely,

Mary Arin Heidemann, Manager Government Programs and Compliance

Enclosure: List of Consultants

Minnesota Historical Society, 345 Kellogg Boulevard West, Saint Paul, Minnesota 55102 651-259-3000 • 888-727-8386 • www.mnhs.org Appendix B: Minnesota License

APPLICATION FOR MINNESOTA ANNUAL ARCHAEOLOGICAL RECONNAISSANCE SURVEY LICENSE

This license only applies to reconnaissance (Phase I) surveys conducted under Minnesota Statutes 138.31-.42 during calendar year 2013 _______. Separate licenses must be obtained for site evaluation (Phase II) surveys, for major site investigations (Phase III), for burial site authentications under Minnesota statutes 307.08, and for survey work that will continue into another calendar year. Only the below listed individual is licensed as a Principal Investigator, not the institution/agency/company or others who work for that entity. The licensed individual is required to comply with all the conditions attached to this license form. Permission to enter land for the purposes of archaeological investigation must be obtained from the landowner or land manager.

Name:Katherine Stevenson
Institution/Agency/Company Affiliation: Mississippi Valley Archaeology Center, U. of Wisconsin-La Crosse
Title/Position: Projects Director
Address: 1725 State St., La Crosee, WI 54601
Work Phone: 608-785-8451 E-Mail: kstevenson@uwlax.edu
Name of Advanced Degree Institution: U. of Wisconsin-Madison Year: 1985
Name of Department: <u>Anthropology</u> Degree: <u>MA</u> MS XPhD
Purpose: (check all that may apply) CRM \underline{X} Academic Research \underline{X} Institutional Field School
Type of Land: (check all that may apply) State Owned X County Owned X Township/City Owned X Other non-federal public
MHS Repository Agreement # 595 Other Approved Curation Facility:
Previous License: Year 2012 Type Annual Number 12-034
Signed (applicant): Katherine P. Stevenson Date: 2/18/2013
Required Attachments: <i>Curriculum Vita</i> and Documentation of Appropriate Experience for previously unlicensed individuals.
Submit <u>one</u> copy of this form and attachments to: Office of the State Archaeologist, Ft. Snelling History Center, St. Paul, MN 55111 612-725-2411 612-725-2729 FAX 612-725-2427 email: mnosa@state,mn.us
Minnesota Historical Society Approval: 1200 Date: $2-27-13$ State Archaeologist Approval: $2725/13$ Date: $2/25/13$
License Number: 13–034 Form Date: 2/15/11