



3 0307 00077 2692

15 - 0330

This document is made available electronically by the Minnesota Legislative Reference Library  
as part of an ongoing digital archiving project. <http://www.leg.state.mn.us/lrl/lrl.asp>

---

# Archaeology in Minnesota – 2014

## Annual Report of the State Archaeologist

---



Office of the State Archaeologist  
Minnesota Department of Administration  
January 2015





## Mission Statement

*The mission of the State Archaeologist is to promote archaeological research, share archaeological knowledge, and protect archaeological resources for the benefit of all of the people of Minnesota.*



## Dedication

This annual report is dedicated to Dennis Gimmestad who retired from state service in 2014. Dennis worked for the Minnesota State Historic Preservation Office (SHPO) from 1977 through 2009 where he did county history-architecture surveys, served as department head, and led the Review and Compliance division. He finished his state career with the MnDOT Cultural Resource Unit serving as an architectural historian and project manager. Many of the successes of Minnesota historic preservation over the last 30 years are due to Dennis' leadership, passion, and insight.

## Abstract

In fiscal year 2014, the Office of the State Archaeologist (OSA) was involved in a wide variety of activities in order to fulfill legal obligations, protect archaeological sites, promote research, educate the public, and generally support the advancement of Minnesota archaeology.

Chapter 1 provides a brief history of the OSA and lists the principal duties and responsibilities of the State Archaeologist.

Chapter 2 summarizes OSA activities and other Minnesota archaeological activities in FY 2014 by program area. Major FY 2014 OSA accomplishments include: reviewing 297 site inventory forms, reviewing 99 development projects, formally authenticating 3 burial sites, doing field research at 59 locations in 43 different counties, and helping to direct the *Statewide Survey of Historical and Archaeological Sites*.

Basic OSA Fiscal Year (FY) 2014 and Calendar Year (CY) 2014 statistics are:

|                         | FY14 | CY14 |
|-------------------------|------|------|
| Licenses Approved:      | 82   | 78   |
| Site Forms Reviewed:    | 297  | 330  |
| Site Numbers Assigned:  | 238  | 252  |
| Reports Added:          | 98   | 104  |
| Projects Reviewed:      | 99   | 83   |
| Major Burial Cases:     | 43   | -    |
| Burial Authentications: | 3    | -    |

Chapter 3 provides an assessment of the current state of Minnesota archaeology including a summary of projects undertaken in 2014 for the Legacy Amendment *Arts and Cultural Heritage Fund - Statewide Survey of Historical and Archaeological Sites*. It also presents a plan for OSA activities in FY 2015.

A glossary of common archaeological terms used in Minnesota is appended at the end of the report.



## Acknowledgements

Director Laurie Beyer-Kropuenske of the Department of Administration Community Services Division provides supervisory direction and essential support to OSA. Her sound advice and attention to detail are greatly appreciated. Numerous other Department of Administration staff provide daily support to the OSA for financial, technical, and personnel matters. Special thanks go to Curt Yoakum, Ryan Church, Adam Giorgi, and Commissioners Spencer Cronk and Matt Massman.

The Minnesota Indian Affairs Council (MIAC) is one of the most important partners of the OSA in protecting burial sites and maintaining essential communication with Minnesota's Indian communities. It is a pleasure to work with Annamarie Hill and her very competent staff. Jim Jones is the long-serving point person for archaeology at MIAC, and Jim's always ready assistance and deep knowledge are much appreciated.

The Minnesota Historical Society (MHS) is another important partner of OSA. Archaeology Department Head Pat Emerson and her staff provide day-to-day support. State Historic Preservation Office (SHPO) staff, especially Sarah Beimers, Tom Cinadr, Dave Mather, and Kelly Gragg-Johnson, who provide critical information and records management assistance. The OSA leases office space from MHS at the Ft. Snelling History Center where Tom Pfannenstiel, Brenda Williams, Paul Cusick, and Kurt Shimek provide logistical assistance essential to the efficient operation of the OSA.

It would be impossible for the OSA to function effectively and efficiently without the assistance of the entire archaeological community in Minnesota. This includes agency archaeologists, private contract archaeologists, academic and museum archaeologists, and avocational archaeologists. The daily support and advice of my wife Pat makes my job much easier and more enjoyable.

Last, but certainly not least, Bruce Koenen has served as the very capable assistant to the State Archaeologist since 1995. Bruce carries out many of the critical daily tasks at OSA including license application processing, site form review, records maintenance, financial accounting, secondary school liaison, and avocational interaction. He serves as the institutional memory for the OSA and his wealth of knowledge and easy-going personality are absolutely essential to the State Archaeologist and the rest of the Minnesota archaeological community.

Scott Anfinson  
State Archaeologist  
January 2015

## Table of Contents

|   |     |
|---|-----|
| Mission Statement   | i   |
| Abstract  | ii  |
| Acknowledgements  | iii |
| Table of Contents   | iv  |
| Chapter 1: Introduction                                   |     |
| The Office of State Archaeologist – Historical Background | 1   |
| Duties of the State Archaeologist                         | 2   |
| Chapter 2: Summary of OSA Activities – FY 2014            |     |
| Licensing and Activities of Licensees                     | 6   |
| Records Maintenance                                       | 8   |
| Development Plan Review                                   | 14  |
| Agency Assistance   | 16  |
| Archaeological Research                                   | 16  |
| Archaeological Site Preservation                          | 18  |
| Public Education  | 19  |
| Burial Sites Protection                                   | 21  |
| Chapter 3: Minnesota Archaeology in 2014                  |     |
| Statewide Survey of Historical and Archaeological Sites   | 37  |
| Current Status of Minnesota Archaeology                   | 39  |
| A Plan for 2015   | 41  |
| References Cited  | 43  |
| Appendix A - Glossary of Minnesota Archaeological Terms   | 44  |

**Cover Illustration:** Winter fieldwork in temperatures below zero at site 21CR155 for the Hennepin-Carver CSAH 101 project near Shakopee.

# **Chapter 1: Introduction**

This report summarizes the activities of the Office of the State Archaeologist (OSA) for Minnesota State Fiscal Year (FY) 2014, the period from July 1, 2013 through June 30, 2014. It also includes some statistics and information for the 2014 Calendar Year (CY) because some activities (e.g., university archaeological field schools, Statewide Survey projects) cross-over state fiscal years.

The State Archaeologist is a civil service employee of the Minnesota Department of Administration (Admin). The Office of the State Archaeologist (OSA) has two staff members, the State Archaeologist and an assistant. The OSA leases office space from the Minnesota Historical Society (MHS) at the Ft. Snelling History Center. The OSA is funded from a general fund appropriation to the Commissioner of Administration.

Minnesota Statutes (MS) 138.38 requires that the State Archaeologist complete “a full report” annually from the date of the last report. The report completion date has been administratively set as February 15. The reports must be filed with the Commissioner of Administration with copies to the Minnesota Historical Society (MHS) and the Minnesota Indian Affairs Council (MIAC). Copies are also sent to the Minnesota Legislative Reference Library, the Department of Transportation (MnDOT), the Department of Natural Resources (DNR), and to other organizations and individuals upon request. The current Annual Report and all previous OSA Annual Reports are available on the OSA website (<http://www.osa.admin.state.mn.us/>).

## **The Office of State Archaeologist – Historical Background**

In 1939, the Minnesota Legislature enacted the Minnesota Antiquities Act (MS 84.37 - .42) reserving for the state the right to license archaeological exploration at any site and claiming ownership of any artifacts recovered from such explorations. Any person who intended to excavate, explore, investigate, or survey an archaeological site in Minnesota on public or private land was required to obtain a license from the Commissioner of Conservation upon recommendation of a designated archaeologist in the Department of Anthropology at the University of Minnesota. Lloyd Wilford, the state’s first professional archaeologist, was the designated archaeologist from 1939 until his retirement in 1959. Elden Johnson replaced Wilford at the University of Minnesota in 1959 and became the next designated licensing archaeologist.

The Field Archaeology Act (MS 138.31 - .42) officially established the position of State Archaeologist in 1963. Initially, the Director of the Minnesota Historical Society (MHS) appointed the State Archaeologist to a four-year term and the State Archaeologist was required to be a staff member at the University of Minnesota. These requirements have been altered several times over the last 30 years, with the position leaving the University in 1978 and officially homeless for almost 20 years. In 1996, the State Archaeologist became a state civil service employee at the Department of Administration and is now appointed by the Commissioner of Administration. The four year term has been eliminated.

Elden Johnson was appointed the first State Archaeologist in 1963 and served until his resignation in 1978. Christy Hohman-Caine, a student of Johnson's and a staff member of the Anthropology Department at Hamline University, was appointed State Archaeologist in 1978. She served until her resignation in late 1992. Hohman-Caine took a job with the Chippewa National Forest in northern Minnesota in 1980, so during most of her tenure the Minnesota State Archaeologist worked as a federal employee based outside of the Twin Cities area. Johnson and Hohman-Caine were not paid a salary for their service as State Archaeologist and it was thus necessary for them to maintain other employment.

From December of 1992 through January of 1995, there was no State Archaeologist. Mainly due to issues relating to the Private Cemeteries Act (MS 307.08), lobbying by developers, state agencies, and archaeologists resulted in the Legislature appropriating funds for the State Archaeologist in FY 1995. Mark Dudzik was appointed State Archaeologist in February 1995 and became the first State Archaeologist to be paid a salary. Dudzik hired Bruce Koenen as the first full-time assistant to the State Archaeologist in June 1995.

Following Dudzik's resignation in July 2005, Scott Anfinson was appointed Acting State Archaeologist in mid-August 2005 while still employed by MHS. He was appointed State Archaeologist effective January 1, 2006. Anfinson was the archaeologist for the State Historic Preservation Office (SHPO) of the MHS (1990-2005), and, prior to that, directed the County-Municipal Highway Archaeological Survey at MHS (1975-1990). Koenen continues to serve as the assistant to the State Archaeologist.

## **Duties of the State Archaeologist**

The principal duties of the State Archaeologist are assigned by two state laws, the Field Archaeology Act (MS 138.31-.42) and the Private Cemeteries Act (MS 307.08). The State Archaeologist is given additional duties in rules implementing Minnesota Water Law (MS 103F), the Minnesota Environmental Policy Act (MS 116D), and the Coroner and Medical Examiner law (MS 390.25, Subd. 5). More recently, duties have been assigned under the Legacy Amendment Arts and Cultural Heritage Fund (MS 129D.17). The State Archaeologist also carries out traditional duties that have evolved since 1963. In all, the State Archaeologist has about 30 discrete duties under law as well as at least 10 traditional duties.

### **Field Archaeology Act (MS 138.31 – 138.42)**

While the Field Archaeology Act has been revised 10 times since 1963, the duties of the State Archaeologist specified in that law have not changed. These duties can be summarized as:

- acts as the agent of the state to administer and enforce the act
- sponsors, engages in, and directs fundamental archaeological research
- cooperates with agencies to preserve and interpret archaeological sites
- encourages protection of archaeological sites on private property
- retrieves and protects artifacts and data discovered on public property
- retrieves and protects archaeological remains disturbed by agency construction

- helps preserve artifacts and data recovered by archaeological work
- disseminates archaeological information through report publication
- approves archaeologist's qualifications for licensing to work on public property
- formulates licensing provisions for archaeological work on public property
- issues emergency licenses for archaeological work on public property
- revokes or suspends archaeological licenses due to good cause
- approves curation arrangements of artifacts and data from state sites
- repossesses artifacts from state sites that are not being properly curated
- consults with MHS and MIAC regarding significant field archaeology
- completes annual reports about OSA and licensees' activities
- reviews and comments on agency development plans that may affect state sites

#### **Private Cemeteries Act (MS 307.08)**

In 1976, the Private Cemeteries Act was amended and the State Archaeologist was given duties including the "authentication" of historic, but legally unrecorded cemeteries. This law has been amended eight times since 1976, most recently in 2007.

The State Archaeologist's duties under MS 307.08 are:

- authenticates all unrecorded burial sites over 50 years old
- grants permission for disturbances in unrecorded non-Indian cemeteries
- allows posting and approves signs for authenticated non-Indian cemeteries
- maintains unrecorded cemetery data
- provides burial sites data to MnGEO (formerly LMIC)
- determines the ethnic identity of burials over 50 years old
- helps determine tribal affiliation of Indian burials
- determines if osteological analysis should be done on recovered remains
- helps establish provisions for dealing with unaffiliated Indian remains
- reviews development plans that may impact unrecorded burials

#### **Minnesota Water Law (MS 103F) - Rules 6120**

The State Archaeologist has several duties specified in Minnesota Water Law Rules, which implement MS 103F pertaining to the development of shoreland as regulated by state and local agencies. Agency reviews of shoreland development must consider impacts on *significant historic sites*. Significant historic sites include archaeological sites listed in or determined eligible to the state or national historic registers. Unrecorded cemeteries are automatically considered to be significant historic sites. The rules specify that no structure may be placed on a significant historic site in a manner that affects the values of the site unless adequate information about the site has been "removed, documented, and curated in a public repository."

Under Rules 6120.2500, Subpart 15a, the State Archaeologist can determine if sites are eligible to the state or national historic registers, although under federal law formal eligibility for the National Register of Historic Places can only be determined by the Keeper of the National Register. Under 6120.3300, Subpart 3e, the State Archaeologist must approve any structure placed nearer than 50 feet from an unplatted cemetery.



**Minnesota Environmental Policy Act (MS 116D) – Rules 4410.1500**

Responsible Governmental Units (RGUs) for Environmental Assessment Worksheets (EAWs) are required to provide a copy of all EAWs to the State Archaeologist. The State Archaeologist has 30 days to comment on a submitted EAW. RGUs make all the important decisions for EAWs including their adequacy and the need for a full Environmental Impact Statement (EIS). If the State Archaeologist recommends archaeological survey, testing, or mitigation for a non-public project covered by an EAW or EIS, it is the RGU that makes the decision as to whether or not this is necessary.

**Minnesota Arts and Cultural Heritage Fund (MS 129D.17)**

Originally established with the 2008 approval of the Clean Water, Land, and Legacy Amendment by Minnesota voters, in 2009 and again in 2011 the Legislature made biennial appropriations of \$500,000 from the Arts and Cultural Heritage Fund for a *Statewide Survey of Historical and Archaeological Sites*. In 2013, the Legislature increased the funding to \$600,000 for the FY 14-15 biennium.

The legislation stipulates that the survey be governed by an Oversight Board and that one of the board members be a representative of the Office of the State Archaeologist. As a member of this Board, the State Archaeologist shares responsibilities for setting priorities, writing requests for proposals (RFPs), selecting contractors, monitoring contract progress, and reporting results to the Legislature, professional archaeologists, the public, and state agencies.

**Coroner, Medical Examiner Law (MS 390.25, Subd. 5)**

After a coroner or medical examiner has completed the investigation of an unidentified deceased person, the coroner or medical examiner must notify the State Archaeologist of all unidentified human remains found outside of platted, recorded, or identified cemeteries and in contexts which indicate antiquity of greater than 50 years.

**Traditional Duties**

Besides performing the duties assigned by Minnesota law listed above, the State Archaeologist also carries out a number of “traditional” duties:

- designs archaeological site inventory forms and reviews completed forms
- assigns official state site numbers to archaeological sites
- maintains an archaeological site inventory
- maintains archaeological research and report files
- organizes the annual Minnesota Archaeology Week
- consults with Indian tribes and federal agencies about archaeological activities
- works closely with MIAC to help develop Indian cemetery management procedures
- provides archaeological information and comments on private developments
- takes the lead in Legislative actions affecting archaeology

### Summary of Duties

The State Archaeologist is the principal archaeologist for the State of Minnesota. On a day-to-day basis, this involves seven major task areas:

- 1) approving license applications in a careful yet timely manner and monitoring the activities of the licensees;
- 2) reviewing site forms, issuing official inventory numbers, maintaining the inventory of known and suspected sites, and reviewing submitted archaeological reports;
- 3) reviewing development plans submitted by government agencies and private entities to evaluate the potential for harm to archaeological sites in project areas;
- 4) promoting and undertaking research in Minnesota archaeology;
- 5) providing public education and answering archaeological questions from the public;
- 6) ensuring burial sites protection through careful record keeping, development plan review, interaction with MIAC, consultation with experts, and doing fieldwork; and
- 7) guiding the *Statewide Survey of Historical and Archaeological Sites*.



State Archaeologist Scott Anfinson (center) and assistant Bruce Koenen (right) excavating a test unit at site 21LP11 in 2014 for the Minnesota River Valley Survey of the *Statewide Survey of Historical and Archaeological Sites*.

## **Chapter 2: Summary of OSA Activities – FY 2014**

### **Licensing and Activities of Licensees**

As specified in MS 138.36, the State Archaeologist approves the qualifications of an archaeologist applying for a license and forwards approved applications to the Director of the Minnesota Historical Society (MHS). While the MHS technically “issues” the license under MS 138.36, the OSA is the entity that develops licensing procedures, reviews license applications, handles all correspondence with licensees and prospective licensees, monitors the activities of the licensees, and maintains records of past licensees.

Beginning in the mid-1960s, licenses were typically issued to archaeologists on a project-by-project basis or as yearly licenses to large agency-specific survey programs such as the Minnesota Trunk Highway Archaeological Reconnaissance Survey (1968 – 1994). A revised licensing procedure was implemented in May 2006, which issued yearly (calendar) licenses to qualified individuals for the purposes of reconnaissance (Phase 1) and evaluative (Phase 2) archaeological surveys. Licensees were required to notify the OSA by email of each project to be surveyed under their license, to provide a separate report for each survey project, and to provide a brief yearly summary of all archaeological work conducted under their license. Separate licenses were still required for intensive excavation projects (Phase 3) on non-federal public land and for burial authentication work on non-federal public or private land.

In calendar year 2011, the State Archaeologist, after coordination with the Minnesota Historical Society, once again revised licensing procedures resulting in four types of licenses: 1) a yearly license for reconnaissance survey, 2) a site-specific license for site evaluations, 3) a site-specific license for major excavations, and 4) a site-specific license for burial authentications.

The reasons for separating the yearly reconnaissance license from evaluation activities were: 1) the increase in applications from out-of-state contractors who were not necessarily familiar with Minnesota archaeological manifestations and field procedures, 2) inappropriate evaluations by some prehistoric archaeologists of historic archaeological sites and some historical archaeologists of prehistoric sites, and 3) inappropriate significance evaluations by some Minnesota archaeologists unfamiliar with a particular Minnesota region or specific historic context.

Revised Professional Qualifications Standards for each type of license were also issued in CY 2011. Archaeologists who have received the combined Phase 1-2 yearly license in the past are not necessarily qualified to receive an Evaluation License (Phase 2), as receiving that license will be dependent on demonstrating appropriate personal qualifications for each site involved. This includes detailed familiarity with the historic contexts present at the site and the archaeological region where the site is located.

The DNR divisional archaeological survey programs continue to receive the combined Phase 1-2 licenses as there is often a need for these programs to rapidly and efficiently deal with a great variety of projects throughout the state. The principal investigators for these programs are familiar with all Minnesota contexts and they have worked in all regions of the state.

The licensing totals for Fiscal Year (FY) 2014 and Calendar Year (CY) 2014 are:

| License Type:                           | FY14     | CY14     |
|---|----------|----------|
| Phase 1/Reconnaissance Survey (yearly): | 61       | 60       |
| Phase 2/Evaluation Survey:              | 14       | 13       |
| Phase 3/Excavation:                     | 5        | 4        |
| Authentication:                         | <u>2</u> | <u>1</u> |
| Total:                                  | 82       | 78       |

Most licensed projects involve *reconnaissance surveys* of relatively small areas and most of these surveys do not locate archaeological sites, although a few surveys can involve large areas and locate multiple sites. *Evaluation surveys* investigate the importance/significance of individual sites that may be impacted by development. *Excavations* involve intensive site investigations that usually require opening large units and usually produce the most useful information about Minnesota's archaeological past. *Authentication projects* help the State Archaeologist determine if human burials exist at particular locations.

The majority of archaeological work done in Minnesota is not subject to state licensing, as work done on federal lands and private lands (non-burial sites) are excluded. The OSA is not required to receive reports on non-licensed archaeological activities, although some investigators and agencies send complimentary report copies to OSA. A few of the notable licensed projects carried out in FY 2014 are summarized below.

The Department of Natural Resources (DNR) continues to fund archaeological programs in several divisions. The archaeological personnel for these programs are provided through contracts with MHS. The four MHS-DNR archaeological programs do reconnaissance surveys (Phase 1), site evaluation testing (Phase 2) and occasional site mitigation (Phase 3) work. They each are required to provide a yearly summary in an annual report.

Dave Radford runs the State Parks Archaeology program assisted by LeRoy Gonsior, Charlie Yesberger, and Jacob Foss. The State Parks archaeological crew has spent considerable time over the past several years surveying the new Lake Vermilion State Park finding important prehistoric and early mining sites. In 2014, they also investigated several interesting prehistoric sites at Minneopa State Park in Blue Earth County and at La Salle Lake in Hubbard County. Radford also assisted the Statewide Survey CCC Camp study.

Tim Tumberg runs the Trails and Waterways program with the assistance of Jennifer Tworzyanski, Mathew Finneman, Amy Ollila, and Miranda Van Vleet. They continued work on the Blazing Star Trail in Freeborn County, testing of a prehistoric site (21FE76).

Mike Magner assisted by Stacy Allan handle DNR Forestry and Wildlife and Fisheries cultural resource programs. Their efforts in FY2014 included continued archaeological investigations of a parking lot expansion at the important A.H. Anderson site (21AN8) in Anoka County and an early milling dam (21CP71/21YM117) on the Minnesota River near



Granite Falls. They utilized LiDAR (Light Detection and Ranging; see Glossary) to map the 21FE2 mound group in Freeborn County. Magner provided key direction for the Statewide Survey CCC Camp study.

There were 14 Phase 2 (evaluation) archaeological licenses issued in FY 2014. The majority (12) of these were for limited formal testing of sites encountered by development projects on non-federal public land. Two Phase 2 licenses were issued for research projects: to Adrien Hannus (Augustana College) for Statewide Survey testing of two sites in Kandiyohi County (21KH44, 21KH46) and to David Mather (MHS) for additional testing at site 21ML11 for Kathio Archaeology Day.

Five Phase 3 (excavation) archaeological licenses issued in FY 2014. Two of these were for research projects: to Ed Fleming (Science Museum of Minnesota) and Gilliane Monnier (University of Minnesota) for their continuing fieldschool excavations at the Bremer Village site (21DK6) in Dakota County and to Rob Mann (St. Cloud State University) for fieldschool excavations at the Little Elk Mission site (21MO38) in Morrison County.

Two of the three development project Phase 3 licenses were issued to Frank Florin (Florin Cultural Research Associates) for mitigation excavations at 21CR155 in Carver County (one license for each calendar year). The other FY14 Phase 3 license was to Anne Ketz (106 Group) for mitigation excavations at 21BL31 in Bemidji.

There were two burial authentication licenses issued in FY2014. These licenses were issued to geoarchaeologist Mike Kolb (Strata Morph Geoexploration) for his work at the 21GD17 prehistoric mound site in Red Wing and to Rebecca Dean (University of Minnesota – Morris) for her work at the Boerner Cemetery in Grant County. All other burial authentications in FY 2014 were completed by OSA staff.

## **Records Maintenance**

### **Archaeological Site File**

Elden Johnson started a state archaeological site file at the University of Minnesota, Department of Anthropology in 1957. Johnson began the file “to facilitate future problem-oriented research” (Johnson 1957:14). The file was kept on 5” x 8” index cards organized by county and each card contained basic locational, descriptive, and reference information.

Site numbers were assigned using the Smithsonian Institution’s trinomial system with a numerical prefix based on state alphabetical position (Minnesota was 21 in 1957), then a two letter county abbreviation (e.g., AN for Anoka), and finally a one-up unique number for each site in a county.

The initial compilation of sites was based on the field notes of archaeologist Lloyd Wilford and the T.H. Lewis-surveyed mound sites contained in Newton Winchell’s *The Aborigines of Minnesota* (1911). Archaeologists who found previously unrecorded sites were asked to submit information about them to the University’s Archaeology Lab.



The University of Minnesota's site file became the official state site file with the appointment of Elden Johnson as the first State Archaeologist in 1963. By the late 1960s, the focus of site file use was changing from research to cultural resource management (CRM), mainly due to several new federal laws including the National Historic Preservation Act (1966), the Department of Transportation Act (1966), and the National Environmental Policy Act (1969).

A major change in site file record keeping occurred in the late 1970s with the initiation of the LCMR-funded Statewide Archaeological Survey (SAS) by the Minnesota State Historic Preservation Office (SHPO) at MHS and concurrently the newly-appointed State Archaeologist (Hohman-Caine) taking a job with the U.S. Forest Service in northern Minnesota. SAS personnel made photocopies of the State Archaeologist's site file cards and created a separate folder for each site, organizing the folders in file cabinets by county.

Because so many new sites were recorded by the SAS-sponsored surveys, the SAS took over assigning the official state site numbers from 1979 through 1981. The SAS also developed a one-page site form that could be folded in half to fit in the State Archaeologist's card file or be left unfolded in the SAS folders.

In 1981, the Minnesota Land Management Information System (MLMIS) at the State Planning Agency created a computerized version of SAS site file, although this "archaeological data bank" was never utilized for state planning purposes and was not available to most archaeologists, as it could only be accessed at MLMIS offices through a main-frame computer. The MLMIS computerized data was not updated after 1981 and not converted for desktop or internet-accessible use.

With the demise of the SAS in late 1981, the assignment of official site numbers reverted to the State Archaeologist. The SAS paper site files became the files of the State Historic Preservation Office (SHPO) at MHS based at Ft. Snelling and later moved to the new MHS History Center near downtown St. Paul.

The first widely available computerization of the archaeological site file occurred in 1982 when the current State Archaeologist, then head of the MHS-based Municipal - County Highway Archaeological Survey, undertook an extensive literature search and review of the archaeological site file. The purpose of the project was to compile a more comprehensive and accurate list of archaeological sites that were recorded in basic archaeological sources so potential effects to "known" sites (many officially unnumbered) could immediately be considered during highway construction plan review.

A major result of the project was word processor files that included five major tables: Numbered Sites, Numbered Sites Corrections, Unnumbered Sites, Unconfirmed Sites, and Find Spots. The tables were compiled in a report that was submitted to the State Archaeologist in early 1983 (Anfinson 1983). These word processor files were converted into an electronic database file in 1984 combining the various tables and a few new data fields. Under the Site Number field, unnumbered and unconfirmed sites were assigned "alpha"

numbers (e.g., 21ANa). Over the next decade, additional fields were added to the database mainly to foster Elden Johnson's 1957 site file research goals.

When Anfinson became the SHPO archaeologist in May of 1990, his computerized database became the SHPO's official archaeological site database. In 1994, MnDOT provided the SHPO with a grant to refine and augment the computerized site file. Under the direction of Homer Hruby, the SHPO completed the project in 1996.

The project not only expanded and made corrections to the electronic site database, it cleaned-up and added materials to the SHPO's hard copy folders, added folders for each "alpha" (officially unnumbered) site, and drew approximate site boundaries on a set of 7.5' USGS maps. Universal Transverse Mercator (UTM) locational fields using approximate site centers were added to the database to facilitate Geographic Information System (GIS) applications like MnDOT's MnModel project that began in 1995 ([www.mnmodel.dot.state.mn.us/](http://www.mnmodel.dot.state.mn.us/)).

During Mark Dudzik's tenure as State Archaeologist (1995-2005), archaeologists submitted newly completed state site forms to the OSA. The OSA carefully reviewed the forms, assigned an official site number, and sent photocopies of the numbered forms to the SHPO. SHPO staff added the information on the forms to the master archaeological site database and filed the paper copy in their site file cabinets. The SHPO then provided a periodic copy of the electronic database to the OSA. The site database was also made available to appropriate state and federal agencies (e.g., MnDOT, DNR, NRCS).

Because SHPO also maintains extensive historic building records, there was often a significant time delay in updating the archaeological site database following the assignment of new site numbers. On January 1, 2007, the OSA took over updating the master electronic Minnesota archaeological site database. This means that the database is now quickly updated immediately following the OSA review of site forms and the assignment of new site numbers. The OSA provides copies of the database to SHPO and other appropriate government agencies upon request.

The site database maintained by the OSA is not entirely accurate or consistent with respect to certain fields of information. There are four common sources of error:

- 1) the original data reported on the site form may be inaccurate;
- 2) the data reported on the site form may be a unique interpretation or have inconsistent interpretations by different archaeological investigators;
- 3) correct data from a site form may have been incorrectly entered into the database;
- 4) different data input personnel prior to 2007 may have used inconsistent codes for the data.

A great effort has been made by the OSA, the SHPO, and MnDOT to ensure that the locational data is as accurate as possible, but fields such as *Site Function* and *Cultural Context* still have significant accuracy and consistency problems.

Besides the site database, the OSA also maintains extensive paper site files. There are several major differences between OSA and SHPO paper files besides the presence of unique data (e.g., newspaper accounts, correspondence) in each entity's folders. The OSA does not have individual folders for the alpha sites. The SHPO does not have most of the data contained in the OSA burial site files. The SHPO depicts both numbered and unnumbered sites on a set of 7.5' USGS maps, while the OSA depicts numbered site locations on a set of county maps, although beginning in 2007, the OSA began to keep a set of USGS maps depicting newly-recorded sites locations.

The *SHPO Manual for Archaeological Projects in Minnesota* (Anfinson 2005), the *State Archaeologist's Manual for Archaeological Projects in Minnesota* (Anfinson 2011), and OSA/MHS licensing requirements specify that professional archaeologists must submit site forms when previously unrecorded sites are located or significant new information is obtained for previously recorded sites. OSA Assistant Bruce Koenen takes primary responsibility for the review of submitted site forms and assignment of official state site numbers. Site forms are required when sites are found by professional archaeologists on non-federal public or private land. Most federal agencies, with the exception of the two National Forests, regularly submit site forms even if the sites are located on federal land.

During 2014, the OSA performed the following site file actions:

|   | FY14      | CY14      |
|---|-----------|-----------|
| New Forms Reviewed and Site Numbers Assigned: | 238       | 252       |
| Revised Forms Reviewed:                       | <u>59</u> | <u>78</u> |
| Total Forms Reviewed:                         | 297       | 330       |

As of June 30, 2014 there were 18,808 archaeological sites listed in the archaeological site database. Of these, only 11,924 (63%) were assigned official state site numbers and thus have a hard-copy file at both the OSA and the SHPO. As of December 31, 2014 there were 18,889 total sites in the site database of which 12,012 (64%) were numbered. The majority of 6,817 unnumbered sites (known as alpha sites as they are assigned alpha-numeric numbers) are federal land sites in Chippewa and Superior National Forests from information obtained by the SHPO in the 1990s. Some are also Post-Contact Period sites documented on early historic maps (e.g., Trygg, Andreas), but as of yet unconfirmed in the field by archaeologists. The site database is constantly being corrected so adding this year's figures from the table above to the previous year's totals does not always match current database totals.

If we compare current site totals to previous years, in 1964 there were 1,160 archaeological sites (all numbered, all prehistoric) in the OSA files and in 1983 there were 3,208 (2,999 numbered, some historic). The SHPO files in 1990 had 5,871 sites of which 3,838 were numbered. The current end of CY2014 total of 18,808 in the OSA site database represents a tripling of recorded sites since 1990, some of which is due to the addition of federal inventories (many lacking state numbers) by the SHPO in the mid-1990s.

On average about 300 site inventory forms are submitted to OSA each year, of which about 90% typically represent previously unnumbered sites. The county with the most sites at the

end of CY 2014 is St. Louis with 2,008 (1,224 numbered) sites. The county with the fewest known sites is Mahanomen with 22 (17 numbered), although Dodge County has only 15 numbered sites along with 32 alpha sites for a total of 47.

It is conservatively estimated that less than 1% of the total prehistoric archaeological sites in the state are known and contained in the site database. This estimate is obtained by multiplying 10 groups of people making 10 unique sites per year by 10,000 years, which equals 1,000,000 sites divided by the 10,000 currently numbered sites. If we add potential historical archaeological sites that are currently unnumbered, we could include 200,000 farmsteads and hundreds of thousands of house lots in cities that are over 100 years old.

Intensively investigated sites include sites that have been the subject of university field school excavations or sites subjected to detailed archaeological work for CRM purposes, including both Phase 2 (Evaluation) and Phase 3 (Data Recovery) projects. Intensive investigation means formal units (e.g. 1x1 m) were excavated or other forms of intensive examination (e.g., controlled surface collection) were used at the site. Total intensively investigated sites in 1963 was 170 (15% of the total numbered sites), 440 (14%) in 1983, 491 (8%) in 1990, and 1,690 (9%) at the end of CY 2014 (436 Phase 3; 1,254 Phase 2 only).

There are over 300 Minnesota archaeological sites listed in the National Register of Historic Places (NRHP). Individual site nominations represent 112 of these listings with at least another 200 sites included within 20 archaeological districts. Archaeological sites account for only about 6% of the total NRHP listed historic properties in Minnesota. Perhaps 10 times as many archaeological sites have been considered eligible to the NRHP through consensus determinations for the federal Section 106 process. Two (2) archaeological sites were individually added to the National Register in CY 2014: Indian Mounds Park (21RA10) in Ramsey County and South Pike Bay (21CA38) in Cass County. The Widow Lake Stagecoach Road District was also added, which contains one archaeological site (21CA759).

Minnesota also has a State Register of Historic Places established by the passage of the Historic Sites Act (MS 138.661 - 669) in 1965. There are 28 archaeological sites individually listed in the State Register (MS 138.664) of which 25 have official state site numbers. There are also State Historic Sites (MS 138.662) that are owned or managed by the Minnesota Historical Society of which 17 are archaeological sites (all numbered). State Register sites and State Historic sites are both provided some protection by MS 138.665, which requires state and local agencies to "protect" these properties (and properties listed on the National Register of Historic Places) if they are threatened by undertakings on agency land or by undertakings that agencies fund or license. Because some listed places have multiple sites, there are 63 archeological sites subject to the Historic Sites Act due to listing in MS 138.

### **Burial Site File**

State Archaeologist Christy Hohman-Caine started a separate OSA burial site file in the early 1980s. This file now contains detailed information on burial sites examined by or subject to inquiries by State Archaeologists Hohman-Caine, Dudzik, and Anfinson. It includes both numbered and unnumbered sites. The file also contains some information on unconfirmed

burial sites that have been reported to the State Archaeologist over the last 30 years. These unconfirmed sites have either not been field checked by an archaeologist or field checked but not found. The Burial Site File is not open to the general public as the data are considered *security information* (see MS 13.37) as specified in MS 307.08, Subd. 11.

In the late-1990s, the OSA extracted burial site information from the master archaeological site database and created the separate Burials Site Database. This database does not contain information on all of the unconfirmed sites in the OSA's paper burial site files, only those sites that have OSA-assigned official state site numbers or alpha numbers.

In September 2003, the OSA began making the Burials Site Database partially available to local government agencies on a webpage maintained by the Minnesota Geospatial Information Office (MnGEO). At that time, a letter was sent to all county governments and assigned them a password to access the website. The website provided a graphic interface allowing local governments to determine if a burial site existed within a specific quarter-quarter section of land (40 acres). If a site did exist within the quarter-quarter, the agency could contact the OSA to get more specific information about particular burials. This website was taken down in 2013 when it was discovered that the software provided by DNR could not account for meandered land (i.e., government lots) in legal location descriptions.

As of June 30, 2014 there were 2,938 burial sites listed in the OSA's Burial Sites Database. As of December 31, 2014 there were 2,947 burial sites. This includes about 12,000 burial mounds in over 1,600 discrete sites. Over 350 of the non-mound burials post-date 1837, the beginning of intensive Euro-American settlement in Minnesota. There are 762 known or suspected burial sites that do not have an official site number, although a few of these may be duplicates of numbered sites.

In 2011, a Legacy Amendment-funded initiative for the *Statewide Survey of Historical and Archaeological Sites* compiled a comprehensive list of historic-period cemeteries following an intensive literature search. This study (Vermeer and Terrell 2011) identified 5,876 cemeteries, of which about 2,500 appear to be officially unrecorded and are thus subject to some OSA management consistent with MS 307.08. Only 156 of these cemeteries are in the current OSA Burials database, of which only 111 have official state site numbers. OSA is attempting to determine which sites in this database are subject to OSA authority (i.e., over 50 years old, unrecorded) and to make this database more widely available as it does not contain prehistoric Indian burial sites. It is the only comprehensive cemetery database maintained in the state of Minnesota.

### **Archaeological Report Files**

The OSA maintains a file of archaeological reports. Archaeologists conforming to the requirements of state licensing have submitted most of these reports. The SHPO also maintains an archaeological reports file that mainly includes reports that have been submitted as part of the federal Section 106 process. As not all SHPO-reviewed projects require state archaeological licensing and not all MS 138 licensed projects require SHPO review, the OSA



and SHPO report files are far from identical, although there is significant overlap. Both the OSA and SHPO maintain databases listing reports they have on file.

In FY 2014, 98 reports were added to the OSA files. A total of 104 reports were added in CY 2014. As of the end of December 2014, the OSA had 5,745 reports listed in its Report database.

Since 1998, the OSA has published yearly (calendar) compilations of abstracts of reports submitted to the OSA. They are produced by Bruce Koenen, the OSA research assistant. They can be found on the OSA website (<http://www.osa.admin.state.mn.us/research.html>).

## **Development Plan Review**

Development plan review by the OSA is principally done under three Minnesota statutes:

1) Under MS 138.40, Subd. 3, *agencies* must submit plans to the State Archaeologist and the Minnesota Historical Society (MHS) for review of developments on their lands where archaeological sites are known or scientifically predicted to exist. The State Archaeologist and MHS have 30 days to comment on the plans. Based on a 2006 Minnesota Attorney General opinion obtained by OSA, “agency” refers to all units of government in Minnesota, not just *state* agencies. “Land” means land or water areas owned, leased or otherwise subject to “the paramount right of the state, county, township, or municipality” where archaeological sites are or may be located.

2) MS 116d requires that an Environmental Assessment Worksheet (EAW) be prepared whenever there is a government action (e.g., building permit) that could result in significant environmental effects. If the EAW determines that there is good potential for significant effects, a more detailed Environmental Impact Statement (EIS) is prepared. The state or local agency controlling the action is designated the Responsible Governmental Unit (RGU). The RGU determines if an EAW or EIS is necessary and what actions should be carried out based on an analysis of the documents. Rules (Mn Rules 4410) for implementing the EAW/EIS process are developed by the Environmental Quality Board (EQB) and the EQB monitors EAW/EIS activities. Any citizen can comment as part of this process. Large area, multi-phased projects can be dealt with under an Alternative Urban Areawide Review (AUAR) rather than multiple EAWs. The OSA was added to the official EAW/AUAR/EIS contact list in FY 2007.

3) MS 307.08, Subd. 10, as revised in 2007, requires that state agencies, local governments, and private developers submit development plans to the State Archaeologist when known or suspected human burials may be affected by developments on their lands. Plans must also be sent to the Minnesota Indian Affairs Council (MIAC) if the burials are thought to be Indian. OSA and MIAC have 30 days to review and comment on the plans.

The State Historic Preservation Office (SHPO) at the Minnesota Historical Society (MHS) acts as the principal environmental review agency for the state with regard to assessing the impacts of development projects on historic properties. Historic properties include both standing structures and archaeological sites. While the SHPO's focus is on federal undertakings as specified in Section 106 of the National Historic Preservation Act, the SHPO also acts for the MHS with regard to Minnesota Statutes 138.40, 138.665, and 116d.

Because the SHPO has well-established systems and experienced staff dedicated to environmental review, the OSA has traditionally deferred to the SHPO for commenting on development projects under MS 138.40 and 116d. This allows the OSA to focus on MS 307.08 reviews and other duties.

Due to budget and staff cuts, in May 2004 the SHPO stopped reviewing EAWs submitted by local government RGUs. Thus in FY 2006, the State Archaeologist requested to be added to the EAW official comment list and the Environmental Quality Board (EQB) implemented this in January 2007.

Because the State Archaeologist has many duties and is short-staffed, replies to EAW submittals are sent only if an archaeological survey is recommended or a known archaeological site or burial site should be avoided within the Area of Potential Effect (APE). Furthermore, if the project will be reviewed under federal Section 106 or will otherwise be reviewed by the SHPO (e.g., State Agency RGU), the OSA defers review and comment to the SHPO unless unrecorded burials or sites on non-federal public property are involved.

There are also times when the OSA is simply too busy with more critical duties to review EAW in a timely manner and no comment is issued unless a known site is threatened. This is becoming more common mainly due to the expansion of OSA responsibilities associated with the *Statewide Survey of Historical and Archaeological Sites*.

The State Archaeologist also reviews plans and reports based on informal agency or developer requests, although no official OSA action is required if the development is on private land or does not threaten burial sites. Citizens often ask the State Archaeologist for information regarding potential impacts to archaeological resources by developments in their neighborhoods. This information is provided as necessary. Some of the requests result in field visits by the State Archaeologist.

During FY 2014, the OSA completed substantial review of 99 development projects, most of which were part of the state EAW/AUAR/EIS process. Development projects that were field review by the State Archaeologist in FY 2014 included:

- Bemidji Library project in Beltrami County with regard to impacts to 21BL31;
- County Road 101 bridge project with regard to impacts sites on the north side of the Minnesota River in Carver and Hennepin counties;
- City of Shakopee trail project with regard to impacts to the Samuel Pond House and Shakopee Village site (21SC2) in Scott County;
- McCarthy Beach State Park Side Lake Beach site (21SL274) in St. Louis County with regard to impacts from the relocation of a campground sanitation building;

- Lower Sioux site (21RW11) in Redwood County with regard to county highway reconstruction impacts.

### **Agency Assistance**

One of the principal duties of the State Archaeologist is to assist state agencies with cultural resource management issues. During FY 2014 these duties mainly included attending meetings and site visits associated with DNR State Park developments and MnDOT highway projects. The State Archaeologist serves on four MnDOT Cultural Resource Unit (CRU) Advisory Committees that each have several meetings per year. These committees require considerable background research and report review. The committees are: MnModel 4, Evaluating Railroad Archaeological Sites, Cultural Resource Inventory System (CRIS), and Integrated Databases Pilot Program.

OSA also assists local agencies. OSA staff spend considerable time on email and telephone correspondence aiding cities, counties, and other local agencies with development review and cultural resource management advice. In FY2014, the State Archaeologist assisted:

- the City of Minneapolis with reviewing interpretive plans for the St. Anthony Falls area.
- the Pollution Control Agency (PCA) with cultural resource review guidelines for silica sand mining.
- the US Army Corps of Engineers with developing survey strategies and data recovery plans for the County Road 101 project in Hennepin and Carver counties.

### **Archaeological Research**

**Radiocarbon Dates File and Database** – When the current State Archaeologist was the SHPO Archaeologist, he developed and maintained a database of Minnesota radiometric dates. This database is now maintained at the OSA. The OSA has paper copies of most reports and most laboratory reporting sheets for radiocarbon dates (also known as <sup>14</sup>C dates) from Minnesota archaeological sites. Seven (7) dates from seven sites were added in 2014. All of these dates were associated with dugout canoes previously found in Minnesota and dated by Maritime Heritage Minnesota using an MHS Arts and Cultural Heritage Fund grant.

The database currently contains 572 dates from 164 sites. The best-dated site in the state is the Late Prehistoric Bryan site (21GD4) at Red Wing with 26 dates. Other sites with reported dates in double digits are: Hannaford (21KC25) with 23, McKinsty (21KC2) with 21, Smith (21KC3) with 15, 21ML81 with 14, Donarski (21MA33) with 12, and Mooney (21NR29) and J Squared (21RW53) each with 10. Fifty-five (55) sites have only a single date. The oldest reasonably accurate date from a Minnesota archaeological site is 10,390 RCYBP  $\pm$  120 from the J Squared site (21RW53), followed by 9220 RCYBP  $\pm$  75 from Bradbury Brook (21ML42), and 9049 RCYBP  $\pm$  82 from Browns Valley (21TR5).

The OSA encourages archaeologists who have obtained radiocarbon dates to submit their laboratory reporting sheets and associated reports to the OSA so all researchers can share in this critical information. Laboratory sheets for radiocarbon dates should always be included in final reports when contractors or agencies obtain dates from archaeological sites as part of the environmental review process or research-driven archaeology.

**Institutional Field Research** - Initially, colleges, universities, and museums were principally responsible for archaeological fieldwork in Minnesota. This began to change in the 1970s with the rapid ascent of government-mandated cultural resource management (CRM) archaeology. This resulted in dramatic shifts in funding and employment from educational institutions to government agencies and private contractors. Universities remain the principal training institutions for archaeologists and principal producers of research-oriented archaeology.

There are five university-based archaeological programs in Minnesota affiliated with majors in Anthropology. These are at the University of Minnesota – Minneapolis, Hamline University, Minnesota State University - Moorhead, St. Cloud State University, and Minnesota State University - Mankato. The University of Minnesota-Duluth has no full-time archaeological faculty, but occasionally offers field schools in association with Superior National Forest or private contractors. Normandale Community College also offers courses in archaeology with some fieldwork. The University of Minnesota, St. Cloud, and Mankato offer graduate programs in archaeology, with only the University of Minnesota-Minneapolis offering a PhD track in archaeology.

In CY 2014, the following university-based field research was undertaken in Minnesota:

*University of Minnesota – Minneapolis*  
- no Minnesota field school in CY 2014

*Minnesota State University - Moorhead (George Holley, Ranita Dalan)*  
- testing at MHS Comstock House (21CY78) in Moorhead

*St. Cloud State University (Rob Mann)*  
- excavations at the Little Elk Mission site (21MO38) in Morrison County

*Minnesota State University – Mankato (Ron Schirmer)*  
- no Minnesota field school in CY 2014, but some student work on Le Sueur County survey

*Hamline University (Brian Hoffman)*  
- no Minnesota field school, but some student work near the Jeffers Petroglyph site (21CO3) in Cottonwood County

The State Archaeologist visited the St. Cloud State University excavation at 21MO38 in Morrison County on 6/12/14.



**St. Cloud State University students water-screening at 21MO38.**

**Other Research** - A significant amount of archaeology is done in Minnesota each year that is not reviewed by the OSA, licensed by the OSA, or sponsored by the OSA. These projects are either reviewed by federal agencies and the SHPO under Section 106 of the National Historic Preservation Act or are privately-funded development projects on private land. The OSA occasionally receives complementary copies of reports on these projects or is asked for advice on the projects. The OSA is not aware of any major Minnesota private development excavations or excavations on federal land in FY 2014, although the examination of the Knife Lake quarries in Superior National Forest continues by a number of institutions.

David Mather, the SHPO archaeologist, and Jim Cummings, a DNR archaeologist/naturalist for Mille Lacs Kathio State Park, continued their research at the Petaga Point site (21ML11) for Kathio Archaeology Day. In FY2014, they excavated another 1x1 meter unit.

### **Archaeological Site Preservation**

The State Archaeologist is the state official charged with promoting archaeological site preservation on both public and private lands. This is accomplished in multiple ways:

- reviewing development plans to identify possible threats;
- proactively attempting to locate new sites through surveys;



- working with the public to help identify known, but unrecorded sites;
- monitoring the current condition of important known sites for impacts.

The State Archaeologist attempts to look at known or reported archaeological sites if they are conveniently located near other fieldwork. He photographs the sites and notes any changes in condition since the last archaeologist's visit. In FY 2014, he examined a historic sawmill complex on Shingle Creek in north Minneapolis and a number of historic properties on Park Point in Duluth, including the shipwreck site of the *USS Essex* and the historic Minnesota Point Lighthouse ruin.

OSA is contacted by many individuals each year who have collected what they believe to be archaeological artifacts. In some cases, the artifacts are just interesting rocks, but in others the artifacts prove to be of cultural origin. The "real" artifacts assist OSA in identifying previously unknown sites. Bruce Koenen is the OSA's point person for dealing with artifacts collectors. His expertise in stone tool analysis and wide experience is essential in making honest yet sensitive replies to requests to identify artifacts. While OSA discourages uncontrolled artifact collecting on private lands and will not place a monetary value on artifacts, working with avocation archaeologists is critical to archaeological research and site protection.

Proactively attempting to locate previously unrecorded sites has been greatly aided by the initiation and continuation of the *Statewide Survey of Historical and Archaeological Sites*. Since 2009, the Statewide Survey has done county-wide surveys in Swift, Olmsted, Red Lake, Steele, McLeod, Le Sueur, and Hennepin counties as well as examining the area along the North Shore in Cook, Lake, and St. Louis counties. Specialty surveys have been done to locate historic dams, CCC camps, burial mounds, historic cemeteries, Dakota Indian sacred sites, masonry ruins, and sites associated with specific prehistoric cultural traditions such as Paleoindian, Woodland, and Plains Village. Surveys are underway attempting to determine site locations of prehistoric cultural traditions in the Minnesota River Valley and to identify historically-significant cultural landscapes in Minneapolis neighborhood parks.

## Public Education

**Archaeology Week** - The first Minnesota Archaeology Week was held in 1995. The OSA has served as the organizer and major sponsor of Archaeology Week since 1998. OSA responsibilities include funding, compiling a Calendar of Events, producing a poster, arranging for the Elden Johnson Distinguished Lecturer, and general promotion. Prior to 2012, Archaeology Week had always been held in the spring of the year, but in 2012 it was decided to hold the event in the fall as it was more compatible with both secondary and post-secondary school seasons.

Archaeology Week in FY 2014 was held September 14-22, 2013. There were 15 events in 10 counties. Dr. Ron Schirmer of Minnesota State University – Mankato presented the 18<sup>th</sup> annual Elden Johnson Distinguished Lecture, entitled "Sixty Years of Red Wing Archaeology." Estimated attendance at all events was 2,020. The CY 2013 (FY 2014)

Archaeology Week poster was titled *A Story in Stone* and describes how prehistoric stone tools are made and interpreted. The CY 2014 Archaeology Week poster was entitled *A Story in Bone*, describing cultural uses and archaeological analysis of animal bone.

**Presentations and Meetings** – During FY 2014, the State Archaeologist made the following professional appearances:

- interviewed by student archaeologists at the Science Museum of Minnesota on September 13, 2013;
- presentation on the use of LiDAR to find burial mounds at the National Tribes and Transportation Conference at Mystic Lake Casino on October 30, 2013;
- presentation on Minnesota archaeology at the Department of Health *Slice of Autumn* festival on October 10, 2013;
- illustrated talk on Minnesota archaeology at the University of Minnesota *Tuesday with a Scholar* forum at the Edina Public Library on February 11, 2014;
- talk on mapping cemeteries at the International Right of Way Association meeting in Maple Grove on March 26, 2014.
- attended the Gales of November shipwreck meetings in Duluth November 1-2, 2013.

OSA assistant Bruce Koenen made the following FY 2014 appearances:

- participated in Archaeology Day at Kathio State Park on 9/28/13;
- attended the Owatonna Artifact Show on 3/22/14;
- attended the Pine City Knap-In on June 27, 2014;
- attended the Minnesota Archaeological Society Annual Meeting on 4/18/2014;
- attended a workshop on Upper Midwest Lithic Raw Material at the University of Wisconsin – La Crosse on February 28-29, 2014;
- organized a Paleoindian Odyssey review event at Ft. Snelling on March 20, 2014;
- organized a meeting of historical archaeologists at Ft. Snelling on 1/23/14.

**OSA Archaeology in Schools and Communities** – Assistant to the State Archaeologist Bruce Koenen has assembled a teaching kit of artifacts that he takes with him on school visits. In FY 2014, he put on three flint-knapping workshops at Normandale Community College on 12/6/13, 4/28/14 and 5/2/14. He also gave Hamline University and St. Cloud State University archaeology students tours of the OSA office. Scott Anfinson gave presentations on Minnesota archaeology at Professor Steven Hahn's American Indian History class at St. Olaf College on April 4, 2014 and a presentation on the Minneapolis riverfront at St. Dominic's School in Northfield on May 9, 2014.

The State Archaeologist continues to serve as an Instructor in the University of Minnesota Department of Anthropology. In FY 2014, he taught one course on Heritage Management. He also serves on a number of graduate student committees both in the Anthropology Department and the Architecture Department at the University of Minnesota.

**Internships** – The OSA sponsors unpaid internships to not only train students of archaeology in practical skills, but to accomplish needed work within the office. In FY 2014, the OSA had one intern – Justin Harvey, a graduate student at St. Cloud State University.

**Boards and Committees** – The State Archaeologist serves on a number educational boards and committees. In FY2014, he:

- served on the University of Minnesota Heritage Education Collaborative;
- served on the Society for American Archaeology (SAA) Public Education Committee;
- served on the Oversight Board for the Legacy Amendment-funded *Statewide Survey of Historical and Archaeological Sites*.

Bruce Koenen serves on the advisory board for the Cultural Resource Management Master's Degree program at St. Cloud State University.

**Media Exposure** - The State Archaeologist typically receives a certain amount of media exposure every year not only due to the controversial nature of some of the duties, but because the public has an intensive interest in archaeology and history. Most media contacts with the State Archaeologist are due either to media reaction to a newsworthy event or are generated by the media due to a perceived public interest. In many cases, the State Archaeologist simply provides background information, but in some cases he is formally interviewed and becomes part of the story. Major media exposure for the State Archaeologist in FY2014 included an interview on the winter excavations at site 21CR155 that appeared in *Minneapolis Star Tribune* on 1/9/14.

**Professional Development and Memberships** – Due to the on-going state agency freeze on out-of-state travel and a tight budget, the State Archaeologist has had limited access to major professional conferences for the last several. The Department of Administration granted special permission for the State Archaeologist to attend the Society for American Archaeology Conference and National Association of State Archaeologists Annual Meeting in Austin, Texas April 21-27, 2014.

The State Archaeologist is a member of the National Association of State Archaeologists (NASA), the Plains Anthropology Conference, the Midwest Archaeological Conference, the Minnesota Archaeological Society, and the Society for American Archaeology.

## **Burial Sites Protection**

A major aspect of the day-to-day work of the OSA is spent dealing with the duties assigned to the State Archaeologist by the Private Cemeteries Act (MS 307.08). These duties principally involve:

- maintaining a file of unrecorded burial site locations;
- answering public and agency inquiries about known or suspected burial sites;
- coordination with the Minnesota Indian Affairs Council (MIAC)
- formally determining the presence or absence of burial grounds through field work in particular areas (i.e., authentication);
- reviewing development plans submitted by agencies and developers;

- advising agencies and landowners on legal and management requirements for unrecorded burial grounds.

In 1985, State Archaeologist Hohman-Caine and MIAC developed formal burial ground management procedures for Indian burials. These procedures were revised several times, but had not been revised after a major change in the MS 307 legislation occurred in 1993. The 1993 change involved only the addition of one word, “grounds”, in 308.07, Subd. 2, but it had major implications for authentication, management, and enforcement. It is now a felony to willfully disturb a “burial *ground*” not just a burial.

This requires that the State Archaeologist define burial ground limits during the authentication process. All land within those limits must be properly treated. Human remains within the burial grounds do not have to be directly disturbed to represent a violation of the law. Emphasis is on all activities within the burial ground that could be construed as a disturbance.

In FY 2008, after careful agency consultation, the OSA issued new burial site procedures that addressed all recent revisions of MS 307.08, including the 2007 revisions. The major differences between the new procedures and the ones developed by State Archaeologist Hohman-Caine in the 1980s are that the new procedures apply only to the OSA and not to other “appropriate authorities” including MIAC and the procedures include both Indian and non-Indian burials. This is consistent with the MS 307.08 revisions signed into law in 2007, which further separated the duties of the State Archaeologist and the MIAC and gave the MIAC the principal responsibility for managing Indian cemeteries once the State Archaeologist had authenticated them. The procedures are available on the OSA webpage.

#### **Coordination with Northern Bedrock Preservation Corps for Cemetery Preservation**

At a House Legacy Committee meeting on March 19, 2014, the State Archaeologist heard testimony from the Northern Bedrock Preservation Corp presented by Meghan Elliot, a financial advisor to the group. Northern Bedrock was founded in 2011 to provide work experience and education in hands-on historic preservation. Based on Elliot’s testimony, the State Archaeologist recognized an opportunity to promote historic cemetery preservation and maintenance.

The State Archaeologist met with Elliot on April 21, 2014 to discuss possible cooperative ventures. On July 14, 2014 he met with Rolf Hagburg of Northern Bedrock and David Grabitske of the State Historic Preservation Office (SHPO) to further investigate opportunities in cemetery preservation. The State Archaeologist provided Northern Bedrock with several possible projects to begin the work. Northern Bedrock has since completed a number of historic cemetery restorations, including the Sherwood Cemetery near Rushford, discussed later in this report.

**MS 307.08 FY 2014 Activities** - The OSA took action on 14 major burial cases in FY 2014. "Major" is defined as a case where substantial OSA review is required as indicated by the need for fieldwork, extensive research, and/or official correspondence. Not all major cases result in formal authentication as defined in MS 307.08. Formal authentication involves either proving to a reasonable degree there is a burial in a particular location or proving to a reasonable degree there is not. When a burial ground or portion of a burial ground is found, mapped, an affiliation determined, and an official finding transmitted to the landowner, it is considered to be "authenticated." There is no standard term for a negative authentication finding.

The OSA typically receives multiple emails and telephone inquiries every week relating to possible burial grounds, but most of these can be dealt with quickly through fact checking and without the need for fieldwork. These "minor" cases do not individually cause a significant expenditure of OSA time or resources, although minor cases as a whole coupled with the major cases take a considerable expenditure of personnel time. Burial site protection activities account for about one-third of the workload of the OSA.

Of the 14 major burial cases in FY 2014, all involved some OSA fieldwork and four resulted in formal authentication. Authentication involves four steps:

- 1) determining if the site is indeed a burial ground;
- 2) defining the limits of verified burial ground;
- 3) attempting to determine ethnic identity;
- 4) sending official correspondence with an authentication conclusion to the landowner as well as appropriate local officials and MIAC in the case of Indian burials.

All FY 2014 major cases are discussed below. Two (2) of the cases resulted in the discovery of previously unrecorded burial sites. Eleven (11) of the sites involved Indian burials and three (3) involved non-Indian burials.

The State Archaeologist makes an effort to re-check in the field known burial sites or look for reported but unthreatened burial sites when it is convenient (i.e., if they are in the vicinity of other projects being field reviewed). The known sites are usually sites that were originally documented in the distant past or sites that have been involved with recent authentication or reviewed development projects.

In FY 2014, the State Archaeologist field examined 22 known burial sites that did not require immediate OSA action. These sites are: 21AK63, 21BL22, 21BL\_\_ (Beltrami Poor Farm Cemetery), 21BN7, 21CP64, 21DK\_\_ (Hastings Pioneer Park/Stowell Cemetery), 21HE3, 21HE27, 21HE28, 21HE59, 21HE60, 21HE61, 21HE65, 21HE265, 21HE89, 21HE393, 21NL8, 21PN3, 21RW11, 21RC\_\_ (Dundas Episcopal Cemetery), and 21SN3. Five additional locations were field checked for reported burials, but all of locations proved negative. Two of the locations were in Hennepin County and the other three were in Beltrami, Sibley, and Waseca counties. All of these sites and locations were photo-documented.

## MS 307.08 Major OSA Actions – FY 2014

### **Malmo Mound Site (21AK1) – Campground Development, Aitkin County**

The Malmo Mounds (21AK1) were first mapped by Warren Upham of the Minnesota Geological Survey in 1893; his map of 18 mounds and account appear in Winchell (1899, 1911). Jacob Brower mapped the mounds in more detail in May 1899, noting 127 earthworks. Brower dug into three of mounds. In 1900 he published his map and excavation results in his volume entitled *Mille Lacs*. The University of Minnesota (Gordon Ekholm) excavated 13 mounds at the Malmo site in 1936 that were going to be impacted by road construction.

The University (Gary Hume) returned to the site in 1962 to re-map the mounds and test the habitation area. The mapping was hampered by rain and heavy brush so only 64 mounds were mapped. A detailed map of the site was made by Minnesota Historical Society archaeologists Doug Birk and Doug George in 1971, who noted 72 earthworks. The Malmo Mound and Village site was listed in the National Register of Historic Places in 1975.

On 6/23/14, a DNR conservation officer at a Lake Mille Lacs boat access was told by a local resident that some burial mounds near the northeast shore of the lake may be threatened by a possible development. The conservation officer called the State Archaeologist to report this conversation and provided a location, but said no work was currently underway. The State Archaeologist visited the area on 6/25/14 and found a bulldozer working within the Malmo Mound Group. He immediately stopped all construction, contacted the land owner (who runs a nearby resort), and informed MIAC by telephone. The landowner said she was unaware of the mound group and was building a campground.

The State Archaeologist walked the disturbed surface noting prehistoric lithic debris but no bone. He photographed the area of disturbance and made a sketch showing bulldozer impacts using the 1971 MHS map. The 2014 bulldozing appears to have impacted three mounds towards the northwest edge of the group.

OSA assistant Bruce Koenen visited the site the following day (6/26/14) to make a detailed map of the surviving mounds, once again using the 1971 MHS base map. No survey was done on the west side of the highway. Koenen documented 57 mounds, noting a mound in the middle of the group not shown on the 1971 MHS map. An official burial authentication letter was issued on 7/23/14. This site will be discussed in more detail in the 2015 Annual Report.



**Bulldozer resting on mound at Malmo site (21AK1)**



### **21AK6 – Landowner Request for Authentication Review, Aitkin County**

In late July 2012, a resident from Big Sandy Lake in Aitkin County called about a “For Sale” sign on a property that she thought contained burial mounds. An OSA file search determined that the property was near 21AK6, a known mound site. The realtor representing the landowner was contacted and told that an OSA field survey would be completed to determine if the subject property indeed contained burial mounds.

Site 21AK6 had originally been reported by amateur archaeologist Jacob Brower in 1893, although no sketch map or exact location was available in OSA files. Archaeologist Lloyd Wilford of the University of Minnesota visited the site in 1940, confirming five mounds at the location, but did not map the site. In 1977, a survey of Big Sandy Lake undertaken by the Science Museum of Minnesota for the Army Corps of Engineers, produced a rough sketch of the five mounds. There was no evidence in the OSA files that any archaeologist had visited the site since 1977.

On 11/1/12, the State Archaeologists visited site. He made a detailed map using both compass-and-tape and GPS methods. A possible sixth mound was noted at the edge of one of the previously known large mounds. On 11/7/12, the State Archaeologist sent an official authentication letter to the realtor with copies to MIAC and the Aitkin County Planning and Zoning Department. The letter confirmed the presence of the mounds, established a 20-foot perimeter around the outer edges of the mound group. It noted that any disturbances within the boundary had to be approved by MIAC. The letter also required that the seller must notify any prospective buyer about the mounds and the disturbance restrictions.

In May 2014, the landowner requested that OSA re-examine the southernmost mound mapped in 2013, as he thought it was a pile of fill that his father had placed there during the construction of their cabin. His purpose was to reduce the limits of the mound site so it would be easier to sell and develop the lot. OSA personnel went to the site on 5/14/14 and cored the mound feature with a 1-inch hand-pushed soil corer. It was clear from the soil profile that the earthen mound was not a recent feature. The State Archaeologist declined to reduce the authenticated site limits established in 2013.

### **21AN2 – Effect of Adjacent Development, Anoka County**

In June 1883, T.H. Lewis mapped 12 mounds in the City of Centerville in Anoka County. Lloyd Wilford of the University of Minnesota visited the mound group several times in the 1940s, noting that the mounds had been significantly impacted by people digging into them and by plowing. Only the largest mound was still visible. A visit by Minnesota Historical Society archaeologists in 1977 confirmed that only one mound was still visible. Surface collection in 1977 suggested a multi-component village site also was present.

In October 2000, OSA personnel Mark Dudzik and Bruce Koenen assisted by a professional surveyor reestablished the mound locations using the still-visible Mound 1 as a benchmark. This was part of the review of a proposed housing development. Archaeologists from the Mississippi Valley Archaeological Center (MVAC) then used soil probes and shovel testing

to try relocate remnants of Mound 2, but no definitive remnants could be discerned. A belly-scarper was then used to remove the topsoil from the areas mounds 3-12 to be disturbed by the proposed housing development. No definitive soil features were located associated with mounds 3-12 at 21AN2 so the project was allowed to proceed as long as Mound 1 and the Mound 2 location were avoided. A request by the developer to re-assess the Mound 2 located was done by OSA in August 2001. Mechanical excavation found no burials pits or human remains so the Mound 2 location was also cleared.

In December 2013, archaeologists with Bolton and Menk contacted the State Archaeologist with regard to proposed improvements to an Anoka County Parks Maintenance Facility within the limits of 21AN2. The improvements included parking lot expansion and underground utility trenching. The State Archaeologist required that all disturbances be kept at least 20 feet from Mound 1 and that the area of disturbance within the habitation site be tested to evaluate integrity. The testing found the project area to be extensively disturbed so no mitigation excavation was deemed necessary. The State Archaeologist visited the site on 5/13/14 to inspect the area and to take pre-construction photos.

#### **21AN183 – Burial Authentication for a Housing Development, Anoka County**

In March 2014, the OSA was contacted by the City Planner for Andover about a new housing development that may affect a possible burial mound. The location had not previously been visited by archaeologists, but Winchell (1911:286) reported a possible mound in that location as reported to him by an early resident. LiDAR analysis by OSA suggested that two large mounds might exist in the vicinity. The State Archaeologist told the Andover City Planner that no disturbances were permitted with 20 feet of the mound and that OSA would officially authenticate the mound in the spring.

On April 23, 2014, OSA's Bruce Koenen visited the development location and confirmed the presence of large mound approximately 75 feet in diameter and 4 feet high. Koenen took a GPS reading from the mound center. The mound area had been recently cleared of woody vegetation, but no stump grubbing had been done on the mound or within the 20 foot buffer. The State Archaeologist notified the Andover City Planner and the developer of the confirmed mound presence and reemphasized no disturbances could take place within 20 feet of the mound edge.

The State Archaeologist visited the site on 5/13/14 to photograph the mound and to examine a nearby wooded location where LiDAR suggested a similar-sized mound existed. The second mound was confirmed in a wooded area to the east, but it was outside the project area. The two mounds have been combined into a single archaeological site and assigned the number 21AN183. At the developer's request, the State Archaeologist returned to the site on 6/18/14 to meet with him and mark the 20-foot boundary with pin flags. An official authentication letter was sent to the developer on 6/23/14 with copies to MIAC and the City of Andover, providing a sketch map showing the mound and the 20 foot buffer.



### **21BL22 – Proposed Construction in Bemidji Library Park, Beltrami County**

In May 1895, Theodore Lewis examined a habitation area in Bemidji that he said extended on both sides of the Mississippi River where it entered Lake Bemidji. Jacob Brower looked at the same area in July 1899, noting prehistoric village materials on the west side of Lake Bemidji extending from the Mississippi River outlet to Diamond Point. Brower mapped four mounds in the southern half of the village area.

Two numbered archaeological site have been defined that encompass the Lewis and Brower sites: 21BL22 is limited to the area immediately adjacent to the north side of the Mississippi River between lakes Irving and Bemidji and containing the southernmost two mounds, while 21BL31 contains the entire area of Brower's village site and all four of his mounds. Thus 21BL22 is within 21BL31 as presently defined.

In 1934, construction on Lake Avenue near the foot of 9<sup>th</sup> Street uncovered skeletal remains that probably were related to Brower's northernmost mound. In 1975, Alan Brew of Bemidji State University excavated a 1x1 m unit at the foot of 6<sup>th</sup> Street as part of a review of telephone cable trenching. Brew recovered prehistoric village materials, but no human remains.

In April, 2013, the City of Bemidji contacted the State Archaeologist about plans to move the Carnegie Library, which was at the foot of 5<sup>th</sup> Street within the limits of 21BL31, but considerably north of 21BL22. The State Archaeologist replied that an archaeological survey would be necessary under both MS 307 and MS 138. The City then hired The 106 Group to do the survey. In August 2013, The 106 Group contacted OSA about the survey, also noting proposed trail work and the relocation of the Paul Bunyan statue near the library. OSA encouraged The 106 group to coordinate with MIAC due to the presence of possible Indian burials in the vicinity.

Archaeological survey in September 2013 recovered modest amounts of prehistoric village artifacts, but no human burial remains or features were encountered. Mitigation excavations by The 106 Group in October 2013 recovered additional but once again modest amounts of village materials. The State Archaeologist visited the location on 9/11/13. The projects were approved to proceed by the State Archaeologist on May 15, 2014.

### **21CH1 – Assessing the Impact of Proposed Highway Construction, Chisago County**

In November 1885, T.H. Lewis mapped 10 mounds on the northeast side of Green Lake in Chisago County within the city of Chisago. When Lloyd Wilford of the University of Minnesota visited the site in September 1944, only one mound was still visible. The rest had apparently been destroyed by residential development and roadwork. A site visit by the MHS Statewide Archaeological Survey in 1978 could find no visible mounds.

In March 2014, MnDOT contacted OSA about the planned upgrade of Chisago CSAH 24 along the east edge of the 21CH1 mound site. The State Archaeologist did a LiDAR analysis of the location and could find no obvious mounds. He visited the location on 5/13/14 and walked over the entire original site area. No mounds were apparent and the mound locations

were now embedded within a residential development. Based on the Lewis notes, it was clear that all but one of the mounds were originally along the bluff edge, well west of the road. Lewis had noted one small mound (Mound 10) that had already been largely destroyed by a road that is now CSAH 24/Old Towne Road. The State Archaeologist notified MnDOT that the CSAH 24 project could proceed as planned, but the contractor should be alerted about the potential to encounter artifacts and human remains and all work should immediately cease if such should occur.

#### **21CL\_\_ - Construction at the Church of Mary and Joseph, Carlton County**

In mid-September 2013, a representative of Fond du Lac Ojibwe Reservation called the State Archaeologist to discuss construction by the Church of Mary and Joseph near Cloquet that may impact burials originally disturbed by church construction in 1962. Apparently several graves were encountered in 1962, but were left in place beneath the front steps of the church. In 2013, the church was proposing to replace the steps with a ramp.

The State Archaeologist called the priest at the Church of Mary and Joseph to discuss the project. The priest said they would take care not disturb any burials and coordinate the construction with Fond du Lac Reservation. This information was forwarded to MIAC. After consulting with Fond du Lac Reservation, the State Archaeologist approved the project on September 17, 2013 and requested that digital photographs of the construction process be sent to the State Archaeologist. The church did this. The location was field checked and photographed by the State Archeologist on 10/13/13.

#### **21FL\_\_ - Reactivation of Oakwood - Sherwood Cemetery, Fillmore County**

In September 2013, the State Archaeologist was contacted by a resident of Rushford asking about re-activating an abandoned cemetery just southeast of town. He was also contacted by an adjacent landowner asking that the cemetery not be re-activated. The cemetery in question is known as Oakwood Cemetery and also as Sherwood Cemetery.

The cemetery was established by Charles Sherwood as a private cemetery in 1870. Sherwood came to Fillmore County from Connecticut in 1855. He was elected to the Minnesota House of Representatives and in 1863 was elected Speaker of the House. He served as Lieutenant Governor of Minnesota in 1864-66. In 1878, Sherwood moved to Tennessee where he founded the town of Sherwood. He kept ownership of the cemetery after he moved from Minnesota. There are only three marked burials in Oakwood-Sherwood: a child names Hayes (1871), Elizabeth Sherwood (1873), and C.M. Ferris (1865). Only two markers are clearly visible, but additional unmarked graves may exist.

In 2012, several local residents founded the Oakwood Cemetery Association and filed Articles of Incorporation for the cemetery. Although the cemetery has been abandoned for over 100 years, cemeteries are not taxable, so the land does not become tax forfeit, and there is no identified private owner. However, Minnesota Statutes 365.28 states:

*PUBLIC BURIAL GROUND IS TOWN'S AFTER TEN YEARS. A tract of land in a town becomes town property after it has been used as a public burial ground for ten years if the tract is not owned by a cemetery association. The town board shall control the burial ground as it controls other town cemeteries. A town that has accepted responsibility for an abandoned cemetery may prohibit further burials in the abandoned cemetery, and may cease all acceptance of responsibility for new burials.*



**Marker in abandoned Oakwood - Sherwood Cemetery**

The State Archaeologist visited the cemetery on 10/1/13 and photographed the area. The cemetery was still unmaintained, but two markers were clearly visible. The State Archaeologist also went to the Fillmore County

Recorder's Office in Preston to do some basic deed research. This research determined that the cemetery was officially recorded and thus the State Archaeologist does not have any management responsibilities under MS 307.08. The State Archaeologist did contact the Northern Bedrock Conservation Corps and they sent a crew to clean up the cemetery in October 2014. For their newsletter story see:

<http://www.northernbedrockconservationcorps.org/2014/11/northern-bedrocks-first-crew-week-3-oakwood-sherwood-cemetery/>

#### **21GD17 – Burial Authentication for Building Expansion, Goodhue County**

The Silvernale Mound site (21GD17) was the largest mound group in Minnesota, originally containing over 300 mounds and perhaps as many as 500 if we add the immediately adjacent site to the south (21GD22). The Silvernale Mounds were first mapped by T.H. Lewis in April 1885. Lewis mapped 226 discrete mounds and noted 50-60 in a cornfield he didn't map. He noted that many other mounds had been obliterated by cultivation.

The Red Wing Industrial Park was developed on the site beginning in the 1960s. Over the last 50 years, industrial park developments have further impacted the mound site. During this time, there have been numerous requests to the State Archaeologist for authentication activities. A survey sponsored by the State Archaeologist in 1988 could only find nine mounds still visible, but soil coring by Grant Goltz (Soils Consulting) on several projects in the mid-1990s suggested subsurface burial pits and mound fill still survived in a few areas where no mounds were surficially visible.

Analysis of aerial photographs by archaeologist Clark Dobbs in 1991 suggested that the imprecise mapping methods used by Lewis made it difficult to accurately overlay a Lewis-generated mound map on the present topography. More recently, LiDAR analysis of the site suggested that as many as 21 mounds may survive, most at the western edge of the site.

In February 2013, an architect based in Rochester contacted the State Archaeologist about a proposed expansion of the Capital Safety facility in the Red Wing Industrial Park. The current building is within the southeastern limits of the Silvernale Mound group. After consulting the various previous mound reconstructions and completing a new reconstruction based on LiDAR, the State Archaeologist determined that several mounds once existed near the west end of the proposed Capital Safety expansion.

On May 22, 2013, the State Archaeologist made a preliminary visit to the location and noted that a new trail had been built west of the Capital Safety Building in an area that once contained mounds; this trail had not been submitted for OSA review. No mounds were clearly visible within the proposed new building footprint or parking lot area. Archaeological monitoring by Ron Schirmer of Minnesota State University - Mankato (MSU-M) in conjunction with new construction at the Proact site immediately to the north suggested that burial pits and habitation site material could survive below the plow zone and other surface disturbances.

On May 30, 2013 OSA personnel excavated three shovel tests in the proposed parking area to make a preliminary assessment as to the extent of soil disturbance and filling. What appeared to be intact soils existed towards the west end of the area. Ron Schirmer was contacted for assistance as he was planning an MSU-M field school near Red Wing and he was known to have a great interest in the Silvernale site. Schirmer agreed to bring his field crew to the site for several days to undertake more extensive shovel testing of the proposed construction area. Capital Safety agreed to this testing.

Schirmer's field school examined the proposed construction area June 6 through June 21, 2013, concentrating on the building footprint. A total of 392 shovel tests were excavated. Only 16 prehistoric artifacts were recovered, consisting of grit-tempered pottery sherds, lithic waste flakes, a shaft abrader, a triangular projectile point, and a hammer stone. Many of the shovel tests had partially intact soils within a plowzone followed by a sub-soil (B) horizon. Schirmer noted a possible mound remnant (Lewis Mound 115?) in an area west of the proposed construction area. While no clear mound remnants or pits were discovered within the proposed construction area, the presence of partially intact natural soils suggested such could survive.

Based on the results of the MSU-M field school, the State Archaeologist encouraged Capital Safety officials to hire a qualified geoarchaeologist to extensively core the western construction area in order to analyze the soils to better assess the probability of burial feature survival. Capital Safety subsequently hired Mike Kolb of Strata Morph Geoexploration. Kolb conducted his work in November 2013. His final report is dated December 2013.

Based on the Kolb investigation, the State Archaeologist allowed construction of the building addition to proceed as the area was not only extensively disturbed, but was outside the limits of the Lewis-mapped mounds. The State Archaeologist asked for re-design of the parking lot and adjacent water control structure to avoid the southwestern project area where some intact soils were present and map analysis indicated the approximate original location of Mound 118. The State Archaeologist also required that all construction be monitored by a qualified archaeologist and the western edge of the project area be fenced off to avoid impacts to the sensitive area.

Capital Safety completed the redesign in the spring of 2014, avoiding most of the southwest area. They contacted Ron Schirmer to do the construction monitoring. Construction on the building began in July 2014. Additional OSA recommendations and archaeological work was done at 21GD17 in FY 15. This will be summarized in next year's annual report, but it can be stated that no burial features or remains were impacted by the eventual construction of the parking lot and water control structure.

#### **21GR53 – Boerner Family Cemetery Destruction, Grant County**

In late November 2012, a member of the Boerner family contacted the State Archaeologist about the destruction of a German Pioneer cemetery in Grant County near Herman. A local farmer had bulldozed the cemetery and then plowed it up because it was in the middle of his field. A basic literature search utilizing aerial photographs and family photographs supplied by the Boerner family confirmed the presence of the cemetery in the recently disturbed location. The State Archaeologist contacted the Grant County Sheriff's Department and they confirmed they were investigating the farmer's actions as a violation of Minnesota Statutes 307.

The State Archaeologist visited the location on 11/20/12 confirming the cemetery destruction and photographed the area. The Grant County Sheriff discovered that the farmer had hired a heavy equipment operator to cut down the trees in the cemetery, knock down the headstones, excavate a large pit, and deposit the headstones in the pit. The pit was then backfilled and the entire area plowed. After discovering the cemetery destruction and consulting with the Boerner family, the sheriff required that the pit be excavated and the headstones retrieved. A surface walkover by members of the sheriff's department in late 2012 recovered a number of bones, which the State Archaeologist identified as non-human.

The Grant County Sheriff and the Boerner family requested that OSA help with a thorough surface examination of the area to determine if any human remains had been disturbed, as well as re-establishing the original cemetery boundaries and attempt to relocate actual grave locations within the cemetery. OSA staff returned to the site on May 2, 2013. They were met by sheriff's department personnel and a member of the Boerner family. The sheriff had re-erected one of the damaged headstones in the approximate area of the cemetery.

Using aerial photographs, OSA staff were able to determine the UTM coordinates of the cemetery corners and these points were then located in the field using a sub-meter GPS unit. A careful surface reconnaissance of the area recovered additional fragments of headstones



and a human phalange. An attempt was made with hand-pushed soil cores to determine grave locations within the boundaries, but the heavy soil prevented the coring tool from penetrating deeply.

Options for cemetery restoration were discussed with the Boerner family representative and the sheriff. All agreed the cemetery should be re-established, the headstones re-erected, and trees planted. The main difficulty was returning the headstones to their original locations above individual graves. This would be a very difficult task without actually excavating the area. The easiest way to find the graves would be to use heavy equipment to strip off the topsoil, but this was also very intrusive. The least intrusive option would be to use mechanical soil coring and/or remote sensing to attempt to find individual graves, but this would require an expensive outside contractor and could not guarantee success. The third option was to have archaeologists hand-excavate narrow trenches across the site. The Boerner family representative preferred the third option.

In June 2013, the Boerner family contacted Rebecca Dean, an archaeologist at the University of Minnesota – Morris (UMM). Professor Dean agreed to assist the family with her archaeological field school in the fall of 2013. The UMM crew performed work at the site on October 28-29 and November 2-3, 2013. Three trenches were excavated in the southeastern part of site in an attempt to relocate original grave shafts. Two grave shafts were discovered. Additional excavations at the site are planned by Dr. Dean in the fall of 2014. The OSA is continuing to assist the Boerner family and Grant County with establishment of permanent boundaries for the cemetery.

#### **21HE20 – Authentication Request in Eden Prairie, Hennepin County**

On 4/5/13, a representative of Pulte Homes contacted the State Archaeologist with a request to authenticate a known mound site (21HE20) in Eden Prairie because the property was in the process of being purchased for residential development. This mound site had first been mapped by Theodore Lewis in 1882 and 1884. It originally consisted of 53 mounds and was known as the Kempton Group. In the 1970s, it was visited by several archaeologists who noted most small mounds had been destroyed by cultivation, but a number of larger mounds survived as well as a few small mounds in a wooded area.

In the 1980s, State Archaeologist Christy Hohman-Caine dealt with a number of proposals to develop the property containing the mounds, but these developments never came to fruition. Another development proposal occurred in 2001 and was dealt with by State Archaeologist Mark Dudzik. This development too never occurred. Neither Hohman-Caine nor Dudzik officially authenticated the mound site as the development threats were not implemented.

Current OSA personnel made a preliminary visit to the site on 4/25/13. LiDAR analysis had suggested that 19 of the 53 mounds still existed, while 14 were uncertain and 20 were probably destroyed. The entire site was field examined and it was clear that a number of mounds survived along the southeastern edge of the property and at the extreme northwest end. A house and buildings dating to the mid-20<sup>th</sup> century were present near the west end of the property. These developments had destroyed a number of mounds. Former agricultural



fields were present along the north-central and northeastern portions of the property and, as suggested in the 1970s, smaller mounds mapped by Lewis there were no longer visible.

Based on the literature review, LiDAR analysis, and preliminary fieldwork, the State Archaeologist suggested that Pulte Homes hire a geoarchaeologist to examine the disturbed areas to see if any mound fill or burial pits survived. Pulte Homes agreed and Michael Kolb of Strata Morph Geoexploration was hired to do the work. Kolb's field investigation took place in early June 2013. Kolb submitted a preliminary report to the State Archaeologist on June 14, 2013.

Based on extensive soil coring, Kolb's report concluded that all mounds that were no longer visible had been completely destroyed except for Lewis Mound 2 where soil coring suggested the possible survival of sub-surface features. There were still 15 visible mounds: 1, 8, 9, 14, 15, 21, 22, 30, 31, 40, 41, 42, 43, 47, and 48.

On 6/17/13, the State Archaeologist issued an official authentication letter for 21HE20. This letter established five discrete mound areas and placed a 20-foot buffer around these areas: Mounds 1,8,9; Mound 2; Mound 14, 15, 21, 22; Mounds 30-31, and Mounds 40, 41, 42, 43, 47, and 48. MIAC and the City of Eden Prairie were copied on the letter.

On 4/3/14, the State Archaeologist visited the area, which was then under initial construction for the housing development. The required setbacks from the still-existing mounds and sensitive areas were being maintained. A walkover of the freshly-graded areas outside of the burial ground limits yielded no artifacts or bone. The development area was photographed.

#### **21HE29 – Residential Construction adjacent to a Mound, Hennepin County**

In June 1883, Theodore Lewis had mapped a large conical mound (60' x 8') in what is now the city of Wayzata. Because Lewis only recorded the government lot for the mound location (a quarter-quarter section or 40 acres), until 2009 the exact location was not listed in the OSA files. However, the location of the mound was well known in the late 19<sup>th</sup> century. The MHS Committee on Archaeology may have excavated a portion of the mound in 1867.

Lloyd Wilford of the University of Minnesota visited the mound in 1947, but failed to give a more exact description of its location. A re-survey of Lake Minnetonka mounds by the Minnesota Historical Society (MHS) in 1972 reported the mound "gone" and houses in the location. In the early 1990s, two local landowners requested that the head of the MHS Archaeology Department provide them with additional information on this mound. Robert Clouse prepared a report for the landowners, but apparently did no fieldwork.

In January 2009, the City of Wayzata requested an OSA authentication of the 21HE29 mound near the west side of Wazata Bay on Lake Minnetonka as there were developments proposed for this quarter-quarter section. The State Archaeologist visited the vicinity on 4/16/09 and the mound was immediately apparent just south of a late 20<sup>th</sup> century house. The landowners reported that they were aware of the mound and would do nothing to disturb it. The OSA mapped the exact mound location and requested the City and the landowner avoid

any disturbance with 20 feet of the mound base. A revised plat of the area was done in 2011, with the mound clearly shown.

In early 2013, the house was purchased by a new owner and he requested permission from the city of Wayzata to replace some trees that were near the mound setback established in 2009. The State Archaeologist allowed tree removal but no stump grubbing adjacent to the mound and also required the 20-foot setback be maintained for any new tree planting. MIAC was copied on all correspondence. The State Archaeologist visited the site on 6/3/14, noting new residential construction south of the mound, but no disturbances were within 20 feet of the mound. The area was photographed.

### **21PO1 –Lot Development and Brush Pile Removal, Pope County**

The Bartke mound site (21PO1) was originally surveyed by Theodore Lewis in 1886, when 30 mounds were recorded. A University of Minnesota archaeological field school had excavated four of the mounds in 1939. The SHPO Archaeologist (now the State Archaeologist) had examined the location in 1995 after a local resident reported a possible housing development (Nordic Heights) at the site. The SHPO Archaeologist (Anfinson) confirmed the site had been damaged by recent road grading and reported it to the State Archaeologist (Dudzik). Dudzik made a detailed map of the site in 1996 and informed the landowner that no additional disturbance was permitted.

In April 2006, new State Archaeologist Anfinson was contacted by a bank in Glenwood regarding the sale of Lot 3, Block 1, Nordic Heights Addition within the Bartke mound site. The State Archaeologist met the Glenwood banker and the prospective landowner of Lot 3 at the site on 5/6/06. It appeared as if there would be sufficient room for the construction of a residence on Lot 3, while maintaining a 20 foot buffer from the mound group.

The State Archaeologist recommended that a detailed survey of site be made by a qualified land surveyor using the mound centers marked by the OSA in 1996 and the original Lewis survey notes. The survey was completed in late May 2006 and a map sent to the OSA. The State Archaeologist informed the landowners and MIAC by letter on 6/5/06 that the 21PO1 burial site boundary was officially established at 20 feet from the bases of the outermost mounds in the group and no disturbance was permitted within the boundary.

In July 2013, the State Archaeologist was contacted by a local resident about proposed residential construction near the western edge of the Bartke site. The State Archaeologist discussed the proposed work with the developer and told him to maintain all setbacks from the mounds group as established in 1996. MIAC also informed the developer of the required setback in a letter dated 11/14/13.

When the State Archaeologist visited the site on 10/24/13 to examine the new construction, he noted a large brush pile had been placed within the northern site limits. A local resident said this had been done by the adjacent Glenwood Golf Club, the landowner. The State Archaeologist contacted the Golf Club in February 2014 and asked them to remove the brush pile, but that no ground disturbance was permitted. If it was to be mechanically moved, this

was best done in winter when the ground was frozen. The Golf Club burned the brush pile in place and carefully removed any residue. The State Archaeologist inspected the area on 3/14/14, noting only minimal ground disturbance. He walked over the bare ground in the burn area on 5/1/14 and did not see any artifacts or bone on the surface.

**Stony Run Cemetery (21YM\_\_ ) – Cemetery Monitoring, Yellow Medicine County**

On 11/7/11, the County Attorney of Yellow Medicine County called the State Archaeologist about an abandoned cemetery that was being impacted by cultivation. The State Archaeologist visited the location on 11/10/11 to examine the situation and take photographs. There was a small grassy area within a cultivated field containing several marked graves.

The State Archaeologist received an official authentication request by letter from the County Attorney dated 11/30/11. The State Archaeologist replied by letter to the County Attorney on 12/5/11 asking that land ownership be determined because authentication requests had to come from the landowner. The County Attorney replied by letter on 12/21/11 that the cemetery had been owned by Stony Run and Lisbon Norwegian Evangelical Church, but that church no longer existed. The county as the principal zoning authority and *defacto* owner of the abandoned parcel thus requested official authentication.

There was a deed for the property in the church's name dated December 11, 1897 filed at the County Recorder's office, but the land had not been officially recorded as a cemetery. The County Attorney also identified the adjacent property owner and the farmer leasing the land who had been gradually plowing closer to the headstones.

On 5/16/12, OSA personnel returned to the site to make a detailed map and establish formal boundaries. The cemetery contained at least six headstones evidencing burials from the 1890s and early 1900s. The text on the headstones was written in Norwegian. Some headstones were still in place, but at least one had fallen over. It was clear from the recent planting of the corn rows that the farmer was utilizing large machinery that barely fit between a utility pole at the edge of the county road ditch to the south and the southernmost headstones in the cemetery.

In order to allow the farmer adequate passage for the large machinery, the State Archaeologist decided not to establish a wide buffer around the entire cemetery, but develop a plan to insure that no graves were impacted by future cultivation. At least 5 feet of clearance between the cultivation and any headstone was required from any headstone on the southern boundary of the cemetery, with a 15-foot buffer on the other three sides of the cemetery.

In an email dated 5/23/12, the State Archaeologist suggested the above buffer to the County Attorney. The letter also requested that the area be fenced to prevent unauthorized intrusion into the cemetery. The County Attorney replied by email on 6/15/12 suggesting that posts rather than a fence be used to demarcate the cemetery boundary as the fence could create a snow trap that could affect the adjacent county road in winter.

The State Archaeologist agreed to the post option by email on 6/19/12 if six posts were used, one at each of the four corners and middle posts in the longer perimeters on the north and south sides. The County Attorney agreed to this plan and was going to forward it to the County Board and the landowner.

On 5/23/14, the State Archaeologist returned to the Stony Run Cemetery to make sure the cultivation setback was being maintained and to see if the posts had been erected. The field had been recently plowed with the setback maintained, but no posts were in place. The State Archaeologist will contact the Yellow Medicine County Attorney to request that the posts be erected prior to the 2015 crop season.



**Wealthwood Cemetery (21AK63) in Aitkin County containing graves associated with an early African American settlement in Minnesota.**



## Chapter 3: Minnesota Archaeology in 2014

In previous Annual Reports, the current State Archaeologist has discussed the status of Minnesota archaeology, highlighting recent developments and current problems, and suggesting courses of action that could improve Minnesota archaeology. The status of archaeology in Minnesota has not changed greatly over the past year with regard to the numbers of archaeologists working in the state, the programs at state universities, state laws, and basic cultural resource management activities. The substantial funding from the 2008 Legacy Amendment continues to have major positive implications for Minnesota archaeology with regard to research, management, and education.

### Statewide Survey of Historical and Archaeological Sites

In November 2008, the voters of Minnesota approved a constitutional amendment that increased the state sales tax by three-eighths of one percent for 25 years with the revenue dedicated to four funds whose primary purpose is to preserve the natural and cultural legacy of the state. The amendment is commonly referred to as the Legacy Amendment. One of the four funds is the *Arts and Cultural Heritage Fund*, which receives 19.75% of this sales tax revenue and is dedicated to the preservation of the state's arts and cultural heritage.



Following intensive lobbying by the State Archaeologist and MHS in May 2009, the Minnesota Legislature allocated \$500,000 from the biennial budget of 2010 - 2011 Arts and Cultural Heritage Fund for a *Statewide Survey of Historical and Archaeological Sites*. This survey was to be accomplished by competitive bid contracts to conduct a statewide survey of Minnesota's sites of historical, archaeological, and cultural significance. The law specified that the Office of the State Archaeologist, the Minnesota Historical Society, and the Minnesota Indian Affairs Council each appoint a representative to an Oversight Board. This Board sets priorities, issues Requests for Proposals (RFPs), selects contractors, and directs the conduct of the survey. The funds were allocated to the Minnesota Historical Society for contracting purposes.

The Minnesota Historical Society appointed the head of their Archaeology Department, Patricia Emerson, to the Oversight Board. The other two members were Scott Anfinson, the State Archaeologist, and Jim Jones from MIAC. At their initial meeting, the Oversight Board determined that archaeological resources rather than standing structures should receive the principal survey emphasis because archaeological resources are much less well known, are largely invisible on the surface, and are not taken into account by most local planning agencies so they are more vulnerable. Furthermore, substantial separate funding from the Arts and Cultural Heritage Fund had been provided to the MHS for grants that realistically would be focused on non-archaeological aspects of the state's cultural heritage because most

grants would go to local historical societies unfamiliar with archaeological resources and needs.

The Board determined that the general survey strategy to be employed should:

- 1) examine poorly known areas of the state;
- 2) examine poorly known historic contexts and property types;
- 3) undertake projects that would assist agencies at all levels of government with protecting and managing cultural resources.

Final reports for all completed contracts can be found on the State Archaeologist's webpage, although exact locational information for archaeological sites has been removed from the on-line reports in order to protect landowner's rights, reduce site vandalism, and comply with state law regarding security data. Exact site locational information will be given to appropriate state and local agencies for planning and management purposes or to professional archaeologists for research and management purposes. This information is also available to site landowners.

A total of eight competitive bid contracts were implemented in the FY 2010-11. These contracts by survey strategy guidelines were:

Poorly Known Areas:

- *An Archaeological Survey of Swift County*
- *An Archaeological Survey of Olmsted County*
- *An Archaeological Survey of the Lake Superior Region (in Cook, Lake, and St. Louis counties)*

Poorly Known Contexts:

- *A Survey to Find Minnesota's Earliest Archaeological Sites*
- *The Age of Brainerd Ceramics*

Poorly Known Property Types:

- *Survey to Assess the Status of Burial Mound Sites in Scott and Crow Wing Counties,*
- *Survey to Identify and Evaluate Indian Sacred Sites and Traditional Cultural Properties in the Twin Cities Metropolitan Area*
- *Investigating Unrecorded Historic Cemeteries in Minnesota*

The State Archaeologist and the Minnesota Historical Society received additional funding for the Statewide Survey for the 2012-13 biennium. The Legislature granted another \$500,000. This funding has resulted in eight new projects:

Poorly Known Areas:

- *Archaeological Survey of Red Lake County*
- *Archaeological Survey of Steele County*
- *Archaeological Survey of McLeod County*



Poorly Known Contexts:

- *Study of Minnesota Plains Village Complexes*
- *Study of Woodland Period Complexes in West Central Minnesota*

Poorly Known Property Types:

- *LiDAR Analysis of Burial Mounds in 16 Counties,*
- *Study of Masonry Ruins,* and
- *Study of Historic Dams.*

The State Archaeologist and the Minnesota Historical Society received additional funding for the Statewide Survey for the 2014-15 biennium. The Legislature generously granted \$600,000 and this funding has already resulted in five new projects:

- *An Archaeological Survey of Hennepin County* (Archaeological Research Services, Christina Harrison, principal investigator)
- *An Archaeological Survey of Le Sueur County* (Minnesota State University - Mankato, Ron Schirmer, principal investigator)
- *A Study of CCC Camps in Minnesota* (Great Lakes Archaeological Research Center, Mark Bruhy and Sean Dunham, principal investigators)
- *Documenting Minneapolis Neighborhood Parks Historic Landscapes* (Landscape Research, Carole Zellie, principal investigator)
- *The Prehistoric Archaeology of the Minnesota River Trench* (Augustana College Archaeological Laboratory, Adrien Hannus principal investigator)

One additional RFP was advertised in FY2014 - *The Archaic Tradition in Central Minnesota*, but there was not an adequate response so the Board decided not to contract for this project in the 2014-15 biennium. If funding can be secured for the 2016-17 biennium, this RFP may be re-issued, along with an additional RFP - *The Archaic Tradition in Minnesota*.

In retrospect, there are some benefits to the delay: The results of two major Archaic site studies due to mitigating impacts from highway projects are expected within the next two years, as well as results from other *Statewide Survey* projects that have Archaic Period implications.

Two additional RFPs will be advertised in FY 2015:

- *Investigating Poorly Known Historic Contexts: Dating Minnesota's Prehistory*
- *Assembling a Handbook of Minnesota Prehistoric Stone Tools*

These two projects do not require any fieldwork, but both would serve great archaeological needs in Minnesota.

## **Current Status of Minnesota Archaeology**

### **Archaeologists**

There are currently perhaps 100 North American archaeologists living and working in Minnesota. More than 60 of these archaeologists have advanced degrees and practice

archaeology full-time in the state. Over 50 of the advanced degree archaeologists work in cultural resource management (CRM) with 12 at Federal agencies, 10 at State agencies, 3 at Indian reservations, and about 30 at private contracting firms based in Minnesota. A number of out-of-state contracting firms also occasionally do archaeological work in Minnesota. Advanced degree archaeologists generally meet federal and state standards required to be a principal investigator on a public archaeological project and to obtain a state license.

There are an unknown number of Bachelor's Degree-level archaeologists living in Minnesota who work on CRM field crews and do much of the analysis, report production, and record keeping for CRM contracting firms and agencies. Some of these jobs are seasonal. A few of these BA-level archaeologists work for agencies, most notably the DNR cultural resource programs.

### **Post-secondary Archaeological Education**

There are 15 full-time academic archaeologists in Minnesota who have advanced degrees and practice North American Archaeology. The University of Minnesota – Minneapolis has five full-time staff archaeologists in the Anthropology Department, but only one specializes in North American archaeology (Katherine Hayes), although another (Gilliane Monnier) is now doing some work in Minnesota. Archaeologists Rebecca Dean and Joseph Beaver are at the University of Minnesota-Morris with both specializing in faunal analysis.

There are three North American archaeologists at Minnesota State University - Moorhead (Mike Michlovic, George Holley, Rinita Dalan), three at St. Cloud State University (Mark Muniz, Debra Gold, Rob Mann), two at Hamline University (Skip Messenger, Brian Hoffman), and one at Minnesota State – Mankato (Ron Schirmer). There is also one North American archaeologist at the Science Museum of Minnesota (Ed Fleming). Susan Krook teaches archaeology and anthropology at Normandale Community College.

### **Public Archaeological Education**

The state continues to have few archaeological publications, archaeological museum exhibits, and archaeological fieldwork opportunities for the general public. University field schools are open only to students and usually to students that are enrolled full-time at the sponsoring university. The National Forest Service offers occasional short-term public excavation opportunities known as *Passport in Time* (PIT) projects, but these are limited to the two national forests in northern Minnesota and have not occurred for several years.

The publication void has been partially filled by the release of Guy Gibbon's book entitled *Archaeology of Minnesota* by the University of Minnesota Press in late 2012, although the book is meant more for professionals than the general public. Placing reports from the *Statewide Survey of Historical and Archaeological Sites* on the OSA webpage provides easy access to important recent archaeological information about Minnesota, but some of these reports are highly technical. The journal *The Minnesota Archaeologist* continues to be published once a year by the Minnesota Archaeological Society.

## A Plan for 2015

### Legislation

Both the Field Archaeology Act (MS 138-31-.42) and the Private Cemeteries Act (MS 307) are in need of amendment to improve archaeology in Minnesota. Legislative initiatives require considerable planning and consultation. In 2015, the State Archaeologist intends to carefully examine the needs of both laws, identify stakeholders, and begin the consultation process, anticipating a 2016 legislative initiative.

The OSA in cooperation with the Minnesota Historical Society will again ask the Legislature to continue funding for the *Statewide Survey of Historical and Archaeological Sites* through the Legacy Amendment Arts and Cultural Heritage Funds. This initiative has been responsible for major contributions to archaeological research and cultural resource management over the last five years.

### Development Plan Review

MS 138.40, Subd. 3 requires all public agencies, not just state agencies, to submit their development plans to OSA and MHS if *known or scientifically-predicted* archaeological sites may be affected on lands they control. The majority of local governments do not conform to this requirement unless the project is required to have historic impact review under federal law (e.g., Section 106, NEPA) or under the Minnesota Environmental Policy Act (MS 116d). For instance, counties and cities rarely submit non-federal highway projects for OSA or MHS review, although such projects represent the majority of local highway development activity in the state and have great potential to harm archaeological and historical sites.

The best way to help local governments comply with existing environmental review requirements regarding archaeological sites and thus help protect these sites, is to provide them with tools to do basic cultural resource assessments internally with minimum expense. The key tools are access to the archaeological site database and access to accurate predictive models for unrecorded sites.

The OSA is working with MnDOT to provide both of these tools. Internet access to the archaeological site file is expected to begin in early FY16. Predictive models for archaeological sites could be provided either as easy to understand county narratives or an accessible version of MnDOT's MnModel application.

### Archaeological Research

Critical research needs include radiocarbon dates for certain sites and complexes, site locational surveys and site excavations in poorly known regions to establish basic cultural sequences and fine-tune predictive models, investigations of poorly known prehistoric complexes such as the Archaic, and a burial mound status field survey. University-based research will still have to take the lead in some of these investigations, especially those

involving major excavations, but state level initiatives are essential to fulfilling others. The OSA will contribute staff time and other resources to further these research goals.

Some of these initiatives may be funded through the *Statewide Survey of Historical and Archaeological Sites*. The 21 projects undertaken over the last five years have clearly demonstrated the value of the *Statewide Survey* to both cultural resource management (CRM) and archaeological research in Minnesota. The survey will continue its three-part focus:

- examining poorly known areas of Minnesota
- examining poorly known historic contexts
- examining poorly known property types.

Examinations of all three of these foci benefit state agencies and environmental review entities by providing information on where archaeological and historic sites are located and determining which of these resources are significant (i.e., worthy of preservation). This information not only helps protect important sites, but can save agencies and developers substantial money by streamlining the review process.

A key Minnesota research need is a Mound Status Survey. Theodore Lewis and Jacob Brower first mapped most of Minnesota's 12,500 known burial mounds in the late 19th century. Some of these mound sites have not been visited by archaeologists in over 100 years. The actual current condition of most mound sites is not known and very few have been officially authenticated by the State Archaeologist. While it is against the law to willfully disturb a burial ground, most land owners are unaware that mounds may be on their property and thus they do not know what to avoid disturbing.

A major effort to assess the status of mound sites in Minnesota began with the 2010 Legacy-funded LiDAR mound survey in Scott and Crow Wing counties as discussed in the 2010 Annual Report and continued with the LiDAR-Mound study of 16 counties completed in 2013 discussed in the 2013 OSA Annual Report.

In FY 2014, DNR provided the OSA with a computer –based LiDAR viewer application that has greatly aided mound verification studies. Beginning with LiDAR-derived analysis, the State Archaeologist will continue to field verify the accuracy of LiDAR data in various counties by visiting known mound sites in the vicinity of proposed developments being investigated by OSA.

## References Cited

Anfinson, Scott

- 1983 *A Review of Archaeological Sites in Minnesota, 1982: A Report to the State Archaeologist*. Minnesota Historical Society, St. Paul.
- 2005 *SHPO Manual for Archaeological Projects in Minnesota* (Revised Version). Minnesota State Historic Preservation Office, St. Paul.
- 2008 *State Archaeologist's Procedures for Implementing Minnesota's Private Cemeteries Act* (MS 307.08). Office of the State Archaeologist. Available at: <http://www.osa.admin.state.mn.us/>
- 2011 *State Archaeologist's Manual for Archaeological Projects in Minnesota*. Office of the State Archaeologist, St. Paul.

Johnson, Elden

- 1957 The Minnesota Archaeological Site File. *Minnesota Archaeologist* 21:14-16.

Vermeer, Andrea and Michelle Terrell

- 2011 *An Investigation of Unrecorded Historic Cemeteries in Minnesota*. Two Pines Resource Group, Shafer. Report completed for the Statewide Survey of Historical and Archaeological Sites.

Winchell, Newton

- 1899 *Geology of Minnesota* (IV). The Pioneer Company, St. Paul.
- 1911 *The Aborigines of Minnesota*. The Pioneer Company, St. Paul.

## **Appendix A: Glossary of Minnesota Archaeological Terms**

**Agency** – any agency, department, board, office or other instrumentality of the state, any political subdivision of the state, any public corporation, any municipality, and any other local unit of government (MS 114c.02).

**Archaic Tradition** – The post-Paleoindian cultural tradition characterized by the disappearance of lanceolate projectile points and the appearance of stemmed and notched points beginning about 8000 B.C. Other Archaic developments include ground stone tools, domestic dogs, cemeteries, copper tools, and diverse hunting-gathering economies. The Archaic lasts until about 500 B.C.

**Archaeological Site** – any discrete location containing clear evidence of human activity that holds potential for significant understanding of the past through the use of archaeological methods.

**Archaeology** - the scientific study of important physical remnants of the cultural past.

**Artifacts** - natural or artificial articles, objects, tools, or other items manufactured, modified, or used by humans that are of archaeological interest.

**Authenticate** - to establish the presence of or high potential of human burials or human skeletal remains being located in a discrete area, to delimit the boundaries of human burial grounds or graves, and to attempt to determine the ethnic affiliation of individuals interred.

**BP** – Before Present; this is an expression of age measured by radiocarbon dating with “present” set at 1950, the first year radiocarbon dating became available. It is more correctly stated as “radiocarbon years before present” or RCYBP. It does not mean the same as “years ago” because raw radiocarbon dates need to be corrected for several inherent errors in order to be converted to actual calendar years.

**Burial** - the organic remnants of the human body that were intentionally interred as part of a mortuary process.

**Burial Ground** - a discrete location that is known to contain or has high potential to contain human remains based on physical evidence, historical records, or reliable informant accounts.

**Cemetery** - a discrete location that is known to contain or intended to be used for the interment of human remains.

**Contact Period** – the initial period of intensive Euro-American and Indian interaction prior to the signing of any major treaties (1650 – 1837)

**Context** – the relationship between artifacts and where they are found, such as depth from surface, association with soil or cultural features, or cultural component assignment. Not the same as *historic context*.



**Cultural Resource Management (CRM)** - The identification, protection, and interpretation of archaeological sites, historic structures, and other elements of cultural heritage through survey, evaluation, and treatment strategies.

**Disturb** - any activity that significantly harms the physical integrity or setting of an archaeological site or human burial ground.

**Feature** – non-artifactual evidence of human activity at an archaeological site usually expressed as noticeable soil disturbances such as pits and hearths. It can also refer to masonry walls and other structures at historical archaeological sites.

**Field Archaeology** - the study of the traces of human culture at any land or water site by means of surveying, digging, sampling, excavating, or removing objects, or going on a site with that intent (MS 138.31).

**Geomorphology** – the study of the earth's surface and how it has evolved generally with regard to soils and sediments.

**Grave Goods** – objects or artifacts directly associated with human burials or human burial grounds that were placed as part of a mortuary ritual at the time of internment.

**Historic Context** – an organizational construct that groups related property types (e.g., *archaeological sites*) together based on a similar culture, geographical distribution, and time period. The Minnesota SHPO has developed a number of statewide historic contexts for the Precontact, Contact, and Post-Contact periods. An example of a Precontact context is Clovis. Not the same as *context* used in a purely archaeological sense.

**Historic Period** – synonymous with the *Contact* and *Post-Contact* periods when artifacts of Euro-American manufacture are present or written records available; begins about 1650.

**Horizon** - a technological or behavioral attribute with broad geographical distribution, but not necessarily at the same time (e.g., fluted point horizon); also a particular layer within an archaeological site.

**Human Remains** - the calcified portion of the human body, not including isolated teeth, or cremated remains deposited in a container or discrete feature.

**LiDAR** – Light Detection and Ranging; a remote sensing method that uses pulsed laser beams usually sent from an airplane to measure topographic elevation to a fine scale. It is highly valuable to archaeology for detecting earthworks such as ditches and mounds.

**Lithic** – made of stone; lithic artifacts are generally manufactured by either chipping or flaking high quality materials (e.g., chert, chalcedony) to produce tools such as knives, scrapers, and projectile points or by grinding or pecking granular rocks (e.g., sandstone, granite) to produce tools such as mauls, hammerstones, or axes.

**Lithic Scatter** – a prehistoric site evidenced almost exclusively by the presence of stone tools and/or stone tool manufacturing debris and lacking ceramics and surface features.

**Mississippian Tradition** – A Late Prehistoric cultural tradition associated with developments originating at the Cahokia site on the Mississippi River across from St. Louis. Characteristics include the use of shell-tempered pottery, intensive corn horticulture, settled village life, and small triangular arrowheads. Mainly found in southern Minnesota, it lasts from about A.D. 1000 to A.D. 1650.

**Qualified Professional Archaeologist** - an archaeologist who meets the United States Secretary of the Interior's professional qualification standards in Code of Federal Regulations, title 36, part 61, appendix A, or subsequent revisions. These standards require that the archaeologist has a graduate degree in archaeology or a closely related field, has at least one year's full-time experience doing archaeology at the supervisory level, and has a demonstrated ability to carry research to completion. There are specific additional standards for prehistoric, historic, and underwater archaeologists.

**Paleoindian Tradition** – The earliest major cultural tradition in the New World characterized by the use of well-made lanceolate projectile points and the hunting of now extinct animals such as mammoth and giant bison. It is dated to 12,000 B.C. – 8000 B.C.

**Period** - a temporal span often associated with a particular cultural tradition (e.g., Woodland)

**Petroglyph** - a design inscribed into a rock face by grinding, pecking or incising; examples can be seen at the Jeffers site in Cottonwood County and Pipestone National Monument.

**Phase** - a geographically discrete taxonomic unit represented by a group of sites with cultural and temporal similarity (e.g., *Fox Lake* in southwestern Minnesota)

**Phase I Survey** – synonymous with a reconnaissance survey; a survey whose objective is to find archaeological sites, map the horizontal limits of the sites, and define the basic historic periods present.

**Phase II Survey** – synonymous with an evaluation survey; intensive fieldwork whose objective is to determine the significance of an archaeological site by assessing the site's research potential as demonstrated by the robustness of the identifiable historic contexts present and the integrity of artifacts and features associated with those contexts. Significance is generally equated with eligibility to the National Register of Historic Places.

**Phase III Project** – synonymous with a treatment activity or site excavation; very intensive fieldwork generally done to mitigate the adverse effects of development upon a significant archaeological site through data recovery utilizing numerous formal excavation units or other intensive investigative methods.

**Pictograph** – a design painted or drawn on a rock face.

**Plains Village Tradition** - A Late Prehistoric cultural tradition associated with the establishment of settled village life along major river valleys in the Great Plains. Characteristics include the use of globular pots that are smooth surfaced and grit tempered as well as intensive corn horticulture and fortifications. Found in western Minnesota, the tradition lasts from about A.D. 1000 to A.D. 1500.

**Post-Contact Period** – the period of Euro-American as opposed to Indian dominance in Minnesota beginning with the first major land cession treaties in 1837.

**Precontact Period** – the time period dating from the earliest human occupation (ca. 12,000 BC) up to the significant incursion of European culture (ca. 1650); synonymous with *Prehistoric Period*.

**Prehistoric Period** – synonymous with the *Precontact Period* (see above); sometimes divided into Early (12,000 – 5000 B.C.), Middle (5000 B.C. – A.D. 1000), and Late (A.D. 1000 – 1650).

**RCYBP** – Radiocarbon Years Before Present means the measured age of a radiocarbon sample with Present set at 1950, the first year of extensive radiocarbon dating. Because all dates are subject to inherent errors, the actual age of any sample needs to be corrected. The error can be thousands of years for dates over 10,000 RCYBP.

**Section 106** – refers to Section 106 of the National Historic Preservation Act of 1966, which states that federal agencies must *consider* the impacts their undertaking have on significant historic properties and *consult* with knowledgeable entities (e.g., SHPO) about these impacts.

**State site or state archaeological site** - a land or water area, owned or leased by or subject to the paramount right of the state, county, township, or municipality where there are objects or other evidence of archaeological interest. This term includes all aboriginal mounds and earthworks, ancient burial grounds, prehistoric ruins, historical remains, and other archaeological features on state land or on land subject to the paramount rights of the state (MS 138.31).

**Tradition** - a prehistoric culture based on lasting artifact types or archaeological features (e.g., *Paleoindian*)

**UTM** – Universal Transverse Mercator; a geographic projection system that divides the earth into meter squares. It is used by GIS and GPS applications instead of latitude – longitude.

**Woodland Tradition** – The post-*Archaic* cultural tradition first identified in the Eastern Woodlands of the United States. It is characterized by the appearance of pottery and burial mounds. Wild rice use becomes intensive in northern Minnesota with limited corn horticulture eventually appearing in the southern part of the state. Woodland begins about 500 B.C. and lasts until A.D. 1650 in northern Minnesota, but is replaced by Plains Village and Mississippian cultures in southern Minnesota about A.D. 1000.