



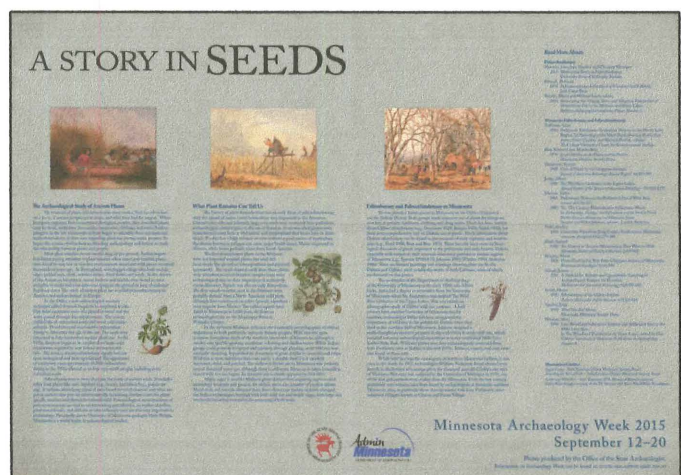
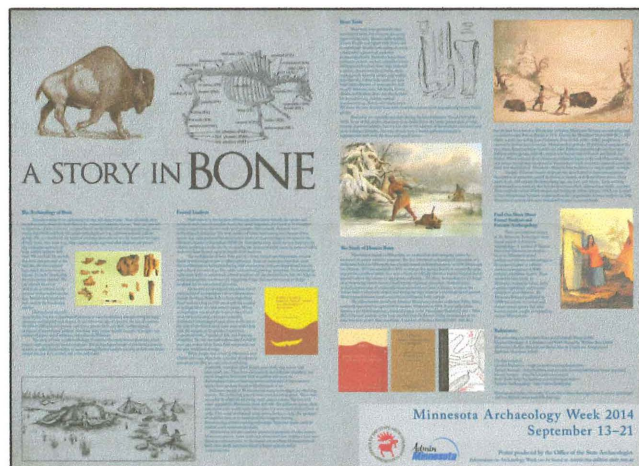
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Archaeology in Minnesota – 2015

Annual Report of the State Archaeologist



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.



This Annual Report is dedicated to Mike Michlovic for 40 years of major contributions to Minnesota archaeology and 40 years of friendship. It is also dedicated to the memory of geologist Herbert Wright, Jr. for his important contributions to Minnesota archaeology.

Abstract

Due to the retirement of State Archaeologist Scott Anfinson in early 2016, this report covers both fiscal year 2015 and calendar year 2015. As in past years, 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 2015 by program area. Major OSA 18-month accomplishments include: reviewing 460 submitted site inventory forms, reviewing 138 development projects that had potential to impact archaeological sites or historic cemeteries, handling 35 major burial site cases, formally authenticating 12 burial sites, revising the OSA webpage, serving on multiple MnDOT advisory committees, helping to implement and direct 10 projects for the *Statewide Survey of Historical and Archaeological Sites*, and initiating a cooperative agreement between MnDOT, MnGEO, and OSA to provide on-line access to the OSA archaeological database in 2016.

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

	FY15	CY15	FY16 (1/2)
Licenses Approved:	81	82	18
Site Forms Reviewed:	328	282	132
Site Numbers Assigned:	242	194	85
Reports Added:	106	116	52
Projects Reviewed:	95	100	43
Major Burial Cases:	22	15	13
Burial Authentications:	8	5	4

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

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 have been 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, Adam Giorgi, Jake Seamans, and Commissioner 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 has been a pleasure to work with Annamarie Hill and her very competent staff over the last 10 years.

The Minnesota Historical Society (MHS) is another important partner of OSA and Executive Director Stephen Elliot has been very supportive. Archaeology Department Head Pat Emerson and her staff provide day-to-day assistance and essential peer interchange. State Historic Preservation Office (SHPO) staff, especially Sarah Beimers, Tom Cinadr, Dave Mather, and Kelly Gragg-Johnson, are important preservation partners 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, and Paul Cusick 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. Dr. Susan Myster, the forensic anthropologist at Hamline University, has been a great help to OSA over the last 10 years.

The daily support and advice of my wife Pat has made my job much easier and more enjoyable. She occasionally volunteers to assist me in the field, putting her University of Minnesota archaeological training to good use.

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. 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 2016

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Cover Illustration: Archaeology Week posters for the last four years designed and produced by OSA.

Chapter 1: Introduction

Minnesota Statutes 138.38 requires that the State Archaeologist complete a report of activities “annually and also upon leaving office.” For the previous nine years, annual reports of the State Archaeologist have basically summarized OSA activities by Minnesota State Fiscal Year, the period from July 1 of one calendar year through June 30 of the following calendar year. The annual reports for the past nine years have also included some statistics and information for the same Calendar Year (CY) as the Fiscal Year (FY) because certain activities (e.g., university field schools, Statewide Survey projects) often cross-over state fiscal years. Due to the retirement of the State Archaeologist in early 2016, this report includes full summaries of OSA activities for FY 2015, CY 2015, and the first half of FY 2016 (July – December 2015). Thus when this report uses “2015” without a CY or FY, it generally means the entire 18 month period from July 1, 2014 through December 31, 2015.

Annual Reports of the State Archaeologist by statute (MS 138.38) must be filed with the Commissioner of Administration, 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://mn.gov/admin/archaeologist/professional-archaeologists/research/annual-reports/index.jsp>).

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.

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 from 1990 through 2005, and, prior to that, directed the County-Municipal Highway Archaeological Survey at MHS (1975-1990). Anfinson will retire as State Archaeologist in February 2016. Bruce Koenen will continue to serve as the assistant to the State Archaeologist, at least for the immediate future.

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 lands 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 and again in 2015, the Legislature increased the funding to \$600,000 for the FY 14-15 and FY 16-17 bienniums.

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

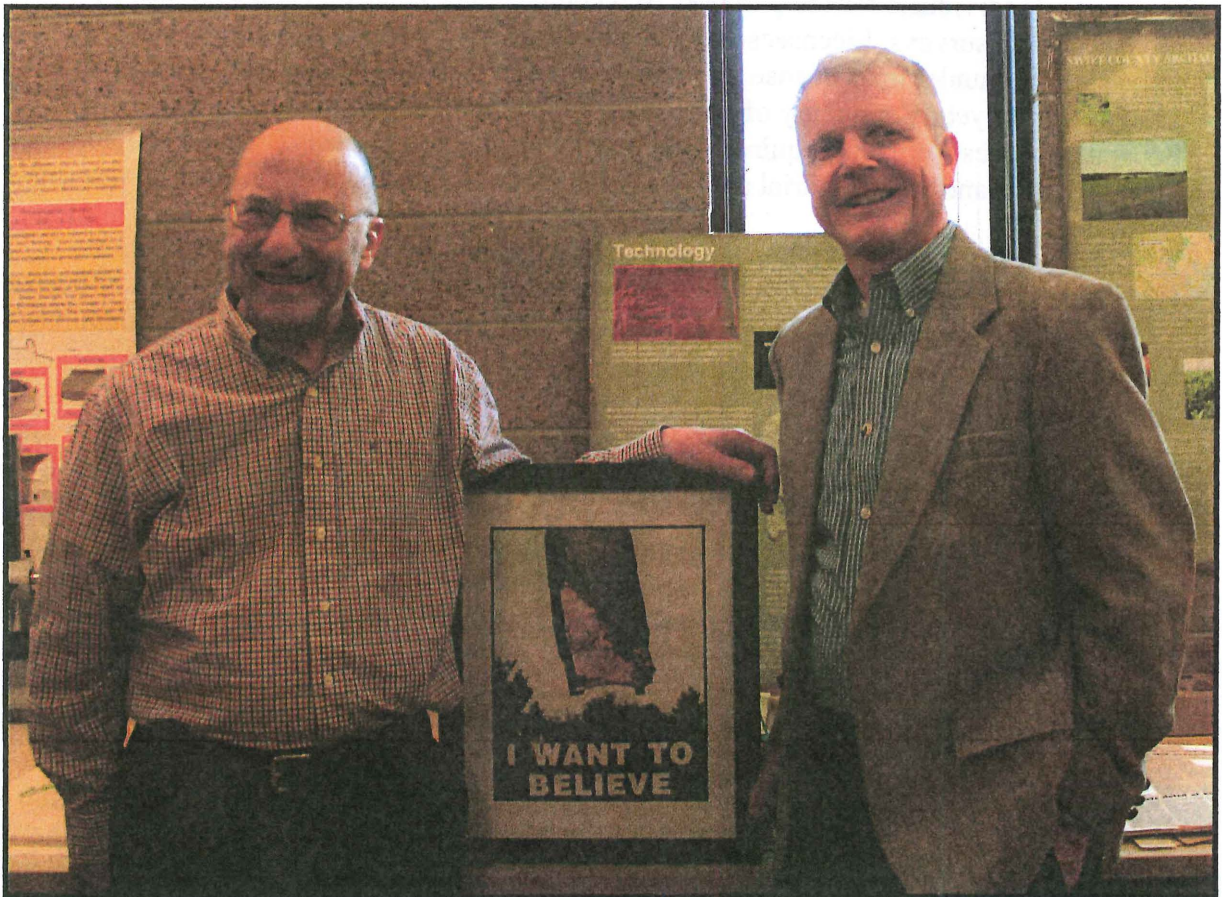
Besides performing the duties assigned by Minnesota law listed above, the State Archaeologist also carries out a number of “traditional” duties:

- 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 (right) at the gathering celebrating Mike Michlovic's (left) retirement from Minnesota State University – Moorhead in May 2015.

Chapter 2: Summary of OSA Activities - 2015

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. Over the last 10 years, the State Archaeologist has approved the professional qualifications for 760 license applications.

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 2015 and the first half of FY 2016 are:

License Type:	FY15	CY15	FY16 (1/2)
Phase 1/Reconnaissance Survey (yearly):	61	67	11
Phase 2/Evaluation Survey:	15	7	2
Phase 3/Excavation:	2	6	5
Authentication:	<u>3</u>	<u>2</u>	<u>0</u>
Total:	81	82	18

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 2015 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. In 2015, they continued their investigation of two large prehistoric sites at Minneopa State Park in Blue Earth County. One site appears just to be Archaic age (9000 – 3000 years ago), while the other was first occupied in the Archaic, but also contained later Woodland and Plains Village occupations. At Itasca State Park, a previously unrecorded Early Prehistoric site was discovered.

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 at prehistoric site (21FE76) on the Blazing Star Trail in Freeborn County. The 2015 work involved the excavation of 12 square meters, most of which went down more than a meter and recovered more than 1,500 artifacts (about 6,650 artifacts were recovered in 2013 and 2014). Another major project was the Mill Towns State Trail - Cannon Falls segment, which

included excavation of 265 shovel tests and 6 square meters of units and resulted in the recovery of about 350 artifacts, including a Paleoindian projectile point fragment.

Mike Magner assisted by Stacy Allan handle DNR Forestry and Wildlife and Fisheries cultural resource programs. Their efforts in FY2015 included Phase II investigations on a parcel going out of state ownership on Lake Vermilion where they uncovered largely intact Late Woodland, Middle Woodland, and possible Paleoindian components. The Forestry program documented and managed several multi-component sites threatened by logging in the Headwaters Lakes area, including what may be an early twentieth-century Ojibwe sugar camp on Leech Lake. Major mitigation excavations in the summer of 2015 were undertaken at the Glenwood Fish Hatchery site (21PO34) where a new building will adversely affect the prehistoric site.

There were 15 Phase 2 (evaluation) archaeological licenses issued in FY 2015 and 11 in CY 2015 for a total of 21 unique Phase 2 licenses over an 18 month period (July 2014 – December 2015). The majority of these were for limited formal testing of sites encountered by development projects on non-federal public land.

Six unique Phase 3 (excavation) archaeological licenses issued over the 18 month period. Michelle Terrell (Two Pines) received a Phase 3 license for extensive testing of the Lower Sioux site (21RW11) in response to proposed county highway impacts. Tim Tumberg of the DNR trails and Waterways program received a Phase 3 license for excavations at 21FE76 on Albert Lea Lake to be affected by the Blazing Star Trail. The other four Phase 3 licenses were issued to Anne Ketz and Adam Kaeding (106 Group) for sites to be impacted by CSAH 61 reconstruction in Hennepin and Carver counties.

Three burial authentication licenses were issued in FY2015 and none in FY 2016. Two of the 2015 licenses were issued to Rebecca Dean (University of Minnesota – Morris) for her work at the historic Boerner Cemetery (21GR53) in Grant County. The other license was issued to Connie Arzigian (Mississippi Valley Archaeological Center) for work at 21WA10, a prehistoric mound site in Afton. All other burial authentication investigations in FY 2015 and FY 2016 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 site 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/).

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 periodically provided a copy of the electronic database to the OSA. Electronic copies of the site database were 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 2015 and the first half of FY16, the OSA performed the following site file actions:

	FY15	CY15	FY16 (1/2)
New Forms Reviewed and Site Numbers Assigned:	242	194	85
Revised Forms Reviewed:	<u>86</u>	<u>88</u>	<u>47</u>
Total Forms Reviewed:	328	282	132

Over the last 10 years, OSA has reviewed 3,036 site inventory forms and assigned 2,430 new site numbers. As of June 30, 2015 there were 19,006 archaeological sites listed in the archaeological site database. Of these, only 12,117 (64%) were assigned official state site numbers and thus have a hard-copy file at both the OSA and the SHPO. As of December 31, 2015 there were 19,092 total sites in the site database of which 12,198 (64%) were numbered. The majority of 6,894 currently 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 CY2015 total of 19,092 sites in the OSA site database represents over a three-fold gain in 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 250 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 2015 is St. Louis with 2,026 (1,238 numbered) sites. The county with the fewest known sites is Mahanomen with 23 (20 numbered), although Dodge County has only 16 numbered sites along with 31 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 12,000 years, which equals 1,200,000 sites divided by the 12,000 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 1,727 (9%) at the end of CY 2015 (435 Phase 3; 1,292 Phase 2).

There are over 300 Minnesota archaeological sites listed in the National Register of Historic Places (NRHP). Individual site nominations represent 113 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. One archaeological site was individually added to the National Register in CY 2015: Schmid Farmhouse Ruin (21HE150) in Hennepin County. This nomination supported a Multiple Property Documentation Form (MPDF) sent to the National Register entitled *Minnesota's Nineteenth Century Masonry Ruins*, which was the result of a Statewide Survey of Historical and Archaeological Sites project.

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 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, 2015 there were 2,956 burial sites listed in the OSA's Burial Sites Database. As of December 31, 2015 there were 2,960 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 at least 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 by 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 2015, 106 reports were added to the OSA files. A total of 116 reports were added in CY 2015 and 52 reports added during the first half of CY 16. As of the end of December 2015, the OSA had 5,866 reports listed in its Report database. Over the last 10 years, 1,203 reports have been added to OSA files and the 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://mn.gov/admin/archaeologist/professional-archaeologists/research/report-summaries/index.jsp>).

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 Area-wide 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*. With the SHPO resuming reviews of local RGU projects in 2014, OSA EAW reviews have become even less of a priority.

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. Over the last 10 years, OSA has reviewed at least 809 development projects.

During 2015, the OSA completed substantial review of at least 100 development projects, most of which were part of the state EAW/AUAR/EIS process. Development projects that were field reviewed by the State Archaeologist in 2015 included:

- Hennepin County Road 61 project with regard to impacts to nine archaeological sites on the north side of the Minnesota River in Carver and Hennepin counties
- Redwood County Highway reconstruction impacts to the Lower Sioux site (21RW11)
- Glenwood Fish Hatchery demolition and construction with regard to impacts to site 21PO34
- Douglas County lakeshore housing development on Lakes Stoney and Taylor near reported prehistoric habitation site 21DLb
- City of Afton sewer project in Washington County

Agency Assistance

One of the principal duties of the State Archaeologist is to assist state agencies with cultural resource management issues. During 2015 these duties mainly included attending meetings and site visits associated with DNR State Park developments and MnDOT 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 Minnesota Archaeological Integrated Databases (MAID).

OSA also assists local and federal agencies. OSA staff spend considerable time on email and telephone correspondence aiding cities, counties, other local agencies, and federal agencies with development review and cultural resource management advice. In 2015, the State Archaeologist assisted:

- The City of Minneapolis with reviewing interpretive plans for the St. Anthony Falls area.
- 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.
- The National Oceanic and Atmospheric Administration (NOAA) with regard to establishing a Marine Protected Area (MPA) in Lake Superior.

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 by OSA. The OSA has paper copies of most reports and most laboratory reporting sheets for radiocarbon dates (also known as ¹⁴C dates) from Minnesota archaeological sites.

At the beginning of 2015, the database contained 572 dates from 164 sites. Thirty-six (36) dates were added in 2015 from reports submitted by archaeologists. Another 67 dates have been received from PaleoResearch Institute (PRI) using Legacy Amendment funding to the

Statewide Survey of Historical and Archaeological Sites. ThePRI dates have not been added to radiocarbon database as of yet as we are in the process of evaluating, correcting, and restructuring the database under a contract with PRI. This is part of a major Statewide Survey effort initiated in 2014 to date important archaeological sites that had been previously excavated. The newly received dates include 30 dates from the Wilford site (21ML12), 16 dates from the La Moille Rockshelter site (21WN1), 6 dates from the Pedersen site (21LN2), 4 dates from the Great Oasis site (21MU2), 3 dates from the Cambria site (21BE2), 2 dates each from the Poole (21FA72), Ft. Ridgley (21NL8), and Winter (21PN17) sites, and 1 date each from Mountain Lake (21CO1), Schilling (21WA1), and Rynearson (21FA97). This brings the overall total of radiocarbon dates from Minnesota archaeological sites to 675.

The best-dated site in the state is the Wilford site (21ML12) with 30 dates. Other sites with reported dates in double digits are: Bryan site (21GD4) with 28 dates, Hannaford (21KC25) with 23, McKinstry (21KC2) with 21, La Moille (21WN1) and 21CR155 with 16, Smith (21KC3) and Silvernale (21GD3) with 15, 21ML81 with 14, Donarski (21MA33) with 12, Vosburg (21FA2) with 11, and Mooney (21NR29) and J Squared (21RW53) each with 10. Fifty-eight (58) 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. Over the last 10 years, 283 dates have been added by OSA to the Minnesota radiocarbon database.

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.

There are five university-based archaeological programs in Minnesota affiliated with Anthropology departments and focused on North American research. 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. Carleton College has one archaeologist (Alex Knodell) mainly focused on Classical Archaeology, but does some Minnesota fieldwork. 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. The University of Minnesota and St. Cloud have Masters Degree tracks in Heritage Management.

In 2015, the following university-based field research was undertaken in Minnesota:

University of Minnesota – Science Museum of Minnesota (Ed Fleming)

- field school excavations at the Sheffield site (21WA3)

Minnesota State University - Moorhead (George Holley, Ranita Dalan)

- field school excavations at 21CY8

St. Cloud State University

- no Minnesota field school in 2015

Minnesota State University – Mankato (Ron Schirmer)

- field school testing in the Red Wing area at sites 21GD95, 21GD204, and 21GD253

Hamline University (Brian Hoffman)

- field school excavations at the Lindbergh House (21M120) and at a small site (21CO62) on DNR's Red Rock Prairie SNR

Carleton College (Alex Knodell)

- field school at Women's League Cabin site (21RC__) in Carleton Arboretum

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 2015, although the research examination of the Knife Lake quarries continues by Superior National Forest.

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 2015, they excavated another 1x1 meter unit.

Katherine Hayes of the University of Minnesota conducted remote sensing (GPR) outside the north wall of Historic Ft. Snelling looking for remains of the Civil War-era prison. This may initiate a more intensive research project for the University at Ft. Snelling. The State Archaeologist visited the field crew on October 5, 2015

University of Minnesota graduate students led by Kelly Wolfe initiated archaeological excavations at Swede Hollow (21RA73) in St. Paul to investigate the late 19th and early 20th habitations of the area. Volunteers assisted with the dig. The State Archaeologist visited the Swede Hollow excavation on August 10, 2015.



University of Minnesota students excavating at the Swede Hollow site (21RA73) in St. Paul.



University of Minnesota students led by Professor Kat Hayes (far left) using remote sensing to locate features of a Civil War era prison at Fort Snelling.

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 non-development threatened known or reported archaeological sites if they are conveniently located near other necessary fieldwork. He photographs the sites and notes any changes in condition since the last archaeologist's visit, but does not revise existing site forms as these surveys are informal. In 2015, he examined the following non-burial archaeological sites: 21AK11, 21CA259, 21CE1, 21CK26, 21CO1, 21CR155, 21DL46/GR41, 21HB55, 21MU2, 21MU6, 21PP2, 21PP17, 21SC2, 21SN144, and 21SN145. He also visited numerous non-threatened burial sites, which are listed in the Burial Sites Protection section of this report.

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 avocational 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, historically-significant cultural landscapes in Minneapolis neighborhood parks, and sites associated with specific prehistoric cultural traditions such as Paleoindian, Woodland, and Plains Village. Surveys are currently underway attempting to determine site locations of prehistoric site in the Minnesota River Valley and Lac Qui Parle County. A major archaeological survey of the Fort Snelling area is also underway.

Public Education

Archaeology Week - The first Minnesota Archaeology Week was held in 1995 organized by the Council for Minnesota Archaeology (CMA). 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 Lecture, and general promotion. Prior to 2012, Archaeology Week had always been held in the spring of the year, but in 2012 the event was moved to the fall as it was more compatible with both secondary and post-secondary school seasons.

Archaeology Week in CY 2014 (FY15) was held September 13-21, 2014. There were 23 events in 14 counties. Mark Bruhy of Commonwealth Cultural Resource Group presented the 19th annual Elden Johnson Distinguished Lecture, entitled "Minnesota's CCC Camps as an Archaeological Resource." Estimated attendance at all events was 1,153. The CY 2014 Archaeology Week poster was entitled *A Story in Bone*, describing cultural uses of and archaeological analysis of animal bone.

Archaeology Week CY 2015 (FY16) was held September 12 – 20, 2015. There were 20 events held in 14 counties. Estimated attendance at all events was 4,160. Craig Johnson of MnDOT presented the 20th annual Elden Johnson Distinguished Lecture, entitled "From Pots to Rocks: 40 Years of Plains Archaeology." The CY 2015 Archaeology Week poster was titled *A Story in Seeds* and describes how botanical remains are used by archaeologists.

Presentations and Meetings – During 2015, the State Archaeologist made the following professional appearances:

- presented a talk on shipwrecks for MHS at a meeting in Duluth 7/17/14
- presented a talk on archaeology at University Minnesota Morris on 9/16/14
- presented a talk at the Council for Minnesota Archaeology symposium and attended the business meeting in St. Cloud on 2/12-14/15
- presented a talk to Mill City Commons neighborhood group on Minneapolis riverfront history on 2/26/15
- attended the Central States Anthropological Conference in St. Paul 4/9-10/15
- presented a talk on Mike Michlovic's contributions to archaeology at his retirement celebration at Minnesota State University-Moorhead on 4/28/15
- presented a talk on Minneapolis riverfront archaeology at the MHS Mill City Museum on 4/30/15
- attended a workshop on remote sensing at the University of Minnesota on 5/14/15
- presented a talk on cultural resource management to the Minnesota Planning Association in Golden Valley on 8/20/15
- attended the Midwest Historical Archaeology Conference in Minneapolis on 10/9/15
- attended the Plains Anthropological Conference and regional National Association of State Archaeologists meeting in Iowa City on 10/14-17/15
- presented a paper on state environmental review to the International Cultural Resources Law Conference in Minneapolis on 10/19/15
- attended MHS meeting at Ft. Snelling concerning planning for new Ft. Snelling interpretive center on 10/29/15
- attended the Gales of November shipwreck meetings in Duluth 11/6-8/15.

OSA assistant Bruce Koenen made the following 2015 professional appearances:

- participated in Archaeology Day at Kathio State Park on 10/4/14
- presentation at the Council for Minnesota Archaeology symposium in St. Cloud on 2/12-14/15
- attended the Owatonna Artifact Show on 3/21/15
- attended the Pine City Knap-In on 6/26-27/15
- participated in Archaeology Day at Kathio State Park on 9/26/15
- helped organize and attended the Midwest Historical Archaeology Conference in Minneapolis on 10/9-10/15
- attended the Plains Anthropological Conference in Iowa City on 10/14-17/15
- attended the Midwest Archaeological Conference in Milwaukee 11/5-7/15

OSA Education 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 2015, he put on two flint-knapping workshops at Normandale Community College on 3/25/15 and 11/18/15. He also gave Normandale archaeology students a tour of the OSA office on 11/20/14. In 2015, Koenen taught five workshops on lithic analysis at the Ft. Snelling History Center on 2/26/15, 3/5/15, 3/19/15, 3/26/15, and 4/9/15.

The State Archaeologist continues to serve as an Instructor in the University of Minnesota Department of Anthropology. In 2015, 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 2015, the OSA had three interns. Julia Palmquist (University of Minnesota) assisted with pulling organic material from the Wilford site (21ML12) collection for radiocarbon dating. Kelsey Bartlett (Minnesota State Mankato) created a database of unnumbered burial sites. Andrew Lundeen (Normandale) did a variety of general office tasks.

Boards and Committees – The State Archaeologist serves on a number educational boards and committees. In 2015, 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 2015 included:

- Interview on Minnesota River Survey on Ortonville radio live on 9/4/14
- Interview on KARE 11 TV concerning abandoned cemeteries aired on 6/14/15
- Interview for Anoka Public Television on Anoka County sites 9/10/15

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 years. The Department of Administration granted special permission for the State Archaeologist to be partially reimbursed to attend the Plains Anthropological Society Conference and National Association of State Archaeologists Regional Meeting in Iowa City October 14-17, 2015. Assistant Bruce Koenen also attended this conference and the Midwest Archaeological Conference in Milwaukee November 5-7, 2015, paying his own way.

The State Archaeologist is a member of the National Association of State Archaeologists (NASA), the Plains Anthropology Conference, the Minnesota Archaeological Society, the Society for American Archaeology, the Archaeological Conservancy, and the American Institute of Archaeology. Any dues to these organizations are paid personally without state reimbursement.

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. 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.

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. In FY2014, Northern Bedrock completed a number of historic cemetery restorations, including the Sherwood Cemetery near Rushford, the Mount Hope Cemetery in Afton, and the Scandia Cemetery in Duluth. In 2015, the State Archaeologist continued to coordinate prospective historic cemetery restoration activities with Northern Bedrock.

MS 307.08 2015 Activities - The OSA took action on 22 major burial cases in FY 2015 and an additional 13 cases in the first half of FY 2016, for a total of 35 cases over the 18 month period. “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, an official boundary defined, and an official finding transmitted in writing 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.

When convenient, OSA makes an effort to re-check known burial sites and locations of reported but unthreatened possible burial sites. The known sites are usually sites that were originally documented in the distant past that have not been recently visited by archaeologists, sites where members of the public or archaeologists have reported a recent change of condition, or sites that have been involved with recent authentications or reviewed development projects. The conditions of the sites are described in a field notebook and the location photo-documented, but OSA does not revise existing site forms as these surveys are informal.

In FY 2015 and the first half of FY 2016, the State Archaeologist field examined 39 known site locations in 19 counties that did not require immediate OSA action. These sites are: 21AK11, 21AN183, 21CA37, 21CA147, 21CE16, 21CE28, 21CP64, 21DL1, 21DL2, 21DL14, 21DL68, 21GD15, 21GD17, 21GD26, 21GD42, 21GD213, 21GR19, 21HE3, 21HE6, 21HE12, 21HE14, 21HE15, 21HE17, 21HE20, 21HE29, 21HE393, 21HB46, 21IA6, 21IA58, 21KC3, 21ME1, 21ML110, 21ML128, 21OT13, 21OT130, 21PP2, 21PO1, Dundas Episcopal Cemetery in Rice County, and the Nerison Family Cemetery in Rock County.

The State Archaeologist also gets reports of possible graves and burial mounds that are not threatened, but people are curious about. When convenient, these locations are examined. In FY15, OSA looked at the following locations, which proved not to be mounds or graves: reported mound in Holyoke Park, Carleton County; reported mounds along CSAH 77 northwest of Gull Lake, Cass County; reported mound on Peninsula Road in Medicine Lake, Hennepin County; and a reported mound on Greenfield Road east of the Crow River in Hennepin County.

Of the 35 major burial cases in FY 2015 and the first half of FY 2016, all involved some OSA fieldwork and 12 resulted in formal authentication. Authentication involves four steps:

- 1) determining if the site is indeed a burial ground;
- 2) defining the limits of a 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 2015 and FY 2016 major cases are discussed below in alphabetical order by county. Six (6) of the cases resulted in the discovery of previously unrecorded burial sites. Twenty three (23) of the cases involved Indian burials and 12 involved non-Indian burials.

MS 307.08 Major OSA Actions – 2015

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 south side of the highway. Koenen documented 57 mounds, noting two mounds in the middle of the group not shown on the 1971 MHS map.

The State Archaeologist returned to the Malmo site on 7/16/14 to examine the two “new” mounds noted by Koenen, to take additional measurements for authentication purposes, to note the conditions of previously recorded mounds south of Trunk Highway 18, and to examine the bulldozed surface of the area east of the mapped mounds. He also had a discussion with the landowner’s son with regard to what could and couldn’t be done at the site. An official burial authentication letter was issued on 7/23/14. A further re-check of the site was done on 11/6/15 to make sure the restrictions noted in the authentication letter were being followed.

Stratton Family Cemetery – Condition Assessment, Blue Earth County

In April 2015, OSA received an email from a member of the Stratton family who was concerned about cattle knocking over headstones in her family cemetery northeast of Good Thunder in Blue Earth County. The State Archaeologist visited the location on 6/11/15, first talking to the landowner who said the cemetery had been recently fenced by the Stratton family to prevent cattle intrusion. Field examination confirmed this, and while the cemetery had suffered some damage from the cattle, it is currently stable.



Report of Possible Threatened Grave – Beardsley, Big Stone County

In July 2014, the Big Stone County Recorder emailed the State Archaeologist about a possible grave in the city of Beardsley that may be threatened by a building expansion. The State Archaeologist visited the location on 8/22/14. At the location was a horizontal limestone slab in a grassy area with “K Albert, Beardsley 1906” carved in it along with a cross that appeared to be upside-down. Soil probes could find no evidence for a grave. The limestone was very crudely carved, like something a child would do. It was concluded that no human grave was present.

21CA147 – Re-zoning Affecting Mounds, City of Lake Shore, Cass County

On October 7, 2013, the City of Lake Shore contacted OSA regarding the re-zoning of 4 lots in the plat of Marsh Vista near the northeast shore of Gull Lake. This mound group had been originally reported in 1984 by archaeologist Douglas Birk during a private contract survey for the Army Corps of Engineers. Birk mapped 10 mounds and the remnants of a logging railroad grade. Some of the evident mounds and possible other mounds were probably affected by the 1892 construction of the railroad. In 1984, there were two residences, three outbuildings, and several entrance roads within the mound group. The State Archaeologist sent the City of Lake Shore a copy of Birk’s map and report, noting that the site had never been officially authenticated by the State Archaeologist per MS 307.08 and that no disturbances were permitted within 20 feet of any mound.

On 4/30/14, the State Archaeologist talked to the landowner who wanted to develop the two southernmost lots on the east side of CSAH 77. Only one mound had been mapped by Birk

east of the county road and this was Mound 1 at the north end of the plat. This mound was still clearly visible using LiDAR and no other mounds were visible east of the road. The landowner was given verbal permission to develop the two non-mound lots.

On 7/17/14, the State Archaeologist visited 21CA147 to assess the current condition of mounds. East of CSAH 77, Mound 1 was still in good shape in a wooded area. West of CSAH 77, there was a large new residence and entrance road at the southern edge of the site, which had apparently destroyed most or all of Mound 10. Mound 8 was not clearly visible, but there was no obvious development at the location. All other mounds were in approximately the same condition as that mapped by Birk in 1984. No development had taken place on the lots east of CSAH 77, south of Mound 1. The location was revisited on 11/5/15 and there was no change in condition.

21CA770 – Burial Impacted by Residential Construction, Cass County

On 9/30/15, the Cass County sheriff called the State Archaeologist to report the possible disturbance of a grave during excavation for a new residence in a development on the west side of Lake Margaret. By the time the sheriff had arrived, the excavation had been backfilled. A single mandible missing the incisors was given to the sheriff by the construction workers. The sheriff gave the mandible to the medical examiner, who then transferred it to Susan Myster, the forensic anthropologist at Hamline University upon determining that the bone was very old. The lack of incisors makes it difficult to determine if the bone is Indian or non-Indian, but it is assumed to be Indian due to the location and condition of the bone.

The State Archaeologist immediately contacted Jim Jones of MIAC. Jones subsequently visited the site, although the results of his field visit have not been reported to OSA. The State Archaeologist visited the location on 11/5/15. By then, the house construction was almost complete and a different set of workmen were at the site; none of these workmen knew anything about the burial so it was impossible to determine the exact location of the find within the footprint of the house. The State Archaeologist walked the disturbed ground in the vicinity, but could find no bone or artifacts. The burial was assigned the site number 21CA770. Authentication awaits a more exact description of the burial location.

Mills Family Cemetery – Proposed Sale of Property, Crow Wing County

On 6/23/14, the State Archaeologist was contacted by an official with Crow Wing County to report a possible unrecorded cemetery on the west side of Lower Mission Lake. The cemetery was reported by Burle Foote who said it belonged to his relatives in the Mills family and originally contained three individuals, all infants. The State Archaeologist contacted Mr. Foote who said the area was threatened by development. Foote had marked the area where he thought the graves were located, apparently without the permission of the land owner.

The State Archaeologist met the land owner at the location on 7/16/14. Based on historic records and lot boundaries, it was apparent that Mr. Foote's location was in error and the

actual location was at least 100 feet to the north and east in a wooded area near a terrace edge. Although there were no headstones or obvious depressions, which is not unusual for infant graves, based on historical records the State Archaeologist officially authenticated a 50' by 90' area as a burial ground. Because infant graves are so difficult to relocate due to the size of the graves and fragility of the bones, no attempt was made to do soil coring during the State Archaeologist's field visit. There is a small possibility that remote sensing could relocate exact grave locations. An official burial authentication letter was sent to the landowner and Crow Wing County on 8/13/14.

21DK101 – Accidental Discovery of an Unmarked Burial in Hastings, Dakota County

On 8/5/14, construction workers excavating footings for a commercial building sign in Hastings, uncovered a human remains. The Hastings police contacted the medical examiner who contacted Susan Myster at Hamline University. Myster dispatched an archaeological crew to examine the site. They determined that remains appeared to have been in a coffin so the remains were probably not Indian. Myster then contacted the State Archaeologist, although by then all remains had been removed from the site by the Hamline archaeologists under the direction of Myster.

The State Archaeologist visited the location on 8/7/14. The excavation location was still open and the grave location was apparent, but no additional remains or artifacts were evident. Based on the coffin parts, the grave may date to the mid-19th century. Based on a preliminary examination of the remains, it appears to be middle aged woman. Myster is still examining the remains, although there has been pressure from individuals in Hastings to do a reburial in a local cemetery. Without a tentative identification of the person or her religious/ethnic identification, in the opinion of the State Archaeologist, it would be inappropriate to do a reburial until all avenues of investigation have been examined in an attempt to identify the individual. Michelle Terrell of Two Pines has assisted OSA with trying to identify the burial. Terrell determined that the burial most likely pre-dates 1856.

21DL68 – Proposed Sale of Property, Douglas County

In 2003, the OSA investigated a burial mound group, 21DL68, associated with a residential development called Heaven in the Woods (originally Whimsical Woods). The group consists of 12 mounds and was originally mapped in 1981. Two (2) of the mounds were south of County Road 120 and the remained were north of the road. The Heaven oin the Woods development was restricted to the area north of the county road. In response to the proposed development, OSA in 2003 suggested a 20-foot buffer around the individual mounds be maintained for the northern mounds, but no site limits were officially defined at that time.

At the request of the landowner due to a Douglas County requirement that the mounds be fenced, the State Archaeologist visited the site on August 12, 2006. Based on this visit and previous OSA work, burial ground limits were officially established by utilizing a 20-foot buffer around the outer mounds in two separate groupings within the development. The landowner was given a map of the officially authenticated boundaries and told that there was not a requirement that these areas be fenced as long as they were avoided by any

development. This only applied to the mounds north of the county road and not the two mounds to the south, which were not closely examined in 2006.

On 8/11/14, one of the landowners on the southern part of 21DL68 called the State Archaeologist because they were selling the property and wanted an official authentication of the mounds on their property. On 8/14/14, the State Archaeologist visited the location and mapped the two mounds with respect to the existing buildings and property lines. The two mounds were partial split by a north-south lot line so the official authentication letter issued on 8/19/14 was sent to both landowners. A 20-foot buffer was established around the mounds for the burial ground limits.

The State Archaeologist also re-examined the northern group of mounds in 21DL68, and although a new residence had been built just north of these mounds, there had been no apparent intrusion into the burial ground limits established in 2006. Also in August 2015, the State Archaeologist reviewed a proposed upgrade of a natural gas pipeline through the area, but there were no impacts to site 21DL68 or vicinity sites 21DL66, 21DL67, or 21DL84.

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 superficially 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 in 2006 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 and was completed for the majority of the area on July 29, 2014, although a small area along the western edge could not be graded at that time. Bruce Koenen

of OSA returned to the site on 10/2/14 to complete the monitoring and was told that there would be a water storage feature added at the north end of the project in an area not previously surveyed.

The State Archaeologist recommended additional survey for the water storage area and this was completed by Kathy Stevenson of MVAC on October 23, 2014. No burial features, bone, or artifacts were recovered, but OSA recommended monitoring of any construction in this area. The monitoring was completed by MVAC November 24-25, 2014. Once again nothing was found. The State Archaeologist visited the site multiple times over the following year to photo-document the construction. Overall, no burial features were found by all of the testing and monitoring on the Capitol Safety expansion during FY 13, FY 14 and FY 15.

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 were done by Dr. Dean and her students in the fall of 2014 and the spring of 2015, but no final report has been received by OSA regarding this work. This work has received considerable media attention. The OSA is continuing to assist the Boerner family and Grant County with establishment of permanent boundaries for the cemetery and with maintaining access for the Boerner family.

Grave Authentication – Headstone Located in City of Herman, Grant County

In early October 2014, the Grant County Recorder contacted the State Archaeologist concerning a headstone located on tax forfeit property in the city of Herman. The county was planning to sell the property and wanted to know any restrictions that should be passed on to prospective buyers. On 10/11/14, the State Archaeologist visited the location. Soil probes suggested that there was indeed a small grave associated with the headstone. The county was informed by email on 10/14/14 that a five foot burial ground boundary has been established around the headstone and all prospective buyers should be made aware of this. No disturbances are permitted within this boundary without the permission of the State Archaeologist.

21HE27 – County Road 101 Reconstruction in Minnetonka, Hennepin County

In January 2008, the State Archaeologist met with Hennepin County Highway and URS personnel to discuss the reconstruction of County Road 101 in Minnetonka. The project included a traffic circle to replace a very dangerous curve. The traffic circle area was within the westernmost limits of 21HE27, a prehistoric burial mound site initially mapped by archaeological surveyor T.H. Lewis in 1883. The mound group as recorded by Lewis consisted of 52 mounds extending for a quarter mile east-west on the south side of Gray's Bay near the east end of Lake Minnetonka in the city of Minnetonka. The project area included where Lewis Mounds 1-11 had been mapped.

In response to the proposed County Road 101 upgrade, OSA personnel first conducted a detailed literature review of the 21HE27 area, including an analysis of land use change as evidenced on historical aerial photographs. Major damage to the southern portion of the mound site occurred in the 1890s when the Chicago, Milwaukee, and St. Paul Railroad excavated a deep trench for the rail line. A depot was then built at the west end of the mound site. With the construction of the first Gray's Bay Bridge in 1920, the local road network was upgraded including what is now Co Rd 101.

The earliest aerial photograph of the area is from 1937, which shows the southern part of the mound area in agricultural fields and the northern part in low density residential. The railroad corridor and the existing alignment of the county road are clearly visible. The depot is gone, but a house is present within the project area on the crest of the hill at the approximate location of Lewis Mound 5, along with an apparent outbuilding (garage?) present at the approximate location of Lewis Mound 4. There is little different on the 1940 aerial, but by the 1945 aerial, additional building construction is evident in the southern part of the mound area. By the 1953 aerial, residential construction has become extensive in the 21HE27 area.

The literature search clearly documented that over the last 140 years, the 21HE27 mounds had been extensively impacted by road, railroad, utility, and residential construction. A Minnesota Historical Society (MHS) survey in 1972 noted "some" mounds remaining, but this may have been a reference to five mounds slightly further to the east, part of a separate mound group now known as 21HE265. In 1986, MHS Trunk Highway Archaeologist Les Peterson reconstructed the Lewis mound locations on a modern map of the area when the current County Road 101 was Trunk Highway 101, but he did not undertake a detailed field survey to relocate any mounds. In August 2000, Office of the State Archaeologist (OSA) staff monitored the widening of Trunk Highway 101 adjacent to 21HE27, but did not find any mounds or human remains in the construction area. OSA staff did not examine the site as a whole outside the highway project limits.

OSA personnel field examined the area of the proposed county highway construction in April 2008, but could see no obvious remnants of mounds in the proposed construction area. Hand-pushed soils cores in approximate original mound locations within the project area were inconclusive as to the survival of mound fill or burial pits. The State Archaeologist recommended that an experienced private archaeological contractor be hired by Hennepin County to complete intensive testing in the proposed construction limits within the mound area mapped by Lewis.

The first phase of this testing was carried out in June and July 2008 by the Mississippi Valley Archaeological Center (MVAC) with Dr. Connie Arzigian as principal investigator. The OSA authentication license issued to Arzigian was co-signed by Jim Jones of MIAC, as stipulated in MS 307.08, Subd. 3a. The MVAC testing involved shovel tests, trenching, and 1x1 m units (see attached map). Arzigian's final report was completed on 5/25/09. The testing did not find any definitive prehistoric features or artifacts, but suggested that a few areas still contained partially intact soil horizons. OSA recommended additional testing of the areas with the most potential prior to construction. A copy of the Arzigian report was sent to Jim Jones of the Minnesota Indian Affairs Council (MIAC).

In May 2010, MIAC hired Grant Goltz to undertake hand-pushed soil coring of the development area. The Goltz work was not coordinated with OSA. Goltz is not a qualified archaeologist under Minnesota law (MS 138.31, Subd. 10) and thus cannot receive an MS 138 license, although he does have extensive experience in examining soils at mound sites. Goltz completed a rough draft report of his work in early June 2010 for MIAC. Hennepin County provided OSA with a copy of the report. The Goltz report did not include a map showing where soil coring was done, although it did contain a rough sketch map depicting alternatives for possible mound locations in the project area based on Lewis measurements.

In the text, Goltz concluded that mound remnants still existed in the original Lewis-mapped locations in the eastern part of the Area of Potential Effect (APE). OSA review of the draft report indicated Goltz's mound reconstructions were 50' off east-west due to his use of a poor quality photocopy of the Lewis notes; the Lewis notes state that a benchmark mound center was "307 feet east of the section corner," but Goltz had read 357 feet. In addition, Goltz was at least 15 feet off north-south due to an improperly located section corner.

Because of the measurement inaccuracies in the Goltz report and the documentation of some intact soils in the Arzigian report, on 6/17/09 in a meeting at Hennepin County offices, OSA recommended that Hennepin County either avoid the eastern project area or obtain another opinion from a qualified geoarchaeologist. OSA stressed at that meeting that even if additional survey failed to find evidence for burials at the site and OSA issued a negative authentication finding under MS 307, human remains could still be uncovered during construction. Should this occur, MIAC would have management authority over the remains and may not let the remains be removed or the project to proceed as designed.

In August 2010, Hennepin County hired Dr. Michael Kolb, an archaeologist and highly experienced geomorphologist, to further investigate the possibility of mound and burial feature survival in the Co Rd 101 APE at 21HE27. The OSA authentication license issued to Kolb was sent to Jim Jones of MIAC for his co-signature. Kolb used a truck-mounted 3" soil corer, excavating close interval (2.5 m) cores along two transects through the proposed construction area; a total of 45 cores were extracted and analyzed. Like the 2009 MVAC examination, Kolb could find no evidence for any surviving mound fill, burial pits, human bone, or artifacts, although patches of truncated original soil still appeared to exist near the eastern edge of the project area. A copy of the Kolb report was sent to Jim Jones of MIAC, but Jones did not comment to OSA or Hennepin County on the Kolb observations.

Following the Kolb survey, OSA concluded that over the last century and a half, intensive transportation and residential-related development had probably destroyed or severely disturbed all mounds and burials in the project area, significantly modifying the soils. Landscaping, major construction and demolition episodes, garbage disposal, sewage lines, soil stockpiling, utilities, gardening, pets, building construction, and just day to day residential activities had all served to extensively alter the soils and adversely impact the mounds and any burials within them. Identifying small remnant features or fragmentary human remains that might be related to the prehistoric earthworks was nearly impossible without complete removal of the topsoil, a procedure that MIAC has historically strongly

opposed as a burial discovery method. The two OSA-required professional archeological surveys had intensively sampled the project area consistent with standard archaeological practice, but could not examine the entire sub-surface.

Based on the findings of the Arzigian and Kolb survey and considering the major mapping errors of the Goltz survey, OSA had no evidence to support the survival of intact human burials within the APE of the proposed Co Rd 101 roundabout. While the Co Rd 101 roundabout was clearly within what once was a burial mound area, MS 307.08, Subd. 13 states that a burial area must "contain or have high potential to contain human remains" in order to receive the protection of the Private Cemeteries Act. Due to extensive disturbances over the last century and a half, OSA could not authenticate a burial ground within the Co Rd 101 project area.

On December 21, 2010, the State Archaeologist issued a negative authentication letter to Hennepin County. In the letter, the county was cautioned that all former burial areas should be treated with care. OSA recommended that all surface soils should be carefully stripped off the mound vicinity construction area and that this stripping be monitored by a qualified archaeologist approved by the State Archaeologist. The letter also recommended careful consultation with the Minnesota Indian Affairs Council (MIAC) to make sure all their concerns had been adequately addressed. Jim Jones of MIAC was copied on the OSA finding letter, but once again made no comment to either OSA or Hennepin County. Thus it was assumed that MIAC did not object to the negative OSA authentication or the completion of the proposed Co Rd 101 construction.

Between the issuance of the OSA negative authentication letter in December 2010 and the start of construction on the Co Rd 101 project in October 2014, a new mound discovery technology, LiDAR, became available to OSA. In 2013, the University of Iowa completed a detailed LiDAR analysis of 21HE27 for OSA. This analysis could find no evidence for any mounds surviving in the Co Rd 101 project area. OSA conducted an additional review of LiDAR data in early 2014 when a DNR-provided LiDAR viewer became available. This analysis too showed no LiDAR-detected mounds in the project area.

Construction finally started on the Co Rd 101 project in the fall of 2014. Hennepin County hired Scott Buskey, an archaeologist with URS, to monitor the grading in the vicinity of the mound area. Grading in this area started on October 1, 2014 with Buskey providing periodic verbal updates to OSA. Topsoil removal began at the west end of the project and gradually moved east, with Buskey walking behind each pass of the bulldozer examining the ground for artifacts, bone, or possible prehistoric features. There was some interruption of progress due to bad weather.

On Saturday, October 11, 2014 Buskey called OSA to report a few small fragments of bone being found near the east end of the project area on what was to be the last day of topsoil removal. OSA required all construction in this area to cease and the bone fragments to be covered. OSA then notified MIAC. Jim Jones agreed to meet OSA personnel at the site the following Monday morning.

On Monday October 13, Scott Anfinson, Bruce Koenen, Scott Buskey, Jim Jones, Melissa Cerida (MIAC assistant), and Leonard Wabasha (Shakopee Dakota) met at the site. Buskey showed the group the bones, which were approximately quarter-sized and possibly from a mammal skull; none were clearly recognizable as human and all showed evidence of pre-construction breakage. OSA personnel assisted by Cerida and Buskey cleared off the area of the find with trowels and careful shovel skimming. The vague soil feature located in the area of the bone find was filled with recent fish bone and gopher bones suggested a recent trash pit for burying fish cleaning remnants. A few more non-gopher mammal bone fragments were also recovered, but none were obviously human and no clearly identifiable burial pit or mound fill was evident.

As the shallow excavation moved to the southeast of the original find, a human tooth was found, the first clearly recognizable human element. Further excavation was halted. A careful surface reconnaissance was made, yielding a few additional small fragments of bone in the most recent bulldozer tracks and following the tracks unto the large backdirt spoil pile at the southeast edge of the project area. The original find area was covered with a tarp and dirt. Following standard MS 307 procedure, the OSA turned over management of the construction area to Jim Jones and MIAC due the presence of the human tooth, a possible remnant of a burial pit, and the fact that an Indian-related mound site once existed at the location. OSA personnel then left the site. On 1/9/15 Buskey provided OSA with a summary of his activities at 21HE27 that included a map showing the area of the bone find and reconstructed mound locations. Based on Buskey's map, the find area was in the approximate center of Mound 4.

Although no reports have been provided to OSA by MIAC since October 13, 2014, OSA-initiated emails with Brian Hoffman, an archaeologist at Hamline University, have provided limited information as to continued archaeological work at the site. The project is on public land and thus subject to MS 138 as well as MS 307. MIAC brought Hoffman and his Hamline crew to the site beginning on October 29, 2014 and again on November 11, 2014 to do a thorough surface collection of the site. A few more small fragments of bone were recovered, but no prehistoric artifacts or features were noted. Inclement weather then prevented additional archaeological work in 2014.

On October 21, 2014, Chairman Charlie Vig of the Shakopee Mdewakanton Sioux Community wrote a letter to Jim Jones of MIAC that was harshly critical of OSA and Hennepin County actions. It stated that the Goltz report "was summarily dismissed by the State Archaeologist." No mention was made of the subsequent Kolb report, the detailed OSA finding letter, and the archaeological construction monitoring required by the State Archaeologist. Neither OSA nor Hennepin County was copied on the Vig letter. Jones forwarded a copy to Hennepin County, but not OSA. Hennepin County then forwarded a copy of the Vig letter to OSA on 10/30/14 and requested a meeting with OSA to discuss options for the Co Rd 101 project in light of the letter and MS 307 requirements.

OSA personnel met with Hennepin County highway personnel on 11/13/14. At the meeting, OSA encouraged Hennepin County to re-design the traffic circle to avoid the area of the bone find and that a proposed trail adjacent to the roadway in the mound area be moved to the south. The traffic circle re-design would require the project be moved only about 20 feet

west. OSA also recommended in the area immediately west and south of the bone find that remained in the project area and had not been graded to subsoil, should be carefully skimmed by an archaeologist. At the meeting, the chief engineer was resistant to any alterations of the project design and wanted any remaining *in situ* bone to be removed and reburied at the margin of the project. OSA informed him that MIAC would likely reject that alternative, but the decision was MIAC's to make.

On January 21, 2015, State Archaeologist Scott Anfinson met with Ed Fairbanks, the newly-hired MnDOT Tribal Liaison. Anfinson has known Fairbanks since the late 1970s when Fairbanks was the conservation officer at Leech Lake Reservation. After leaving Leech Lake employment in the early 1980s, Fairbanks had worked for the BIA and the EPA. Fairbanks volunteered to help find a solution to the Co Rd 101 project that was acceptable to all parties. The State Archaeologist then contacted Hennepin County to encourage them to work with Fairbanks prior to meeting with MIAC. Hennepin County met with Fairbanks on 2/4/15. Hennepin County then met with Jim Jones of MIAC on 2/11/15.

OSA has been given no details as to what was discussed at the MIAC-Hennepin County meeting, but it became apparent that MIAC would not allow any additional disturbance of the bone find area, requiring a re-design of the traffic circle. Anfinson briefly met with Jim Jones at the Council for Minnesota Archaeology (CMA) meeting in St. Cloud on February 14, 2015 and Jones confirmed that project re-design was necessary.

On February 26, 2015, Jones emailed the State Archaeologist requesting that he appear at the MIAC Board meeting at Mystic Lake on March 5. Anfinson agreed. When he appeared at the MIAC Board meeting along with Jones, the State Archaeologist was asked a few questions, but none of the board members appeared overly upset as to what had occurred at the Co Rd 101 project and no criticism was made of the OSA role.

In February and March 2015, there was some media interest in the Co Rd 101 project. A story appeared in the *Minneapolis Star Tribune* on 2/15/15, on MPR in late March, and on KSTP television news on 3/30/15. The State Archaeologist was extensively quoted in the *Star Tribune* story as was Jones of MIAC. An additional story appeared in the *Star Tribune* on May 14 following a news conference sponsored by MIAC at the site. OSA was not invited to appear at this news conference and was not interviewed for the story, although a follow-up interview by the *Star Tribune* reporter provided a few quotes from the State Archaeologist in the on-line version of the story.

In mid-May 2015, a Hamline-MIAC archaeological crew resumed work at 21HE27. OSA was not informed by MIAC as to when work at the site was initiated and has been provided no official reports of the results of the work from MIAC. According to OSA-initiated personal communications with Brian Hoffman, the archaeologist at Hamline University helping to direct the work, a few additional bone fragments were found on the surface and in the ground at the original bone find area near the east end of the project. There may also be a burial-related feature farther north and east of the original bone find, but this is in the area where no mound is recorded.

Apparently, no prehistoric artifacts have been found anywhere on the site and no *in situ* burials have been found west of the original bone find. Thus human remains have only been found *in situ* near the very northeast edge of the project area and also perhaps outside of the original project area. MIAC screened the entire very large backdirt pile, although OSA suspected that fragmentary human remains were limited to the northern surface. Hennepin County has been billed for these costs. OSA has not been informed if any human bone was documented deeper in the backdirt pile. OSA has requested a status report from Hamline University per MS 138 licensing requirements, but that report has not been received as of yet.

In summary, the following points are stressed with regard to the Hennepin County Co Rd 101 project, OSA actions, and impacts to site 21HE27:

- 1) OSA is committed to protecting burials of all types in Minnesota and the evidence of that commitment is extensively documented in the last 10 years of OSA Annual Reports. The Co Rd 101 project was the first time in the tenure of the current State Archaeologist that human bone has been encountered on a project subject to preconstruction OSA review. The OSA typically has 30 major burial cases each year including 10 formal authentications, of which about half are negative.
- 2) All Minnesota State Archaeologists have issued numerous negative authentication findings for areas that once contained burial mounds. These findings have been based on land-use history, current conditions, and rigorous archaeological surveys much like the ones conducted for OSA on the Co Rd 101 project.
- 3) OSA and Hennepin County did due diligence to prevent the disturbance of burials on the Co Rd 101 project, sponsoring two full archaeological surveys, undertaking LiDAR analysis, and requiring archaeological monitoring of the construction. The pre-construction surveys could not see the entire sub-surface, but only a scientific sampling of the construction zone. This extensive sampling suggested there were no intact mounds or burial pits. This finding has apparently been confirmed by the recent archaeological work undertaken by MIAC and Hamline University.
- 4) No significant harm was done to intact human burials by the Co Rd 101 project as construction was stopped immediately when possible human bone was encountered. No intact mounds or intact burials were harmed by the project.
- 5) MIAC was sent copies of all final reports for surveys commissioned by OSA and was copied on the final negative authentication finding letter issued to Hennepin County almost four years prior to the initiation of any construction on the Co Rd 101 project. If MIAC objected to the project being built as originally designed or disagreed with OSA conclusions, they had plenty of time to offer their opinion after receiving the final survey report (Kolb) and the OSA finding letter.
- 6) MIAC has not asked for any OSA assistance at 21HE27 since the original find of a few pieces of bone in October 2014. MIAC has not informed the OSA as to the results of their activities taking place at 21HE27. Some brief reporting has been done by Hamline University in accordance with MS 138 licensing requirements.

Highway construction was finally re-started in the curve vicinity in October 2015 after a year of delay. Additional work by MIAC at the site is apparently planned for 2016. This work is subject to MS 138 licensing requirements.

21HE65 – Authentication Request, Hennepin County

In 1883, T. H. Lewis mapped 18 mounds on the north shore of Cooks Bay on Lake Minnetonka in the city of Mound. This mound group was later assigned the state number of 21HE65 and is named the Bartlett Mounds after a 19th century resort that was on the property. The road north of the site is still known as Bartlett Boulevard.

Over the last 120 years, the area has been subjected to intensive residential development. Only four mounds (1, 6, 10, 15) are clearly visible today, although sub-surface burial pits and remnants of mound fill may still exist at some of the mound locations not clearly visible. The current State Archaeologist has previously dealt with development and authentication issues regarding Mounds 1-4 (see 2006 Annual Report) and Mound 15 (see 2009 Annual Report).

In late November 2015, the State Archaeologist got an authentication request from the landowner of the lot containing 21HE65 Mounds 4-8 as the property was for sale. OSA fieldwork for the authentication was done on December 8 and December 10, 2015. Of the five mounds potential on the lot, only one (Mound 6) was clearly visible, located between the house and Bartlett Boulevard. This mound was originally 40 feet in diameter and 5 feet high. Using pink pin flags, OSA staff marked a boundary approximately 5 feet from the south, west and north edges of the mound. On the east side, the mound would have come even with the west wall of the garage, but a builder's trench appears to have cut into the mound by at least two feet so the eastern limits of the mound were set at 2 feet west of the garage.

Most of Mound 7 (36'x3.5') north of Mound 6 has been destroyed by the road and the garage entrance, although some intact soils may exist along the southern edge of the mound just prior to the steep cut that descends to Bartlett Blvd. Mound 5 (26'x4') just southwest of Mound 6 has been completely destroyed by the construction of the house. Mound 4 (32'x2.5') and Mound 8 (32'x2') were at the southeast and southwest corners of the lot respectively and are largely contained on adjacent lots. Most of Mound 4 and part of Mound 8 appear to have been destroyed by lake shore grading and erosion, but OSA was unable to confirm total destruction and sub-surface burial pits could still exist. Because the locations of Mound 4 and 8 appear to fall within setbacks from the lake and from the lot lines, they are probably not threatened by any development.

An official authentication per MS 307.08 was issued to the landowner by the State Archaeologist on December 16, 2015 with copies going to MIAC and the City of Mound. In this letter, the landowner was told to avoid any disturbances within the area defined for Mound 6 unless MIAC permission was granted and also cautioned that any proposed disturbances in the immediate vicinity of the original locations of Mounds 4, 7, and 8 would have to be reviewed by OSA.

McMillan Burial Site (21HE98) – Proposed Development in Wayzata, Minnesota

In September 2014, a landowner in Wayzata called the Minnesota Historical Society concerned about a proposed development that might affect a known Indian burial site known as the McMillan site (21HE98). This site had been accidentally discovered in 1964 when the

McMillan family (of Cargill fame) was building an addition to their house on a high terrace overlooking a wetland north of Lake Minnetonka. The University of Minnesota sent graduate student Kent Day to investigate the site. Day excavated the exposed burial pit, although it had been severely disturbed by the construction work. Day could find no evidence of a mound, but the landowner reported in a newspaper account that he may have levelled a mound to smooth out his lawn.

The University recovered the remains of at least 17 individuals including 13 under the age of 18. It was interpreted as a single burial event. The individuals may have died a violent death as there was a stone triangular projectile point embedded in a vertebra and some of the skulls showed evidence of cut marks. No other artifacts were found, but the triangular projectile point suggests a Late Prehistoric affiliation. Most of the remains in the University collections were repatriated to MIAC and apparently reburied in the late 1990s in accordance with NAGPRA. The McMillan family apparently kept some of the remains as documented by a Trunk Highway archaeological survey crew in 1993 who were examining the reconstruction of Trunk Highway 12. There was no State Archaeologist at the time. The vertebra with the projectile point was not in the human remains inventoried in 1998 by Hamline University prior to MIAC reburial.

The State Archaeologist visited the location on 9/16/14, first discussing the site with the landowner across the street who had reported the proposed development. The McMillan house was very extensive and appeared to have several additions; no one was living in it in the fall of 2014. It was clear that the original burial pit excavated by the University of Minnesota in 1964 had been completely destroyed. No other mound-like features were visually apparent on the property and LiDAR analysis also indicated no surviving mounds.

On 10/15/14, the State Archaeologist wrote a letter to the City of Wayzata, officially informing the city of the original burial located there, but also stating that there was no evidence for authenticating the site as a burial ground because the only known burial feature had been completely removed in the early 1960s. The State Archaeologist recommended that the entire parcel be archaeologically surveyed prior to any development in case unknown burials still existing outside already disturbed areas. MIAC was copied on the letter. Subsequent visits to the site by the State Archaeologist on 11/5/14, 4/16/15, and 10/21/15 indicated no development has taken place.

Boucher Farm Cemetery – Proposed Development in Plymouth, Hennepin County

In August 2015, a resident of Plymouth who lives on Hamel Road called the State Archaeologist to report a possible historic cemetery that could be impacted by a proposed development. He stated that “the headstones had been pulled out several years ago.” An OSA literature search indicated the cemetery could be the Boucher Family Cemetery originally associated with a farm of the same name. Pope and Fee (1998: 67) note that “some of the burials” had been moved to St. Joseph Catholic Cemetery in Plymouth. A historic aerial photograph from 1947 indicates the land is farmed by then.

The State Archaeologist visited the location on 9/3/15. The land was in soy beans at the time. There was a development sign at the south edge of the field. A quick walkover of the bean field found no evidence for a cemetery at that location. This site should continue to be monitored by OSA.

Inadvertent Discovery of Human Skull – Eden Prairie, Hennepin County

Susan Myster of Hamline University called the State Archaeologist on 2/6/15 to report that a resident of Eden Prairie walking along the bluff just west of Trunk Highway 169 found a human skull near James Brown Park. The police had given the skull to the Hennepin County Medical Examiner and they had subsequently given it to Dr. Myster as it appeared quite old. The Medical Examiner's office also contacted the State Archaeologist and suggested they would do a DNA test to see if they could determine ethnic identity. No report on final analysis has been received from Hamline or Hennepin County. There is a possibility that the skull could be prehistoric Indian from either 21HE17 or 21HE24.

21HB57 – Possible Development Effects in Hubbard County

In January 2014, a resident of Hubbard County emailed the SHPO about the removal of fences protecting burial mounds at Beauty Lakes Estates east of Lake Itasca. The SHPO forwarded the message to the State Archaeologist. The Beauty Lakes Estates development was archaeologically surveyed by Soils Consulting in 2000. It involved no public land so no state archaeological license was required. The surveyors located three habitation sites (21HB53, 21HB54, 21HB55) and one possible burial mound (21HB57). 21HB53 was recommended as Not Eligible to the National Register. Sites 21HB54 and 21HB55 were the subject of a Phase 2 evaluation by Soils Consulting later in 2000; both sites were recommended as Eligible. The habitation site (21HB54) was protected by Outlot B and the possible mound site (21HB57) was protected by Outlot A. The Memorandum of Agreement (MOA) stipulates that the other habitation site (21HB55) would be impacted and would be the subject of a mitigation excavation. The OSA files have copies of the Phase 1 and Phase 2 reports for Beauty Lakes, but have no evidence that the Phase 3 was ever completed for 21HB55.

OSA staff visited the suspected mound location (21HB57) in 2000, but because the area was still undeveloped and heavily vegetated, they could not relocate the possible mound so the site was not officially authenticated. The State Archaeologist (Dudzik) was only peripherally involved in any of the negotiations regarding the development of the MOA or the Covenants. There is nothing in state law that requires the placement of permanent fences around burial mounds or other types of sites, but fences were required in the MOA and the Covenants and these documents have some legal standing. It is interesting that the role of the State Archaeologist outlined in the covenant was to authenticate any burials inadvertently disturbed by development in the non-protected areas. The need for the State Archaeologist to authenticate the possible mound was not mentioned.

The current State Archaeologist visited the 21HB57 location on 9/24/14. The possible mound was still protected by a wooden fence and there appeared to be no change in condition from

2000. The possible mound was very small, about five feet in diameter and one foot high. No soil probes were done, but it is unlikely that it is a prehistoric mound.

The 21HB55 site was also examined. The Soils Consulting investigators thought it to be a single component Paleoindian site and thus very important. According to the Beauty Lakes development sign, the lot (15) has been sold. There is a shed and a deer stand on the high terrace above the habitation site, but there have been no major disturbances to the site itself. If the site is to be impacted by development and a mitigation excavation is not done, the developer would be in violation of the MOA.

McKinstry Site (21KC2) – Efforts to Prevent ATV Damage, Koochiching County

In July 2013, MnDOT officials in Koochiching County alerted the MnDOT Cultural Resources Unit (CRU) about impacts to the McKinstry Mounds (21KC2) from all-terrain vehicles (ATV). Archaeologist Craig Johnson of MnDOT CRU passed this information on to the State Archaeologist. Most of McKinstry site had been purchased by MnDOT in 1993 as part of the mitigation for a new bridge on Trunk Highway 11 that was adversely impacting part of the habitation component of the McKinstry site.

In 2013, the State Archaeologist and MnDOT agreed that signs should be put up near the mounds to warn ATV riders that it was against the law to drive over the mounds. MnDOT implemented this in August 2013, placing several sign that cited Minnesota Statutes 307.08 and 138.31-.42. In September 2014, the State Archaeologist visited 21KC2 to determine if any additional damage had been done to the mounds since the MnDOT signs had been posted. There was no evidence for recent damage so the signs have been effective.

In November 2015, MnDOT requested that the State Archaeologist officially authenticate the McKinstry Mounds to facilitate MIAC and tribal consultation about their treatment and the possible transfer of ownership to MIAC. The State Archaeologist complied with the MnDOT request, issuing an authentication letter on 12/2/15. A 50-foot burial ground boundary was established around the mounds.

Grandview Cemetery – Possible Agricultural Disturbance near Ghent, Lyon County

In May 2014, a resident of Wells, Minnesota wrote the State Archaeologist concerning the possible disturbance of a historic cemetery just east of Ghent. He stated he used to live in the Ghent area and during a drive-by had noticed that the cemetery had been “tilled and planted.” A literature search by OSA indicated that a cemetery known as the Ghent or Grandview cemetery was located in the area according to Pope and Fee (1998:90).

The State Archaeologist visited the location on 8/14/14. The cemetery was still in good shape in a grassy field, although it was not being maintained. One headstone was upright and clearly visible during a walkover of the field; it was of a Civil War veteran. The former resident who reported the disturbance was mistaken in his location of the cemetery.

21ML110 – Proposed Land Purchase, Mille Lacs County

In July 2015, a person interested in purchasing several lake lots on Lake Mille Lacs in Wahkon contacted OSA by email about possible burials on the lots. The lots in question were at the location of 21ML110, a burial ground first recorded by Jacob Brower in 1900. Brower was making a circuit of Lake Mille on foot in the spring of 1900 and camped just north of “a distinct glacial ridge” that contained some small mounds. He mapped an Ojibwe village just west of the ridge with bark lodges and mounds next to each other.

The first modern archaeological examination of the area was in May 1990 when Grant Goltz of Soils Consulting mapped two mounds and four possible grave depressions on the ridge. An official with Mille Lacs Ojibwe Reservation contacted State Archaeologist Christy Hohman-Caine at the same time noting the ridge with possible burials was within the exterior boundaries of the reservation. The State Archaeologist did not officially authenticate the possible burial ground in 1990 or assign the location a state site number.

In August of 2001, a realtor contacted State Archaeologist Mark Dudzik about the location. Dudzik and his assistant Bruce Koenen visited the location in September 2001 and relocated the features noted by Goltz in 1990. Dudzik did not authenticate the site as a burial ground per MS 307.08 as the buyers at that time lost interest in the property, but an official site form was completed and the site was assigned the number 21ML110. OSA sent a copy of the site form to the City of Wahkon, which was their first official record of the site.

In June 2006, State Archaeologist Scott Anfinson visited the location at the request of the City of Wahkon, noting the features reported by previous investigators, but no official action was taken as there was once again no threat to the site. Anfinson again visited the site on 11/5/2015 in response to the 2015 realtor request. A new road had been cut through the ridge, but it was well east of the possible burial ground. There was excellent visibility so the features were photographed. The mounds are very small and are not obviously burial mounds. Several small depressions other than the ones near the mounds were also noted on the ridge. These could be due to many types of natural (e.g., tree falls) or cultural actions other than burials. Once again no official authentication was issued as there was no imminent threat to the site and an authentication would require a detailed geomorphological analysis of the area.

21OT202 – Landowner Request for Authentication, Otter Tail County

In early June 2015, a landowner on East Lost Lake in Otter Tail County contacted OSA with regards to a planned addition to her home that could affect possible burial mounds. OSA determined that no mounds had been previously recorded at the location. The State Archaeologist visited the location on 6/12/15. Two obvious burial mounds were indeed on the property, one oblong mound (30' x 50' x 3') well east of the planned construction and one circular mound (33' x 2.5') just north of the existing house. The site was mapped and photographed. The site was assigned the number 21OT202.

On 7/8/15, the State Archaeologist issued an official authentication per MS 307.08 via email to the landowner. A 10-foot buffer was established around each of the two mounds. A 10-

foot rather than 20-foot buffer was used because the mound north of the existing house was about 12 feet from the edge of the circular mound and the entrance road was within five feet of the oblong mound.

Possible Mound Site Damage - West Battle Lake, Otter Tail County

In the spring of 2014, a resident of Otter Tail County reported a possible construction threat to a burial mound on the south side of West Battle Lake north of Clitherall. No mounds were recorded at the location in OSA files. The State Archaeologist visited the location on 8/1/14. The "mound" area had been recently cleared of brush and trees by heavy machinery. There was a small, irregularly-shaped, flat-topped rise in the cleared area that did not look like an obvious burial mound. A walkover of the bare soil did not locate any artifacts, bone, or features. The rise was examined with a hand-pushed soil corer. The soil in the rise had an 80 cm deep, mottled appearance suggesting it was a recent fill pile. Adjacent soil off the rise had 40 cm of black top soil. A resident of the home immediately to the north was contacted and he said the soil was piled there several years ago to support a sign advertising the development. It is unlikely the location is a burial mound.

Pokegama Mission Cemetery (21PN104) – Inadvertent Disturbance, Pine County

On 10/13/14, Sue Myster of Hamline University called the State Archaeologist to report the disturbance of a burial ground on the east side of Pokegama Lake in Pine County. Skeletal remains of at least two individuals had been uncovered by the construction of a basement foundation under an existing cottage. The association of some square nails with the remains suggested that the burials were from the historic period. Although there was nothing clearly definitive of ethnic association, Myster suggested that slight flattening of the femora indicated that the remains might be Indian. All construction excavation was halted and MIAC was called in to examine the burial area.

A literature search suggested that the burial ground was associated with a Protestant mission for the Ojibwe that was established in 1836, but was abandoned in the late 1840s. The area then became a farm. It had never been examined for its archaeological potential, although several archaeologists have visited the location prior to the burials being disturbed and the location had been assigned the OSA alpha number of 21PNi.

The State Archaeologist visited the location on 11/6/14. There were three areas still exhibiting yellow boundary tape and recent hand excavation, but no human remains were evident. The areas had not been backfilled, but the foundation under the cabin had been completed. The area was photo-documented. The site was given the official number of 21PN104, although no definitive boundaries have been established other than the apparent locations of the burials. The State Archaeologist re-visited the site on 11/8/15, noting all construction had been completed and the area restored to a grass-covered yard. OSA has not received any updates or written reports concerning the 2014 MIAC investigations at the site or the ethnic identity or disposition of the human remains that were recovered.

21RO9 – Possible Impacts from Marina Development in Warroad, Roseau County

On 9/10/14, the State Archaeologist received a letter from Darrell Seki, the tribal chairman of the Red Lake Band of Chippewa Indians concerning a possible burial site near their new Seven Clans Casino in Warroad on land they would like to develop as a boat marina. In the 1930s, the director of the Roseau County Historical Society, P.O. Fryklund, reported to University of Minnesota archaeologists a “large cemetery” on the north side of the Warroad River and “a number of graves” on the south side of the river. Fryklund included a map showing the general locations of the cemeteries immediately adjacent to the river bank.

The cemeteries were given one official state site number (21RO9) by the University in the 1960s based on the Fryklund report, but no archaeologist has ever surveyed the southern burial location to look for the cemetery or any other type of cultural resources. The location of the new casino to the east of the possible burial ground was archaeologically surveyed by Soils Consulting in 2012, but the cemetery area was not examined. DNR currently owns the land containing most of the possible cemetery area. This area is mostly wooded, but contains a boat landing in the far southwest portion of the parcel.

The State Archaeologist visited the location on 9/25/14. The entire state-owned parcel (known as Parcel B) west of the casino parking lot was walked. No obvious features or markers were apparent indicating a burial ground. Three small soil cores were taken in this area to determine the soil properties. The soils appear to be basically a shallow silt loam with clay increasing with depth. The State Archaeologist also briefly visually examined the farmstead area to the south and west (known as Parcel C) that could also contain graves.

The State Archaeologist sent Chairman Seki a letter on 10/9/14 stating the following:

Relocating graves is often very difficult and requires intensive field work by experienced personnel. This is especially true in areas where actual grave locations are vaguely defined. On the low impact end, we have found that relying on small diameter soils cores or remote sensing alone are not fool-proof methods to relocate grave sites in informally defined cemeteries because there are so many forms of soil disturbance that can produce grave-like features (e.g., rodent borrows, tree falls). On the other hand, the most accurate and efficient method to relocate graves is the use of machine excavation either through complete removal of the top soil or extensive backhoe trenching. These machine methods can extensively disturb individual graves if they are indeed present and certainly create massive disturbance of a cemetery setting that can be very upsetting to many individuals and groups. We only use machine excavation if we are fairly certain that no graves exist in an area.

There are intermediate disturbance methods that are generally reliable to assess the potential of an area to contain burials. Close-interval shovel tests or close-interval machine drawn soil cores are the most common. There are also various kinds of electronic remote sensing that could be employed, but the method chosen would have to be appropriate to the soils and any suggested anomalies would have to be subjected to some form of soil excavation to confirm that they are indeed possible burials. The moderately dense woods would make any type of intensive archaeological examination of the wooded areas difficult and may require extensive tree removal.

Based on current funding and staffing, it was impossible for OSA to conduct the necessary intensive fieldwork in 2015 to determine if burials are present in the area defined as Parcel B. Although state law (MS 307.07, Subd. 3a) charges the State Archaeologist with the exclusive authority to authenticate burials on non-federal lands in Minnesota, it does not require that OSA carry out the authentication survey or pay for a qualified archaeologist to do such a survey. MS 307.08, Subd. 5 says “the state” is responsible for costs associated with authentication on private lands, but does not designate a fund for this work; thus it is basically an unfunded mandate. When an extensive survey is required on private land, OSA usually recommend that a private contract archaeologist be hired and that this person is paid by the developer or land owner. OSA must license any individual who is doing the authentication work and they must be a qualified archaeologist as defined in MS 307.08.

The state-owned parcel (B) has not been subjected to any intensive archaeological survey due to the possible presence of graves. Non-burial prehistoric and early historic archaeological materials have a high likelihood to exist in this area and, even if no cemetery is present. Impacts to this type of archaeological site must be carefully considered prior to any land exchange or development under MS 138. Comprehensive cultural resource survey of this parcel would have to be done by a DNR archaeologist or a licensed private contract archaeologist prior to any sale.

In order to move ahead with the marina project in a reasonable time-frame, the State Archaeologist made the following recommendations to Chair Seki with regard to the possible cemetery in both parcels adjacent to the Warroad casino and other potential types of archaeological sites on the state-owned parcel:

- 1) Minimize any disturbance to the possible cemetery area.
- 2) Hire a qualified private contract archaeologist to conduct a burial authentication survey of any proposed disturbances on both the private land (Parcel C) and the state-owned land (Parcel B).
- 3) Contact DNR with regard to any non-authentication surveys necessary for the state-owned land.

21SC24 – Possible Impacts from Buried Cable Installation, Scott County

On 10/1/15, Three Rivers Park District contacted OSA concerned the installation of a fiber-optic line to serve their headquarters building at the Landings in Scott County. Several options were proposed in consideration of possible impacts to burial mounds that once existed in the vicinity.

The project was within the limits of the 21SC24, a burial mound group first mapped by Theodore Lewis in 1882. The mound group originally consisted of 111 mounds. In 1940, the Department of Highways constructed Trunk Highway 101 through the southern portion of the mound group destroying numerous mounds, although the University of Minnesota excavated a few prior to destruction. In 1965, TH 101 was again upgraded and the University returned to the site to conduct salvage excavations on 17 mounds.

In 1967, work began on the Minnesota Valley Restoration Project that was later known as Murphy's Landing and is now known as The Landing. All of the surviving mounds were incorporated into the park area. Various projects on TH 101 and in The Landing over the next 40 years resulted in several archaeological surveys by the Trunk Highway program and private consultants. Some of these surveys have attempted to re-map the surviving mounds, although there are discrepancies between the maps. No mounds are still visible in the area of the proposed fiber optic cable and the entire area has been heavily disturbed by road construction and utility work.

On 10/2/15, the State Archaeologist visited the project location. Based on this visit, he recommended that Option B should be used rather than Option A. The ditch north of the frontage road was examined by the State Archaeologist and also the entrance to the office. Several hand-pushed soil cores were taken from the ditch bottom along the proposed cable route, finding about 12 inches of mottled (disturbed) soil followed by a dark yellow sand. The depth of the sand could not be determined as the probe could not penetrate deeper due to some gravel in the sand. The sandy-gravel layer is either the original C soil horizon or a fill layer added by road construction. The immediate area of the office is mainly parking lot so it could not be soil cored, but it is assumed that the area has been graded and filled to about the same depth as the ditch.

In an email to Three Rivers Park District on 10/12/15, the State Archaeologist recommended that if option B were to be used, the cable should be put in with a cable plow rather than ditched. This would cause minimal soil disturbance. OSA also recommended that the cable should be placed in the ditch bottom or in-slope rather than in the back slope or land along the ditch north of the backslope. It should be buried as shallow as possible, preferably less than 14 inches. If these measures are implemented, OSA concluded there should be no adverse impacts to site 21SC24. MIAC and the Shakopee Dakota Community were copied on the OSA 10/12/15 email.

Three Rivers subsequently hired archaeologist Steven Blondo to monitor the installation of the fiber optic cable. On 12/3/15, Three Rivers forwarded a letter report from Blondo noting that no burial features or archaeological remains were obviously disturbed by the project.

21SC30 – Burial Authentication Request Associated with Sand Mine, Scott County

In June 2015, the State Archaeologist received a letter report from Summit Envirosolutions describing the results of an archaeological survey in the vicinity of mound group 21CS29. The survey was done on behalf of a company that wanted to expand their sand mining operations in the vicinity. The mound site had been originally mapped by T.H. Lewis in 1889 and consisted of 22 mounds. A note in the OSA files from 10/15/1975 suggested that 17 of the mounds had been "destroyed by cultivation," while 5 others remained partially visible in a trail. LiDAR analysis conducted by Summit and OSA in 2015 prior to the field survey indicated that Lewis Mounds 1 and 8 were still obviously visible, although they were located southeast of the project area.

On 6/12/15, OSA's Bruce Koenen accompanied Summit personnel to the site. Using Mounds 1 and 8 as reference points, it was possible to reconstruct the locations of the other mounds mapped by Lewis in 1889. Only Lewis mounds 10-16 were within the proposed project area. None of the mounds in the project area were visible to the archaeological surveyors. Soil coring in the project area did not locate any obvious burial pits, but extended A soil horizons (mound fill?) seemed to be present at all the mound locations except Mound 11, which appears to have been destroyed by 19th century railroad grading.

Summit recommended a 50' buffer be established around the south, west, and north sides of the area containing Mounds 10, 12, 13, 14, 15, and 16 and extending to the base of the railroad cut on the east. This was established as the official cemetery boundary of this area of mound site 21SC29 by OSA email on 7/6/15.

21SH25 – Land Sale Authentication, Sherburne County

In August 2014, a realtor contacted the State Archaeologist about the possible sale of a property on Briggs Lake in Sherburne County that may contain burial mounds. A check of OSA files indicated that mounds were first recorded at that location by the University of Minnesota in 1981, but they were not mapped in detail at that time. An official site number 21SH25 was assigned to the site.

The State Archaeologist visited the location on 8/28/14 confirming the presence of the mounds. He returned on 11/6/14 to make a detailed map of the site for authentication purposes. The site consists of four mounds on two adjacent lots. Two of the mounds are split by the lot line. A note on the University of Minnesota site form states that five mounds were present in 1981, but only four mounds were photographed at that time so the "five" might be a typo. The cabin on the southern lot had partially intruded into the eastern edge of one large mound and a sidewalk on the north side of that cabin had intruded into the west side of a small mound.

In May of 1995, MIAC was contacted by the owner of the northern lot about the mounds on his property and by a letter dated 5/18/95 to that landowner, MIAC had established a 25-foot no disturbance buffer on that lot. This did not represent an official authentication per MS 307.08, as only the State Archaeologist can take that action. There was no map of the site attached to the MIAC letter in the OSA files.

On 11/17/14, official burial ground authentication letters per MS 307.08 were sent to both property owners along with sketch maps. A burial ground boundary was established with a 20-foot buffer around the exterior of the group excluding the existing cabin on the southern lot. Copies of the letters were sent to Sherburne County and MIAC.

In June of 2015, The State Archaeologist was contacted by Sherburne County about a septic system that had been built on the southern lot without a permit. The State Archaeologist visited the location on 6/24/15 and found no disturbance within the established burial ground buffer. A walkover of the disturbed soil yielded no artifacts or bone.

21TO23 – Development Threat to Historic Cemetery, Todd County

In August 2015, a resident of Todd County emailed the State Archaeologist about a possible threat to a historic cemetery on the northeast side of Sauk Lake. An RV park was proposed to be built next to the cemetery. The cemetery is known as the Lakeview or Dimond Family Cemetery. It was given the state site number of 21TO23 in 1999 after the same resident who contacted OSA in 2015, a member of the Dimond family, provided detailed information to OSA. At that time, the cemetery was brush covered and not being maintained.

The State Archaeologist visited the location on 8/6/15. It was during heavy rain, but the condition of the cemetery had not appreciably changed since 1999. There did not appear to be any imminent threats to the cemetery, but additional follow-up should be done in 2016.

Sale of Land Containing Possible Burials on Pine Island Lake, Todd County

In August 2015, an employee with Todd County Soil and Water Conservation contacted the State Archaeologist concerning a possible historic cemetery on a parcel of land that was for sale on Pine Island Lake. The possible cemetery had been reported to him by two local residents. A check of OSA files and other documentation could find no evidence for a cemetery at that location. The State Archaeologist visited the location on 8/6/15. The area in question was immediately adjacent to some old farm buildings and was sloping. There were no markers or surface features evidencing burials. It appeared to be an unlikely location for a cemetery, but additional follow-up literature search and survey in 2016 may be prudent.

21WD5 – Sale of Land and Timber Harvesting at Mound Site, Wadena County

In July 2015, a resident of Wadena County contacted the State Archaeologist about his intent to buy a parcel of land that contained a number of burial mounds. The area had considerable dead and down timber from a tornado that went through the area in 2011, and the prospective buyer wanted to remove this timber. The mound group (21WD5) had first been reported by University of Minnesota archaeologist Lloyd Wilford in 1945. He stated there were two elongated mounds in a wooded area east of a county road and two additional mounds in a cultivated field west of the road. Wilford noted that the western mounds were barely visible.

In July 1996, OSA staff visited the area to assure the mounds would not be disturbed by a proposed telephone cable. The area east of the road was densely wooded at that time and the former cultivated field to the west was in a pine plantation. No mounds were apparent immediately adjacent to the road so there was no threat from the cable installation. OSA staff did not relocate any of the mounds in 1996. In 2002, the site was visited by DNR Forestry archaeologist Patricia Emerson in response to a request from Potlatch Corporation. Emerson relocated the two eastern mounds and mapped them using a hand-held GPS. Emerson updated the site form in 2003.

The State Archaeologist visited the site on 8/6/15. The land east of the road was still in dense brush with some downed trees. The eastern mounds were relocated. There was very little downed timber on the mounds and no apparent damage to the mounds from the 2011 storm.

Colored pin flags were put in place around the south perimeters of both mounds. The proposed buyer was sent an email on 8/11/15 with a map showing the mound locations. He was asked to avoid disturbing the mounds if he bought the land and removed nearby timber.

21WA10 – Sewer Impacts to Mound Group, City of Afton, Washington County

In 1883, T.H. Lewis mapped seven mounds on two blocks within the city of Afton on the St. Croix River. An eighth mound in the group had apparently been destroyed by street construction. All of the mounds were simple conical forms except for one mound (Mound 5) which appeared to be circular with an attached linear mound extending to the south. This mound came to be known as “the rattlesnake mound” because Lewis had drawn several small bulbs at the far end of the linear attachment resembling the rattle on a rattlesnake’s tail. In his 1883 notes, Lewis called the linear feature “the approach” and noted that the “approach is partially overflowed in high water.” Lewis did not call the mound a snake effigy in his original notes. The term “rattlesnake mound” was suggested by Lewis in 1887 in an article in the journal *Science*. The site has been assigned the official state site number of 21WA10.

A field check by two Minnesota Historical Society archaeologists in 1971 noted that the mounds had probably been destroyed by housing construction. In a 1985 letter to the Army Corps of Engineers, State Archaeologist Christy A.H. Caine stated that emergency levee construction in 1971 “impacted and buried” the rattlesnake mound and that “upgrading the levee would not cause any further impact to this site.”

In early March 2015, the State Archaeologist received an EAW from MPCA concerning a sewer project in the City of Afton. Because there were several known sites in the immediate vicinity including mound group 21WA10 and the area had high potential for unrecorded sites, the State Archaeologist recommended an archaeological survey of the entire project. The City of Afton complied and hired Mergent to complete the survey. The Mergent archaeological survey was completed in mid-April 2015. The Mergent report noted possible impacts to the 21WA10 mound, but Mergent did not undertake a detailed survey of the mound group area. There were sewer lines, a lift station, and a stormwater collection pond proposed for the mound area.

On the advice of the State Archaeologist, the City of Afton subsequently hired the Mississippi Valley Archaeological Center (MVAC) with Connie Arzigian as principal investigator to survey the mound site location. MVAC completed the survey in May 2015. Shovel testing and soil probing did not recover any prehistoric artifacts or identify any possible burial pits or mound fill, but the remnants of one possible conical mound (5) was visually apparent in the backyard of a house. No coring or shovel testing was done in the mound, but some intact soils were found near the mound. The possible surviving mound remnant was the head of Lewis’ rattlesnake mound. The “tail” was no longer visible.

The State Archaeologist met with City of Afton officials on 6/10/15 to discuss the project and how impacts to 21WA10 could be avoided. Based on that meeting and the MVAC report, the State Archaeologist made the following recommendations by letter on 6/15/15:

With regard to the Wastewater Collection System:

- 1) The proposed Wastewater Treatment Plant and Force mains have little potential to affect archaeological resources.
- 2) The Lift Station at Upper 34th St. is close to what was mapped as the snake's tail of 21WA10 and would have no effect to the mound location if it was moved slightly farther (at least 10') to the south.
- 3) The individual sewer connections to the buildings on the two blocks east of St. Croix Trail between 33rd Street and upper 34th should avoid impact to locations where individual mounds were mapped as part of the mound site 21WA10. Although most of mounds are no longer visible and indeed may have been totally destroyed by previous construction, by avoiding the mapped locations of the mounds would greatly reduce the probability that any human burials would be affected by the project.

With regard to the Stormwater Collection System:

- 1) The proposed ditch on the west side of the dike is well east of the 21WA10 mounds (as mapped) and should have no effect on archaeological site 21WA10.
- 2) The two stormwater ponds proposed in the east central portion of 21WA10 should be reconfigured and moved far enough to the east and south so they stay at least 20 feet from the mounds as mapped.

With regard to the Street reconstruction:

- 1) Several 21WA10 mounds (Mound1 and two no longer visible mounds on the 1883 Lewis Map) are within street rights-of-way so there is some chance burial pits could still exist if previous construction did not completely destroy them. If the streets are to be widened at these locations, a qualified archaeologist should monitor the initial excavation.

In conclusion, the State Archaeologist requested that the City of Afton avoid all effects to the mound locations as mapped in 1883 and that any excavations done in the immediate vicinity of any of the mounds as mapped be monitored by a qualified archaeologist. Furthermore, it was requested that the City provide OSA with a map with all areas of previous disturbances clearly shown on the two blocks containing of 21WA10.

The City of Afton fully complied with the OSA recommendations and replied by letter on 8/11/15. It was clear from the previous disturbance map provided by the city, that the mound group had already been severely impact by residential and commercial development, roads, utility trenches, and individual septic systems. Because the sewer project will avoid all disturbances to surface soils at the original location of the mounds in 21WA10, there will no adverse impacts to any remnants of the mound site. The mound site was not officially authenticated per MS 307.08 at this time because no testing was done all of the Lewis mapped mound locations and all disturbances to those locations has been avoided.

21WA12 – Possible Impacts from Wayside Construction, Washington County

In September 2015, the DNR State Parks Archaeologist contacted the State Archaeologist with regard to possible impacts to mound site 21WA12 from a MnDOT wayside

improvement on DNR property. The site was originally mapped by T.H. Lewis in 1885 and consisted of a single mound, 2.5 feet high and 80 feet in diameter. The location recorded by Lewis is thought to be on Lookout Point on the St. Croix River north of Stillwater. A 1984 MTHARS survey of Trunk Highway 95 could not relocate the mound.

On 10/7/15, the State Archaeologist visited the location, noting a grassy island in the center of the existing parking lot. There were several large oak trees in this center island, suggesting that intact soils could exist immediately adjacent. There was no obvious mound in the island. It is unlikely a mound could have survived anywhere else within or immediately adjacent to the wayside. The proposed project will not impact the center island. DNR was informed of these findings by email on 10/12/15.

The State Archaeologist also examined a higher terrace across the highway west of the wayside as LiDAR analysis had indicated a possible mound. The mound-like feature appears to be a fill-pad associated with a residence.

Union Cemetery – Possible Road Construction Impacts, Wright County

In February 2015, the Wright County Highway Department contacted the OSA concerning the reconstruction of CSAH 3 north of TH 55 east of South Haven. Additional right of way would be required and this was within a historic cemetery called Union Cemetery. Nineteen (19) graves were known to exist within the cemetery. The county wanted to move three of the graves. The State Archaeologist asked the county to determine if the cemetery was officially recorded and to try determine if there were still relatives of the people interred in the three graves that could be contacted. The county replied that the cemetery was not recorded so the State Archaeologist had partial authority under MS 307. The county has not addressed the issue of possible surviving relatives.

The State Archaeologist visited the location on 4/17/15. Two of the graves were clearly visible at the northwest edge of the cemetery and may have already been partially disturbed by the existing CSAH 3 ditch. One of the graves appeared to be a Civil War veteran. Additional coordination with the county will be necessary prior to any OSA action.



21WR196 –Inadvertent Burial Destruction on Clearwater Lake, Wright County

On 8/3/15, Susan Myster of Hamline University called the State Archaeologist to report the inadvertent discovery of human remains on Clearwater Lake north of Annandale. Myster had also contacted Jim Jones of MIAC. A landowner had been grading a new parking area next to his house and had noticed part of a human skull in the area where the removed material was being placed. The landowner called the sheriff and the medical examiner had contacted Myster when the remains were determined to be quite old.

OSA files indicated there were no recorded burial grounds or archaeological sites at the reported location. The State Archaeologist contacted the sheriff to make sure that the area was secured and would not be subjected to additional disturbance. All visible bone had been removed by the sheriff.

The State Archaeologist visited the location on 8/5/15. The original grave location was on the edge of a prominent hill just down slope from the house and on the edge of a steep backslope cut for the adjacent public road. The landowner had used a Bobcat to cut out a small parking area that could hold two to three vehicles. The fill was then taken to the other side of the house to level an area of the yard that sloped down to the lake.

No bone was still visible in the original cut area, but the remains of a burial pit were apparent. The State Archaeologist used a trowel to clean off the face of the cut by the pit. No more bone was *in situ* in or around the pit feature. In the area where the fill had been placed, small pieces of bone were visible on the surface. This bone was collected and later delivered to Myster at Hamline.

The State Archaeologist called Jim Jones of MIAC from the site to report the possible disturbance of an Indian grave. He then told the landowner not to do any additional grading in either the fill or cut areas until after MIAC had a chance to examine the site. Jones visited the site several days later, although OSA has received no report as to what MIAC did at the site. A site form was completed by OSA and the site number of 21WR196 assigned.

The State Archaeologist re-visited the site on 9/3/15. The condition was approximately the same as the 8/5/15 visit. The landowner was frustrated that MIAC had not completed work at the site. He wanted to at least stabilize the slope where it had been cut to prevent erosion and to finish his parking area. The State Archaeologist told him that he would do what he could to see if MIAC could finish work at the site. Myster suggested by email on 9/10/15 that the remains were likely Indian. The current condition of the site is not known.

The site cannot be authenticated as an existing burial ground at this time because the one known burial has been removed. There is a possibility of additional burials on the hill top, although most of it has already been disturbed by house construction and utility work.

Stony Run Cemetery – Cemetery Condition 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 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 farmer.

The State Archaeologist has returned to the Stony Run Cemetery multiple times (5/23/14, 7/31/14, 7/17/15) to make sure the cultivation setback was being maintained and to see if the posts have been erected. The field has been planted in corn and beans with the setback maintained, but no posts are in place. The State Archaeologist needs to contact the Yellow Medicine County Attorney to request that the posts be erected prior to the 2016 crop season.

Chapter 3: Minnesota Archaeology in 2015

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 archaeological 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) examine poorly known property types.

One of the main purposes of this strategy was to 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.

The Legislature appropriated additional funding for the Statewide Survey for the 2012-13 biennium. (\$500,000), the 2014-15 biennium (\$600,000), and the 2016-2017 biennium (\$600,000). A total of 25 competitive bid contracts have implemented since the Statewide Survey's beginning in FY 2010. These contracts by survey strategy are:

Poorly Known Areas (11 contracts):

- *Archaeological Survey of Swift County*
- *Archaeological Survey of Olmsted County*
- *Archaeological Survey of the Lake Superior Region (Cook, Lake, and St. Louis counties)*
- *Archaeological Survey of Red Lake County*
- *Archaeological Survey of Steele County*
- *Archaeological Survey of McLeod County*
- *Archaeological Survey of Le Sueur County*
- *Archaeological Survey of Hennepin County (need final report)*
- *Archaeological Survey of the Minnesota River Valley (need final report)*
- *Archaeological Survey of the Ft. Snelling Area (in progress)*
- *Archaeological Survey of Lac Qui Parle County (in progress)*

Poorly Known Contexts (6 contracts):

- *Survey to Find Minnesota's Earliest Archaeological Sites*
- *The Age of Brainerd Ceramics*
- *Study of Minnesota Plains Village Complexes*
- *Study of Woodland Period Complexes in West Central Minnesota*
- *Radiocarbon Dating Minnesota's Prehistory (need final report)*
- *A Handbook of Minnesota Prehistoric Stone Tools (in progress)*

Poorly Known Property Types (8 contracts):

- *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 Area*
- *Investigating Unrecorded Historic Cemeteries in Minnesota*
- *LiDAR Analysis of Burial Mounds in 16 Counties*
- *Study of 19th Century Masonry Ruins*
- *Study of Historic Dams*
- *Study of the Archaeological Potential of CCC Camps*
- *Study of Minneapolis Neighborhood Parks Historic Landscapes*

Three to four additional RFPs will be advertised in late FY 2016 to be completed in FY 2017.

Current Status of Minnesota Archaeology - 2015

Archaeologists

There are currently perhaps 100 North American archaeologists living and working in Minnesota. About 60 of these archaeologists have advanced degrees and practice archaeology full-time in the state. About 50 of the advanced degree archaeologists work in cultural resource management (CRM) with 14 at Federal agencies, 12 at State agencies, 2 at Indian reservations, and about 20 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 full-time for agencies, most notably the DNR cultural resource programs.

Post-secondary Archaeological Education

There are 13 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 two North American archaeologists at Minnesota State University - Moorhead (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. Carleton College has one archaeologist (Alex Knodell) who does some fieldwork in Minnesota, but is a Classical archaeologist.

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 college students and usually to students that are enrolled full-time at the sponsoring institution. 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 was 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 the Future

The Office of the State Archaeologist (OSA)

The first priority is to fully fund the OSA. The office has been significantly under-funded by legislative appropriation over the past several years. Band-aid approaches to closing the funding gap have been used and this type of funding is not guaranteed in the future. If a major shortfall occurs without one of the band-aids available, reduction of staff hours is a real possibility. This would prevent OSA from fulfilling its statutory and traditional duties. **It is imperative that the basic OSA budget be fully funded by the Legislature.**

The OSA and the Minnesota Historical Society Archaeology Department (MHS-AD) have been closely linked for 40 years. They have been in the same building at Fort Snelling since 1995, where OSA leases office space from MHS. At Ft. Snelling, OSA shares access to the official state archaeological site files. MHS shares access to their archaeological collections, library, and laboratory. Peer interchange is very important to both OSA and MHS-AD. MHS plans to create a new visitor's center at Ft. Snelling in the next five years. It would be best to keep both OSA and MHS-AD at Ft. Snelling, but if this can't be done they should be provided a new home together that has convenient public access and adequate facilities. **It is imperative that OSA and MHS-AD remain together to continue their essential sharing.**

Legislation

The Field Archaeology Act (MS 138-31-.42) and to a lesser degree, the Private Cemeteries Act (MS 307) are in need of amendment to improve archaeology in Minnesota and clarify legislative intent. Legislative initiatives require considerable planning and consultation. The current State Archaeologist after retirement intends to stay involved in legislative efforts as he has been carefully examining the needs of both laws over the past 40 years. He can help draft legislation, help identify stakeholders, and assist in the consultation and legislative process. **It is imperative that Minnesota Statutes 138 be significantly revised in the next few years with respect to archaeology and history.**

The State Archaeologist in cooperation with the Minnesota Historical Society should ask the Legislature in 2017 to continue funding for the *Statewide Survey of Historical and Archaeological Sites* through the Legacy Amendment Arts and Cultural Heritage Fund. This initiative has been responsible for major contributions to archaeological research and cultural resource management in Minnesota over the last five years. **It is imperative that the Statewide Survey be refunded for the next biennium.**

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 has been intensively working with MnDOT and MnGEO to provide both of these tools. MnDOT and MnGEO signed a contract in December 2015 to implement Internet access to the archaeological site file in late 2016. This access will be restricted to government agencies and professional archaeologists. It will ultimately serve as mechanism for archaeological data input as well as data output. Predictive models for archaeological sites could be provided as simplified version of MnDOT's MnModel application. **It is imperative that professionals and agencies be given internet access to archaeological inventories and accurate predictive models to improve cultural resource management and to reduce impacts to archaeological sites.**

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 should 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 25 projects undertaken over the last seven years have clearly demonstrated the value of the *Statewide Survey* to both cultural resource management (CRM) and archaeological research in Minnesota. The survey should continue its initial three-part focus: examining poorly known areas of Minnesota, examining poorly known historic contexts, and examining poorly known property types with the possible addition of a fourth focus: Providing Archaeological Education Materials.

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

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. LiDAR analysis has greatly aided mound condition assessments. 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.

The Statewide of Historical and Archaeological Sites has been the most significant development in Minnesota archaeology during the 40 career of the current State archaeologist. **It is imperative that the Statewide Survey continue to be funded to further archaeological research in the state.**

Archaeological Education

Public accessibility to archaeological findings and interpretations has been greatly improved over the last 20 years by the Internet. Much of the on-line material, however, is either aimed at professionals or difficult for the public to evaluate as to accuracy and veracity. The redesign of the OSA webpage during 2015 is a major step in helping the public find out about and participating in archaeology. This website needs to be continually improved.

The limited amount of printed material available to professionals and the public is also a concern. In 1968, the Minnesota Historical Society started a publication series for both Prehistoric and Historic archaeology. The Historic Archaeology Series only produced two publications, one in 1968 and one in 1969. The Prehistoric series produced 14 publications from 1969 through 1997. MHS has not published any archaeology since 1997 and none of the Historic or Prehistoric series books are still for sale by MHS Press. The lack of recent archaeological publications by MHS needs to be addressed.

There is also a very limited amount of classroom materials for Minnesota primary and secondary students. This is mostly the fault of the professional archaeological community who are often too concerned about fulfilling their agency or business obligations to pay attention to public obligations. We all must remember it is the public that funds the great majority of our work and we must do a better job of letting them know what we are doing in plain language, helping students become interested in archaeology, and providing opportunities for the public to take part in archaeological activities. **It is imperative that we do a better job with public archaeological education and involvement.**

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A glossary of Minnesota archaeological terms can be found on the State Archaeologist's website at: <http://mn.gov/admin/archaeologist/public/resources/glossary/index.jsp>