CULTURAL RESOURCES SURVEY OF THE SMALL BOAT HARBOR
PROJECT AT LAKE OF THE WOODS WARROAD MINNESOTA(U)
BEMIDJI STATE UNIV MN A P BREW ET AL. 01 NOV 77

UNCLASSIFIED DACW7-77-M-1859
**Title:** Cultural Resources Survey of the Small Boat Harbor Project at Lake of the Woods, Warroad Minnesota.

**Authors:** Alan P. Brew and William J. Yourd

**Performing Organization:** Bemidji State University

**Performing Organization Address:** Bemidji, MN 56601

**Contract or Grant Number:** DACW37-77-M-1859

**Report Date:** November 1977

**Number of Pages:** 1135

**DISTRIBUTION STATEMENT:** Approved for public release; distribution unlimited

**ABSTRACT:**

Historic and archaeological records contain reports of three cultural loci on the north side of the mouth of the Warroad River: 1) an Indian village; 2) an American Fur Company Post, circa 1820; and 3) historic Indian cemetery. A field investigation of several proposed dredging areas and spoil-dump sites did not locate any of these sites.
INSTRUCTIONS FOR PREPARATION OF REPORT DOCUMENTATION PAGE

RESPONSIBILITY. The controlling DoD office will be responsible for completion of the Report Documentation Page, DD Form 1473, in all technical reports prepared by or for DoD organizations.

CLASSIFICATION. Since this Report Documentation Page, DD Form 1473, is used in preparing announcements, bibliographies, and data banks, it should be unclassified if possible. If a classification is required, identify the classified items on the page by the appropriate symbol.

COMPLETION GUIDE

General. Make Blocks 1, 4, 5, 6, 7, 11, 13, 15, and 16 agree with the corresponding information on the report cover. Leave Blocks 2 and 3 blank.

Block 1. Report Number. Enter the unique alphanumeric report number shown on the cover.

Block 2. Government Accession No. Leave Blank. This space is for use by the Defense Documentation Center.

Block 3. Recipient's Catalog Number. Leave blank. This space is for the use of the report recipient to assist in future retrieval of the document.

Block 4. Title and Subtitle. Enter the title in all capital letters exactly as it appears on the publication. Titles should be unclassified whenever possible. Write out the English equivalent for Greek letters and mathematical symbols in the title (see "Abstracting Scientific and Technical Reports of Defense-sponsored RDT&E," AD-667 000). If the report has a subtitle, this subtitle should follow the main title, be separated by a comma or semicolon if appropriate, and be initially capitalized. If a publication has a title in a foreign language, translate the title into English and follow the English translation with the title in the original language. Make every effort to simplify the title before publication.

Block 5. Type of Report and Period Covered. Indicate here whether report is interim, final, etc., and, if applicable, inclusive dates of period covered, such as the life of a contract covered in a final contractor report.

Block 6. Performing Organization Report Number. Only numbers other than the official report number shown in Block 1, such as series numbers for in-house reports or a contractor/grantee number assigned by him, will be placed in this space. If no such numbers are used, leave this space blank.

Block 7. Author(s). Include corresponding information from the report cover. Give the name(s) of the author(s) in conventional order (for example, John R. Doe or, if author prefers, J. Robert Doe). In addition, list the affiliation of an author if it differs from that of the performing organization.

Block 8. Contract or Grant Number(s). For a contractor or grantee report, enter the complete contract or grant number(s) under which the work reported was accomplished. Leave blank in in-house reports.

Block 9. Performing Organization Name and Address. For in-house reports enter the name and address, including office symbol, of the performing activity. For contractor or grantee reports enter the name and address of the contractor or grantee who prepared the report and identify the appropriate corporate division, school, laboratory, etc., of the author. List city, state, and ZIP Code.

Block 10. Program Element, Project, Task Area, and Work Unit Numbers. Enter here the number code from the applicable Department of Defense form, such as the DD Form 1498, "Research and Technology Work Unit Summary" or the DD Form 1634, "Research and Development Planning Summary," which identifies the program element, project, task area, and work unit or equivalent under which the work was authorized.

Block 11. Controlling Office Name and Address. Enter the full, official name and address, including office symbol, of the controlling office. (Equates to funding/sponsoring agency. For definition see DoD Directive 5200.20, "Distribution Statements on Technical Documents.")

Block 12. Report Date. Enter here the day, month, and year or month and year as shown on the cover.

Block 13. Number of Pages. Enter the total number of pages.

Block 14. Monitoring Agency Name and Address (if different from Controlling Office). For use when the controlling or funding office does not directly administer a project, contract, or grant, but delegates the administrative responsibility to another organization.


Block 17. Distribution Statement (of the abstract entered in Block 20, if different from the distribution statement of the report). Insert here the applicable distribution statement of the abstract from DoD Directive 5200.20, "Distribution Statements on Technical Documents."

Block 18. Supplementary Notes. Enter information not included elsewhere but useful, such as: Prepared in cooperation with ... Translation of (or by) ... Presented at conference of ... To be published in ...

Block 19. Key Words. Select terms or short phrases that identify the principal subjects covered in the report, and are sufficiently specific and precise to be used as index entries for cataloging, conforming to standard terminology. The DoD "Thesaurus of Engineering and Scientific Terms" (TEST), AD-672 000, can be helpful.

Block 20. Abstract. The abstract should be a brief (not to exceed 200 words) factual summary of the most significant information contained in the report. If possible, the abstract of a classified report should be unclassified and the abstract to an unclassified report should consist of publicly-releasable information. If the report contains a significant bibliography or literature survey, mention it here. For information on preparing abstracts see "Abstracting Scientific and Technical Reports of Defense-Sponsored RDT&E," AD-667 000.
CULTURAL RESOURCES SURVEY OF THE SMALL BOAT HARBOR PROJECT AT LAKE OF THE WOODS, WARROAD, MINNESOTA

Project Director: Alan P. Brew, Associate Professor of Anthropology
Institution: Bemidji State University
Report Authors: Alan P. Brew and William J. Yourd
Contracting Agency: U.S. Army Corps of Engineers, St. Paul District
Contract Number: DACW37-77-M-1859
Date: November 1, 1977
DISCLAIMER NOTICE

THIS DOCUMENT IS BEST QUALITY PRACTICABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>The Locality</td>
<td>1</td>
</tr>
<tr>
<td>Scope of Work</td>
<td>2</td>
</tr>
<tr>
<td>Methodology</td>
<td>2</td>
</tr>
<tr>
<td>Excavations - Stratigraphy</td>
<td>5</td>
</tr>
<tr>
<td>Excavations - Artifacts</td>
<td>7</td>
</tr>
<tr>
<td>Excavations - Summary</td>
<td>9</td>
</tr>
<tr>
<td>Interviews</td>
<td>9</td>
</tr>
<tr>
<td>Conclusions</td>
<td>10</td>
</tr>
<tr>
<td>Recommendation</td>
<td>11</td>
</tr>
<tr>
<td>Table I Descriptive and Provenience Data</td>
<td>12</td>
</tr>
<tr>
<td>Plates and Figures</td>
<td></td>
</tr>
</tbody>
</table>
Introduction

This document constitutes the final report of the project defined in Contract No. DACW37-77-M-1859 between the U.S. Army Corps of Engineers, St. Paul District and Bemidji State University as a "cultural resources survey of the small boat harbor project at Lake of the Woods, Warroad, Minnesota."

With acceptance of this report, the contractual obligations of Bemidji State University are met.

The Locality

Historic and archaeological records contain reports of three cultural loci on the north side of the mouth of the Warroad River, that is, along the shore of Lake of the Woods. These sites are as follows: (1) an Indian village of 24 families (Trygg Map, Sheet 22, 1967 ed.; Survey General's Offices Map, 1896); (2) an American Fur Company post, circa 1820; and (3) a historic Indian cemetery, listed as 21-R0-9 in the Archaeological Site Files of the Department of Anthropology, University of Minnesota.

A field investigation of several proposed dredging areas and spoil-dump sites conducted in this locale by the authors earlier this year did not locate any of these sites but did raise the possibility that the village site could have been situated in the present Lakeview Park, which is maintained by the City of Warroad. This possibility and the historical records constituted the justification for a detailed cultural resources survey of the area prior to construction of a channel and
associated recreational facilities.

**Scope of Work**

Under a contract from the St. Paul District, U.S. Army Corps of Engineers, Bemidji State University conducted a cultural resources survey of Lakeview Park and nearby areas which will be affected by any of several proposed construction programs. The survey was designed to determine the presence or absence of prehistoric and/or historic cultural materials within these areas by the following means: (1) review of existing references and of archaeological data from the local area; (2) archaeological testing of the proposed channel area ("Alternate D") and adjacent areas, such as the proposed swimming pool; and (3) brief field inspection of proposed disposal sites for "Alternative A."

Because the archaeological testing produced essentially negative results, considerable effort was devoted to interviewing local informants. The data obtained from them support the negative assessment and will be presented below. Although the negative conclusions are reasonably well supported, the nature of the testing was such (see below) that no absolute statement of "no effect" can be made. Therefore, this report will include a recommendation of action to be taken by the Corps of Engineers to assure appropriate and adequate consideration of cultural resources.

**Methodology**

The research design included the following three components:
(1) archaeological shovel-test sampling of the major construction zones; (2) brief field inspection of proposed spoil-dump sites; and (3) interviews of local informants. The negative results of the first and second phases gave increased importance to the third.

The areas of highest priority in the field investigation were the proposed channel and the adjacent land which may be affected by substantial landscaping and the construction of a swimming pool. Three lines of shovel tests were excavated in these areas (Fig. 1). A line (Plate I) of nine pits at 25 m. intervals was laid out with a dumpy level along the approximate center of the proposed inland channel. This line sampled about 42% of the total length of the channel. Extension of the line was deemed inappropriate because the area to the east is paved and is used heavily and the area to the west is occupied by an operating sewage treatment plant and its lagoons. The area to the north of the line is lakeshore lowland. Two lines of pits were excavated in the swimming pool area; the first (Plate II) consisted of six pits, the second, of two.

The circular shovel pits were 0.5 to 0.7 m. in diameter and, with two exceptions, ranged from 0.65 to 1.65 m. in depth, averaging 1.2 m. In two pits (L1-5 and L2-4) large stone or concrete blocks were encountered near the surface. Additional excavation and probing indicated that these blocks represented artificial filling and no effort was made to dig around or beneath them. The other pits were excavated originally down to a solid peat layer. When excavation of one pit (L2-5) revealed
that recent cultural material lay within this layer, several of
the other pits were extended to greater depth. Thus, 11 of the
17 pits were excavated into a dark gray sand or clay layer
which was interpreted as a natural horizon indicative of under-
water deposition (Fig. 2, L1-7, L2-1, and -5).

The fill from the shovel-tests was sorted by hand or trowel.
Each pit was profiled, using field methods for determination of
particle size, consistency, calcareousness, and other pedolo-
gical variables. Colors were determined by using the Munsell
Soil Color Charts. Although the small diameter of the pits
precluded much photography, a picture was taken of the charac-
teristic laminated fill (Plate III). The site map (Fig. 1) was
prepared from the Preliminary Channel Plan (Architectural Re-
sources, Inc., Duluth).

A brief field inspection was made of the proposed dumping
locations of "Alternative A." A walk-through of the areas west
of C.S.A.H. 74 and south of Taylor Road was hampered by forest
vegetation or fresh-cut hay but sufficed to indicate that no
surface indications of significant pre-modern cultural materials
were present. Because the disposal area north of Taylor Road
had been plowed recently, a more thorough inspection was pos-
sible. The southeast quarter of that area was examined at 10 m.
intervals and pre-modern cultural materials were not found.

The negative results of the shovel-tests, together with
the complex and initially-confusing nature of the stratigraphy,
led to a considerable effort to interview local informants.
Discussions of (1) the history of the area, (2) the dredging
operations and other activities which resulted in the filling of Lakeview Park, (3) collecting prehistoric artifacts in the vicinity, and (4) the location of the Indian village and cemetery were held with four men who ranged in age from the late 60's to 80 or so and who were life-long or long-term residents of the area. Although these interviews were informal, questions were related to specific factors (e.g., the laminated fill noted during excavation) and notes were taken in progress.

Excavations - Stratigraphy

The 15 deep shovel-test pits revealed a complex stratigraphy, consisting of several different types of artificial fills (Fig. 2), and produced a limited amount of cultural material, most of which is of late historic vintage (Table 1). Although the sampling procedure provided adequate horizontal coverage of the project area, the considerable amount of artificial fill, which reached depths of up to 1.45 m. (4.76 ft.), precluded extensive vertical coverage.

The stratigraphy (Fig. 2) consists almost entirely of artificial fills which appear in three main types, as follows:

1. an upper layer, varying in thickness from 7 to 56 cm., of sand and gravel, containing occasional pieces of brick and some glass, metal, and leather objects; 
2. deposits of laminated muck, peat, and sand, 10 to 70 cm. thick, varying in the amount of sand present; and
3. pure peat deposits, 20 to 80 cm. thick, which contain some historic and prehistoric artifacts. In four pits, a layer of sawdust and wood chips 15 to 20 cm. thick underlies the gravel fill. The sawdust is fresh and dry and has undergone no decomposition. Informants' statements
indicate that both the Marvin Window Company and an earlier sawmill used a portion of the park area as a dump.

Initially, the laminated layer and the peat were interpreted as natural, lake-shore-margin deposits, but the discovery of a 2 cm. thick layer of late historic bottle glass in the peat at a depth of 115 to 117 cm. (Fig. 2, L2-5) contradicted that finding. When some of the completed pits were extended to greater depths, other historic objects, including some clay-pigeon fragments, were found in the peat (Table I). Although these later finds could be discounted as representing downward migration, the glass layer in Pit 2-5 was of such thickness, consistency, and quantity that it could be interpreted only as a deposition in situ.

The problem presented by the latter interpretation was resolved through the aid of Peter Harder of Warroad. Mr. Harder reported that "37 or more years ago" he had worked on the dredging project which had resulted in the filling of Lakeview Park. The project entailed the pumping of "muck" from the river channel into the park area, behind a dike. The material was pumped through one-foot diameter pipes in such a fashion that large quantities of essentially pure organic matter were incorporated in the fill. Mr. Harder stated that bullheads and other fish were sucked through the pipes. Occasional replacements of the pipes, variations in the rate of flow through them, and differences in topography in the lowland area account for the laminated fill which appears in most profiles (Plate III). The basal deposit, which was reached in 11 of the 15 pits, varies in texture from sand to clay and in color from light
olive gray (5Y 6/2) to black (5Y 2.5/1). The material appears to be a gleyed marl deposited in a lake-bottom environment. One slightly water-worn prehistoric ceramic fragment occurred near the top of the marl at a depth of 1.4 m. in Pit 1-3. The presence of occasional prehistoric artifacts in the river and lake-bottom materials was noted by the authors during the earlier work in May, 1977, and can be attributed to either off-shore refuse disposal or erosion from an on-shore location.

In summary, the test-excavations in Lakeview Park indicate that the present elevated terrain there is the result of intentional filling during the last 40 years. The majority of this fill was derived from pump-dredging of the Warroad River channel, while later filling consisted of dumping of sawmill waste. Eventually, sand and gravel were placed in the park to create a baseball field (informant's report).

At some time prior to filling, the area had been under water. The excavations produced no evidence of a prehistoric or early historic dry-land surface in the proposed project area. Because of the thickness of the artificial fill, however, the vertical sampling procedure was sufficiently limited to preclude an absolute statement that no such surface existed.

Excavations - Artifacts

The artifacts from the excavations in Lakeview Park (Table I) are predominantly of late historic or early modern vintage and, with one exception, were recovered from contexts which have been interpreted as artificial fill. Most of the finds were of an individual or scattered nature. The only two "concentrations"
occurred as follows: (1) six fragments from two clay pigeons, indistinguishable in shape and style from the current type, which were recovered from Pit 1-3 at a depth of 80 cm., 25 cm. below the top of a solid peat layer; and (2) 47 pieces of bottle and jar glass and one metal can fragment found in Pit 2-5 at a depth of 115 to 117 cm., 20 cm. below the top of a peat layer. The latter concentration can be described best as a "carpet" and definitely represents a primary deposit. None of the glass appears to be of a significantly greater age than that suggested for the filling of the park area (ca. 1930).

Of the four prehistoric objects recovered (Table I), only one came from the basal sand, which is the only "natural" layer encountered in the excavations. This specimen is a cord-wrapped-paddle-impressed sherd which was recovered at a depth of 1.4 m. in Pit 1-3. The other specimens, all from near the top of the peat layer, or ca. 79 cm. below the surface, in Pit 2-6, were a small sherd and two pieces of mammalian long bone, one of which was cut and/or ground on one end. These specimens indicate that prehistoric activities occurred in the vicinity but they are not sufficient to warrant designation of the area as a site (see above).

In summary, the preponderance of the artifactual evidence is consistent with the interpretation that the park area has been subjected to considerable artificial filling. The historic artifacts can be attributed to accidental disposal (knife scabbard, see Table I), dumping of sawmill waste (sawdust and wood chips), refuse disposal (glass in Pit 2-5), and recreational use
of the area (clay pigeons). The few prehistoric artifacts came from contexts which represent both the artificial filling and accidental inclusion in lake-bottom sediments.

**Excavations - Summary**

Neither stratigraphic nor artifactual evidence indicate that significant cultural materials are present in the project area. The stratigraphy is composed of up to 1.45 m. of artificial fill and the basal natural stratum represents underwater deposition. The only concentration of artifacts is a refuse deposit of an early-modern date.

**Interviews**

Because the information gained from shovel-testing was limited and confusing, several long-term residents of the Warroad area were interviewed. In addition to Mr. Harder (see above), the informants were as follows: (1) John LaChappelle, manager of the Morey Fish Company fishery; (2) George Johnston, a commercial fisherman and an amateur collector of Indian materials; and (3) A.J. Landby, who has lived in the area since 1899. These informants provided considerable data about cultural activities in the Lakeview Park vicinity.

According to Mr. Harder, the historic Indian village was probably in the park area, but south of MacKenzie Road (Fig. 1) and extending onto the Cal's Motel property. Mr. Johnston reported that in his youth he found "lots" of pottery on the river shore where the Cal's Resort Docks is located today. The presence of this pottery would suggest that a prehistoric
component existed at the village location. Johnston stated further that the portion of the park for which construction is proposed was low, swampy land in the past and that he does not know of any artifacts' being found there.

The Indian cemetery was reported, by Johnston, to have been between the present Morey fishery building and the Warroad Airways office and, by LaChappelle, to have been on the site of the latter structure. According to Johnston, the cemetery, which included grave houses, was bulldozed away "some time ago."

These informants' reports indicate that no significant cultural materials are present in the proposed construction area and that the Indian cemetery and village cited in various sources are unlikely to exist in an undisturbed condition. The former site apparently has been eradicated entirely and the latter has been disturbed, if not destroyed, by construction south of MacKenzie Road.

Conclusions

Archaeological shovel-testing and statements collected from local informants indicate that no significant cultural materials exist in the proposed construction area of "Alternative D." This negative statement, however, can be made with only 90% confidence because of the considerable amount of recent artificial fill which overlies the area. The thickness of the fill prevented adequate sampling by the method available (shovel-testing).

No new information was obtained about the location of the American Fur Company post. New data pertaining to the historic
(and prehistoric) Indian village and the cemetery indicate that they both were located beyond the limits of the proposed construction zone and that they have suffered considerable damage, if not total destruction.

A brief field inspection of a portion of the disposal areas proposed in "Alternative A" did not produce evidence of pre-modern cultural activities. Therefore, the archaeological potential of these areas is believed to be minimal to non-existent.

**Recommendation**

Because the negative assessment of the archaeological potential of the "Alternate D" construction zone cannot be offered with absolute certainty, the authors recommend that an archaeologist be on the scene during those portions of the project which involve excavation within the park area. This action will assure adequate protection of any cultural resources which may underlie the artificial fill and lake-bottom sediments.
Plate I. Looking northwest along Line 1. Line extends 200 m. from Pit L1-1 (foreground, with sod replaced) toward northeast corner of sewage treatment plant (in distance).

Plate II. Looking southeast along Line 2. Line extends 125 m. from Pit L2-1 (foreground, with sod replaced) toward northwest corner of trading post (in distance).
Plate III. Upper .6m of Pit L1-3 showing characteristic profile of laminated artificial fill produced by pump-dredging of Warroad River channel, circa 1930.
Table I. Descriptive and Provenience Data re Artifacts Recovered

<table>
<thead>
<tr>
<th>Artifact</th>
<th>Pit No.</th>
<th>Depth (in cm.)</th>
<th>Layer</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>sherds</td>
<td>1-3</td>
<td>140</td>
<td>blue-gray sand</td>
<td>cord-wrapped-paddle impressed, grit temper, 3.25 x 2.5 cm.</td>
</tr>
<tr>
<td>bone</td>
<td>2-6</td>
<td>ca. 79</td>
<td>lower peat</td>
<td>grit temper, 1.63 x 1.24 cm.</td>
</tr>
<tr>
<td></td>
<td>2-6</td>
<td>ca. 79</td>
<td>lower peat</td>
<td>long-bone fragment, large mammal, 8.41 x 1.64 cm.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>shaft fragment, cut to taper at one end, 5.13 x 1.18 cm.</td>
</tr>
<tr>
<td>leather</td>
<td>1-8</td>
<td>22</td>
<td>gravel fill</td>
<td>knife sheaf, from old logger's mitten, hand-stitched, 18.6 x 6.1 cm.</td>
</tr>
<tr>
<td>metal</td>
<td>2-6</td>
<td>ca. 15</td>
<td>gravel fill</td>
<td>strap door handle fragment, 20.0 x 3.45 cm.</td>
</tr>
<tr>
<td></td>
<td>2-5</td>
<td>117</td>
<td>lower peat</td>
<td>can bottom frags, probably one can, 5 pieces</td>
</tr>
<tr>
<td>ceramic</td>
<td>1-3</td>
<td>ca. 80</td>
<td>peat</td>
<td>clay pigeon frags (6), 2 represented, modern style</td>
</tr>
<tr>
<td>glass</td>
<td>1-6</td>
<td>37-42</td>
<td>sawdust</td>
<td>clear glass (2), no discoloration but 1 is burned</td>
</tr>
<tr>
<td></td>
<td>1-9</td>
<td>72</td>
<td>peat</td>
<td>clear glass (4), jar?, no discoloration</td>
</tr>
<tr>
<td></td>
<td>2-5</td>
<td>117</td>
<td>peat</td>
<td>clear glass (34), jar &amp;/or bottle, plain no discoloration</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>clear (1) jar or bottle base</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>clear (4) jar or bottle glass with raised lettering &amp;/or decoration</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>blue jar glass (1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>black bottle glass (6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>black bottle neck &amp; lip(1), seamed neck and collar, cap-type, beer bottle?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ext. diam. 2.64, int. diam. 1.55 cm., small portion of gold paper lab 1 still attached</td>
</tr>
</tbody>
</table>
DTIC
98-86
FILMED
E.N.D.