This report concerns the cultural resources investigations for the State Road and Ebner Coulee Flood Control Project at La Crosse, Wisconsin. A literature search and intensive survey of the project areas concluded that the National Register site (47LC20) will not be affected by the project. However, prehistoric cultural resources could be affected. In addition, potentially significant historical remains were discovered within the vicinity of the Eldon Lamb farmstead.
FINAL REPORT

CULTURAL RESOURCES INVESTIGATIONS FOR THE STATE ROAD
AND EBNER COULEE FLOOD CONTROL PROJECT,
LA CROSSE, WISCONSIN

Prepared for
U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT
(Contract No. DACW37-80-C-0028)

Submitted by
Dr. T. R. Hays
Field Director
Duane E. Peter,
Olin F. McCormick
Research Archaeologists
Dr. James P. Gallagher
Principal Investigator
Center for Research Archaeology
La Crosse, Wisconsin

March 1981
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>iii</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Archaeological and Historical Background</td>
<td>2</td>
</tr>
<tr>
<td>Prehistoric Sites</td>
<td>3</td>
</tr>
<tr>
<td>Historic Sites</td>
<td>6</td>
</tr>
<tr>
<td>Pammel Creek Channel</td>
<td>10</td>
</tr>
<tr>
<td>Intensive Field Survey</td>
<td>10</td>
</tr>
<tr>
<td>Research Methodology</td>
<td>10</td>
</tr>
<tr>
<td>Survey Results</td>
<td>11</td>
</tr>
<tr>
<td>Pammel Creek Alternate</td>
<td>18</td>
</tr>
<tr>
<td>Random Field Survey</td>
<td>18</td>
</tr>
<tr>
<td>Intensive Field Survey</td>
<td>20</td>
</tr>
<tr>
<td>Research Methodology</td>
<td>21</td>
</tr>
<tr>
<td>Survey Results</td>
<td>22</td>
</tr>
<tr>
<td>Conclusions</td>
<td>27</td>
</tr>
<tr>
<td>References Cited</td>
<td>29</td>
</tr>
</tbody>
</table>
ABSTRACT

This report concerns cultural resources investigations for the State Road and Ebner Coulee Flood Control Project at La Crosse, Wisconsin conducted for the U.S. Army Corps of Engineers, St. Paul District. A literature search and intensive survey of the project areas have concluded that the National Register site (47LC20) will not be affected by the proposed flood control project. However, prehistoric cultural resources could be adversely affected by the proposed flood control project alternate plan. In addition, potentially significant historical remains were discovered within the vicinity of the Eldon Lamb farmstead. If this area is to be directly impacted, further documentation and evaluation of these resources will be necessary. Alternatively, careful planning of the route of the proposed channel could assure that no potentially significant cultural resources would be negatively affected.

The literature search revealed that potentially significant prehistoric and historic cultural resources may be present along the upper reaches of the Pammel Creek drainage as well. Any plans concerning the future alteration of additional segments of Pammel Creek should provide for an evaluation of such potentially significant archaeological remains.
INTRODUCTION

This report presents the results of cultural resources investigations for the State Road and Ebner Coulee Flood Control Project at La Crosse, Wisconsin conducted for the U.S. Army Corps of Engineers, St. Paul District. The cultural resources survey was composed of two separate but related tasks: (1) a literature and records search for the general area surrounding the flood control project; and, (2) an intensive survey of the proposed construction area (a 100-foot wide strip on each side of Pammel Creek from Highway 14/61 to the Mississippi River). A later modification to the contract required an additional intensive survey of an alternate project area located on approximately five acres of land northwest of Pammel Creek.

The purpose of the literature review was to provide a summary of the historic and prehistoric character of the area in order that it may serve as a guide for future planning. The purpose of the intensive survey was twofold: (1) to locate and identify any unknown archaeological, historic, or architectural sites within the area and evaluate the possible impact of the proposed construction on them; and (2) to find the limits of a known National Register Site adjacent to the area and assess the possible impact of the proposed construction upon it.
The initial field work was conducted on May 22-23 and May 30, 1980 by the field director, a crew supervisor, and five experienced crew members under the supervision of the principal investigator, James P. Gallagher. The alternate project area was surveyed October 4-5, 1980 by the field director, crew supervisor and four crew members.

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Prior to the initiation of fieldwork, a literature and records search was completed in order to provide a list of potentially significant sites that might be affected by future flood control projects within the immediate area. The library of the State Historical Society of Wisconsin was checked for relevant reports and documents. The State Historic Preservation Office inventory files of architectural or historic sites, and the Wisconsin Archaeological Codification Files of archaeological sites also were researched. Data held at the University of Wisconsin at La Crosse, including the results of a 1979 archaeological survey of portions of La Crosse County (Gallagher, 1980), also provided pertinent information.
Prehistoric Sites

Other than the Overhead Site (47LC20), which is adjacent to the proposed construction area, only four prehistoric sites had been recorded within Shelby Township before 1979 (Figure 1). Sites 47LC10, 11, 13, and 14 are located to the northwest in Sections 5 and 6. Site 47LC4, a mound group, has also been reported on the La Crosse prairie, but the exact location of this site is no longer known. A review of the Charles E. Brown manuscripts for La Crosse County revealed references and information concerning sites in the La Crosse region. None of these sites, however, are in the vicinity of Pammel Creek.

Systematic investigation of archaeological sites within La Crosse County has been initiated only within the last decade. The Overhead Site (47LC20) was investigated and defined by Stoltman (1973), Vehik (1977), and Penman (1979), and has been determined eligible for inclusion on the National Register of Historic Places. The significance of the site stems from its potential for providing important information on: 1) the late prehistoric Oneota occupation of Western Wisconsin; and, 2) the earlier Woodland occupation of the area.

The ca. 1425 A.D. Oneota occupation at the north end of the Overhead Site has produced artifacts, well-preserved
FIGURE 1
KNOWN ARCHAEOLOGICAL SITES IN THE LA CROSSE AREA
organic material, and cultural features that add important information concerning Oneota culture history and human ecology. The site substantiates the presence of Orr Phase peoples in western Wisconsin prior to European contact. Data extracted from the site provides important insight into Orr Phase dwellings, settlement patterns, and subsistence activities (Stoltman, 1973).

The southern portion of the Overhead Site contains lithic artifacts and cord-marked grit-tempered sherds characteristic of a Woodland occupation (Penman, 1979). Subsequent controlled surface collections and testing were conducted in the Woodland occupation area by Dr. Gallagher in late 1979 and early 1980. During the summer, 1980, Gallagher directed extensive excavations near two probable mounds on the west side of the site. Pottery from several features indicated a range of occupation for the site from Early Woodland to Oneota.

One of the probable mounds was tested and revealed a Middle Woodland multiple burial. Fourteen individuals were buried in a single pit. Classic Middle Woodland grave goods consisted of projectile points of Knife River flint, platform pipes, copper beads and awls. A radiocarbon date of 2130±80 B.P. (Beta 1916) was obtained from bone of a skeleton from the Middle Woodland burial mound (Gallagher and Stevenson, 1980).
Elsewhere in La Crosse County, systematic surveys of areas that will be negatively impacted by future urban-industrial expansion have been conducted (Gallagher, 1980). Several Oneota sites have been located within the La Crosse area. Woodland sites are less well represented within the survey areas. However, recent construction activities less than one mile upriver from Pammel Creek exposed a site (47LCS9) which contained both Woodland and Mississippian ceramics. Thus far, systematic excavation of sites within La Crosse County has been focused upon Mississippian assemblages such as those represented at the Valley View Site (47LCS34) (Gallagher and Stevenson, 1980) and the Overhead Site (47LC20). Systematic investigation of Woodland components has been limited to the counties (Trempealeau, Monroe, Vernon) surrounding La Crosse County (Stoltman 1979:122-139). The recent investigative efforts at the Overhead Site (47LC20) and the newly discovered site (47LCS9) should provide valuable information concerning the Woodland occupation of the La Crosse area and its relationships to both the surrounding Woodland manifestations and the subsequent Mississippian occupations.

**Historic Sites**

A study of archival maps and local histories provided interesting data concerning the historic utilization of the
Pammel Creek vicinity. Alfred Brown's sketch map of the 1846 survey for the U.S. Government Land Office depicts both natural and cultural features which are significant. The drainage indicated in Sections 9 and 10 (Figure 2) corresponds closely to the upper portions of what is now known as Pammel Creek. At that time, however, the drainage had no outlet to the Mississippi River. It merely emptied into a slough within Section 9. Exactly when this drainage was artificially channeled southward is unclear.

Pammel (1928:23) states that his father had cut through a rise on the Pammel farm in order to straighten the creek. Interestingly, Pammel also notes that his father found many shells, arrow points, and pottery sherds within the rise. This rise, according to Pammel, is where John Nugel, one of the early settlers of the area, had built his cabin. Whether this cabin is the one depicted in Section 15 of Brown's sketch map is unknown. A later map of La Crosse County compiled by H. I. Bliss in 1874 indicates that the Pammel lands were farther north in Section 10. Nevertheless, the Pammel family may have sold portions of their land by 1874, for Bryant (1907:232) makes this statement concerning the Nugel homestead:

The first permanent settlers in the present town of Shelby came to La Crosse in the year of 1844. They were two brothers, John and Charles Nugel, and early the following Spring they took up land between Mormon and State Road Coulees, which they immediately began to cultivate.
Alfred Brown's 1846 Sketch Map (T15N, R7W)

Figure 2
This description makes the cabin depicted in Section 15 of Brown's 1846 sketch map a likely candidate for the Nugel homestead. The location at present is probably near the County Infirmary shown on the USGS 7.5' La Crosse quadrangle.

Another cultural feature on Brown's sketch map which is pertinent to the immediate vicinity of the flood control project is the area designated as "Merrick's field." This field, according to its plotting, should be very near, if not partially encompassing, the presently defined limits of the Overhead Site (47LC20). This would mean that a portion of the site may have been under cultivation for more than 130 years. Why the name, Merrick, was designated to this field is unclear. An examination of the La Crosse County deeds and abstracts revealed that Nathan Myrick, the first settler of La Crosse, should have been the owner of this land in 1846. Saban H. Merrick did not acquire it until 1854. Perhaps Brown merely misspelled Myrick's name.

No structures are depicted within the immediate project area on the early Government Land Office survey maps. The cabin in Section 15 and the house within Mormon Coulee, itself, were the only structures within the immediate vicinity in 1846. An 1874 La Crosse County map produced by H. I. Bliss, a civil engineer and surveyor, reveals a structure in Section 22 on the T. Burns property at the approximate location of
the present Eldon Lamb farmstead adjacent to Pammel Creek. Although only a superficial examination of the Lamb farmhouse was possible, it is unlikely that the present farmhouse is the same structure that was plotted in 1874. It is more likely that the archaeological remains of this earlier homestead are within the direct impact area of the flood control project.

PAMMEL CREEK CHANNEL

Intensive Field Survey

Research Methodology

The field survey of the proposed construction area at Pammel Creek involved both an examination of the stratigraphic profile of the creek banks and subsurface testing of the impact areas on both sides of the creek. The former method involved one person cutting shovel profiles at 10 meter intervals along the right descending bank of Pammel Creek. Since much of the left descending bank consisted of spoil dirt from a previous channelization project, shovel profiles were cut at 50 meter intervals only. The subsurface testing of the impact areas on both sides of the creek consisted of a single line of shovel tests, approximately 1/2 m. in diameter and 1/2 m. deep, placed 10 meters from each creek bank. This distance was usually greater along the left bank of the creek due to the presence of the spoil dirt mounds. The shovel test holes of each line were placed at
10 meter intervals. Several holes (E23-E26) were not excavated along the left bank due to the combined effects of the spoil dirt and an old drainage channel (map 1). In accordance with standard survey procedures all soil from the shovel tests was screened through 1/4" hardware cloth. A soil auger was used regularly to check for indications of archaeological components beneath the base of the shovel tests. All test holes were backfilled after examination.

The use of a one meter long soil auger allowed examination of the stratigraphy below the shovel tests. While it is unlikely that artifacts would have been collected from such a small coring, a good indication of the basal soils was provided. In each case the soil auger tests revealed a continuation of the culturally sterile alluvial sands. There was no indication of the presence of an old soil which might have been a prehistoric living surface.

Survey Results

The shovel profiles of the creek banks revealed a very mixed stratigraphy along the upper half of the survey area. Mixed sediments and building rubble were noted in the bank profiles. Apparently the previous channelization of the creek had cut through relatively recent fill material within this portion of the Pammel Creek drainage. The shovel profiles of the bottomland or marsh area of the drainage
revealed that the alluvial sediments are very recent. Plastic cups and other modern debris were found 50 centimeters below the surface.

The shovel test holes within the impact zone on either side of the creek revealed a very similar situation. Within test hole W4 a large iron spike was found at the contact of an upper zone (0-20 cm.) of bedded sands and a lower zone of mottled sand and silt. The bedded sands represent recent alluvial deposition. The lower zone of mottled matrix may represent disturbed fill material from either the creek channelization project or construction activities related to the development of the nearby Sherwood Manor housing development and park. The stratigraphy varies considerably from test hole to test hole on the right bank of the creek. In test hole W10 a homogeneous zone of dark yellow brown, sandy alluvium is present between 20 and 45 centimeters below the surface. However, in test hole W14 this same zone is not present until 66 centimeters below the surface. As one goes downstream, this homogeneous sandy alluvium appears at the surface or may be as deep as 70 centimeters. It was initially thought that this zone might represent an undisturbed bottomland surface.

The discovery of artifacts within this sandy zone at test holes W19, 20, and 22 (Table 1) also indicated that the above geomorphological interpretation might be correct.
TABLE 1. ARTIFACTS RECOVERED FROM SHOVEL TEST HOLES ALONG PAMMEL CREEK.

<table>
<thead>
<tr>
<th>Test Hole</th>
<th>Artifact</th>
</tr>
</thead>
<tbody>
<tr>
<td>W4</td>
<td>Iron spike (24.5 cm. in length; 1.5 cm. in diameter)</td>
</tr>
<tr>
<td>W19</td>
<td>Pottery sherd (Shell temper; 8x11 mm.) Chert fragment</td>
</tr>
<tr>
<td>W19A</td>
<td>Pottery sherd (Shell temper; 6x8 mm) Chert fragment</td>
</tr>
<tr>
<td>W19B</td>
<td>Glass fragment</td>
</tr>
<tr>
<td>W20</td>
<td>Chert secondary flake</td>
</tr>
<tr>
<td>W21</td>
<td>White porcelain china fragment</td>
</tr>
<tr>
<td>W22</td>
<td>Chert fragment White porcelain china fragment</td>
</tr>
<tr>
<td>W27</td>
<td>Chert tertiary flake</td>
</tr>
<tr>
<td>W28</td>
<td>Pottery sherd (Shell temper; 7x11 mm)</td>
</tr>
<tr>
<td>W29</td>
<td>Pottery sherd (Shell temper; 7x7 mm)</td>
</tr>
<tr>
<td>E2B</td>
<td>Wire nail Glass fragment</td>
</tr>
<tr>
<td>E8</td>
<td>Cinders Brick fragments</td>
</tr>
<tr>
<td>E9</td>
<td>Brick and stone rubble</td>
</tr>
</tbody>
</table>
However, the fragmentary nature of the artifacts, their low density, and the fact that all were recovered within 35 centimeters of the surface raised questions concerning their context. The occurrence of the sandy layer at the surface could indicate the removal of overlying deposits which could have resulted from construction of the park area. As a consequence, the provenience of any artifacts present would have been disturbed.

Additional shovel test holes (map 1) were placed around test hole W19 to determine the direction and extent of the artifact scatter. Only test hole W19A yielded a shell-tempered sherd and a fragment of chert. The variable stratigraphy among these closely related holes, however, again suggested that a primary context is unlikely. Test hole W19A revealed an upper zone of light brown, sandy alluvium (0-25 cm. B.S.), a middle zone of mottled dark and light colored sands (25-44 cm. B.S.), and a lower zone of fine alluvial sands (44-63 cm. B.S.). Test holes W20 and W19D, on the other hand, exhibited 70 cm. of the dark yellow brown, sandy alluvium. A clay lens (0-3 cm. B.S.), a mottled sandy alluvium (3-28 cm. B.S.), a yellow brown silt (28-48 cm. B.S.), and a fine alluvial sand (48-55 cm. B.S.) comprise the stratigraphy of test hole W19D. Some variable stratigraphy may be expected within a floodplain situation, but subsequent communication with Raymond Brothers Construction Company,
which was responsible for the land leveling at Sherwood Manor and the adjacent park, indicated that the matrix of these test holes may be extremely disturbed. Since the greatest concentration of artifacts is near the surface and within the park area, it is doubtful that the cultural remains are within a primary context.

Archaeological materials were also recovered from test holes W27, W28, and W29 (Table 1). Again, these materials are very sparse and fragmented. All were recovered within the upper 20 cm. of the test holes. Additional holes within this area (map 2) yielded no artifacts. Although the park construction did not affect this area, the previous channelization of the creek, recent fill activities, and flooding have likely affected the context of these artifacts also. There is no indication that these few remains are associated with a larger scatter of artifacts and features within a primary context.

Interestingly, no prehistoric artifacts were encountered along the left bank of Pammel Creek which is nearer the Overhead Site (47LC20). Additional holes (E20A, E22A) were placed along the treeline adjacent to the cultivated field in which artifacts had been noted on the surface (map 1). No prehistoric artifacts were removed from these holes within the 100 foot strip along Pammel Creek. Consequently, the construction of the proposed flood control project will
have no direct impact on the Overhead Site (47LC20). Furthermore, the northwestern boundary of the Overhead Site can be moved eastward from its presently defined position (Figure 3).

Although no potentially significant prehistoric cultural remains will be negatively impacted by the proposed channelization project at Pammel Creek, the probability of significant historical cultural resources within the project area is high. Shovel test holes within the immediate vicinity of the Eldon Lamb farmstead (map 1) revealed concentrations of brick and stone rubble and cinders within 10 meters of the present creek channel at depths of 25 to 50 cm. below the surface. This archaeological indication of previous historic structures together with the documentation (La Crosse County map) that a structure was located within this vicinity in 1874 suggest that a potentially significant historical site may be adversely affected by the proposed construction project.

The literature review and a deed search of the Lamb property indicated that the land was first owned by Nathan Myrick in 1846. The 1846 map by Brown, however, does not indicate a structure at the location. The property was next owned by George Farnum in 1853 and then by S. H. Merrick in 1854. The first map showing a structure on the property was the 1874 map by Bliss. Timothy Burns was owner at that time.
Lift
North Station
Area 5b IC I
0
OVERHEAD SITE
(47-Lc-20)
Figure 3
The archaeological remains of the historic structure at the Lamb farm could represent the Burns' house of 1874 or an earlier structure. If it is earlier, it would constitute one of the earliest houses in the area. Consequently, more documentation is necessary before the full potential significance of the historic site can be ascertained.

PAMMEL CREEK ALTERNATE

Pammel Creek flood control Alternative E-1 calls for an earth channel northwest of Pammel Creek and for a "stilling basin" (approximately 5.33 acres) northwest of Pammel Creek. This area currently is a residential park containing a ball field and playground equipment. The Sherwood Manor housing subdivision lies on raised ground to the west and north of the park (Figure 3).

Random Field Survey

On July 26, 1980 the field director and three crew members conducted random shovel tests in the park area. The purpose of the shovel tests was to determine if the sub-surface soil profiles indicated mixing of artifact bearing sediments. Five shovel test pits were dug (1-5). Three of the holes were placed between the creek and the estimated location of the buried 72" storm drain.
Two test holes were placed between the storm drain and the housing development (map 1). Matrix was screened through 1/4" wire mesh, the holes were backfilled, and the sod replaced.

The results of the random shovel tests are as follows:

<table>
<thead>
<tr>
<th>Test Hole 1</th>
<th>0-15 cm</th>
<th>yellow sandy &quot;fill&quot; for playground area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-65 cm</td>
<td>dark brown sandy soil</td>
</tr>
<tr>
<td></td>
<td>65-85 cm</td>
<td>reddish brown sand</td>
</tr>
<tr>
<td>Test Hole 2</td>
<td>0-40 cm</td>
<td>dark brown sandy soil</td>
</tr>
<tr>
<td></td>
<td>40-80 cm</td>
<td>light reddish brown sandy silt, becoming sand at depth</td>
</tr>
<tr>
<td>Test Hole 3</td>
<td>0-65 cm</td>
<td>dark brown sandy soil, some artifacts in upper 25 cm.</td>
</tr>
<tr>
<td></td>
<td>65-80 cm</td>
<td>reddish brown sand</td>
</tr>
<tr>
<td>Test Hole 4</td>
<td>0-30 cm</td>
<td>dark brown sandy soil with artifacts</td>
</tr>
<tr>
<td></td>
<td>30-60 cm</td>
<td>light brown sandy layer mottled with rodent holes</td>
</tr>
<tr>
<td></td>
<td>60-75 cm</td>
<td>yellowish coarse sand</td>
</tr>
<tr>
<td>Test Hole 5</td>
<td>0-40 cm</td>
<td>dark brown sandy soil with artifacts</td>
</tr>
<tr>
<td></td>
<td>40-60 cm</td>
<td>reddish brown sand</td>
</tr>
<tr>
<td></td>
<td>60-75 cm</td>
<td>light brown sand</td>
</tr>
</tbody>
</table>

Artifacts recovered from the random shovel test holes are listed below:
Test Hole 3

1 chert chip
1 shell-tempered potsherd
1 white porcelain china fragment
1 fragment of porcelain pipe bowl and stem

Test Hole 4

7 fire-burned rock fragments
1 chert chip
13 shell-tempered potsherds (11 < 2 cm)

Test Hole 5

9 chert chips (<2 cm)
3 shell-tempered potsherds (plain)

The stratigraphy of sediments in the random shovel test holes containing artifacts did not indicate major soil disturbances. There appeared to be a consistent pattern of deposition with artifacts occurring in a dark brown sandy soil underlain by culturally sterile sands. The evidence from these tests indicated a good probability that cultural resources in primary context were located in the park area. Consequently, the Corps of Engineers, St. Paul District authorized an additional intensive survey for this alternate project area.

Intensive Field Survey

On October 4 and 5, 1980, archaeologists from the Center for Research Archaeology at La Crosse undertook systematic
shovel testing at the residential park located southwest of the junction of Pammel Creek and State Highway 61. The park is northwest of the Overhead Site (47LC20), and directly south of an area where some prehistoric burials reportedly were disturbed by the Sherwood Manor subdivision construction. The purpose of the shovel tests was to determine whether the proposed flood control project would disturb in situ cultural resources.

Research Methodology

A careful pedestrian reconnaissance of the park area revealed that several bare spots of ground exhibited some prehistoric cultural material. This was not totally unexpected with the proximity of previously recorded archaeological sites and the fact that the park had suffered some previous disturbance through plowing and more recently with the placement of a 72" storm drain through the middle of the area. Next, the entire park area was divided into a 15 meter interval grid and a 60 cm. deep shovel hole was dug at each 15 meter pin (map 1). All of the fill dirt from each hole was passed through a 1/4" wire mesh screen and any material, natural or cultural, remaining was bagged for later cleaning and laboratory inspection. When cultural remains were recovered the approximate depth was noted. Each hole was carefully scrutinized following excavation and its stratigraphic soil information recorded before backfilling.
No holes were left open when researchers were not present at the site; and the entire area was returned, as nearly as possible, to its pre-investigation appearance.

Survey Results

In general terms, the eastern half (rows I-IV) of the park showed extensive disturbance and evidence of recent filling and flood deposition. While some variation exists, the following generalized description characterized all of the shovel holes in the eastern portion of the park.

<table>
<thead>
<tr>
<th>Depth Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-30 cm</td>
<td>Dark grayish brown sandy loam with rootlets, worm and insect burrows and runs, and occasional pieces of very recent human trash. Grain size appears to be fine to medium.</td>
</tr>
<tr>
<td>30-50</td>
<td>Mottled yellowish brown sand with fewer rootlets. Grain size is medium coarse.</td>
</tr>
<tr>
<td>50-60+</td>
<td>Dark brown sandy loam. Grain size is fine to medium. No rootlets.</td>
</tr>
</tbody>
</table>

Rows V-VII showed some differences below 30 cm. in several areas with the 30 to 60 cm. stratum being a mottled yellowish brown medium sand. It is of interest to note that artifacts were not found below the 30 cm. level in these units. The test units containing artifacts below the 30 cm. level were a homogeneous dark grayish brown sandy loam to at least a depth of 60 cm. below the surface.
In one such test hole (VI-7, Figure 4) a concentration of pottery, mussel shell, bone, and stone artifacts was noted at approximately 50 cm. below the surface. The unit was broadened in order to assess whether the materials were in situ, and several close internal tests were spaced around hole VI-7 in order to define the limits of the concentration, designated Feature 1.

**Feature 1.** This feature was revealed in shovel test hole VI-7, but was absent in hole VI-6 and VI-8. A series of more closely spaced shovel tests (Figure 4) indicated that the feature is no greater than approximately 5x10 meters in size and varies in depth from 50 cm. to 80 cm. below the surface. Several concentrations of fresh water mussel shell and broken pottery attest to the in situ nature of the deposit. The artifacts recovered during the shovel testing are as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pottery</td>
<td>Forty (40) potsherds were recovered from Feature 1. All were shell-tempered, undecorated, burned, and highly friable. Several of the larger sherds had a carbonized encrustation on their exterior surface.</td>
</tr>
<tr>
<td>Debitage</td>
<td>Fourteen (14) pieces of debitage were recovered. All were of locally available siliceous material.</td>
</tr>
<tr>
<td>Tools</td>
<td>Two (2) retouched pieces were found. One appears to be a utilized flake and the other a fragment of a scraper bit.</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>One (1) small light purple bottle glass fragment was found about 20 cm. below the surface; and one (1) large burned limestone chunk was recovered within the feature. Several fragments of wood charcoal were noted and collected.</td>
</tr>
</tbody>
</table>
probable limit of artifact concentration

Area Around Unit VI-7

Excavation Unit

Feature 1
Test Excavation Unit VI-7

Figure 4
Shovel Test B. This area is most probably an extension of Feature 1 to the north, but is treated separately here because of artifactual differences. Hole "B" was the only other location in which the Feature 1 midden was specifically located. It is possible, however, that other such localities exist within the research area and were missed by the 15 meter interval shovel tests.

The artifacts recovered from hole B are listed below. As may be seen, the main differences between hole B and hole VI-7 (Feature 1) are in the quantities of tools and pottery, and the presence of a diversified faunal sample.

**Potsherds**

All except one are shell-tempered, burned, and very friable. All sherds are undecorated except two. One is brushed on both the interior and exterior surfaces, and is sand-tempered. The other is a rim sherd fragment from a shouldered bowl with a pinched everted rim and small oval indentations at the rim/body junction. All of the latter may be classed as "Allamakee trailed," characteristic of the Orr Phase of the Oneota.

**Mussel Shell**

A number of fresh water mussel shells were recovered. All were fragmentary and in relatively poor condition. Of note, however, is that the variety is fairly large with a thick shell (10-15 mm).

**Debitage**

Some pieces of debitage were recovered from the feature. All pieces were of local chert except two pieces of quartzite. In addition, one (1) burin spall was noted.
Tools

Three (3) retouched bladelets were noted with mean (x) dimensions of 20.17 mm length, 8.92 mm width and a 2.50 mm thickness. All were of chert. One (1) thumbnail scraper of a mottled/tan white fine grained chert was found. The only other tools were four (4) small triangular projectile points, two of which were complete and measure as follows:

<table>
<thead>
<tr>
<th>length</th>
<th>mid-width</th>
<th>base-width</th>
<th>thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 mm</td>
<td>4.0 mm</td>
<td>14.5 mm</td>
<td>5.5 mm</td>
</tr>
<tr>
<td>22.75 mm</td>
<td>2.75 mm</td>
<td>12 mm</td>
<td>5.0 mm</td>
</tr>
</tbody>
</table>

The faunal assemblage from the shovel testing is quite remarkable both for its state of preservation and diversity of species.

**Mammals**

Beaver ........................................ incisor (2)
Muskrat ........................................ incisor (1), molar (1)
Dog sp ........................................ incisor (1)
Deer ........................................ incisor (1)
rip (1)
tibia (1)
metatarsal (4)
phalanx (1)
limb (29)

**Reptiles**

Snake ........................................ vertebra (1)
Turtle ........................................ carapace (37)
ribs (16)
vertebrae (7)
limbs (15)
CONCLUSIONS

The literature search and intensive survey along the Pammel Creek channel revealed no potentially significant prehistoric cultural resources which will be adversely affected by the flood control project. It has been determined that the Overhead Site (47LC20) does not extend into the proposed impact area. Consequently, the northwestern boundary of the Overhead Site, as it is presently defined, can be moved. Minimally, the boundary should be moved 100' to the east of the present Pammel Creek channel (Figure 3). Archaeological investigations recently conducted by the University of Wisconsin, La Crosse, at the Overhead Site will more accurately establish the horizontal extent of the Overhead Site outside the present area of concern.

The probability that significant historical remains are present in the immediate vicinity of the Eldon Lamb farmstead is high. If the Lamb farmstead is to be directly impacted by the proposed construction, further documentation and evaluation of these potentially significant historical remains will be necessary.

The shovel testing for the Pammel Creek Alternate plan indicated that at least the western part of the park area contains prehistoric cultural remains in primary context. The late prehistoric occupation was apparently contemporaneous with the Oneota remains at the Overhead Site.
across Pammel Creek to the south. The general area west of the existing 72" storm drain and especially around test hole VI-7 and B contain bone, shell, charcoal, debitage, tools, and fire-cracked rock. No such indications of in situ occupation were found to the east of the storm drain. Consequently, it is in the eastern area of the park that any future construction would be least likely to disturb any potentially significant cultural resources.

It is also evident from the archival maps and Pammel's (1928:23) account that the probability of both prehistoric and historic sites being present along the upper reaches of the Pammel Creek drainage is relatively high. Any plans concerning the future alteration of the upper portion of the Pammel Creek drainage should provide for an evaluation of such potentially significant archaeological remains.
REFERENCES CITED

Bryant, Benjamin F.
1907 Memoirs of La Crosse County. Western Historical Association, La Crosse.

Gallagher, James P.

Gallagher, James P. and Katherine Stevenson

Pammel, L.H.

Penman, John T.
1979 Highway Archaeology in Wisconsin: the 1978 Field Season. Wisconsin Department of Transportation, Madison, Wisconsin.

Stoltman, James B.

Stoltman, James B.

Vehik, Rain and Susan C.