

Thunderbird

Archeology

**MANAGEMENT SUMMARY OF THE PHASE IA
ARCHEOLOGICAL INVESTIGATIONS OF THE
± 131 ACRE WHITE'S FORD PARK PROPERTY,
LOUDOUN COUNTY, VIRGINIA**

By

Tammy Bryant, M.A.,RPA

February 2009

WSSI Project #21372.03

Prepared for:
Northern Virginia Regional Park Authority
5400 Ox Road
Fairfax Station, Virginia 22039

Prepared by:
Thunderbird Archeology
Wetland Studies and Solutions, Inc.
5300 Wellington Branch Drive
Suite 100
Gainesville, Virginia 20155



ABSTRACT

An archival study and walkover reconnaissance, with supplemental auger testing, was conducted of the proposed White's Ford Park in Loudoun County, Virginia. Thunderbird Archaeology, a division of Wetlands Studies and Solutions, Inc. of Gainesville, Virginia, conducted the study described in this report for the Northern Virginia Park Authority of Fairfax Station, Virginia. The fieldwork was carried out in February of 2009. Based on the results of this study, the project area is considered to have a high probability for both historic and prehistoric sites. A Phase I archeological investigation is recommended prior to planned development.

TABLE OF CONTENTS

| | |
|--|-----|
| ABSTRACT | i |
| TABLE OF CONTENTS | iii |
| LIST OF EXHIBITS | iv |
| LIST OF TABLES | v |
| LIST OF PLATES | vi |
| INTRODUCTION | 1 |
| ENVIRONMENTAL SETTING | 1 |
| PREVIOUS ARCHEOLOGICAL RESEARCH | 9 |
| FIELD METHODS | 14 |
| RESULTS OF ARCHIVAL SEARCH | 15 |
| RESULTS OF FIELD INVESTIGATIONS | 26 |
| Southern Half | 27 |
| <i>The Outer Levee</i> | 27 |
| <i>Outer Flood Chute</i> | 41 |
| <i>First Inner Levee/Terrace</i> | 47 |
| <i>First Inner Flood Chute</i> | 58 |
| Northern Half | 63 |
| <i>Second Inner Levee/Terrace</i> | 63 |
| <i>Second Inner Flood Chute</i> | 71 |
| <i>Slope Leading to the Pleistocene Terraces</i> | 76 |
| SUMMARY AND CONCLUSIONS | 78 |
| REFERENCES CITED | 80 |
| PLATES | 81 |
| APPENDIX I | 113 |
| Artifact Inventory | 113 |

LIST OF EXHIBITS

| | | |
|------------|--|----|
| Exhibit 1 | : Portion of the 2005 ADC Northern Virginia Regional Map Showing the Location of the Project Area | 2 |
| Exhibit 2 | : Portion of the U.S.G.S. 1995 Poolesville, MD-VA 7.5' Quadrangle Showing the Location of the Project Area | 4 |
| Exhibit 3 | : November 2008 Natural Color Imagery Aerial Photograph Showing the Project Area | 5 |
| Exhibit 4 | : Project Map Showing Micro-Topographic Divisions | 7 |
| Exhibit 5 | : 2007 Natural Color Imagery Map showing the Architectural Resources and Archeological Sites Recorded with the Virginia Department of Historic Resources | 10 |
| Exhibit 6 | : Portion of 1853 Yardley Taylor Map Showing the Approximate Location of the Project Area | 16 |
| Exhibit 7 | : Portion of 1862 McDowell Map of Northeast Virginia and Vicinity of Washington D.C. Showing the Approximate Location of the Project Area | 17 |
| Exhibit 8 | : Portion of 1863 Macomb Map of the Upper Potomac from McCoy's Ferry to Conrad's Ferry and Adjacent Portions of Maryland and Virginia Showing the Approximate Location of the Project Area | 18 |
| Exhibit 9 | : Portion of 1880 J.M. Hopkins' Map of Leesburg, Loudoun County, Virginia Showing the Approximate Location of the Project Area | 19 |
| Exhibit 10 | : Portion of 1925 United States Post Office Rural Delivery Routes Map Loudoun County, VA Showing the Location of the Project Area | 20 |
| Exhibit 11 | : Portion of U.S.G.S. 1908 Quad Map Seneca, MD-VA Showing the Location of the Project Area | 21 |
| Exhibit 12 | : Portion of U.S.G.S. 1944 Quad Map Seneca, MD-VA Showing the Location of the Project Area | 22 |
| Exhibit 13 | : Portion of U.S.G.S. 1952 Quad Map Poolesville, MD-VA Showing the Location of the Project Area | 23 |
| Exhibit 14 | : Portion of U.S.G.S. 1970 Quad Map Poolesville, MD-VA Showing the Location of the Project Area | 24 |
| Exhibit 15 | : Portion of U.S.G.S. 1988 Quad Map Poolesville, MD-VA Showing the Location of the Project Area | 25 |
| Exhibit 16 | : Portion of Project Map Showing Archeological Site Locations, Auger Holes and Surface Collections | 29 |
| Exhibit 17 | : Soil Profile, Auger Test 3 | 31 |
| Exhibit 18 | : Soil Profile, Auger Test 9 | 33 |
| Exhibit 19 | : Portion of Project Map Showing the Probability Areas for Cultural Resources within the Project Area | 35 |
| Exhibit 20 | : Portion of Project Map Showing Recommended Phase I Testing within the Project Area | 39 |

LIST OF EXHIBITS continued

| | |
|--|----|
| Exhibit 21 : Soil Profile, Auger Test 2 | 43 |
| Exhibit 22 : Soil Profile, Auger Test 13 | 45 |
| Exhibit 23 : Soil Profile, Auger Test 1 | 50 |
| Exhibit 24 : Soil Profile, Auger Test 10 | 53 |
| Exhibit 25 : Soil Profile, Auger Test 14 | 55 |
| Exhibit 26 : Soil Profile, Auger Test 4 | 59 |
| Exhibit 27 : Soil Profile, Auger Test 5 | 61 |
| Exhibit 28 : Soil Profile, Auger Test 6 | 65 |
| Exhibit 29 : Soil Profile, Auger Test 11 | 67 |
| Exhibit 30 : Soil Profile, Auger Test 15 | 70 |
| Exhibit 31 : Soil Profile, Auger Test 8 | 73 |
| Exhibit 32 : Soil Profile, Auger Test 12 | 75 |
| Exhibit 33 : Soil Profile, Auger Test 7 | 77 |

LIST OF TABLES

| | |
|---|----|
| Table 1 : Previously Recorded Archeological Sites within One Mile Radius Of the Project Area | 12 |
| Table 2 : Artifacts Recovered from Site 44LDA, Surface Collection | 51 |

LIST OF PLATES

| | | |
|----------|---|-----|
| Plate 1 | : Representative View of Vegetation within the Project Area | 83 |
| Plate 2 | : Representative View of Vegetation within the Project Area | 83 |
| Plate 3 | : Outer Levee, West Half, Facing East | 85 |
| Plate 4 | : Outer Levee, West Half, Facing South | 85 |
| Plate 5 | : Outer Levee, East Half, Facing South/Southeast | 87 |
| Plate 6 | : Outer Levee, East Half, Facing Northeast | 87 |
| Plate 7 | : Outer Levee, East Half, Facing North | 89 |
| Plate 8 | : Outer Levee, East Half, Facing West | 89 |
| Plate 9 | : Outer Flood Chute, West Side, Facing North | 91 |
| Plate 10 | : Outer Flood Chute, West Side, Facing West | 91 |
| Plate 11 | : Outer Flood Chute, East Side, Near Auger 13, Facing Southwest | 93 |
| Plate 12 | : Outer Flood Chute, East Side, Near Auger 9, Facing North | 93 |
| Plate 13 | : First Inner Levee/Terrace, Site 44LDA, Facing North | 95 |
| Plate 14 | : First Inner Levee/Terrace, Site 44LDA, Facing East | 95 |
| Plate 15 | : Lithic Artifacts from Surface Collection of Site 44LDA | 97 |
| Plate 16 | : Shepard Ceramics from Surface Collection of Site 44LDA | 97 |
| Plate 17 | : Potomac Creek Ceramics from Surface Collection of Site 44LDA | 99 |
| Plate 18 | : First Inner Levee/Terrace, Site 44LD0309, Facing East | 99 |
| Plate 19 | : First Inner Levee/Terrace, Site 44LD0309, Facing Northeast | 101 |
| Plate 20 | : First Inner Flood Chute, West Half, Facing Northwest | 101 |
| Plate 21 | : First Inner Flood Chute, East Half, Facing North/Northwest | 103 |
| Plate 22 | : First Inner Flood Chute, East Half, Facing North/Northwest | 103 |
| Plate 23 | : Drainage along North Portion of First Inner Flood Chute, Facing West | 105 |
| Plate 24 | : Second Inner Levee/Terrace, West Half, Site 44LD0365, Facing East/Northeast | 105 |
| Plate 25 | : Second Inner Levee/Terrace, East Half, Site 44LD0365, Facing West | 107 |
| Plate 26 | : Second Inner Levee/Terrace, East Half, Facing Southeast | 107 |
| Plate 27 | : Second Inner Flood Chute, DHR Recorded Location of Site 44LD0365, Facing Northeast | 109 |
| Plate 28 | : Second Inner Flood Chute, Eastern Portion, Facing Northwest | 109 |
| Plate 29 | : Second Inner Flood Chute, Extreme Eastern Portion, Facing North/Northwest | 111 |

INTRODUCTION

This transmittal presents the results of an archival study and walkover reconnaissance, with supplemental soil augering, of the proposed \pm 131 acre White's Ford Park, located on Hibler Road in Loudoun County, Virginia (Exhibit 1). Thunderbird Archeology, a division of Wetland Studies and Solutions, Inc., of Gainesville, Virginia, conducted the study described in this report for the Northern Virginia Regional Park Authority (NVRPA) of Fairfax Station, Virginia. The fieldwork was carried out in February of 2009.

The methodology utilized in the investigation described herein was based upon a verbal Scope of Work and an e-mail dated January 21, 2009 from Heidi Siebentritt of the Loudoun County planning office. It is designed to make a preliminary assessment of the probability that the project area will contain archeological sites with the anticipation of a formal Phase I report to follow at a later date.

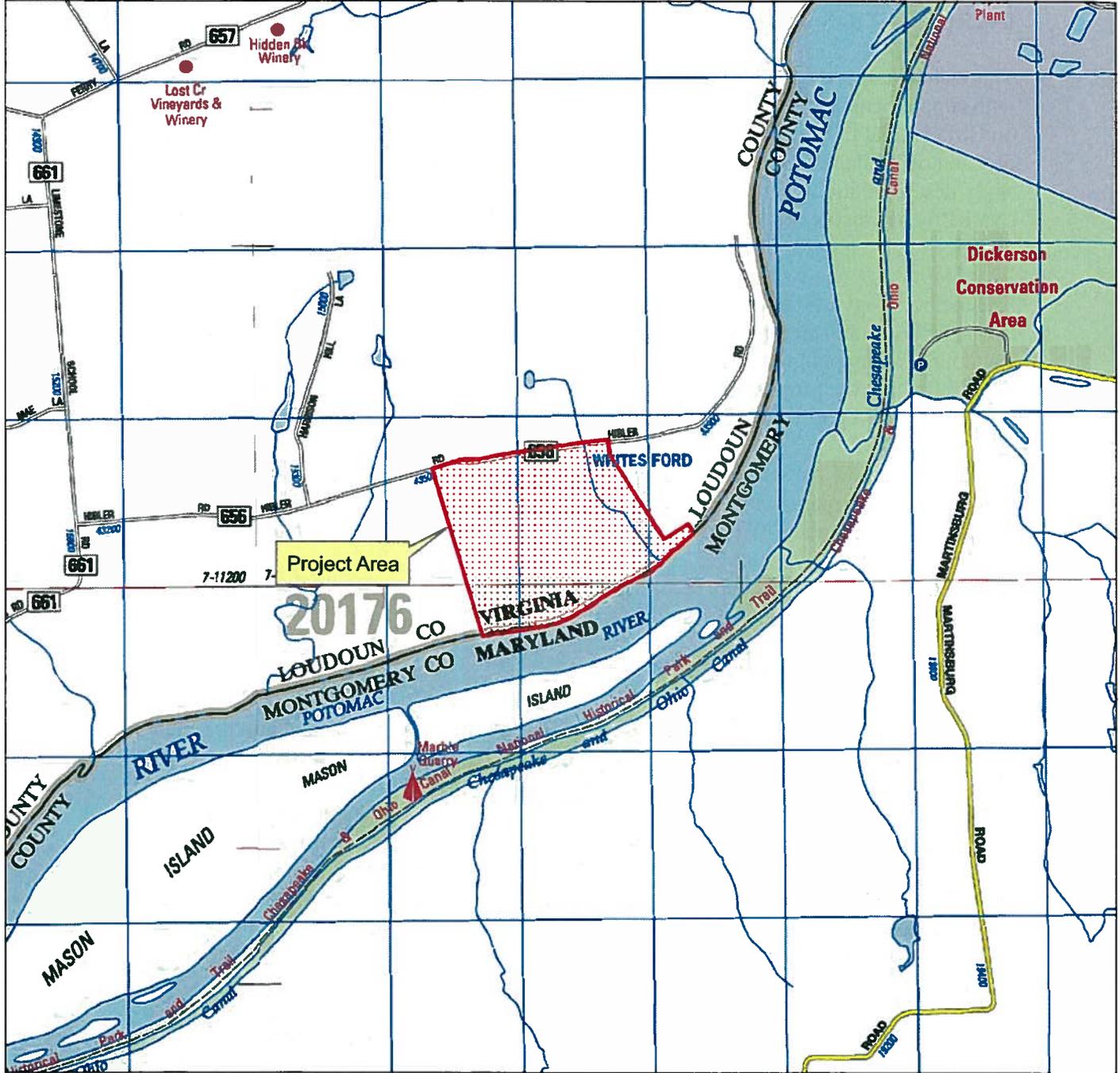
Tammy Bryant, M.A., served as Principal Investigator on this project and directed the fieldwork. Ms. Bryant was assisted by Archeologists Jeremy Smith, David Carroll, and Kristin Deily. Elizabeth Waters Johnson, M.A., conducted the artifact analysis.

All research data and field data resulting from this project are currently on repository at the Thunderbird offices in Gainesville, Virginia.

ENVIRONMENTAL SETTING

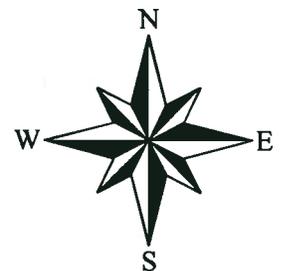
Loudoun County encompasses portions of the Piedmont Triassic Lowland and the Inner Piedmont Plateau sub-provinces and a portion of the Blue Ridge Province (Fenneman 1938; Bailey 1999). The Piedmont Physiographic Province is underlain by igneous and metamorphic rocks of various origins that were folded during the Paleozoic as the North American and African plates converged. Later, in the Mesozoic, rifting occurred as Pangea broke apart and the Atlantic Ocean formed. The Piedmont ranges from 200 feet above sea level (a.s.l.) at the Fall Line to circa 1000 feet a.s.l. in the western portion at the Blue Ridge. Because of the intensive weathering of the underlying rocks in the Piedmont's humid climate, bedrock is generally buried under a thick, 6 to 60 foot blanket of saprolite.

The Piedmont Province has been sub-divided into three sub-provinces: the Outer Piedmont Plateau, the Triassic Lowlands, and the Inner Piedmont Plateau. The project area lies in the Triassic Basin, or Triassic Lowlands. These are long, narrow rift valleys, or basins, formed during the Triassic period. These valleys, underlain by Mesozoic sedimentary and igneous rocks, have filled with sandstones and basalts. Elevations range from 200 to 400 feet a.s.l.



Copyright ADC The Map People
Permitted Use Number 20711184

Vicinity Map
White's Ford Park
WSSI #21372.03
Scale: 1" = 2000'



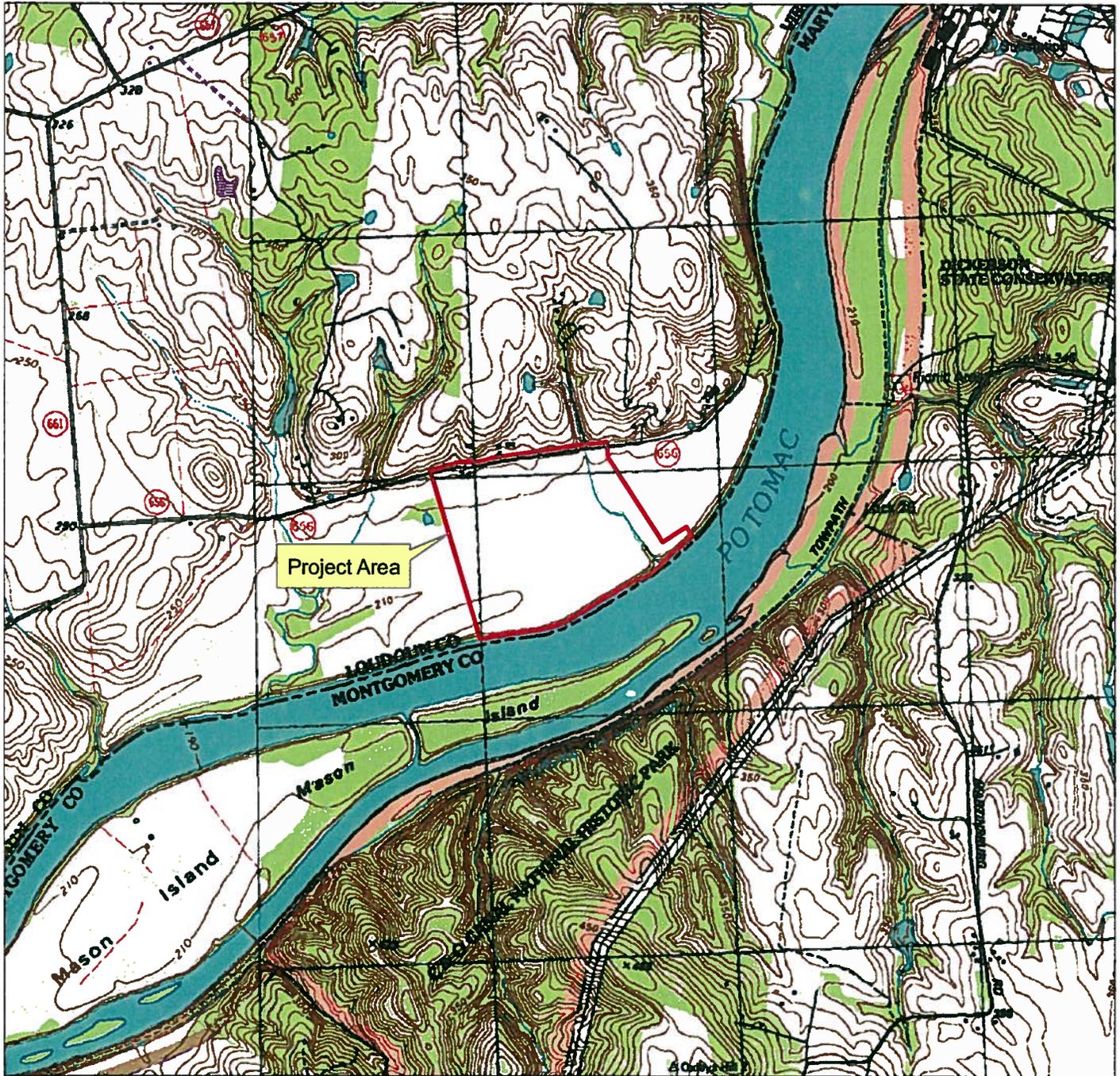
The topography of the project area is comprised of the broad floodplain of the Potomac River, northwest of Mason's Island (Exhibit 2). Generally, the project area lies at elevations between 205-230 a.s.l., with the highest elevations along the slopes in the northern section. The lowest elevations were in the flood chutes, with the terraces lying at 210 and 215 a.s.l. At the northern end, the slope rises sharply out of the floodplain, from 215 a.s.l. in the flood chute, to 230 a.s.l. at the northern project boundary along Hibler Road. An unnamed tributary of the Potomac River flows southward along the eastern border of the project area.

The majority of the property has been under cultivation in the recent past; at the time of the survey, the fields contained the remnants of both corn and soybean crops (Exhibit 3). The tributary is lined with mature cottonwood and sycamore trees. Plates 1 and 2 present typical views of the vegetation within the project area.

Distinct micro-topographic divisions were noted within the floodplain. A generalized topographic description of these divisions within the floodplain follows, moving from the Potomac River at the southern edge of the property to the inner edge of the Pleistocene terraces to the north:

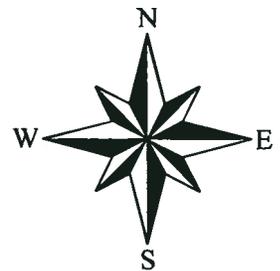
- The river and the immediately adjacent narrow floodplain location
- The outer levee
- The outer flood chute
- The first inner levee/terrace
- The first inner flood chute
- The second inner levee/terrace
- The second inner flood chute
- The slope to the uplands

The width of each micro-topographic division and the visibility of the terraces vary within the project area. In general, the western half of the project area has more pronounced terrace breaks, while in the eastern half, these breaks are less apparent. The eastern end of the project area also includes a very young terrace near the river and downslope of the outer levee. This more recent terrace was not observed elsewhere in the project area. Further west along the river, the outer levee appears as a high steep bluff above the river.



**USGS Quad Map
Poolesville, MD-VA 1995
White's Ford Park
WSSI #21372.03
Scale: 1" = 2000'**

Latitude: 39°11'21" N
Longitude: 77°29'09" W
Hydrologic Unit Code (HUC): 020700080403
Stream Class: III
Name of Watershed: Potomac River





Fall 2008 Natural Color Imagery
White's Ford Park
WSSI #21372.03
Scale: 1" = 500'

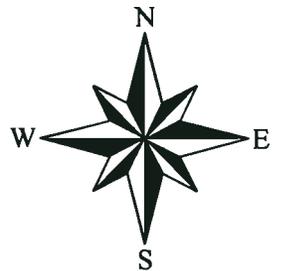
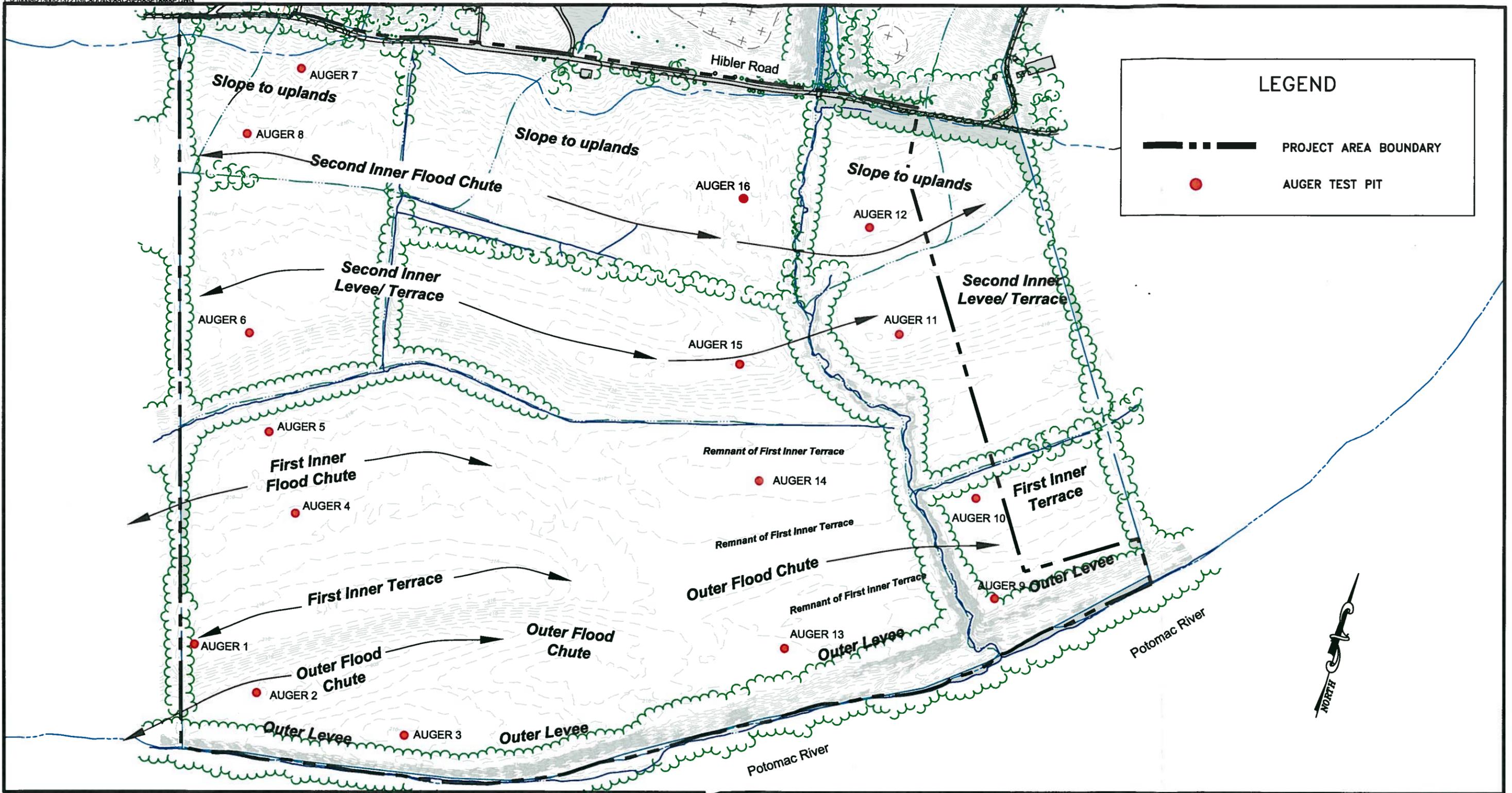


Photo Source: Aerials Express

Thunderbird Archeology
A Division of Wetland Studies and Solutions, Inc.

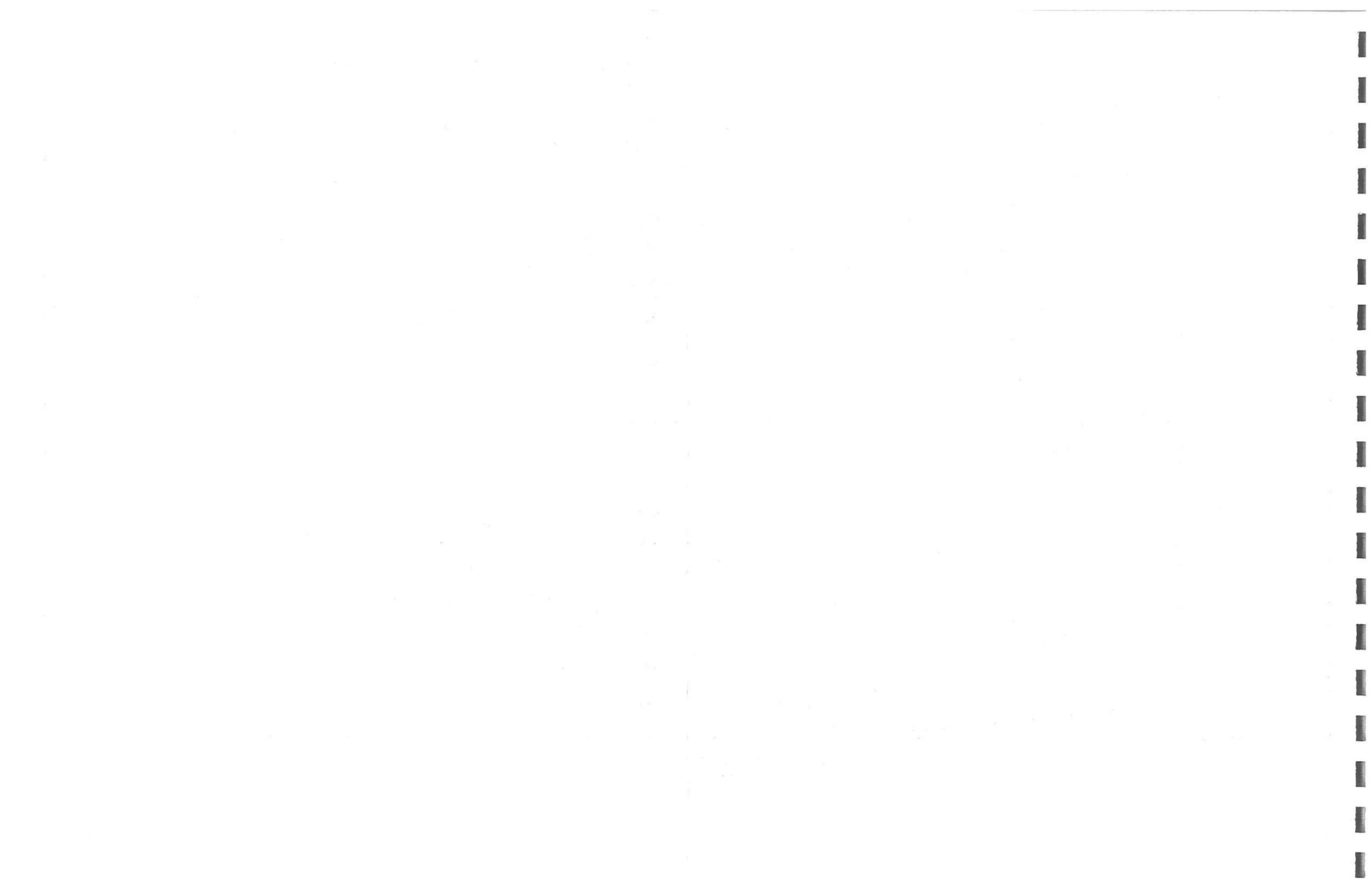
Exhibit 3



LEGEND

- PROJECT AREA BOUNDARY
- AUGER TEST PIT

**Project Map Showing Micro-Topographic Divisions
White's Ford - WSSI #21372.03
Scale: 1" = 300'**



The floodplain within the project area is approximately 2,700 feet (823 meters), east to west, at the widest point although a small extension in the southeast corner extends about another 50 feet. Measuring north-south, the floodplain is approximately 2,100 feet (640 meters) at its widest point; the uplands to the north extend for another 300 feet (91.4 meters). The north-south dimensions of the various micro-topographic divisions are approximately:

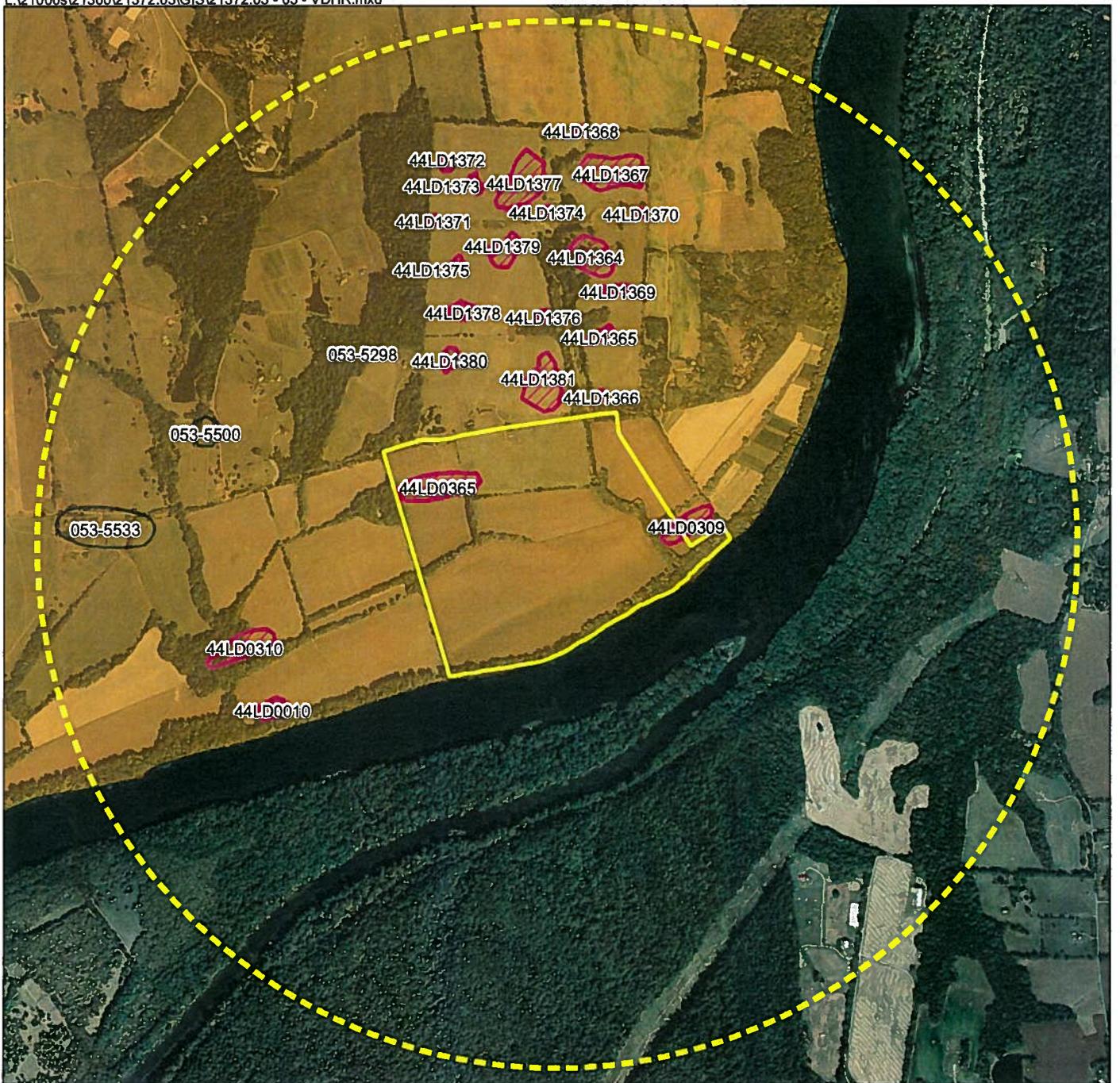
- Outer Levee: 50 feet (15 meters)
- Outer flood chute: 300 feet (91 meters)
- First inner levee/terrace: 300 feet (91 meters)
- First inner flood chute: 500 feet (152 meters)
- Second inner levee/terrace: 400 feet (121 meters)
- Second inner flood chute: 300 feet (91 meters)
- Slope to uplands: 300 feet (91 meters)

Each of the micro-topographic divisions has different depositional histories and, based on the present evidence (which should be considered very preliminary); appear to have been utilized during different time periods although some overlap occurs. For example, the soils within the outer levee are relatively recent and, other than the most recent plowed deposits, no stable living surfaces are evident within the soil profile. The most extensive use of the first inner levee/terrace was during the Late Woodland period, post 1000 A.D. (although an Early Archaic point, dating from 7700-6900 B.C., was also recovered from the surface). Based on the materials recovered from site 44LD0365 during a previous survey, the second inner levee/terrace was utilized during the Middle Archaic time period, 6500-3000/2500 B.C. The Pleistocene terraces, which abut the project area to the north, are much older, circa 15,000 B.C., and could have been utilized throughout prehistory. During a 2006 Phase I survey of the property north of the project area, these upland settings yielded artifacts from both the Middle and Late Archaic periods (Breckenridge 2006).

PREVIOUS ARCHEOLOGICAL RESEARCH

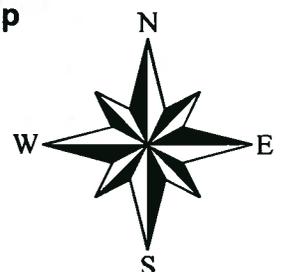
The following inventory of previously recorded architectural resources within and near the project area was established by using the Virginia Department of Historic Resource's (DHR) online Data Sharing System as well as examining cultural resource files and reports at the Thunderbird Archeology office in Gainesville, Virginia.

Two archeological sites, 44LD0309 and 44LD0365, have been recorded within the current project area. In addition, the project area is located within the Catoctin Rural Historic District (053-0012). Twenty archeological sites and three architectural resources have been identified within a one-mile radius of the project area. Exhibit 5 shows the locations of these cultural resources.



**VDHR Architectural Resources and Archeological Sites Map
2007 Natural Color Imagery**

**White's Ford Park
WSSI #21372.03
Scale: 1" = 1500'**



-  VDHR Architectural Resource
-  VDHR Archeological Site
-  Project Area
-  1 Mile Radius From Center of Project Area

Photo Source: October 2007 Aerials Express natural color imagery

Site 44LD0309 was recorded in 1980, based on a reconnaissance by William Rust of the Loudoun Archeology Center. The site was defined as a small lithic scatter dating from the Middle and Late Woodland time periods and yielded 12 artifacts. The artifacts included a quartz triangular projectile point as well as a quartz biface, a quartzite unifacial tool and quartz and rhyolite flakes were collected. One quartz and one rhyolite flake had been retouched into expedient tools. The site dimensions given on the form are 300 meters east-west by 100 meters north-south and the site is described as being located on the lower Potomac River floodplain, at an elevation of 200 feet and 100 meters north of the Potomac River.

Site 44LD0365 was recorded in 1985 by Howard MacCord, Sr. Mr. MacCord described the site as a scattering of Archaic period artifacts and debitage along a ridge, approximately 400 meters north of the right bank of the Potomac River. The artifacts noted on the site form include a Halifax point, scrapers and fragments of other points. The site dimensions are given as approximately 100 feet wide but the form notes that the artifacts were distributed along the ridge for approximately 1,000 feet.

The Catoctin Rural Historic District, listed in the National Register of Historic Places (NRHP), spans approximately 25,000 acres of rolling farmland in northern Loudoun County and is primarily devoted to livestock and agricultural production. The district is situated north of the town of Leesburg and is bounded by the Potomac River on the north and east sides and by the Catoctin Mountains to the west. The district includes many large and small farms that contain historic buildings and structures dating from the late 18th through the early 20th centuries. The historic buildings include dwellings and outbuildings, churches, schools, and general stores that "...represent a continuum of changing cultural and agrarian developments and life styles of the past two hundred years" (DHR 053-0012). Several properties within the historic district have been individually listed in the NRHP; these include the Balls Bluff Battlefield and National Cemetery (DHR 253-5021) and the Lucketts School (DHR 053-0287).

The network of roads through the historic district has also changed little over the centuries. U.S. Route 15 (James Madison Highway) runs north-south through the Catoctin District. An effort to preserve the historic significance and scenic value of the Route 15 corridor has been made through a multi-state, multi-jurisdictional venture entitled "The Journey Through Hallowed Ground." The project goals include gaining scenic byway designation for the entire length of Route 15 (from roughly Gettysburg, Pennsylvania, in the north to Charlottesville, Virginia, in the south) and lobbying to preserve the scenic and historical significance of the road during improvements and development. The National Trust for Historic Preservation has added the corridor to its 2005 list of America's 11 Most Endangered Historic Places. The Northern Virginia Piedmont region of the corridor has been on the list since 1994. In 1989, the District was determined to be eligible for the National Register of Historic Places. It was also listed on the Virginia Landmark Register in 1988.

As previously stated, twenty archeological sites have been recorded within the vicinity of the project area; these sites are listed in Table 1 and summarized below

TABLE 1: Previously Recorded Archeological Sites within a One Mile Radius of the Project Area

| DHR Site Number | Site Type | Temporal Affiliation |
|------------------------|----------------------------|--|
| 44LD0010 | Village | Woodland |
| 44LD0310 | Lithic Scatter | Prehistoric, Unknown |
| 44LD1364 | Lithic scatter Domestic | Prehistoric, Unknown Mid-19 th -20 th Century |
| 44LD1365 | Lithic scatter | Prehistoric, Unknown |
| 44LD1366 | Lithic scatter | Prehistoric, Unknown |
| 44LD1367 | Lithic scatter | Prehistoric, Unknown |
| 44LD1368 | Dwelling | Late 18 th -early 19 th Century |
| 44LD1369 | Lithic scatter | Late Archaic |
| 44LD1370 | Refuse scatter | Historic, Unknown |
| 44LD1371 | Refuse scatter | Early 19 th -20 th Century |
| 44LD1372 | Dwelling | Late 18 th /early 19 th Century |
| 44LD1373 | Lithic scatter | Middle Archaic |
| 44LD1374 | Refuse scatter | 20 th Century |
| 44LD1375 | Lithic scatter | Prehistoric, Unknown |
| 44LD1376 | Dwelling | Late 19 th /early 20 th Century |
| 44LD1377 | Lithic scatter | Prehistoric, Unknown |
| 44LD1378 | Lithic scatter | Prehistoric, Unknown |
| 44LD1379 | Lithic scatter | Prehistoric, Unknown |
| 44LD1380 | Lithic scatter | Prehistoric, Unknown |
| 44LD1381 | Lithic scatter | Prehistoric, Unknown |

Two prehistoric sites have been recorded in the vicinity along the floodplain of the Potomac River. Site 44LD10 is reported to be the location of a Woodland village with Native American burials. The site was first recorded in 1939 as the Mason Island Site and has been visited by collectors and avocational archeologists over the years. Excavations were conducted in the 1960s by A.F. Johnson, but the data was never published. Site 44LD0310 was recorded as lithic scatter by William Rust in 1980; no temporally diagnostic artifacts were recovered from this site.

The remaining 18 archeological sites were recorded during a Phase I investigation of the ± 150 acre Hibler Road property which abuts the current project area on the north (Breckenridge 2006). Eleven of these sites (44LD1365-1367, 44LD1369, 44LD1373, 44LD1375, and 44LD1377-1381) dated from the prehistoric period and were generally low density lithic scatters, indicative of ephemeral occupations by prehistoric populations. Two of these lithic scatters were dated to more specific periods of

prehistory on the basis of temporally diagnostic artifacts. A Holmes type hornfels projectile point was recovered from site 44LD1369, indicating occupation during the Late Archaic period (2500-1000 B.C.). A probable Halifax type quartz projectile point was recovered from site 44LD1373, indicating occupation during the Middle Archaic period (6500-3000/2500 B.C.).

Seven of the 18 archeological sites identified during the 2006 survey dated from the historic period. Site 44LD1364 was a multi-component site, yielding both prehistoric and historic period artifacts. The prehistoric component dated to an undetermined period of prehistory and the historic component contained artifacts associated with a dwelling occupied from the mid or late 19th century through the 20th century. Sites 44LD1368 and 44LD1372 were interpreted as a late 18th/early 19th century dwelling sites which may have been occupied by enslaved African Americans or tenants. Site 44LD1376 was interpreted as the possible location of a late 19th/early 20th century dwelling. Sites 44LD1370, 1371 and 1374 were refuse scatters dating from the early 19th into the 20th century.

In addition to the archeological sites discussed above, one architectural resource lay within the Hibler Road property (DHR 053-0012-0082). This resource is associated with the Catoctin Rural Historic District and is known as the Lloyd Fry, or Colonel White House; it was described as a late 19th century (circa 1880) I-house. The archeological site associated with this dwelling is 44LD1364. Recorded during a 1988 reconnaissance survey, the Lloyd Fry House complex includes three contributing buildings (a dwelling and two barns) and two non-contributing buildings (a garage and a shed).

The house is reputed to have an association with Colonel Elijah Viers White, a significant figure during the Civil War in Loudoun County who served as commander of the Confederate Army's 35th Battalion, Virginia Cavalry. When the dwelling was recorded, however, this association was apparently thought to be legendary (DHR site file 053-0012-0082) and the house was recorded as dating to circa 1880, too late to have an association with Colonel White during the Civil War. Loudoun County property assessments do not provide a construction date for the dwelling. Historic maps, however, indicate the existence of a dwelling in this vicinity as early as 1853 and architectural details of the house, such as the five-bay façade and shouldered chimneys, suggest an earlier construction date than the circa 1880 date suggested by the DHR site file.

Two additional 19th century architectural resources were recorded during a 2003 architectural survey in the vicinity of the property. Whitegate Farm (DHR 053-5500), located on Hibler Road northwest of the project area, is a circa 1840 two-story house and two modern outbuildings. This dwelling may be in the same location as the dwelling identified as J.E. Nixon, depicted on the 1853 Yardley Taylor map of Loudoun County.

The second architectural resource, located to the west of the project area, is a circa 1870 farmhouse (DHR 053-5533) and associated outbuildings (a corn crib, a barn and a tool shed). This farm complex may be in the same location as the Harrison residence, as depicted on the 1880 Hopkins map of Leesburg.

FIELD METHODS

The fieldwork for this project was limited to a pedestrian reconnaissance, supplemented by soil augering as soil accretion within at least some portions of the floodplain was anticipated to be substantial. The purpose of the reconnaissance was to identify any areas of disturbance and to determine if any cultural resources were present. The augering was designed to provide information about the floodplain micro-topography as well as to determine if buried soil horizons which could sustain prehistoric occupations were present. Although the Potomac River floodplain would be generally considered high probability for the occurrence of archeological sites, the reconnaissance and augering were used to define micro-topographic zones within the floodplain and to determine the probability that a specific micro-topographic zone would yield cultural materials. The augering was conducted in all micro-topographic zones, regardless of probability.

The pedestrian reconnaissance was conducted with archeologists approximately 10-15 feet apart. Surface visibility was 20% or less in most areas as the ground cover consisted of corn stalks and the detrius resulting from the harvesting of soy beans. However, in some locations and generally between the crop rows, the visibility was greater but never exceeded 30%. In some locations where artifacts were noted, a sample of the temporally diagnostic artifacts were collected and removed to the laboratory for examination. In other locations, the artifacts were mapped but left in the field. The boundaries of any sites identified, as well as the collected artifacts, were located using a Global Position System consisting of a Magellan MobileMapper CE.

The auger holes were judgmentally placed; however, at least one auger hole was placed within each micro-topographic unit to determine the age and depth of the soils within the zone. The augering was conducted using a three inch diameter bucket auger plus extensions; these extensions allowed the auger to reach a maximum depth of ten feet below the ground surface. The depth, Munsell color and texture were recorded for each auger bucket. The depths of each individual bucket ranged from half a foot to a foot, depending on the amount of clay or sand present in the soil horizon. All soil removed from the auger buckets was laid out in lines and inspected for soil properties such as gleying, manganese, charcoal, gravels, or any cultural materials. Auger holes were filled in and survey located with a Magellan MobileMapper CE.

Photographs were taken that would illustrate topographical features and vegetation within the project area and of any pertinent above ground cultural features and areas of disturbance. In addition, notes were taken describing any cultural resources, the vegetation, and any disturbed areas. These notes and photographs, as well as the original field maps, are currently on file at the Thunderbird office.

RESULTS OF ARCHIVAL SEARCH

An examination of historic maps and other archival sources was undertaken as part of this investigation; this examination was used to assess the probability that historic sites would be present within the project area.

Yardley Taylor's 1853 map shows no buildings within the project area, however, houses associated with the names "W. Gray" and "J.H. Nixon" are shown nearby (Exhibit 6). A similar picture is shown on the 1862 McDowell map; however, this contrasts with the 1863 Macomb map of the same time period which indicates a building within the project area (Exhibits 7 and 8). An 1880 map does not indicate buildings within the project area, although settlement of the general vicinity has intensified (Exhibit 9). Dr. Mason is shown as residing on Masons Island on this map. No buildings are shown within the project area on a 1925 Post Office map but a road is shown traversing the northern portion of the project area and a second road is shown near the eastern boundary (Exhibit 10). A 1908 U.S.G.S topographic map shows a picture similar to that in 1925, however, subsequent U.S.G.S. maps from 1944-1988 indicate that the road near the eastern border is no longer extant (Exhibits 11-15). An outbuilding is shown within the project area on a 1952 map (see Exhibit 12).

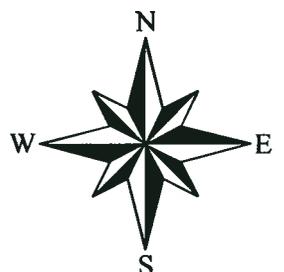
Although buildings are shown within the project area only on single maps from 1863 and 1952, the project area is considered to have a moderate to high probability of yielding historic period cultural materials. Sites which may be associated with enslaved African Americans or tenants were found on the adjacent parcel; none of these are associated with buildings shown on historic maps as individuals of the lower socio-economic strata were frequently omitted from cartographic materials. Because of this, it is possible that similar sites are present within the project area. If they are present, they are considered to be most likely on the edge of the Pleistocene terraces in the far northern portion of the project area or on the higher terrace adjacent to the Potomac where a building is shown on the 1863 map.

L:\21000s\21300\21372.03\GIS\21372.03 - 06 - Yardley Taylor 1853.mxd



 Approximate Location of Project Area

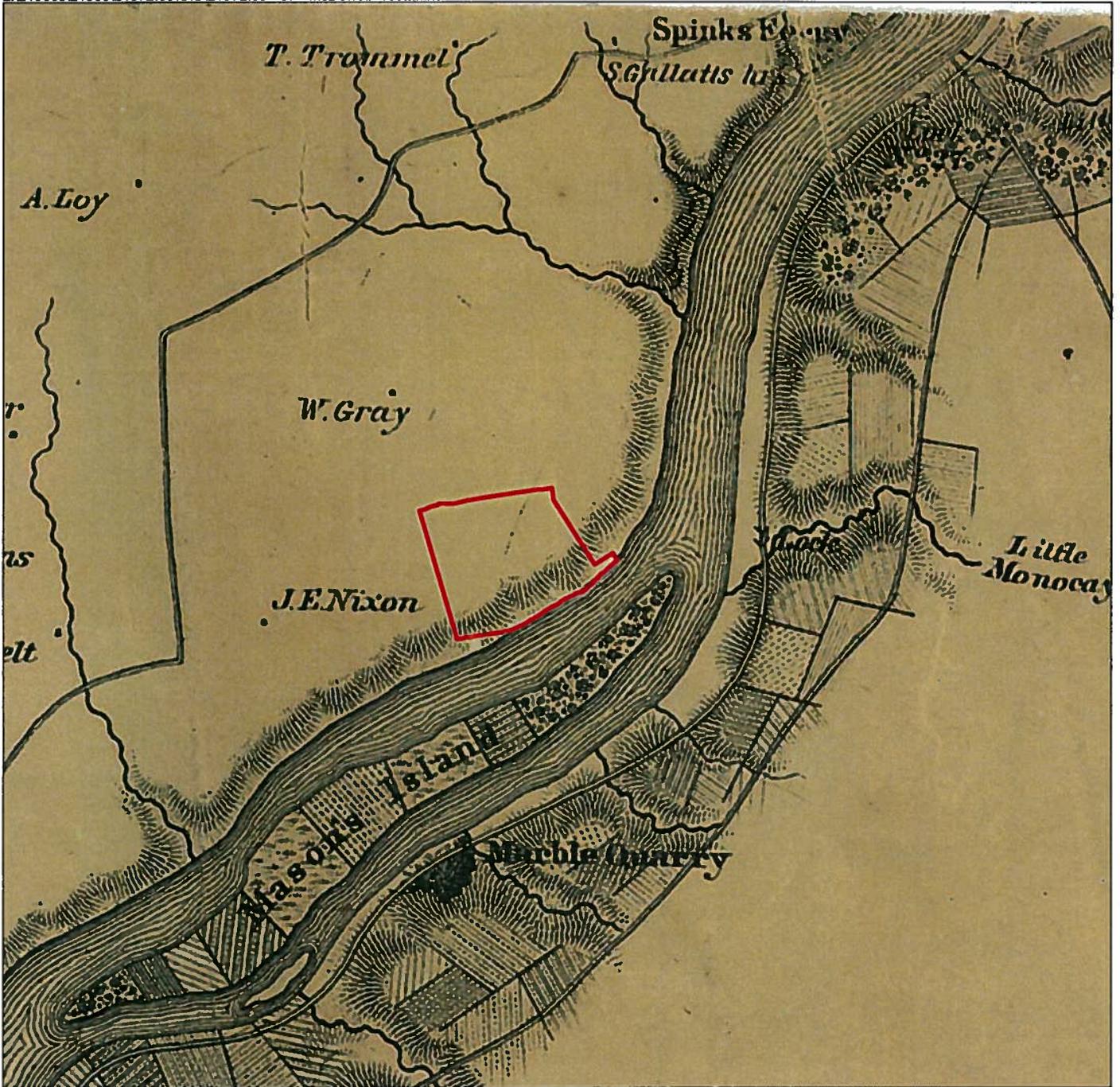
**1853 Yardley Taylor Map
Loudoun County, VA
White's Ford Park
WSSI #21372.03
Scale: 1" = 1/2 mile**



Map Source: "Map of Loudoun County, Virginia from actual surveys by Yardley Taylor, 1853". Original Scale: 1" = 1 mile

Thunderbird Archeology
A Division of Wetland Studies and Solutions, Inc.

Exhibit 6



1862 McDowell Map
 Northeast Virginia and Vicinity of Washington D.C.
 White's Ford Park
 WSSI #21372.03
 Scale: 1" = 1/2 mile

 Approximate Location of Project Area

Map Source: Map of N. Eastern Virginia and Vicinity of Washington. Compiled by General Irvin Mc Dowell, January 1862. United States. Corps of Topographical Engineers*. Original Scale: 1" = 1 mile.

Thunderbird Archeology
 A Division of Wetland Studies and Solutions, Inc.

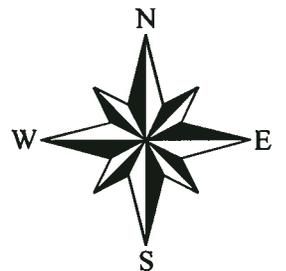


Exhibit 7

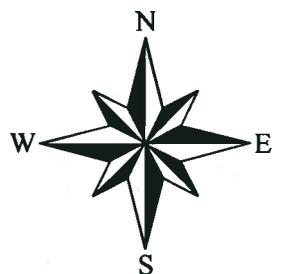
L:\21000s\21300\21372.03\GIS\21372.03 - 08 - Macomb shenandoah1863.mxd

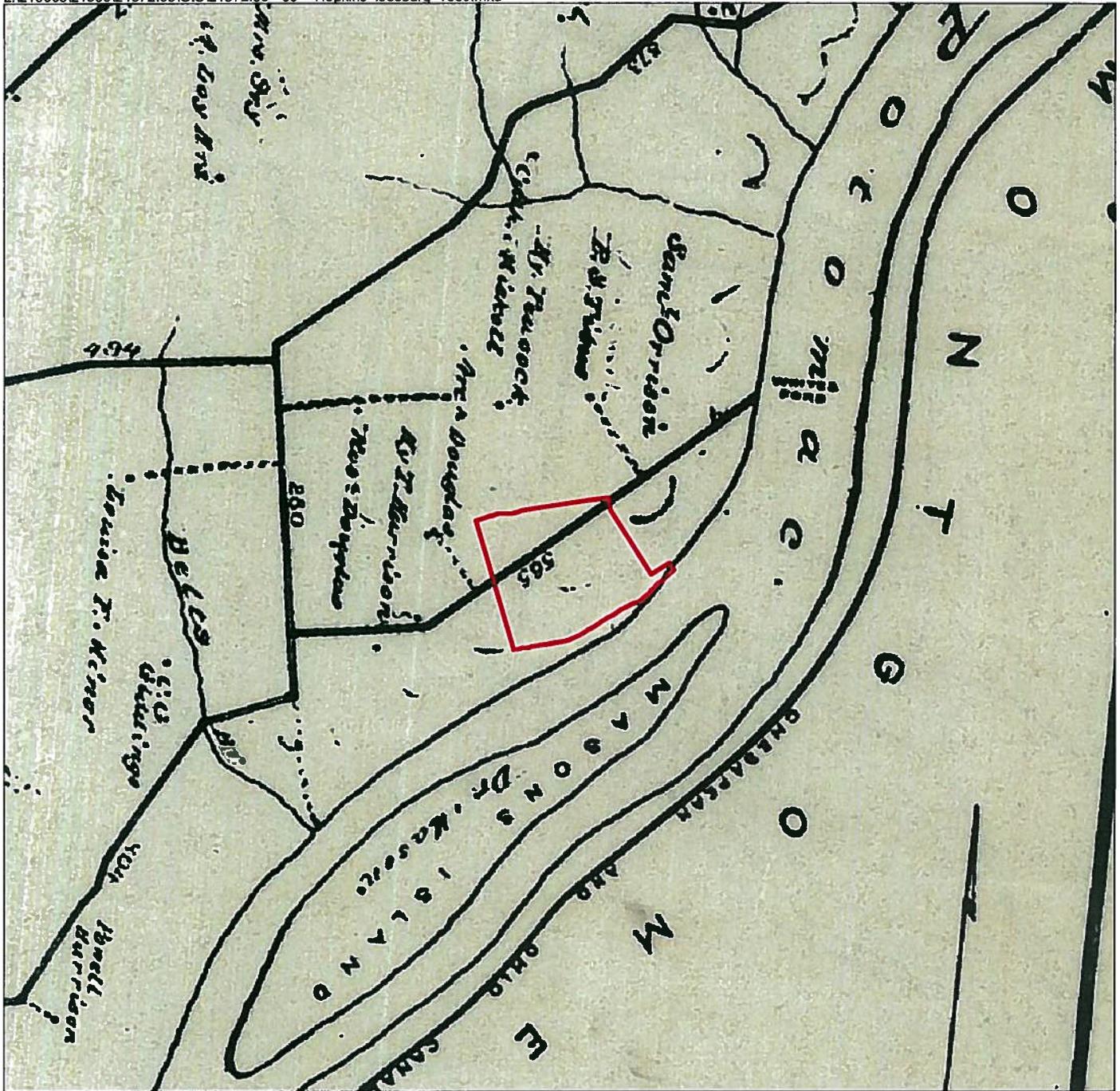


1863 Macomb Map
Upper Potomac Region, Maryland & Virginia
White's Ford Park
WSSI #21372.03
Scale: 1" = 1/2 mile

 Approximate Location
of Project Area

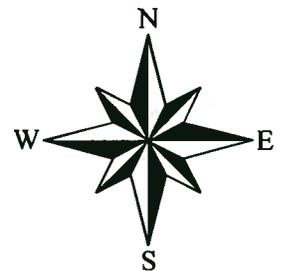
Map Source: "Upper Potomac from McCoy's Ferry to
Conrad's Ferry and adjacent portions of Maryland and
Virginia compiled from county maps and maps prepared
by Col. J. N. Macomb, A.D.C. Lt. Col. Engrs with additions
and corrections by Lt. Col. D. H. Strother, A.D.C. Engineer
Department, 1863. Original Scale: 1:130000.





1880 Hopkins Map
 Leesburg, Loudoun County, VA
 White's Ford Park
 WSSI #21372.03
 Scale: 1" = 1/2 mile

 Approximate Location
 of Project Area

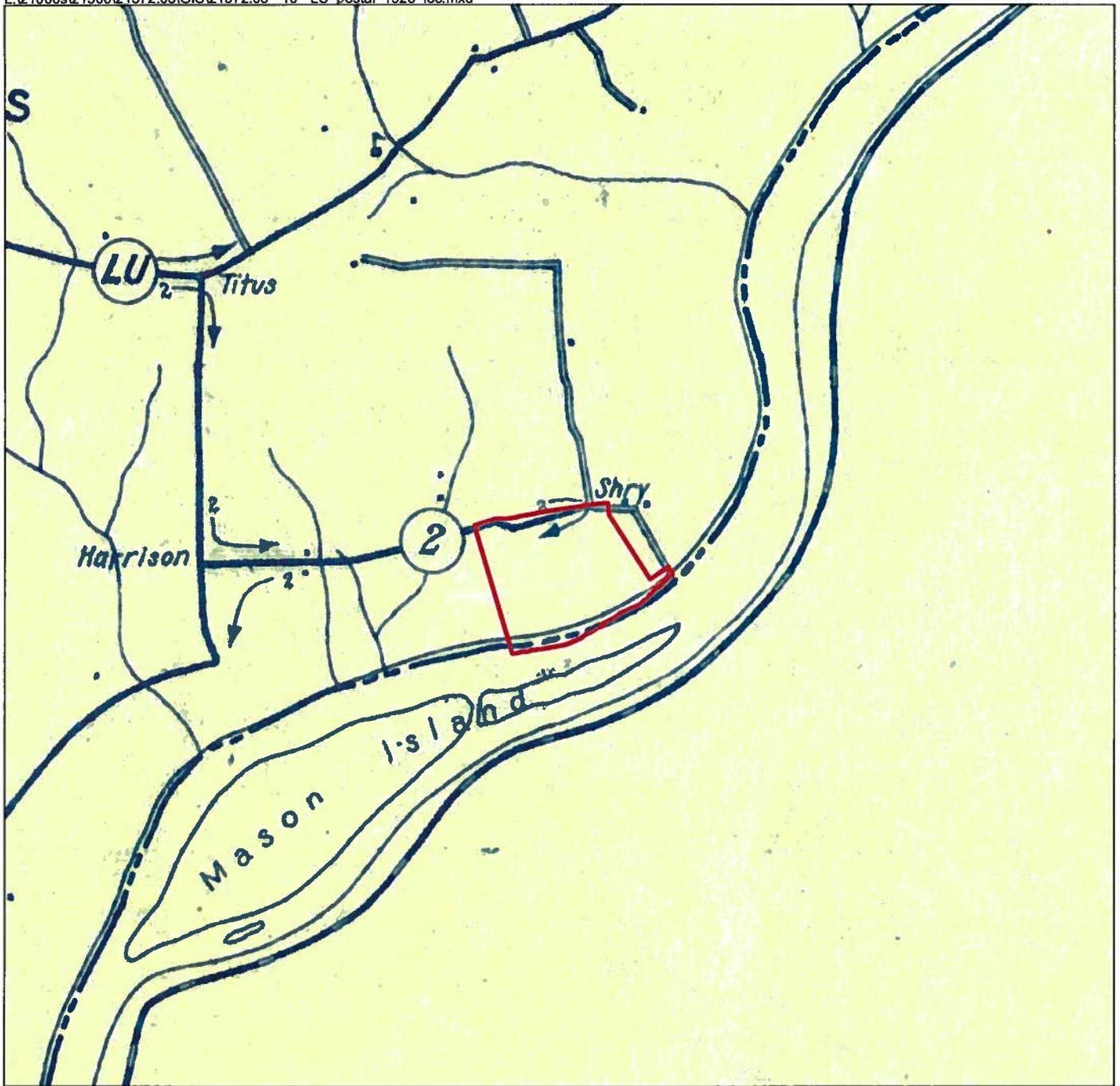


Map Source: "Leesburg, Loudoun County, VA. 1880".
 J.M. Hopkins. Original scale: 2" = 1 mile.

Thunderbird Archeology
 A Division of Wetland Studies and Solutions, Inc.

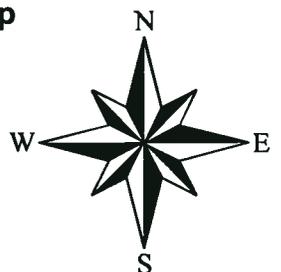
Exhibit 9

L:\21000s\21300\21372.03\GIS\21372.03 - 10 - LC postal 1925 loc.mxd

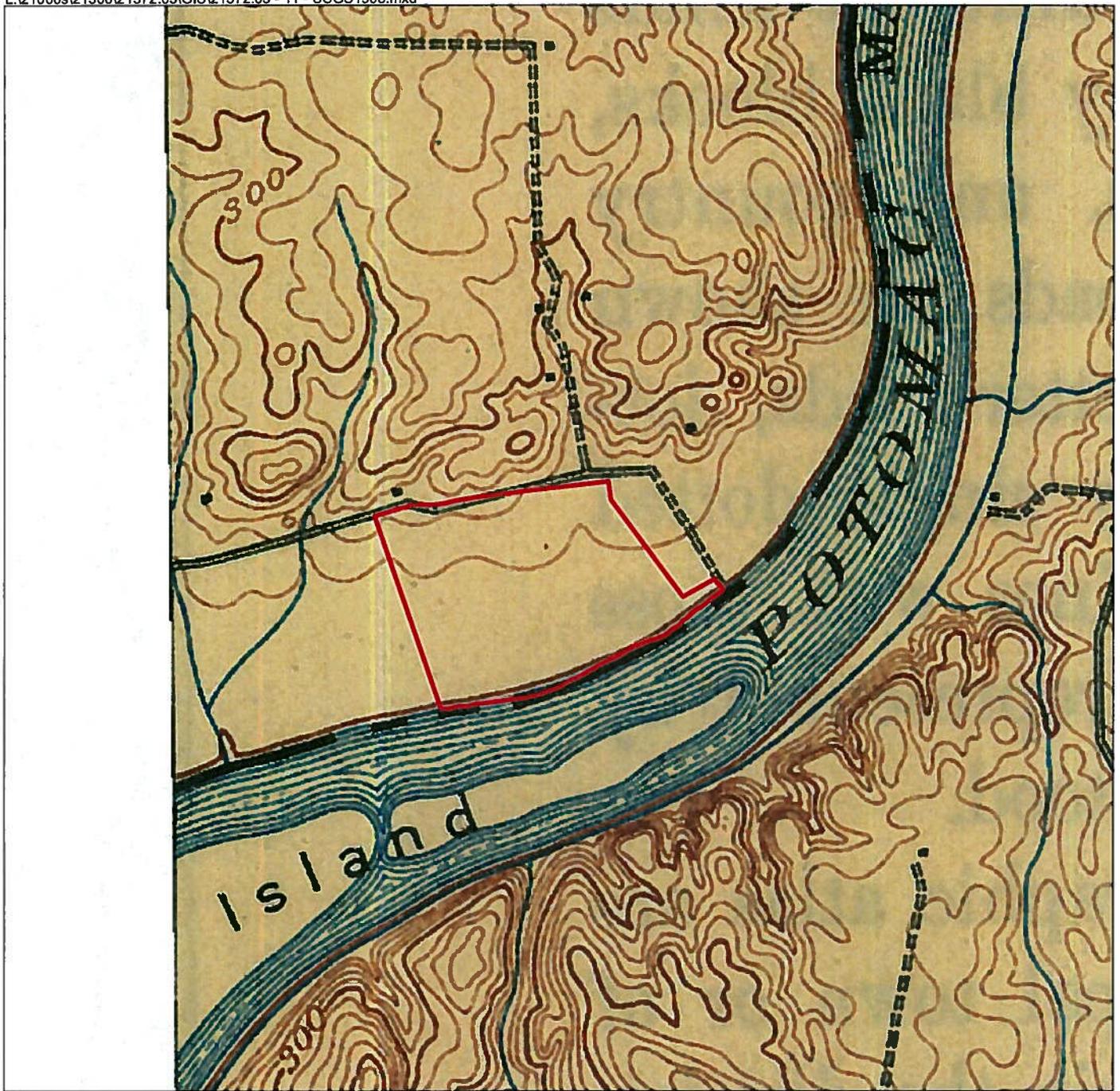


1925 United States Post Office Rural Delivery Routes Map
Loudoun County, VA
White's Ford Park
WSSI #21372.03
Scale: 1" = 1/2 mile

 Approximate Location of Project Area

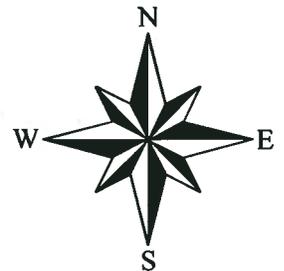


Map Source: "Rural Delivery Routes - Loudoun County, Virginia. Post Office Department, Division of Topography, 1925." Library of Congress Geography and Map Division Washington D.C. Original Scale: 1" = 1 mile.



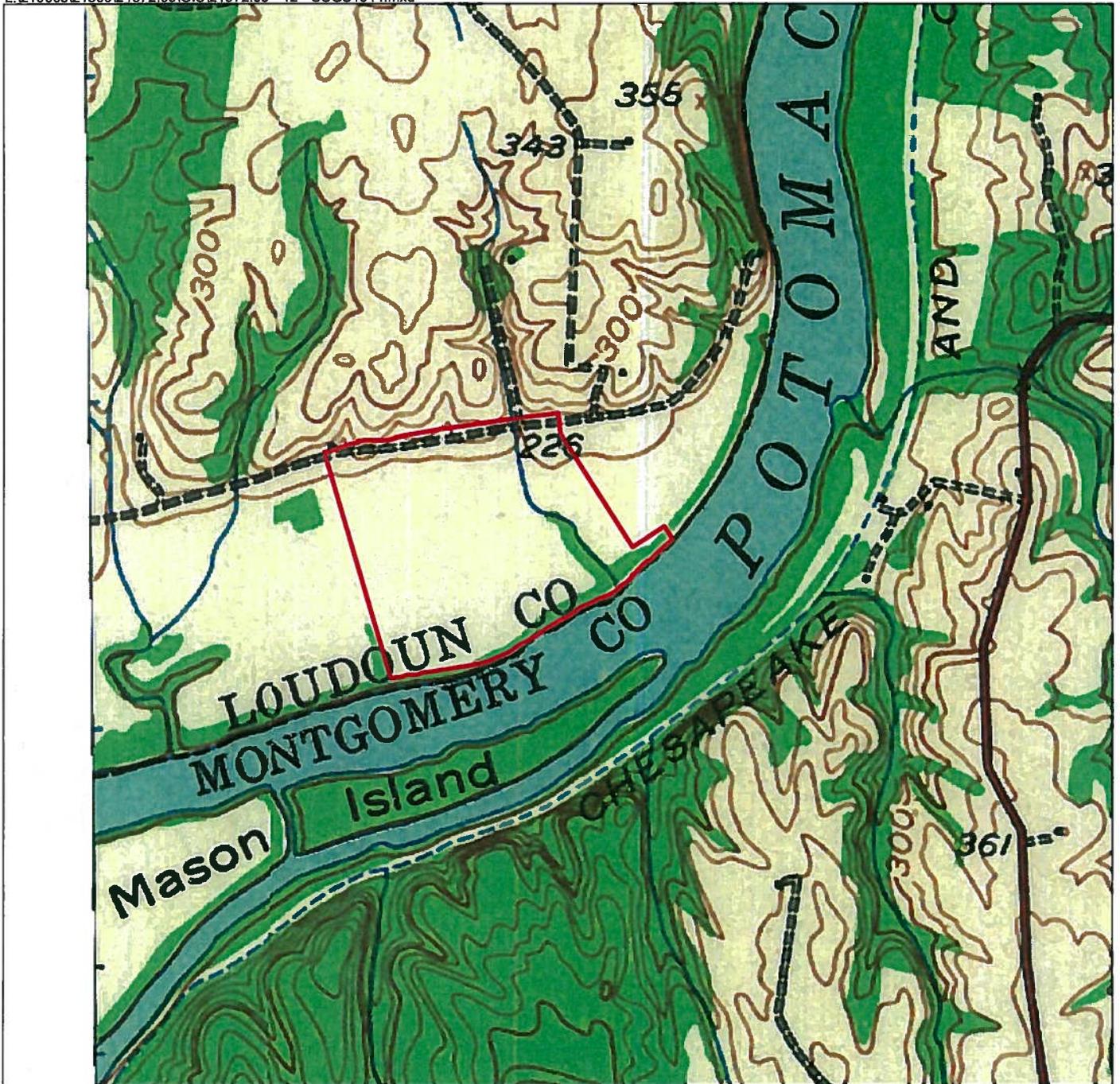
 Approximate Location of Project Area

USGS Quad Map
Seneca, MD-VA 1908
White's Ford Park
WSSI #21372.03
Scale: 1" = 1500'



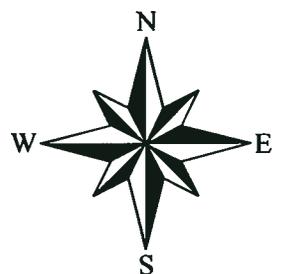
Thunderbird Archeology
A Division of Wetland Studies and Solutions, Inc.

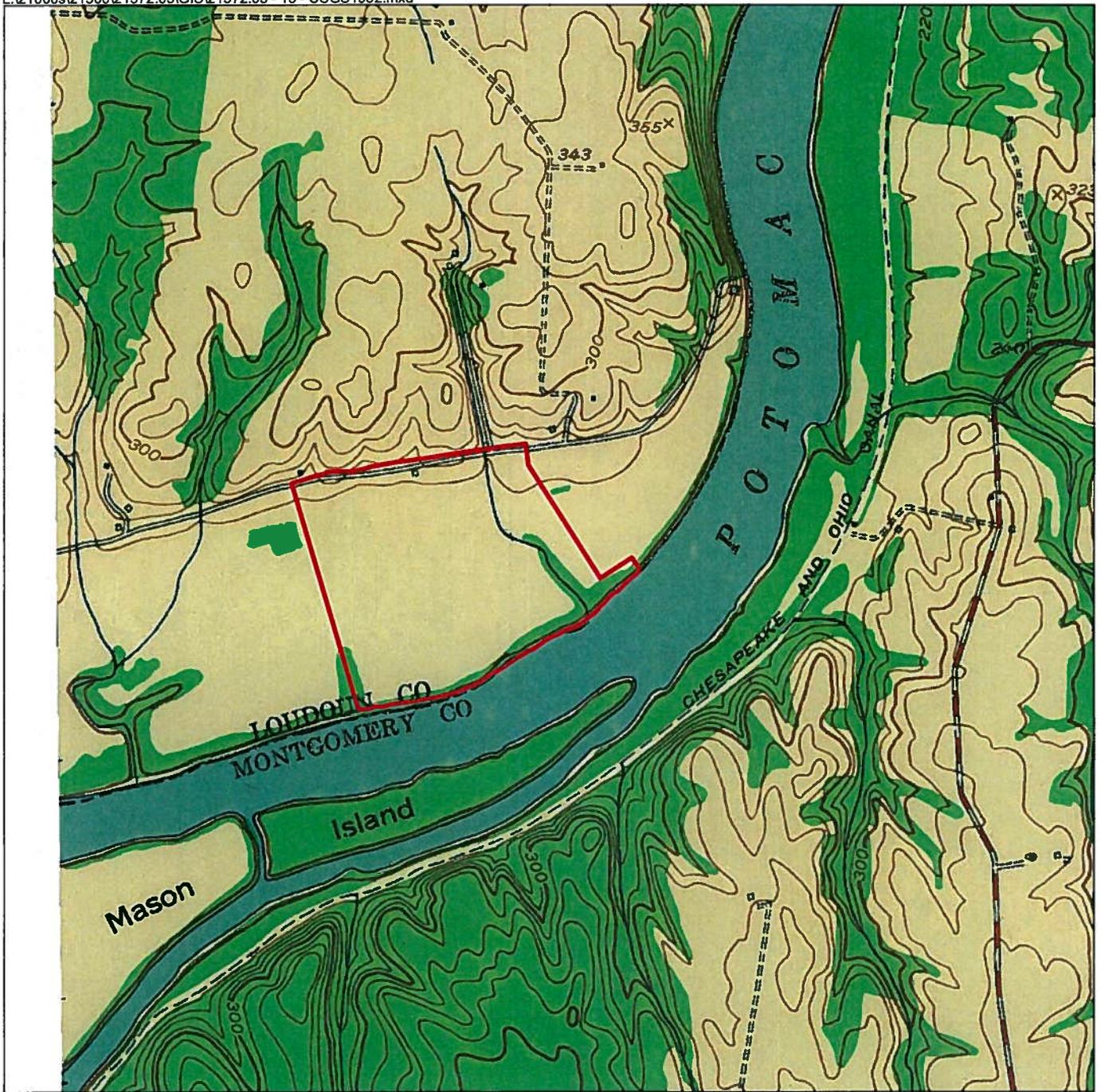
Exhibit 11



 Approximate Location of Project Area

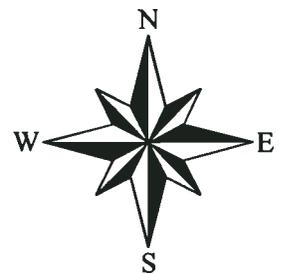
USGS Quad Map
Seneca, MD-VA 1944
White's Ford Park
WSSI #21372.03
Scale: 1" = 1500'





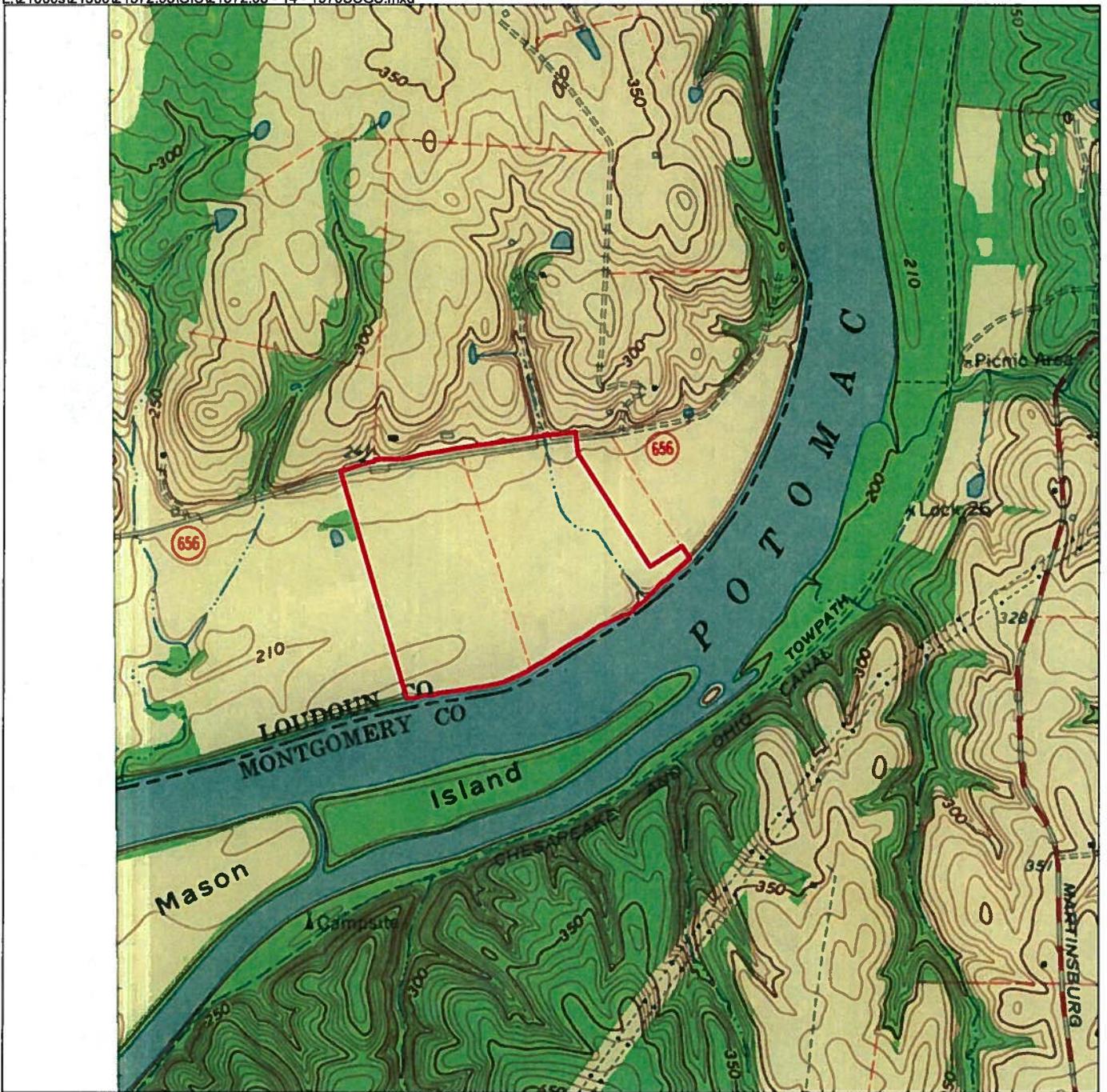
 Approximate Location of Project Area

USGS Quad Map
Poolesville, MD-VA 1952
White's Ford Park
WSSI #21372.03
Scale: 1" = 1500'



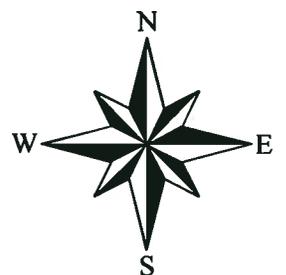
Thunderbird Archeology
A Division of Wetland Studies and Solutions, Inc.

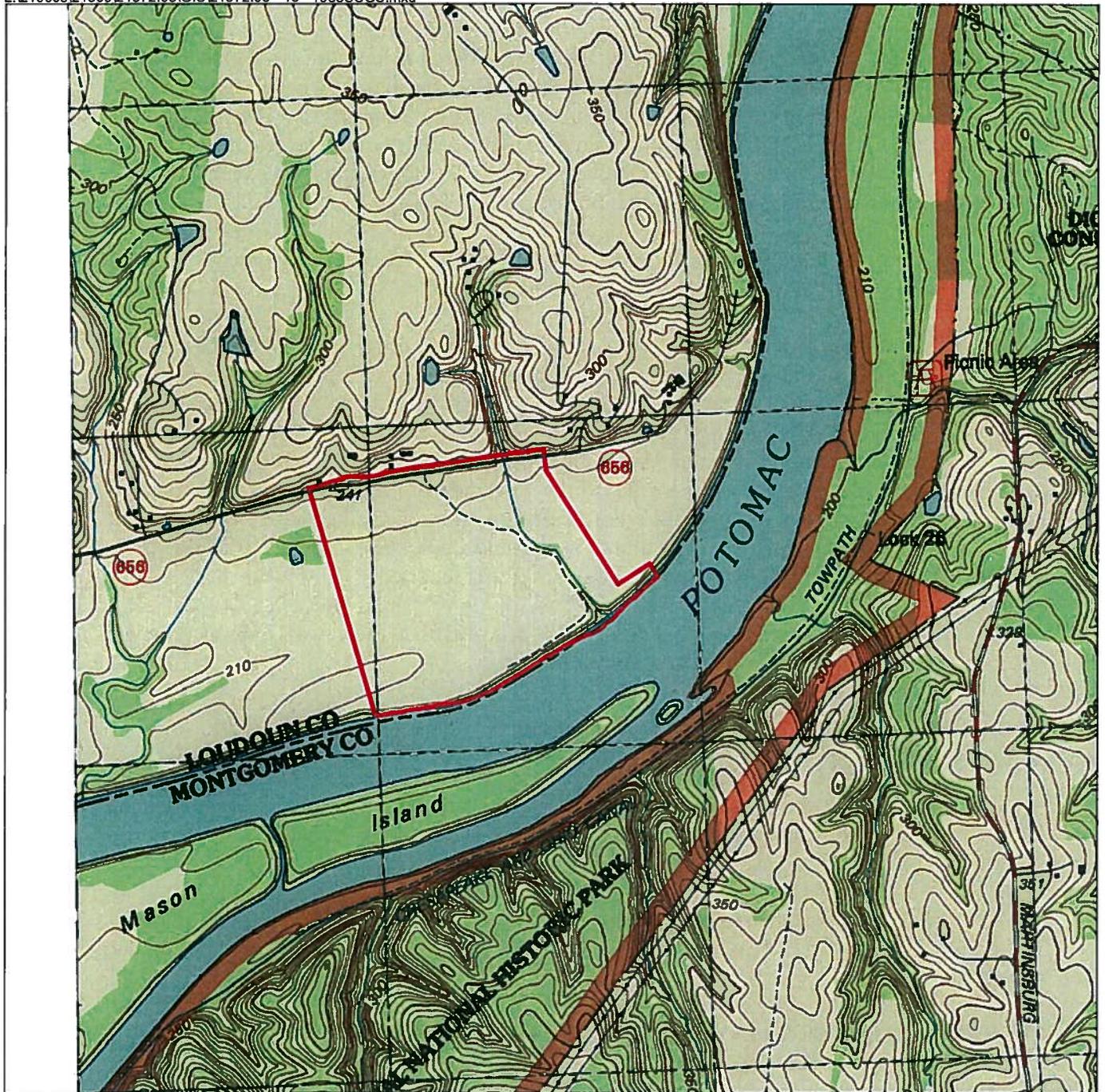
Exhibit 13



 Approximate Location of Project Area

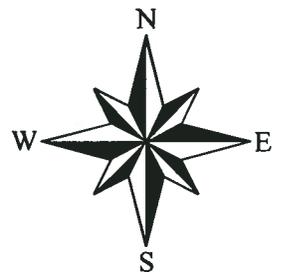
USGS Quad Map
Poolesville, MD-VA 1970
White's Ford Park
WSSI #21372.03
Scale: 1" = 1500'





 Approximate Location of Project Area

USGS Quad Map
Poolesville, MD-VA 1988
White's Ford Park
WSSI #21372.03
Scale: 1" = 1500'



Thunderbird Archeology
A Division of Wetland Studies and Solutions, Inc.

Exhibit 15

In addition to domestic sites, the project area is considered to have at least a moderate probability of yielding Civil War materials. Civil War activities are known to have occurred in the vicinity and White's Ford is located nearby. The Official Records of the War of the Rebellion indicate troop movements in the vicinity of the project area just prior to the Battle of Ball's Bluff in October of 1861. The following is an excerpt from the records (Scott 1881, Volume 5:361, 363):

*Report of Lieut. Col. John McGuirk, Seventeenth Mississippi Infantry,
of events, October 20-23*

.....You ordered me to go at once to White's Ford, visiting Captain Duff's pickets up the river to the head of Mason's Island, and report after daybreak. I reached the pickets at White's Ford, and shortly after I was on the heights above Mrs. Orrison's house, watching a brigade (four regiments) drawn up in line of battle, apparently awaiting marching orders. As this was the only demonstration I witnessed in my travels, I watched the movements of this brigade, and as I waited one of the pickets at White's Ford came up and told me he heard firing of small arms down the river. I left him to watch, and started as the brigade filed down the river towards the point at which the firing was reported.

When I reached White's Ford I was informed that there was fighting towards Leesburg, in the direction of Conrad's Ferry...

Report of Capt.. W. L. Duff, Seventeenth Mississippi Infantry

COLONEL: I have the honor to submit the following report of the action near Big Spring on the morning of the 21st instant: We had, as you are aware, been on detached service since August 24, having pickets at Stuart's Mill, Conrad's Ferry, Ball's Mill and Mrs. Mason's Island.

The presence of pickets on Mason's Island and the usage of nearby White's Ford as a transportation route indicate that it is possible that the project area was utilized during the Civil War as well.

RESULTS OF FIELD INVESTIGATIONS

The field investigations described below were designed to provide a preliminary assessment of the probability that archeological sites will be present within the project area and to provide preliminary information regarding the archeological sensitivity of particular areas within the proposed park site. It was hoped that this assessment would provide input during the park planning process so that impacts could be avoided in areas that were deemed particularly archeologically sensitive.

It should be noted that the assessments and recommendations provided herein are considered to be preliminary and are based solely upon a surface reconnaissance and limited soil testing. They are designed to provide guidance for those locations that should be systematically tested during the Phase I investigation. However, because archeological work, particularly that using mechanized equipment, is inherently destructive, in our opinion, deep testing during the Phase I investigation should be limited to those locations and depths that will be impacted by the planned park facilities.

As noted previously, the floodplain can be divided into several micro-topographic zones. In order to clarify the floodplain dynamics and because significant differences were observed, the micro-topographic zones within the floodplain have been separated into the northern half and the southern half and will be discussed below by these segments. Each of these units was examined to determine if archeological sites are likely to be present and, if sites are present, the time periods that might be represented.

The vegetation throughout most of the property consisted of cultivated fields. Ground surface visibility in these fields was 20% or less as the fields contained the remains of cultivated corn stalks, soybean plantings and scrub weeds. A sample of diagnostic artifacts was collected from any sites and the site boundaries were survey located using a hand held GPS unit, however, the majority of the artifacts were noted and left in the field.

Southern Half

The southern half includes the outer levee, outer flood chute, first inner levee/terrace, and first inner flood chute. Each of these zones is discussed individually below and illustrated on Exhibit 4.

The Outer Levee

Description

The outer levee, the youngest portion of the floodplain, runs parallel to and virtually the entire length of the river within the project area (see Exhibit 4). It is the locus of the most recent soils and, because of this, is where the later prehistoric and historic period sites may be located. In general, the outer levee measures 50 feet (15 meters) wide north to south and lies at an elevation between 207-215 a.s.l. Plates 3-7 present views of the outer levee.

Vegetation consisted of a tree line overlooking the river and open fields in the remainder of this sub-area. The pedestrian reconnaissance and soil augering revealed marked differences in topography and soil stratigraphy between the eastern and western halves of the outer levee.

The western half of the levee is a straight steep bluff above the river ranging in elevation from 207-210 a.s.l., moving east to west. The eastern half of the outer levee ranges in elevation from 210-215 a.s.l. and, moving east to west, drops steeply to a lower terrace at elevations of 195-205 a.s.l. This lower terrace appears to be younger and affected by recent floods. Detrius from flooding hung from the tree branches and recent sand deposits were present around the base of trees.

The vegetation in the lower terrace and the outer levee consists mostly of the species of the gallery forest including sycamore and cottonwood. Most of the specimen trees such as the sycamores are quite large in the lower terraces.

Soils

The soil deposition and stratigraphy between the western and eastern portions of the outer levee are significantly different. In general, the soils in the western portion of the outer levee consist of plowed soils from 2-3 feet (61-91 centimeters); these are underlain by recent sands to 10 feet (304 centimeters) where the auger testing ceased. There was almost no formation of stable land surfaces evident in the soil profiles. Because no stable land surfaces formed, the probability of buried archeological sites is felt to be low.

An auger hole was placed in an area of slight higher elevation along the outer levee to examine the soils in this location (Exhibit 16). The slightly elevated area, combined with the soil stratigraphy, appears to indicate the forming of a sandbar on the edge of the outer levee.

Auger Test 3 is representative of the stratigraphy near the western half of the outer levee (Exhibit 17):

Auger 3

Ap/C horizon: 0-12 inches (0-30.5 centimeters) below surface – [10YR 3/3] dark brown fine silt sand

Apb/C1 horizon: 12-18 inches (30.5-45.7 centimeters) below surface – [10YR 3/3] dark brown fine sand

Apb/C2 horizon: 18-27.6 inches (45.7-70.1 centimeters) below surface – [10YR 4/3] brown coarse sand

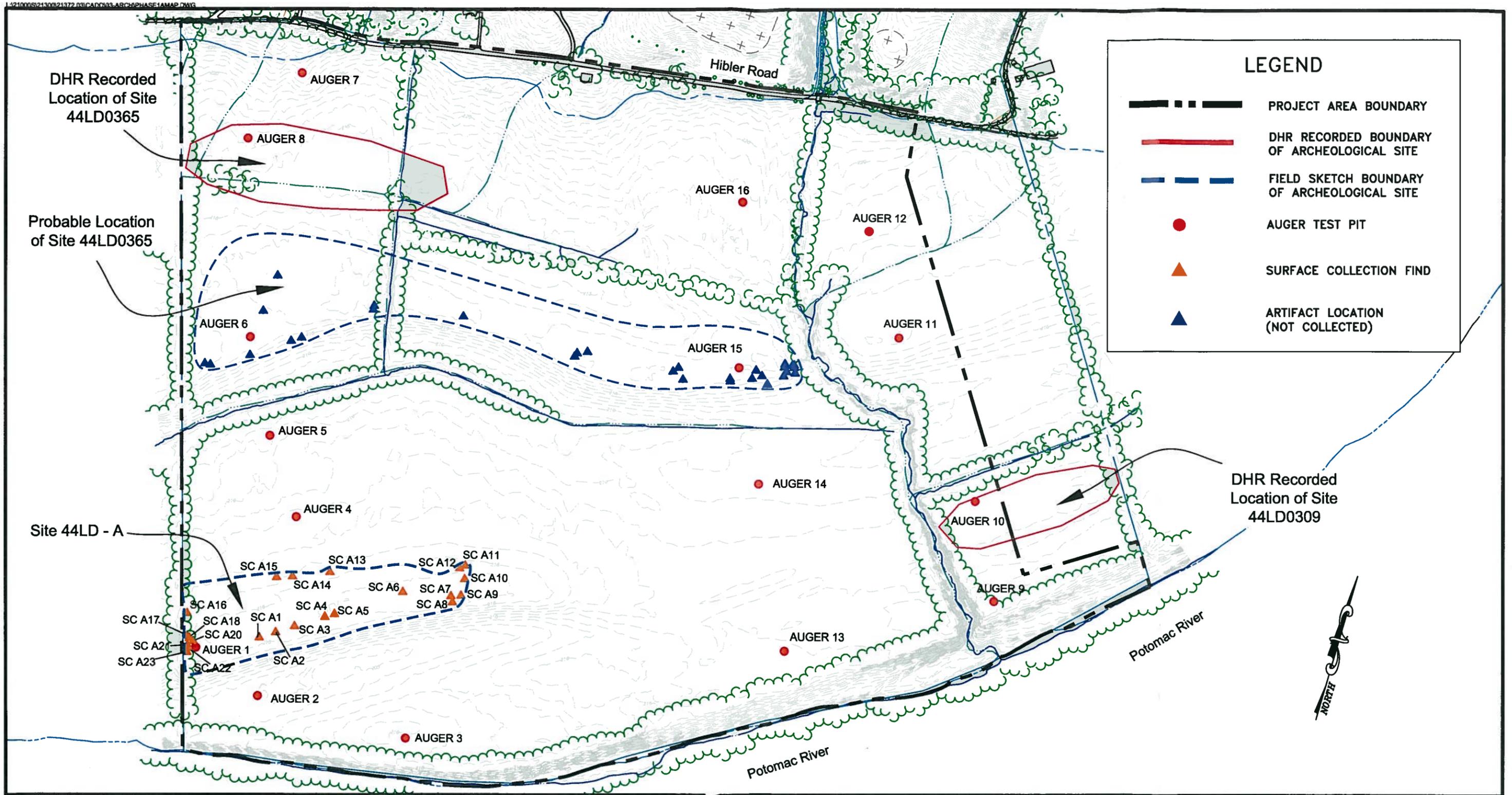
C1 horizon: 27.6-61.2 inches (70.1-155.4 centimeters) below surface – [10YR 4/6] dark yellowish brown sand

C2 horizon: 61.2-86.4 inches (155.4-219.5 centimeters) below surface – [10YR 4/6] dark yellowish brown slightly silt sand

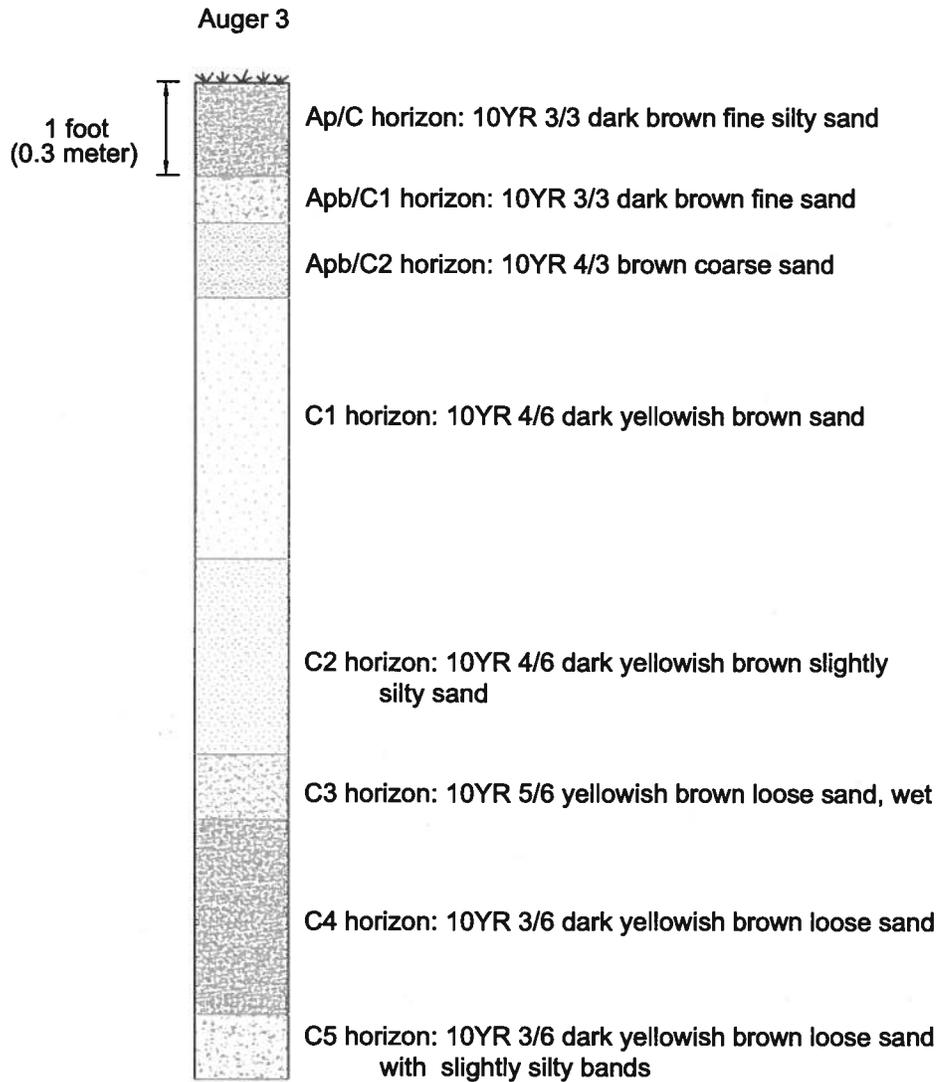
C3 horizon: 86.4-94.8 inches (219.5-240.8 centimeters) below surface – [10YR 5/6] yellowish brown loose sand, wet

C4 horizon: 94.8-120 inches (240.8-304.8 centimeters) below surface – [10YR 3/6] dark yellowish brown loose sand

C5 horizon: 120-128.4 inches (304.8-326 centimeters) below surface – [10YR 3/6] dark yellowish brown loose sand with slightly silt bands



Portion of Project Map Showing Archeological Site Locations, Auger Holes and Surface Collections
 White's Ford Park - WSSI #21372.03
 Scale: 1" = 300'



Stratigraphic Profile for Auger Hole 3
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 2'

The stratigraphy along the eastern portion of the outer levee exhibited more stable soil horizons and several buried organic horizons, indicative of old surfaces, were noted. Although soils were deposited in this location by flooding, it is apparent from the soil profile that stable surfaces were available between flooding episodes. These occurred between 2-3 feet (61-91 centimeters), 6 feet (182 centimeters), and again at 8 feet (243 centimeters) and are noted as Ap/Apb or Ab horizons in Exhibit 18. Auger Test 9 is a representative of the soil stratigraphy in the eastern half of the outer levee (see Exhibits 16 and 18):

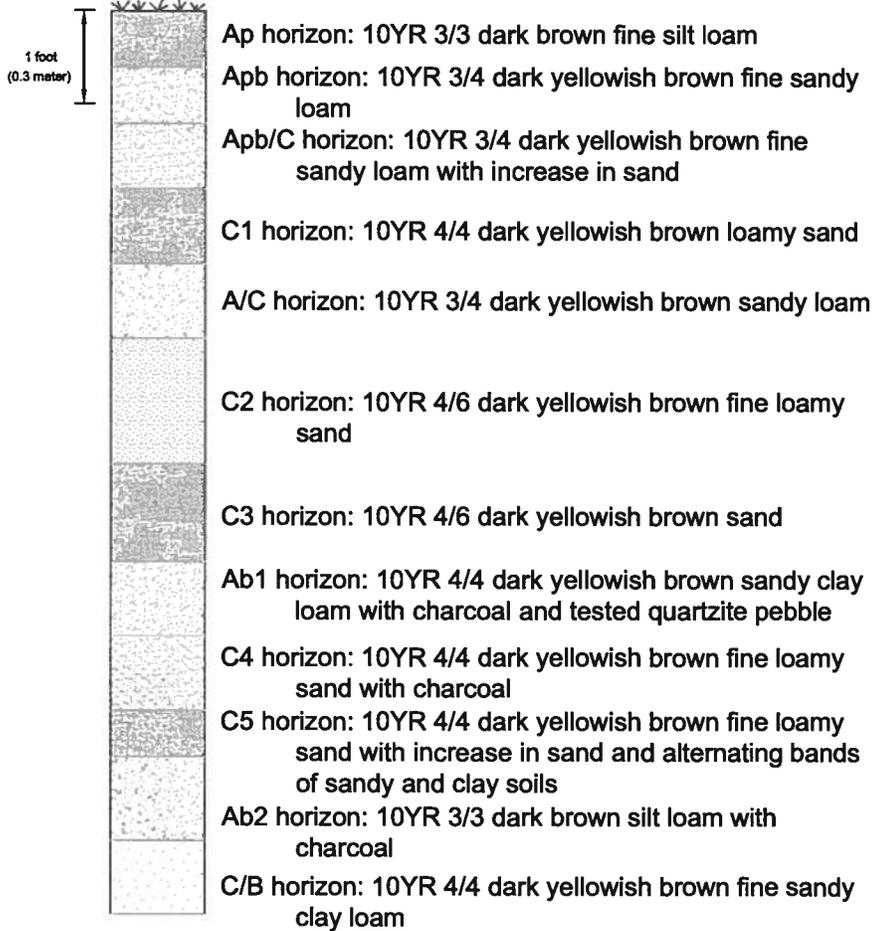
Auger 9

- Ap horizon: 0-7.2 inches (0-18.3 centimeters) below surface – [10YR 3/3] dark brown fine silt loam
- Apb horizon: 7.2-14.4 inches (18.3-46.5 centimeters) below surface – [10YR 3/4] dark yellowish brown fine sandy loam
- Apb/C horizon: 14.4-22.8 inches (46.5-57.9 centimeters) below surface – [10YR 3/4] dark yellowish brown fine sandy loam with increase in sand
- C1 horizon: 22.8-32.4 inches (57.9-82.3 centimeters) below surface – [10YR 4/4] dark yellowish brown loamy sand
- A/C horizon: 32.4-42 inches (82.3-106.7 centimeters) below surface – [10YR 3/4] dark yellowish brown sandy loam
- C2 horizon: 42-58.2 inches (106.7-147.8 centimeters) below surface – [10YR 4/6] dark yellowish brown fine loamy sand
- C3 horizon: 58.2-70.8 inches (147.8-179.8 centimeters) below surface – [10YR 4/6] dark yellowish brown sand
- Ab1 horizon: 70.8-80.4 inches (179.8-204.2 centimeters) below surface – [10YR 4/4] dark yellowish brown sandy clay loam with charcoal and tested quartzite pebble
- C4 horizon: 80.4-90 inches (204.2-228.6 centimeters) below surface – [10YR 4/4] dark yellowish brown fine loamy sand with charcoal
- C5 horizon: 90-96 inches (228.6-243.8 centimeters) below surface – [10YR 4/4] dark yellowish brown fine loamy sand with an increase in sand and alternating bands of sandy and clay soils
- Ab2 horizon: 96-106.8 inches (243.8-271.3 centimeters) below surface – [10YR 3/3] dark brown silt loam with a lot of charcoal
- C/B horizon: 106.8-116.4 inches (271.3-296 centimeters) below surface – [10YR 4/4] dark yellowish brown fine sandy clay loam

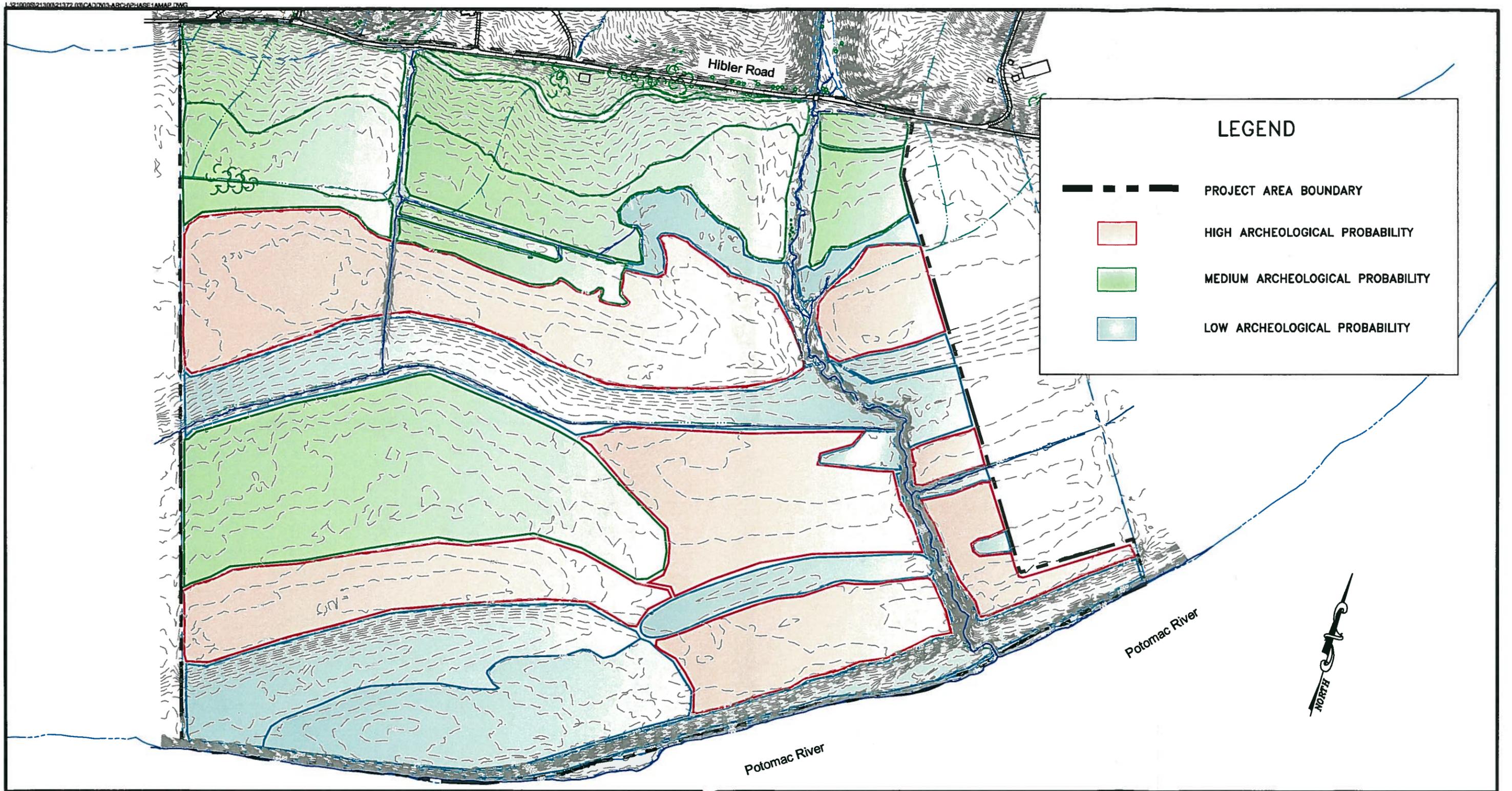
Archeological Site Probability

The probability that the outer levee will contain archeological sites varies. While the eastern half has a high probability for archeological deposits, the western half is considered to have a lower probability for these deposits (Exhibit 19). This assessment is based on the soils observed in Auger Tests 3 and 9. Auger Test 3 contained recent sand deposits which probably forming a sand bar to depths of 10 feet+.

Auger 9



Stratigraphic Profile for Auger Hole 9
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 2'



Portion of Project Map Showing the Probability Areas for Cultural Resources within the Project Area
 White's Ford Park - WSSI #21372.03
 Scale: 1" = 300'

Auger Test 9 revealed soils of greater stability including least three buried surfaces that could have been used by prehistoric populations. In addition, the topographic feature, in which Auger Test 9 was excavated, lies just beyond site 44LD0309 which was dated to the Late Woodland time period by the recorders. Only a small flood chute separates the topographic feature containing Auger Test 9 from the recorded site and it is possible that this feature could have been utilized by the site's occupants. The topographic feature may also be a remnant of the first inner levee/terrace that contained site 44LDA. If so, it may contain the vestiges of the occupation identified on the larger portion of the levee/terrace.

Recommendations

Recommendations for testing strategy along the western portion of the outer levee would include auger holes 100 feet (30 meters) apart (Exhibit 20). If any organic horizons or stable soil horizons were encountered in the auger test, testing intervals should be reduced to 50 feet (15.2 meters) to better define the land surface.

If the stable surface is found at depths of 3 feet (.91 meter) or less, Phase I shovel test pits should be conducted at 50 foot (15.2 meter) intervals to determine if archeological deposits are present.

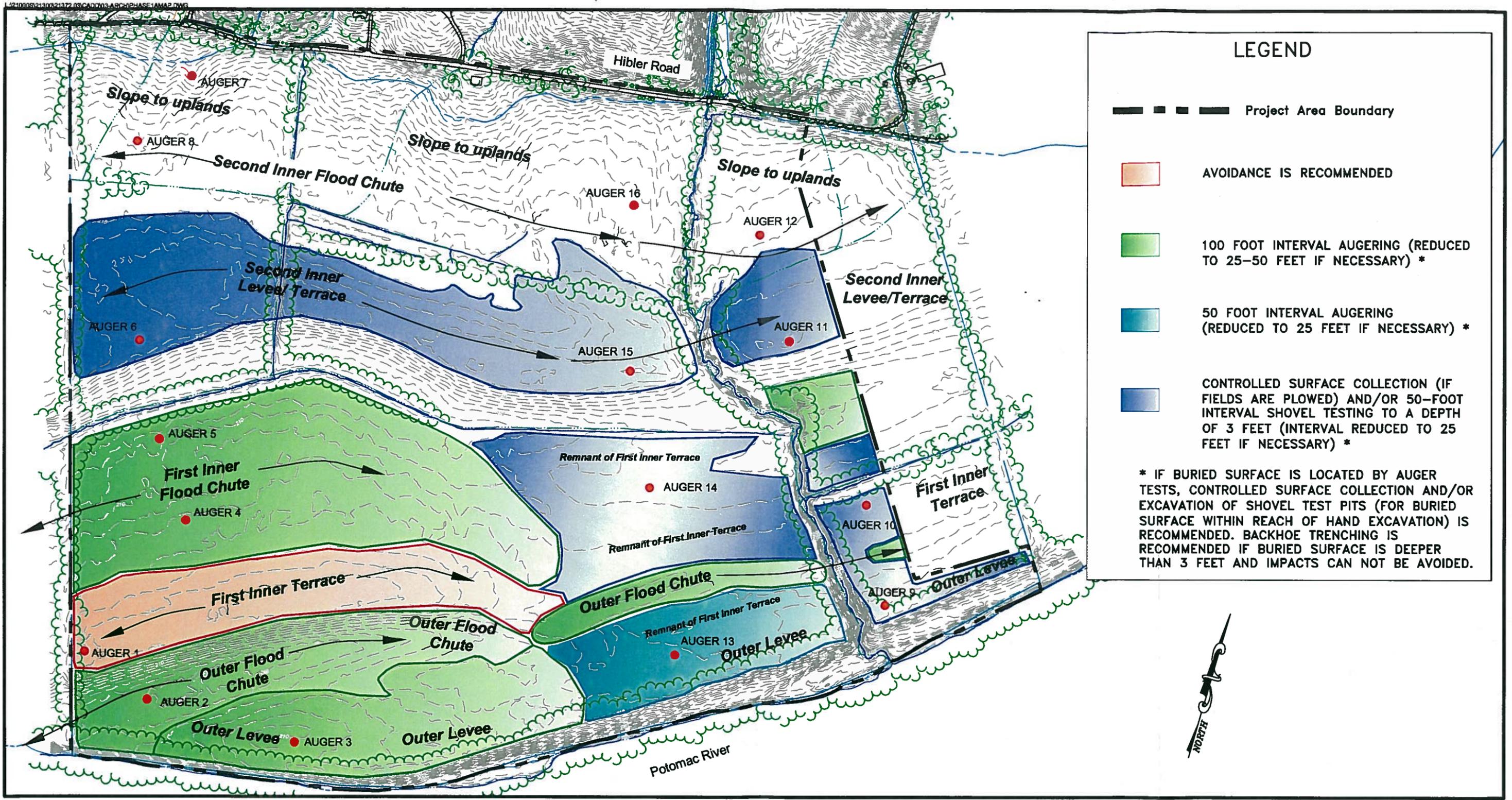
If a stable surface is identified that is deeper than 3 feet (.91 meter), trenches should be excavated to sterile soil using a backhoe with a smooth bladed bucket. These trenches should be spaced every 50 feet (15.2 meters) within the area containing the buried land surface.

Testing along the eastern portion of the outer levee should include auger testing at 50 foot (15.2 meter) intervals in the vicinity of Auger Test 13 (see Exhibit 20). If any organic horizons or stable soil horizons are encountered in the auger tests, the testing interval should be reduced to 25 feet (7.6 meters) to better define the land surface.

If the stable surface is at three feet or less, shovel test pits should be excavated at 50 foot (15.2 meter) intervals in order to better record the soil stratigraphy and recover any artifacts that maybe present.

If the surface is deeper than 3 feet (.91 meter), trenches should be excavated every 50 feet (15.2 meters) using a backhoe with a smooth bladed bucket; these will be used to investigate the buried surface to determine if cultural materials are present.

The portion in the far eastern corner near Auger Test 9 should be shovel tested to a depth of at least 3 feet (.91 meter). This testing would investigate and recover any artifacts from within the upper land surfaces identified in the auger test. If artifacts are recovered in the shovel testing and impacts can not be avoided below 3 feet (.91 meter), trenches should be excavated using a backhoe with a smooth bladed bucket to better define the depths of the cultural deposits. Additional trenches should be excavated every 50 feet (15.2 meters) to define the horizontal extent of any buried sites that are found.



Portion of Project Map Showing Recommended Phase I Testing Within the Project Area
 White's Ford Park - WSSI #21372.03
 Scale: 1" = 300'

Outer Flood Chute

Description

Although slightly discontinuous, the outer flood chute generally borders the outer levee (see Exhibit 4). The outer flood chute is the area where the river breaches the levee and flows during a high flood stage. It is a dynamic setting characterized by more recently deposited soils. Plates 9-12 present views of the outer flood chute.

The outer flood chute ranges in elevation from west to east between 205-213 a.s.l. This micro-topographic zone is very well defined to the west and borders the more resistant first inner levee/terrace near Auger Test 2 (see Exhibit 16). The outer flood chute becomes less defined and narrower moving eastward towards Auger Test 13. It is possible that the first inner levee/terrace gradually drops in elevation towards Auger Test 13. However, this would have to be confirmed by additional testing and an examination of additional soil profiles. While Auger Test 13 has a slightly more stable soil profile, it appears to be a lower portion of the same terrace.

Although not visible in the field because of erosion and/or plowing, an examination of the topographic contours indicates that the flood chute or a drainage may have breached and bisected the lower less stable portion of the first inner levee/terrace. The flood chute or a drainage would have been located near the middle of the terrace where the elevation drops.

The vegetation along the inner flood chute consisted of open fields with the remains of corn stalks, soybeans and weeds. Ground surface visibility was 20% or less at best.

Soils

The soils in the western portion of the outer flood chute, which is better defined, appear to have a higher clay content. This may be the result of larger quantities of water pooling in one place or moving through the soil column. This water action will increase the clay content as the clay will move with the water through the profile, ultimately being deposited within the soil column.

Auger Test 2 is representative of the stratigraphy of the western half of the outer flood chute (see Exhibit 16 and Exhibit 21):

Auger 2

Ap horizon: 0-12 inches (0-30.5 centimeters) below surface – [10YR 4/3] brown fine silt loam

Apb/C1 horizon: 12-19.2 inches (30.5-48.8 centimeters) below surface – [10YR 4/3] brown fine sandy loam

Apb/C2 horizon: 19.2-25.2 inches (48.8-64 centimeters) below surface – [10YR 4/4] dark yellowish brown sandy loam

Bw1 horizon: 25.2-34.8 inches (64-88.4 centimeters) below surface – [10YR 4/4] dark yellowish brown fine clay loam

C horizon: 34.8-43.8 inches (88.4-111.2 centimeters) below surface – [10YR 4/4] dark yellowish brown fine sandy loam

Bw2 horizon: 43.8-51.6 inches (111.2-131 centimeters) below surface – [10YR 4/4] dark yellowish brown silt clay loam

Bw3 horizon: 51.6-60 inches (131-152.4 centimeters) below surface – [10YR 5/4] yellowish brown clay loam with small amount of charcoal

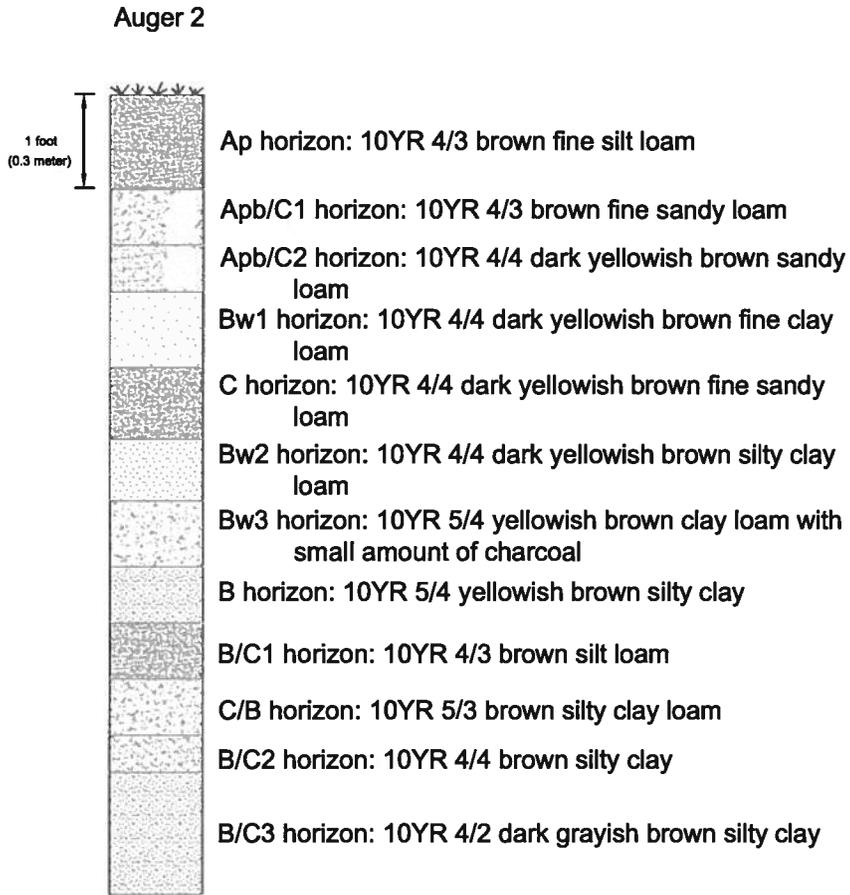
B horizon: 60-67.2 inches (152.4-170.7 centimeters) below surface – [10YR 5/4] yellowish brown silt clay

B/C1 horizon: 67.2-74.4 inches (170.7-189 centimeters) below surface – [10YR 4/3] brown silt loam

C/B horizon: 74.4-81.6 inches (189-207.3 centimeters) below surface – [10YR 5/3] brown silt clay loam

B/C2 horizon: 81.6-86.4 inches (207.3-219.4 centimeters) below surface – [10YR 4/4] brown silt clay

B/C3 horizon: 86.4-102 inches (219.4-259 centimeters) below surface – [10YR 4/2] dark grayish brown silt clay



Stratigraphic Profile for Auger Hole 2
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 2'

The soil profile along the eastern, more discontinuous portion of the outer flood chute appears to be more sandy and contain less clay. This may indicate a less stable landform with more soil being deposited in the outer flood chute during floods.

Auger Test 13 is representative of the soils near the eastern half of the outer flood chute (see Exhibit 16 and Exhibit 22):

Auger 13

Ap horizon: 0-9.6 inches (0-24.4 centimeters) below surface – [10YR 4/3] brown fine sandy loam

Apb/C horizon: 9.6-14.4 inches (24.4-36.6 centimeters) below surface – [10YR 4/3] brown fine loamy sand

Apb1 horizon: 14.4-22.8 inches (36.6-57.9 centimeters) below surface – [10YR 3/3] dark brown fine sandy loam with charcoal

Apb2 horizon: 22.8-31.8 inches (57.9-80.8 centimeters) below surface – [10YR 3/3] dark brown sandy loam with an increase in charcoal

A/C1 horizon: 31.8-39.6 inches (80.8-100.6 centimeters) below surface – [10YR 4/4] dark yellowish brown fine sandy loam with charcoal

A/C2 horizon: 39.6-49.2 inches (100.6-125 centimeters) below surface – [10YR 4/4] dark yellowish brown fine silt loam with charcoal

B/C1 horizon: 49.2-67.2 inches (125-170.7 centimeters) below surface – [10YR 4/4] dark yellowish brown fine clay loam

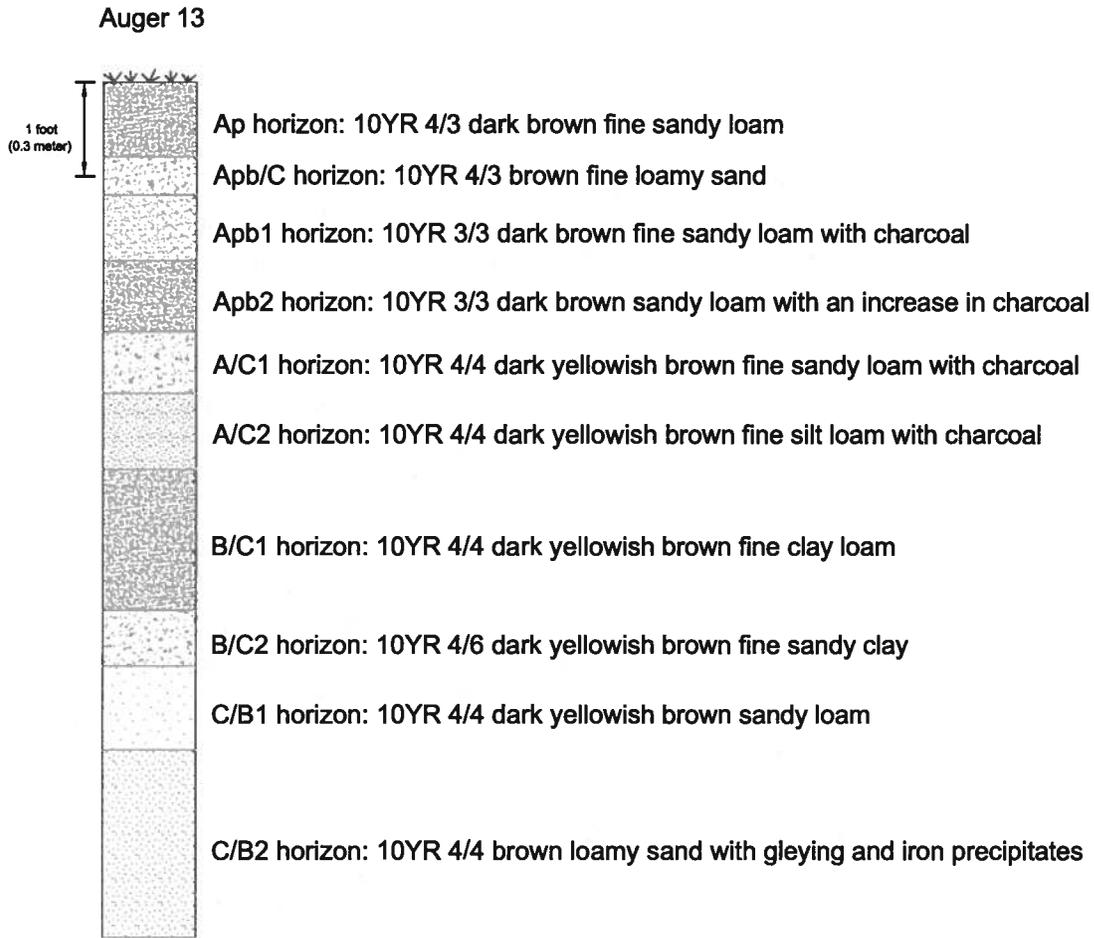
B/C2 horizon: 67.2-74.4 inches (170.7-189 centimeters) below surface – [10YR 4/6] dark yellowish brown fine sandy clay

C/B1 horizon: 74.4-85.2 inches (189-216.4 centimeters) below surface – [10YR 4/4] dark yellowish brown sandy loam

C/B2 horizon: 85.2-109.2 inches (216.4-277.4 centimeters) below surface – [10YR 4/4] brown fine loamy sand with gleying and iron precipitates

Archeological Site Probability

The probability that the outer flood chute will contain archeological sites varies (See Exhibit 19). The western half has a low probability for archeological deposits, while the eastern half is considered to have a somewhat higher probability. This is partially because the western half is much broader and well defined, while the eastern portion of the outer flood chute is less defined, discontinuous, and probably braided. The more well defined nature of the western portion is likely the result of continuous and high velocity water movement which would also have removed any land surfaces that may have once been present in this location. In contrast, the water movement was less constant and had less velocity in the eastern portion. This may have resulted in the preservation of land surface that could have sustained prehistoric occupation, i.e. more low lying and less developed portions of the first inner terrace/levee may be preserved in the eastern portion. The preserved segments of the inner terrace/levee may contain the remnants of archeological sites. The soil profile and topographic location of Auger Test 13 provides some support for this as it was higher in elevation and contained a slightly more stable soil profile.



Stratigraphic Profile for Auger Hole 13
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 2'

Recommendations

The western portion of the outer flood chute should be initially tested by augering every 100 feet (30.5 meters) (see Exhibit 20). If stable surfaces are found that could have been utilized by prehistoric populations, the auger intervals should be reduced to 50 feet (15.2 meters) to better define the land surface.

If the stable surface is found at depths of three feet (.91 meters) or less, Phase I shovel test pits should be conducted at 50 foot (15.2 meter) intervals to determine if archeological deposits are present.

If a stable surface is identified at a depth greater than three feet (.91 meters), trenches should be excavated to sterile soil using a backhoe with a smooth bladed bucket. These trenches should be spaced every 50 feet (15.2 meters) within the area containing the buried land surface.

The initial testing in the eastern portion of the outer flood chute should include auger testing at 50 foot (15.2 meter) intervals (see Exhibit 20). If any potential buried ground surfaces or organic horizons are encountered in the auger tests, the testing interval should be reduced to 25 (7.6 meter) feet to better define the land surface.

If the stable surface is found at depths of 3 feet (.91 meter) or less and impacts are anticipated to be shallow in this location, the area should be tested either by a controlled surface collection or by shovel testing. The controlled surface collection should be conducted within a freshly plowed field, after a rain event. If shovel testing is the method chosen or if impacts are anticipated to extend below plow depths, the shovel test pits should be excavated every 50 feet (15.2 meters), with additional shovel test pits at 25 foot (7.6 meter) intervals around the positive units.

If a stable surface is identified at a depth greater than three feet, trenches should be excavated to sterile soil using a backhoe with a smooth bladed bucket. These trenches should be spaced every 50 feet (15.2 meters) within the area containing the buried land surface. If a buried archeological site is identified, additional trenches should be excavated at 25 foot (7.6 meter) intervals as necessary to define the site and explore the cultural deposits.

First Inner Levee/Terrace

Description

The outer edge of the first inner levee/terrace is marked topographically by the deepest part of the outer flood chute (see Exhibit 4). There is a rise of about 10 feet (3 meters) from the outer flood chute to the top of the first inner levee/terrace along the western portion of the terrace. The eastern portion of this terrace is much lower in elevation and rises only slightly 1-2 feet (30-60 centimeters) above the outer flood chute. The difference in elevation, from west to east, is 215-210 a.s.l.

The vegetation along the inner flood chute consisted of open fields with the remains of corn stalks, soybeans and weeds. Ground surface visibility was 20%, or less, at best. The area was walked in 10-15 foot (3-4.6 meter) transects looking for any surface artifacts.

Two archeological sites, 44LD0309 and 44LDA, are present within this micro-topographic zone (see Exhibit 16). Site 44LD0309 had been recorded prior to the current investigation and site 44LDA was recorded during the current investigation. These sites are discussed in more detail below.

Site 44LDA

During the course of this investigation, one archeological site, site 44LDA, was discovered on the western portion of the first inner levee/terrace (see Exhibit 16). The DHR form for site 44LD0365, a Middle Archaic site located just north of site 44LDA, notes that "44LD0365 was located along a ridge just north of an extensive Late Woodland village site 44LD?". However, the site was apparently never recorded with the DHR during this earlier survey. A site form has been submitted to the DHR but the site number has not been received at the time of this submittal. A final management summary with the DHR site number will be provided. Plates 13 and 14 present views of the site.

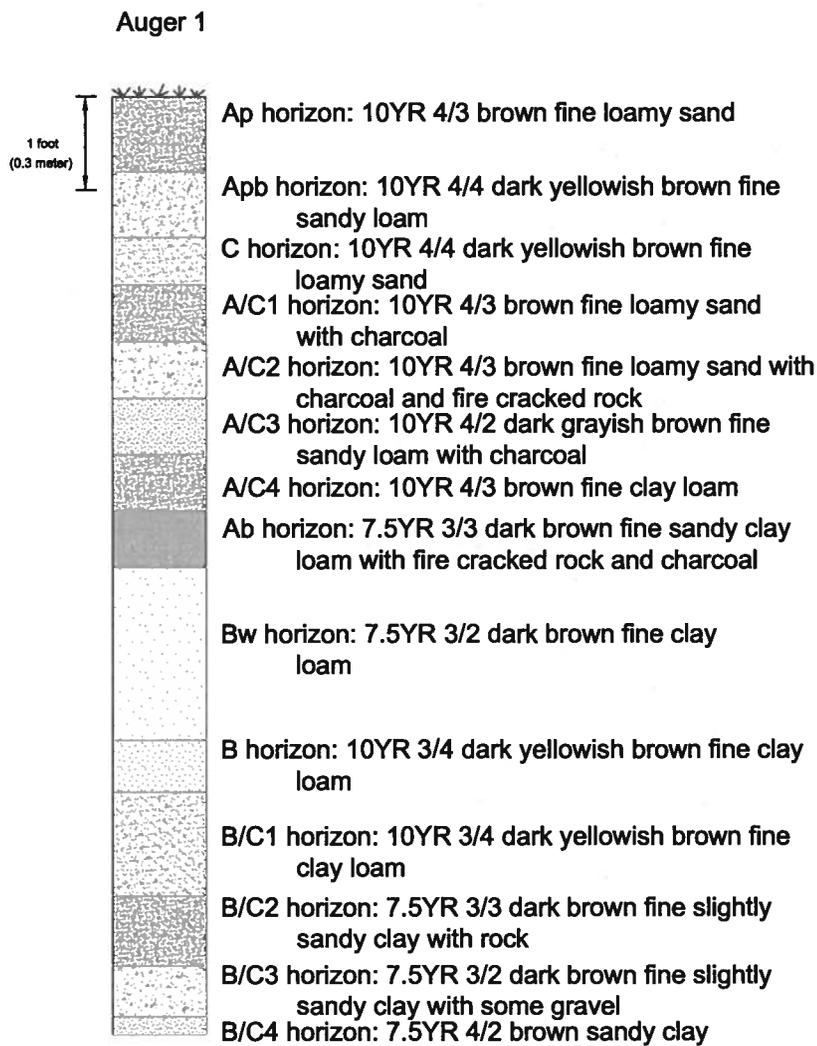
The approximate limits of site 44LDA were delineated by a pedestrian reconnaissance during the current investigation. The reconnaissance consisted of archeologists walking approximately 10-15 feet (3-4.6 meters) apart. Surface visibility was generally poor, only 20% at best, however, greater surface exposure was available in some of the crop rows. The site limits were determined by the presence of artifacts visible on the ground surface; however, no subsurface testing was conducted. A sample of the diagnostic artifacts was collected but the majority of the artifacts were noted and left in the field for a more systematic collection.

The site limits, based on the surficial artifacts, measure 1,000 feet by 300 feet (304 meters by 91 meters) (see Exhibit 16). This site is confined topographically by the first inner levee/terrace and appears to extend to the west, outside of the current project area. The site boundaries within the project area, as well as the locations of the artifacts collected, were survey located using a hand held GPS unit.

The soils within site 44LDA derived from old sediments deposited by the Potomac River; these sediments resulted in the formation of the first inner levee/terrace. The profile from Auger Test 1 indicates that, between periods of flooding, the landform containing the site was stable enough for surfaces to develop (Exhibit 23). The profile indicates the soil has been plowed to a depth of 1.5 feet (45 centimeters). Below this is roughly 2 feet (61 centimeters) of recent deposition, with organics mixed extending to 4 feet (122 centimeters). At 4 feet (122 centimeters), a buried surface was noted with weakly developing subsoil to 6 feet (183 centimeters). From 6-10 feet (183–304 centimeters) are levels of developing sandy clay soils. The augering was stopped at 10 feet (3 meters).

Site 44LDA, Auger 1

- Ap horizon: 0-9.6 inches (0-24.4 centimeters) below surface – [10YR 4/3] brown fine loamy sand
- Apb horizon: 9.6-18 inches (24.4-45.7 centimeters) below surface – [10YR 4/4] dark yellowish brown fine sandy loam
- C horizon: 18-24 inches (45.7-61 centimeters) below surface – [10YR 4/4] dark yellowish brown fine loamy sand
- A/C1 horizon: 24-31.2 inches (61-79.2 centimeters) below surface – [10YR 4/3] brown fine loamy sand with small amount of charcoal
- A/C2 horizon: 31.2-38.4 inches (79.2-97.5 centimeters) below surface – [10YR 4/3] brown fine sandy loam with charcoal and fire cracked rock
- A/C3 horizon: 38.4-45.6 inches (97.5-115.8 centimeters) below surface – [10YR 4/2] dark grayish brown fine sandy loam with small amount of charcoal
- A/C4 horizon: 45.6-52.8 inches (115.8-134.1 centimeters) below surface – [10YR 4/3] brown fine clayey loam
- Ab horizon: 52.8-60 inches (134.1-152.4 centimeters) below surface – [7.5YR 3/3] dark brown fine sandy clayey loam with fire cracked rock and charcoal
- Bw horizon: 60-82.2 inches (152.4-208.8 centimeters) below surface – [7.5YR 3/2] dark brown fine clay loam
- B horizon: 82.2-88.8 inches (208.8-225.5 centimeters) below surface – [10YR 3/4] dark yellowish brown fine clay loam
- B/C1 horizon: 88.8-102 inches (225.5-259 centimeters) below surface – [10YR 3/4] dark yellowish brown fine clay loam
- B/C2 horizon: 102-111 inches (259-282 centimeters) below surface – [7.5YR 3/3] dark brown fine slightly sandy clay with rock
- B/C3 horizon: 111-117.6 inches (282-299 centimeters) below surface – [7.5YR 3/2] dark brown fine slightly sandy clay with some gravel
- B/C4 horizon: 117.6-120 inches (299-305 centimeters) below surface – [7.5YR 4/2] brown sandy clay



Stratigraphic Profile for Auger Hole 1
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 2'

Table 2 presents a summary of the artifacts recovered during the current investigation.

Table 2: Artifacts Recovered from Surface Collections, Site 44LDA

| Provenience | Quantity | Artifact Type | Begin Year | End Year |
|---------------------------|--------------------|---|-------------------------------|--------------------------------|
| Surface Collection | | | | |
| | Ceramics | | | |
| | 1 | stoneware | late 19 th century | early 20 th century |
| | Prehistoric | | | |
| | 2 | ceramics, Potomac Creek Late Woodland | A.D. 1300 | A.D. 1700 |
| | 23 | ceramics, Shepard Late Woodland | A.D. 900 | A.D. 1450 |
| | 1 | chert point, Palmer Type Early Archaic | 7700 B.C. | 6900 B.C. |
| | 1 | rhyolite point, Fox Creek/Selby Bay Type, unfinished, Middle Woodland | A.D. 300 | A.D. 600 |
| | 1 | jasper biface thinning flake | | |
| | 5 | quartz primary reduction flakes | | |
| | 5 | quartz biface thinning flakes | | |
| | 1 | quartz biface fragment middle-late stage | | |
| | 1 | quartz biface fragment | | |
| | 1 | quartz biface early stage | | |
| | 2 | quartz bifaces late stage | | |
| | 1 | quartz point tip | | |
| | 1 | quartzite decortication flake | | |
| | 1 | quartzite fire cracked rock (FCR) | | |
| | 2 | sandstone fire cracked rock (FCR) | | |
| Total Site A | 49 | | | |

The artifacts collected from and observed on the surface of the site consisted of pottery and lithic debitage. The majority of the pottery could be typed as Shepard ware and dates from the Late Woodland time period, although two sherds of Potomac Creek, a later Late Woodland variant were also recovered. The Shepard ceramic type is named after site 18MO3 which lies on the Maryland side of the Potomac River, downstream from the project area and across from Selden Island. The Potomac Creek pottery is generally thought to have derived from the Shepard wares and is the pottery type thought to be associated with the historic Piscataway and related Native American groups in the Inner Potomac Coastal Plain. Plates 15-17 contain a representative selection of the artifacts recovered from the site.

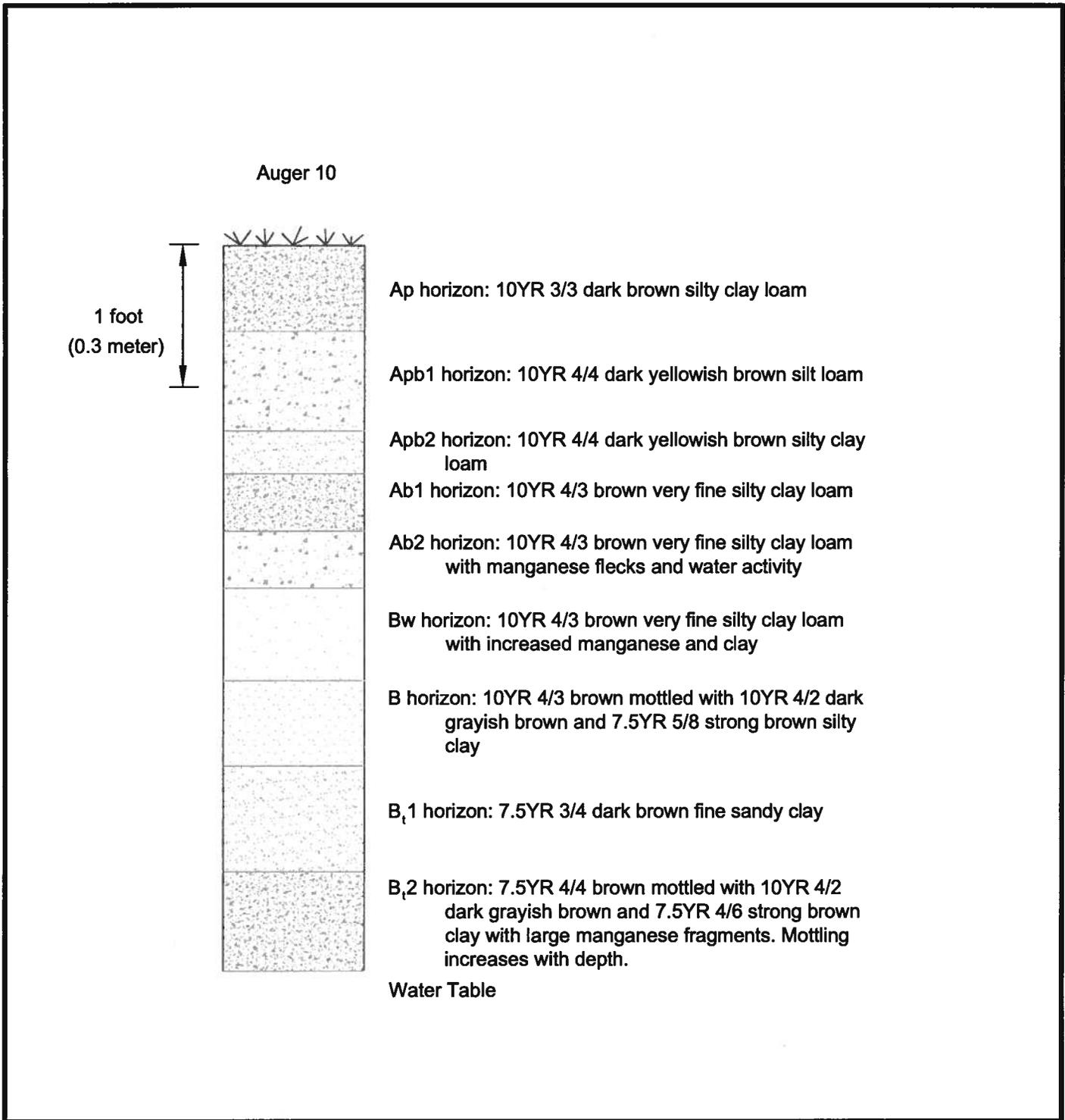
Although the Late Woodland time period appears to be the dominant occupation represented at this site, based on the limited evidence uncovered during the current investigation, it is obvious that the site area was utilized during other prehistoric periods as well. A Palmer point, dating from the Early Archaic period, and what appears to be an unfinished Fox Creek/Selby Bay point from the Middle Woodland period, were recovered from the site as well (see Plate 15).

Site 44LD0309

Site 44LD0309 was recorded in 1980, based on a reconnaissance by William Rust of the Loudoun Archeology Center. The site was defined as a small lithic scatter dating from the Middle and Late Woodland time periods and yielded 12 artifacts. The artifacts included a quartz triangular projectile point, as well as a quartz biface, a quartzite unifacial tool and quartz and rhyolite flakes. Single quartz and rhyolite flakes had been retouched into tools. The site dimensions given on the form are 300 meters east-west by 100 meters north-south and the site is described as being located on the lower Potomac River floodplain, at an elevation of 200 feet and 100 meters north of the Potomac River. Plates 18 and 19 present views of the site.

A pedestrian reconnaissance was conducted of the site area, as shown on the DHR maps, in order to confirm the site location (see Exhibit 16). However, surface visibility within the recorded site limits was almost zero. The west area of the site, along the tree line, had slightly better visibility but no artifacts were observed in this location. Plates 18 and 19 present an overview of the site area.

The soils within site 44LD0309 were plowed to a depth of 1.5 feet (45 centimeters) and a buried surface was noted from 1.5-2.5 feet (45-76 centimeters). Below the buried surface, slight gleying was noted. The clay content of the soil column, as well as the amount of gleying and manganese fragments, increased with depth. Manganese is often an indicator of poor drainage as it precipitates and forms hard nodules from water movement up and down the soil column. These nodules are then deposited within the soil column. The water table was encountered at 5 feet (152 centimeters); augering ceased at this point. Auger Test 10 is representative of the soil stratigraphy near the eastern half of the inner levee/terrace and in site 44LD0309 (Exhibit 24):



Stratigraphic Profile for Auger Hole 10
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 1'

Auger 10

Ap horizon: 0-7.2 inches (0-18.3 centimeters) below surface – [10YR 3/3] dark brown silt clay loam

Apb1 horizon: 7.2-15.6 inches (18.3-39.6 centimeters) below surface – [10YR 4/4] dark yellowish brown silt loam

Apb2 horizon: 10.8-19.2 inches (39.6-48.7 centimeters) below surface – [10YR 4/4] dark yellowish brown silt clay loam

Ab1 horizon: 19.2-24 inches (48.7-61 centimeters) below surface – [10YR 4/3] brown very fine silt clay loam

Ab2 horizon: 24-28.8 inches (61-73.1 centimeters) below surface – [10YR 4/3] brown very fine silt clay loam with manganese flecks and evidence of water activity

Bw horizon: 28.8-36.6 inches (73.1-93 centimeters) below surface - [10YR 4/3] brown very fine silt clay loam with more manganese and increase in clay

B horizon: 36.6-43.8 inches (93-111.2 centimeters) below surface - [10YR 4/3] brown mottled with [10YR 4/2] dark grayish brown and [7.5YR 5/8] strong brown silt clay

B_t1 horizon: 43.8-52.8 inches (111.2-134.1 centimeters) below surface – [7.5YR 3/4] dark brown fine sandy clay

B_t2 horizon: 52.8-61.2 inches (134.1-155.4 centimeters) below surface – [7.5YR 4/4] brown mottled with [10YR 4/2] dark grayish brown and [7.5YR 4/6] strong brown clay with large manganese fragments. Mottling increases with depth

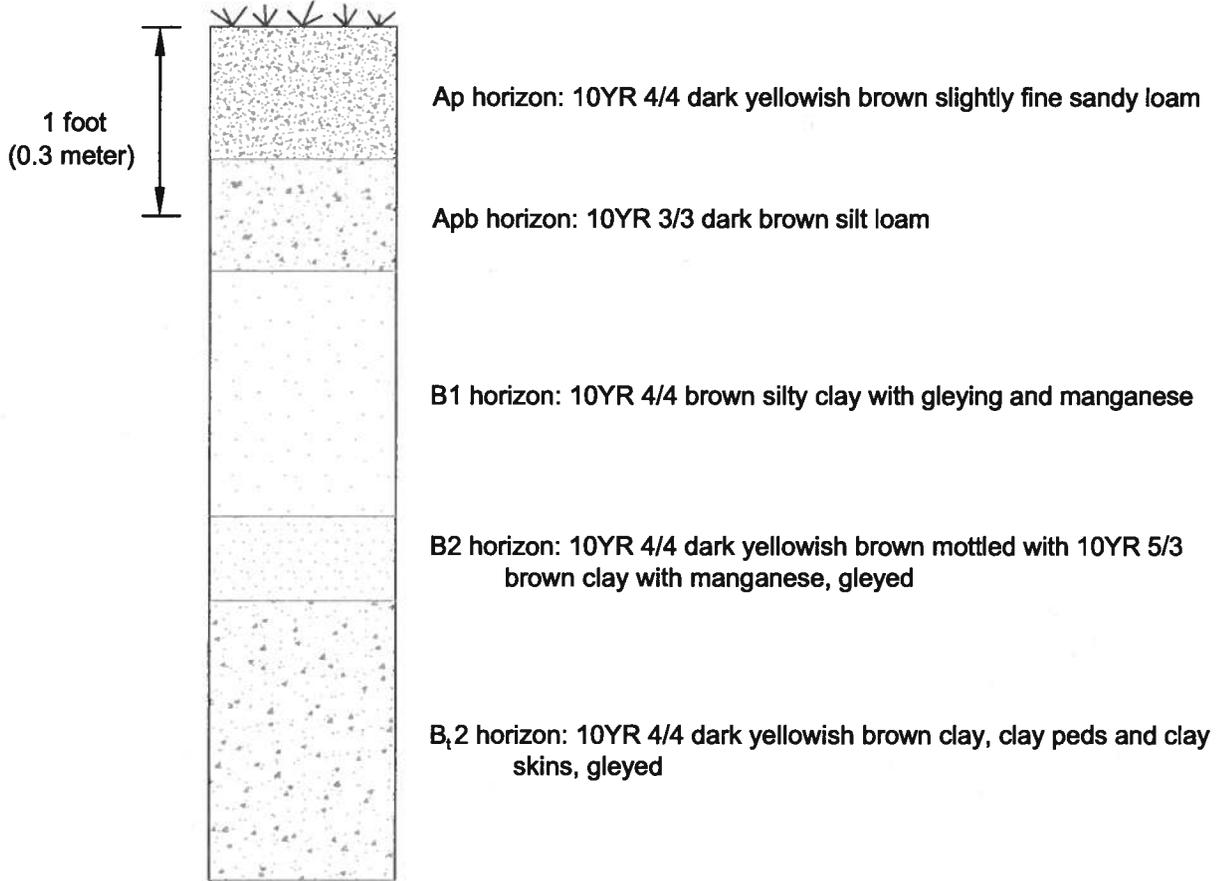
Water Table

Soils Outside of the Sites

The soil profile, as indicated by Auger Test 14 in the eastern portion of the first inner levee/terrace, indicates that the terrace formation in this location is very resistant (Exhibit 25). The landform is a remnant of the more well defined first inner terrace; this remnant has been cut or truncated by water movement through the first inner flood chute. It appears as if, during flooding, water reached the more resistant portion of the terrace and was forced south back into the Potomac River through a weak spot in the underlying soils. This may have caused the break in the terraces as well as the deposition of sands resulting in the sandbar along the outer levee.

The soils near Auger Test 14 were plowed to roughly 1.5 feet (45 centimeters). The plowed soils were underlain by very dense subsoil which became gleyed and contained manganese and saprolite at 2 feet (61 centimeters). The soils continue to increase in clay content and become dry and friable, with an increase in saprolite at 4.5 feet (137 centimeters). Testing was ceased at this level because of auger refusal in the dense clay. The soil profile from Auger Test 14 illustrates the soil column discussed above (see Exhibit 25):

Auger 14



Stratigraphic Profile for Auger Hole 14
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 1"

Auger 14

Ap horizon: 0-8.4 inches (0-21.3 centimeters) below surface – [10YR 4/4] dark yellowish brown slightly fine sandy loam

Apb horizon: 8.4-15.6 inches (21.3-39.6 centimeters) below surface – [10YR 3/3] dark brown silt loam

B1 horizon: 15.6-31.2 inches (39.6-79.2 centimeters) below surface – [10YR 4/4] brown silt clay with gleying and manganese

B2 horizon: 31.2-36.6 inches (79.2-92.9 centimeters) below surface – [10YR 4/4] dark yellowish brown mottled with [10YR 5/3] brown clay with manganese, gleyed

Bt2 horizon: 36.6-54.6 inches (92.9-138.7 centimeters) below surface – [10YR 4/4] dark yellowish brown clay, clay peds and clay skins, gleyed

Archeological Site Probability

The probability that the first inner levee/terrace and all remnant portions will contain archeological resources is very high (see Exhibit 19). The western half of the terrace, which is the highest and most well developed portion, contains a Late Woodland Village (site 44LDA). Sites of this type frequently contain a high numbers of features; these features may include things such as storage or refuse pits, hearths and, possibly, human burials. The Early Archaic and Middle Woodland time periods were also represented at the site but features associated with these periods are felt to be less likely.

In addition, the soil profile within site 44LDA indicates that this portion of the first inner levee/terrace contains a buried ground surface at a depth of between 4 and 5 feet (1.2-1.5 meters) below the ground surface. This ground surface may have been utilized as a campsite by prehistoric populations. Fire cracked rock was observed within the buried ground surface; this is frequently an indicator of an archeological site.

A second site (44LD0309) dating from the Middle and Late Woodland time periods, had been previously recorded on the eastern portion of the first inner levee/terrace. This site is less well defined and, based on the artifacts listed on the site form, does not appear to have the density of 44LDA. No pottery was noted and it may represent either transient or more specialized use of the area during the periods of occupation.

The eastern remnant portions of the first inner levee/terrace are also considered high probability. The area around these landforms, because they were lower in elevation and appear to have been more prone to flooding or water pooling, may have been an attractant for game animals. As a result, smaller sites or more specialized activity areas may be present in these locations. Large village sites are not anticipated here because of the drainage and relatively small size of the landforms.

Recommendations

Because of the poor surface visibility and the lack of subsurface testing during the current investigation, the boundaries of site 44LDA are considered to be tentative and the site boundaries should be better established using one of two methods (see Exhibit 20). The first method would be a controlled surface collection which should be conducted when the field containing the site is freshly plowed and after a rain event. If this method is chosen, the DHR Guidelines (2003) require that at least two shovel tests be excavated within the site.

The second method consists of the excavation of shovel test pits at 50 foot (15.2 meter) intervals; additional shovel tests should be excavated at 25 foot (7.6 meter) intervals as necessary around the artifact bearing units.

Once the boundaries of the site are better established, our recommendation would be to avoid impacts to this portion of the project area because of the potential significance of the site and the likelihood of features, including human burials.

If impacts to the site can not be avoided and disturbance is planned below 4 feet (1.2 meters) where a buried ground surface was identified during the auger testing, backhoe trenches should be excavated to sterile soil using a backhoe with a smooth bladed bucket. These trenches should be spaced every 50 feet (15.2 meters) within the area containing the buried land surface. If cultural deposits are encountered, additional trenches should be excavated at 25 foot (7.6 meter) intervals within the area containing these deposits.

The lower eastern remnant terraces could either be tested a by a controlled surface collection, as described above, or by shovel testing (see Exhibit 20). Again, the shovel test pits should be excavated every 50 feet (15.2 meters) with additional shovel test pits at 25 foot (7.6 meter) intervals around the positive units. No backhoe trenching will be necessary in this area as the soil profiles observed in the auger tests do not indicate the presence of buried surfaces.

As with site 44LDA, site 44LD0309 should be subject to either a controlled surface collection or shovel testing, as described above (see Exhibit 20). No sub-plow zone surfaces were observed in the shovel tests; because of this, no backhoe testing is recommended for this location.

First Inner Flood Chute

Description

To the rear, or north, of the first inner levee/terrace lie the back swamp areas or first inner flood chute (see Exhibit 4). The first inner flood chute is an area of low lying, swampy ground interspersed with slightly higher landforms; this almost gives it the appearance of a braided stream bed. The water flow within the flood chute would have been from east to west and the flood chute is narrower in the eastern portion, broadening towards the western half. Plates 20-22 present views of the first inner flood chute.

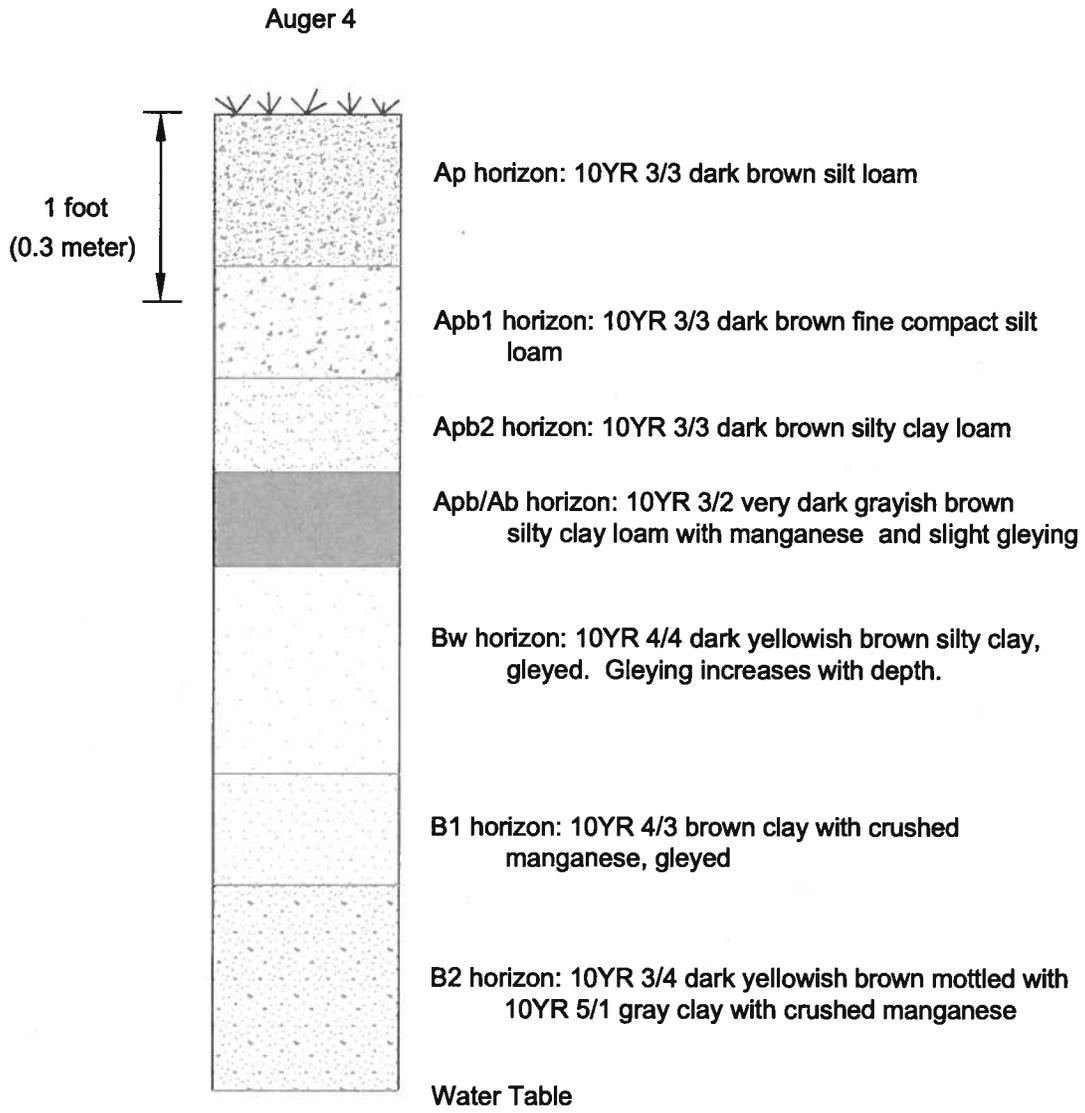
The elevation drops from south to north from 213-208 a.s.l. across the approximately 500 foot (152 meters) span of the first inner flood chute. This flood chute is bounded to the north by an incised drainage. This drainage almost appears as if it were an old farm road bed (Plate 23).

The vegetation along the inner flood chute consisted of open crop fields with remains of corn stalks, soybeans and weeds. Ground surface visibility was 20%, or less, at best. The lower areas closest to the drainage were more poorly drained. This area was walked in 10-15 foot (3-4.6 meter) transects looking for any surface artifacts.

Soils

The soils in the first inner flood chute showed dramatic differences between the southern and northern portions. Auger Test 4 revealed soils that were slightly similar to those on the first inner terrace (see Exhibit 16). The soils were plowed to a depth of 2 feet (61 centimeters) and a shallow buried organic surface was noted between 2-2.5 feet (61-76 centimeters). Below this, the soils became gleyed; clay content, gleying and manganese nodules increased with depth. Between 4-5 feet (121-152 centimeters), the soils exhibited very high clay content and were dense and heavily gleyed. The water table was reached at 5 feet (152 centimeters) and the augering ceased at this point. The heavy clay content in this profile may be the result of large quantities of water pooling in one place or moving through the soil column. This water action will increase the clay content as the clay will move with the water through the profile, ultimately being deposited within the soil column. The buried surfaces observed on the first inner levee/terrace, below 2 feet (61 centimeters) in Auger Test 1, were not seen in Auger Test 4 (see Exhibit 16). The soils in Auger Test 4 may indicate the terrace sloped downward in this location and that the back swamp or inner flood chute was much closer to back edge of the terrace than it appears currently. This may be a result of plowing and erosion filling in the outer flood chute.

Auger Test 4 presents an illustration of the soil stratigraphy on the southern edge of the first inner flood chute (Exhibit 26):



Stratigraphic Profile for Auger Hole 4
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 1'

Auger 4

Ap horizon: 0-9.6 inches (0-24.4 centimeters) below surface – [10YR 3/3] dark brown silt loam

Apb1 horizon: 9.6-16.8 inches (24.4-42.7 centimeters) below surface – [10YR 3/3] dark brown fine silt compact loam

Apb2 horizon: 16.8-22.8 inches (42.7-57.9 centimeters) below surface – [10YR 3/3] dark brown silt clay loam

Apb/Ab horizon: 22.8-28.8 inches (57.9-73.1 centimeters) below surface – [10YR 3/2] very dark grayish brown silt clay loam with slight gleying and manganese

Bw horizon: 28.8-42 inches (73.1-106.7 centimeters) below surface – [10YR 4/4] dark yellowish brown silt clay, gleyed. Gleying increases with depth

B1 horizon: 42-49.2 inches (106.7-125 centimeters) below surface – [10YR 4/3] brown clay with crushed manganese, gleyed

B2 horizon: 49.2-62.4 inches (125-158.5 centimeters) below surface – [10YR 3/4] dark yellowish brown mottled with [10YR 5/1] gray clay with crushed manganese

Water Table

The soils within Auger Test 5 indicate the soils have been plowed to a depth of 1.3 feet (40 centimeters); this plowed horizon lies atop a well developed clay horizon which was heavily gleyed and contained manganese nodules. The water table was reached at a depth of 3 feet (91 centimeters). Based on the soil profile within Auger Test 5, this portion of the flood chute would have been saturated for long periods. The profile for Auger Test 5 is described below and illustrated in Exhibit 27:

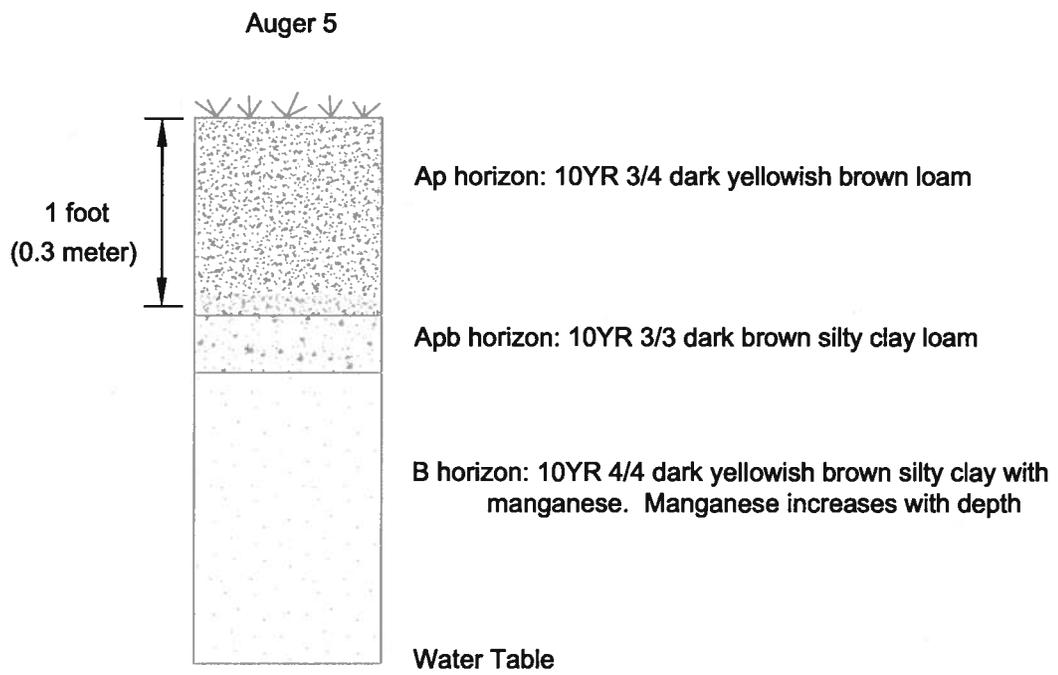
Auger 5

Ap horizon: 0-12.6 inches (0-32 centimeters) below surface – [10YR 3/4] dark yellowish brown loam

Apb horizon: 12.6-16.2 inches (32-41.1 centimeters) below surface – [10YR 3/3] dark brown silt clay loam

B horizon: 16.2-34.8 inches (41.1-88.4 centimeters) below surface – [10YR 4/4] dark yellowish brown silt clay with manganese. Manganese increases with depth

Water Table



Stratigraphic Profile for Auger Hole 5
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 1"

Archeological Site Probability

The majority of this micro-topographic zone is not expected to yield archeological resources (see Exhibit 19). The inner flood chute in the vicinity of Auger Test 5 has a low probability of containing archeological deposits as the high velocity water movement through this area would have removed any land surfaces that may have been present in this location. However, the portion of the inner flood chute in the vicinity of Auger Test 4 had a distinctly different soil profile, one that indicated some stability. Because of this, the portion of the flood chute near Auger Test 4 has a moderate probability of yielding cultural materials.

Recommendations

The initial testing in the eastern portion of the first inner flood chute should include auger testing at 100 feet (30.5 meters) intervals (see Exhibit 20). If any potential buried ground surfaces or organic horizons are encountered in the auger tests, the testing interval should be reduced to 50 feet (15.2 meters) feet to better define the land surface.

Once the land surface has been defined and, providing that this surface is present at depths of three feet or less and impacts to this location will be shallow, the area should be tested for the presence of cultural materials either by a controlled surface collection, as described previously, or by shovel testing. The shovel test pits should be excavated every 50 feet (15.2 meters) with additional shovel test pits at 25 foot (7.6 meter) intervals around the positive units.

If a stable surface is identified at a depth greater than 3 feet (.91 meter) or deeper impacts are planned, trenches should be excavated to sterile soil using a backhoe with a smooth bladed bucket. These trenches should be spaced every 50 feet (15.2 meters) within the area containing the buried land surface. If cultural materials are found within the trenches, additional trenches should be excavated at 25 foot (7.6 meter) intervals to better define the site and explore the cultural deposits.

Northern Half

The northern half includes the second inner levee/terrace, the second inner flood chute and the slopes leading to the Pleistocene terraces. Each of these zones is discussed individually below and shown on Exhibit 4.

Second Inner Levee/Terrace

Description

The outer edge of the second inner levee/terrace is marked by the deepest part of the inner flood chute. There is a rise of approximately 6-7 feet (1.8-2 meters) from the first inner flood chute to the top of the second inner levee/terrace. The second inner levee/terrace is consistent across the floodplain and generally ranges in elevation between 215-217 a.s.l. (see Exhibit 4). The terrace is approximately 400 feet (121 meters) across, and is bordered to the north by the second inner flood chute. A deeply incised drainage to the east bisects this terrace. Plates 24-26 present views of the second inner levee/terrace.

The vegetation along the second inner levee/terrace consisted of open fields with the remains of corn stalks, soybeans and weeds. Ground surface visibility, at best, was 20% or less. The area was walked in 10-15 foot (3-4.6 meter) transects looking for any surface artifacts.

Soils

The soil horizons on this terrace were consistently older and more eroded than those to the south towards the river and, in general, the soils were more stable. The soil profile consisted of the river deposits that formed the terrace overlying soil that derived from the residual bedrock decomposing into soil or river base deposits.

The soil profile was plowed to 1.5 feet (45 centimeters); this plow zone overlay a weakly developing soil horizon to a depth of roughly 3 feet (.91meter). Between 3-4 feet (.91-1.2 meters) below surface, gleying and manganese were noted overtop the decomposing bedrock noted at 5 feet (1.5 meters). Auger Test 6 was placed in the widest portion of the terrace, along the southern edge (see Exhibit 16).

Although located within site 44LD0356, as defined during the current investigation, this profile is representative of the stratigraphy on the western half of the second inner levee/terrace (Exhibit 28):

Auger 6

Ap horizon: 0-9 inches (0-22.9 centimeters) below surface – [10YR 4/3] brown silt clay loam

Apb horizon: 9-16.8 inches (22.9-42.7 centimeters) below surface – [10YR 4/4] dark yellowish brown silt clay

Bw horizon: 16.8-20.4 inches (42.7-51.9 centimeters) below surface - [10YR 4/6] dark yellowish brown silt clay

B horizon: 20.4-34.2 inches (51.9-86.9 centimeters) below surface - [10YR 4/6] dark yellowish brown clay with manganese. Manganese increases with depth

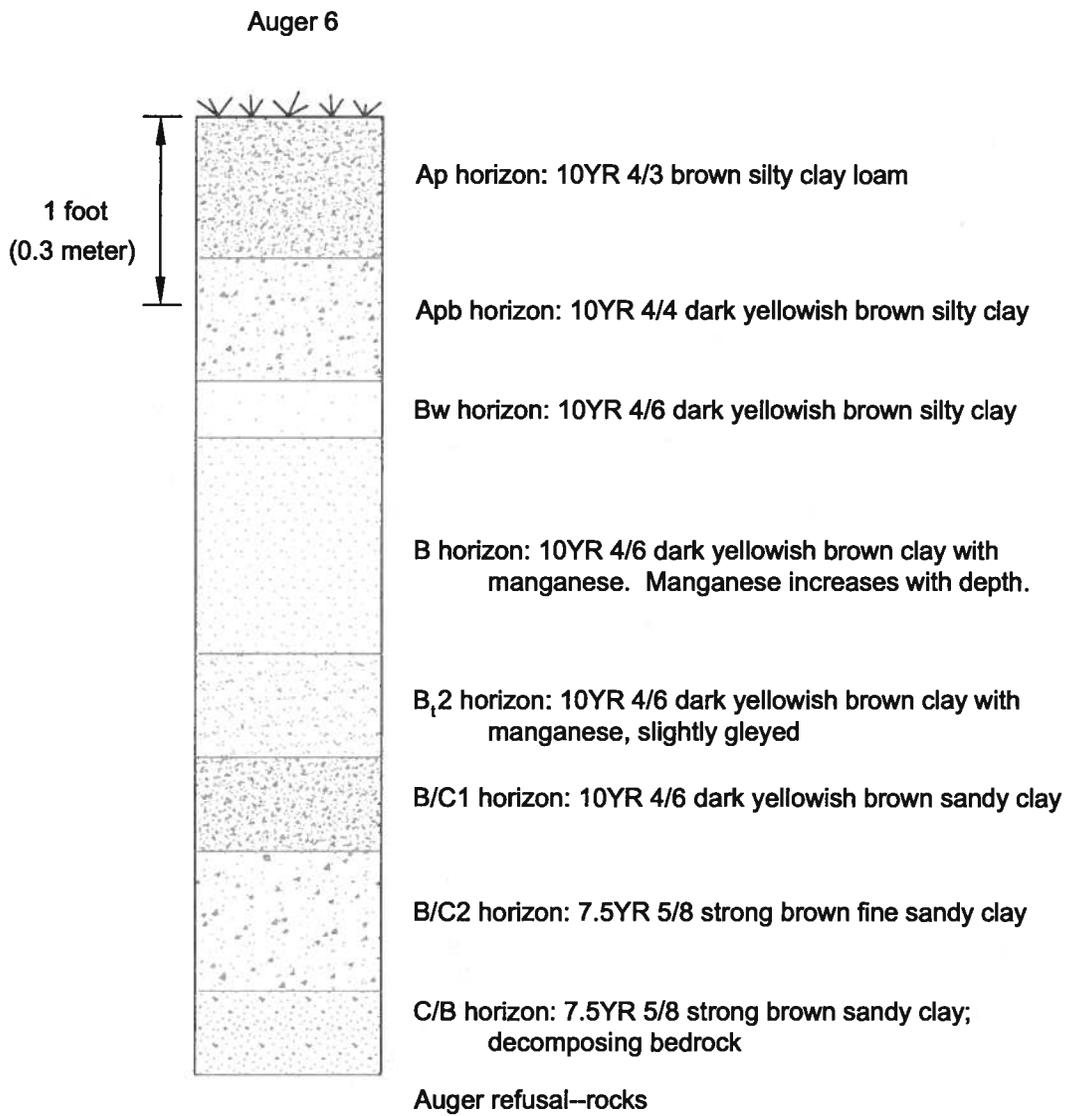
B2t horizon: 34.2-40.8 inches (86.9-103.6 centimeters) below surface – dark yellowish brown clay with manganese, slightly gleyed

B/C1 horizon: 40.8-46.8 inches (103.6-118.9 centimeters) below surface – [10YR 4/6] dark yellowish brown slightly sandy clay with manganese

B/C2 horizon: 46.8-55.8 inches (118.9-141.7 centimeters) below surface – [7.5YR 5/8] strong brown fine sandy clay

C/B horizon: 55.8-60 inches (141.7-152.4 centimeters) below surface – [7.5YR 5/8] strong brown sandy clay with saprolite

Auger Refusal – rocks



Stratigraphic Profile for Auger Hole 6
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 1'

The soils on the eastern side of the drainage at Auger Test 11 were similar to the western side of the drainage (see Exhibit 4 and Exhibit 29). Again, the soils appeared as sandy deposits with depth and rounded pebbles were noted at 5.5-6.0 feet (1.6-1.8 meters). The terrace formation is stable, but overlies older coarse river deposits that predate the formation of the terrace. The soil profile of Auger Test 11 is representative of the soils near the far eastern portion of the second inner levee/terrace (see Exhibit 29):

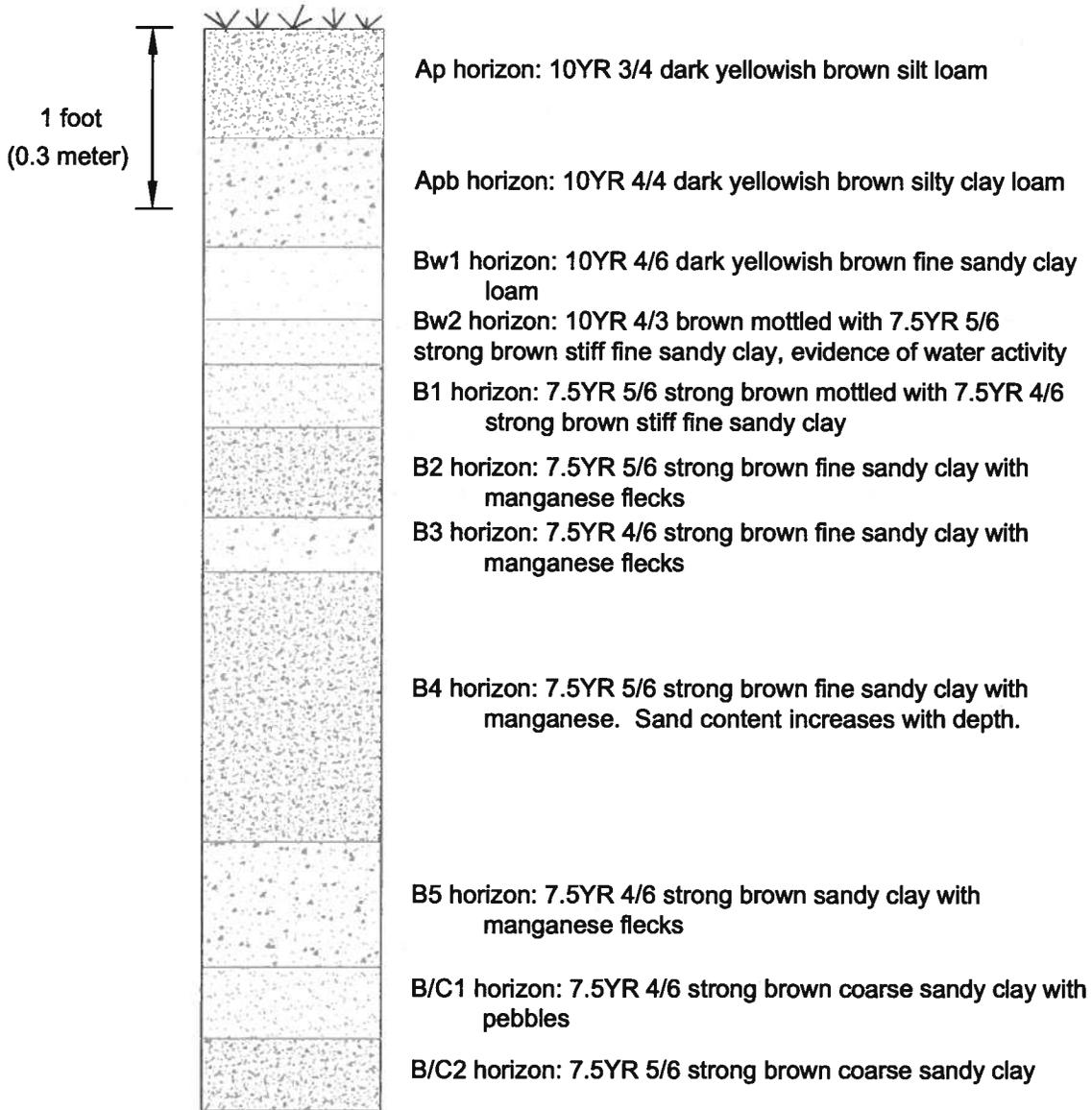
Auger 11

- Ap horizon: 0-7.2 inches (0-18.3 centimeters) below surface – [10YR3/4] dark yellowish brown silt loam
- Apb horizon: 7.2-14.4 inches (18.3-36.6 centimeters) below surface – [10YR 4/4] dark yellowish brown silt clay loam
- Bw1 horizon: 14.4-19.2 inches (36.6-48.8 centimeters) below surface – [10YR 4/6] dark yellowish brown fine sandy clay loam
- Bw2 horizon: 19.2-22.2 inches (48.8-56.4 centimeters) below surface – [10YR 4/3] brown mottled with [7.5YR 5/6] strong brown stiff fine sandy clay, evidence of water activity
- B1 horizon: 22.2-26.4 inches (56.4-67 centimeters) below surface – [7.5YR 5/6] strong brown mottled with [7.5YR 4/6] strong brown stiff fine sandy clay
- B2 horizon: 26.4-32.4 inches (67-82.3 centimeters) below surface – [7.5YR 5/6] strong brown fine sandy clay with manganese flecks
- B3 horizon: 32.4-36 inches (82.3-91.4 centimeters) below surface – [7.5YR 4/6] strong brown stiff sandy clay with manganese
- B4 horizon: 36-54 inches (91.4-137.2 centimeters) below surface – [7.5YR 5/6] strong brown fine sandy clay with manganese. Sand content increases with depth
- B5 horizon: 54-62.4 inches (137.2-158.5 centimeters) below surface – [7.5YR 4/6] strong brown sandy clay with manganese flecks
- B/C1 horizon: 62.4-67.2 inches (158.5-170.7 centimeters) below surface – [7.5YR 4/6] strong brown coarse sandy clay with pebbles
- B/C2 horizon: 67.2-72 inches (170.7-183 centimeters) below surface – [7.5YR 5/6] strong brown coarse sandy clay

Site 44LD0365

The recorded location of site 44LD0365 is within the second inner flood chute and lies north of the second inner levee/terrace, however, the flood chute seems an unlikely location for the site (see Exhibits 4 and 16). In addition, the original DHR site form (not included in the Data Sharing System transcription), notes that the site is located on a ridge approximately 400 meters north of the Potomac River. The description and location conform more closely to the second inner levee/terrace location discussed here. Artifacts were noted on the ground surface on the second inner levee/terrace, but not on the second inner flood chute, although the surface visibility in both locations was

Auger 11



Stratigraphic Profile for Auger Hole 11
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 1'

approximately equal. A new site boundary for site 44LD0365 has been defined based on the information gathered during the current investigation. The new site boundaries and other pertinent information will be updated on the DHR site form. Plate 27 presents a view of the site.

The site was recorded in 1985 by Howard MacCord, Sr. Mr. MacCord described the site as a scattering of Archaic period artifacts and debitage which included a Halifax point (Middle Archaic) along a ridge, approximately 400 meters north of the right bank of the Potomac River. MacCord notes that the artifacts were scattered for approximately 1000 feet along the ridge although his recordation of the site limits was considerably smaller. He also stated the site was located just north of an extensive Late Woodland village. This village (site 44LDA) was discovered during the current investigation on the first inner levee/terrace (see Exhibit 16).

As previously stated, during the current investigation, artifacts were noted on the surface; these generally concentrated along the southern edge of the terrace overlooking the first inner flood chute. A cluster of artifacts was noted in the southeastern corner of the second inner levee/terrace; however, the cluster is likely a factor of greater surface visibility in this location. The artifacts were survey located but not collected. They included quartz and quartzite debitage, two early stage bifaces, one point tip, one jasper debitage, fire cracked rock, and one tested cobble. The site appears to extend along most of the second inner levee/terrace.

Auger Test 15 was placed on the eastern end of the terrace, within site 44LD0365, near the Potomac River tributary (see Exhibit 16). This was close to the cluster of artifacts noted above. The soil profile was similar to that in Auger Test 6; however, a depth of 6.5 feet (2 meters) was reached before auger refusal. The profile within the auger test appears to indicate that the soils at 4.5 feet (1.4 meters) were becoming more unstable and less well developed (Exhibit 30). These probably represent coarser river deposits that predate the formation of the second inner levee/terrace. It is also possible that deposits from the deeply incised tributary to the east affected this end of the landform. Very rounded chert and jasper pebbles were noted at 6.5 feet (2 meters). Similar pebbles and cobbles were noted in the base of the drainage to the east of Auger Test 15. No unplowed, buried ground surfaces were noted in the soil profile of this auger test.

Auger Test 15 illustrates the soils within the eastern end of site 44LD0365 as well as the eastern end of the second inner levee/terrace (see Exhibit 30):

Auger 15

Ap horizon: 0-8.4 inches (0-21.3 centimeters) below surface – [10YR 4/3] brown silt loam

Apb1 horizon: 8.4-16.2 inches (21.3-41.4 centimeters) below surface – [10YR 4/4] dark yellowish brown silt clay loam

Apb2 horizon: 16.2-22.2 inches (41.4-56.4 centimeters) below surface – [7.5YR 4/6] brown silt clay

Bw horizon: 22.2-34.2 inches (56.4-86.9 centimeters) below surface – [7.5YR 4/6] brown silt clay with manganese and slight gleying

B horizon: 34.2-54.6 inches (86.9-138.7 centimeters) below surface – [7.5YR 4/6] brown fine sandy clay, slightly gleyed

C/B1 horizon: 54.6-60.6 inches (138.7-153.9 centimeters) below surface – [10YR 5/6] yellowish brown fine sandy clay loam

C/B2 horizon: 60.6-66.6 inches (153.9-169.1 centimeters) below surface – [10YR 4/6] dark yellowish brown fine sandy loam

C1 horizon: 66.6-72.6 inches (169.1-184.4 centimeters) below surface – [10YR 4/4] dark yellowish brown loamy fine sand with organic lensing

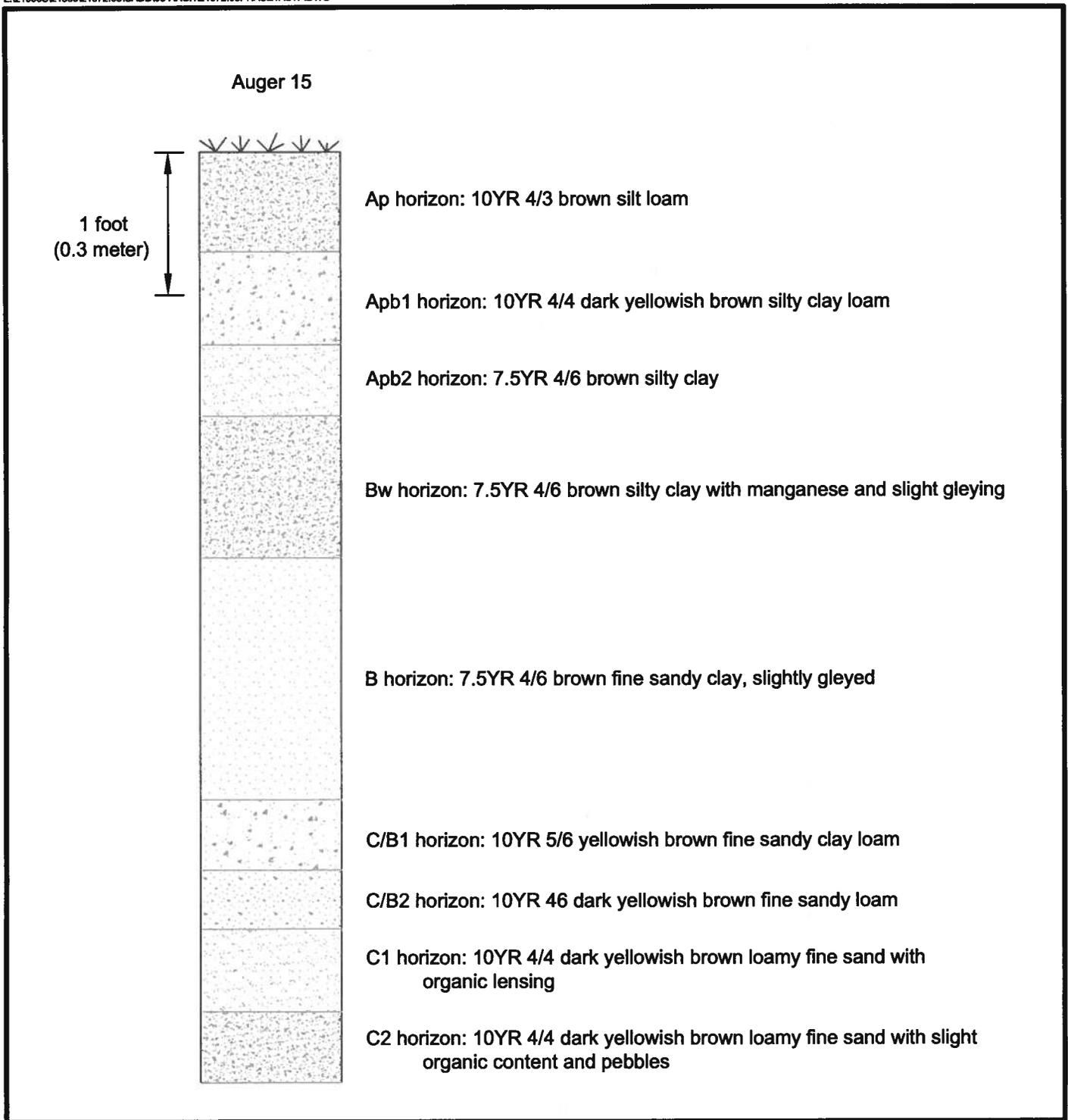
C2 horizon: 72.6-78.6 inches (184.4-199.6 centimeters) below surface – [10YR 4/4] dark yellowish brown loamy fine sand with slight organic content and pebbles

Archeological Site Probability

The probability that the second inner levee/terrace contains archeological resources is very high (see Exhibit 19). The terrace contains a previously recorded site dating to the Middle Archaic time period. Although the site extends across most of the landform on which it is located, it is likely that it represents a location that was periodically revisited rather than a single camping episode. No buried ground surfaces were noted on the levee/terrace and the landform was probably initially available for habitation during the Archaic time period and may have been used during all subsequent prehistoric time periods.

Recommendations

Because of the poor surface visibility and the lack of subsurface testing during the current investigation, the new boundaries of site 44LD0365 are considered to be tentative and the site boundaries should be better established using one of two methods. The first method would be a controlled surface collection which should be conducted when the field containing the site is freshly plowed and after a rain event (see Exhibit 20). If this method is chosen, the DHR Guidelines (2003) require that at least two shovel tests be excavated within the site.



Stratigraphic Profile for Auger Hole 15
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 1"

The second method consists of the excavation of shovel test pits at 50 foot (15.2 meter) intervals; additional shovel tests should be excavated at 25 foot (7.6 meter) intervals as necessary around the artifact bearing units in order to better define the site limits.

Mechanized testing will not be required on the second inner levee/terrace as no deeply buried land surfaces that could potentially contain archeological materials are present. The soil horizons that may contain cultural deposits are confined to the first 2-2.5 feet (.61-.76 meters).

Second Inner Flood Chute

Description

Similar to that of the first inner flood chute, the second inner flood chute lies to the rear or north of the second inner levee/terrace (see Exhibit 4). The second flood chute would have been an area of lower swampy ground interspersed with slightly higher landforms; similar in appearance to a braided stream. The second inner flood chute is the location where the Potomac River would have been flowing during the Pleistocene time period. It would have been abutting terraces that were 12-15,000 years old. Plates 28 and 29 present views of the second inner flood chute.

The elevation of the second flood chute remains constant at 215 a.s.l., for approximately 300 feet (91 meters), before it begins to rise into the upland landforms to the north of Hibler Road. Several drainages, fed by the uplands, flow into this flood chute. These drainages run along more resistant portions of the upper slopes and finger down through the flood chute into the drainage running east-west through the flood chute. During the time of the current survey, standing water was present in this flood chute.

The vegetation along the inner flood chute consisted of open fields with the remains of corn stalks, soybeans and weeds. Ground surface visibility was 20% or less and the ground surface was, for the most part, wet or covered by standing water.

As previously discussed, the DHR recorded location of site 44LD0365 is within this flood chute. However, as was indicated earlier in this summary, the recorded location appears to be in error and the correct site location appears to be on the second levee/terrace (see Exhibit 16). Nevertheless, the original site location in the flood chute was walked in 10-15 foot (3-4.6 meter) transects to determine if artifacts were visible on the ground surface.

Soils

The soil stratigraphy in the second inner flood chute comprises of plowed soils to a depth of 1.5 feet (45 centimeters). The reddish color of the soils, and the presence of saprolite, indicates these soils are quite old. Plowing throughout the historic period has caused considerable erosion and the plow is now extending into the underlying, ancient residual soils. The soils are heavily gleyed and contain manganese nodules at 2 feet (.61 meter) and, by 3 feet (.91 meter), the clay was incredibly dense. The density of the clay is a result of the depth of the water table as well as the incorporation of the underlying older soils by plowing. The dense clay caused auger refusal at roughly 3 feet (.91 meter).

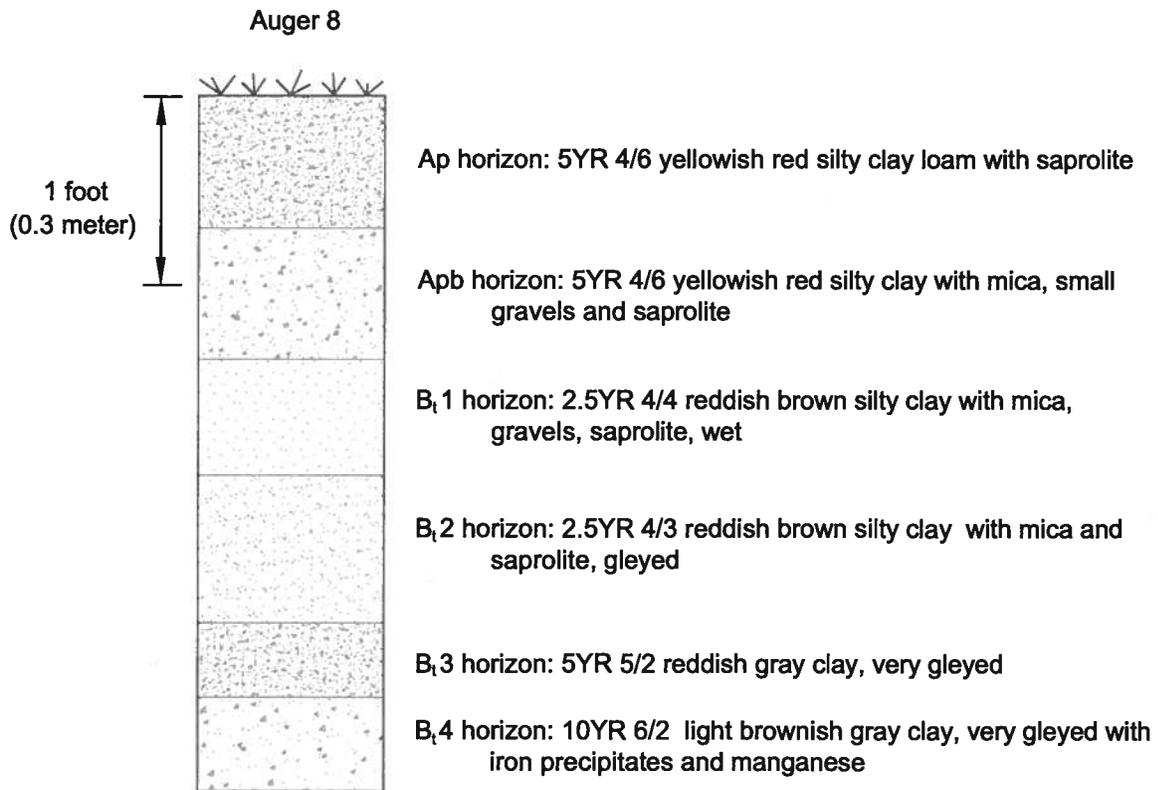
Auger Test 8 is representative of the soils on the western half of the second inner flood chute (see Exhibit 16 and Exhibit 31):

Auger 8

- Ap horizon: 0-8.4 inches (0-21.3 centimeters) below surface – [5YR 4/6]
yellowish red silt clay loam with saprolite
- Apb horizon: 8.4-16.8 inches (21.3-42.7 centimeters) below surface – [5YR 4/6]
yellowish red silt clay with mica, small gravels and saprolite
- Bt1 horizon: 16.8-25.2 inches (42.7-64 centimeters) below surface – [2.5YR 4/4]
reddish brown silt clay with mica, gravels, saprolite, wet
- Bt2 horizon: 25.2-33.6 inches (64-85.3 centimeters) below surface – [2.5YR 4/3]
reddish brown silt clay with mica and saprolite, gleyed
- Bt3 horizon: 33.6-38.4 inches (85.3-97.5 centimeters) below surface – [5YR 5/2]
reddish gray clay, very gleyed
- Bt4 horizon: 38.4-44.4 inches (97.5-112.8 centimeters) below surface – [10YR 6/2]
light brownish gray clay, very gleyed with iron precipitates and manganese

A similar soil profile was seen in Auger Test 16 in the eastern portion of the flood chute (see Exhibit 16). Similar soils and depths were noted. However, the Auger Test 16 profile appeared to be dryer and contain a more friable, dense gleyed clay. Again, the auger refusal in the clay was at 3 feet (.91 meter).

Auger Test 12 was placed in the far eastern portion of the flood chute east of the drainage (see Exhibit 16). The soil profile was similar to Auger Test 8 and 16; however, the profile in Auger Test 12 consisted of slightly deeper deposits. The soils were plowed to 2.5 feet (.76 meter). Below the plowed soils were weakly developed clays and sands that may have been deposited by the springhead of the drainage to the east of Auger Test 12. The deposits may also have derived from slope wash eroding or washing down from the higher elevations to the north and depositing in this location. A heavily gleyed clay was encountered at 4-5 feet (1.2-1.5 meters), slightly deeper than in Auger Tests 8 and 16.



Stratigraphic Profile for Auger Hole 8
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 1"

The profile from Auger Test 12 illustrates the stratigraphy on the far eastern portion of the second inner flood chute (Exhibit 32):

Auger 12

Ap horizon: 0-12 inches (0-30.5 centimeters) below surface – [7.5YR 4/4] brown silt loam

Apb1 horizon: 12-22.8 inches (30.5-57.9 centimeters) below surface – [7.5YR 4/4] brown silt loam with charcoal

Apb2 horizon: 22.8-27.6 inches (57.9-70.1 centimeters) below surface – [7.5YR 4/3] brown silt clay loam with an increase in charcoal

Bw horizon: 27.6-33.6 inches (70.1-85.3 centimeters) below surface – [7.5YR 5/8] strong brown clay loam, gleyed

C horizon: 33.6-44.4 inches (85.3-112.8 centimeters) below surface – [7.5YR 5/6] strong brown wet loamy sand, gleyed with manganese

B horizon: 44.4-50.4 inches (112.8-128 centimeters) below surface – [7.5YR 5/8] strong brown clay, heavily gleyed with manganese and saprolite

B2t horizon: 50.4-58.8 inches (128-149.3 centimeters) below surface – [7.5YR 5/8] strong brown mottled with [7.5YR 6/1] gray clay with increase in gleying, manganese and saprolite

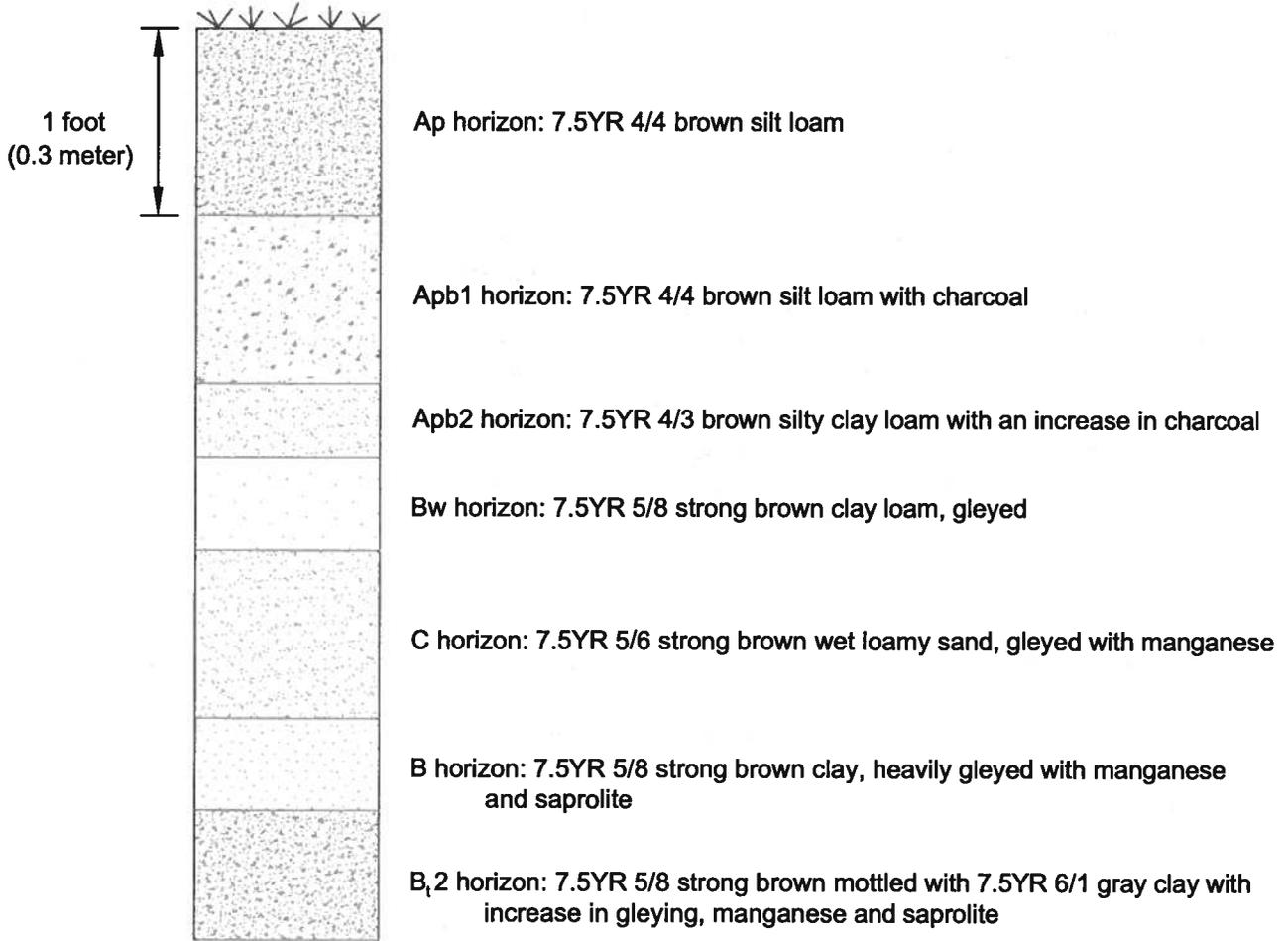
Archeological Site Probability

This micro-topographic zone is not expected to yield archeological resources (see Exhibit 19). The second inner flood chute has a low probability of containing archeological deposits as the high velocity of water movement through this area would have removed any land surfaces that may have been present in this location. It is also possible any evidence of the sites have been plowed out and eroded away. The soil profile in both Auger Tests 8 and 16 indicate the older underlying deposits are being plowed up. These older deposits predate human occupation of the area.

Recommendations

Because the second inner flood chute is not expected to yield cultural materials, no additional archeological investigation is recommended in this location.

Auger 12



Stratigraphic Profile for Auger Hole 12
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 1"

Slope Leading to the Pleistocene Terraces

Description

The slopes rising out of the second inner flood chute mark the bank of the channel of the Potomac River 15,000 years ago during the Pleistocene time period (see Exhibit 4). The terraces which lie above the slopes, outside of the project area, date to this period as well. A Phase I investigation of the terraces was conducted previously (Breckenridge 2006).

The vegetation along the slopes consisted of open fields with the remains of corn stalks, soybeans and weeds. Ground surface visibility was 20% or less and these areas were walked in 10-15 foot (3-4.6 meter) transects looking for surface artifacts.

Soils

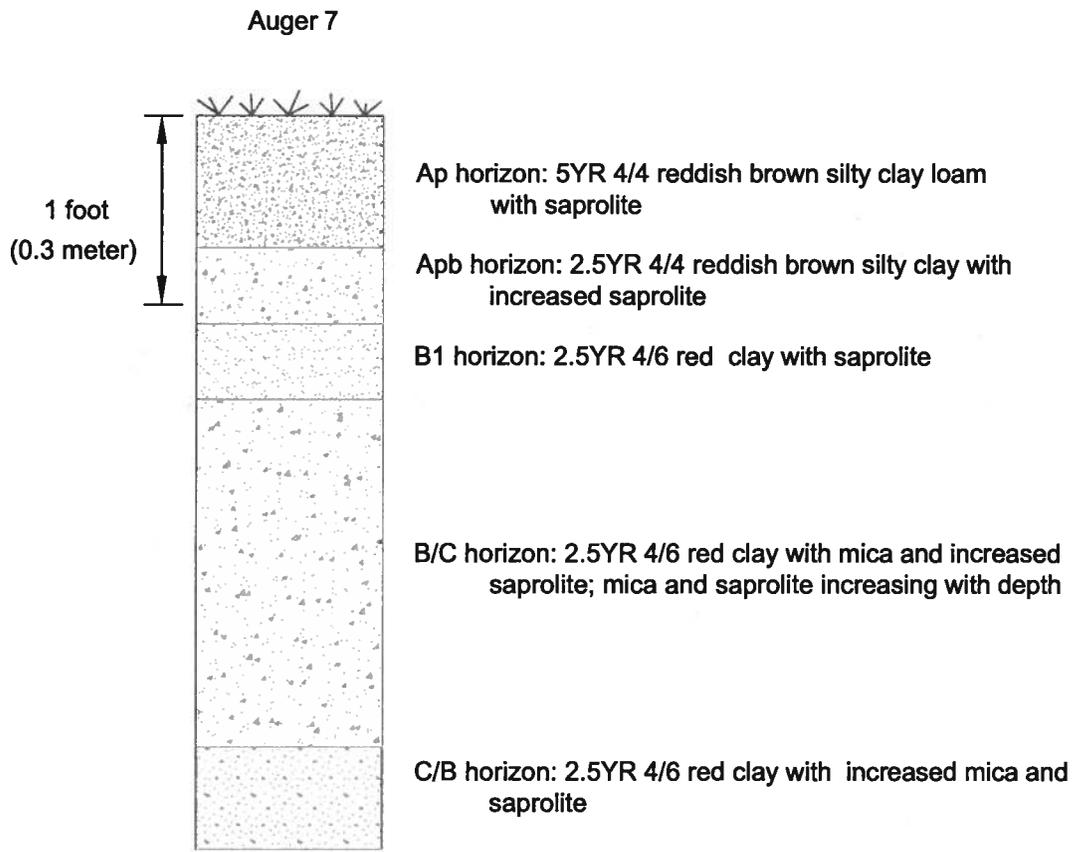
The soils on the slopes rising to the Pleistocene terraces are plowed to a depth of 1.3 feet (.4 meter). The reddish color of the soils and the presence of saprolite indicate that these soils are very old. Plowing has caused considerable erosion over the years; currently, because of this erosion, the underlying residual soils are being incorporated into the plow zone. The soils directly under the plow zone consist of decomposing bedrock which is turning into soil. The soil has a powdery feel to it because of the decomposing mica in the saprolite. The testing was halted because of auger refusal at the level of the decomposing bedrock at 4.0 feet (1.2 meters). Auger Test 7 illustrates the soils within the micro-topographic zone (see Exhibit 16 and Exhibit 33).

Archeological Site Probability

This micro-topographic zone is not expected to yield archeological resources (see Exhibit 19). The soil profile in Auger Test 7 indicates the older underlying bedrock deposits are being plowed up. These older deposits predate human occupation of the area.

Recommendations

Because the slopes leading to the Pleistocene terraces are not expected to yield cultural materials, no additional archeological investigation is recommended.



Stratigraphic Profile for Auger Hole 7
White's Ford Park Phase IA - WSSI #21372.03
Scale: 1" = 1'

SUMMARY AND CONCLUSIONS

A Phase IA pedestrian reconnaissance, with supplemental auger testing, was conducted of the proposed ± 131 acre White's Ford Park, located along the Potomac River in Loudoun County, Virginia.

Two previously recorded archeological sites, 44LD0309 and 44LD0365, are present within the project area and one new archeological site, 44LDA, was found during the current investigation.

Site 44LD0309 was recorded in 1980 by William Rust of the Loudoun Archeology Center. The site was defined as a small lithic scatter dating from the Middle and Late Woodland time periods. Although a pedestrian reconnaissance was conducted of the site area during the current investigation, surface visibility was poor and no cultural materials were observed. It is recommended that site 44LD0309 should be subject to a Phase I investigation consisting of either a controlled surface collection or systematic shovel testing following the DHR Guidelines. No sub-plow zone surfaces were observed in the shovel tests; because of this, no backhoe testing is recommended for this location.

Site 44LDA is interpreted as a Late Woodland village. Because of the site type, it is possible that high numbers of features, such as storage or refuse pits, hearths and, possibly, human burials, are present. Early Archaic and Middle Woodland artifacts were also recovered from the site but features associated with these periods are felt to be less likely. The soils within the site contained a buried ground surface with fire cracked rock between 4 and 5 feet (121-152 cm) below the ground surface. Fire cracked rock is frequently an indicator of cultural deposits.

Site 44LDA should be subject to a Phase I investigation to better define the site boundaries. The Phase I could be conducted in two ways: either by a controlled surface collection or systematic shovel testing following the DHR Guidelines. Once the boundaries of the site are better established, our recommendation would be to avoid impacts to this portion of the project area because of the potential significance of the site and the likelihood of features, including human burials.

If impacts to the site can not be avoided and disturbance is planned below 4 feet (121 cm) where a buried ground surface was identified during the auger testing, backhoe trenches should be excavated to sterile soil using a backhoe with a smooth bladed bucket.

The investigation was designed to assess the probability that archeological sites will be present within the project area and to provide preliminary information regarding the archeological sensitivity of specific locations within the proposed park site. It is hoped that the assessments and probability information contained within this report should be utilized during the park planning process in an attempt to avoid or limit impacts within the most archeological sensitive areas.

Site 44LD0365 was recorded in 1985 by Howard MacCord, Sr. who described the site as a scattering of Archaic period artifacts and debitage. However, the recorded location of the site with the DHR was not felt to be very likely location for archeological deposits and the recorded location did not match the description on the site form. During the current investigation, artifacts were observed on the ground surface of an adjacent land form that more closely matched the site location description. The DHR site form will be updated to include this information.

Phase I testing is recommended for this site. The Phase I investigation could consist of either a controlled surface collection or systematic shovel testing following the DHR Guidelines. Deep testing using mechanized equipment is not required for this site as no deeply buried land surfaces are present.

In addition to the sites described above, a number of locations within the proposed park site are considered to have a moderate or high probability of yielding cultural deposits. A Phase I archeological investigation is recommended for these locations, using the specific types of testing detailed in the body of this report.

The assessments and recommendations provided within this report are considered to be preliminary and are based solely upon a surface reconnaissance and limited soil testing. However, they can provide guidance for those locations that should be systematically tested during the Phase I investigation. However, because archeological work, particularly that using mechanized equipment, is inherently destructive, in our opinion, deep testing during the Phase I investigation should be limited to those locations and depths that will be impacted by the planned park facilities.

REFERENCES CITED

Bailey, C.M.

- 1999 Physiographic Map of Virginia, The Geology of Virginia. Chad Roberts and C.M. Bailey, College of William and Mary Department of Geology.
http://www.wm.edu/geology/virginia/phys_regions.html (29 October 2004)

Breckenridge, Curt

- 2006 Phase I Archeological Investigations of the Circa 150 Acre 43646 Hibler Road Property, Loudoun County, Virginia. Report prepared by Thunderbird Archeology, Gainesville, Virginia for QDP, LLC, Oak Hill, Virginia.

Fenneman, Nevin M.

- 1938 Physiography of Eastern United States. McGraw-Hill Book Company, Inc. New York and London.

Scott, Lieutenant Colonel Robert N.

- 1881 The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies, Volume 5. Government Printing Office, Washington, D.C.

PLATES



PLATE 1
General Vegetation, Facing West/Northwest



PLATE 2
General Vegetation, Facing West/Northwest



PLATE 3
Outer Levee, West Half, Facing East



PLATE 4
Outer Levee, West Half, Facing South



PLATE 5
Outer Levee, East Half, Facing South/Southeast



PLATE 6
Outer Levee, East Half, Facing Northeast

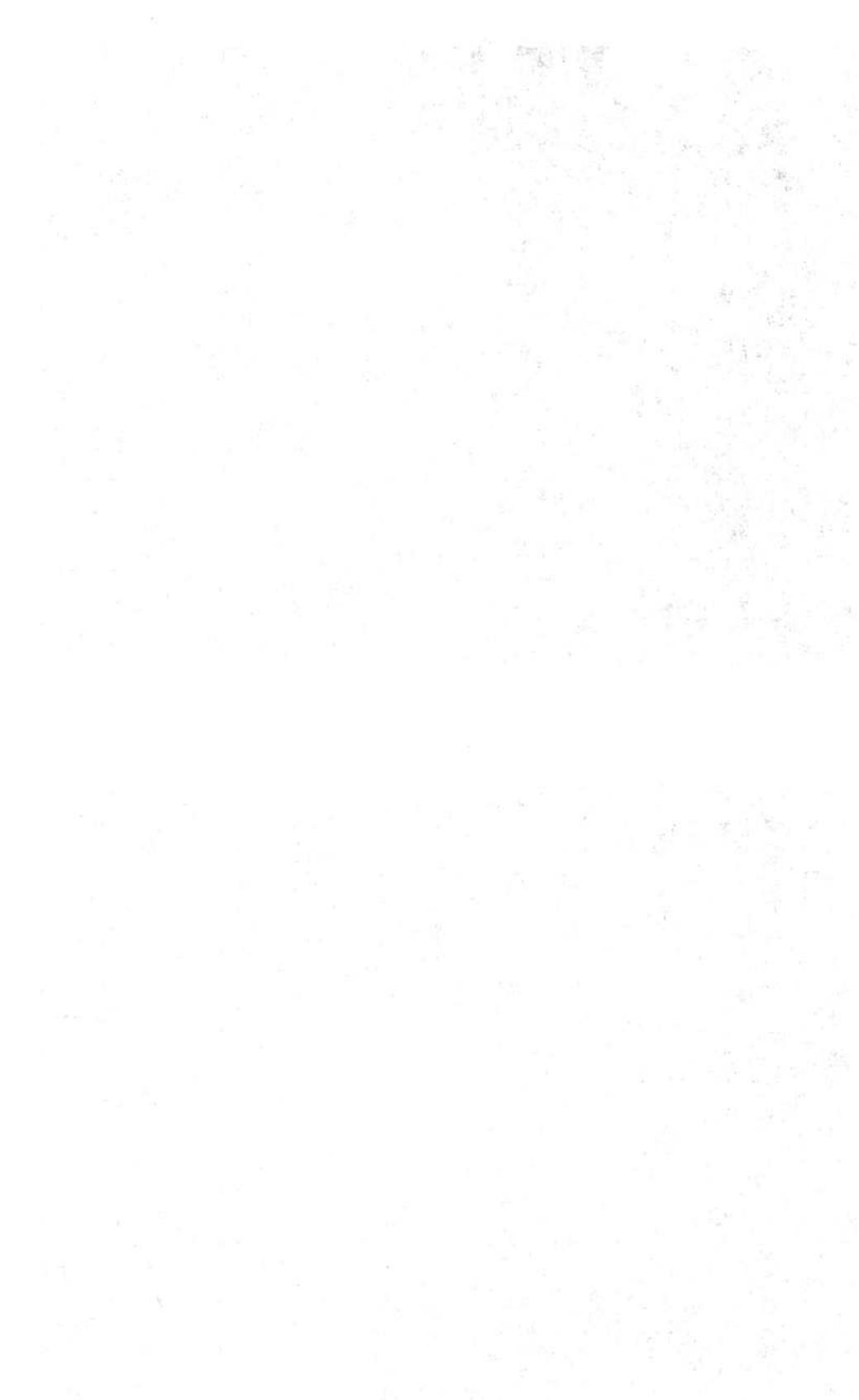




PLATE 7
Outer Levee, East Half, Facing North



PLATE 8
Outer Levee, East Half, Facing West



PLATE 9
Outer Flood Chute, West Side, Facing North



PLATE 10
Outer Flood Chute, West Side, Facing West



PLATE 11
Outer Flood Chute, East Side, Near Auger 13, Facing Southwest



PLATE 12
Far East Side, Near Auger 9, Facing North



PLATE 13
First Inner Levee/Terrace, Site 44LDA, Facing North



PLATE 14
First Inner Levee/Terrace, Site 44LDA, Facing East



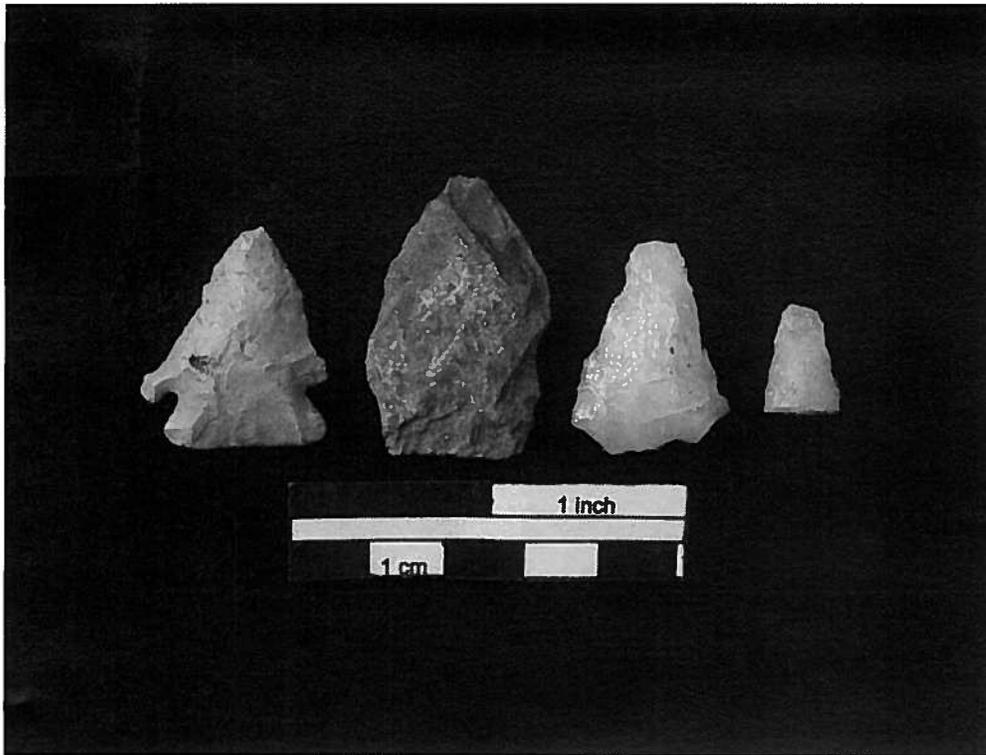


PLATE 15

Lithic Artifacts Recovered from Surface Collections at 44LDA: From left to right: Palmer Type Projectile Point, Unfinished Fox Creek/Selby Bay Projectile Point, Quartz Triangular Preform, and Quartz Projectile Point Fragment

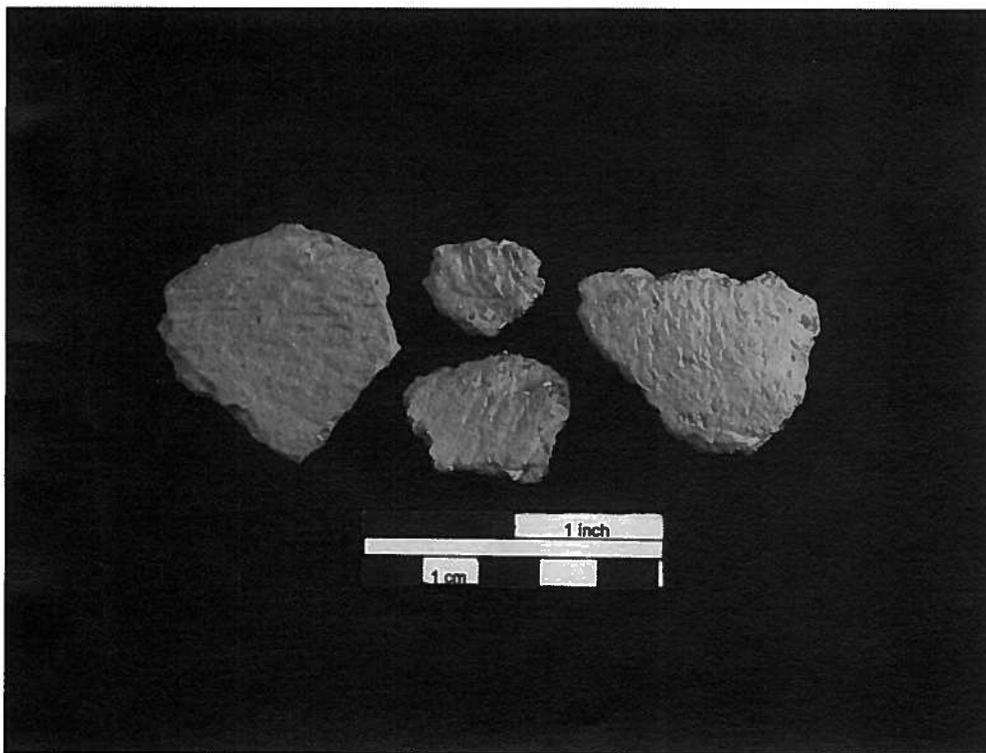


PLATE 16

Shepard Ceramics Recovered from Surface Collection at Site 44LDA



PLATE 17
Potomac Creek Ceramics Recovered from Site 44LDA



PLATE 18
First Inner Levee/Terrace, Site 44LD0309, Facing East





PLATE 19
First Inner Levee/Terrace, Site 44LD0309, Facing Northeast



PLATE 20
First Inner Flood Chute, West Half, Facing Northwest



PLATE 21
First Inner Flood Chute, East Half, Facing North/Northwest



PLATE 22
First Inner Flood Chute, East Half, Facing North/Northwest



PLATE 23
Drainage along North Portion of First Inner Flood Chute, Facing West



PLATE 24
Second Inner Levee/Terrace, West Half, Site 44LD0365, Facing East/Northeast



PLATE 25
Second Inner Levee/Terrace, East Half, Site 44LD0365, Facing West



PLATE 26
Second Inner Levee/Terrace, East Half, Facing Southeast



PLATE 27

Second Inner Flood Chute, DHR Recorded Location of Site 44LD0365, Facing Northeast



PLATE 28

Second Inner Flood Chute, Eastern Portion, Facing Northwest



PLATE 29

Second Inner Flood Chute, Extreme Eastern Portion, Facing North/Northwest



APPENDIX I
Artifact Inventory

**WHITE'S FORD PARK PHASE IA
ARTIFACT INVENTORY**

SITE 44LDA

Auger Hole A-1, 2.6 feet - 3.2 feet

Prehistoric

- 2 sandstone fire cracked rock (FCR)

SC A-01

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 quartz biface thinning flake, whole, 20.2 x 13.1 mm
- 1 quartz primary reduction flake, medial
- 2 quartz primary reduction flakes, proximal

SC A-02

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 grey chert projectile point, Palmer type, corner notched, ground base, heavily curated, Early Archaic (7700 B.C.-6900 B.C.), 27.9 mm x 22.8 mm
- 1 jasper biface thinning flake, proximal
- 1 quartz primary reduction flake, whole, 19.2 mm x 21.1 mm

SC A-03

Prehistoric

- 2 body sherds (mend), crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 quartz biface early stage

SC A-04

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 quartz biface fragment, middle-late stage

SC A-05

Prehistoric

- 1 body sherd, crushed quartz tempered, indeterminate surface treatment, Late Woodland (A.D. 900 - A.D. 1450), Shepard

SC A-06

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard

SC A-07

Prehistoric

- 1 quartz biface fragment, late stage, unfinished Triangular type projectile point

SC A-08

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard

SC A-09

Prehistoric

- 2 body sherds, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 quartz biface fragment

SC A-10

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard

SC A-11

Prehistoric

- 1 rhyolite projectile point fragment, unfinished Fox Creek/Selby Bay Lanceolate type, Middle Woodland (A.D. 300 A.D. - A.D. 600)

SC A-12

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-wrapped dowel, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 body sherd, crushed quartz tempered, smooth, Late Woodland (A.D. 900 - A.D. 1450), Shepard

SC A-13

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard

SC A-14

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 quartzite decortication flake, whole, 32.0 mm x 58.5 mm

SC A-15

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard

SC A-16

Ceramics

- 1 buff bodied coarse stoneware sherd, dark brown glazed interior, Bristol slipped exterior (late 19th/early 20th century)

SC A-17

Prehistoric

- 1 quartz biface thinning flake, whole, 9.0 mm x 13.8 mm
- 1 rim sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 1300 - A.D. 1700), Potomac Creek

SC A-18

Prehistoric

- 1 quartz biface late stage

SC A-19

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard

SC A-20

Prehistoric

- 1 rim sherd, crushed quartz tempered, cord-wrapped dowel on rim, Late Woodland (A.D. 1300 - A.D. 1700), Potomac Creek

SC A-21

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 body sherd, crushed quartz tempered, fabric-like appearance, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 quartz biface thinning flake, proximal
- 1 spall, crushed quartz tempered, indeterminate surface treatment, Late Woodland (A.D. 900 - A.D. 1450), Shepard

SC A-22

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 body sherd, crushed quartz tempered, smooth, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 quartz biface thinning flake, proximal
- 1 quartz biface thinning flake, whole, 12.6 mm x 8.2 mm
- 1 quartz primary reduction flake, medial
- 1 quartzite fire cracked rock (FCR)

SC A-23

Prehistoric

- 1 body sherd, crushed quartz tempered, cord-marked, Late Woodland (A.D. 900 - A.D. 1450), Shepard
- 1 quartz point tip fragment