Request for Proposals
Phase IB Archeological Survey for
Cranberry Lake Preserve
Town of North Castle, New York

Requested by
Westchester County Department of Planning

Contact Person
Suzette B. Lopane, RLA
Landscape Architect
148 Martine Avenue room 414
White Plains, New York 10601
(914) 995-2443

Investigation Description
The County of Westchester is seeking a qualified archeologist to perform a Phase IB Archeological Investigation for a nature preserve located at 1609 Old Orchard Street in the Town of North Castle, in the portion of which is commonly known as North White Plains. The County is proposing to replace the existing nature center building and utility infrastructure. The attached Project Limit Maps ‘A’ and ‘B’ show the Limits of Disturbance of the work. The proposed site improvements will include a new septic system, about 900’ north of the proposed building. This will be connected to the nature center by a force main which will be located along the side of the road and then through the woods. Closer to the building, the stormwater from the roof of the new building will be diverted to a series of rain garden and forebay ponds, designed to protect the existing vernal pond areas from sudden surges in water level. New paths will connect the proposed nature center to the existing pavement of the asphalt driveway and parking spaces, which will remain.

A Phase IA Report for Archeological Potential and Sensitivity Assessment was completed by Hartgen Archeological Associates in July 2006, and is enclosed herein (See Attachment ‘B’). The report recommends that Phase IB subsurface archeological testing be conducted; see the recommendations in the report for specifics.

Project Location
The project is located in central Westchester County near the Kensico Dam in the Town of North Castle in the area commonly known as North White Plains. Specifically, the site is known as Cranberry Preserve, 1609 Old Orchard Street, off Route 22.
**Consultant Qualifications**
The consultant who will be chosen to perform the required services must be an archeologist with demonstrated experience in conducting cultural resource investigations and preparing field investigation reports for submission to the New York State OPRHP. The primary investigator shall meet and/or exceed the Secretary of the Interior Professional Qualifications Standards listed in the Code of Federal Regulations (36 CFR Park 61).

**Deadline for Submission of Proposal**
Qualified archeologists must prepare a written proposal to conduct the requested site investigation and submit to the Westchester County Department of Planning no later than Thursday, August 31, 2017 at 5pm.

**Site Inspection**
The site is located entirely within the public park which is open from dawn to dusk and is fully accessible for site inspection.

**Need for Investigation**
A determination with regard to the project’s impact on historic and archeological resources from the New York State Historic Preservation Office is required. The purpose of this Phase IB survey is to determine the presence or absence of sites in specific areas that will be impacted by ground disturbing activities. The survey must identify and assess archeologically sensitive areas,
cultural/sacred areas and any structures that may be affected by the proposed development. The findings of the 1B study report are to be submitted to the New York State OPRHP for their review and determination of areas with the project site, if any, that would require a Phase 2 cultural resource investigation.

Investigation Methodology
All work to be performed under this contract must adhere to New York Archaeological Council (NYAC), NYSM and NYS OPRHP requirements. Safety requirements specified by the Occupational Safety and Health Administration (OSHA) shall be followed as well as the rules regarding New York Dig Safe Notifications.

Investigation Timeframe
The work to be performed shall commence at the earliest possible date in consideration of field conditions and contract approval by Westchester County, and shall be completed no later than sixty (60) days following the notice to proceed with work except as extended by Westchester County in writing.

Attachments
- Project Limits Map
- Phase IA Archeological Investigation Report

Proposal Submission
Investigation proposals must:
- Describe the research, field, laboratory, and analysis methods that are appropriate to the applicable Standards for conducting the investigation
- List locations where the investigation team has participated in surveys of a similar scope
- Include a schedule of dates for conducting field surveys, preparing field reports, and submitting reports to the New York State OPRHP
- Include a completed fee schedule form indicating hourly or daily rates per task, transportation costs, and costs for photocopying, photography and miscellaneous supplies.

All proposals shall be e-mailed or hand-delivered to the following address:

Suzette B. Lopane, R.L.A.
Landscape Architect
Westchester County Department of Planning
148 Martine Ave., Room 414
White Plains, NY 10601
sbl1@westchestergov.com

If you have any questions and need further information or clarification, please contact Suzette Lopane at Westchester County Planning Department (914) 995-2443.
Matchline

Future Septic Expansion Field, 3' deep.

PROJECT LIMIT LINE

AREAS OF POTENTIAL EFFECT

- New Utility Trench, 3' deep
- New Utility Trench, 4' deep
- Proposed Paths, 18" excavation
- Proposed Stone and Brick Pavement, 15" excavation
PHASE IA REPORT FOR ARCHEOLOGICAL POTENTIAL
AND
SENSITIVITY ASSESSMENT

CRANBERRY LAKE PRESERVE
NORTH CASTLE AND HARRISON
WESTCHESTER COUNTY, NEW YORK

HAA 3469

Submitted to:

WESTCHESTER COUNTY DEPARTMENT OF PARKS, RECREATION
AND CONSERVATION
25 MOORE AVENUE
MOUNT KISCO, NEW YORK 10549

Prepared by:

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AN ACRA MEMBER
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JULY 2006
MANAGEMENT SUMMARY

Phase of Survey: IA

Location Information
  Location: One Old Orchard Street off Route 22, North White Plains; east of Mount Kisco Road, on North Castle Peninsula
  Minor Civil Division: North Castle, Harrison
  County: Westchester

Survey Area
  Length: 2,000 feet (609 m)
  Width: 5,000 feet (1,524 m)
  Number of Acres Surveyed: 165 acres (66.78 ha)

USGS 7.5 Minute Quadrangle Map: White Plains and Glenville

Literature Review
  Sites within One-Quarter Mile: 0
  Surveys within One-Quarter Mile: 0
  National Register properties within One-Quarter Mile: 1
  Map-Documented Structures in Study Area: 1 (and 1 observed historic resource)

Archeological Sensitivity Assessment
  Precontact Resources: high
  Historic Resources: moderate

Report Authors: John Wilkinson and Shannon Wright

Date of Report: July 2006
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1. Northwest view of the entrance to Cranberry Lake Preserve along Old Orchard Street. There is an overgrown stone wall in this area.
2. North view of a stone and concrete bridge or culvert over a small brook near the park entrance.
3. Southeast view of a stone and mortar foundation and an outbuilding modified to a garage at the approximate location of MDS 1. This is adjacent to the paved access road and trail.
4. Northeast view of the sloping topography and light tree cover in the northern portion of the study area.
5. Northwest view of a small rock overhang near the trail in the northern portion of the study area. There may be larger overhangs useful as rockshelters in other locations.
6. Northwest view of a rock outcrop off the trail. The upthrusts and overhangs have a general slant to the northeast.
7. Northeast view of a thin vein of quartz or quartzite in a rock outcrop. Most of the quartzite appears to be of relatively low quality, unsuitable for use in precontact tool manufacture.
8. Northeast view of the moderate slope along a terrace in the central portion of the study area. The level terraces between waterways would have been useful for precontact camp sites.
9. Southwest view of a small wet area along the trail. The environments of the study area would have been conducive to hunting several types of game.
10. Southeast view of the lake in the center of the study area. This habitat would have been useful for fishing and hunting waterfowl in the precontact periods.
11. Northeast view of the marshland environment along the lake.
12. Southwest view of a level terrace in the southwestern portion of the study area. Level terraces near fresh water sources have an elevated potential for the presence of precontact sites.
13. Southwest view of a second level terrace in the southwestern portion of the study area. While there is less running water in this area, there is the potential for smaller, isolated precontact sites.
14. Northeast view of a high, relatively intact stone wall along the western boundary of the study area.
15. Northeast view of the entrance to a subterranean structure along the lake. Its date of construction is not yet known. Some local residents referred to it as "the bunker."
16. Southwest view of a second stone feature and stone wall along the trail and the lake.
17. Southwest view of the quarry in the southeastern portion of the study area. This is the area of greatest previous disturbance. No chert veins were visible in the quarried rocks.
18. Southwest view of a large tree and a stone-lined shrub at the paved entrance to the quarry. No other structural remains were visible on the surface.
19. Southeast view of a stone wall along the trail in the southeastern portion of the study area.
20. Northwest view of a line of tall trees and modified residences along Old Orchard Street.

REPORT FOR ARCHEOLOGICAL POTENTIAL

INTRODUCTION

Hartgen Archeological Associates, Inc. (HAA, Inc.) was retained by the Westchester County Department of Parks, Recreation and Conservation (Parks Department) to conduct a Phase IA literature review and archeological sensitivity assessment for Cranberry Lake Preserve in North Castle and Harrison, Westchester County, New York. The study is one of twenty-six studies being undertaken for the Parks Department of twenty-four county-owned parks and two county-owned golf courses located throughout Westchester County. These studies are general in nature and do not address any specific development or construction plans, therefore, there are no specific areas of potential effect (APE).

The Phase IA study was conducted in accordance with the New York Archaeological Council’s Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State (NYAC 1994) and the New York State Office of Parks, Recreation and Historic Preservation’s (OPRHP) Phase I Archaeological Report Format Requirements (OPRHP 2005). The goal of the Phase IA archeological study is to provide information pertaining to known and potential cultural resources within the study area. The Phase IA archeological study included a review of recorded precontact and historic sites within the study area; recorded historic structures located within the study area; environmental conditions within the study area; and a site visit to document general existing conditions. Local historians or historical societies were contacted by mail for information pertaining to the study area. Together, these tasks assisted in assessing the historic landscape and archeological sensitivity of the area.

The Principal Investigator is Karen S. Hartgen (RPA). The project manager is Lori Blair. The report authors are John Wilkinson and Shannon Wright. Historical map and site file research were completed by Colleen Keopke and Erin Klinge. Report maps were prepared by Christine Smith.

Cranberry Lake Preserve is off Route 22 in North White Plains. It is 165 acres (66.78 ha) of “unspoiled forest”, and includes a 10-acre (4.05 ha) pond. It is a hilly wooded site with bedrock outcroppings. Westchester County acquired these properties in 1967 (Westchester County Park files).

STUDY INFORMATION

Location

This park is located in the central portion of Westchester County, about six miles (9.6 km) east of the Hudson River, and two miles (3.2 km) west of Connecticut. It is bounded by Old Orchard Street on the north, Route 22 on the west, and on the east by Park Road, in the towns of North Castle and Harrison, Westchester County, New York (Map 1).

Description of Study Area

Cranberry Lake Preserve is hilly and wooded with natural rock outcroppings. It contains Cranberry Lake, South Pond, the currently-closed Birchwood Swim Club, tennis courts, a granite quarry used during the construction of Kensico Dam, and two quarry ponds (Westchester County Park files).

ENVIRONMENTAL INFORMATION

Topography and Bedrock Geology

The bedrock in the study area is from the Upper Proterozoic, Metamorphic rocks of sedimentary and volcanic origin, consisting of Fordham gneiss (Fisher et al. 1970). There are bedrock outcrops, predominantly of granite and quartzite. Although quartzite is one material quarried by Native American groups for stone tool production, the quality of the quartz and quartzite in the study area was likely insufficient for practical use. The granite present in the project area was known to have been quarryied in the historic period.
The elevation of this park ranges from 450 to 520 feet (137.2 to 158.5 m) above mean sea level (USGS 1971; USGS 1994). The topography is predominantly rolling with some steep areas rising to terraces, and flat wetland areas in the northeast and eastern portions of the project area. Level areas in the vicinity of wetlands are sensitive to precontact occupation, while the severely sloping portions are not considered sensitive.

Soils and Drainage

Soils found in the Cranberry Lake Preserve study area are predominantly in Chatfield-Hollis-Rock outcrop and Charlton-Chatfield complex soils. Most of the soils in the study area are well drained, including Charlton-Chatfield, Chatfield-Hollis-Rock, and Hollis-Rock complexes. Poorly drained soils in the study area include Carlisle muck, Leicester loam, and Sun loam (USDA 1994; USDA 2004) (Map 3).

Table 1. Soils in Study Area.

<table>
<thead>
<tr>
<th>Name and symbol</th>
<th>Soil Horizon Depth cm (in)</th>
<th>Color</th>
<th>Texture, Inclusion</th>
<th>Slope</th>
<th>Drainage</th>
<th>Landform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlisle muck (Ce)</td>
<td>A 0-10 cm (0-4 in)</td>
<td>Dk RBrn</td>
<td>Muck</td>
<td>0-2%</td>
<td>Very poorly drained</td>
<td>Broad, basinlike or other depressional areas between hills and on outwash or till plains</td>
</tr>
<tr>
<td>Charlton-Chatfield complex, rolling, very rocky (CrC)</td>
<td>B 10-132 cm (4-52 in)</td>
<td>Black</td>
<td>Muck</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C 132-152 cm (52-60 in)</td>
<td>Dk Red Brn</td>
<td>Muck</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Varies: A 0-5 cm (0-2 in)</td>
<td>V Dk GBrn</td>
<td>Lo</td>
<td>2-15%</td>
<td>Well drained and somewhat excessively drained</td>
<td>Hilltops and hillsides that are underlain by highly folded bedrock</td>
</tr>
<tr>
<td></td>
<td>B 1-20 cm (2-8 in)</td>
<td>Dk Brn</td>
<td>Lo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B2 20-61 cm (8-24 in)</td>
<td>Dk YBrn</td>
<td>Sa lo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C 61-152 cm (24-60 in)</td>
<td>Dk GBrn</td>
<td>Sa lo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chatfield-Charlton complex, hilly, very rocky (CsD)</td>
<td>Varies: A 0-5 cm (0-2 in)</td>
<td>V Dk GBrn</td>
<td>Lo</td>
<td>15-35%</td>
<td>Well drained and somewhat excessively drained</td>
<td>Tops and sides of hills that are underlain by highly folded bedrock</td>
</tr>
<tr>
<td></td>
<td>B1 5-18 cm (2-7 in)</td>
<td>Dk Brn</td>
<td>Lo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B2 18-61 cm (7-24 in)</td>
<td>Brn</td>
<td>Si lo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bedrock—granitic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chatfield-Hollis-Rock outcrop (CrC)</td>
<td>Varied: A 0-5 cm (0-2 in)</td>
<td>V Dk GBrn</td>
<td>Lo</td>
<td>3-15%</td>
<td>Mixed: Well drained and somewhat excessively drained</td>
<td>Hilltops and narrow ridges in bedrock controlled landscape</td>
</tr>
<tr>
<td></td>
<td>B 5-18 cm (2-7 in)</td>
<td>Dk Brn</td>
<td>Lo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C 18-61 cm (7-24 in)</td>
<td>Brn</td>
<td>Si lo</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name and symbol</td>
<td>Soil Horizon Depth cm (in)</td>
<td>Color</td>
<td>Texture, Inclusion</td>
<td>Slope</td>
<td>Drainage</td>
<td>Landform</td>
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</tr>
<tr>
<td>Chatfield-Hollis-Rock outcrop complex, hilly (Cud)</td>
<td>Varies: A1 0-5 cm (0-2 in) A2 5-18 cm (2-7 in) B 18-61 cm (7-24 in) bedrock</td>
<td>V Dk GBrn</td>
<td>Lo</td>
<td>15-35%</td>
<td>Well drained and somewhat excessively drained</td>
<td>Hillsides in bedrock-controlled areas</td>
</tr>
<tr>
<td>Hollis-Rock outcrop complex, very steep (HrF)</td>
<td>A 0-3 cm (0-1 in) B 3-41 cm (1-16 in) Bedrock--granite</td>
<td>Dk Brn</td>
<td>Lo</td>
<td>35-60%</td>
<td>Well drained and somewhat excessively drained</td>
<td>Hillsides in bedrock-controlled landscapes</td>
</tr>
<tr>
<td>Leicester loam (LcB)</td>
<td>A 0-20 cm (0-8 in) B1 20-46 cm (8-18 in) B2 46-66 cm (18-26 in) C 66-152 cm (26-60 in)</td>
<td>V Dk GBrn</td>
<td>Lo</td>
<td>3-8%</td>
<td>Somewhat poorly drained and poorly drained</td>
<td>Lower parts of hillsides and along small drainageways in bedrock controlled areas</td>
</tr>
<tr>
<td>Sun loam (Sh)</td>
<td>A 0-23 cm (0-9 in) B1 23-48 cm (0-19 in) B2 48-69 cm (19-27 in) C1 69-102 cm (27-40 in) C2 102-152 cm (40-61 in)</td>
<td>V Dk GBrn</td>
<td>Lo</td>
<td>0-3%</td>
<td>Poorly drained or very poorly drained</td>
<td>Small depressions and along drainageways on till plains</td>
</tr>
<tr>
<td>Sun loam, extremely stony (Sm)</td>
<td>A 0-23 cm (0-9 in) B1 23-48 cm (0-19 in) B2 48-69 cm (19-27 in) C1 69-102 cm (27-40 in) C2 102-152 cm (40-61 in)</td>
<td>V Dk GBrn</td>
<td>Lo</td>
<td>0-3%</td>
<td>Poorly drained or very poorly drained</td>
<td>In small depressions and along drainageways on till plains</td>
</tr>
<tr>
<td>Udorthents, smoothed (Ub)</td>
<td>Varies</td>
<td>Varies</td>
<td>3-15%</td>
<td>Excessively drained to moderately well drained</td>
<td>Altered by cutting and filling</td>
<td></td>
</tr>
</tbody>
</table>

Drainages in the study area include quarry lakes (man-made) and Cranberry Lake (natural). The study area is near Bronx River, Kensico Reservoir, Kensico River, and Rye Lake. Several small drainages in the study area connect into these larger waterways (USGS 1971; USGS 1994). Most precontact and early historic settlements were in close proximity to waterways; the known connection of Cranberry Lake to early historic resource procurement suggests sensitivity to early occupations in the study area.
Vegetation and Forest Zone

Plan species that are indigenous to the area or those that were introduced after colonization were often a valuable resource to the inhabitants of a particular region. Several forest types have been proposed that are likely to have existed in New York before land modifications, deforestation, and the introduction of foreign species (Küchler 1964). The forest type within which the study area is located is therefore described through the concept of “potential natural vegetation”, which infers its past forest environment, not necessarily that which is current.

Westchester County is located in the Northern Hardwood zone of natural vegetation (Küchler 1964). The Northern Hardwood zone is found in eastern and central New York, north central Pennsylvania, and extends westward to Michigan and Wisconsin. Smaller areas are found in the southern Appalachian Mountains.

This potential forest type is characterized by tall, broad-leaved deciduous trees with an admixture of needle-leaf evergreens. Sugar maple (Acer saccharum), Yellow birch (Betula allegheniensis), Beech (Fagus grandifolia), and Hemlock (Tsuga canadensis) are the major taxa. Other components include Striped Maple (Acer pensylvanicum), Red Maple (A. rubrum), Mountain Maple (A. spicatum), White Ash (Fraxinus Americana), Mountain Laurel (Kalmia latifolia), White Pine (Pinus strobus), Black Cherry (Prunus serotina), Canada yew (Taxus Canadensis), American Linden (Tilia Americana), and American Elm (Ulmus Americana). The Northern Hardwood zone is nearly as productive as the neighboring Appalachian Oak Forests. Mast seeds from deciduous trees in both forest types provided a food source for game pursued by Native Americans, and the seeds themselves are a source of starch for winter provisioning.

The current vegetation in Cranberry Lake Preserve is secondary forest, of predominantly hardwoods with occasional landscaped evergreens.

Man-Made Features and Alterations

Cranberry Lake Preserve contains a closed swim club, tennis courts, a granite quarry used during the construction of Kensico Dam, and two quarry ponds. Numerous trails and historic stone walls are also in the study area.

DOCUMENTARY RESEARCH

Office of Parks, Recreation and Historic Preservation (OPRHP) and New York State Museum (NYSM)

Archological Sites

An examination of the site files of the NYSM and the OPRHP identified no documented archeological sites within one-quarter mile (402 m) of the Cranberry Lake Preserve.

State and National Registers

The OPRHP computer inventory was examined for properties listed on and determined eligible for listing on the State and National Registers of Historic Places. One resource was identified within one-quarter mile (402 m) of the Cranberry Lake Preserve.

Table 2. National Register Listed Properties within One-Quarter Mile of the Study Area

<table>
<thead>
<tr>
<th>Property Name</th>
<th>Status</th>
<th>Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronx River Parkway Reservation</td>
<td>NR</td>
<td>Bronx River, automobile parkway, and park, 1906 to 1925</td>
<td>1500 feet (457.2 m) west and south</td>
</tr>
</tbody>
</table>
The Bronx River Parkway Reservation, consisting of the re-routed Bronx River, automobile parkway, and landscape/park, was built between 1906 and 1925. It is 15.5 miles (24.9 km) long. It grew out of the cleaning movement of the Bronx River valley. The Bronx River Parkway was built between 1906 and 1925. Initially part of a sewer system to clean up the Bronx River, its’ expanded scope included taking lands up to 300 to 1,000 feet (91 to 305 m) wide to prevent pollution that had plagued the Bronx River for decades. The land was acquired by 1916, and construction proceeded with 370 buildings removed in the early phases of work. Large sections of the river were rerouted. Two service stations were built along the Parkway. When completed, it contained 1,155 acres (467 m) with 28 parkway bridges, 10 crossing bridges, and 21 timber bridges for pedestrians across the river, as well as a tennis club.

Previous Surveys

The OPRHP library contained no archeological surveys that have been conducted within one-quarter mile (402.3 m) of Cranberry Lake Preserve.

Precontact Overview

While the Westchester region has evidence of precontact occupation since as far back as the Paleo-Indian period, the prehistory of the county is less well known than surrounding regions. This is attributed to “poorly defined stratigraphic relationships of components, a lack of abundant single component sites, poor preservation of organic materials, and site disturbance and destruction...” (Wiegand and Abraham 1995).

The first evidence of people in what is now New York state dates back to the Paleo-Indian period (10,500-7,000 B.C.). This period of time is poorly defined in the Northeast and is recognized only by sporadic surface finds of “fluted” projectile points. Paleo-Indian peoples were organized in mobile bands of hunters with groups that usually contained about 25 people. As climatic changes occurred, the food supply decreased, and people began to move to other areas, such as modern-day Pennsylvania and the Carolinas (Lenig 1977: 25).

The climate continued to change, and New York State became covered with what was essentially a modern hardwood forest, and the human population slowly began to increase. During this time, there is evidence of increased mobility and perhaps wider distribution of the population throughout the Northeast, which defines the Archaic period (7,000-1,000 B.C.). During the Archaic, mobility was influenced by the extraction of food and other subsistence resources within limited areas. Seasonal campsites by small bands were common, and food procurement activities occurred in various areas as the seasons progressed. The Archaic period (4,500-1,300 B.C.) is the best-documented period in the archeological record of Westchester County. Site locations are more varied and were occupied seasonally, compared to the Paleo-Indian period (Crichton and Kennedy 1986).

Near the end of the Archaic period, the dead began to be buried with varying degrees of ceremony with some graves containing offerings. There has been evidence of long distance trade, such as the presence of conch shells from the Gulf of Mexico, shell beads from the Atlantic Coast and exotic flints from various locations (Ritchie 1980: 32).

Following the Archaic, the Woodland period (1000 B.C. to AD 1650) was marked by increased sedentism and increased population density as precontact groups established fixed homebases. There is evidence of large scale storing of food resources in pits excavated into the ground and in large ceramic vessels. Populations began settling in more resource-rich lowlands (Ritchie 1980).

The Early Woodland Period can be divided into two phases in the Hudson River region, Meadowood and Middlesex. The Meadowood phase is represented by a number of caching sites. There are many isolated spot finds of Meadowood points especially concentrated around the confluence of the Mohawk River and the Schoharie Creek. The Middlesex phase is not as well represented in the lower Hudson Valley as it is in the lower Mohawk Valley (Ritchie 1994).
During the Middle Woodland (600 B.C. to A.D. 1,000), increased use and technological development of ceramics was accompanied by an apparent increase in population density. Similar to the Early Woodland period, the Middle Woodland period is characterized by an association between Northeast and Midwest cultures, specifically the Hopewell tradition. However, obvious cultural affiliation with Hopewellian peoples is absent in the lower Hudson Valley (Ritchie 1994).

The next period of the precontact era in the Northeast was the Late Woodland. This period was characterized by population expansion that resulted in the development of the nations and tribes encountered by European settlers. Territorial expansion was also common at this time. There are two major traditions identified within the Late Woodland period in New York: Owasco (AD 1,000-1,400) and Iroquois (AD 1,400 to contact) both of which are very well represented in parts of New York state. The Owasco tradition can be further delineated into numerous phases (Ritchie 1994: 219).

Endemic warfare reported in the 17th century may have its roots in Owasco times as population expanded and tribalism and localism progressed (Ritchie and Funk 1973). At the time of European contact (approximately 1609), the Iroquoian Confederacy was already formed and the Mohawk were engaged in conflicts with the Mahican and Montagnais and Algonquins. In the proto-historic period, "the entire country south of the Highlands, that is, Westchester County, was occupied by the chiefdoms of the Wappinger division of the Mohicans" (Shonnard and Spooner 1900: 24).

**Historical Overview**

With the urging of the Dutch West Indies Company, Dutch settlers moved into the Hudson River area and immediately impacted the native lifestyle, often building settlements in the locations frequented by native peoples. European illnesses caused the deaths of many indigenous persons, and open hostility served to further reduce the number of tribes in the region (Shonnard and Spooner 1900: 89).

The most prominent first European settler in Westchester County was Anne Hutchinson, a religiously devout and vocal woman who preached in Boston and moved to the Pelham area in 1624, described as a "complete wilderness" (Shonnard and Spooner 1900: 91). From all appearances, she had no deed for the land. Hutchinson and most of her family were killed in 1643 by Siwanoy, led by a man named Wampage who took the name "Anne-Hoock" after the attack. Captain John Underhill, a former member of Hutchinson's Boston "flock" was sent to the area to attack the Siwanoy tribe in return for this and other attacks. With land available in the aftermath, wealthy settlers purchased vast tracts of lands and large manors were established (Crichton and Kennedy 1986: 13). More than fifty percent of the land was divided between six manors after the English took possession of New York (Shonnard and Spooner 1900: 141).

In time, resistance and loyalty to the English Crown polarized and intensified in Westchester County. Eventually, disagreement turned to bloodshed and manifested in the Revolutionary War. Westchester County was part of the Neutral Ground during much of the Revolutionary War, caught between the front lines of the British and Revolutionary Army and looted by both sides for supplies. In 1776, two British ships docked on the west bank of the Hudson River opposite Tarrytown and were suspected of passing plans and ammunition to Loyalist forces in the area (Shonnard and Spooner 1900: 341). In 1777, several British ships with troops put ashore in Tarrytown to draw attention from maneuvers elsewhere (Shonnard and Spooner 1900: 434). In 1779, individual members of the British unit attacked and killed two citizens in Tarrytown (Shonnard and Spooner 1900: 458-459).

One of the seminal events of the American Revolution, which took place in Tarrytown was the capture of Major John Andre. A group of rebel militiamen stopped Andre on the road. Andre inadvertently revealed himself as a British agent to the rebels, and was discovered with military plans of West Point from Benedict Arnold. As a result, Arnold was implicated, and West Point was protected from an invasion (Shonnard and Spooner 1900: 470).

In 1781, American ships laden with needed military supplies from West Point ran aground at Tarrytown while trying to avoid a squad of British ships. The British attacked and burned the American boats but were turned away by rifle fire from the shore. The fires were extinguished and the cargo was
Phase IA Literature Review, Westchester County Parks, Cranberry Lake Preserve

rescued. The next day, a battery of cannon at Tarrytown drove off the British ships (Shonnard and Spooner 1900: 508). After the war many citizens left the county. As the demand for American goods abroad revived in the late 18th century, so did the economy of the region, and settlement began again (Shonnard and Spooner 1900:275). As the population and industry of New York City grew even larger, the demand for water grew even greater. As a result, the Old Croton Aqueduct was constructed to channel fresh water from a dam at Croton through an immense passage ending miles away in New York City. The aqueduct was constructed from 1835 to 1842, and its completion was marked by great celebrations (Shonnard and Spooner 1900:548-558).

With the advent of a completed railroad in 1841, farms became larger and shipped foodstuffs quickly to New York City. Residents of the county often commuted there as well. By the end of the 19th century, the population in southern Westchester County became concentrated with workers moving northward from New York City. In 1924, parkways for motorized transportation had been completed. The ease of transportation encouraged many people to move to the county and the continued prosperity of New York City has ever since had a strong effect on the settlement of Westchester County (Crichton and Kennedy 1986: 16).

White Plains is the county seat for Westchester County, and was incorporated in 1788. Mount Pleasant was originally part of the Manor of Philipsburgh. The Manor was broken up after the Revolutionary War. Mount Pleasant was incorporated as a town in 1788. Old Kensico was originally known as Wright Mills. When the Kensico Reservoir was built in 1886, it flooded the valley in which part of the town stood. The inhabitants moved up the hill or outside the walls of the dam and have since changed the name to Valhalla. Harrison is named for John Harrison of Flushing, who was awarded the tract in 1697. The upper half of Harrison's Purchase was originally settled by Quakers (NYSGenWeb).

New Kensico Dam, 500 feet (152 m) west of Cranberry Lake Preserve, was built between 1906 and 1915. It is near the old Kensico Dam at Valhalla. Water is brought to the Kensico Reservoir from the Catskills via the Catskill Water System. The construction of the dam moved a village, known in colonial times as Wright's Mills. The rock for the dam came via a railroad built specifically for this purpose from Quarry Heights just southeast of the park, and the sand came from east of Rye Lake (Swanson and Fuller 1982: 102).

What is now Cranberry Lake Preserve was part of the former estate of Nathan Straus, founder of the New York City radio station WMCA. Cranberry Lake Preserve was acquired by Westchester County in 1968, and consisted of 135 acres (54.6 ha). It opened in 1975 with a 7-acre (2.8 ha) wetland and a 4.5-acre (1.8 ha) lake. The earliest mention of Cranberry Pond, which contained native cranberries, was in 1705. Until the 20th century, this area was largely unpopulated. The construction of New Kensico Dam beginning in 1912 west of the study area, quarried granite from the study area and the vicinity of Laurel Ridge Trail. A narrow gauge railroad was constructed through what is now the park to transport granite. A rock crushing plant, built in 1912, was east of the park. The quarrying ceased in 1915, and the dam opened in 1917 (Park files; Cirillo 1976:144).

Historical Map Review

Historic maps were examined for evidence of historic resources in Cranberry Lake Preserve. The study area has been superimposed on each map. One structure is indicated in the study area on several maps from the mid-19th century and later. Additional structures are shown in close proximity to the study area.

18th- and 19th-century Property Maps

Map 4 is a portion of the 1779 Sauthier A Chorographical Map of the Province of New York showing the vicinity of the study area between the Bronx River (sic) and Mamaroneck River on Valentine's Hill. No structures are indicated in the study area's vicinity.

Map 5 is the 1831 Sidney and Neff Map of Westchester County showing the study area along portions of modern-day Mount Kisco Road and Park Road. The Bronx River is to the west, Rye Pond to
the east, Kensico Village (not yet relocated) is just to the north, and “Negro Hills” are along the southeast border. No structures are shown in the study area, but several are near what are now the park boundaries. These include Percy, L. Miller, F.P. Horte, and others that are not legible on this copy.

Map 6 is the 1858 Merry Map of Westchester County showing the study area along what are now Old Orchard Street and Route 22. “Negro Hills” are to the southeast. No structures are in the study area. Nearby structures include one illegible in the east, A.W. Fisher, J. Miller, C. Davis, W. Williams, and J. Horton.

Map 7 is the 1867 Beers Atlas of New York and Vicinity showing the study area, with Cranbury Lake in the middle. A structure affiliated with P.S. Carailear (MDS 1) is shown in the northwest portion of the study area. Other nearby structures include M. Fitzgerald, C.P.H., Job C. Foster, C.P. Williams, T. Turner, J. Plaiters, and an unlabeled one along the eastern boundary of the study area.

Map 8 is the 1872 Beers County Atlas of Westchester showing the study area between what are now Route 22 and Old Orchard Road. Cranbury Lake (sic) is shown in the middle of the study area. One structure is shown in the study area: P.S. Casaillear at the northern part (MDS 1). Other nearby structures include C.P.H., M. Fitzgerald, T. Turner, and J.P. Williams. M. Rouee is indicated near Cranbury Lake, although no structure is indicated.

Map 9 is the 1881 Bromley Atlas of Westchester County showing the study area. This still shows the Bronx River, not Kensico Lake or Reservoir which was first completed in 1886. One structure is indicated in the study area: P.S. Castinlear at the north end (MDS 1). Other nearby structures include M. Fitzgerald, C.B.H., Job C. Foster, J.P. Williams, T. Turner, and two unlabeled structures in the southeast. Again, M. Rouee is shown near the lake, but no structure is shown.

Map 10 is the 1901 Bromley Atlas of Westchester County showing the study area east of Lake Kensico, formed by the first Kensico Dam. It shows one structure at the north end of the study area, possibly belonging to J. Raven which is immediately adjacent (MDS 1). Other nearby structures include W.E.B. and unlabeled structures.

**Topographic Maps**

Map 11 is the 1934 USGS Tarrytown quadrangle showing the study area east of Kensico Reservoir. No structures are indicated in the study area, and no structures are indicated within close proximity to the study area.

Map 12 is the Acquisition Map from 1958 of the property belonging to Nathan Strauss which will form the majority of Cranberry Lake Preserve. It does not indicate any standing structures in the study area, but there is a development laid out in the southernmost portion.

Map 2b is a topographic and feature map of the park dating from 1996. This indicates a number of trails. A building is shown near the park entrance at the northern end, as well as a parking lot, drive, and nature lodge.

In all, one map-documented structure was indicated in Cranberry Lake Preserve on historic maps. It was variably called Carailer, Casaillear, Castinlear and Raven, and is in the northwest corner of the study area; it was indicated on maps between 1867 and 1901. Due to the inaccuracies of early cartography, there may be additional historic occupations that were not indicated on these maps, or structures dating to periods previous to 1851, or temporary occupations that fell between map dates.
Table 3. Map-Documented Structures in the Study Area,

<table>
<thead>
<tr>
<th>MDS #</th>
<th>1779</th>
<th>1851</th>
<th>1858</th>
<th>1867</th>
<th>1872</th>
<th>1881</th>
<th>1901</th>
<th>1934</th>
<th>1958</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>P.S. Carailer</td>
<td>P.S. Casailer</td>
<td>P.S. Castinlear</td>
<td>J. Raven</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SITE VISIT

A site visit was conducted on February 3, 2006 by archeologist John Wilkinson to document existing conditions in the study area. The weather was cool and clear with excellent visibility.

There is a stone wall near the entrance to Cranberry Lake Preserve along Old Orchard Street (Photo 1). There is a small brook near the park entrance, with a stone bridge or culvert (Photo 2) in the general area of MDS 1. The bridge has been partially reconstructed with concrete. An intact outbuilding next to a stone and mortar foundation lies along the park trail in the area of MDS 1 (Photo 3).

Most of the topography in the study area is moderately sloping with light tree cover (Photo 4). There are small rock overhangs along the trail (Photo 5), the larger of which could have been utilized as rockshelters. Most of the rock outcrops and upthrusts have a northeasterly slant (Photo 6), with thin veins of poor-quality quartz or quartzite in some of the rock formations (Photo 7).

Portions of the study area are severely sloping, but there are level terraces above the rolling topography (Photo 8). The level areas between wet areas (Photo 9) and the lake (Photo 10) have an elevated sensitivity for the presence of precontact cultural materials. The biotic resources of the study area with its small brooks, larger waterways and marshy areas (Photo 11) would have been a diverse environment for hunting and fishing camps. There are also level terraces in the southwestern portion of the study area (Photos 12-13). Unlike the central and northern portion of the study area, there is less running water in this location. As a result, this is a more likely location for isolated precontact hunting sites.

A high stone wall bordering the study area is generally in good condition (Photo 14). Other stone features in the area include a subterranean structure (Photo 15) and a square stone base or marker and wall along the trail (Photo 16). Local residents referred to the subterranean structure as “the bunker.” Due to this term, and its proximity to the granite quarry, it may have been a dynamite storage area from quarrying activities. The trail from the subterranean structure or bunker leads to the former quarry in the southeastern portion of the study area (Photo 17). This is the most extensive area of previous disturbance. No large veins of chert were visible in the rock formations.

There is a large tree and stone-bordered landscaping at the entrance to the quarry (Photo 18). No structural remains were visible in this location or in the woods along the trail (Photo 19) leading out to Old Orchard Road, near MDSs just outside of the study area. There are tall trees and modified structures along the road outside of the study area (Photo 20). A local resident inquiring about the survey stated he found “many arrowheads” when playing in the study area as a youth. An oral survey of the local residents could produce information on precontact sites in the study area.

Although there are written and verbal accounts of a railroad connecting the quarries east of the park to the dam west of the park, no evidence for this feature was encountered during the site visit.

Table 4. Field Inspection of Cultural Resources in Study Area

<table>
<thead>
<tr>
<th>MDS #</th>
<th>Field Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Foundation observed; other features present as well</td>
</tr>
<tr>
<td>A</td>
<td>Observed “bunker”; quarry-related</td>
</tr>
</tbody>
</table>

ARCHEOLOGICAL SENSITIVITY

Precontact Archeological Sensitivity

Generally speaking, the study area has a high sensitivity for the presence of precontact archeological sites. The highest sensitivities are along the level terraces close to fresh water, and at larger rock overhangs where precontact rockshelters are possible. Areas of moderate precontact sensitivity include the rolling slopes near water and the level terraces further away from water. Areas of low precontact sensitivity include the areas of severe slope and the quarried area (Map 13).

Historical Archeological Sensitivity

Generally speaking, the study area has a moderate to low sensitivity for the presence of historic cultural materials. Exceptions to this are the MDS 1 foundation along the central trail and access road and the bunker along the lake, which are, respectively, high and moderate in historic archeological sensitivity. MDSs just outside the study area somewhat increase the sensitivity at the edges of the study area closest to them where affiliated activity areas are possible. The remainder of the study area is relatively low in sensitivity to historic archeological resources; the topography and location suggest occupations would have primarily been along established transportation systems, which remain along the borders of the study area (Map 13).

RECOMMENDATIONS

Phase IB testing should be conducted prior to ground disturbances, in the areas of potential effect. Testing should be completed at 25-foot intervals in the vicinity of map-documented structures, near those whose main occupation is just outside of the study area. In the remainder of the study area, the Area of Potential Effect should be shovel tested at 50-foot intervals.
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1958 Acquisition Map of Nathan Strauss Property (Cranberry Lake). On file at Westchester County Parks Commission.

Westchester County Planning Department

Wiegand, Ernest A. and Abraham, Judith F.
MAPS
Map 2a

2004 NYS Office of Cyber Security and Critical Infrastructure
Westchester County 6-inch Resolution Natural Color Orthoimagery

contours 5m
scale 1:3936

Legend
- Study Area
- Photograph Angle
- Map Documented Structure (MDS)

Base map: Pat DeStefano, June, 1996
Fieldwork: Michael Dieter, August, 1996
Drafting: Michael Dieter, September, 1996
Printing: Micro Print, Danvers, 1996
Map Coordination: Chris Gessner
43 R.H.M. Hudson Valley Engineering
PO Box 61, Pleasantville, NY 10570
This map is copyrighted work and may not be reproduced without written permission from Hartgen Archeological Associates, Inc.
TOWN OF

NORTH CASTLE

Westchester Co., NY

Scale 1” = 1000 feet

Notes:
Map Documented Structure (MDS)
Graphic not to scale.

1867 Beers Atlas of New York and Vicinity

Map 13

Photo 1. Northwest view of the entrance to Cranberry Lake Preserve along Old Orchard Street. There is an overgrown stone wall in this area.

Photo 2. North view of a stone and concrete bridge or culvert over a small brook near the park entrance.
Photo 3. Southeast view of a stone and mortar foundation and an outbuilding modified to a garage at the approximate location of MDS 1. This is adjacent to the paved access road and trail.

Photo 4. Northeast view of the sloping topography and light tree cover in the northern portion of the study area.
Photo 5. Northwest view of a small rock overhang near the trail in the northern portion of the study area. There may be larger overhangs useful as rock shelters in other locations.

Photo 6. Northwest view of a rock outcrop off the trail. The upthrusts and overhangs have a general slant to the northeast.
Photo 7. Northeast view of a thin vein of quartz or quartzite in a rock outcrop. Most of the quartzite appears to be of relatively low quality, unsuitable for use in precontact tool manufacture.

Photo 8. Northeast view of the moderate slope along a terrace in the central portion of the study area. The level terraces between waterways would have been useful for precontact camp sites.
Photo 9. Southwest view of a small wet area along the trail. The environments of the study area would have been conducive to hunting several types of game.

Photo 10. Southeast view of the lake in the center of the study area. This habitat would have been useful for fishing and hunting waterfowl in the precontact periods.
Photo 11. Northeast view of the marshland environment along the lake.

Photo 12. Southwest view of a level terrace in the southwestern portion of the study area. Level terraces near fresh water sources have an elevated potential for the presence of precontact sites.
Photo 13. Southwest view of a second level terrace in the southwestern portion of the study area. While there is less running water in this area, there is the potential for smaller, isolated precontact sites.

Photo 14. Northeast view of a high, relatively intact stone wall along the western boundary of the study area.
Photo 15. Northeast view of the entrance to a subterranean structure along the lake. Its date of construction is not yet known. Some local residents referred to it as "the bunker."

Photo 16. Southwest view of a second stone feature and stone wall along the trail and the lake.
Photo 17. Southwest view of the quarry in the southeastern portion of the study area. This is the area of greatest previous disturbance. No chert veins were visible in the quarried rocks.

Photo 18. Southwest view of a large tree and a stone-lined shrub at the paved entrance to the quarry. No other structural remains were visible on the surface.
Photo 19. Southeast view of a stone wall along the trail in the southeastern portion of the study area.

Photo 20. Northwest view of a line of tall trees and modified residences along Old Orchard Street.