



2010

**A COMPILATION OF KNOWN HISTORIC STRUCTURES AND
ARCHAEOLOGICAL SITES:
RAMAPO MOUNTAINS COUNTY PARK
Townships of Mahwah and Oakland
Bergen County, New Jersey**



Prepared for:
Bergen County Department of Planning
and Economic Development
&
Bergen County Department of Parks



August 8, 2010



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MANAGEMENT SUMMARY

Maser Consulting, P.A. (Maser) was contracted in April 2009, by the Bergen County to conduct a Cultural Resources Inventory of Ramapo Mountains County Park as part of the Ramapo Mountains County Park Management Plan. The Cultural Resource Inventory includes four contiguous parks within the Ramapo Mountains: Ramapo Valley County Reservation, Camp Glen Gray, Tamarack Recreation Area, and Todd Recreation Area as well as the Campgaw Mountain County Reservation. The four properties total approximately 4,500 acres and are characterized by extensive areas of natural landscape including wetlands, vernal pools, forest, outcrops, and rare plant and animal habitat.

Preliminary background research included visits to the New Jersey State Historic Preservation Office, the New Jersey State Museum, and the New Jersey State Library. This research included review of all registered historic property and archaeological site records, maps, and correspondence, identification of previous regulatory and planning cultural resources investigations conducted within and surrounding the project area, identification and mapping of all reported cultural resources within the project area, and a review of registration maps for the project area surroundings for site sensitivity modeling. Field inspection included a general one day pedestrian traverse of the park property in order to assess the topography of the subject property, identify potential for undocumented cultural resources, and document areas of disturbance apparent at ground surface.

The Cultural Resource Inventory resulted in the identification of a total of twenty three cultural resources. One extant late nineteenth century building is within the project area, the Darlington School House (NJHPO 32), as well as, fifteen historic archaeological sites. Additionally, seven prehistoric and contact period archaeological sites have been recorded within the Ramapo Mountains County Park. Formal findings of eligibility cannot be determined for the majority of known sites based on previous cultural resource investigations.

Maser recommends further evaluation of known cultural resources within project area to determine their current condition and determine their eligibility status. Maser recommends field inspection of known sites and development of a site sensitivity model for the project area.



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1.0 Introduction

1.1 Project Purpose and Goals

Maser Consulting, P.A. (Maser) was contracted in April 2009, by the Bergen County to conduct a Cultural Resources Inventory of Ramapo Mountains County Park as part of the Ramapo Mountains County Park Management Plan. A number of parks and forest preserves encompass the Bergen Ramapo Mountains, including Harriman State Park, Norvin Green State Park, the Ramapo Valley County Reservation, Ramapo Mountain State Forest, Ringwood State Park, and Sterling Forest State Park. The Cultural Resource Inventory includes four contiguous parks within the Ramapo Mountains: Ramapo Valley County Reservation, Camp Glen Gray, Tamarack Recreation Area, and Camp Todd as well as the Campgaw Mountain County Reservation.

This cultural resource inventory is presented as a compilation of known historic structures and archaeological sites both historic and prehistoric. All previously identified cultural resources have been included and any information regarding their eligibility for the National or State Register of Historic Places and/or local historical significance is presented. This is intended as an Identification-Level Survey and eligibility statements are preliminary unless based on previous State or Local designations.

Research included data gathered from a number of sources including: (1) the New Jersey Historic Preservation Office; (2) the New Jersey State Museum and State Library; (3) the Bergen County Historical Society; (4) the Mahwah Historical Society; and (5) the Mahwah Historic Preservation Commission. New Jersey historians Paul W. Schopp and T. Robins Brown were consulted and especially helpful in providing maps and related research materials.

1.2 Project Area Description and Acreage

The Ramapo Mountains County Park consists of a series of open spaces and parks owned and managed by Bergen County, New Jersey. These properties are located in the townships of Mahwah and Oakland and are situated within the Ramapo Mountain portion of the Appalachian Mountains, which in New Jersey is also included within the Highlands Physiographic Province. The Cultural Resource Inventory includes four contiguous parks within the Ramapo Mountains: Ramapo Valley County Reservation, Camp Glen Gray, Tamarack Recreation Area, and Todd Recreation Area as well as the Campgaw Mountain County Reservation (Figure 1). The four properties total approximately 4,500 acres and are characterized by extensive areas of natural landscape including wetlands, vernal pools, forest, outcrops, and rare plant and animal habitat. Campgaw Mountain Reservation is a 1,351 acre park located mostly within Mahwah, but includes parts of Oakland and Franklin Lakes.





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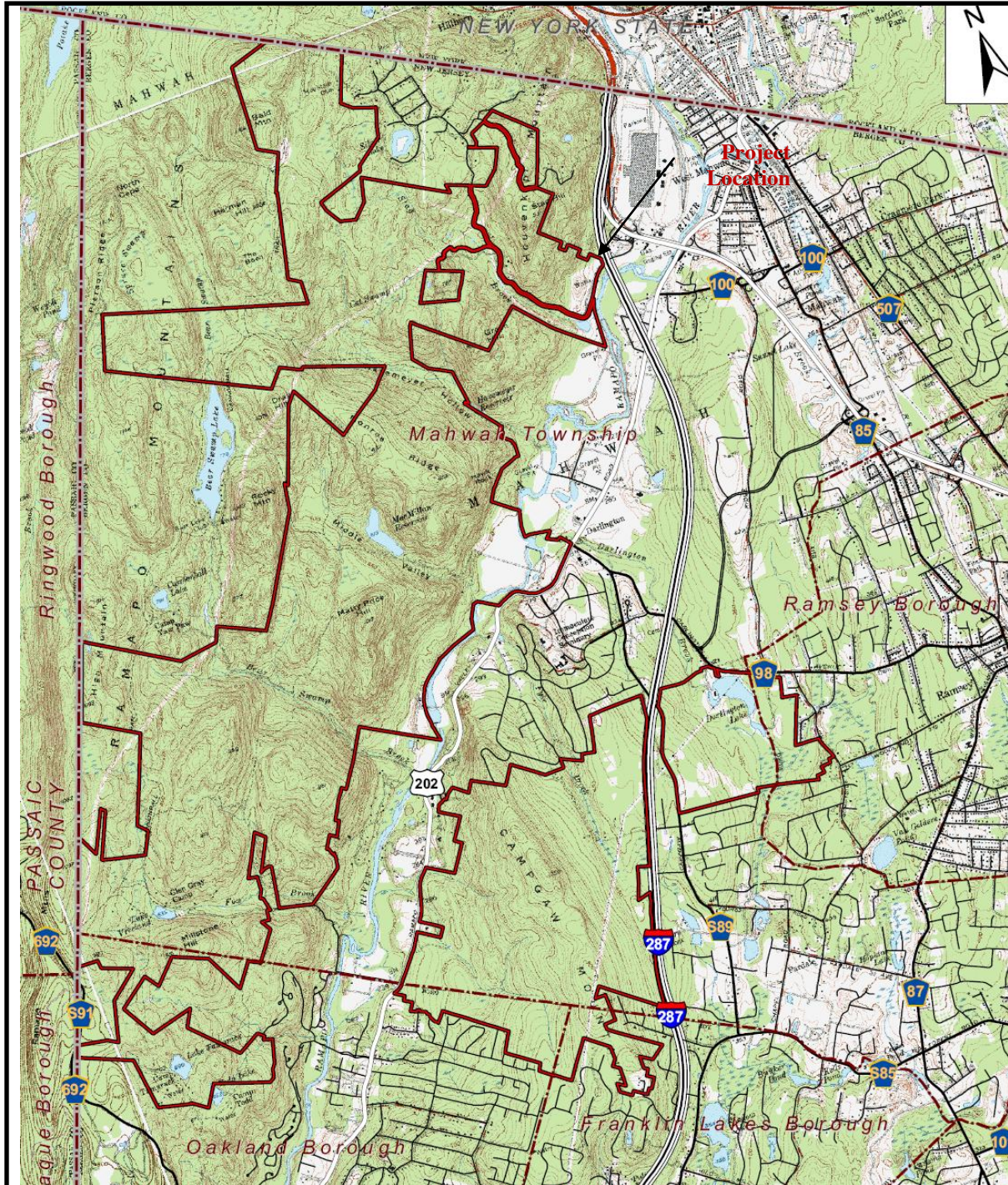


Figure 1: Map of Project Location.



HAMILTON OFFICE

100 American Metro Boulevard, Suite 152
Hamilton, NJ 08619
Phone (609) 587-8200
Fax (609) 587-8260
E-mail-solutions@maserconsulting.com

USGS Ramsey 7.5 Minute Series Quadrangle, 1955
(photorevised 1981)

Source: Terrain Navigator 7.03



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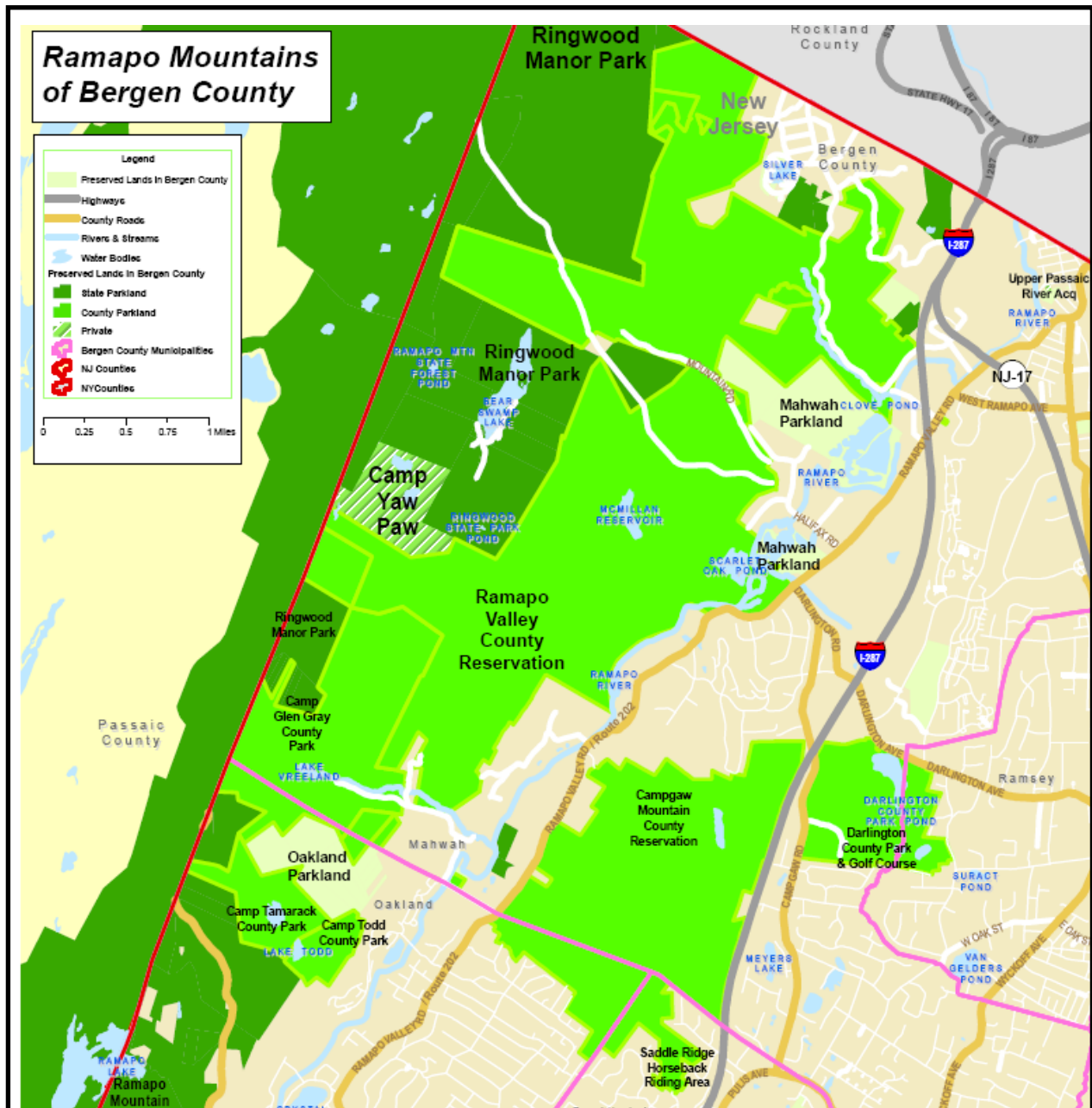
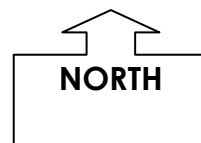


Figure 2: Map of Project Area.



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100 American Metro Boulevard, Suite 152
Hamilton, NJ 08619
Phone (609) 587-8200
Fax (609) 587-8260
E-mail-solutions@maserconsulting.com





1.5 Research Design

The Cultural Resource Inventory for the project area included background research on the history of the parcels contained within the park system boundary and on the surrounding area, a one day site visit of the property in order to assess the project area's potential for undocumented historic properties and archaeological sites, and development of recommendations for the property with regard to the treatment of known or potential cultural resources.

1.6 Report Format

This report begins with an introduction to the project, including a summary of the work completed, a description of the project location and its vicinity, and a summary of applicable regulations related to this investigation. Section two presents a summary of the physical and environmental context of the project area, interpretative statements of land use and project context, a description of the background literature review and records research results for the project area and its vicinity. Section three contains a detailed discussion of results and analyses of data generated from the cultural resources inventory. Conclusions and recommendations are presented in the final section. Appendix B presents the resumes of the primary researchers involved in this project.

1.7 Summary of Findings and Recommendations

The Cultural Resource Inventory resulted in the identification of a total of twenty three cultural resources. One extant late nineteenth century building is within the project area, the Darlington School House (NJHPO 32), as well as, fifteen historic archaeological sites. Additionally, seven prehistoric and contact period archaeological sites have been recorded within the Ramapo Mountains County Park. Formal findings of eligibility cannot be determined for the majority of known sites based on previous cultural resource investigations.

Maser recommends further evaluation of known cultural resources within project area to determine the current condition and determine the eligibility status. Maser recommends field inspection of known sites and development of a site sensitivity model for the project area.





2.0 Background Research

2.1 Background Research Methods

Background research for this project included: (1) review of published and unpublished documents related to the discovery and evaluation of prehistoric and historic cultural resources in Bergen County (2) historic map research to profile settlement pattern and land use for Bergen County and for the project area in particular, (3) a comparative review of registered prehistoric archaeological sites within the Ramapo River watershed, and in particular its upland tributaries of Ramapo River (4) consultation was local historians.

Records review of registered archaeological sites and previous archaeological investigation surveys was conducted at the New Jersey Historic Preservation Office and the New Jersey State Museum and included examination of site registration and survey files and archaeological survey and data recovery reports for comparable sites in Bergen County. Background research conducted at the New Jersey Historic Preservation Office, the New Jersey State Museum, and at the New Jersey State Library examined historic maps and atlases, and related primary documents.

2.2 Geology

The Ramapo Mountains of Bergen County are located in the Highlands Physiographic Province. They consist of weathered granitoid bases of Precambrian origin. The Highlands is characterized by broad parallel ridges and deep glacial valleys. The mountains are not particularly high with rounded peaks reaching elevations of 1,200 feet above sea level. The surrounding lowlands along the eastern border are part of Piedmont Province, a Triassic lowland formation. These lowlands were first occupied by Euro-Americans in the 17th century (Lenik 1999).

Where the Ramapo Mountains and the Piedmont meet there is an important geologic feature, the Ramapo Fault, running from Stony Point on the Hudson to Boonton, New Jersey. It provides the course for the Ramapo River, running from Monroe, New York to the Atlantic by way of the Pompton and Passaic Rivers.

An important component of the surficial geology of the Ramapo Mountains County Park are the materials deposited by glaciers long after the mountain-building episodes, which formed the metamorphosed bedrock of the Highlands Regions, but still many millennia in the past. Extensive ice sheets or glaciers extended southward from the subarctic regions of North America as far as New Jersey, during ice ages occurring over the last one and a half million years. This geological time span is referred to as the Pleistocene Epoch. The pre-Illinoian, the Illinoian and the Wisconsinan glaciations covered parts of northern New Jersey with ice. High Point, New Jersey was covered with up to 2,000 feet of ice, when these ice ages reached their





utmost extent. The Wisconsinan glaciation, which occurred about 21,000 years ago, is responsible for the glacial deposits in the Ramapo Mountains County Park (Witte 1998).

As they move across the landscape, glaciers scour and scratch bedrock, capturing and transporting soils and boulders. Grooves in rock, called striations, show the direction in which the glacier moves. Glaciers moving across fractured or jointed bedrock pluck large block of stone and carry it long distances sometimes. When boulders or large blocks of stone are dropped by a melting glacier far from their original locations, they are called erratics (Kauffman 1990, Witte 1998). Such erratics have been observed in the Ramapo Mountains County Park (Figure 3). They have been a source of scenic interest and sometimes provided shelter for native people.

The general term for all sorts of material deposited by glaciers is drift. Drift can be stratified (sorted) or unstratified (unsorted). Till is the term for unstratified drift directly placed by a glacier (Kauffman 1990). The till of the eastern Highlands is almost entirely derived from gneissic rock. It is characterized by a gritty matrix containing gneissic rock fragments ranging from sand size up through boulder size. The most common size elements are stones ranging from pebbles with diameters of less than an inch to boulders eight feet in diameter. According to Salisbury, et al, "Where the surface remains in its natural state, bow(u)lders are sometimes so abundant that fields may be crossed, almost without stepping off them"(Salisbury, et al 1902; 474).

Moraines are landforms composed of till laid down by the glacier. Terminal and end moraines are ridges of till deposited at the utmost edge of a glacier. When the glacier stabilizes for a period of time during melting, ridges called recessional moraines form. Most common are ground moraines, which consist of layers of till dropped by the body of the glacier. The Wisconsinan ice sheet extended as far south as the northeasterly corner of Middlesex County and bisected Morris County (Witte 1998), so no terminal or end moraines are present in the Ramapo Mountains County Park. As depicted on the Glacial Sediments Map, the majority of the Reservation is covered by a thin veneer of till, interspersed with rock outcrops, typical of ground moraines. Four areas of continuous till are located within the valleys of the streams feeding Havemeyer Reservoir, Macmillan Brook, Bear Swamp Brook and Fox Brook.





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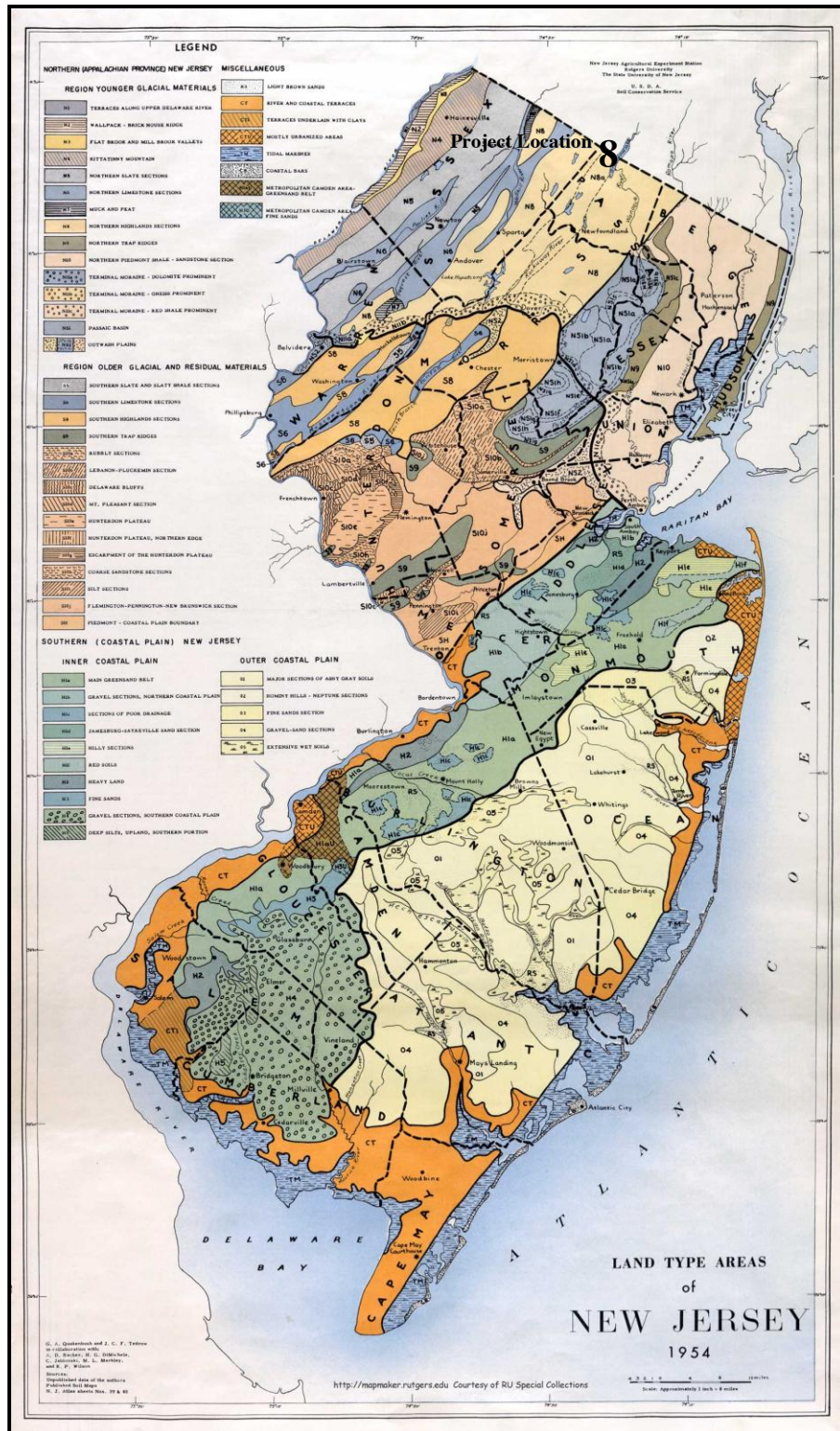


Figure 3: Surficial Geology Context of the Project Location (Quakenbush and Tedrow 1954).





2.3 Topography

The dominant features of the park's topography include the Ramapo Mountains, the Ramapo River Valley, and the rolling hills and broad valleys of the piedmont. The Ramapo Mountains are composed of metamorphic Precambrian rock part of the Appalachian chain. The Ramapo Valley County Reservation including Tamarack Recreation Area, Todd Recreation Area, and Camp Glen Gray, extends over approximately 4,500 acres of glaciated terrain of the New Jersey Highlands. The highest point is Bald Mountain reaching an elevation 1,164 feet above sea level (Bischoff 1979). To the southeast is the Piedmont area consisting of rounded hills and wide valleys, comprising most of Mahwah Township. This section with outcroppings at Campgaw and Cragmere was formed by the volcanic flows from the mountains some 200 million years ago (Bischoff 1979).

2.4 Hydrology and Vegetation

The Pequannock, Wanaque, Mahwah, and Ramapo Rivers are the principal watercourses that flow through the Northern Highlands. They join at a point in the Pompton Plains-Wayne area to form the Pompton River. The Mahwah River flows along the southeastern border of the Highlands and joins the Ramapo River in Mahwah, near the border with New York. Numerous other brooks, creeks, streams and surface water features flow through the Ramapo Valley County Reservation.

Nearly all of the water bodies shown on the 1955 USGS Figure 1 are man-made. Swamps and streams were dammed to create Silver Lake, Bear Swamp Lake, MacMillan and Havemeyer Reservoirs, Cannonball Lake and Lake Vreeland.

Most of the landscape in this area is open space with secondary tree growth. The forests consist of dense mixed oak and hickory and contain many seasonal resources such as nuts, berries, and other edible plants. Forty-two species of edible vegetation have been recorded in the Highlands (Lenik 1999). Other habitats include the Hemlock-Mixed Oak and Sugar Maples of the upland forests, as well as Chestnut-Oak Forest commonly found on ridge tops, slopes, and outcrops of thinner soil.

2.5 Land Use and Current Conditions

The Ramapo Valley County Reservation, parking lot located in Mahwah along Ramapo Valley Road (US 202) about two miles south of NJ Route 17, encompasses 3313 acres and offers 19.7 miles of challenging hiking trails, areas for permitted tent camping and casual strolling areas. It was opened to the public in 1972. The Reservation's trails connect with those in Ringwood State Park to the west, Ramapo Mountain State Forest to the southwest, and Camp Glen Gray to the south. The majority of the Reservation has been left in its natural wild state, and is





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mostly hilly forming part of the eastern tier of the Ramapos. Only the strolling areas immediately adjacent to the parking lot on US 202 and Scarlet Pond (a former quarry) have been substantially impacted by past human activities and more recently by intensive recreational use. Bathroom facilities and picnic areas are also available in the vicinity of the parking lot.

Fishing is permitted with a NJ State license in the Reservations two reservoirs, Scarlet Pond and McMillan Reservoir, and the Ramapo River located along the parks eastern boundary.

The Reservation was the former site of A. B. Darling Mansion (built 1864). As owner of Fifth Avenue, Darling used this area as a dairy farm. The land was then bought by George Crocker in 1900, and subsequently by Emerson McMillin and 1926 the Roman Catholic Diocese of Newark. Hoppers owned the land before Darling (Mahwah Historical Society. 1976. B.C. Commission).

Camp Glen Gray is a camping facility located along the border of the municipalities of Oakland and Mahwah, located off of State Routes 202 and 208 and Interstate Route 287. It was originally developed as a Boy Scout camp in 1917 and is named for one of its founders, Frank F. Gray. Camp Glen Gray was the longest continuously operating Boy Scout camp in the United States.

In January of 2002, the 750 wooded acre camp became part of Bergen County's park system. The park is managed by the Friends of Glen Gray and use of the facilities requires a reservation and applicable use fees. The park offers hiking trails, fishing and boating opportunities on Lake Vreeland and camping. Cabins, lean-tos and tent sites make are available for camping. A sports field, campfire ring and an amphitheater provide places to hold outdoor events. A Dining Hall (with a kitchen) may be used for indoor events and meals. Bathroom facilities at campsites consist of latrines in keeping with the camp's rustic mode. Toilets (in warm weather) are located off the parking lot.

In the winter, wood stoves in the cabins will keep you warm. Many of the cabins also have electricity. Camp Glen Gray is a weekend campground facility. However, day visitors are permitted only if they are coming to participate in a camp or group sponsored weekend event.

The Tamarack Recreation Area was a former Boy Scouts camp encompassing 182 acres of mostly unimproved woodlands along a ridgeline of the Ramapo Mountains. The entrance to the former camp is along the eastern side of Skyland Drive in the Borough of Oakland. The camp abuts Camp Glen Gray to the north, Todd Recreation Area to the east and Ramapo Mountain State Forest to the west and south. No facilities are available in the area, however, footprints of the former camp structures are evident. The Tamarack Recreation Area offers hiking trails





connected to adjacent State and County owned lands and fishing opportunities in Lake Tamarack.

The New Jersey Department of Environmental Protection declared the site an illegal waste dump in 1993. The dumped material included chemicals, heavy metals and 35,000 tons of demolition debris (including bricks, asphalt, tiles, and wood). The site was remediated shortly thereafter.

The Todd Recreation Area was a former Boy Scouts camp encompassing 73 acres of mostly unimproved woodlands along a ridgeline of the Ramapo Mountains. The entrance to the former camp is along the eastern side of Skyland Drive in the Borough of Oakland. The camp area abuts Oakland Parkland to the north, Camp Tamarack to the west and privately owned properties to the east and south. The Todd Recreation Area offers hiking trails connected to adjacent State and County owned lands and fishing opportunities in Lake Todd. The Todd Recreation Area also contains ecologically significant features such a trout production stream and several vernal pools.

Campgaw Mountain Reservation is a 1351 acre park located mostly within Mahwah, but includes some areas of Oakland and Franklin Lakes. The Reservation is bordered by US Route 202 to the west, Interstate 287 to the east and private properties to the north and south. The Reservation includes a ski area located on the Reservation's highest peak, Campgaw Mountain, of 735 feet above sea level. The ski area has two 2-person chairlifts and one magic carpet suitable for novice skiers. The area also has opened up a section of the smaller hill for patrons to rent inner tubes and slide down to the bottom. The area also has a small lodge, snack bar, and equipment rental shop.

The Reservation was originally an U.S. Army Nike Missile station which was created in 1955 for the defense of the New York Metropolitan Area from strategic bombers. In 1959, the site was upgraded to house Nike-Hercules Missiles with increased range, speed and payload characteristics. The missile site closed in June 1971. The launcher area has been removed. Several buildings are intact and have been converted to serve as offices, horse stables and tack rooms at the Saddle Ridge Riding Area.

2.5 Prehistoric Context

2.5.1 Culture History

The prehistory of North America is commonly divided into three broad chronological periods: the Paleo-Indian, Archaic, and Woodland. These periods are further divided into subperiods, usually classified as early, middle or late, that reflect changes in cultural patterns over time and the environmental changes to which they correspond.





Table 1. Prehistoric Cultural Periods.

Period	Beginning Date	Ending Date
Paleo-Indian	12,000 B.P.	10,000 B.P.
Early Archaic	10,000 B.P.	8,000 B.P.
Middle Archaic	8,000 B.P.	5,000 B.P.
Late Archaic	5,000 B.P.	3,000 B.P.
Early Woodland	3,000 B.P.	2,000 B.P.
Middle Woodland	2,000 B.P.	1,000 B.P.
Late Woodland	1,000 B.P.	450 B.P.
Historic Contact	450 B.P.	250 B.P.

The Prehistoric archaeological record of the Highlands Physiographic Province including Rockland and Orange Counties, New York and Passaic and Bergen Counties, New Jersey shows a record of human occupation from the Paleo Indian Period through the Historic Contact Period. Native American cultural ties to the Highlands Province exist today through the presence the Ramapough Mountain People.

2.5.2 Paleo-Indian

The Paleo-Indian period coincides climatologically with the Early Holocene. The period is characterized by a reduction in the number of grassland and forest edge habitats and the wildlife they supported (Custer 1996; Cavallo 1981; Kraft 1977). For New Jersey, the environment was probably much like that of the modern Eastern Sub-Arctic with boreal forests of fir, spruce, and sporadic stands of pine, birch, and maple predominant (Webb 1987: 183). Geologically, the New Jersey coastline laid some 60.0 to 80.0 miles (96.6 to 128.7 kilometers) east of its present-day location. The lower sea levels that resulted from glacial expansion exposed a broad, flat continental shelf of marshes and meadows cut by deep river channels and branching streams (Kraft 1977; Chesler 1982; Cavallo 1981).

Early human populations inhabiting the upper Mid-Atlantic were most likely organized as small hunter-gatherer bands characterized by low population density and high mobility that occupied both caves and rockshelters as well as short-term open air camps. Based on the distribution of the over 200 fluted projectiles, primarily Eastern Clovis points and Dalton points, recovered throughout New Jersey, Paleo-Indian groups may have preferred riverine settings along the Delaware River and its main tributaries. Mason's (1959) study of uncontrolled Paleo-Indian projectile point finds determined that more than 50 percent were collected from within 16.0 kilometers (10.0 miles) of the Delaware River, and an additional 25 percent from along its principal tributaries.





Custer (1996: 106) suggests that Paleo-Indian populations could have ranged over broad areas during the course of a year exploiting a wide range of food resources. Reliance on a broad-based subsistence economy, as hypothesized for the Shawnee-Minisink site, rather than reliance on megafauna hunting has been hotly debated (McNett 1986; Gardner 1978; Cleland 1976; Stoltman and Baerreis 1983:254; Custer 1989; Custer and Wallace 1982:151). A preference for high quality lithics—particularly jasper and chert—for the manufacture of fluted projectile points and other tools also suggests extensive seasonal rounds.

With a few notable exceptions, Paleo-Indian tools have been recovered as surface finds. A small number of Paleo-Indian sites have been studied in New Jersey, such as the Ziert Site, a stratified site in the northwest corner of Sussex County and the Plenge Site on the Musconetcong River in Warren County which contained over 1,500 Paleo-Indian implements, 131 of which were fluted points or preforms recovered during controlled surface collections (Kraft 1977). Paleo-Indian sites on the Outer Coastal Plain, such as at two sites along the Manasquan River in Monmouth and Ocean Counties, contained subsoil cultural deposits.

A limited number of Paleo Indian sites have been recorded in the Ramapo Mountains and two sites in the region have been excavated professionally: the Dutchess Quarry Cave Site on Lookout Mountain near Florida, New York and the Zappavigna Site in Hamptonburg, New York (Lenik 1999). All other available data on the Paleo Indian occupation in the northern Highlands is based on surface finds of diagnostic artifacts. A Cumberland-style fluted point of Onondaga chert, was found at the base of a ridge on the west bank of the Ramapo in Mahwah, New Jersey (Lenik 1999). Several other isolated surface finds have been found on floodplain and riparian setting in the general vicinity.

2.5.3 Early Archaic

The Early Archaic period (10,000 to 8,000 B.P./8000 to 6000 B.C.) is associated with a continuing expansion of forest habitats. A generalized subsistence strategy referred to as a Broad Spectrum Revolution adapted Early Archaic populations to a more moderate climate that favored plant gathering and processing strategies. The in-migration of various nut-bearing oak and chestnut species may have provided a catalyst for this subsistence shift.

Floodplains and river islands were attractive locations for hunter-gatherer camps as upland areas continued to be predominated by boreal forest. However, during this period limited use of upland lakes and bogs is evidenced by a small number of archaeological sites adjacent to these locales. Sinkhole complexes may have supported clusters of natural ponds throughout the Late Pleistocene and Early Holocene that would have been attractive locations for migratory wildlife and the human populations that exploited them. Such freshwater wetlands added to the diversity of resources available in the periods immediately following the last glaciation and made broad-spectrum foraging a successful subsistence strategy for human





populations (Custer 1996; Meltzer and Smith 1986; Cavallo and Mounier 1980; Pagoulatos 1991).

Technologically, the Early Archaic is defined by a shift away from fluting as a means of projectile point hafting and toward side-notching and corner-notching related to exploitation of a wider variety of fauna and possibly the migration of southeastern populations into the region (Kraft 1986:65). In New Jersey, the *Early Archaic* is marked by increased tool diversity as thumb-nail end scrapers, side scrapers, drills, hammerstones, anvilstones, and a variety of corner-notched and stemmed projectile point types (including corner-notched Palmer and Kirk points, Kanawha stemmed points, bifurcate LeCroy points and Hardaway-Dalton points) are found. The introduction of atlatl or spear-thrower technology and the use of more varied lithic materials also characterize the technological changes of the period. A small number of Early Archaic sites have been investigated in New Jersey, including the Harry's Farm Site, Warren County and the Twombly Landing Site, Hudson County.

Evidence of Early Archaic occupation the northern Highlands region is extremely sparse and consists of a few surface finds of bifurcated points.

2.5.4 Middle Archaic

At approximately 8,000 B.P. technological and settlement pattern shifts, as well as climatological changes, signal the beginning of a new phase of human settlement. Bifurcate projectile points become more common and variability in manufacturing techniques continues to increase. Environmental changes that occurred over the course of this period produced a warmer and wetter climate allowing the development of deciduous forests that more closely resembled their modern counterparts. Decline in boreal species and an increase in oak and hemlock favored the influx of new plant and animal communities. However, the distribution of these resources differed markedly from that of contemporary communities. The increase in temperature and rainfall (known as the Atlantic Episode) also favored the expansion of wetlands throughout the region. The result of all of these environmental changes was an interior more homogeneous and productive than that enjoyed by previous human populations (Custer 1996; Chesler 1982; Pagoulatos 1991). The increasing diversity of resources is reflected in the wider variety of tools manufactured and utilized by Middle Archaic populations including groundstone technology and an array of plant processing tools. Archaeological remains suggest a greater reliance on plant resources, many of which were certainly localized, short-term, seasonal food sources. The intensification of resource use by Middle Archaic hunter-gatherers is a response to the predominant oak-chestnut-beech-elm broadleaf forests of much of central and northern New Jersey during this period. An increased use of nut-bearing tree species is evident in technological innovations that developed woodworking tools made from coarse-grained lithics (argillite and shale) by pecking and grinding techniques. Caches of tools, suggesting more predictable and regularized movements of population over an annual cycle, appear in the archaeological record for the first time. Likewise, site distribution reveals the





utilization of a wider variety of habitats as well as much more intensive utilization of riverine and wetland settings (Custer 1996; Chesler 1982; Meltzer and Smith 1986; Pagoulatos 1991).

Settlement models demonstrate increased sedentism with large base camps located on major streams supported by small, seasonally occupied upland procurement camps geared to the exploitation of specific resources (Kinsey 1972:331). Several Middle Archaic sites have been investigated across New Jersey, including the Rockelein Site, Warren County, the Miller Field Site, Warren County, the Harry's Farm Site, Warren County, the Byram Site, Hunterdon County, the Koens-Crispin Site, Ark Road, Medford Township, Burlington County, and the Savich Farm Site in Marlton, Burlington County. The first use of shellfish is evidenced on some sites integrated within this stratified riverine settlement system of large and small camps within a band level society.

Changes in lithic technology from highly curated Paleo-Indian and Early Archaic tool kits to production of bifurcate points from flake blanks provides evidence for reduction in mobility and greater utilization of local lithics. Bifurcate points and stemmed points (Neville, Morrow Mountain, Stanly and Kirk points) dominate assemblages. In New Jersey, Middle Archaic sites that contain only a few bifurcate points are found around periglacial features, dune features, and high terraces. Middle Archaic sites with relatively high quantities of bifurcate points and other associated cultural material tend to be found adjacent to higher-order waterways such as rivers and bays (Treichler Bridge Site, Cape May Point Site, Rockelein Site). Caches of flakes associated with the bifurcate deposits at the Treichler Bridge Site and the Rockelein Site imply an intention to return to these sites. The feature diversity and site structure of larger bifurcate sites and other Middle Archaic sites (Treichler Bridge Site, 28Me1D, Rockelein Site) suggests that these sites cannot be classified as classic macro-band base camps, especially when compared to Late Archaic macro-band base camps (Carr 1998; Anderson et al. 2000; Cook 1960). Middle and Late Archaic sites are much more common throughout New Jersey where the introduction of food-grinding tools in artifact assemblages indicate an increased reliance on wild nuts, roots, seeds, and berries. Exploitation of fish and freshwater mussels is evident in the fill of refuse pits and the presence of net sinkers and harpoon heads.

Evidence of Middle Archaic occupation has been found at the Spring House Rockshelter in Oakland, N.J., the Apshawa Rockshelter in Bloomingdale, N.J., and at two sites in both Monksville and Canistear Reservoirs in New Jersey (Lenik 1999).

2.5.5 Late Archaic

The Late Archaic period (6000 to 4000 B.P./4,000 B.C. to 2,000 B.C.) represents a stabilization of cultural and environmental changes onset in the previous time period. These adaptations are, debatably, the result of major climatological and environmental changes that occurred throughout eastern North America during this time. The archaeological record of the Late Archaic suggests some population growth as well as more intensive utilization of sites in





preferred ecological settings. More repeated and intensive use of riverine settings is indicated. Moreover, use of more productively marginal resource areas increases and regional exchange networks appear for the first time. Technologically similar to the Middle Archaic, the Late Archaic continues a trend toward increasing variety in tool types and manufacturing techniques as distinct regional styles develop. Tools specialized for plant processing, and also for fishing and fish processing, appear in quantity. These technological developments, coupled with continued caching of tools and the development of storage pits, suggest a greater emphasis on base camp settlement patterns (Carbone 1982; Custer 1984; Custer 1996).

Overall, climatic changes during the Late Archaic would have significantly enhanced the productivity of some habitats, such as coastal marshes and mixed interior forests, while diminishing the output of traditional resource rich areas (Carbone 1982; Custer 1996; Pagoulatos 1991). Settlement patterns and subsistence strategies appear to have been radically altered to accommodate local populations in the face of changing resource availability. Significant increases in population density are noted in some areas as is a general decrease in mobility. Especially in proximity to riverine settings, large sites characterized by dense scatters of artifacts begin to appear. Use of swamp and marsh habitats intensifies during this period (Custer 1996: 188). Finally, the far-reaching distribution of high-quality lithics may suggest the development of regional exchange networks as some groups' mobility patterns brought them into closer contact with other regional communities (Carbone 1982; Custer 1996; Pagoulatos 1991).

Increased sedentism and use of a greater variety of environments during this period is characterized by economic and technological diversification which included heavy grinding tools for plant processing (mortars, pestles, sandstone bowls) stone knives, bolas, full-grooved and $\frac{3}{4}$ -grooved axes, variation in projectile designs as broadspear, narrow stemmed, or fishtail points, as side-notched and corner-notched Brewerton and Vosburg points and as narrow-stemmed/narrow and weakly side-notched Poplar Island, Bare Island, Lackawaxen Stemmed and Normanskill points. Tool manufacturers drew on a wide variety of local materials such as argillite and quartzite and exotic raw materials obtained from extensive trade networks.

These cultural adaptations have been argued to be the result of significant changes in rainfall patterns throughout the period that produced a much drier climate than the preceding period. Also, important to local resource distribution were changes in marine environments occurring at this time. Slowing sea level rise favored a stabilization of coastal environments which led in turn to the development of shellbeds and estuarine marshes (Carbone 1982; Custer 1984; Custer 1996). Economic and technological changes reflect the selection of a broader range of habitats for settlements with larger encampments located near major rivers and small sites near coastal areas, estuaries, freshwater springs, lakes and drainage basin divides to take advantage of resource bases created by the formation of estuarine marshes and the development of oak-hickory forests. Cemetery sites are also identified for this time period,





evidence of increased mortuary ceremonialism throughout the Eastern Woodlands during the Late Archaic. In New Jersey, most Late Archaic site excavations have occurred in the Upper Delaware Valley. Other notable Late Archaic sites are the Red Valley Site, Monmouth County, the Koens-Crispin Site, Burlington County, and the Savich Farm in Marlton, Burlington County on the Outer Coastal Plain, a cemetery site dated to 2300 to 1900 B.C. (Regensburg 1971). Savich Farm, a multi-component Early Archaic to Late Archaic site, contained 41 cremated burials accompanied by Koens-Krispin points, bi-pennate atlatl weights, chipped stone adzes, and full grooved axes.

2.5.6 Terminal Archaic

The final phase of the Mid-Holocene, called the Terminal Archaic (3,000 to 2,000 B.P.; 2,000-1,000 B.C.), is marked by innovations in permanent housing and re-usable storage technologies related to increased sedentism and, perhaps, population growth in the region. The introduction of steatite bowls and technological changes in projectile points signal a socioeconomic shift related to the intensification of a few key foraging strategies. Climatic modulation from mesic (warm, moist) to xeric (cool, dry) may have created changes in resource distribution that favored shifts in subsistence-settlement strategies that included an emphasis on anadromous fish along major river systems and a new interest in estuarine resources (Custer 1984: 37; Stoltman and Baerreis 1983; Thieme and Schuldenrein 1996). The introduction of broadspear technologies has been interpreted as an innovation geared to fish capture and/or processing (Kinsey 1972:346-7; Custer 1984:40). Evidence of shellfish gathering has been dated to this period though its practice intensifies in succeeding periods (Brennen 1977; Wyatt 1977; Williams and Thomas 1982:124-125). Sites such as the Koens-Crispin Site, Burlington County and the Savich Farm Site, Burlington County provide evidence of the appearance of innovative hunting tools, processing tools, and cooking methods, including large, broad, thin Lehigh, Perkiomen, and Susquehanna points and soapstone cooking vessels. Forests dominated by nut-bearing trees such as beech, chestnut, hickory and oak provide a variety of exploitable resources for larger social units.

Forty-five Late and Terminal Archaic Period sites have been recorded in the northern Highlands region occurring in various environmental setting such as river and stream floodplains, around lakes, wetlands, freshwater springs, on upland terraces, hilltops, and in rockshelters (Lenik 1999). They vary in size and duration of occupation but are all mainly focused on the procurement and processing of subsistence resources (Lenik 1999).

2.5.7 Early Woodland

The Early Woodland period (3000 to 2000 B.P./1000 B.C. to A.D. 0) marks the shift to modern climatological and environmental regimes in the Eastern United States. Vast deciduous forests dominate the landscape and temperature and rainfall patterns take on marked seasonal fluctuations. Mixed Oak-Chestnut forests characterized by a rich variety of tree species develop and added to the resource abundance of the region (Shelford 1963; Custer, 1996).





Culturally, the environmental changes of the Early Woodland favored the continued development of trends initiated during the Late Archaic. Intensification in the use of plant foods as well as a trend toward increasing degrees of sedentism mark the transition from the Archaic to Woodland eras. Floodplains and their surroundings continued to attract base camp settlement in an even more focused manner than the previous period. Finally, continuing trends of the Late Archaic, exchange networks and mortuary ceremonialism became further elaborated throughout the Early and Middle Woodland (Carbone 1982; Custer 1984; Custer 1996).

Socioeconomic patterns during this period are characterized by band level society with the first evidence of community identity, mortuary ceremonialism, extensive trade networks for exotic raw materials, heavy reliance on fishing, documented shellfish exploitation, and the manufacture of chipped tools made from a variety of fine and coarse-grained lithics. Most importantly, the introduction of ceramic technology, most likely influenced by groups to the south and west, and initial experiments with plant domestication characterize the period.

Two early ceramic types, Marcey Creek and Ware Plain, are flat-bottomed vessels with lug handles and straight sides that mimic steatite bowls but demonstrate a shift to more intensive usage of storage technologies and more readily available raw materials. These styles are gradually replaced by conical, grit-tempered, coil-constructed vessels marked on both their interiors and exteriors by cord-wrapped paddles, a style called Vinette I.

A number of temporally and spatially discrete archaeological cultures have been defined for the Early and Middle Woodland that relate to the increasing sedentism and territorial demarcation that occurred during the transition from Archaic to Woodland. The Orient Culture of the eastern portions of northeastern North America influenced economy and technology for the inhabitants of New Jersey from approximately 3,200 to 2,600 B.P. Focused more towards the coastal areas of New York and New Jersey, the Meadowood Culture developed contemporaneously with the Orient Culture (Chesler 1982; Pagoulatos 1991). Other important cultural systems in New Jersey include the Adena-Middlesex Culture and the Bushkill culture, identified by its distinctive Teardrop, Lagoon, and Rossville points. The Early Woodland Period Meadowood phase and the Middlesex phase are represented by several sites in New Jersey, including the Rosenkrans Site in Sussex County where thirteen burials contained prestige items that included a copper boatstone, copper and whelk shell beads, and a number of large broad-stemmed Cresap points (Kraft 1974). Other notable Early Woodland sites include Abbott Farm, Mercer County, the Raccoon Point Site, Gloucester County, and the Woodbury Annex Site, Burlington County.

Evidence of the Early Woodland (1,000 B.C.- 1 A.D.) has been found at three sites in the northern Highlands region; two in Harriman State Park, N.Y. and one in Oakland, N.J.





2.5.8 Middle Woodland

The Middle Woodland Period (2000 B.P. to 1100 B.P./A.D. 1 to A.D. 900) is represented by settlement patterns focused on the seasonal fission/fusion of hunter-gatherer social groups between large and small camps. Intensification of coastal resource exploitation is demonstrated in the large-scale exploitation of seasonal resources including shellfish at large coastal sites occupied on a semi-permanent basis. Large shell middens are reported along the estuaries and bays of the ICP, located on promontories overlooking tidal marshes. Diversity in mortuary ceremonialism, ceramic diversity, and the beginnings of cultivation of maize, beans, tobacco, and squash mark the transition to more sedentary occupation patterns. Horticulture is not evident during this period.

Middle Woodland cultures that arose from these sociocultural changes are marked by the increasing sophistication of ceramic technology and style, and a marked decline in elaborate mortuary practices. Abbott-Zoned decorated ceramics characterized by shell tempering and the manufacture of very large pots demonstrate the elaboration of ceramic styles. The period is marked by net-impressed and zoned ceramic styles, by Rossville, Fox Creek, and Jack's Reef projectiles and by the presence of a variety of groundstone implements including hammerstones, anvilstones, pestles, and netsinkers. Distinctive regional cultures marked by various styles of plain and decorated ceramics, bone tools, and variety in projectile point styles have been outlined for the period. In the upper Middle Atlantic region, the Fox Creek Culture continued a subsistence emphasis on fish, small game, and starchy plant species. Fox Creek culture is marked by stemmed and lanceolate Fox Creek points and Petalas blades. Elsewhere in the region, the Kipp Island Culture (1,700 to 1,150 B.P.) and the Webb Phase Culture (1,600 to 800 B.P.) intruded into New Jersey from their core areas in New York and Delaware, respectively (Chesler 1982; Pagoulatos 1991). The Kip Island Culture, with distinctive corner-notched and pentagonal Jack's Reef points, is prevalent throughout New Jersey. Sites such as the Abbot Farm site, Mercer County and the Faucett Site represent the some of the most notable expressions of the Middle Woodland in New Jersey. At the Faucett site, an oval house pattern approximately 9.0 meters by 7.6 meters (30.0 feet by 25.0 feet) indicates a nuclear family household pattern.

2.5.9 Late Woodland

The Late Woodland period (1100 B.P. to 400 B.P./ A.D. 900 to A.D. 1600) for the northeastern United States is the last period commonly classified as prehistoric. Environmental and climatic characteristics have assumed fully modern form by this point in time. As a result, much of the cultural change manifest during this period is the result of changes in the social environment.

Development of modern ecological and climatic conditions during the Late Holocene (2,000 B.P. to present) allowed for the stabilization of settlement patterns and a gradual shift from generalized foraging and the exploitation of native seeds and grasses to the use of





domesticated plants. At the beginning of the Late Woodland, settlement patterns exhibit a shift away from estuarine settings in favor of more exclusively floodplain locations. Settlement pattern is characterized by unfortified hamlets, camps, and long houses with a decrease in band territory size as seasonal economic strategies included hunting and foraging in upland areas as well as shellfishing and maize horticulture in riverine settings. A settlement model focused on seasonal fission/fusion of social groups along river drainages developed in the Inner Coastal Plain (Kraft 1986:101; Mounier and Martin 1992). Increasing population density throughout the Late Woodland led to the development of fully sedentary villages in some areas by the close of the Late Woodland.

The introduction of technologies from the south and west throughout the period aided the transformation to fully sedentary lifestyles and horticultural subsistence. Both the bow and arrow and maize agriculture were first introduced into the northeast during the Late Woodland. Both were quickly adopted by local groups as major parts of their subsistence strategies. Ceramics continued to develop during this period as vessel walls became thinner and decorations more complex. Conversely, much of the Late Woodland also shows a marked decrease in exchange and mortuary ceremonialism in comparison to earlier periods (Kraft 1986a, 1986b; Kraft and Mounier 1982; Custer 1996). Perhaps the result of population movements at the beginning of the period, exchange networks do not begin to re-assert themselves until nearly the end of the Late Woodland. Forty-four Middle (1 A.D. -1,000 A.D) and Late Woodland Period (1,000 A.D.- 1600 A.D.) sites have been documented in the northern Highlands region.

2.5.10 Historic Contact Period

The Historic Contact period (450 B.P. to 250 B.P./ A.D. 1600 to A.D. 1750) for the northeastern United States is the first period of written history. Environmental and climatic characteristics have remain the same as the Late Woodland. As a result, much of the cultural change manifest during this period is the result of changes in the social environment, specifically the arrival of Europeans.

Henry Hudson first explored the eastern coast of North America. On September 12, 1609 he entered New York Bay. In the following years the Dutch made regular voyages to the mouth of the Hudson to trade with the Native Americans and settled Manhattan Island in 1624. Early attempts at settlement in New Jersey were unsuccessful due to hostilities from the natives. The entire northeastern portion of New Jersey and southeastern New York was an area of frequent interaction between the Dutch and Native Americans into the 18th century. The material record of the Historic Contact Period is reflected in many archaeological sites in the northern Highlands region.

Thirty Contact Period archaeological sites have been recorded in the Ramapo Mountains. This archaeological evidence is important for the Highlands region because it demonstrates a





continued Indian occupation during the Contact-Early Historic Period (1600 A.D.- 1750 A.D.). There has been some dispute as to whether or not Native Americans ever left the region, but strong archaeological evidence shows a continued occupation through historic times (Lenik 1999). Three Contact-Early Historic Period archaeological sites are located in the Bergen County Park lands; the Darling Rock House (28-Be-179) and the Darlington Rock Shelter (28-Be-178) and an unnamed rockshelter (233-136) identified in the Bergen County Historic Sites Survey (1984-85).

2.6 Historic Context

The Ramapo Mountains have been the focus of settlement for populations in the region since prehistoric times. Seventeenth century travelers and surveyors noted the locations of several Lenape villages dispersed along the Ramapo and Mahwah Rivers, with a major one being situated on the current location of Ramapo College (Bischoff 1979:17). Indeed, the name Mahwah is said to have derived from a meeting place and site of annual ceremonies for Native American settlements, called “mawewi”. European settlement in the Bergen area developed around a similar riverine focus as settlers moved west out of population centers in New York.

The first European settlers to the northern New Jersey area were the traders of the Dutch East and West India Companies who established trading posts in New Amsterdam by 1625. Small numbers of these traders moved across the Hudson and established farms in the area of Bergen, the present Jersey City by 1664 (Bischoff 1979). People for New Netherland as well as non English speaking immigrants continued to cross the Hudson and explore what had become East Jersey. During the 17th century there was frequent contact between the Dutch and the Indians, and after 1664 the English and the Indians (Lenik 1999). The Europeans were primarily concerned with financial gain and appear to have been dependent on the Indians for food supplies in some instances. Around 1640, Indians at Tappan in northeastern Bergen County traded maize with the Dutch for cloth.

The first person on record to settle the area was Blandina Bayard (Bischoff 1979). She established an Indian trading post in the wilderness of Mahwah around the year 1700. On August 10, 1700, she received an Indian deed for a large tract of land in present day Mahwah, Oakland, and Franklin Lakes. At the time there was dispute as to whether the area was part of New York or New Jersey.

Other early settlers to Ramapo area included German Palatine immigrations that had come to New York from the Rhine Valley. An English land proprietor named Peter Fauconnier, convinced some of the immigrants lease to land from him in the newly acquired Ramapo tract (Bischoff 1979). Some of the first tasks facing the German settlers were the construction of shelters and





creating farmland from meadows. There are references to log cabins in the area and to little log cabins full of stumps (Bischoff 1979; 31).

The goals of settlers at the time was at first trading but as conditions in the region changed Europeans became more self sufficient and constructed more permanent settlements and agriculture. The Dutch and English became more interested in permanently acquiring land from the Indians, who were now viewed as an obstacle. Numerous land transactions were made for various items of European trade goods such as clothing, alcohol, blankets, guns, tools, and metal objects. The settlers began clearing larger tracks of forest, removing stumps, and tilling the virgin soil. One result was the many stone fences that still exist in the Mahwah area (Bischoff 1979; 31) (Photograph 1).



Photograph 1- Typical Example of Stone Fence from Early Farming Period .

The boundaries of “Bergen County” changed many times between 1683 and 1852. Before 1710 the project area was part of Essex County. Around 1710 the area of Bergen County was enlarged to include land on the west side of Hackensack River to the Passaic River (Rutsch 1980). By 1790 the county population was 12,601 with settlements still scattered throughout the county. Settlement was sparse and limited to small frontier outposts and scattered homesteads. Farming was limited to subsistence levels with small surpluses planted to pay for



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taxes and expenses when possible. Typical crops raised by the mountain famers included rye, buckwheat, corn, potatoes, and oats and varieties of livestock including pigeons.

At the time roads in the Ramapo frontier were primitive and only slightly improved if at all from Indian trails. Water routes offered the easiest method of early transportation. The Ramapo River was not entirely navigable so the Hackensack River became the chief commercial waterway of the area. As a result major roads were not built until the early 18th century. Pre-Revolutionary War roads within the northwest section of Bergen County that still exist in their original alignment include U.S. Route 202, originally called Valley Road, Island Road, Ridge Road, Myrtle Avenue, and Darlington Road (Rutsch 1980).

The general study area was the stage for a great amount of activity during the Revolutionary War. When the British seized New York City in the summer of 1776, they gained control of transportation and communication routes along the Mid-Atlantic seacoast. American forces have to use inland routes for troop movements and supplies. Ramapo Valley Road (Route 202, provided to transportation as it passed through the first break in the Hudson Highlands west of the Hudson River Valley (Bischoff 1979). This area was locally known as “the Clove” and was of great significance for Patriotic forces and the British. An early Hessian map depicts the topography and layout of roads in the area (Figure 4). Ramapo Valley Road depicted as “Clove Road” on Figure 4 was a key route Continental Army as Washington tried to outmaneuver the British through the Ramapos.





Figure 4: Martin, Capitaine and Charles Aug de Gironcourt, Hessian Map of North Jersey, 1779.



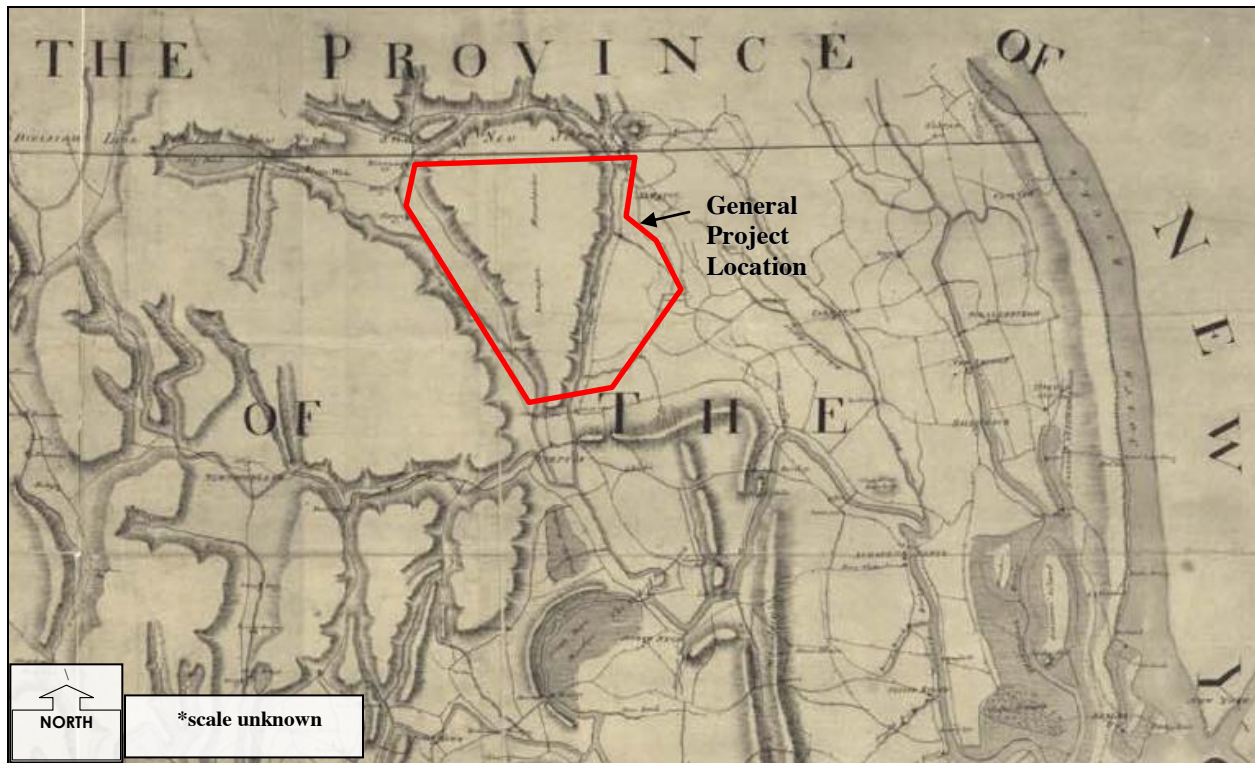


Figure 5: John Hills, Map of the Northern Parts of New Jersey, 1781.

After the revolutionary war the Highlands area returned to relative isolation (Figure 5 and 6). Transportation and communication was no longer limited to inland routes and the Clove lost its national importance as a bypass through the mountains (Rutsch 1980). In the Campgaw Mountain area, the scenic views of the mountains and valleys attracted wealthy estate builders like George Crocker in the late 19th and early 20th centuries and Clarence Chapman c. 1900-10.

The predominant cultural group continued to be the Dutch throughout the seventeenth and eighteenth centuries. Their influence is particularly evident among the surviving structures from this era. Dutch influenced architecture remains in the form of local brownstone and frame, gambrel-roofed one-and-one half storied, low ceilinged farmhouses (Rutsch 1980). Settlers during the colonial period still practiced self sufficiency with activities such as lime burning, leather tanning, carpentry, wheel righting, shoemaking, weaving, and iron forging being common in the area. An exception to this self sufficiency was the settlers' dependence on the local miller (Rutsch 1980). Grains were ground at mill sites that once dotted the landscape along the waterways. Notable among Mahwah's early mill sites is the Hopper Gristmill Site (SR 11/06/1980, NR 3/3/1980) along Ramapo Valley Road (Figure 7).





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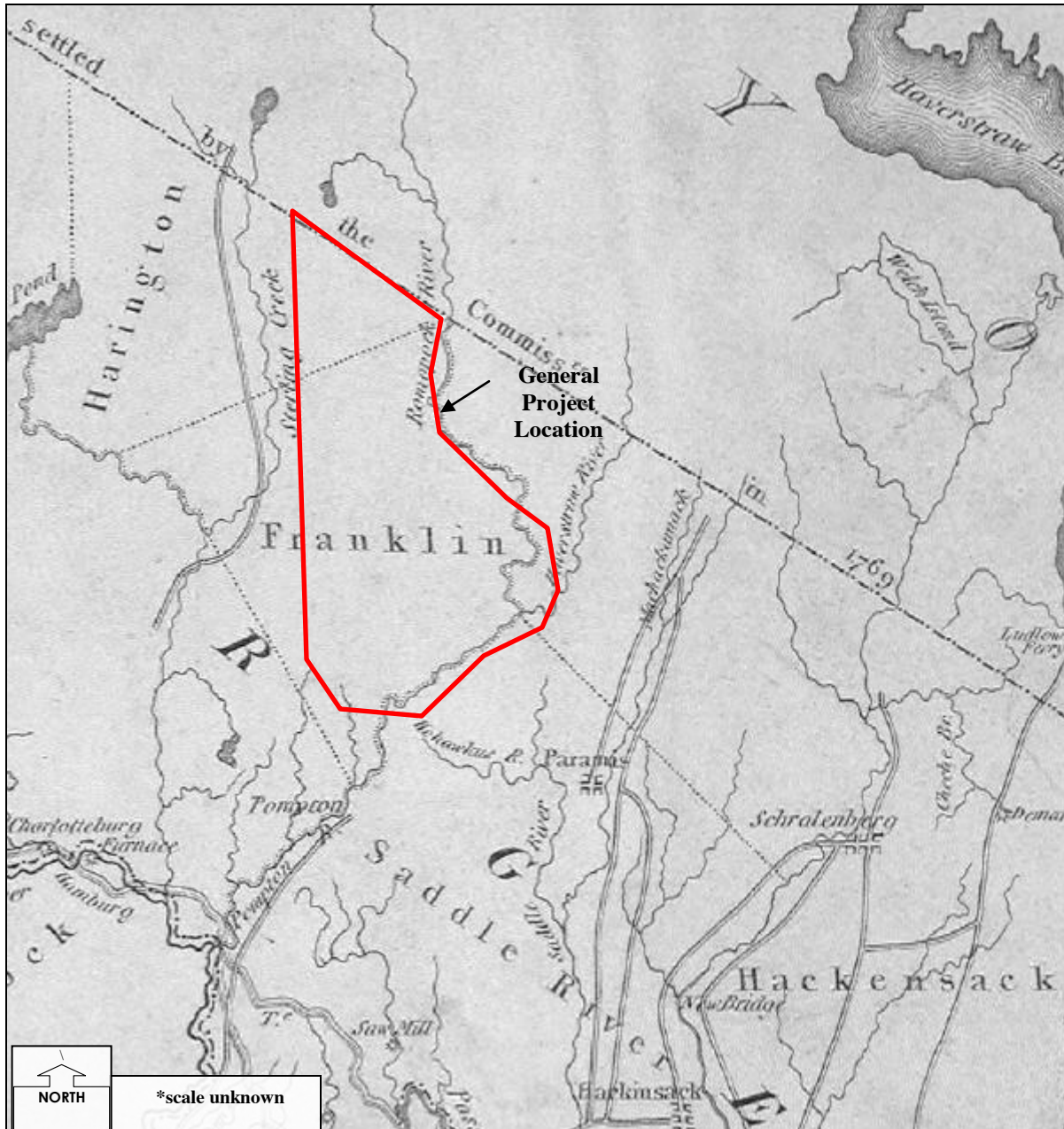


Figure 6: William Watson, Map of the State of New Jersey, 1812 .





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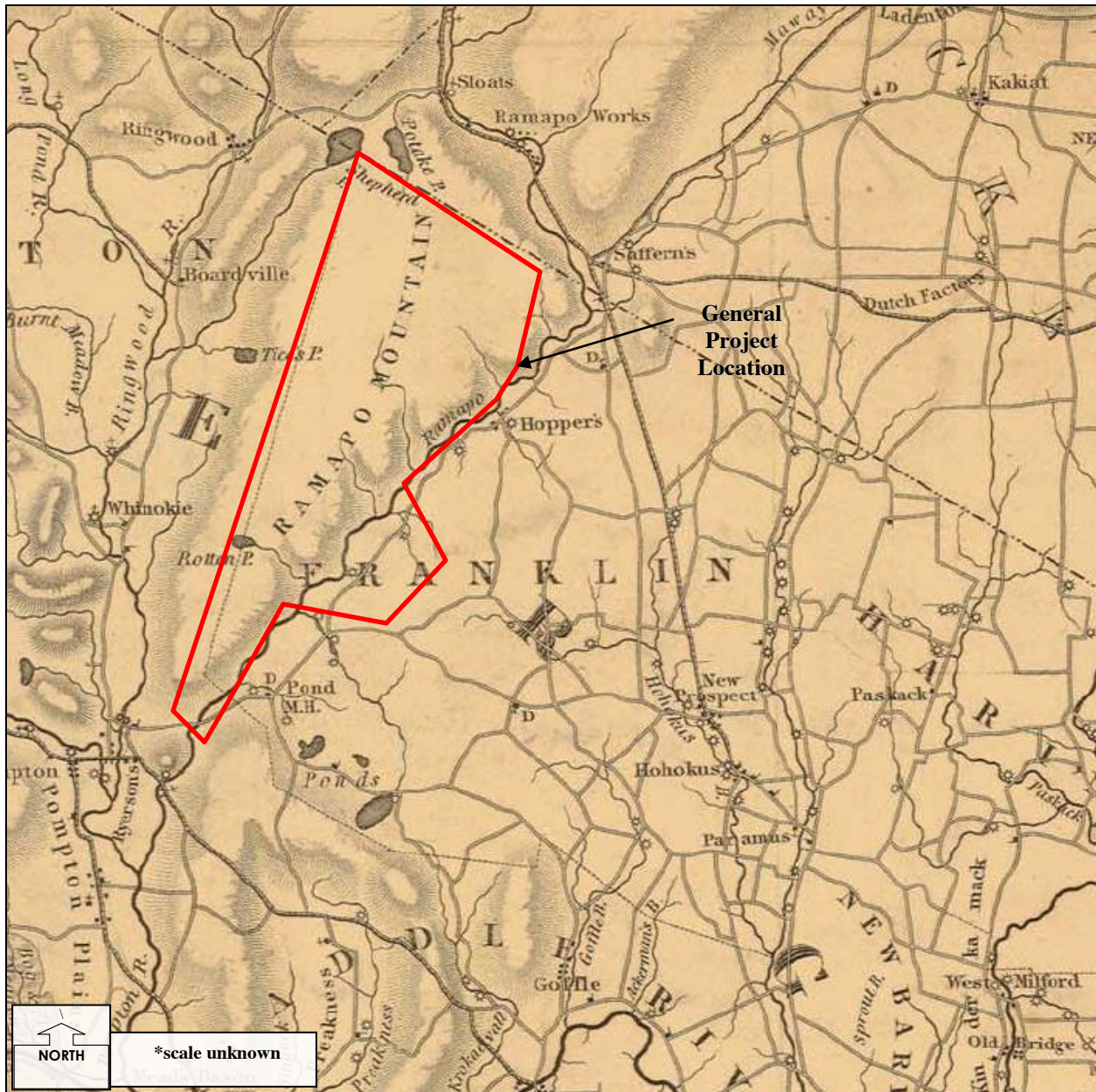


Figure 7: Thomas Gordon, Map of New Jersey, 1833.

In the mid 19th century the development of the railroad system through the northwest section of Bergen County opened the area to larger markets and helped connect the rural mountains to larger urban areas. By 1847 the Paterson and Ramapo line was completed through northwest Bergen in 1848. In 1852 it was renamed the New York, Lake Erie and Western Railroad (Figure 8). The railroad did not introduce a rapid change to the agricultural economy but rather allowed





farmers to carry produce and access larger markets in nearby cities (HSS 1984-85). There was no official passenger station in Mahwah until 1871.

The estate phase continued through the nineteenth century with more prominent people moving into the Mahwah area. These builders contributed to the Italianate style architecture found throughout the area. The country estate phase was facilitated by the Mahwah passenger depot which provided the area access to New York and attracted wealthy vacationers. This phase of estate building began around the mid-19th century and continued until the Great Depression (HSS 1984-85).

One prominent figure in Mahwah's estate history is Alfred B. Darling. He made his fortunes in hotel management and real estate and purchased land in Mahwah in 1872. He developed a dairy business to supply his hotel in New York and bred racehorses. The general area around Darling's farm came to be called "Darlington", and is still called so today (HSS 1984-85).

During the 19th century there were still communities of Ramapo Mountain people living in the Bergen County and Mahwah area. For example the Green Mountain Valley Settlement (233-120) was home to some of these people who worked as domestics and farm laborers at the local estates. Other settlements were found in the Silver Lake section of Mahwah on Monroe Ridge, along Fyke Creek at Campgaw Mountain southeast of Ramapo Valley Road (Rutsch 1980).

The West Mahwah area containing the Ramapo Mountains was also the focus of mining and charcoal industries during the 19th century. Iron furnace and forge industries in the nearby mountains of New York State required large amounts of charcoal. Historic sites 233-119 and 233-123 are associated with colliers, some of whom were European immigrants, who came to chop wood in the winter and tend burning pits from April to November (HSS 1984-85). The Butler mine site (233-124) is a remnant of iron mining in the Ramapo Mountains. The mine was in operation before and after the Civil War (HSS 1984-85). The Hopkins and Dickinson Manufacturing Company which produced metal castings in a factory along the Ramapo also explored the adjacent mountains for viable ore deposits. Nickel bearing rock was found on Monroe Ridge and a mining site (233-122) is still visible today (HSS 1984-85).

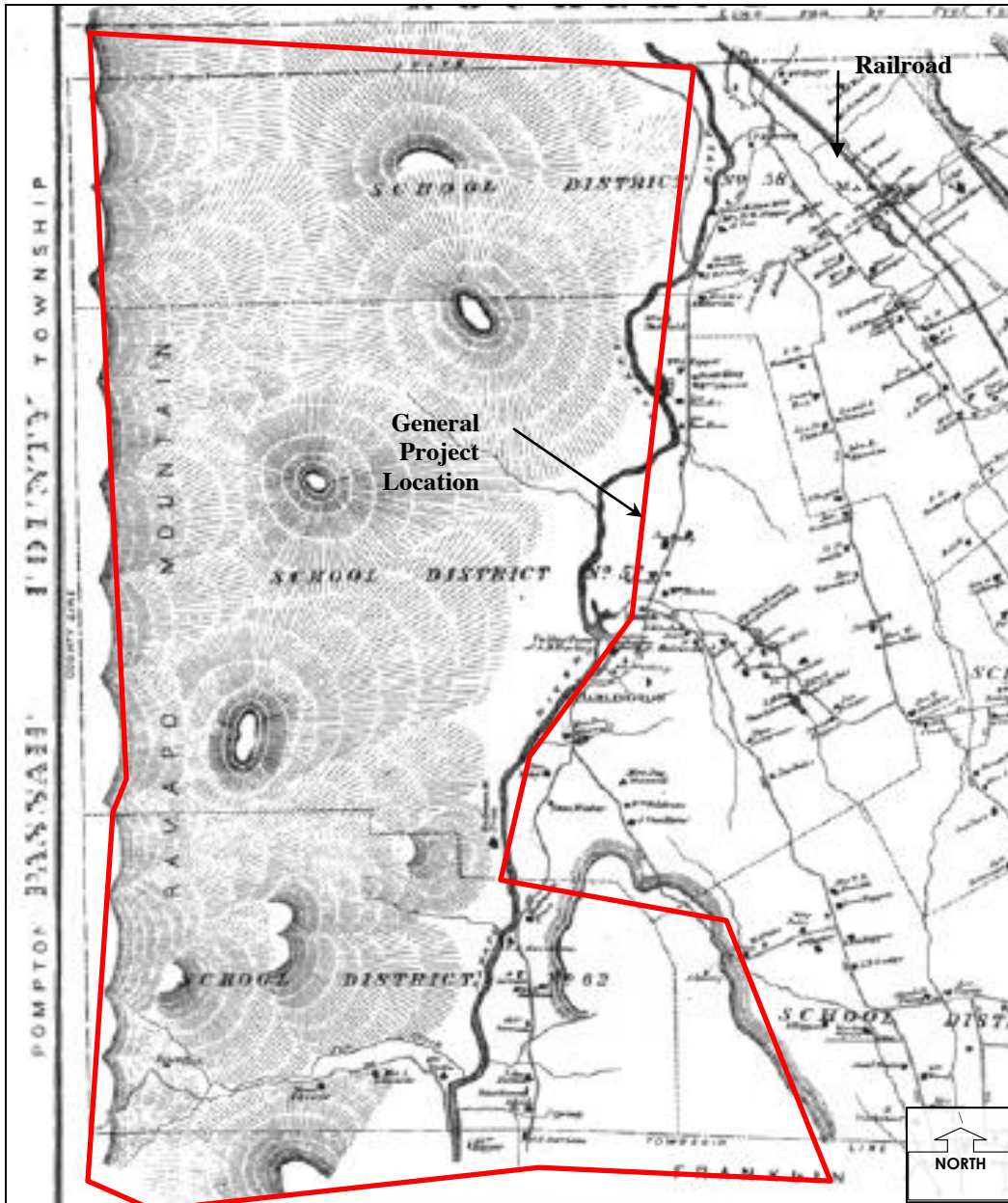


Figure 8: A.H. Walker Atlas of Bergen County, Hohokus Township, 1876. One inch is equal to approximately 1,980 feet

Into the twentieth century, the growth of the area was slow and economy remained largely agrarian. The population of Mahwah began the 20th century with approximately 1,220 residents. There still remained no formal “Main Street” or defined “downtown” to the Mahwah area. The railroad depot and neighborhood along Franklin Turnpike contained a few hotels, rooming houses, blacksmiths, and stores and provided the most concentrated area of





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development. This is a contrast to the contemporary downtown growth that was beginning in the late 19th to early 20th centuries in neighboring towns such as Ramsey (HSS 1984-85).

The population in the area steadily increased during the mid-20th century. After WWII a county wide building expansion contributed to growth of the county's municipalities. Suburban growth expanded in Mahwah and included new housing, schools, stores, shopping centers, and numerous improvements to infrastructure needed to accommodate an increasing population (HSS 1984-85). In 1955 Ford Motor Company opened the nation's largest automobile plant in north Mahwah. This industry helped contribute to growth of Mahwah and local businesses until the 1980's when it closed.

The residential population of Mahwah was 10,800 in 1970 and 12,127 in 1980. Because of its vast holdings of parkland and areas of undeveloped farmland, the area has retained a more rural character than most other municipalities in Bergen (HSS 1984-85). Conditions today show an increase in development with more farmland being subdivided and a growing number of commercial buildings and townhouse being built. The Ramapo Mountains County Park represents important areas of protected open space in the Highlands area of northern New Jersey.





3.0 Results of Records Review

Background research at NJHPO and NJSM focused on the review of registration, eligibility, and nomination records for previously identified historic and archaeological resources and correspondence related to the evaluation of these identified resources, as well as a review of all related mapping and reporting on these known cultural resources. NJHPO records related to both planning surveys and regulatory investigations as well as information on file in historic context files were utilized to identify and characterize registered historic and archaeological properties within and surrounding the project area by each resource's location, estimated age and function, and cultural associations. NJHPO copies of regulatory and planning survey reports were also examined, with the locations of these investigations noted on project maps. A significant number of historic and prehistoric resources have been identified in a planning survey for Bergen County, The Bergen County Historic Sites Survey for Mahwah Township conducted in 1984-1985. Several archaeological sites identified in this planning survey have not been recorded at the NJSM and are referred to by the site numbers in the survey, prefix 233-site number. NJSM records searches included a review of site registration files and maps as well as of published early twentieth century surveys of archaeological resources in New Jersey (Skinner and Schrabish 1913; Spier 1915; Cross 1941). These sources provided information on the types, locations, and sizes of archaeological resources within and surrounding the project area. Statements of historical significance are based on the finding made in previous cultural resource surveys and/or evaluations. A total of 23 reported archaeological and historic resources were identified as a result of these records reviews.

Table 2. Previously Recorded Resources within the Ramapo Valley County Reservation.

Site Number	Site Name	Site Age/Type	Water Source and Distance (ft)	Eligibility Status
233-136		Prehistoric Contact/ Rockshelter	Halifax Brook, directly west	Previously excavated/ undetermined
233-141		Prehistoric/ Rockshelter	Bear Swamp Brook/ directly southwest	undetermined
28-Be-87	Hohokus Township	Prehistoric/ Rockshelter	Bear Swamp/ unknown	undetermined
28-Be-	Darlington	Woodland through	Unnamed	Previously





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178	Rockshelter	Contact	stream/ 30.0 feet west	excavated/ undetermined
28-Be-179	Darlington Rock House	Late Archaic, Woodland, Contact	Unnamed stream/ 300.0 feet southwest	Previously excavated/ undetermined
32	Darlington Schoolhouse	Historic Building/ c. 1892	N/A	Eligible
233-116	Mountain Cemetery	Historic Site/ 19 th and 20 th century	N/A	Eligible
233-117	Robert J. Davidson building ruins	Historic Site/ early 20 th century	N/A	Eligible
233-118	Jacobus De Groat House	Historic Site/ c. 1800	N/A	undetermined
233-119	Italian Company's Lot	Historic Site/ c. 1860's- late 19 th century	N/A	undetermined
233-120	Green Mountain Valley Settlement	Historic Site/ 19 th to early 20 th century	N/A	undetermined
233-121	Halifax Farm Site	Historic Site/ 19 th century	N/A	undetermined
233-122	Nickel Mine	Historic Site/ c.1872-1881	N/A	undetermined
233-123	John C. Demarest/ Cornelius Demarest charcoal production site	Historic Site/ c. 1870's	N/A	undetermined
233-128	MacMillan Reservoir	Historic Site/ c. 1902	N/A	undetermined
233-129	Goat Farm ruins	Historic Site/ 20 th century	N/A	undetermined

Prehistoric archaeological sites 233-136 and 233-141 were identified in the Bergen County Historic Sites Survey (1984-85). Site 233-136 is located south of Herman Hill in the Maple Swamp vicinity approximately 200.0 yards south of the Hoeflerlin Trail. This shelter is of large size and located in close proximity to three water sources (Halifax Brook, a spring beneath the talus boulders, and the swamp west of the shelter). Musket balls and pipestems were found in





the shelter possible evidence of trade with the Dutch settlers (HSS 1984-85). Site 233-141 is located along the north bank of Bear Swamp Brook. This is a small rockshelter with a southwest opening and has close access to fresh water (HSS 1984-85).

Located in former Hohokus, present Mahwah, archaeological site 28-Be-87 was first identified in the Archaeological Survey of New Jersey by Alanson Skinner and Max Schrabisch, 1913. Prehistoric site 28-Be-87 is a rockshelter in the vicinity of MacMillan Reservoir along the northern most end. It is recorded as; "A small rock dwelling...1 mile east of Bear Swamp and about 3 miles northwest of Darlington. It occupies a gully in one of the most inaccessible portions of the Ramapo Mountains and it contained but few traces of Indian origin, among them being chips, fire-cracked pebbles and some rejects" (Skinner and Schrabisch 1913;73). This site was not inspected during the Bergen County Historic Sites Survey (1984-85). The current condition and eligibility status are undetermined.

Prehistoric sites 28-Be-178 (Darlington Rockshelter) and 28-Be-179 (Darlington Rock House) are both rockshelters located along the Hoeflerlin Trail. Both site show archaeological evidence of the Prehistoric and Contact Period Native American occupation. Darlington Rockshelter (28-Be-178) was inspected during the Bergen County Historic Sites Survey (1984-85) and was give inventory number 233-137. It is located south of Herman Hill in the Maple Swamp vicinity along the Hoeflerlin Trail. This site has been tied to historic documentation of Blandina Bayard early settlement of the area (HSS 1984-85). The Darlington Rock House (28-Be-179) was excavated in 1923 by A.H. Heusser and later recorded at the NJSM by Edward Lenik (1988).The condition and eligibility status of these sites is undetermined.

The Darlington School House (NJHPO 32) is located on 600 Ramapo Valley Road. It was constructed in 1892 in the Richardsonian Romanesque style and was designed by Dudley Newton. The building has been determined to be eligible for listing on the State and National Register of Historic Places (SHPO COE 6/1/04).

Historic sites 233-119 and 233-123 are associated with colliers who produced charcoal for the iron furnace and forge industries of New York State. They were not inspected during the Bergen County Historic Sites Survey (1984-85). Archaeological evidence of these historic sites, would likely manifest as disturbed forest with blackened charcoal depressions. Archaeological evidence may yield information pertaining to historic charcoal production camps.

The historic nickel mine (233-122) is associated with the Hopkins and Dickinson Manufacturing Company which produced metal castings in a factory along the Ramapo also explored the adjacent mountains for viable ore deposits. Nickel bearing rock was found on Monroe Ridge and a mining site (233-122) is still visible today (HSS 1984-85).

The Mountain Cemetery (233-116) is located in the Silver Lake area of the Ramapo Valley County Reservation west of the Mountain Road extension (HSS 1984-85). The cemetery





contains 19th and 20th century burials associated with Ramapo Mountain people's community in the Stag Hill area. The cemetery is of irregular shape and on uneven terrain. The boundaries were undetermined by the Bergen County Historic Sites Survey (1984-85) but the site was determined to be of historic significance (HSS 1984-85).

Robert J. Davidson building ruins (233-117) is located to the northwest of Silver Lake, on the southwest edge of Bald Mountain along the Hoeflerlin Trail. The archaeological site is recorded as the fieldstone foundation remnants of the main house and barn along with four small outbuilding whose function has not been identified. It was determined to be a significant site pertaining to Mahwah's estate phase of development (HSS 1984-85). Robert J. Davidson was an executive with the American Brakeshoe and Foundry Co. The farm was purchased from Edward J. and Jane DeGroat in 1906.

The Jacobus De Groat House (233-118) is located west of Silver Lake on the east side Lakeview Drive. It was previously the oldest and most intact example of an early log wall cabin in the Silver Lake-Stag Hill area. The house was constructed c. 1800 but was destroyed by arson in 1983. It was previously recommended eligible for its architectural integrity. It was stated that little was known about the building methods and ownership histories (HSS 1984-85). This site may have the potential yield information as an archaeological site pertaining to the early settlement period of the Highland region.

The Green Mountain Valley Settlement (233-120) was the home to some of the Ramapo Mountain people in the late 19th century. It is located in the Halifax section northwest of Havemeyer Reservoir along the north side of Halifax Road. The site is manifest as five stone foundation elements of various functions and an extensive stone wall system. Some dwellings and cellar pits have been identified but other structures are of unknown functions. The Ramapo Mountain people worked as domestics and farm laborers around the area estates. The site needs further evaluation and documentation to determine its integrity and/or significance (HSS 1984-85).

The Halifax Farm site (233-121) is located on Monroe Ridge south of the Havemeyer Trail. A small farm building was identified and an extensive rock wall system in the Bergen County Historic Sites Survey (1984-85). The condition and eligibility status of these sites is undetermined.

The MacMillan Reservoir (233-128) is located between the Reservoir Trail and the Silver Trail in the Middle Valley west of the Ramapo River. The reservoir was dug in the early 20th century c. 1902. It is irregularly shaped approximately one mile in length by a quarter mile in width. The reservoir is associated with the estate phase of development. It supplied water to the George Crocker Estate. There is a stone dam and wheelhouse remains present at the south end of the



lake and there was an extensive pipe system to carry the water supply (HSS 1984-85). The eligibility status of the site is undetermined.

The Goat Farm ruins (233-129) are located on the north side of Bear Swamp Road, east of the intersection with the Silver-Yellow Trail. The site consists of the stone wall ruins of two buildings associated with the goat breeding farm of Hooker I. Coggeshall in 1927. The eligibility status of the site is undetermined.

Table 3. Previously Recorded Resources within Camp Glen Gray.

Site Number	Site Name	Site Age	Water Source and Distance (ft)	Eligibility Status
233-131	Algiers Farm and Lookout	Historic Site/ 19 th century	N/A	undetermined
233-132	Sanders Farm Site	Historic Site/ 19 th century	N/A	undetermined
233-133	Peter and Mary Post – Francis Price Home Site	Historic Site/ Mid 19 th century	N/A	undetermined
233-134	Moses Edwards Cabin Site	Historic/ Pre-1861	N/A	undetermined

Historic Site 233-131 (Algiers Farm and Lookout) consists of the remains of a rectangular stone foundation. The site is located in Camp Glen Gray on the north end of the Fox Brook crossing. The Yellow Trail passes through the foundation. Additional research is needed to determine the owners of the farm and significance of the site.

Historic Site 233-132 (Sander Farm Site) is located north of Lake Vreeland along the north end of Fox River crossing (Photograph 2). It is manifested as the remains of the 19th century farming occupation by James Sanders. The remains of five buildings and service structures are recorded including the main farm building, a small barn, ice-house, mill building, and wood working troop cabin. Charcoal pits are also discernible throughout the area. The eligibility status of the site has not been determined.

Historic Site 233-133 (Peter and Mary Post-Francis Price Home site) is the site of a non-extant house from the mid-19th century or earlier. It is located northwest of Lake Vreeland along Midvale Mountain Road. The site is of particular local significance for its ties to the Price family. Francis Price lived in the home from 1877-1878. He was the son of Rodman Price the only New Jersey governor to come from Bergen County. Francis Price served as a Lt. Colonel of the N.J. 7th





Regiment during Civil War and was wounded in the battle of Gettysburg. He was promoted to Colonel and then brigadier general and also served as the secretary of the Oakland iron mining company. The eligibility of the site is undetermined.

Historic Site 233-134 (Moses Edwards Cabin site) is located on Midvale Mountain Road (Glen Gray Road) along the south side. It consists of the pre 1861 remains of the cabins unmortared stone foundations, rotting framing members, and scattered debris. Several stone walls radiate from the cabin in all directions (HSS 1984-85). The eligibility status is undetermined.

Table 4. Previously Recorded Resources within the Tamarack/Todd Recreation Areas.

Site Number	Site Name	Site Age	Water Source and Distance (ft)	Eligibility Status
28-Be-78	Franklin Township	Prehistoric		
28-Be-79	Franklin Township	Prehistoric	Ramapo River/ directly south	undetermined

Prehistoric sites 28-Be-78 and 28-Be-79 were first identified in the 1913 Archaeological Survey of New Jersey by Alanson Skinner and Max Schrabisch. Site 28-Be-78 is described as a rockshelter located in the southwestern part of the Ramapo Mountains, three miles north of Oakland (Skinner and Schrabisch 1913; 73). Site 28-Be-79 is recorded as one of two camp sites occurring in Franklin Township within a distance of 4 miles on the north bank of the Ramapo River (Skinner and Schrabisch 1913; 74). No information about the current condition or eligibility status of these sites is available.

Table 5. Previously Recorded Resources within the Campgaw Mountain Reservation.

Site Number	Site Name	Site Age	Water Source and Distance (ft)	Eligibility Status
233-145	William J. Pulis House	Historic/ 19 th century	N/A	undetermined

Historic Archaeological site 233-145 (William J. Pulis House) is located on Fyke Road in the parking lot near the entrance to the Maintenance Garage of the Bergen County Park Commission, Campgaw Reservation. The faint outline of a house foundation can be discerned





from evidence of stonework and scattered brick (HSS 1984-85). Other archaeological features such as a stone lined well and outhouse foundation are present on the site. The eligibility status of this site has not been determined.

According to the 1984-85 Bergen County Historic Sites Survey an early log building was known to have existed in the Fyke Road section of the Campgaw Mountain Reservation, but it has since been demolished.

3.1 Summary of Recorded Sites

Research at state agencies identified seven recorded prehistoric and contact period archaeological sites within the project area (Table 2-5). In the Bergen Park lands, prehistoric archaeological sites show extensive use of rockshelters as habitation sites by Indians during many periods of occupation (Photograph 3). There are also several open air camp sites are recorded. The archaeological evidence within rockshelters and open air campsites indicate a settlement pattern consisting of small camps that were occupied for short periods of time (Lenik 1999). People subsisted from a hunting and gathering economy and sites tend to be small resource procurement or processing camps. These sites may have been a component of a broader localized settlement pattern focused on the resources of the Ramapo Mountains and various tributaries to the Ramapo River.



Photograph 2- Overview typical rockshelter.



Sixteen Historic Sites were identified within the Ramapo Mountains County Park. All periods of Bergen County's development from the historic Contact Period to the estate phase are represented. The majority of historic sites are manifested as archaeological components such as building ruins, wall systems, cellar pits and other surface indicators of anthropogenic land use (Photograph 3).



Photograph 3 –Overview Sander's Farm Site, Established 1810.

4.0 Conclusions and Recommendations

4.1 Conclusions

The Literature Survey resulted in the identification of a total of twenty three cultural resources. One extant late nineteenth century building is within the project area, the Darlington School House (NJHPO 32), as well as, fifteen historic archaeological sites. Additionally, six prehistoric and contact period archaeological sites have been recorded within the Ramapo Mountains County Park. Formal findings of eligibility cannot be determined for the majority of known sites based on previous cultural resource investigations.



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4.2 Recommendations

Maser Consulting recommends further evaluation of known cultural resources within project area in order to determine their current condition and determine their eligibility status. Furthermore, site sensitivity modeling should be developed to determine probabilities for encountering undocumented cultural resources within the park lands. Any efforts to expand existing facilities or trail systems should require prior cultural resource investigations before any ground disturbing activities are undertaken.

Existing trail layouts should be considered for impacts to recorded archaeological sites. For example the Yellow Trail Passes directly through the Algiers Farm and Lookout site (233-131) in Camp Glen Gray on the north end of the Fox Brook crossing. Impacts to recorded cultural resources from current land use activities should be evaluated.





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APPENDIX A

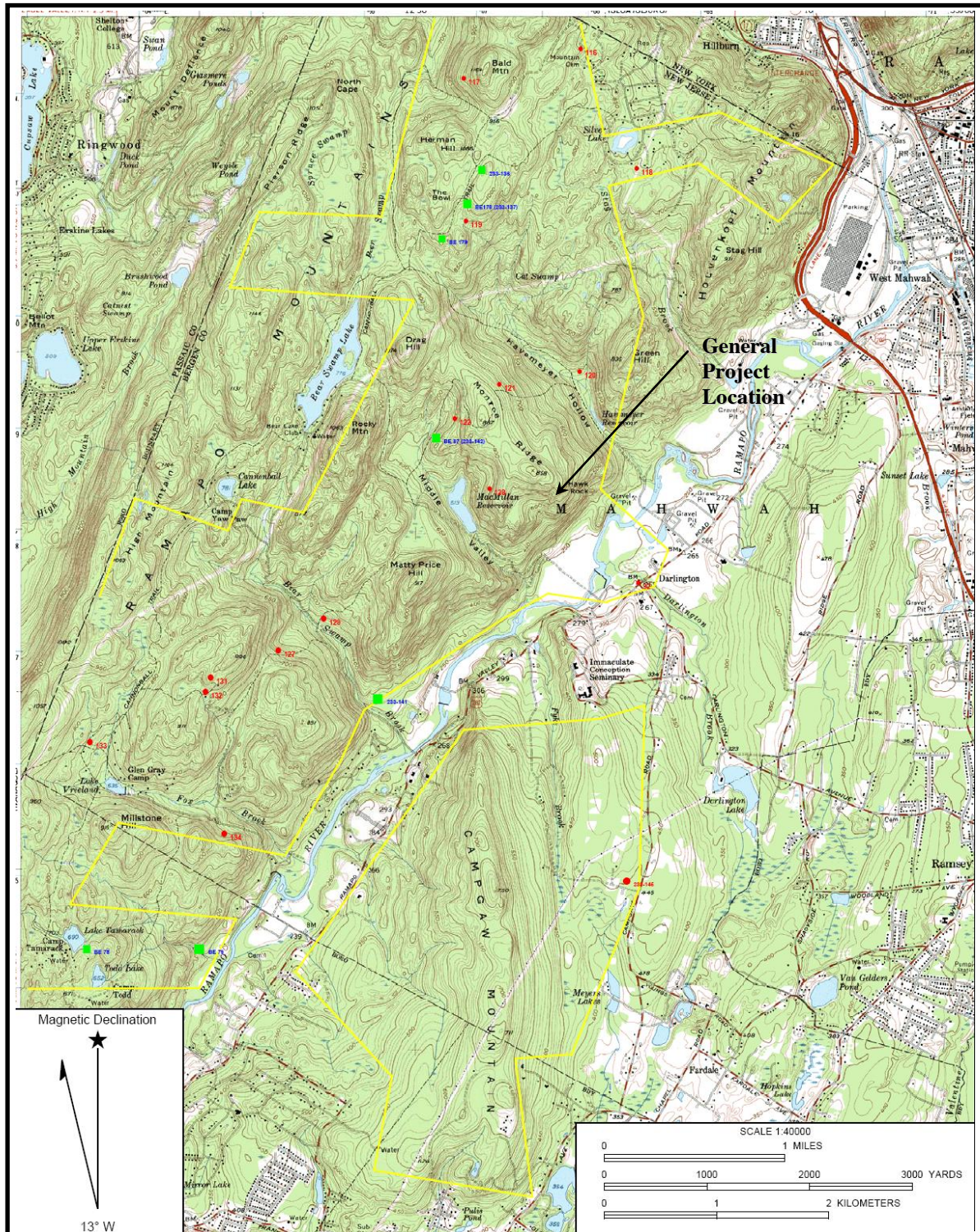
MAP OF CULTURAL RESOURCES WITHIN PROJECT AREA





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Magnetic Declination
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SCALE 1:40000
0 1 MILES
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HAMILTON OFFICE
100 American Metro Boulevard, Suite 152
Hamilton, NJ 08619
Phone (609) 587-8200

KEY:
Historic Sites Represented in Red
Prehistoric Sites in Green

Source: Terrain Navigator 7.03





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APPENDIX B

Resumes





THOMAS W. BAILEY, RPA
Department Manager - Cultural Resources

EXPERIENCE

Mr. Bailey has over 25 years experience that has focused on the coordination and integration of cultural resource management services in both the public and private sector. His efforts have focused on establishing long-range planning strategies in the areas of land use, transportation, public facilities and services, and open space preservation/conservation. He has a thorough understanding of cultural resource legislation at the local, state, and federal levels and has extensive experience managing complex cultural resource investigations from initial identification through site evaluation to the mitigation of effects. Mr. Bailey encourages client participation, the use of state-of-the-art investigative techniques, and anticipating the client's needs. Additional training includes *Introduction to Federal Projects and Historic Preservation Law* and *Preparing Agreement Documents* sponsored by the Advisory Council on Historic Preservation, and *Environmental Report Preparation* and *Post-Certificate Environmental Compliance* by the Federal Energy Regulatory Commission.

EDUCATION

M.S. Interdisciplinary Archaeological Sciences, University of Minnesota, 1997
B.A. Sociology / Anthropology, University of Wisconsin, 1983

PROFESSIONAL AFFILIATIONS

Register of Professional Archaeologists
Society of American Archaeology
Society of Historical Archaeology
Archaeological Society of New Jersey
New York State Archaeological Association

PROJECT EXPERIENCE

Mays Landing Water Power Company, Atlantic County, NJ – Architectural History Investigations Maser conducted an Intensive Level Architectural History Resource Recordation of the former Mays Landing Water Power Company (MLWPCCM). The MLWPCCM is listed as a key-contributing resource to the Mays Landing National Register Historic District. Of 13 buildings that make up the site of the former MLWPCCM; eleven buildings survived a fire on September 10, 2007 and two were completely destroyed. Historic research included examination of historic maps, the R. D. Wood Company records, the Wheaton Industries Company, published and unpublished books on Mays Landing and surrounding area, and published information on the textile industry. The fieldwork was completed in December 2007; the final report was submitted to the Pinelands Commission in April 2008. Maser is currently providing archaeological evaluation and mitigation services for the project under a separate scope of work.

County of Gloucester – US 322 & CR 536 Mullica Hill Bypass, Mullica Hill, NJ

Professional archaeological services to conduct cultural resource investigations to verify the presence or absence of historic or archaeological resources within the project's Area of Potential Effect (APE)





associated with the professional engineering services for the preliminary and final design of the Route 322 Mullica Hill By-pass that will serve as a connector to State Highways Route 45 and Route 77. Services include records review and historic research, architectural documentation, archeological fieldwork, and preparation of final report.

Pulte Homes – Delaware Valley Division – Residential Development, Southampton Township, NJ

Professional archaeological services to conduct a Phase IB archaeological and architectural history investigation and preparation of a report for submittal to the NJDEP – Historic Preservation Office (HPO) for this proposed residential development. Services included a records review, fieldwork including shovel testing, visual inspection, and other appropriate checks for determining the presence of historic sites, and site maps will be drawn in relation to existing conditions and photographs will be taken of each site and setting.

County of Gloucester – Design of Two Bridges, Franklin Township / Monroe Township, NJ

Professional archaeological services to perform a cultural resources screening associated with the replacement of two (2) timber bridges (8K6 – Grant Avenue over Little Ease Run and 7P1 – Winslow Road over Great Egg Harbor River). The screening will identify known historic sites and assess the potential for encountering unreported historic sites, both pre-contact and historic, within the area of potential effect (APE). Services included records review, reconnaissance survey, and final report.

Cinnaminson Township, Burlington County, New Jersey – Cultural Resources Investigations

Supervising Archaeologist for a cultural resources survey for the New Jersey Department of Transportation at Route 130 And Cinnaminson Avenue/Church Road/Branch Place, Cinnaminson, New Jersey. The cultural resources survey included a Phase I archaeological identification survey and a Phase I-II identification and evaluation survey for architectural history. The survey was conducted for the New Jersey Department of Transportation for the proposed roadway improvements.

Tall Timbers at North Creek, LLC – Proposed Resort, Johnsburg, NY

Professional archaeological services to conduct a Phase IB archaeological investigation and preparation of a report to the New York Office of Parks, Recreation and Historic Preservation (OPRHP). Services included records review to verify the presence of previously recorded historic properties or cultural resources in or adjacent to the project area, to obtain information on project-specific natural characteristics and cultural patterns, and review the results of cultural resources investigations in the immediate region; and field work including shovel testing, visual inspection, and other appropriate checks for determining the presence of historic sites, site maps will be drawn in relation to existing conditions and photographs will be taken of each site and setting.

Blue Water Communications – New Temple Synagogue, Lakewood, NJ

Professional archaeological services to conduct a cultural resource screening associated with the site design and civil engineering services for a new 20,000 SF Synagogue consisting of assembly space, administrative and support offices, educational classrooms, and banquet hall with kitchen on approximately 17-acres. The screening will identify known historic sites and assess the potential for encountering





unreported historic sites, both pre-contact and historic, within the Area of Potential Effect (APE). Tasks included background research at NJDEP Historic Preservation, NJ State Museum, and local historical societies, reconnaissance survey and visual inspection of APE.

Avalon Bay Communities – Multi-Family Housing, Oakland, NJ

Professional archaeological services to perform a Cultural resource review for a 282 unit multi-family residential development on approximately 40-acres.

CJS Investments – Active Adult Community, Tinton Falls, NJ

Professional archaeological services to perform a cultural resources screening associated with the site design and civil engineering services for a proposed active adult community of 309 lots with every 8th lot to be a duplex to meet COAH affordable housing requirements. The balance of lots will be single-family dwellings along with typical appurtenant site improvements including land area (approximately 5-acres) reserved for future public park. The screening will identify known historic sites and assess the potential for encountering unreported historic sites, both pre-contact and historic, within the area of potential effect (APE). Services included records review, reconnaissance survey, and final report.

Union County, Rahway City, New Jersey – Cultural Resources Investigations

Supervising Archaeologist for a cultural resources survey at the Dolbier-Housman House, site number 28Un38, 1797 Lenington Street, Block 353, Lot 2, in Rahway City, New Jersey. The cultural resources survey included a Phase I archaeological identification survey and a Phase I-II identification and evaluation survey for architectural history. The survey was conducted for G.M.M. Associates as part of waterfront development project number 2013-06-0003.1.

Borough of Metuchen – Scoping and Feasibility Study Route I-287 and Route 27 Interchange

Professional services to conduct a cultural resources investigation associated with the scoping and feasibility study for Route I-287 and Route 27 Interchange improvements. Services provided included investigation to identify historic sites, both pre-contact and historic, within the Area of Potential Effect (APE). The investigation will be conducted in two stages: a records review and reconnaissance survey, and fieldwork. A review SHPO records documents previously recorded sites in the project area; the reconnaissance survey consists of a visual inspection of the APE to assess the potential for encountering historic sites. Fieldwork will include shovel testing, surface examination, and other appropriate checks for determining the presence of cultural materials, develop site maps, and site photographs with each location marked on USGS 7.5' topographic maps.

County of Middlesex – Vehicle Traffic Control Signal River Road, Piscataway, NJ

Professional services to conduct an additional cultural resources / archaeological investigation associated with the modification of the existing emergency vehicle traffic control signal at the intersection of River Road and Netherwood Avenue and the installation of an emergency vehicle traffic control signal at the intersection of River Road and Park Avenue. The initial archaeological assessment concluded that there is a moderate potential for encountering archaeological properties within the area of potential effect (APE). Additional documentation that identifies specific details for the context sensitive solutions for the intersection improvements are required. The additional services were provided to identify historic sites both pre-contact and historic





within the APE, archaeological site identification, records review and archival research, phase I archaeological survey, laboratory analysis of artifacts, public outreach, and final report and artifact curation. A phase II will be conducted if any archaeological sites are identified to determine National Register eligibility.

Caroline County Airport Expansion, Caroline County, Maryland

Conducted cultural resources identification survey associated with the proposed Carolina County Airport expansion. The investigation consisted of an archaeological investigation of 576 acres and architectural survey of properties adjacent to the airport. Eleven architectural resources were recorded, one which was already listed on the National Register. One additional property was potentially eligible for the National Register. Six (6) archaeological sites were recorded, one of which is potentially eligible for the National Register.

Virginia Department of Transportation – Route 460 (Petersburg to Wakefield) Virginia

Conducted a Phase I archaeological survey for a 28-mile, 500-foot wide corridor for the Virginia Department of Transportation. The survey consisted of systematic shovel testing along the entire corridor. The investigations identified 58 archaeological sites, and 26 isolated finds dating from the Early Archaic to Middle Woodland. Ten (10) of the sites are potentially eligible for listing on the National Register.

US Army Corp of Engineers

Principal Investigator for a Phase I archaeological survey along the Red River for the proposed diversion channel project west of Grand Forks, North Dakota conducted for the US Army Corps of Engineers. The area investigated was a 2,000-foot corridor at the upstream end of the project and included the area from the west side of Cole Creek in North Dakota to a distance of 300 feet east of the bank of the Red River in Polk County, Minnesota. Three cultural properties were identified during shovel testing on the west side of the Red River.

Northern Natural Gas Company

Project Manager/Principal Investigator for a Phase I-II cultural resources survey for the Northern Natural Gas Company Willmar 12-inch Branch Line Loop in Carver and Scott Counties, Minnesota. The project area consisted of a 200-foot ROW along 9.4 miles of the existing pipeline corridor at the Minnesota River crossing between Carver and Scott counties. Sixteen cultural properties were identified, including, pre-contact lithic scatters, isolated finds, standing structures, and historic sites. Five sites were recommended for Phase II evaluation to determine National Register eligibility. Following completion of Phase II investigations, two sites were recommended eligible for the NRHP.





SELECTED PROJECTS

St. Paul District, USACE (Project Manager)

Phase II Evaluation of the NRHP Eligibility of 50 Buildings and 3 Bridges in the City of Grand Forks, North Dakota and the City of East Grand Forks, Polk County, Minnesota.

Minnesota Department of Transportation (Project Manager)

Phase I and II Cultural Resources Study along TH14 from Owatonna to Mankato, Minnesota. Minnesota Department of Transportation

Iowa Department of Transportation (Project Manager)

Phase I Cultural Resources Investigation for the US 34 Realignment Project from I-29 in Iowa to US 75 in Nebraska.

Minnesota State Archeologist (Principal Investigator)

Burial Site Authentication Investigations at 21-HE-0019 (South Sub-Group), Eden Prairie, Minnesota.

Taliaferro & Browne, Inc., Kansas City, MO (Principal Investigator)

Town of Kansas Site Pedestrian Bridge Location: Archaeology Survey Results.

Walla Walla - District, USACOE (Principal Investigator)

Evaluations of 29 Archaeological Sites within the Water Resource Development Act of 1996 Conveyed Lands, Benton and Franklin Counties, Washington.

Washington State University and Bureau of Land Management (Principal Investigator)

Geophysical Investigations at the Birch Creek Site (35ML181), Owhyee River, SE Oregon.

Schwetye Architects, St. Louis, MO (Principal Investigator)

Cultural Resources Survey of 16 Cellular Tower Locations in Missouri.

Minnesota Department of Transportation (Project Manager)

Geoarchaeological Data Recovery, East Terrace Site (21BN6) and Gardner Site (21SN14).

Hennepin County Parks, Minnesota (Project Manager)

Architectural Survey of a Historic Stone House in Lake Minnetonka Regional Park.

Regional Railroad Authority and Minnesota Department of Transportation (Project Manager)

Phase I and II Cultural Resources Investigations of the Central Corridor: Minneapolis, Hennepin County and St. Paul, Ramsey County.





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Carlton County, Minnesota (Project Manager)

Cultural Resources Investigation for The Brooks-Scanlon Lumber Mill for the TH45 Reconstruction.

Government Services Administration (Project Manager)

Stage II Archaeological Research for the proposed Federal Building-U.S. Courthouse, Minneapolis, Minnesota.

Anoka County, Minnesota (Project Manager)

Phase III Data Recovery at Site 21AN17.

Mid-Coast Transit Corridor (Project Manager)

Phase I Archaeological Survey for the Mid-Coast Transit Corridor in Seattle, WA.





CHRISTOPHER L. WALKER

Archaeological Crew Chief

EXPERIENCE

Christopher Walker is the Crew Chief and Field Archaeologist for Maser Consulting P.A. and has over four years experience in Cultural Resource Management. Mr. Walker has extensive experience in the detailed analysis of prehistoric and historic cultural materials. His interests include lithic analysis of prehistoric artifact assemblages, environmental reconstructions through analysis of geologic and soil conditions, site identification of New Jersey prehistoric archaeological sites based on predictive modeling and extensive knowledge of New Jersey prehistoric culture and archaeology. His archaeological investigations have included extensive work in the areas of Archaic to Woodland Lenape sites, spatial analysis and geographic information systems, traditional field survey and cartographic techniques, and historic and industrial archaeology of the Northeast. Mr. Walker also has extensive experience as a Geotechnical Specialist with Maser Consulting P.A. His work included deep test boring, dynamic compaction monitoring, nuclear density testing, extensive laboratory testing to ASTM standards, and quality control testing of hazardous materials.

EDUCATION

Rutgers, The State University of New Jersey, B.S. Evolutionary Anthropology, Environmental Science (specialization Archaeology and Soil Ecology), 2007.

PROJECTS

Chesterfield LLC

Phase II Archaeological Evaluation 28Bu660, 28Bu661, 28Bu663, Traditions at Old York Village and The Shoppes at Old York Villages, Township of Chesterfield, Burlington County, NJ

(Crew Chief)

Phase II archaeological evaluation efforts resulted in the delineation of two prehistoric transient stations (28Bu660 and 28Bu663) and one seasonal camp (28Bu661). No cultural features were identified during subsurface excavations at 28Bu660 and 28Bu663, and the few prehistoric artifacts recovered from each site were not clustered and were confined to plow zone contexts. Both 28Bu660 and 28Bu663 lack archaeological integrity and do not meet criteria of eligibility for listing on the National Register of Historic Places. One cultural feature was identified during subsurface excavations at 28Bu661; however, the overwhelming majority of cultural material was confined to the plow zone. Artifact patterning identified at 28Bu661 cannot be dated to specific occupations due to the lack of diagnostic finds for the site overall. Due to disturbance of cultural deposits as the result of agricultural practices and related sheet erosion of surface soils, 28Bu661 was determined to lack archaeological integrity and does not meet the criteria of eligibility for inclusion on the National Register of Historic Places.





O'Neill Properties

National Lead Industries Property Redevelopment, Borough of Sayreville, Middlesex County, NJ (Crew Chief)

Phase IA Cultural Resources Sensitivity Assessment of National Lead Industries Property in preparation for redevelopment of the 250 acre property for multiple commercial uses. Maser identified three significant historic uses of the property related to three periods of land use, the colonial, the nineteenth century early industrial, and the twentieth century urban industrial. Documentary research that utilized historical geographic, topographic, and nautical maps as well as a variety of published local history documents established the likely location, character, and extent of each of these occupations and served as the basis for property investigation recommendations.

County of Gloucester, New Jersey

Phase I Cultural Resources Investigation, U.S. Route 322 Mullica Hill Bypass Feasibility Study, Township of Harrison, Gloucester County, NJ (Crew Chief)

Phase I Cultural Resources Investigations of the proposed U.S. Route 322 Bypass of the Mullica Hill Historic District provided documentary research and field identification survey of previous land use and cultural landscape changes to the village of Mullica Hill and its surroundings. Maser completed a detailed historic context for the northern portion of Harrison Township with emphasis on changes to the cultural geography of the area in and around the historic village of Mullica Hill. Documentary research that utilized historical geographic and topographic maps and historic aerial photography as well as a variety of published local history documents complemented field investigations that identified five historic properties within or adjacent to the project area significant to the cultural heritage of Harrison Township.

Dornoch Jasper LLC

The Vistas Condominiums Demolition Monitoring & Historic Structures Mitigation of Passaic Water Company Middle Reservoir and Totowa Reservoir, Block 801, Lots 13, 21, and 22, City of Paterson, Passaic County, NJ (Crew Chief)

Maser Consulting, P.A. provided documentary research and cultural resources field investigation services related to the demolition of pre-existing structures on the site of the former Passaic Water Company property on Jasper Street in the City of Paterson, Passaic County, New Jersey located within the Great Falls Municipal Historic District. The Middle Reservoir represented by a preserved section of the southeast wall 175.0 feet long and 12.0 feet high was documented through scaled drawings and photography. Following demolition monitoring of warehouse buildings and foundations, subsurface excavations exposed remnant sections of the three walls of Totowa Reservoir. The Totowa Reservoir wall remnants were documented with scaled, measured drawings and photography of the exposed wall segments prior to their demolition.

Opus East, LLC

Archaeological Evaluation of 28Me149, Waterview Center, Township of Hamilton, Mercer County, NJ (Crew Chief)

Phase II archaeological site evaluation of 28Me149 resulted in the delineation of a prehistoric transient station, tentatively dated to the Late Archaic period. Lack cultural features, and plow zone context of the overwhelming majority of cultural materials resulted in the determination that the site lacks archaeological integrity and does not meet the criteria for eligibility to the National Register of Historic Places.

Township of Old Bridge, Middlesex County, New Jersey

Phase IA Cultural Resources Sensitivity Assessment, Roadway Improvements, County Route 516 and Old Bridge High School Access Road, Township of Old Bridge, Middlesex County, NJ (Crew Chief)

Phase IA Cultural Resources Sensitivity Assessment of the intersection of County Route 516 and Old Bridge High School Access Road in preparation of Application for Project Authorization to the New Jersey Historic Sites Council. Maser identified two registered historic properties, Cedar Grove School (NRHP





A COMPILATION OF KNOWN HISTORIC STRUCTURES
AND ARCHAEOLOGICAL SITES:
RAMAPO MOUNTAINS COUNTY PARK
BERGEN COUNTY, NEW JERSEY

AUGUST 8, 2010

10/24/1976) and Abraham Warner House within the project area, and fourteen additional historic and archaeological resources within a 3.0 miles (4.8 kilometer) radius of the project area. None of these cultural and historic resources were directly impacted by the proposed project.

Pulte Homes—Delaware Valley Division

Phase I/II Cultural Resources Investigations, Traditions at Southampton, Township of Southampton, Burlington County, NJ *(Crew Chief)*

Phase I/II investigations resulted in the identification of one historic archaeological site (28Bu712) on Block 602, Lot 14 manifested as an extensive but shallow brick feature related to the nineteenth century occupation of the property. Delineation of a buried nineteenth century occupation surface characterized by five contemporaneous historic features and three modern intrusive features. While relatively intact and undisturbed, these historic features had been subject to a long episode of deterioration in place and showed little functional integrity to their original use. 28Bu712 was determined ineligible for inclusion on the National Register of Historic Places.

SELECTED PROJECTS

American Cyanamide Superfund Site, Bridgewater, Somerset County, NJ
(Geotechnical Specialist)

Quality Control and Compaction Testing for hazardous soil cleanup and disposal.

Toll Brother's Riveria at East Windsor, Mercer County, NJ
(Field Technician)

Phase III data recovery at 28Me146 for residential construction.

K. Hovnanian Corporate Headquarter, Red Bank, Monmouth County, NJ
(Field Technician)

Phase III data recovery at 28Mo307 for commercial development.

