

PART THREE: AFFECTED ENVIRONMENT

Overview

This section describes existing conditions in the park and its environs as a basis for comparison of the environmental effects that would result from the implementation of the alternatives presented in this draft plan.

This section is organized by selected cultural and natural resource topic areas or “impact topics.” The resource topics were selected for inclusion in this section because the resources identified within each topic could be affected by the proposals outlined in the alternatives. The planning team selected the impact topics based on legislative requirements, resource information, planning issues, and concerns expressed by the public and other agencies during the scoping phase of the planning process. The potential effects of the alternatives on these impact topics are described in the “Environmental Consequences” section.

Cultural Resources

As an historic area of the National Park System, Sagamore Hill National Historic Site was administratively added to the National Register of Historic Places in 1966, with the passage of the National Historic Preservation Act. The park’s National Register documentation was updated in 1980 and again in 2006. The 2006 revision further considered the significance of the park’s cultural landscape as well as Old Orchard, the estate that was built by Theodore Roosevelt, Jr.

Many of the features described below are formally documented on the park’s List of Classified Structures. Each building or structure cataloged in the system is assigned a unique identification number (LCS #). A complete list of the buildings and structures included in Sagamore Hill’s inventory appears in Appendix C.

Cultural Landscapes

The original grounds at Sagamore Hill National Historic Site, shaped by the development of the property by Theodore Roosevelt beginning in 1880, included a rural country home and a working farm. The home was situated at the highest point on the property, amidst open lawn with specimen trees and meadow, with 360-degree views. Arrayed to the northeast (rear) of the home were the gardens, pasture, and support buildings. Later, Theodore Roosevelt, Jr. built the Old Orchard estate complex on a portion of the

property. The 83-acre site includes frontage on Cold Spring Harbor to the east and views of Oyster Bay to the west.

Today the property consists of designed areas providing a setting for the residential buildings, areas associated with former agricultural uses, naturally occurring woodlands, ponds, and a sand beach. The appearance of the grounds has been modified while under the stewardship of the Theodore Roosevelt Association and National Park Service. However, the historic field patterns, historic woodlands, ponds, and sand beach retain their appearance from the time of the family's occupancy. The most notable change is that the property no longer functions as a working farm. This change in land use from agriculture to museum/park has resulted in successional vegetation encroaching on the open fields, creating an increased sense of enclosure.

Sagamore Hill is accessed today from Sagamore Hill Road, constructed in 1953. The visitor parking lot, added to the site in 1954, is located in the former garden/agricultural area and is adjacent to the north pasture. Sagamore Hill Road and the parking area were constructed to accommodate visitors and supplement the historic hierarchical circulation system consisting of main access routes, secondary roads, and paths. The original approach road, designed for carriages, originated at the service road (LCS# 0400946) in the southwest corner of the property and terminated at the circular drive on the south side of the house. Two stone retaining walls (LCS# 040952) associated with this road remain. The introduction of the automobile changed the circulation system at Sagamore Hill. The original approach road was too steep for an automobile to climb and was replaced in 1912 by a new entrance drive. The carriage road (LCS# 040945), originally constructed of compacted soil, survives in the southwest corner of the property as a pedestrian way. Successional vegetation was cleared from the road bed in 1993 and the surface was mulched.

The 1912 entrance road originated to the south of the carriage road where the topography was less steep and met the circular drive to the east of the carriage road. Designed by engineer Hans Rude Jacobson, the 14'-wide road was surfaced in macadam (LCS# 040947) and bordered by 2'-wide broken stone gutters set in concrete (LCS# 040950). Surface run-off is collected in a brick and concrete culvert (LCS# 040950) located under the road. The extension of an existing retaining wall was also completed as part of the 1912 entrance drive construction. Although no longer used for vehicular traffic, this road is important for pedestrian circulation. A modern asphalt internal road system connects the east side of the house

with the site of the Stable and Lodge. Two paths remain from the historic period. These include a gravel walk, which originates at the main house and leads to the pet cemetery (LCS# 040949), and a single remaining path in the surviving portion of the flower and vegetable garden (LCS# 040948). The latter is constructed of compacted earth and defines the western boundary of the historic garden.

The access road to Old Orchard originates at the Sagamore Hill Road, and a portion follows the route of an historic farm road, runs along the northern boundary of the property, and terminates in a circular drive in front of the house. During the historic period, the circular drive was surfaced with oyster shells, like many of the existing pathways and roads on the property at the time.

Large specimen deciduous and coniferous trees are located on the north, east, and south lawn surrounding the Theodore Roosevelt Home. Several trees are known to be from Theodore Roosevelt's lifetime, including four European beeches, a copper beech, an American elm, a red cedar, and two white oaks. Several Canadian hemlock and white pines date to the later historic period. Two beech trees on the south side of the house were removed and replaced with genetically identical plant material in 2000. The meadow to the west of the main house was restored in 1998. The growth of the historic trees, together with the addition of non-historic ornamental and shade trees, has resulted in a denser canopy and obscured views to Long Island Sound.

Historic fences and fence lines that once enclosed fields are present throughout the property (LCS# 040959). The only extant pasture is located east of the parking lot and is enclosed with a split rail fence. With some variation, this historic fence type was used throughout the property. Today it remains along the northern border, encloses a portion of the property on the south, portions of the orchard and parking lot, and is found throughout the woodlands.

The construction of Old Orchard and its associated support buildings in 1937 and 1938 (respectively) reflected the declining agricultural use of the property and the increased residential estate development in the area. The Old Orchard support buildings include the garage, the foreman's cottage, and the cold cellar. Sited within a mature apple orchard of approximately 70 trees, the building of Old Orchard resulted in the removal of almost one-half of the trees, many of which had been damaged or destroyed in a hail storm in the early 1930s. The extant orchard presently contains 43 common apple trees, 15 of which may date to the historic period.

The Sagamore Hill grounds continue to embody Roosevelt's intent to create a rural country home, despite the change in land use, the increased woodland cover, and the addition of visitor services. Surviving are the majority of constructed features as well as the topography, natural systems, and native vegetation that initially drew him to the property.

Historic Buildings and Structures

SAGAMORE HILL (THEODORE ROOSEVELT HOME) 1884 (LCS # 001243)

The main residence at Sagamore Hill is roughly cruciform in shape, with longer west and east wings separated by shorter south and north wings. Architects Hugo Lamb and Charles Alonzo Rich designed the house, incorporating Roosevelt's preferences. The red brick and wood-frame house embraces the Queen Anne style both in plan and details. Viewed from the exterior, the house appears to be two-and-a-half stories; however, the interior reveals three stories, an attic, and full basement. Prominent features include a porte-cochere at the main entrance, piazzas, dormers, and gables. The building itself has seen few alterations from the original 1884–1885 plan; the only significant changes to the house itself were Roosevelt's addition of the North Room and the modification of the piazza to create a speaking platform from which Roosevelt could address delegates who came to Sagamore Hill.

In keeping with the popular Queen Anne style, the house has a horizontal rather than vertical focus, with its large and open areas and wide gable ends reaching outward rather than upward. The piazza extends from the porte-cochere on the south façade around the west side where it widens and forms a porch shaded by an awning. There is a sawn-wood balustrade at the outer edge that continues with the piazza for a short distance along the west side of the north wing. A lattice-sided service porch with an openwork top extends from the staff's kitchen, and there is a third porch on the east side of the house. On the second floor, a small shingled porch and two decks open off Theodore Roosevelt's bedroom, bathroom, and guest room, respectively.

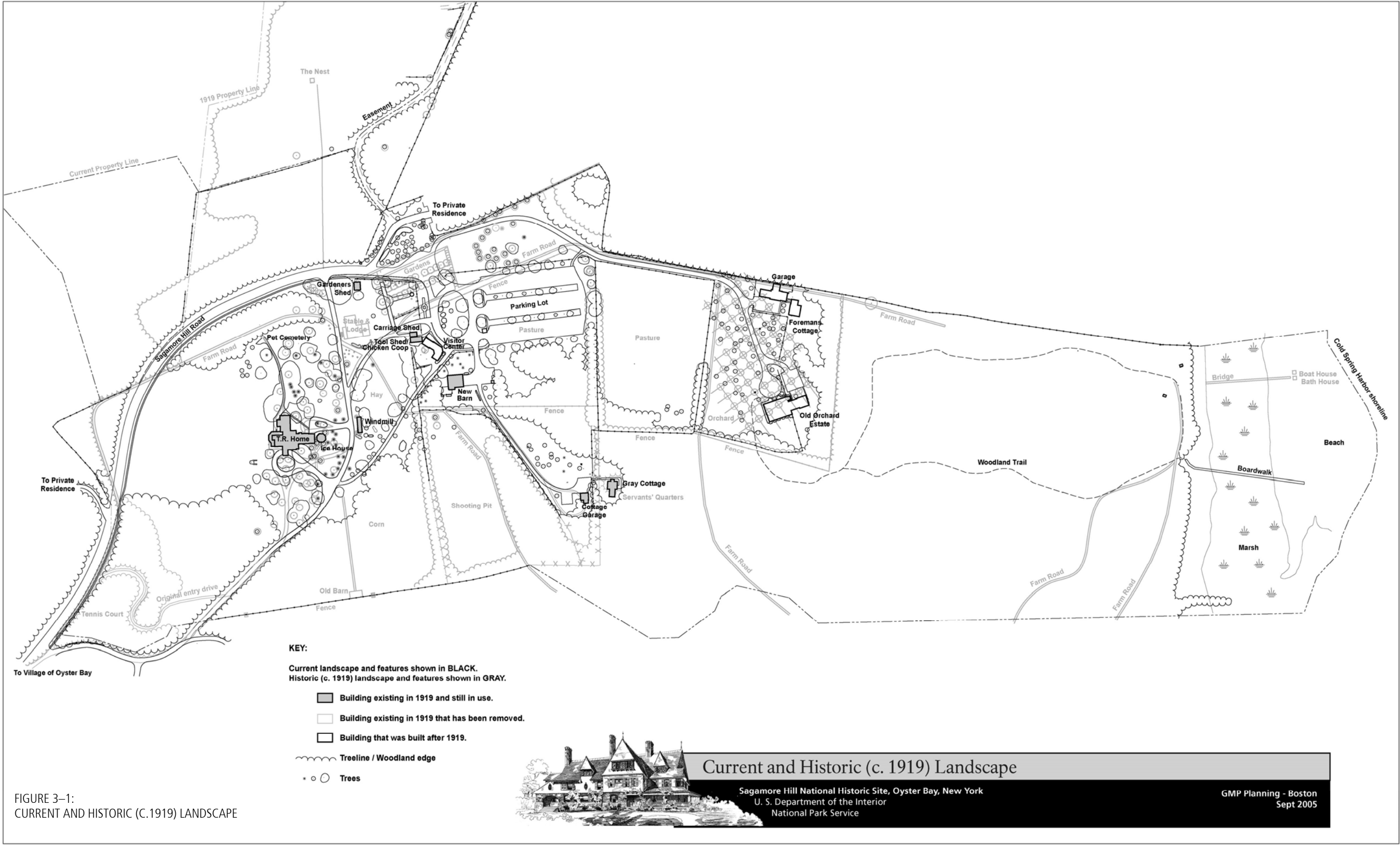
The majority of Sagamore Hill's 28 rooms retain significant integrity. The first floor has oak-paneled walls and a beamed entrance and stair hall. First-floor rooms include the library (which served as Roosevelt's private office), the family dining room, the drawing room, and the kitchen connecting the laundry room, pantry, and staff dining room. The spacious North Room was added in 1905. On the second floor are the family and guest bedrooms, a nursery, an original bathroom, two other bathrooms added in 1905, and a south bedroom and bathroom added in the 1920s. The

main stair hall is centrally located and illuminated with a large stained glass skylight. The rear service stairwell extends from the basement to the third floor. On the third (top) floor are the Gun Room, Theodore Jr.'s room, the schoolroom, linen room, sewing room, and the cook's and two maids' rooms. Room interiors and decorative finishes are mostly typical of the period in style and appearance. The oak paneling is original to the period of significance. Several rooms such as the "Double Guest Room" have period wallpaper predominately applied during the 1950s TRA period, with other reproduction wallpapers installed by NPS more recently.

The North Room, designed by architect C. Grant LaFarge, was built in response to Roosevelt's pressing need to entertain large groups and distinguished visitors and Edith's desire to preserve the privacy of her drawing room. The 1905 addition provided him with a large (40' x 30') room in which to receive guests and dignitaries who visited the property. Though added after the construction of the main building, the exterior façade of the North Room was designed to complement the rest of the structure, with its red brick walls and wood-shingled gable ends. A plaster eagle and wreath decoration is set on a wood panel on the exterior gable; two additional plaster eagles adorn the interior. The only original wallpaper remaining in the house, a red and gold pattern, is found in this room.

A number of alterations to the main house occurred after the period of significance. Following Edith's death in 1948, the Theodore Roosevelt Association (TRA) purchased Sagamore Hill in 1950 and intended to open it to the public for visitation. While the TRA made a number of physical changes to the site, they were largely logistical and did not represent any particular vision or revisioning of Roosevelt's life or home. The TRA alterations included installation of new heating, electrical, and fire protection systems to enhance the safety of the house; a new asphalt shingle roof; and repainted exterior. Louvers were added to the north and south attic gables for ventilation. In order to improve visitor circulation and meet fire codes, a new stair from the second to third story was built in the west front part of the house. In the first story rear hall, the stair to the basement was moved to the south wall, and the stair to the second story was widened. The hall from the main hall to the kitchen was straightened. The small service porch off the kitchen on the north was enclosed and converted to office space; steps from this room to the outside lead east. The room to the east of the kitchen, which contained the laundry during the historic period, is today an office for the park guides and volunteers. The top floor has an open attic not accessible to the public.

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Since 1963 the National Park Service has restored the upper floors to their appearance when Theodore Roosevelt lived on the property. Their efforts have included removing later partitions, refinishing of varnished woodwork that had previously been painted, re-papering walls, and other similar work. In 1993 the NPS adopted a new Furnishing Plan. Some 600 pieces of furniture and artwork were relocated in a major reinterpreted effort that also necessitated changes in wall and floor treatments throughout the house, repair and repainting of first and second floor walls, and the restoration of five second-story rooms and second- and third-story halls.

PUMP HOUSE 1884 (LCS # 040956)

The Pump House is a simple wood-framed structure with brick foundation and gable roof. A long structure, it has two connected segments: one is a partially buried brick cellar with shingles and bulkhead doors on the south end, and the other is a low shed on wood posts, a non-historic TRA addition. The original portion houses the pumping station for one of the wells.

ICE HOUSE 1885 (LCS # 005441)

The Ice House was built in 1885 in close proximity to the main house. An octagonal structure of red brick, it stands five feet high with walls over six inches thick and is capped with a steep pyramidal wood-shingled roof. The Ice House was used as a holding area for the estate's reserve water supply and ice storage. Taken as needed, ice was cut and kept in a large icebox in the butler's pantry. During the TRA period, the Ice House was converted to public restrooms. Today, it is used for storage; the restrooms have been removed.

GRAY COTTAGE 1910 (LCS # 001244)

The Gray Cottage is a small wood-frame clapboard residence built in 1910 to house Roosevelt's coachman, valet, and their families. The building was divided into two apartments during the historic period. It is a rectangular two-story building with two-by-two bay and a pitched roof. The only detailing on the modest house consists of narrow wooden corner boards and eave returns. The primary façade differs from its original appearance in that the porch has been enclosed. In 1953 the house underwent a restoration under the TRA. The NPS completed a number of interior alterations and added a two-story addition to the rear of the structure in the 1960s so that it could be used as a park residence.

NEW BARN 1907 (LCS # 005442)

The New Barn was constructed in 1907, after the original barn on the property (Old Barn) collapsed in 1904. It has been dramatically altered

since its construction. The New Barn now has asbestos concrete shingles on a gambrel roof, a partial basement with concrete foundation, and a center chimney. There are three bays on the east façade, two of which contain modern garage door openings. The west façade, also three bays across, has modern replacement windows. The later entrance porch on the north façade has a shed roof, while a contemporary entrance has been added on the southwest corner of the building. The New Barn was remodeled to serve as a residence and a garage in 1947 after the loss of the Stable and Lodge. Today it has five rooms, a small screened porch, and a storage attic. The garage portion of the building houses park vehicles and Eastern National sales storage.

CARRIAGE SHED C. 1885–1890 (LCS # 005445)

Since the period of the TRA ownership, this structure has become known as the “carriage shed.” However, the building is too small to have housed the Roosevelt carriage, which was actually stored on the first floor of the stable. An interview with one of the farm manager’s children in the 1970s described this building as “the farm shed” or “garage” for oxen harnesses and slaughtered hogs. The Carriage Shed has two large flushboard doors with crossbracing and metal hinges, a concrete foundation, and wood framing and walls. A hay loft is accessible from the gable end. Today the structure houses vending machines for the convenience of visitors.

TOOL SHED/CHICKEN COOP C. 1885–1890 (LCS # 005444)

The Tool Shed/Chicken Coop is one and one-half stories with a concrete foundation and is located directly next to the Carriage Shed. Similar to the Carriage Shed, the Tool Shed/Chicken Coop has overhanging eaves and wooden corner boards. The structure probably was used to house chickens and to store feed and other maintenance equipment. Today it serves as an exhibit area and storage for maintenance.

GARDENER’S SHED C. 1890S (LCS # 005443)

The Gardener’s Shed is a simple one-story building with wood foundation, framing and board-and-batten siding, and a shingled gable roof with diamond-shaped four-light windows in each gable end; there is a large sliding door on the east end. The structure was probably built during the 1890s, as visitors’ accounts refer to the fact that the gardener was living in the shed during the summers in the 1890s. It had been used to store firewood and farming tools. During the 1950s the TRA modified the building by removing the stovepipe and outhouse. Currently it is used for equipment storage.

OLD ORCHARD 1938 (LCS # 005447)

Old Orchard is located on the grounds of Sagamore Hill and was the estate of Theodore Roosevelt, Jr. Designed in 1937 by William McMillan, the property is historically and architecturally significant as the home of a prominent New Yorker and a representative example of early 20th century estate design on Long Island's North Shore. Old Orchard embodies the distinguishing Colonial Revival characteristics of the classic Long Island estate – an idyllic setting, distinguished mansion, with inconspicuous and well-designed support buildings.

The Old Orchard estate is situated one-quarter mile east of Sagamore Hill's main house in the southern portion of the former orchard. Enclosed by fences on three sides and dense woodlands on the fourth, the estate consists of a large brick mansion with an attached service wing, a wood-frame caretaker's cottage, and garage, all set within a rural landscape on the edge of Sagamore Hill's orchard. With its broad, symmetrical, seven-bay façade and high hip roof, the mansion is one of the estate's most prominent built features. The property remains largely intact and displays restrained classical designs and details. The building's rear or garden façade on the ground floor is characterized by a series of full-height windows with double-hung, nine-over-fifteen sashes flanking what had been a center French door with transom. The central French door was replaced with a handicapped-accessible entryway approached by a poured concrete walkway during the 2003 rehabilitation. The mansion's interior remains largely intact and includes a broad entrance hall with secondary stair hall and a classical paneled arch, a wide staircase with balustrade, decorative mantels in the principal main floor rooms, and paneled window reveals on the garden front. The mansion's service wing and upper floors also remain largely unchanged. This building serves as the park's administrative headquarters. Two units of park housing are located in the former service wing.

OLD ORCHARD GARAGE 1938 (LCS # 040954)

The Old Orchard garage is located in a small service complex with the Foreman's Cottage just north of the main house. The garage has wood-shingle sheathing and a second-floor overhang with decorative pendants. A small apartment is located over the garage and originally housed Old Orchard staff. The apartment continues to be available as housing for park staff. The six-bay garage houses the park's maintenance function.

OLD ORCHARD FOREMAN'S COTTAGE 1938 (LCS # 040955)

The Foreman's Cottage has a center entrance, wood-shingle siding, and a center brick chimney. The foreman's cottage is also used for park housing.

COLD CELLAR 1938 (LCS # 040957)

An extant concrete cold cellar, built into a slope and accessed via a wood door, is located northeast of Old Orchard on the edge of the woodlands. It is presently unused.

WINDMILL 1971 RECONSTRUCTION (LCS # 001245)

The Windmill is a 1971 reconstruction on the site of the 1884–1886 original, which had served to pump water to the estate. Because of differences in its proportions and the materials composing the wheel itself, the existing windmill is considered neither to be an accurate reconstruction of the original nor eligible for the National Register. The park staff maintains the windmill as a cultural resource.

Archeological Sites and Resources

An Archeological Overview and Assessment was prepared for Sagamore Hill by SUNY Stony Brook with oversight by archeologists of the NPS Northeast Region. This document provides a background on the environmental setting of Sagamore Hill along with a cultural historical framework against which prehistoric and historic period land use can be examined.

In general, an Archeological Overview and Assessment describes existing documentary resources, summarizes previous archeological investigations in the park, and makes recommendations as to additional research that should be undertaken to better understand and manage archeological resources.

Besides being the home to the 26th President, Sagamore Hill has a lengthy history spanning millennia of human occupation. For the purposes of the archeological overview and assessment, time is divided into the following periods of significance:

- Prehistoric Native American, beginning from the earliest colonization until the arrival of European settlers in the mid-17th century,
- Colonial period of Dutch and English settlement and farming, lasting through the end of the Revolutionary War,
- Pre- 1880 Euro-American history, when the property was used for agricultural purposes, and
- Post-1880, when Theodore Roosevelt acquired the property.

The Sagamore Hill property contains both known and potential archeological resources, which are described in the 2004 Archeological Overview and Assessment. Archeological resources at the park are important for both their research and interpretive value. Investigation of

the Native American deposits at Sagamore Hill would increase our knowledge about prehistoric peoples on Cove Neck and Long Island. Sites associated with the prehistoric occupation of the property are most likely located on the eastern portion of the site along Eel Creek and Cold Spring Harbor.

The activities on the property from the 17th century through circa 1880 are perhaps the least well-known and/or understood. During the first two centuries of Euro-American settlement, Cove Neck served as agricultural land on the periphery of the thriving maritime village of Oyster Bay. Farmers in the region were involved in a global market economy from an early date, exchanging the products of their land with manufactured and exotic goods brought by ship into Oyster Bay Harbor. What is now the Sagamore Hill property played a role in this economy and was used as farmland by the Cooper and Youngs families beginning more than 150 years prior to Roosevelt's purchase in 1880. Although there is little documentation regarding the Sagamore Hill property prior to 1880, archeological resources from the 17th through mid-19th centuries would be important for understanding the complete history of the property.

The Roosevelt period is relatively well-documented in archives, photographs, and cultural material collections. Areas around structures and features associated with the Roosevelt family's tenure—both missing and existing—offer the greatest potential for historic archeological resources. The areas around the existing Theodore Roosevelt Home and farm buildings, the Stable and Lodge and the Old Barn sites, trash pits and other features may be particularly archeologically rich. On the other hand, the area around Old Orchard is not considered to be archeologically important, because much of the house site was constructed using large amounts of fill.

Further archeological investigation of the Roosevelt period would complement the documentary record and might shed light on unknown activities at Sagamore Hill, providing a material record of an American President's life on his country farm.

Collections and Archives

The furnishings at Sagamore Hill National Historic Site are significant, contributing features to the overall property. Sagamore Hill is furnished as it was during Theodore Roosevelt's lifetime; more than 90 percent of the 8,200 objects on display at the Theodore Roosevelt Home are original to the house and the Roosevelt family, contributing to the site's National Register eligibility. Because of this direct association, the collections

convey a powerful story about Theodore Roosevelt and his values and provide a unique way of understanding Roosevelt family life at Sagamore Hill through material culture. In addition to the Roosevelt family materials, the collection includes objects and archives related to the history and management of Sagamore Hill as a commemorative site. These collections include 16,000 photographs documenting Roosevelt's public career; the records of the Theodore Roosevelt Association, which purchased the site in 1950, opened it to the public in 1953, and donated it to the National Park Service in 1963; and various NPS records and research documents.

Most striking to any visitor are the many artifacts that reflect Roosevelt's passion for the outdoors. Theodore Roosevelt was not only a world-renowned hunter, but also a widely respected natural scientist. He wrote scholarly and popular articles on birds, game animals and his outdoor travels. Roosevelt hunted on behalf of museums at a time when animals were most often studied out of their natural habitats by examination of their bones and hides. There are more than 75 hunting trophies from North America, Africa, and South America in the home. They include two mountain lions, a big-horned sheep, a mountain goat, and a wild peccary in the library; trophy mounts of oryx, eland, and a Cape buffalo head; and elephant tusks and lion skins in the North Room.

The artwork in the home also reflects his love of nature, animals, and outdoor life. There are bronze statues of a rhinoceros, a cougar, and elephants; and paintings of American landscapes. In the library are a bronze "Paleolithic Man" and a pastel portrait of a Cree Indian by Frederick Remington, and the North Room contains a bronze of Remington's "Bronco Buster." There are family portraits and prints of Italian scenes in the hallways through the home. The oak paneling in the library and hall and Philippine carmagon woodwork in the North Room provide a most impressive setting for Roosevelt's hunting trophies and artwork.

Roosevelt's belief that a close relationship with nature was an essential aspect of healthy development is also reflected in the family's commitment to the working farm. The park possesses a number of items that reflect this use of the site, including farming implements and tools, some of which were very possibly used on the farm during Roosevelt's lifetime.

Roosevelt displayed trophies of diplomacy with as much pride as those of the hunt: one of the first of a long line of distinguished visitors received in the North Room was Baron Komura, senior Japanese representative in the

talks arranged by President Roosevelt to bring an end to the Russo-Japanese War. A Japanese sword, a gift from the village of Sendie, graces the room, as do many other exotic objects given to or collected by the Roosevelts during presidential and post-presidential years.

The Roosevelt home is filled with over 6,000 books, a testament to the breadth of Roosevelt's intellectual curiosity. There are histories, folktales, biographies, travel books and atlases, natural history studies, and poetry collections. Roosevelt was an indefatigable reader and read French and German as well as English. He was also a prolific writer and authored some three dozen books on a variety of subjects, including politics and government, biographies, natural history topics, his travels in Africa and Brazil, and American history. Paintings and prints over the bookcase in the library also suggest Theodore Roosevelt's role models, beginning with his father, Theodore Roosevelt, Sr. in the oil painting in the center. Others represented in the library are Abraham Lincoln, a friend of Roosevelt's father; General U.S. Grant, who was a constituent of State Assemblyman Theodore Roosevelt in the early 1880's; Chief Justice John Marshall; Dutch patriots William and Maurice of Orange; Sir Thomas More and his rival William Warham, Archbishop of Canterbury; and Oliver Cromwell.

The unexhibited museum collections at Sagamore Hill NHS include historic furnishings, decorative arts, fine arts, firearms, ethnographic materials, memorabilia, manuscripts, rare books, resource management records, architectural fragments, and field collections of archeological artifacts and natural history specimens. These materials are stored under substandard conditions at numerous locations within the park that do not meet DOI and NPS standards, and at several outside institutions due to the lack of a single adequate space in which to consolidate the collections. Including archives, the park has about 85,000 objects in storage. The unexhibited Sagamore Hill collections occupy approximately 3,100 square feet in 18 substandard locations throughout the site and at several off-site locations.

The archival collection of Sagamore Hill NHS is made up of: (1) historic manuscripts and papers from private individuals, (2) records of the TRA, and (3) NPS records documenting management of park cultural and natural resources. Within these collections are personal letters, business correspondence and financial records, architectural drawings and plans, maps, photographs, negatives, and printed materials. These documents hold a wealth of valuable information and insights into the history of the Theodore Roosevelt family; their home at Sagamore Hill in Oyster Bay, NY; efforts to preserve historic landscapes, structures, artifacts and

archives; and the work of many individuals and organizations to balance preservation and use.

The park maintains three designated collection storage areas in the Theodore Roosevelt Home (with portions of the collections relegated to three additional spaces). The main dedicated collection storage area is a 540-square-foot room in an L-shaped configuration in the basement of the house connected to the 300-square-foot curatorial office area by a solid-core doorway. The space lacks environmental controls or an independent intrusion alarm system, but does have smoke detection and fire suppression. In 2004, the curatorial work space and some of the collections housed in this area had to be relocated due to mold that was threatening employee health and the condition of the collection. Those collections were relocated to Old Orchard. Portions of the collection are also stored in the New Barn, Tool Shed/Chicken Coop, Ice House, and Gardener's Shed – none of which are appropriately climate-controlled.

Unexhibited collections are also stored in three off-site locations. Lowell National Historical Park maintains a small collection of architectural fragments from the Tool Shed/Chicken Coop and the Theodore Roosevelt Home. The material is inventoried and tagged, but is intermingled with material from other parks. The Northeast Archeology Program is currently storing 657 artifacts and associated documentation. The Institute for Long Island Archeology, State University of New York at Stony Brook, is currently storing two unaccessioned and uncataloged collections.

Sagamore Hill National Historic Site is one of many sites, museums, and libraries that maintain significant collections of material related to Theodore Roosevelt. The Theodore Roosevelt Birthplace National Historic Site in Manhattan collects items relating to Roosevelt's childhood as well as Theodore Roosevelt memorabilia.¹ Theodore Roosevelt Inaugural National Historic Site in Buffalo, New York, collects items relating to Roosevelt's 1901 inauguration and objects "documented to be connected to Theodore Roosevelt, through provenance or strong association."² However, the largest collection of material related to Theodore Roosevelt is located at the Theodore Roosevelt Collection at Harvard University's Houghton Library and includes manuscripts, photographs, and books. The Library of Congress houses the Theodore Roosevelt papers relating to his presidency. In addition, Columbia University has an oral history collection relating to the family, and the

¹ *Theodore Roosevelt Birthplace Scope of Collection Statement* (Approved 1991)

² *Theodore Roosevelt Inaugural Site Foundation Collections Management Policy* (Approved 2000), 3.

State Museum of New York in Albany possesses the Lyall D. Squair collection, “one of the largest private collections of manuscripts, books and artifacts relating to Roosevelt as a New Yorker and as president.”³ There are many areas for possible overlapping of collections at these institutions, which all potentially have common research and collection document needs.⁴

In terms of use of the collection, approximately five to ten non-NPS researchers per year make on-site visits to Sagamore Hill to study museum collection items. The number of on-site visits would likely increase if improved facilities were made available. Over the last five years, the staff handled an annual average of 200 internal NPS research and historic photograph requests and over 250 external requests for such information, which arrived by telephone, fax, electronic mail and written correspondence.⁵

The conference room at Old Orchard serves as the temporary research room in which a portion of the park’s collection is presently stored. Collections that continue to be stored at the Theodore Roosevelt Home and at other locations on-site are transported by curatorial staff to the Old Orchard conference room for study. The majority of archival collections are in the storage room at Old Orchard adjacent to the conference room.

Park staff members are the primary users of the park archives. NPS staff members from Regional Offices and Centers also use the records for research, planning, and projects. Architectural drawings, land records, resource management data, photographs, research reports, compliance files, planning documents, etc. are needed when staff need to research past issues and decisions.

Natural Resources

Topography

Long Island is within the Atlantic Coastal Plain physiographic province, characterized by a 185-mile (300-kilometer)-wide gently sloping surface that extends beneath the ocean, where it is known as the Continental Shelf. Cove Neck is part of the Harbor Hill recessional moraine created over 15,000 years ago during the retreat of the Wisconsin ice sheet (Sirkin

³ New York State Museum website, <http://www.nysm.nysed.gov>

⁴ In addition to the collections mentioned, there may also be pertinent collections at The TR Medora Foundation in Medora, South Dakota; the Rough Rider Museum; and Theodore Roosevelt National Park.

⁵ The information presented includes the years 2000, 2001 and 2004. While the Old Orchard Museum was under renovations (2002–2003), the staff could not obtain access to much of the archives and therefore forwarded many of the request for photographs to Harvard’s Theodore Roosevelt Collection.

1996). Sagamore Hill's topography is undulating throughout, ranging from a high of 168 feet (51 meters) above sea level at the main house (the highest point on Cove Neck), to sea level along the eastern boundary of the park. The most notable topographic feature in Smith's Field is a glacial kettle hole called "Devil's Punch Bowl," where the Roosevelt family skied, only a portion of which is located within the park's boundary. The topography slopes downward in all directions from the platform on which the main house sits, becoming relatively flat to the east, the former location of the most intensively cultivated plots. There are two ravines separated by a small knoll in the southeast corner of the historic farm area. The natural area is characterized by rolling hills and valley, sloping downward from west to east, to the edge of woodlands, where a short bluff overlooks the wetlands and beach on Cold Spring Harbor.

Soils

Soils at Sagamore Hill are dominated by Montauk fine sandy loam, generally 3–8% slopes, with sections of 8–15% slopes in the northwest and on the bluff overlooking Cold Spring Harbor. Montauk fine sandy loam (3–8% slopes) is categorized by U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) as prime farmland. Montauk fine sandy loam (8–15 % slopes) is categorized by New York State as Farmland of Statewide importance. The southeast corner of the property contains Plymouth loamy sand, 8–15% slopes, while the south half of the central portion is Riverhead sandy loam, 15–25% slopes with a small section of Plymouth Riverhead complex soils, 15–35% slopes, northeast of center. The far eastern edge of Sagamore Hill is Pawcatuck mucky peat and beaches (Wulfort 1987: Sheets 1 and 9).

The Montauk series consists of deep, well-drained, medium-textured soils with low natural fertility that formed in fine sandy loam or in a mantle of silt loam over glacial till, usually on terminal moraines. Plymouth loamy sand, Riverhead sandy loam, and Plymouth Riverhead complex soils are very deep, well-drained, moderately coarse-textured sediments with low natural fertility. These soil series are commonly found throughout Nassau County on morainic hills and ridges. The Pawcatuck series consists of very deep and poorly drained soils that are subject to daily tidal saltwater flooding (Wulforst 1987: 79–80).

Flora and Fauna

Due to its small size (slightly over 80 acres), Sagamore Hill is best considered an important part of the larger landscape needed to support viable wildlife populations. For instance, Sagamore Hill's beach-salt marsh-tidal creek habitat complex is a component of the larger Oyster Bay

and Cold Spring Harbor system, which provides an important nesting area for one of the larger populations of diamondback terrapins (*Malaclemys terrapin*) in the state (Cook 2004, preliminary report).

Though individually small, Sagamore Hill's many vegetation types are used by a variety of plants and animals, including some locally and nationally rare species. Because Sagamore Hill is part of a fragmented, suburban landscape and has experienced regular disturbance over the years, certain invasive species have significantly altered the state of some natural communities (Dutton 1998). Some areas have been affected to such an extent that it is unlikely that even intensive management action could restore them to their original natural condition. Such areas include a patch of forest in the southwest corner of the park that has been significantly invaded by Japanese and Norway maple (*Acer palmatum* and *Acer platanoides*, respectively). Despite threats from such exotics, however, Sagamore Hill has several valuable communities, including a relatively rare intact stand of native oak–tulip tree forest, as well as a hydrologically intact maritime complex consisting of high and low salt marshes, a tidal creek, dunes, and beach. Invasives remain one of the greatest threats to these areas, however, with exotic tree and shrub species threatening the intact forest stand, and the aggressive invasive emergent common reed (*Phragmites australis*) encroaching on the estuarine complex from developed areas to the north and south. Encroachments or changes to the maritime complex that extend to privately owned land to the north and south are a great threat as well.

Table 3–1. Summary of Natural Resources found at Sagamore Hill that are Significant at the National, Regional, or State and Local Level.

Level of Significance	Resource
National	Rare comet darner dragonfly (<i>Anax longipes</i>)
Regional	Rare intact stand of oak–tulip tree forest
	Migratory bird habitat for at least 10 Partners in Flight (PIF) species of conservation concern
	Forest breeding habitat for PIF ⁶ conservation priority bird species, e.g., wood thrush (<i>Hylocichla mustelina</i>).
State and local	Nesting sites for one of the larger populations of diamondback terrapins (<i>Malaclemys terrapin</i>) in the state
	Locally uncommon herpetofauna, such as spotted salamanders (<i>Ambystoma maculatum</i>) and box turtles (<i>Terrapene carolina</i>)
	Intact community complexes (e.g., beach–saltmarsh–tidal creek, vernal pond–upland forest) important for species with multiple–habitat requirements

⁶ As noted previously, Partners in Flight (PIF) is a cooperative land bird conservation effort involving partnerships among federal, state, and local government agencies, philanthropic foundations, professional organizations, conservation groups, industry, the academic community, and private individuals.

Sagamore Hill's fauna consists of a range of largely urban-tolerant species, but some are locally uncommon and generally are not known to persist well in urban-suburban landscapes, including spotted salamanders (*Ambystoma maculatum*) and box turtles (*Terrapene carolina*) (Cook 2004, preliminary report). The mammals of the park are predominantly native species typical of the Northeastern suburban landscapes, with few exotics. Species associated with large natural landscapes, such as large carnivores, are absent from the park (O'Connell et al. 2004, progress report). Sagamore Hill also hosts at least 21 odonate species, including the rare comet darner dragonfly (*Anax longipes*) (Sones & Briggs 2004, progress report).

One of Sagamore Hill's greatest natural resource values may lie in the high number of varied habitat types in close proximity. For example, many of the amphibian and reptile species of the park have complex life-cycles that require a diversity of habitats for reproduction and over-wintering (Cook 2004, preliminary report).

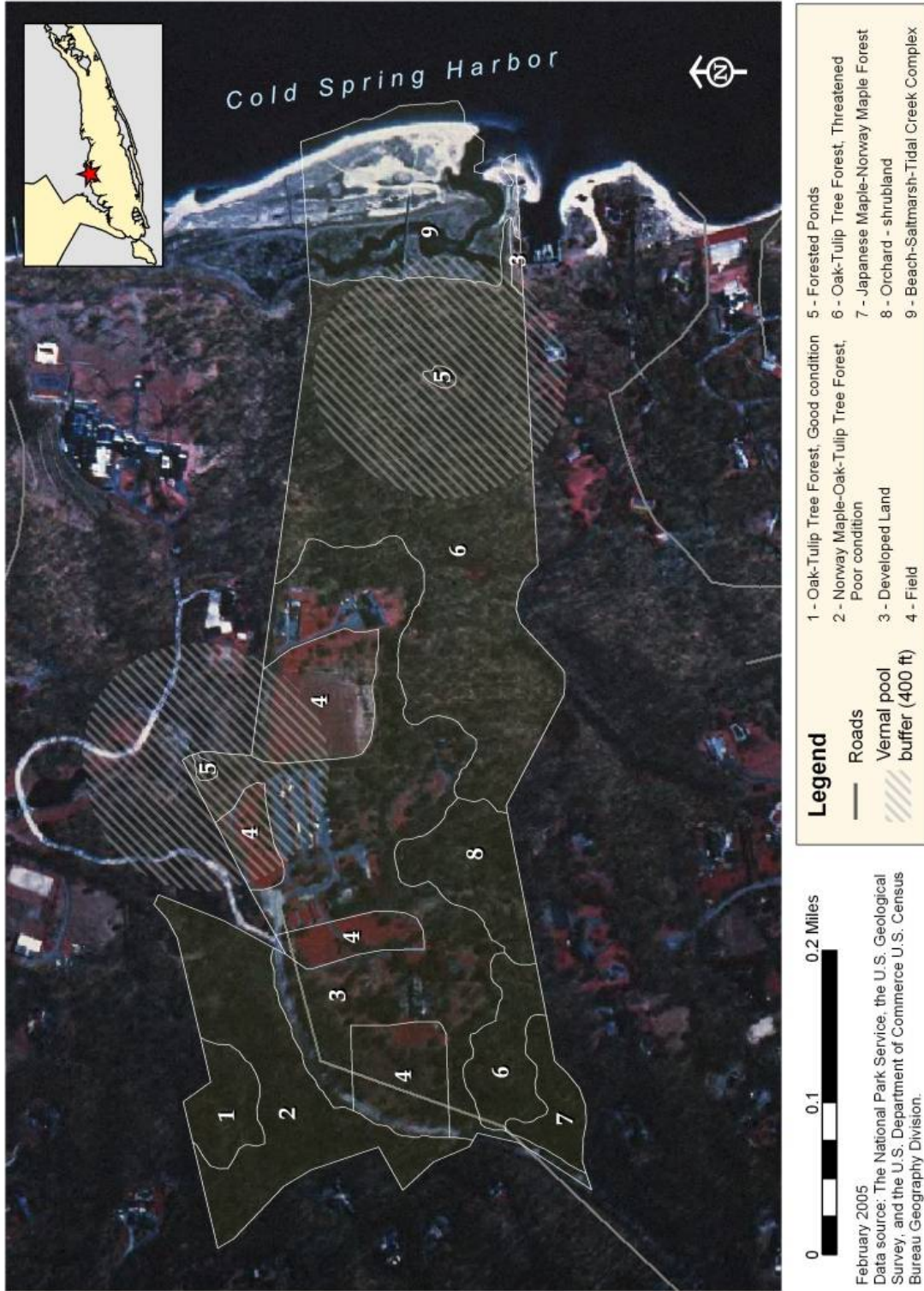
To better understand the distribution of natural resources across the park, a draft vegetation map (Feldmann, preliminary delineations 2004) was created that delineated nine vegetation "types" (Figure 3-2). Listed below are brief summaries of nine distinct vegetation "types" found at Sagamore Hill, including a description of their habitat value for relevant flora and fauna.

(1) OAK-TULIP TREE FOREST

Oak-tulip tree forests (*Quercus* sp. and *Liriodendron tulipifera*) are mesophytic hardwood forests occurring on well-drained soils throughout southeastern New York. Sagamore Hill contains a single 30-acre patch of oak-tulip tree forest that remains in good condition (i.e., predominantly free of exotic species). The patch is located within a matrix of poor-condition Norway maple-oak-tulip tree forest (2) in the northwest corner of the park. Though relatively small, such patches of intact forest are quite rare on Long Island, with only one other significant example in Nassau County (Edinger et al. 2002; Feldmann, preliminary report 2004).

The majority of reptiles and amphibians at Sagamore Hill are primarily terrestrial, though many require wetland habitats at some point in their life cycles. These terrestrial species, such as the eastern red-backed salamander (*Plethodon cinereus*), common garter snake (*Thamnophis sirtalis*), and box turtle (*Terrapene carolina*), extensively utilize Sagamore

Figure 3-2: Vegetation Types at Sagamore Hill National Historic Site



Hill's mixed deciduous forests. The box turtle, in particular, depends upon large, roadless patches of intact habitat, such as those at Sagamore Hill (Cook 2004, preliminary report).

Most of the mammals present at Sagamore Hill make use of the park's oak-tulip forests. Larger residents such as raccoons (*Procyon lotor*), Virginia opossums (*Didelphis virginiana*), feral cats (*Felis sylvestris*), and red foxes (*Vulpes vulpes*) hunt or scavenge along the forest floor. Eastern chipmunks (*Tamias striatus*) are common, and even southern flying squirrels (*Glaucomys volans*) are known to reside in these areas. Smaller mammals found in this community include the short-tailed shrew (*Blarina brevicauda*) and white-footed mouse (*Peromyscus leucopus*) (O'Connell et al. 2004, draft report).

(2) NORWAY MAPLE-OAK-TULIP TREE FOREST

The northwest corner of Sagamore Hill contains a significant area of oak-tulip tree forest that has experienced invasion by the aggressive exotic Norway maple (*A. platanoides*). Though threatened, this forest could be restored to a healthy condition by proper management (Edinger et al. 2002; Feldmann, preliminary report 2004). Even in its current condition, this area is presumed to possess habitat value for many of the avian, reptile, and amphibian species that reside in the park's oak-tulip tree forests.

(3) DEVELOPED LAND

Along with maintained fields, parking areas, paved roads, and man-made structures make up a significant portion of the northern and western sections of the park. Moderate, sustained disturbance has resulted in the establishment of several native and non-native invasive species both within and adjacent to these areas. Cultivated species in the gardens and other areas surrounding buildings also have the potential of establishing in adjacent natural areas (Edinger et al. 2002; Feldmann, preliminary report 2004).

(4) FIELD

A significant portion of Sagamore Hill consists of open areas maintained as grass- and sedge-dominated fields. Box turtles (*T. carolina*) and snakes typically use these habitats, and several amphibians such as wood frogs (*R. sylvatica*) and spring peepers (*Pseudacris crucifer*) were also found while surveying fields at Sagamore Hill. The three species of turtles found at Sagamore Hill (box, painted [*Chrysemys picta*], and snapping [*Chelydra serpentina*]) use well-drained fields for nesting during the early summer (Cook 2004, preliminary report) and can be disturbed by activities at that time of year.

Field habitat at Sagamore Hill is likely too small to attract grassland birds. Grassland birds are known to be area-sensitive, especially in the northeast: most species of conservation concern require patches over 50 acres in size (Vickery et al. 1994). However, the field habitat does provide important foraging opportunities for more common species like barn swallows (*Hirundo rustica*), eastern kingbirds (*Tyrannus tyrannus*), and robins (*Turdus migratorius*), all of which are documented breeders at Sagamore Hill.

Many mammals that utilize Sagamore Hill's forest communities also make use of the park's field habitats. Species surveyed in these communities include raccoon (*P. lotor*), opossum (*D. virginiana*), feral cats (*F. sylvestris*), gray squirrel (*S. carolinensis*), and short-tailed shrew (*B. brevicauda*) (O'Connell et al. 2004, draft report).

Along with the Heron Pond site, two of Sagamore Hill's fields (east of the main parking area and west of the house) had the highest odonate species abundance of all sites within the park (12 and 10 species, respectively). The field east of the parking area was also the only area in which a rare species, the comet darner dragonfly (*Anax longipes*), was observed during a recent survey (Sones & Briggs 2004, progress report). Three dragonflies and one damselfly species were recorded in the field north of the parking lot, while two damselflies and three dragonfly species were found in the field west of the Visitor Contact Station.

(5) FOREST PONDS

The two ponds at Sagamore Hill constitute the park's only freshwater wetland sites. Though small, these water bodies provide vital habitat for a variety of amphibian, reptile, avian, and mammal species (Feldmann, preliminary report 2004). Woodpile Pond, located north of the main parking area, and Heron Pond, located within the eastern oak-tulip tree forest, exhibit the highest species diversity of amphibians and reptiles of all areas within the park (Cook 2004, preliminary report). These sites constitute primary habitat for painted turtles (*C. picta*) and snapping turtles (*C. serpentina*) and are critical for obligate vernal-pool breeders, such as wood frogs (*R. sylvatica*), spotted salamanders (*A. maculatum*), spring peepers (*P. crucifer*), and grey treefrogs (*Hyla versicolor*). Even purely terrestrial species such as the common garter snake (*T. sirtalis*) and the box turtle (*T. carolina*) use these wetlands to obtain food or escape extreme temperatures.

Forested Buffers. A growing amount of literature has shown that the adjacent upland forest matrix constitutes critical habitat for a number of

species that use forested ponds. Many reptile and amphibian species have complex life cycles that require both aquatic and terrestrial habitats (Wilbur, 1980; Sinsch, 1992; Sjogren-Gulve, 1994). For even the most aquatic species found at these sites such as painted turtles (*C. picta*), surrounding terrestrial habitat is known to be crucial for at least some aspect of the animal's life cycle. Species such as wood frogs and spotted salamanders spend only a short time within the ponds during the breeding season and utilize adjacent forested upland for the remainder of the year. Aquatic turtles likewise depend upon well-drained upland forests and fields for nesting.

Many species of pond-breeding amphibians are positively associated with the amount of forest 200–1000 meters from these ponds (Porej et al. 2004), and habitat alterations of forested uplands can result in greater landscape resistance, which reduces dispersal capabilities (deMaynadier and Hunter, 1998; Gibbs, 1998; Guerry and Hunter, 2002; Rothermel and Semlitsch, 2002). For this reason, it is recommended that special consideration be given when any management activity is planned in a forested upland buffer within 400 feet of a pond's edge, the average approximate dispersal distance of several sensitive mole salamander (i.e., *Ambystoma*) species (Calhoun & Klemens 2002; Calhoun & deMaynadier 2004).

Besides exhibiting high amphibian species diversity, Heron Pond had one of the highest species diversities for odonates in the entire park. Six species of dragonflies and two species of damselflies were recorded at the site, as were the park's only recorded twelve-spotted skimmer (*Libellula pulchella*) and slender spread-wings (*Lestes rectangularis*). Three dragonflies and one damselfly were also recorded at the Woodpile Pond site (Sones & Briggs 2004, progress report).

Management concerns for these sites, particularly at Woodpile Pond, include protecting surface water from runoff from parking lots and other developed areas, as well as possible removal of exotic plant species when necessary (Feldmann, preliminary report 2004).

(6) OAK-TULIP TREE FOREST

The largest woodlands within Sagamore Hill consist of oak-tulip tree forests that are threatened to a greater or lesser degree by invasive species, such as the Norway maple (*A. platanoides*) instead of more widespread invasives, as found in the Norway maple-oak-tulip tree forest considered to be in poor condition. Within these tracts, such exotics are mostly associated with forest edges adjacent to developed areas or with man-made trails. Though threatened, these forests could probably be restored

to their original healthy condition by appropriate management (Feldmann, preliminary report 2004).

As mentioned above, terrestrial reptile and amphibian species such as the eastern red-backed salamander (*Plethodon cinereus*), common garter snake (*Thamnophis sirtalis*), and box turtle (*T. carolina*) extensively utilize Sagamore Hill's mixed deciduous forests. Other, more wetland-dependent species also require areas of unfragmented forest for some portion of their life cycle. For example, both wood frogs (*R. sylvatica*) and spotted salamanders (*A. maculatum*) occur most frequently and in greater abundance in roadless, forested landscapes when suitable ponds are present (Baldwin and Vasconcelos 2003, Egan 2001, Egan and Paton 2004, Windmiller 1996). Their occurrence and abundance are likewise negatively correlated with road density (Egan 2001), suggesting that their persistence in suburbanized landscapes such as that surrounding Sagamore Hill will depend on remnants of relatively unfragmented forested landscapes extending for some distance beyond the edge of the wetlands (Cook 2004, preliminary report).

The oak-tulip tree forest is one of the most important natural resource features for birds at Sagamore Hill. This forest supports at least one breeding pair of wood thrush (*Hylocichla mustelina*), a species of high conservation priority and regional responsibility, based on PIF prioritization (Dettmers and Rosenberg 2000). Baltimore orioles (*Icterus galbula*) also breed in this patch of forest and are an important conservation priority for the region. The hairy woodpecker (*Picoides villosus*), a year-round resident to the area, is also a priority species forest bird for which Sagamore Hill offers a habitat. Forest-breeding birds should be a priority for Sagamore Hill given the good condition of the existing resource. Forest birds are declining throughout the northeast and Partners in Flight recommends that partners (including the National Park Service) coordinate efforts to maintain habitats to protect populations of priority species. The oak-tulip tree forest at Sagamore Hill is important not only to breeding birds, but also to some high-priority migrating bird species, seven of which were detected at this site during recent avian inventories: eastern wood-pewee (*Contopus virens*), scarlet tanager (*Piranga olivacea*), black and white warbler (*Mniotilta varia*), chimney swift (*Chaetura pelagica*), rufous-sided towhee (*Pipilo erythrophthalmus*), black-billed cuckoo (*Coccyzus erythrophthalmus*), and Blackburnian warbler (*Dendroica fusca*).

As with intact oak-tulip forests, most of Sagamore Hill's mammals are found in these communities. Red foxes (*V. vulpes*), eastern chipmunks (*T.*

striatus), and southern flying squirrels (*G. volans*) are but a few of the species surveyed in these areas. Others include white-footed mice (*P. leucopus*) and short-tailed shrews (*B. brevicauda*) (O'Connell et al. 2004, draft report).

(7) JAPANESE MAPLE–NORWAY MAPLE FOREST

The aggressive exotics Japanese maple and Norway maple have encroached significantly upon the oak–tulip forest along the park's western edge. A small, narrow patch along the southwest corner is now dominated by these species and is unlikely to be successfully restored to its natural condition (Edinger et al. 2002; Feldmann, preliminary report 2004). However, it can be presumed that this area continues to possess some habitat value for many of the avian, reptile, amphibian, and mammal species that reside in the park's oak–tulip tree forests.

(8) SUCCESSIONAL SCRUB–SHRUBLAND

Successional scrub–shrublands are located adjacent to the developed areas of the park and provide potential foraging and nesting habitat for bird species such as the brown thrasher (*Toxostoma rufum*), chestnut-sided warbler (*Dendroica pensylvanica*), American robin (*Turdus migratorius*), and eastern kingbird (*Tyrannus tyrannus*) (Edinger et al. 2002; Feldmann, preliminary report 2004). Mammals observed in this community include raccoons (*P. lotor*), opossums (*D. virginiana*), feral cats (*F. sylvestris*), and white-footed mice (*P. leucopus*) (O'Connell et al. 2004, progress report). This area also likely possesses at least some habitat value for other fauna residing in the park's oak–tulip tree forests.

(9) BEACH–SALTMARSH–TIDAL CREEK COMPLEX

The complex of vegetation types extending from the oak–tulip forest to the shoreline at the park's eastern boundary consists of narrow bands of a wide variety of habitat types. The sparsely vegetated maritime beach and dune communities provide potential habitat for rare plant species, such as the seabeach amaranth (*Amaranthus pumilus*), as well as nesting areas for shorebirds such as terns and plovers. A tidal creek runs through the saltmarsh complex behind the dunes, providing a likely nursery for a number of marine and estuarine fish species, such as mummichog (*Fundulus heteroclitus*), winter flounder (*Pseudopleuronectes americanus*), and striped bass (*Morone saxatilis*). Wading birds such as great blue heron (*Ardea herodias*) and egrets frequent such areas to feed (Edinger et al. 2002; Feldmann, preliminary report 2004). Raccoons (*P. lotor*) and opossums (*D. virginiana*) also hunt and scavenge along the shore and marshes of this maritime complex, and white-footed mice (*P. leucopus*) can be found among its grasses and sedges (O'Connell et al. 2004, draft report).

Immediately adjacent to the creek and flooded by tides each day, the low saltmarsh consist of an almost mono-specific stand of cordgrass (*Spartina alteriflora*). Low saltmarsh vegetation provides habitat for fiddler crabs (*Uca* sp.) and many species of birds, such as clapper rails (*Rallus longirostris*) and marsh wren (*Cistothorus palustris*). Such birds are also common in the less frequently flooded high marsh, which is characterized by a mixture of short cordgrass, salt-meadow grass (*Spartina patens*), and other species. Among the animals common to the high marsh are the coffeebean snail (*Melampus bidentatus*) and the American black duck (*Anas rubripes*) (Feldmann, preliminary report 2004). The black duck winters along Long Island Sound and is a common winter resident of the Sagamore Hill tidal creek complex. This species has experienced severe population declines over the past few decades due to habitat loss and hybridization with mallards. Maintaining wintering habitat is critical to maintaining the existing black duck population; therefore, the tidal creek complex at Sagamore Hill is another important natural resource supporting local and regional avifauna.

The northern diamondback terrapin (*Malaclemys terrapin*), though the most abundant reptile at Sagamore Hill, is found exclusively within the park's estuarine habitats. These turtles are found primarily in Eel Creek and Cold Spring Harbor and nest on the adjacent beach. Though small, the maritime complex at Sagamore Hill is a vital part of the larger Oyster Bay and Cold Spring Harbor system, which supports one of the larger diamondback terrapin populations in the state.

Five species of dragonflies have also been recorded within the estuarine complex at Sagamore Hill. These include the only seaside dragonlet (*Erythrodiplax berenice*) recorded at the park, as well as wandering and spot-winged gliders (*Pantala flavescens* and *P. hymenaea*, respectively).

Water Resources

GROUNDWATER

Long Island is composed of a series of sand and gravel aquifers from which all of the population's water supply is drawn. In the vicinity of Sagamore Hill, the depth to the ground water table and the Upper Glacial aquifer in the vicinity is typically less than 30 feet (9.1 meters) (Busciolano 2002). The Upper Glacial aquifer is the shallowest and the closest to the most sources of contamination of the three aquifers that compose the island. As a result it is the most heavily contaminated. Most of the region's drinking water is drawn from the other two aquifers. Sagamore Hill is located in the recharge area for the Upper Glacial aquifer.

SURFACE WATER

There are two freshwater ponds located within Sagamore Hill: Woodpile Pond, near the center of the north property boundary on Sagamore Hill Road, and Lower Lake (also known as Heron Pond), near the southeast corner. As noted above, these two ponds constitute the park's only freshwater wetland sites. Though small, these water bodies provide vital habitat for a variety of amphibian, reptile, avian, and mammal species (Feldmann, preliminary report 2004). In addition, a map of the property made by Theodore Roosevelt around the time he acquired it in 1880 (Sagamore Hill archives) indicates a "frog springs" near the northeast corner. Woodpile Pond formerly drained into Cold Spring Harbor via a stream on a neighboring property to the north, but this stream had been filled early in the 1990s, resulting in higher water levels in the pond (Bellavia and Curry 1995:162).

Coastal Zone

As mentioned above, Cove Neck is surrounded by Oyster Bay Harbor to the west and north and by Cold Spring Harbor to the east. Both harbors empty into Long Island Sound to the north. The west edge of the Sagamore Hill property is approximately 1850 feet (564 meters), and the north edge approximately 2400 feet (732 meters) from the shoreline, while the east edge abuts Cold Spring Harbor. The tidal Eel Creek separates the wooded uplands of Sagamore Hill from the saltwater marsh and beach along Cold Spring Harbor.

All of Cove Neck (and therefore, Sagamore Hill) is included within the landward coastal boundary as defined by the NYS Coastal Zone Management Program.

Sagamore Hill is identified as federally excluded property under New York State's Coastal Zone Management Program. However, the Coastal Zone Management Act includes provisions to ensure that federal agency activities are consistent with the enforceable policies of the NYS Coastal Zone Management Program. The types of activities within the coastal zone that are covered by these regulations include:

- activities directly undertaken by, or on behalf of, federal agencies;
- activities requiring authorizations or other forms of approval from federal agencies;
- activities involving financial assistance from federal agencies; and
- outer continental shelf activities.

Visitor Experience/ Visitor Services

Visitor Use Patterns

In 2002, a visitor use survey was undertaken by Robert Manning, professor of Recreation Management at the University of Vermont. The survey was administered on 13 randomly selected days in August. Visitors representing the park's general audience were approached at random and invited to participate in the survey. Those who agreed were given a survey to complete at the end of their visit and were asked to return it before they left the park. No school groups were represented, and few participants in organized tours participated in the survey. The survey effort resulted in a response rate of 97.6 percent, yielding a total of 409 completed questionnaires. At the time the Theodore Roosevelt exhibit at Old Orchard was under development and would not be open to the public until January 2004. Therefore, the data do not reflect visitor use related to Old Orchard. The final visitor use report was completed in March 2003 and characterized visitor use and the visitor experience as follows.

The vast majority of visitors surveyed came in relatively small groups of family and/or friends. Nearly all the visitors surveyed were from the United States, with most of the states represented. A considerably smaller group of survey respondents were from 11 foreign countries. Over half of the US visitors were from New York State, followed by New Jersey, California, and Pennsylvania.

The average age of respondents was 50 years, with just over 25 percent being 60 or older. Visitors were highly educated, with three quarters having attained at least a college degree. Visitors earned relatively high incomes: over 40 percent earned \$100,000 or more annually. Over 90 percent of the visitors were white.

About half were first-time visitors to Sagamore Hill. The average length of stay was about 2 hours. Sagamore Hill was the primary destination for nearly all visitors surveyed, though many visitors also visited a variety of local tourist attractions. Only a small minority of visitors had also visited other sites related to Theodore Roosevelt.

The Theodore Roosevelt Home and the Visitor Contact Station were visited by nearly all visitors. Most visitors also walked the grounds. Nearly all visitors traveled to Sagamore Hill by private automobile.

About 20 percent of visitors stayed overnight at a local hotel, motel, bed and breakfast, or other commercial lodging, and about 40 percent ate at least one meal at a local restaurant.

Based on the park staff's current experience, Sagamore Hill serves a variety of visitors.

- General tourist population who come to Long Island, some for the primary purpose of visiting Sagamore Hill, and some of those seeking tourist sites in the local area.
- Schools, school groups, and educators in Nassau, Suffolk, and Queens counties. Currently, approximately 5,000 students from local school districts visit the park annually, though the park must turn away as many as 6,000 students due to the limitations of staff and program space.
- Organized groups, bus groups, senior groups, scout/youth groups, and tour operators.
- Local residents of Long Island.
- Audiences who use the Internet for information and interpretive materials.
- International visitors.

Current Visitation

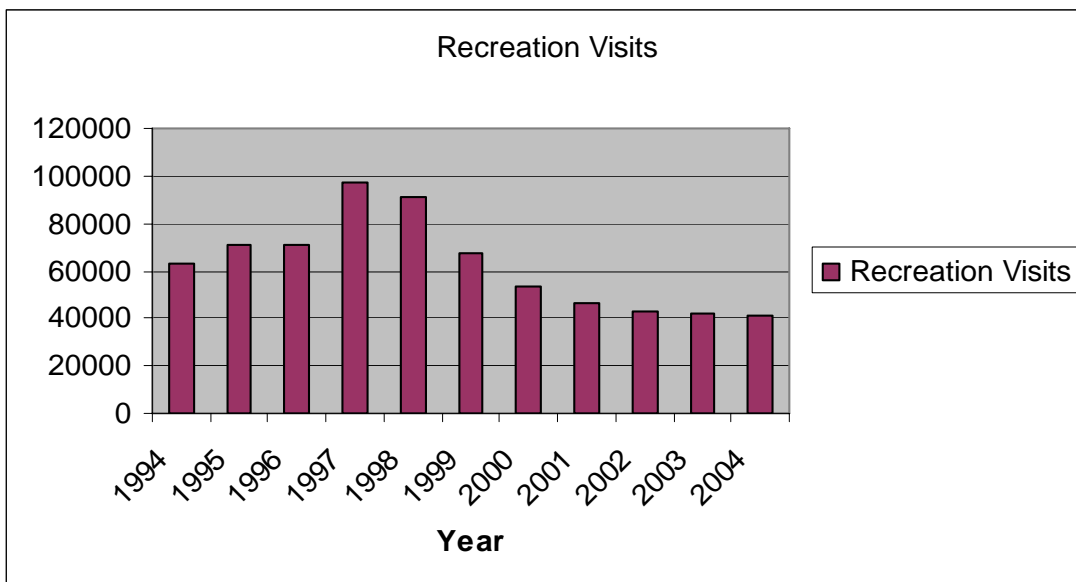
Visitation at Sagamore Hill has shown a steady rate of decline particularly since 2000. From 2000 to 2004, visitation declined about 22.7 percent, though it is important to note that these figures do not account for recreational users from the surrounding neighborhood.

A number of factors account for the decline in visitation, particularly changes in counting methods. From 1994 to 1996, the park used traffic counters to tally the number of visitors. In 1997, when the visitor contact station opened, the site counted both visitors to the new facility and to the ranger kiosk, resulting in some double counting during 1997 and 1998. The current counting method for recreation visits reflects the number of visitors actually recorded purchasing tickets to tour the Theodore Roosevelt Home.

Table 3-2: Sagamore Hill Visitation 1994-2004

Sagamore Hill NHS — Visitation 1994-2004	
Year	Total Recreation Visits
1994	62,887
1995	71,261
1996	71,195
1997	96,590*
1998	90,919
1999	67,193 ⁺
2000	53,182
2001	45,176
2002	42,526
2003	42,396
2004	41,082

Figure 3-3: Sagamore Hill Recreation Visits 1994-2004



As was the case at many national park sites after September 11, 2001, Sagamore Hill experienced a significant dip in visitation. This and other significant acts of global terrorism had an effect on general visitation, but more particularly on school groups. Other factors influencing visitation by school groups include changes in teaching staff at local schools and the increasing cost of transportation. Finally, because of staffing constraints, a significant number of school and other organized tour groups are turned away.

Pre-arrival Resources

Most visitors received information about Sagamore Hill before their visit. However, information about the area was often obtained through informal

sources such as networks of family and friends. The next largest segment relied on guide books or other publications.

Visitors planning a trip may access the Sagamore Hill page on the National Park Service's website (www.nps.gov/sahi), which provides basic information on the park's location, hours of operation, park facilities and tours, and special events.

For school groups, the web page offers information on booking a class field trip, themes, goals, and objectives for educational visits, and educational pre-visit materials for a variety of age groups.

An automated phone system enables the park to provide updates on cancellation and closures as needed. Park staff are also available by phone to answer visitor questions or assist in organizing school and other group tours.

Visitor Experience

The 2002 Visitor Use Survey revealed the following information about the visitor experience at Sagamore Hill. The quality of all visitor facilities and services was rated as good or excellent by survey respondents. The lowest-rated visitor facility was the picnic area, and the tour of the Roosevelt Home was the highlight of the visit for the vast majority. Most visitors did not feel crowded on the grounds of Sagamore Hill, in the Visitor Contact Station, or at the picnic area. Over two-thirds of visitors rated the quality of their overall experience at Sagamore Hill as excellent, and nearly all rated the quality of their experiences as good to excellent.

Interpretation of most Theodore Roosevelt-related themes was rated as good or excellent. The most important interpretive topics were the personal life of Theodore Roosevelt, Theodore Roosevelt's family, the time period in which Theodore Roosevelt lived, Sagamore Hill as the "summer White House," Theodore Roosevelt as hunter, and Theodore Roosevelt as President. The least important interpretive topics were Theodore Roosevelt as author, Theodore Roosevelt as supporter of the arts, and Theodore Roosevelt as scientist.

There is relatively strong support for ranger-guided tours, but only modest visitor support for development of more trails and paths on the property. There is only modest support for tours to be conducted to surrounding visitor attractions with centralized parking in the hamlet of Oyster Bay.

Visitor Facilities & Amenities

VISITOR CONTACT STATION

The current Visitor Contact Station is adjacent to the park's parking lot in the same building as the park's Eastern National bookstore. The building was constructed in the early 1950s by the Theodore Roosevelt Association and served as a refreshment stand for many years. In 1997, the building was remodeled for use as the visitor contact station offering basic park information, fee collection, and the Eastern National bookstore. A small changing exhibit panel is also located in the Visitor Contact Station. The contact station is open 9am to 5pm Wednesday through Sunday, extended to seven days a week between Memorial Day and Labor Day. Public restrooms are also available at this location and are accessible from the exterior of the building.

During its hours of operation, a member of the park's visitor services staff is stationed at the Visitor Contact Station. A small workspace is located adjacent to the fee collection desk. In addition to providing visitor information and collecting admission fees, park staff often handle sales on behalf of the Eastern National bookstore.

According to the 2002 visitor use survey, over 90 percent of respondents visited the Visitor Contact Station, and over 77 percent stopped in at the bookstore. Thirty-seven percent of respondents indicated that they made a purchase at the bookstore.

The Visitor Contact Station is universally accessible.

PICNIC AREA

An unsheltered picnic area with a number of tables is located in the courtyard at the rear of the Visitor Contact Station.

THEODORE ROOSEVELT HOME

The Theodore Roosevelt Home offers 25 rooms furnished to Roosevelt's occupancy during the summer White House years (1902–1908). According to the 2002 Visitor Use Survey, 99 percent of respondents participated in a house tour, and a nearly equal number indicated that the tour of the home was the highlight of their visit.

Admission to the Theodore Roosevelt Home is by guided tour only. House tour group size is limited to 14 people. Up to four tours may be taking place in the home at a given time. The home is open from 10 AM to 4 PM Wednesday through Sunday and daily between Memorial Day and Labor Day. Tours are offered on the hour and on the half-hour. The length of

the guided tour varies between 45 and 90 minutes, depending upon the guide and the nature of the participating group. Tickets for house tours are offered on a first-come, first-served basis. Reservations for large groups are made in advance. Tickets for tours of the home often sell out by early afternoon on weekends, holidays, and during the summer season. About 14 tours of the Theodore Roosevelt Home are offered daily. The fee for a guided tour of the Theodore Roosevelt Home is \$5. Children 16 or under are admitted free of charge. According to visitor use survey results, visitors typically wait an average of 20 minutes to get on a tour.

For large groups of more than 30 persons and during days of high visitation, the first floor of the Theodore Roosevelt Home is open for self-guided viewing. While more limited than a ranger- or docent-led tour, the experience is enhanced by visitor services staff, who are on hand to answer any questions. This allows visitors who would otherwise not see the Roosevelt Home to see its most distinctive rooms including the North Room. The fee for this abbreviated tour is \$3. A 4:20 PM first floor walk-through (\$3) also is offered daily.

The first floor of the Theodore Roosevelt Home is universally accessible but is not ADA-compliant. The mechanism for making the first floor accessible is a portable ramp that exceeds the prescribed standard of an eight percent slope (1:12 ratio of rise over run), making it inconvenient and difficult for some disabled visitors.

THEODORE ROOSEVELT EXHIBIT AT OLD ORCHARD

The Theodore Roosevelt Exhibit at Old Orchard opened to the public in January 2004. The exhibit is open Wednesday to Sunday from 10 AM to 4 PM. This is the only formal museum exhibit at the park. The exhibit is designed to tell the story of Theodore Roosevelt's life and achievements and to complement what can be seen in the Theodore Roosevelt Home. Many objects and artifacts are being displayed for the first time in the park's history. The exhibit also includes permanent tactile exhibit items to touch and feel. Two changing exhibit cases in the audio/visual room at Old Orchard offer seasonal exhibits.

Two 15-minute films are available in the audio/visual room at Old Orchard. These films offer information and historical footage of the Roosevelt family at Sagamore Hill and of Theodore Roosevelt's career.

Admission to the Theodore Roosevelt Exhibit at Old Orchard is free. The first floor of this facility is universally accessible. Public restrooms are also available at this location.

WAYSIDES

Interpretive waysides are outdoor panels that can be freestanding or attached to an existing structure such as a kiosk. They include descriptive information about park resources such as historic structures, historic landscapes, and natural features. There are a number of waysides throughout the park that interpret different aspects of the site's architecture, landscape, and overall history. Many of the waysides were installed at different times and differ in appearance. Some of the content on these waysides does not reflect current scholarship and should be updated or replaced.

TRAILS

A one-mile loop trail begins behind Old Orchard and descends a wooded sloping path to Eel Creek, the salt marsh, and beach at Cold Spring Harbor. A boardwalk and a bridge carry walkers through the salt marsh and across Eel Creek to the beach. A trail map prepared by the park staff is available to visitors at the Visitor Contact Station.

As reported in the 2002 Visitor Use Survey, about 50 percent of respondents said that they used the park's trail.

The trail is not universally accessible. However, arrangements can be made with the park staff to transport a disabled visitor by electric cart.

PERSONAL SERVICES

Personal services are carried out by both visitor services staff and the park's large and dedicated corps of volunteers. Both visitor service staff and volunteers greet visitors and provide basic park orientation information. As noted above, the centerpiece of the park's visitor experience is the guided tour of the Theodore Roosevelt Home. Park staff and volunteers also offer regularly scheduled tours of the grounds, talks from the porch of the Theodore Roosevelt home, and nature walks. Gallery talks for the Theodore Roosevelt Exhibit at Old Orchard are also under development.

Due to staffing limitations, personal services are concentrated on-site. However, the park has previously worked with community-based organizations like the Oyster Bay Main Street Association to offer periodic ranger-led walking tours in the hamlet of Oyster Bay.

LIVING HISTORY

Sagamore Hill NHS does not have a formal living history program. However, during special events such as the annual July 4th program, the

park has employed not only an actor to portray Theodore Roosevelt, but also a “Rough Rider” reenactment group that performs on horseback.

EDUCATION PROGRAMS

Sagamore Hill offers tours to nearly 5,000 school children annually. Demand for this program is high, and the park is often forced to turn groups away. The program for school groups includes a reservation system, pre-visit materials for a variety of age groups, a guided tour of the Theodore Roosevelt Home tailored to the requirements of the group, and organized inquiry exercises at the Theodore Roosevelt Exhibit at Old Orchard (e.g. scavenger hunts). Junior ranger activities are offered as well.

Additionally, the Theodore Roosevelt Association has developed curriculum-based lesson plans based on national educational standards. They are available free of charge on the Association’s website (www.theodoreroosevelt.org).

SPECIAL EVENTS

Annual special events include the July 4th celebration, a “Neighborhood Nights” community concert, Navy Day, and participation in the annual celebration of Theodore Roosevelt’s birthday by the community of Oyster Bay. Lectures and special programs are also scheduled seasonally.

The Friends of Sagamore Hill and the Theodore Roosevelt Association sponsor additional programs throughout the year in partnership with NPS to augment the park’s existing programming.

Attendance at special events often exceeds 500 participants and may reach 1,500 during the July 4th celebration.

PUBLICATIONS

Sagamore Hill NHS has a standard brochure introducing the park to visitors. The brochure is designed to agency-wide standards, making it immediately recognizable as an NPS product. The park brochure has recently been translated into Russian and Japanese; German and Spanish versions of the brochure are currently under development. All other park publications are currently available in English only. A number of photocopied hand-outs list birds and natural resources at the park and provide orientation to park trails or to other Theodore Roosevelt sites in the immediate community. A published guide to the park is available for purchase at the bookstore. A volunteer newsletter – *The Rough Writer* – is produced monthly and distributed to roughly 100 volunteers and community partners. The park also offers “Junior Ranger” activities.

One of the park's primary partners, the Theodore Roosevelt Association, publishes *The Theodore Roosevelt Association Journal*, a quarterly scholarly journal that explores and promotes scholarship and research on all aspects of Theodore Roosevelt's life. The Theodore Roosevelt Association is also involved with projects that augment park publications, including a revised edition of *Sagamore Hill: An Historical Guide* in progress which when completed will also be available for purchase at the Visitor Contact Station.

The park's bookstore, run by Eastern National, stocks numerous commercially available books and video programs associated with Theodore Roosevelt and Sagamore Hill.

WEBSITE

Sagamore Hill maintains a page on the National Park Services website (www.nps.gov) that offers specific guidance for potential visitors as well as a limited amount of in-depth information on the site's history. The web page offers links to other informational sites including the Theodore Roosevelt Association website, which provides a great deal of detailed information about Theodore Roosevelt's life and achievements.

Recreational Uses

Sagamore Hill is a popular destination for neighborhood residents who come to walk, run, bicycle, and relax on the porch at the Theodore Roosevelt Home. No exact count has been taken to estimate the volume of local recreational use.

Park Operations and Facilities

Parking and Site Circulation

ENTRY

As noted earlier, over 97 percent of visitors to Sagamore Hill arrive by private automobile and are directed through Oyster Bay either along state routes 106 or 25A to Cove Road. Signage directs visitors from Cove Road to Cove Neck Road, which ends at a private drive, where a visitor needs to turn right onto Sagamore Hill Road. Sagamore Hill Road was constructed in the 1950s by Nassau County, which continues to own and maintain the road.

Sagamore Hill Road is the main gateway into Sagamore Hill National Historic Site. Though there is no directional signage to guide visitors along this road, just below the hillside upon which visitors can catch a glimpse of the house, there is a New York State historic plaque and the site's historic stone marker inscribed "Sagamore Hill."

PARKING

Visitors continue along Sagamore Hill Road until they reach the top of the hill and a 100-car parking area. Currently, the parking area can accommodate automobile and bus parking on the average visitor day and is rarely full.

A few times during the year, particularly for the July 4th celebration, parking capacity is exceeded and the adjacent field is used to accommodate overflow. Recent natural resources research has indicated that the fields have some value as nesting areas during certain times of the year. The park will be taking this into account in considering future locations for overflow parking.

CIRCULATION

A modest system of paved park roads and pathways service all visitor and park support facilities. A total of approximately one mile of paved roads and pathways are maintained by the park. While all of these are passable by service vehicle for operational and emergency purposes, most are limited to pedestrian use. To improve accessibility from the visitor parking area to Old Orchard and to limit pedestrian/vehicle conflicts on the Old Orchard service road, a path across the field to the east of the parking area has been established and is maintained as a pathway for most of the year.

Some of the park's roads and pathways follow the historic circulation patterns established during the Roosevelt family's tenure. The remains of roads and pathways abandoned by the Roosevelt family or later by the Theodore Roosevelt Association and National Park Service are visible. These historic road segments and features have been documented in the park's Cultural Landscape Report and on its List of Classified Structures.

UNIVERSAL ACCESS

The park's paved roads and pathways are all universally accessible. The surfaced path to Old Orchard crosses an area that is level in grade and can accommodate a wheelchair. However, some of the park's visitor facilities are located at what some might consider significant distances from one another. For instance, the Theodore Roosevelt Exhibit at Old Orchard is approximately one-quarter mile from the Theodore Roosevelt Home. The park maintains two electric carts that are available for staff to transport visitors requiring assistance. The carts have all-wheel drive and are capable of transporting visitors requiring such assistance along the woodland trail to the beach to view Cold Spring Harbor.

The first floor of Old Orchard is universally accessible and includes accessible restrooms. The Visitor Contact Station is also universally

accessible, as is the first floor of the Theodore Roosevelt Home. A portable ramp is available at the Theodore Roosevelt Home but it does not meet Americans with Disabilities Act (ADA) design guidelines and exceeds the standard eight percent slope.

Park Support Facilities

PARK OFFICES

The administrative offices for Sagamore Hill NHS are located on the second floor of Old Orchard. This building houses the offices of the superintendent, administrative officer and staff, the museum curator and curatorial staff, the chief of visitor services, and an interpretive park ranger. There is no formal break room – a small kitchenette allows for minimal storage and warming of food and beverages. The second floor of Old Orchard is not universally accessible.

Due to deteriorating conditions in the collection storage area in the basement of the Theodore Roosevelt Home, a large portion of the collection had to be relocated to Old Orchard. The new home for most of these objects became the conference room at Old Orchard, which is no longer available to accommodate the needs of the park staff.

Sagamore Hill has recently established a TelNet Station allowing access to live, satellite-based training and other interactive activities. This greatly enhances access to training opportunities for park staff as well as park partners.

MAINTENANCE FACILITY

Sagamore Hill's maintenance operation is currently housed in a 1,800-sq.-ft. converted six-car garage built in 1938 that has many environmental deficiencies, including no fire suppression system. The shop does not meet OSHA standards for ventilation, lighting, and egress; or national and state safety codes for mechanical and electrical systems.

The 2004 Environmental Audit pointed out a number of deficiencies associated with Sagamore Hill's maintenance facility that cannot be addressed under existing conditions, including storage of chlorofluorocarbon (CFC) refrigerants outside the maintenance yard, inadequate space to store records, and uncentralized hazardous chemical storage. Due to lack of adequate space, incompatible hazardous materials are stored near each other in the one storage shed. The hazardous waste cabinet is over-full and as a result bulky wastes must be stored outside behind the current shop due to lack of space. The recycling program also is limited due to space. The adaptation of the old garage into the shop does

not adequately meet wastewater management procedures (i.e. floor plug in drains).

The maintenance facility is located immediately on the park's boundary, and therefore it is not possible to expand this facility to address the many deficiencies that have been identified. The building is historic and is considered to contribute to the National Register status of the property. To preserve the structure, non-compatible uses must be removed from this building.

PARK HOUSING

Sagamore Hill provides six units of staff housing, which were evaluated and certified by the National Park Service's Northeast Region. The housing is offered to employees at a comparable market rate for the northeastern United States as determined by the Department of the Interior. Currently housing is available in Gray Cottage, the Foreman's Cottage at Old Orchard, two apartments in the Old Orchard service wing, one apartment over the current maintenance facility, and housing for up to three people in the New Barn.

According to the US Department of Housing and Urban Development's (HUD) regional housing market report (spring 2003), the average rent for a one-bedroom apartment in Nassau/ Suffolk County is \$1,700. The average for a two-bedroom apartment in the same market area is \$2,500. HUD further notes that due to the scarcity and cost of developable land and very strong demand, affordable housing is a key issue in this market area.

FEE COLLECTION

Sagamore Hill NHS collects an admissions fee from visitors to the Theodore Roosevelt Home. The fee for an adult to enter the home is \$5; for entrance to the first floor of the home, \$3. Children under the age of 16 are admitted free. The park does not charge a fee for school groups.

The park participates in the Recreation Fee Demonstration Program, meaning that Sagamore Hill is permitted to retain 80 percent of the fees collected at the park for use on-site rather than returning the fees to a general fund for system-wide redistribution. Fee demonstration program monies are used to support the repair and rehabilitation of park resources. In Fiscal Year 2004, revenue generated through the Fee Demonstration Program totaled \$88,357.

STAFFING

Sagamore Hill operates with an equivalent total of 20 full-time employees including those who are intermittent, subject to furlough, or seasonal. The

staff is organized into 4 divisions – Administration, Visitor Services, Collection Management, and Preservation and Maintenance. Visitor Services is the largest division in terms of both full-time and seasonal employees.

Sagamore Hill does not currently have any commissioned law enforcement rangers on its staff.

VOLUNTEERS

Sagamore Hill has a long-standing and very successful volunteer program. While the total number varies, the park typically has between 40 and 60 active volunteers each year. Primarily, volunteers are drawn from the local community, but some travel long distances to support the park's efforts. According to Sagamore Hill's 2003 State of the Park summary, park volunteers contributed 5,933 hours of service to the site. Over 1,000 hours were contributed to collections management, with the majority of the remaining hours being devoted to visitor services and interpretation. In 2004, park volunteers contributed 6,734 hours of service to the park.

The volunteers in collection management helped with projects including seasonal and daily housekeeping, polishing silver, washing light fixtures, vacuuming, rehousing of collections, refolding textiles, cataloging objects and archives, creating small changing exhibit panels, and pulling photos for exhibits.

Volunteers in visitor services and interpretation greeted visitors, responded to inquiries, offered visitor orientation information, developed educational programs, and conducted tours of the Theodore Roosevelt Home, as well as the Theodore Roosevelt Exhibit at Old Orchard.

The volunteers are represented by a Volunteer Advisory Board that meets bimonthly. Communication between volunteers and park staff is enhanced by the production of a monthly newsletter, *The Rough Writer*. The park offers formal training to its volunteers as needed.

The program is administered through the park's Visitor Services division.

PRINCIPAL PARTNERS

Since its inception, Sagamore Hill NHS has operated in close collaboration with the Theodore Roosevelt Association (TRA). The TRA works closely with the National Park Service and the National Parks Foundation (which holds and manages the park's endowment) to consult and advise on the use and management of the funds. The TRA works collaboratively with NPS on the development of special programs and initiatives associated with

studying and interpreting the life and legacy of Theodore Roosevelt. Additionally, the TRA has raised funds in support of specific park projects. The Friends of Sagamore Hill, a local chapter of the TRA, also engages in collaborative activities with the park and in fundraising.

These principal partners are described in greater detail in Part One of this document.

Socioeconomic Environment

Introduction

Sagamore Hill National Historic Site is located in Nassau County, one of four counties located on Long Island, the largest island adjoining the continental United States, with a population of over 7 million people. Nassau County is immediately to the east of the New York City borough and county of Queens, placing it in the largest metropolitan area in the United States.

Demographic Profile – Nassau County

In 2000, Nassau County's population was approximately 1,334,544—up just 3.6 percent from the population identified in the 1990 Census. Population growth in Nassau County is steady, but modest. In 2002, it was rated 19th in growth among New York State's 62 counties.

However, Nassau County is densely populated, with an average distribution of approximately 4,700 people per square mile. This is significantly denser than the state average of 401.93 people per square mile.

In terms of race and ethnicity, the 2000 Census revealed that 79.3 percent of Nassau County residents are white, 10.1 percent are Black, 4.7 percent are Asian, and less than 1 percent are Native American. Ten percent of Nassau County residents are Hispanic or Latino.

The average age in Nassau County is 38.4 years, slightly older than the statewide (36.8 years) and national (36.22 years) averages. Of residents over the age of 25, 35.4 percent have attained a bachelor's degree or higher, compared to 24 percent nationally.

According to the 2000 Census, the median household income for Nassau County was \$72,030, considerably higher than both the medians for New York State (\$43,393) and the nation (\$41,994). Per capita income for Nassau County was \$32,151 – again considerably higher than per capita incomes statewide (\$23,389) and nationally (\$21,587).

Sagamore Hill is located within the town of Oyster Bay, which covers a substantial geographic area and is home to a population of 295,827. The town of Oyster Bay consists of 22 incorporated municipalities. Sagamore Hill also sits within the considerably smaller incorporated village of Cove Neck, which has a population of just 300 residents (2000 Census). The median household income of Cove Neck is \$159,792 and the median age is 44. The nearby hamlet of Oyster Bay is an unincorporated community of 6,826 residents that is governed at-large by the Town of Oyster Bay. The hamlet has strong historical ties to Sagamore Hill and is the commercial center located nearest to the historic site.

Housing

The 2000 Census identified 459,862 housing units in Nassau County. Of these, 80.3 percent were single-family homes and 19.7 percent were multiunit housing structures. According to the American Community Survey of the U.S. Census Bureau, the median value of an owner-occupied home in 2003 inflation-adjusted dollars was \$378,152, nearly \$180,000 higher than the statewide median of \$198,883. The median monthly cost with a mortgage was approximately \$2,229. The median rent asked for a vacant unit in 2003 inflation adjusted dollars was \$1,213 as compared with statewide and national median for rent —\$770 and 679 respectively.

Regional and Local Economy

The Long Island economy is large and diverse. In 2002, non-agricultural employment accounted for approximately 1.2 million jobs. The largest employment sector was Trade, Transportation, and Utilities (60 percent of these jobs are in retail trade), followed by Education and Health Services, Professional and Business Services, Manufacturing, and Leisure and Hospitality. The greatest job growth since 2005 has been in professional and business services, education and health services, other services, and trade transportation and utilities. The leisure and hospitality employment sector also saw strong growth. Since May 2004, the average unemployment rate for Nassau County has been about 4 percent.⁷

Despite the number of jobs on Long Island, commuting patterns continue to suggest that the region's economy is closely linked with New York City's. Though combined employment in Nassau and Suffolk Counties attracted about 266,000 commuters from outside the region, they could not compare with the volume of workers commuting to Manhattan on a

⁷ NYS Department of Labor, Work Force Industry Data
NYS Office of the Comptroller, *Recent Trends in the Long Island Economy*, April 2003.

daily basis—1.5 million. Further, in 2000, as many as 22 percent of working residents of Long Island commuted to Manhattan for work.^{8,9}

Sagamore Hill is located in the incorporated village of Cove Neck, a largely residential community with no commercial center. The business district located along Audrey Avenue, South Street, and West Main Street within the unincorporated hamlet of Oyster Bay is the closest commercial center to Sagamore Hill. This area is home to the primary municipal offices for the town of Oyster Bay. Retail, restaurants, professional offices, and community services like the public library and senior center compose the core offerings in the hamlet. State Route 106 runs through and actually terminates in the hamlet and is one of the access routes to Sagamore Hill.

Economic Impact of Visitation to Sagamore Hill

The most recent profile prepared for Sagamore Hill NHS using the National Park Service's Money Generation Model 2 was completed in 2003. The Money Generation Model was developed by NPS to produce quantifiable measures of park economic benefits that can be used in planning and impact analysis. Sagamore Hill hosted 42,396 visitors in 2003. Among these visitors, the model calculated that 20 percent were local residents on day trips, approximately 55 percent were non-local visitors on day trips, and 25 percent were overnight visitors staying in local lodging and campgrounds. On average, visitors spent \$115 per visitor group per day in the local area. Total visitor spending was \$2.43 million in 2003.

The direct effect of this spending includes \$2.03 million in sales, of which \$690,000 was spent on hotels and motels, \$570,000 on food and drink, \$290,000 on retail goods, and \$260,000 on amusements. As visitor spending circulates through the local economy, secondary effects created an additional \$1.13 million in spending on local goods and services. In sum, visitors to Sagamore Hill NHS had a total economic impact of \$3.16 million, which contributed to the creation of 58 jobs.

⁸ Bram, Jason and Alisdair McKay. "The Evolution of Commuting Patterns in New York City Metro Area" in *Current Issues in Economics and Finance – Second District Highlights*. Federal Reserve Bank of New York. October 2005

⁹ Federal Reserve Bank of New York. *District Profile – Long Island*. October 2004