Chapter 7- Environmental Impacts and Mitigation

Introduction

Consistent with the intent of the State Environmental Quality Review Act (SEQRA), environmental factors were considered in evaluating the plan alternatives and in selecting the preferred alternative, i.e., the Draft Master Plan, which is described in Chapter 6. Chapter 7 focuses on environmental impacts and mitigation of adverse effects. For the purposes of SEQR compliance, however, the entire document (Master Plan/DEIS) satisfies the requirements for an environmental impact statement as specified in Part 617, the rules and regulations implementing SEQR. The environmental setting is discussed in Chapter 3 and Chapter 5 contains the alternatives analysis.

This chapter has two primary parts: a summary of environmental impacts associated with alternatives and a more detailed analysis of impacts associated with implementation of the Draft Master Plan including a discussion of mitigation measures.

Impacts of Alternatives

In Chapter 5 (Analysis and Alternatives), alternative management and development directions were developed for the park using information on existing conditions, the analysis of recommended directions for activities, and constraints and considerations identified in the resource analysis. The preferred alternative for the entire park (i.e. the Draft Master Plan) consists of the best alternative for each identified activity and resource.

Much of the information on the environmental impacts of alternative actions is presented in Chapter 5. The following is a summary of the findings from the impact analysis.

Status Quo Alternative

The Status Quo alternative consists of the current facilities, programs and practices as described in Chapter 3 (Environmental Setting). Under this alternative, the current resource protection, operation, and facility management practices would continue. The need to provide more uniform access to all patrons wishing to visit the park would not be met, and existing facilities or uses that have adverse impacts would not be mitigated. While resources such as threatened and endangered species will continue to be protected, other natural resources may be degraded without adequate planning and measures to assure their preservation.

While the Status Quo alternative would ostensibly not result in any additional adverse environmental impacts, the potential for long-term indirect adverse environmental impacts is likely, since there would be no plan to guide use, protection and limited additional facilities in the park. It is predicted that additional demands will be placed on the park's natural, cultural and recreational resources. Without the guidance provided by the Master Plan, which directs use and development toward areas with higher capacity for such use and away from the more sensitive areas of the park, the potential for adverse impacts on environmental resources increases.

Preferred Alternative and the Draft Master Plan

The preferred alternative is the compilation of the preferred recreation activity and resource stewardship options identified in Chapter 5. This compilation at the end of Chapter 5 and within Chapter 6 was subject to a final evaluation (or synthesis) to assure that there was consistency among the various alternatives. The draft master plan, described in Chapter 6, provides considerable recreational and resource protection benefits. This Draft Master Plan/EIS also identifies potential

adverse impacts, both short and long term, as well as ways to minimize, if not eliminate them to the fullest extent possible through appropriate mitigation measures. Impacts and mitigation, in addition to information provided in Chapter 5, are discussed in the sections following. From a long-term perspective, implementation of the park master plan will result in a beneficial environmental impact by insuring that the most sensitive areas of the park will be identified, monitored and provided appropriate stewardship and that the various systems and the services are maintained, preserved and protected.

Potential Environmental Impacts associated with Implementation of the Master Plan

Transportation, Access & Traffic

The Master Plan will revise access to the park in order to alleviate present concerns with safety and with the narrow, somewhat steep entrance/exit. Various alternatives were explored and discussed in Chapter 5. The preferred option offers the simplest and safest solution for addressing access. Widening the entrance/exit will reduce traffic conflicts on the entrance road and will better accommodate exiting traffic. A landscaped median will be installed to separate entering and exiting traffic, and improve aesthetics. OPRHP will need to work with the Village regarding modifications to the park entrance. Most of the exit traffic now from the Henry Lloyd house, which is causing conflicts with programs run by the Lloyd Harbor Historical Society (LHHS), as well as safety concerns due to a curve in Lloyd Harbor Road at that point, will be rerouted to the improved main entrance/exit. This will reduce pedestrian/vehicular conflicts near the Henry Lloyd house and alleviate safety concerns by greatly reducing the amount of traffic at this second access point on the busy Lloyd Harbor Road. This exit will only be used for large park events or events related to the Henry Lloyd House/Weir Barn.

Although construction for the revised entrance/exit will need to take place in an area of moderately severe slope, work on the entrance road is necessary to control the disturbance that presently occurs due to vehicles driving in areas not designed for access, degrading the roadside and grassed areas. Additional discussion of this issue is provided in the Land section of this chapter.

Improvement of the entrance road will require moving one side of the historic stone gate and other modifications to the road. This section of the entrance road has been modified before and itself is not as historically significant as other roads in the park. Also, alteration at the current entrance will have less impact on historic resources than would occur if the Henry Lloyd entrance, the original estate entrance, were to be altered. Moving the gate will be carefully planned and conducted in accordance with The Secretary of the Interior's Standards for the Treatment of Historic Properties (1995). Redesign of the entrance road should take into consideration features of the historic drive and/or other road layout of the estate. Archeological investigation will take place during design to properly consider any cultural resources prior to construction. Impacts to important archeological resources will be mitigated if avoidance is not possible.

Additional, but limited, vehicular access within the park is included in the proposed plan. Although a trolley for access improvement was considered, the volume of users would be too low to support such a system. Roads that will be used for this access already exist, although some improvements will be required. Service Drive modifications to provide for two-way traffic from the main parking area to the proposed northeast parking lot will need to account for historic features and drainage issues. This work will retain the character of the drive and will involve minimal changes to adjacent areas. Crushed stone will be added as needed to provide adequate access on the road from the Farm Group north.

Traffic calming measures and speed limit signs will be installed to reduce the speed of vehicles in the park. Combined with additional access and safety measures for pedestrians and bicyclists, safety, as well as the visitor experience, will be improved. The entrance improvements will include separation for pedestrian access. Pedestrians can continue to enjoy the experience of the historic treed landscape of the Main Drive; this experience will be further improved with the exclusion of vehicular traffic from the stable entrance north to the main house. Separation of vehicular and pedestrian use around the Farm Group will also greatly increase pedestrian safety as well as the visual experience for the pedestrian user. The road north of the Farm Group will be for vehicles only and the road south of the Farm Group will be pedestrian only. This will route vehicular traffic away from sensitive historic areas and provide an improved visitor experience for pedestrians away from traffic.

The new shared-use path that will run from the Main House adjacent to the Service Drive will be constructed with a pervious material. There are a number of alternatives for such surfacing, including geo-textiles, porous asphalt, porous concrete, plastic grid systems, and block pavers (Scampini 2005). There are many benefits to using pervious surfaces, primarily to allow rainwater to percolate through the surface back into the ground water supply and to reduce potential for erosion and runoff, but they may also have drawbacks with respect to installation and maintenance. The additional pedestrian trail will also be pervious assuming it is operationally feasible in this location.

Analysis will be conducted to assess the feasibility of restoring sections and reverting portions of the former Plank Road into sand pathways. Additional planning for this action is necessary in order to assure protection of the adjacent salt marsh, provide consistency with historic resources, and coordinate with permitting agencies as needed. If this action is feasible, it would reduce the present impact of the historic road on the adjacent salt marsh.

There are a number of changes in the proposed plan with respect to parking but no natural areas of the park will be used for parking. During evaluation of the current parking, the existing 120-car main lot was identified as being somewhat intrusive. Thus, the existing lot will be reconfigured and reduced in size to 82 spaces and will receive native landscape treatment to soften its visual effect. Bio-filtration swales will be added to mitigate existing drainage impacts. Also, as discussed in Chapter 5, the existing overflow lot west of the Farm Group is heavily used, especially on weekends during the season, and this was identified as being taxing on staff time and on the grass areas. The Plan proposes improvement of this area to formalize the lot with 126 spaces, and landscape to minimize visual intrusion, which will also, along with swales, reduce runoff and erosion from the additional paved surface. To be more convenient for the newly paved parking area, the contact station will be relocated slightly to the west. Revising the existing haphazard arrangement to formal parking areas will reduce the amount of space needed for parking the same amount of cars and reduce the impact on adjacent grassed areas. Staff time and operational costs associated with constant restoration will also be reduced.

In order to provide improved access for older park patrons, children, and patrons with disabilities, a new small (20-30 space) lot, referred to in the plan as the Northwest Lot, will be provided in an open disturbed area along the existing Fisherman’s Road, distinct from the fishing lot. This lot would have a pervious surface to limit runoff and erosion impacts.

To consolidate and improve parking for the Main House, a new 50-car lot will be provided at the former indoor tennis site just south of the Main House. This site is already cleared and previously paved, and is also screened from view because it is surrounded by trees. In order to minimize the visual and physical impact on the park’s resources, the existing haphazard parking near the stable will be formalized and properly designed. The area currently provides approximately 50 spaces. The capacity will remain the same but the area will be surfaced with pervious pavement and parking will

be prohibited in some of the areas it is now allowed. Alternate parking may be provided on an as-needed basis, but again, only in designated areas. Establishing formal parking with proper drainage will eliminate ponding and mud in this area and will improve aesthetics near the historically important stable. Finally, a small pervious parking area will be provided for the LHHS (Weir Barn lot) so grassed areas do not need to be used for normal use, including school groups, at the site. Alternative schemes to accommodate large events will be examined so as to minimize disturbance to the grounds.

The proposed improvements to access and parking are not expected to significantly increase the level of use of the park and as a result, traffic entering and exiting the park is expected to remain about the same as current levels. With improved parking and access, through traffic will be better able to safely access the interior of the park and will better accommodate the general public and less able patrons' needs. Access and parking improvements with careful design can limit and mitigate adverse impacts.

Recreation

Implementation of the Master Plan will result in substantial beneficial recreation and open space impacts. The plan outlines improvements to recreation facilities and visitor amenities including a visitor center, providing general public access to areas of interest in the park such as the main house and Long Island Sound, and improving the trail network.

Within the Farm group, the proposed visitor center will provide improved services including interpretive exhibits on important park resources and additional interpretation of the Farm Group. Additional interpretive elements will be incorporated in many aspects of the facility for both environmental and cultural/historic resources. Interpretation provides a recreational activity while increasing awareness and promoting protection of important resources. Improved signage and interpretation will provide visitors with a better understanding of the history and natural resources of Caumsett. Existing successful programs such as BOCES environmental education will be continued. Interpretive panels, kiosks, brochures, and self-guided tours will all supplement existing programs and enhance knowledge and understanding about the park's important environmental and historic/cultural resources.

Other proposed changes in the Farm Group include housing the relocated park office, which will provide improved accessibility for patrons, moving the restrooms closer to (or as a part of) the proposed visitor center, and providing a better space for the Volunteers for Wildlife.

Patrons who might have difficulty walking will be provided with additional opportunity to visit more of the scenic and cultural areas of the park near the Main House and with more convenient access to Fresh Pond. Convenient parking for general park visitors to the Main House will be provided, instead of the current situation of only allowing certain visitors to drive the present 1.5 mile distance from the main parking area.

The difficulty with access and time constraints for school groups and others to access the low salt marsh will be addressed by providing a new lot (the Northwest lot). While presently only fishermen with permits have parking near Long Island Sound, the new lot will provide general park visitors more convenient access to the Sound and shoreline than the present 2-mile walk. This access will be open on weekends as well as during the week instead of the current situation where it is only available during the week when staff is available to assist. Those with fishing permits will still be allowed to park in the existing fishermen's lot. The addition of a composting comfort station at the new parking area location will provide a more convenient location for visitors using this lot and/or accessing the shore. It will eliminate the need for water and septic system and also limit potential adverse impacts from effluent and installing utilities.

The impact of environmental education activities in the salt marsh is currently kept to a minimum through a permit system for access to the marsh. Restoration activities and trail improvements, including Plank Road Trail, will further protect the marsh from use impacts. Observation decks to connect to Plank Road Trail will lessen potential impacts of uncontrolled access to this area while improving the visitor experience. Any needed permits will be obtained for this work and special care will be taken to preserve and protect the fragile ecology of this area.

Sustainable design will be incorporated into building planning; existing historic buildings in the park will be protected and reused where appropriate. The use of existing park buildings allows for the expansion of recreation opportunities without the loss of open space required by new construction.

The trail system will be defined with clearly marked, designated loop and linear trails. The system will utilize existing and/or improved trails to the greatest extent possible. The extensive system of trails within Caumsett will be modified to provide markings, designate trails for uses they are suited to, eliminate non-essential or social trails, improve connectivity of trails where it is appropriate and provide linkages outside of the park. Steep eroded trails and those in dangerous locations will be repaired in accordance with trail standards or be rerouted if necessary. Water management and erosion control techniques, such as deberming and development of knicks and rolling grade dips will be used on wet or slighty eroded trails. These changes would also reduce trail wear and concomitant impacts by removing inappropriate uses from certain trails or reducing erosion. Eliminating some trail links will reduce confusion, thus improving the visitor experience. The trails system will continue to accommodate a variety of uses including walking/hiking, biking, and equestrian, and trail system modifications will provide improved visitor access. Implementation of trail recommendations will provide a more organized, understandable trail network that will benefit all users. As indicated in Chapter 5, these improvements will help users find their way, mitigate user conflicts, and enhance orientation to park resources. Pedestrians can continue to enjoy the experience of the historic treed landscape of the Main Drive; this experience can be further improved with separation of vehicular and pedestrian traffic.

Coordination with volunteer groups and individuals for the maintenance of the trails system will be implemented as well, which will improve trail maintenance.

The Master Plan proposes to allow permitted access, at designated location(s), for specific, designated, hand powered watercraft to launch from the park into the Long Island Sound. While this activity currently takes place, it is unregulated, which creates safety concerns, particularly since park management is unaware when people may get stranded in the Sound. A designated location or a couple of locations for this activity will be provided. These location(s) would be chosen so as not to conflict with existing uses such as fishing, nor cause impacts to the park's natural resources, such as endangered species nesting areas.

The proposed day use equestrian permits, such as are issued at other parks, will provide consistency with respect to equestrian users and increase safety, since permits would require compliance with existing equine regulations.

Additional recreational facilities and activities were considered during the planning process; potential impacts and rationale for decisions were discussed in Chapter 5.

Land

The Master Plan and master plan process places great emphasis on preservation of the sensitive natural and cultural resources of Caumsett. Planning for new or relocated facilities reflects this emphasis, and these facilities will avoid highly sensitive areas to the greatest extent possible. It is inherent, though, that the plan and its implementation will result in some physical change and

disturbance to the land, particularly where new parking, recreation facilities and trails are constructed or relocated.

Although expansion of the equestrian concession facilities in the park has been suggested, evaluation indicates that any expansion would not be consistent with historic resources or use levels. Measures to reduce the aesthetic and other impacts of the current operation will be incorporated as part of the plan. Parking in and around the stables will be improved (as described previously) and, with proper design, surface drainage will be improved to help eliminate ponding and mud problems in the area.

The area adjacent to the present entrance/exit road is currently subject to disturbance due to conflicts on the narrow road and uncontrolled vehicle use of areas adjacent to the roadside. These disturbances have created exposed areas subject to erosion and runoff to Lloyd Harbor Road and subsequently Lloyd Harbor itself. To alleviate these issues and to address safety issues, revisions to this road will occur. Construction will need to take place in the area adjacent to the present entrance/exit road and revisions will need to be made to the stone culverts to allow for widening. This work will take place in an area of 8 to 15 percent slopes where the hazard of erosion is moderately severe and limitations for roads are moderate to severe due to the slope (Warner, *et.al.* 1975).

Proper design of the road is necessary to reduce the risk of runoff and erosion. For instance, if feasible, considering historic landscape considerations, the road could provide gentle switchbacks to reduce the slope on the road. Proper design of the drainage is also essential to retain water on site and assure that there is no runoff or sedimentation on Lloyd Harbor Road, and no effects to Lloyd Harbor.

Any projects that disturb one acre or more will be subject to the State Pollution Discharge Elimination System (SPDES) General Permit Process. This process involves the development of a site-specific Stormwater Pollution Prevention Plan (SWPP) including sedimentation and erosion control plans. Best Management Practices (BMPs) as described in the New York Guidelines for Urban Erosion and Sediment Control (USDA-SCS, 1989) will be used to reduce impacts to soils due to master plan projects. Some measures anticipated to be used include: minimizing soil disturbance and vegetation clearing; the use of silt fencing, straw bales or other similar technology where needed; preservation of vegetated buffers; and seeding and mulching of disturbed areas as soon as possible following work.

The plan proposes improvements to the existing parking lot to provide a more visually pleasing area with less impact due to addition of landscape and vegetative swales. The new parking facilities will be located in previously disturbed areas of low cultural and ecological importance. Although the overflow parking lot will be formalized, the plan will decrease the current impact to adjacent grassed areas and will for provide improved drainage and swales. Little disturbance will be required to provide the Northwest lot, only minor filling and/or re-grading for preparation. It is proposed that this lot use pervious pavement to minimize runoff impacts to this area of the park.

New trail sections may require some vegetation removal and grading. Disturbance will be limited primarily to the required width of the trail corridor. The policy and guidelines for trail building that have been established by recognized trail organizations and governmental agencies will be followed; a compilation of standards that OPRHP uses is provided in Appendix F. These established guidelines will assure that work will be completed in a manner that maximizes the protection and preservation of the resources of the park. Steep trails and erosion-prone areas will be improved or closed as appropriate. Restoring closed trails with native vegetation and stabilizing the damaged areas will reduce the potential for soil erosion and mitigate impacts to adjacent areas.

No new buildings are proposed and no undisturbed areas will be used for parking. Most of the park will continue to remain in its natural state, retaining open space. Continuing to limit mowing of fields and additional grassland management will retain and promote natural open space.

Water Resources

Lloyd Harbor and Long Island Sound (LIS), respectively, are Caumsett's water boundaries on the north and south of the park. Fresh Pond, located in the park, is another body of water that can be impacted by activities in the park. These elements are important water features for both aesthetic and natural resource value. In fact, the bays and coastal waters of LIS have been state designated as Significant Coastal Fish and Wildlife Habitats (New York State Department of State 2009) and LIS provides over $5.5 billion annually to the economy. Any activity in the park that disturbs soil or releases elements onto the ground can have impacts on these water bodies, as the lands eventually drain into these waters. Preventing and minimizing releases in the Caumsett "watershed' is imperative to preserving the unique character and services that Fresh Pond, Lloyd Harbor and LIS provide to both the park and surrounding communities. Caumsett State Historic Park Preserve also encompasses 1600 acres of underwater land in LIS. This land (sans eelgrass meadows), though not considered for management in this plan, is an important resource and development of a management plan for this land, in the future, should be considered.

The protection of groundwater quality will be enhanced through updating and upgrading the septic systems in the park, as needed.

It is not anticipated that the implementation of the Master Plan will have significant adverse environmental impacts on water bodies and water courses within and adjacent to the park. Revision of roads and trails, development of parking areas and separation of vehicular and pedestrian use will have the greatest potential for adverse impacts due to erosion and runoff. The discussion in the previous section refers to measures to assure that such impacts will be very limited and that drainage from these areas will be contained on site. The plan identifies changes and additions to trails that will address current drainage problems, including standing water or seasonal wet areas. Routine water abatement techniques such as water bars or rock rearrangement will remedy many of these problems. This work will be undertaken using established guidelines found in the OPRHP Trail Maintenance manuals and with consultation from OPRHP Regional biologists and Heritage Program staff to identify any important natural communities or species in these areas, prevent their disturbance and ensure their preservation. If any areas require more than routine measures, these will be identified through the trails approval process and remedies will be planned in conjunction with park and regional staff. Such work would include the construction of culverts and/or boardwalks. Some projects, such as the Plank Road Trail boardwalk or other work next to wetlands, may require additional consultation and permits from the NYS Department of Environmental Conservation (DEC) and/or the US Army Corps of Engineers (COE). The regional staff will review all these types of proposals and consult with these agencies as appropriate. All plans will be reviewed to assure that stormwater management and sediment and erosion control measures, as well as biological considerations are incorporated into design and construction. Following construction, the trails will be monitored to ensure that drainage and erosion control measures are working effectively.

Implementation of the proposed master plan will result in additional paving in the park. Currently there are 8.8 acres of pavement (all impervious) in the park. It is proposed to develop 16.2 acres of pavement. Sections of the proposed pavement would utilize permeable materials (Northwest parking area, equestrian, Weir Barn parking and other areas as feasible from a management perspective). The existing and proposed lot at the entrance would have drainage infrastructure to mitigate storm runoff (refer to discussion below), as would the northeast parking area. In addition, some of the proposed paved areas are currently used for parking and access now but are unpaved, such as the equestrian

and overflow main parking area, so the amount of additional parking is modest. Nonetheless, an increase in impervious surface could result in an increase in the quantity and velocity of runoff generated during storm events.

A variety of measures will be taken to reduce the quantity of wastewater and stormwater and manage stormwater on the site more effectively; these are summarized in Chapter 6 under Water Conservation and Stormwater Management. Vegetated swales will be utilized for the main entrance parking, both existing and new, and will include absorbent soil mixtures and native plant materials that can withstand extreme moisture changes. The swales will assist in stormwater and erosion control in these locations. Permeable pavement will be used for the Northeast parking area (approximately 4,000 square feet), the northwest parking area (approximately 2,000 square feet) and the Weir Barn (Henry Lloyd house) parking lot (approximately 800 square feet). Porous pavements can significantly reduce the quantity of runoff from parking areas following storm events. As discussed in the previous section, DEC's Stormwater SPDES General Permit process including the preparation of a SWPP will be followed for any activity disturbing one acre or more. Other measures that will be taken to avoid or minimize impacts to surface water quality include the following: clearing and ground disturbance for any proposed park improvements will be kept to the minimum necessary to complete the required work; and all disturbed areas will be seeded and mulched immediately following final grading to assure rapid re-vegetation of exposed soils. Removal of invasive species and allowing for regeneration of native species of plants, and providing restoration plantings where needed, will assist in control of surface drainage.

Operations and maintenance procedures for spill prevention and response will be implemented. Examples of such procedures include when filling or emptying tanks (diesel, gasoline, oil), using or disposing paint or other chemicals. Spillage issues associated with operation and maintenance of parks will be guided by BMPs to minimize impacts to waterways. Training of staff in appropriate procedures and periodic reviews are also performed.

Caumsett State Historic Park Preserve is not located in a special ground water protection area program.

Park visitors use the shoreline, walk along the beach barefoot, and also congregate in the Sand Hole, which is influenced by geese as well as other pollutant sources. Boats temporarily moor in the Sand Hole, sometimes outside of the park boundary where OPRHP has no authority to control users. In addition to disturbance of nesting birds, eelgrass meadows, and the low salt marsh, boaters also pose concerns with respect to water quality due to possible discharges from onboard toilets and holding tanks. DEC states that, "Treated and untreated wastes can deliver pathogens and toxins to local waters and contribute to harmful nutrient loadings. Waste treated by on-board septic systems often contains chemical additives such as formaldehyde, phenyls and chlorine" (DEC 2009). Though Oyster Bay/Cold Spring Harbor is currently a designated No-Discharge Zone, infractions may still occur. DEC is currently working on a proposal that would make the entire near shore area of Long Island Sound a No Discharge Zone helping to ameliorate impacts to water quality. In the meantime, the Town of Huntington should be requested to visit the Sand Hole with pump boats on a routine basis. Periodic water quality monitoring will be instituted at Caumsett to identify if there are issues with respect to geese feces on the beach or other water quality concerns that should be addressed. Expansion of signage and education efforts should also assist in deterring boaters from discharging into the water.

Boater education, additional waste/recycling receptacles, as well as signage can assist in reduction of any marine debris that may originate from the park.

Wetlands

Caumsett contains extensive wetland areas, including 89 acres of low salt marsh which is a significant habitat, 79 acres of eelgrass meadows in the marine subtidal area, 17 acres of salt shrub area, and freshwater wetlands in Fresh Pond and the vernal pool areas. The eelgrass meadows will continue to be managed and restored in cooperation with Cornell Cooperative Extension. Through implementation of the marsh management strategy in the plan including control and prevention of invasive species and their introduction, protection from trampling of vegetation through the installation of a boardwalk, prohibiting dogs and other pets from the park, and interpretive signage, the marsh will be better protected from recreational and other impacts.

Installing a boardwalk to limit foot traffic near the marsh will limit human impacts to the marsh and Sound. Though the proposed boardwalk is above mean high water and should not require a wetlands permit, OPRHP will work with NYS DEC to obtain a permit if necessary for this work and to minimize impacts to the water quality.

Additional measures should also be identified that will reduce upland contamination or pollutants from entering the marsh. Fresh Pond will receive improved protection under the plan through invasive species management and rerouting of trails away from sensitive areas. In addition, opportunity for environmental interpretation of the pond will be afforded by addition of an observation deck.

Biological Resources/Ecology

Overall, the Master Plan will have a positive impact on the natural resources within the park. Limited new development is proposed. Primary impacts of the plan are associated with access improvements, particularly the main entrance modifications and parking. Direct impacts to biological resources associated with these proposed improvements will be limited since proposed improvements have been sited in areas with previous development or limited environmental sensitivity. Additional discussion of impacts is included in subsections below.

The importance of the natural resources within the park is recognized with the proposed designation of the park as a Park Preserve. Designation of a Park Preserve confirms the agency’s commitment to retaining the natural and cultural character of Caumsett. In general, designation raises recognition of Caumsett as providing valuable open space and important ecological and historic resources in this developed region. Park Preserve law calls for management of a park so designated to conduct scientific studies; preserve the integrity of its resources; restore and maintain historical and archeological sites; and provide for the management of all unique, rare, threatened or endangered species of flora and fauna. Necessary facilities including offices, roads, paths, environmental centers and parking areas may still be provided, as long as these constitute no more than fifteen percent of the land area of the park.

Environmental education is already provided and may be expanded as feasible in accordance with the preserve designation. Recreational uses provided within Caumsett include passive uses such as horseback riding, fishing, hiking, nature study, and photography. For some of these uses it may be appropriate for an admission control system, through permits, on either a group or individual and non-discriminatory basis pursuant to rules and regulations promulgated by the Commissioner. Such a system is already in place for fishing, and is recommended for horseback riding as well, in order to be consistent with the preserve designation. Further protection will be afforded to Caumsett through a provision of the law that requires an EIS to be prepared prior to removing any park preserve designation.

Ecological Communities

The importance of the natural resources within the park will be further recognized with the proposed designation of portions of the park as a Natural Heritage Areas (NHA). Recognition of other significant habitat occurrences that may not be covered under the proposed NHA designation is not necessary to assure protection of these areas, as the entire park will have additional protections afforded it under its designation as a Park Preserve. This proposed NHA designation will help guide future management of the most significant natural resources in the park and provide additional support to carry out recommendations in the NHP report. Although some development of NHAs may be feasible, doing so may diminish the ability of significant habitats to perform ecological functions. The designation of these areas in the Master Plan confirms the agency's commitment to retaining their natural character and condition.

As identified in this plan, Caumsett contains four significant Ecological Communities. Designation of the NHA will promote recognition of these important resources and provide environmental interpretive opportunities. The area can be managed to further benefit the important natural resources the NHA designation recognizes.

The low salt marsh, and its management recommendations which will reduce impacts, was discussed in this chapter under Wetlands. The maritime beach significant community extends into the Sand Hole area (*Ibid.*). Although much of the Sand Hole is privately owned including the water entrance to it, management of the beach should recognize this connection and strive to make activities consistent with preservation of the significant natural community. Whenever possible, beaches and dunes should be allowed to undergo erosion and other natural changes that occur with storms and high tides. Bulk-heading and other forms of shoreline hardening within the park have been avoided as they interfere with natural ecological processes. Implementation of appropriate management projects can raise the overall quality of this area. Educating park users, fencing off sections of the dune to foot traffic, and construction of boardwalk trails are typically successful and worthwhile endeavors used to protect dunes and the threatened colonial waterbird species that use the dune and beach areas (*Ibid.*).

Significant ecological communities will receive protection under the master plan and where threats exist, efforts will be made to mitigate these and enhance ecosystem function. Natural shoreline and dune restoration BMPs will enhance and preserve ecosystem function.

As noted in the latest Natural Heritage report for the park (*Ibid.*), all of the natural community classes within the park have value for local and regional biodiversity. The successional old fields in Caumsett, while not a habitat that has been classified as significant, provide habitat for grassland birds, butterflies and other animals, important not only to the park, but Lloyd Neck and the North Shore in general. These and other fields in the park will continue to be managed to provide habitat for birds and other wildlife in the area. Under the master plan, mowing of successional old fields will continue to be restricted to dates outside of peak nesting periods for birds that depend on this habitat. The recent discovery of the Baltimore checkerspot, a butterfly rare to Long Island due to loss and change of habitat though not in the state (Julie Lundgren, electronic communication July 07, 2009), has demonstrated the need to address habitat management to benefit this species. Managing the fields for the checkerspot can benefit other *Lepidotera* (butterflies and moths) and other insect species as well (*Ibid.*). A successional old field management plan will be advanced, likely with the assistance of the Foundation's Environmental Committee and other partners.

The Natural Heritage report (Smith and Lundgren 2009) also indicated that increasing forest and shrub cover along roadsides helps support the health of the natural communities in the park. This will be considered in design of roads as well as other improvements as the plan is implemented. Careful species selection is necessary and will be coordinated with NHP scientists. Also,

consideration will be given to allowing small openings located within forested areas to revert to forest which could improve ecosystem condition and benefit forest-nesting birds.

Trail use is one of the main recreation activities that occur within the significant forest areas in the park and have the most potential to affect them. Visitor education programs will be enhanced to emphasize the importance of these areas and the importance of remaining on marked trails. Proposed routes for new trails will be carefully located using appropriate design and construction methods. Measures will be taken to protect Fresh Pond ecology, particularly by rerouting trails away from the pond edge.

Limited new development proposed within the Plan is focused in areas that have already been disturbed and which have the least sensitive vegetation and habitat types. Proposed new trail routes will incorporate measures to inventory and review new trail routes to assure trail use does not result in any significant adverse impacts to the ecological communities. Particular care will be taken to avoid fragmentation that breaks habitat into small isolated patches. As indicated in the Heritage report for the park (*Ibid.*) fragmentation of habitat by roads, trails and other clearing can cause a number of impacts such as altering the movement of animals, increasing potential for invasive species, and reducing breeding bird success. NHP scientists will be consulted in site-specific layout of trails and measures taken to reduce or minimize unnecessary openings within forested areas.

Plants

The Master Plan will have beneficial impacts on the vegetation within the park. Management of the park has included control of invasive plants. The master plan will provide more formal recognition of management strategies to control invasive plants, particularly those affecting sensitive species and habitats. Prevention of new occurrences is included as an element of invasive species management within the plan, with an eventual goal to eradicate invasive species. Invasive species management will provide primary benefit to native plants by giving them more opportunity to persist in the park. Once they are established, native plants require less maintenance and have far greater ecological value than non-native alternatives. Since native species have adapted together over many years in this area, the relationships and mutualisms that have evolved will be a benefit to both native plant and animal populations that have been coexisting for many years.

It is important to recognize that Caumsett's unique character with significant natural and cultural features requires careful balancing to assure that these important qualities are protected while meeting recreational needs.

Proposed development of new recreational amenities will all be sited in areas of low environmental sensitivity. These facilities are planned for areas within current disturbed areas, minimizing impacts to native or historic vegetation. The trail recommendations within the Master Plan will close eroded and informal spider trails that currently negatively impact plant life.

Some limited tree removal will be required as a result of Master Plan implementation. In keeping with OPRHP's tree management policy (Ash 2009), the park will manage trees and forested areas where necessary to: protect public health and safety; maintain scenic, cultural, recreational, historic, and aesthetic landscape features; and conserve native biodiversity. Trees to be removed will be primarily non-native. Overall, the Master Plan was designed to minimize impacts to trees by maximizing use of existing roads and developed areas. Any vegetation clearing will assure that the areas do not have rare species or habitats. Restoration and cleanup are important elements of any tree pruning or removal projects. Conditions following such pruning and/or removal should be as consistent as possible with the environmental and/or historic character of the affected area prior to the work.

The Master Plan calls for restoration of native vegetation in certain areas of the park. Any invasive species found in these areas will be removed and disposed of in a manner that will protect the existing native plants populations. Again in keeping with OPRHP policy (*Ibid.*), restoration design of historically significant landscapes at Historic Sites and State Parks should take into account where appropriate the use of native species and minimize the potential for establishment of invasive species. Landscape planting will be guided by the CLR but will use plants indigenous to the area wherever possible. Selection of plant species or communities of species should be site specific, taking into consideration the natural, ecological, historic, archeological, and aesthetic elements in the immediate areas as well as the management goals of the park. For non-native plants that may be a part of cultural landscape, efforts will be made to assure that these are non-invasive, or to find appropriate native alternatives that would provide similar landscape qualities (e.g., color, shape, soil tolerance). This will have a beneficial impact on the overall ecosystem in that area, including plants. Removing trees or vegetation within a historic landscape requires review under Section 14.09 of the Parks, Recreation and Historic Preservation Law (PRHPL; refer to Cultural/Archeological Resources in this chapter).

Animals

Invasive species management under the plan will benefit native animals as well as native plants. Since the native species in this area have been coexisting and have adapted together over many years, the relationships and mutualisms that have evolved will be a benefit to both native plant and animal populations.

Overall, the proposed Master Plan will have a beneficial impact on fish and wildlife resources within the park through the additional protection afforded those species by establishment of the Park Preserve and the NHA.

The habitat and open space protected by these designations is a great benefit to wildlife in heavily developed Long Island. Since most impacts of the proposed plan will occur in areas previously developed which do not provide significant wildlife habitat, short and long term adverse impacts to fish and wildlife resources is not anticipated by adoption of the proposed Master Plan.

Under the endangered species management strategy in the plan, existing efforts to protect terns and plovers will be continued and additional measures undertaken. Signage for the Sand Hole to inform boaters of the ecological sensitivity of the area will assist in protection efforts for the plovers and terns, and reduce potential for human disturbance of important nesting areas. Although in the past, predation of eggs and chicks was relatively uncommon, predation has been on the rise. Enclosing nests on a routine basis will enhance efforts to increase productivity of these nesting birds by protecting eggs from predators. Partnering with Volunteers for Wildlife to help in the control of the raccoon, fox and feral cat populations will greatly assist in efforts to reduce loss of plover and tern chicks due to predation.

Birds – The BCA already in place affords protection and recognition to areas deemed to be of significant value to bird populations in the area. The park contains many types of habitats supporting a diverse assemblage of bird species using the area for breeding or during migration. The park was designated as a BCA because it is a migratory concentration site, a diverse species concentration site, individual species concentration site, and a species at risk site.

The Management Guidance Summary (MGS, see Appendix A) for the BCA provides recommendations relating to habitat protection, access, operation and education and outreach programs focusing on the protection of birds and bird habitats within Caumsett. Part of the vision for the BCA was that the area will serve as an important resource for research into the conservation of endangered and threatened species and for environmental interpretation and education. Research to

determine and map the extent to which vegetation has encroached upon the beach nesting habitat is to be encouraged, along with restoration or enhancement of this habitat. The MGS indicated that the region's plover stewards should continue to monitor the adjacent private land with the permission of the landowner. Additional recommendations concerning education, garbage removal and predator control were included. Also, management should continue to be consistent with the "Piping Plover Atlantic Coast Population Revised Recovery Plan" (U.S. Fish and Wildlife Service, 1996). The agency also encourages stewardship to protect the dunes and beach areas. Whenever possible, OPRHP will allow beaches and dunes to undergo changes due to natural processes that occur with storms and high tides. To protect grassland bird habitat, to the extent possible for the fields that are mowed (about half), mowing will not occur until after birds have fledged their broods, preferably after August 15th. MGS recommendations are considered a part of this plan and will continue to be implemented to the greatest extent possible within staffing, funding and operational constraints.

The Master Plan proposal to manage the successional old fields will further benefit grassland birds. Improvements proposed for the salt marsh, including removal of invasives, will also benefit birds. Interpretative materials about the diverse bird species will be developed. Additional informational and interpretive signs will be added as needed next to sensitive areas. OPRHP partners with the Caumsett Foundation's Environmental Committee which has provided additional updates to the existing bird checklist. Additional partnerships with Audubon New York and local bird clubs on interpretive programs and inventories are recommended in this plan.

Inventory of bird species is important to establishing a baseline. Periodic inventory will serve as a comparison with this baseline. Periodic monitoring of the trails/roads that circumnavigate the (then) proposed communication facility began in 2007 and will continue.

Wildlife and nuisance animal damage – As indicated in Chapter 3, Canada Geese populations cause considerable damage and unsanitary conditions from droppings. White tailed deer also feed throughout the park and can cause damage to the herbaceous and shrub layers of the forest and woodland areas. The master plan discusses the approach to wildlife management and damage caused by other (e.g., feral) animals. Canada geese management is an ongoing OPRHP program, primarily focused on health concerns relative to bathing beaches. As indicated under Water Resources in this chapter, water quality monitoring will be instituted to identify if there are issues with respect to geese feces or other water quality concerns.

OPRHP is developing a wildlife manual that will provide guidance to facility managers and other staff regarding wildlife issues. Part of this manual will address damage caused by wildlife, and when and how to take action to address damage concerns. The wildlife management sections in Chapters 5 and 6 are consistent with OPRHP's programmatic approach regarding such issues. As mentioned earlier, deer have been identified as causing impacts to plants in the park, and strategies should be developed to protect the important natural resources and biodiversity from such damage. Any management actions need to be preceded by documentation of damage, and include monitoring protocols to document and adjust management as necessary.

Rare Animals

Under the Master Plan, additional efforts to monitor shoreline nesting areas will benefit threatened and endangered species. Damage and threats to plovers and terns will be documented and action taken as necessary to address such problems as nuisance wildlife and feral cats. Additional monitoring can be undertaken though wildlife camera monitoring and other enhanced efforts.

Where boaters come ashore from the Sand Hole, their activities disturb habitats and nesting shorebirds. Additional efforts to discourage disturbances and to educate boaters as to the sensitive nature of the nesting birds are recommended in order to provide better protection for the piping

plovers and least terns that utilize the site. Continued fencing and monitoring of nesting areas promotes protection from human and animal disturbance. Development and installation of signage, particularly near the Sand Hole, as well as enhancing interpretive efforts and patrol, will enhance efforts to limit activities that threaten rare species.

Resource management at Caumsett takes into account the Recovery Plan for the Piping Plover (Atlantic Coast Piping Plover Recovery Team 1996). OPRHP will continue to work closely with US Fish and Wildlife Service, DEC and other partners to protect piping plovers at Caumsett, and will utilize a region-wide management approach.

A population of a butterfly rare on Long Island has been found in the park. Discussion of management may be found under Ecological Communities in this chapter. Continuation of current practices of very limited or no use of pesticides is important to the protection of this and other animals found in the park.

Invasive Species

Trail uses, boating and other recreational uses can facilitate the spread of invasive species. Invasive plant seed can be inadvertently introduced on construction equipment and through the use of mulch, imported soil, gravel, and sod. Some invasive plant species may have been intentionally planted in erosion control, landscape, or wildflower projects. Additionally, invasive plants migrate into the park from the surrounding communities.

The latest update of the Natural Heritage Program (NHP) report for Caumsett (*Ibid.*) stated that, "The establishment and spread of invasive species are considered the greatest threats to natural communities of Caumsett State Historic Park Preserve. The expansion of exotic plant populations often results in displacement of native species and threatens the overall quality of many natural areas across the state." A number of invasive plants were cited as already present on edges, along roads and trails, and within successional forests. The report also indicated that "because of its aggressive nature and tendency to form monospecific stands, common reed (*Phragmites australis*) is a threat to the biodiversity of Fresh Pond and to the colonial waterbird nesting habitat at the park." This points to the need to control reed in these sensitive areas, and its removal is included in the management strategy for the low salt marsh and Fresh Pond. While a section of the marsh is densely covered with *Phragmites*, initial control will be focused on those areas of the marsh where reed is sparser and more easily controlled. Smaller infestations will be addressed, particularly any areas that pose a threat to rare species. If larger restoration projects are needed, grant assistance may be available through a number of programs such as the Long Island Sound Study Futures Fund.

Invasive species management and preservation of Caumsett's natural resources is an integral part of this Plan. Implementation of the overall invasive species management element of the master plan will focus on prevention, identification of invasive species, early detection and rapid response, and eradication from sensitive habitat areas. It is important to implement BMPs to minimize spread of invasive species. Practices such as proper material disposal and equipment cleaning methods limit the potential of invasive species to establish in new locations within and beyond a site. DOT has developed useful BMPs for invasive plant control (DOT 2009) that can be tailored to agency or park-specific projects and operations. In addition, while there are no invasive fauna, such as insect pests, known to occur at Caumsett, precautions, including surveying and monitoring of at-risk trees, will be continued. The NHP report (Smith and Lundgren 2009) indicated that. "Invasive fauna such as crabs, fish, and insect pests have been less well-documented at the site, but are well-known across the region as threats to the native biodiversity of the ecological systems of Long Island." Additional survey and monitoring for such species is included as part of the invasive species strategy. Care will be taken that any such undiscovered fauna is not moved beyond park borders. Contractors removing

wood products should be advised of firewood regulations and informed of sourcing and product labeling requirements. Educational information should be provided, including brochures, posters, bookmarks and other materials as available, for the business and for their use with customers.

New construction projects as well as day to day operations also have the potential for spreading invasive species. Park and regional environmental staff are very knowledgeable regarding the impacts of invasive species and ongoing interpretive programs and training will improve their ability to prevent the spread of invasive species. In addition, all equipment, soils, straw and other construction materials used in Caumsett should be inspected to assure it is not transporting invasive species. Hay often contains weed seed or propagules. Possible measures to prevent spread of hay from the stable area should be identified and implemented if possible.

OPRHP's invasive species program applies EBM principles including consideration of ecosystems and connections beyond the borders of Caumsett. OPRHP will work closely with stakeholders including the Caumsett Foundation, Long Island Invasive Species Management Area, and their volunteers to monitor the extent and spread of invasive plants in these areas and along the trails inside and on trails that connect to the park to identify and implement appropriate control measures where needed.

Cultural/Archeological Resources

Implementation of the proposed Master Plan for Caumsett will result in many beneficial impacts to the historic resources at the park. The cultural resource goal is to protect, preserve and interpret important historic structures, landscapes and archeological resources within Caumsett State Historic Park Preserve. The Master Plan recognizes and protects the many important historic and cultural resources within the park. As an historic landscape, planting in the park will be managed following preparation of a CLR under a framework that recognizes significance of the landscape as a historical/cultural resource. With respect to Caumsett's significant historic structures, Historic Structure Reports will be prepared to properly document their historic qualities, identify needed rehabilitation, and plan for any changes in use that may be proposed. These reports will assure that changes made in accordance with the plan are carefully planned to assure proper historical treatment.

Under the master plan, a comprehensive archeological resource study of the park will be conducted. Such a study is essential to inform decisions with respect to development and to protect archeological resources from damage or destruction. Until a comprehensive survey is undertaken, any project that could affect archeological resources of the park will require site-specific survey. All such projects are reviewed by OPRHP Division for Historic Preservation's Bureau of Historic Sites (BHS). Any measures to avoid or mitigate impacts to archeological resources or recommendations for additional archaeological surveys will be implemented.

Several historic buildings in the park currently suffer from underuse and require updating of utilities and as well as accessibility improvements. The Master Plan describes provides short and long term direction for use of several of these buildings that includes opening select buildings for exhibits or other public use. Providing public access to the buildings and their interpretation along with adaptive reuse will enhance the cultural experience at Caumsett.

While some alterations may be necessary, adverse effects on historic fabric will be avoided or minimized. Compliance with Section 14.09 of the PRHPL is assured for State Historic Sites through a Memorandum of Agreement (MOA) between the BHS and Field Services Bureau (FSB). Section 14.09 requires state agencies to avoid or mitigate the adverse impacts of its undertakings on eligible or registered properties. Any projects that may or will cause any change in the quality of registered property in the project impact area will be reviewed by BHS or the State Historic Preservation Office (SHPO) as called for in the MOA. This assures compliance with 14.09 and that there are no adverse

impacts. All work will be in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

Improved signage and interpretive materials will improve understanding of the history of the park.

Scenic Resources

Implementation of the Master Plan will not result in any significant adverse impacts on scenic resources in the park. Scenic resources, both the formal landscapes and the natural settings, will be protected and maintained through the actions recommended in the plan. Improvements to the equestrian center will greatly improve aesthetics of that area and either eliminate or screen visually intrusive elements. The greenhouse area will be cleaned up and the spatial character of the glass houses preserved while making the areas safe and accessible. Likewise, the debris pile will be cleaned up, screened and better managed in the short term, and removed in the long term.

Scenic vistas in the park will be maintained and improved. Improved, cohesively designed signage will improve aesthetics in the park in keeping with its natural and historic resources. New or revised facilities in the park will also be designed to be in keeping with the park's character.

Public Health and Safety

Public health and safety are an important consideration in park operations and OPRHP's Recreation Services program places strong emphasis on visitor safety. New or substantially rehabilitated facilities will be designed and constructed to meet applicable health and safety codes, including compliance with the Americans with Disabilities Act. Upgrade of electrical systems at various buildings in the park, and improving lighting at the Polo Stables and surrounding buildings will enhance safety. The greenhouses will be rehabilitated and made safe for passive recreation or interpretive use.

Vehicular and pedestrian safety will be improved within the park, and the main entrance/exit will be widened at Lloyd Harbor Road to improve safety for the community. The proposed exit changes and parking at the Henry Lloyd house will also improve safety for school children by reducing exiting traffic there and provide a safe area for children to cross the road from the house to the Weir Barn. The layout of the revised pedestrian routes has been configured to reduce the length of pedestrian routes that are adjacent to roadways. Traffic calming measures and speed limit signs will also improve safety of visitors. Providing a visitor center and restrooms in a location convenient to patrons and separate from the park office and maintenance facilities will reduce patron-operational conflicts and associated safety issues.

Additional study of the old Plank Road will be progressed to address potential safety issues. Eroded trails or trails in dangerous locations near bluffs will be closed to improve visitor safety.

Design and construction of new facilities and rehabilitation of historic structures will meet all applicable health and safety codes.

Requiring day use permits for launching hand-powered watercraft and for equestrian use will increase safety with respect to these activities and for safety of horses to assure proper vaccinations.

Information on ticks, fire danger and trail conditions should be posted as appropriate. Serious injuries or accidents may require the assistance of park police, or local fire protection or ambulance services.

Air Quality

Potential air quality impacts as a result of Master Plan implementation will be minimal. The park currently has 202 parking spaces (main, fisherman's and equestrian lots), and under the Master Plan approximately 220 spaces will be added. The northwest parking area will have fairly limited use and is not expected to result in a major increase in emissions or reduction in air quality within the park. Short term temporary impacts that may occur as a result of master plan implementation could include a minor temporary increase in vehicle exhaust and some generation of dust during construction. Air quality impacts from construction vehicles will be mitigated by assuring that these vehicles are in good running condition and are not producing excessive exhaust. It is expected that the plan will be implemented over a period of time and such impacts will be temporary and localized to the specific work areas.

Impact on Growth and Character of Community and Neighborhood

Caumsett State Historic Park Preserve has beneficial impacts to the community and neighborhood by maintaining public access to significant historic and natural resources, and preventing residential or commercial development at the site. Since the Master Plan calls for continued operation of the park similar to its historic type and level of use, no adverse impacts on community character are anticipated.

Implementation of the Master Plan may result in a modest increase in recreational use of the park. This increased recreational use will be carefully managed in an effort to support the vision and goals established to maintain the quality of the park's recreation resources, historic resources and important open space and natural habitats. There will be positive, on-going, economic impacts to the communities surrounding the park, in the form of increased business investment in the communities. Tourism related expenditures, for activities such as day-use, trail activities and special events, are a major element of the economic vitality of nearby communities. Caumsett State Historic Park Preserve, with its significant recreation, historic and natural resources, provides benefit to the community of Lloyd Harbor.

No new development is proposed in the areas of Lloyd Harbor's Coastal Overlay District.

Use and Conservation of Energy

Other than short-term use of fuel during construction, implementation of the master plan should result in reduced energy use.

Solid Waste Management

For proposed actions in Suffolk County, EISs must address impacts on solid waste management and the project's consistency with the state or locally adopted solid waste management plan. As garbage pickup is by private carter, the garbage therefore does not impact the Village municipal system. The quantity of recyclables from the park, which are taken to the Town's facility, is modest but if it should ever pose a problem with respect to capacity, the park will make alternate arrangements for recyclables. OPRHP will assure consistency with the state's source separation requirements.

Unavoidable Adverse Effects

The proposed Master Plan will result in some unavoidable adverse impacts. These will be monitored and action will be taken, if necessary, to prevent any significant impacts from occurring.

In addition to the impacts outlined already in this chapter, there will also be temporary adverse air and noise impacts (i.e., fugitive dust, noise from construction machinery, etc.) associated with construction of proposed improvements.

Some additional impervious surfaces will be added to improve access and parking. This will be balanced with providing pervious surfaces where operationally feasible and providing landscape, drainage improvements and bio-filtration swales.

Irreversible and Irretrievable Commitments of Resources

Additional site-specific planning, development and implementation of a Master Plan, including construction of additional parking and access facilities and revised trail system, will involve the irreversible and irretrievable commitment of public resources in the form of time, labor and materials. Implementation of the Master Plan will also involve an increase in energy use for construction and operation of new and rehabilitated facilities.

Relationship to Other Programs

Events

In order to provide consistency with the Master Plan, it is recommended that special events guidelines be developed for the park. Guidelines will provide information concerning the types of events that are consistent with the goals and mission of the park, define park carrying capacity and attendance limits, assure proper traffic control and guidance on other operational aspects of events, and address environmental impacts. Having such guidelines in place will assure that events are consistent with the character of the park, and facilitate review of special event proposals and approval of those that are consistent with the guidelines.

Partnerships

The Master Plan calls for strengthening partnerships with organizations operating in the region. As discussed earlier, the Huntington Audubon Society could help monitor breeding and migratory birds in the park. Coordination with volunteer groups and individuals for the maintenance of the trails system will improve connections with the community and with regional trail programs.

Plans

Village of Lloyd Harbor – As indicated in Chapter 6, the relationship between the park and the Village of Lloyd Harbor is important. In addition to coordinating as needed on special events and other matters of mutual interest, OPRHP will continue to evaluate consistency of programs and projects with the Village's Comprehensive Plan and the LWRP. See below for a discussion of the consistency of this plan with the LWRP.

Long Island North Shore Heritage Area (LINSHA) – As described in Chapter 2, a State-designated Heritage Area stretches the entire expanse of the North Shore of Long Island. In 2006, OPRHP received and approved the LINSHA Management Plan (LINSHA Planning Commission 2006). It is NYS policy to follow the recommendations in the plan and to ensure that actions by the State are reviewed for consistency with the Management Plan.

This Master Plan/Draft EIS for Caumsett State Historic Site and the associated implementation of the preferred alternatives described in this plan are consistent with the LINSHA Management Plan. The Management Plan calls for "preserving, protecting and enhancing the cultural, historical and natural resources of Long Islands North Shore" (*Ibid.*). The Master Plan and preferred alternatives will preserve the heritage and historical resources of LINSHA including the Native American and

colonial historical resources found within Caumsett State Park. The Master Plan proposes actions that will protect the environmental, natural and maritime resources such as managing the important salt marsh complex, controlling invasive species and designating Caumsett as a park preserve and also an NHA within the park. The Master Plan preserves and enhances recreational and educational opportunities for residents and visitors to Long Island's North Shore and enhances economic vitality and cultural life within the Heritage Area.

Sustainability and Ecosystem-Based Management

This plan has incorporated the agency's sustainability initiative and goals. Related to sustainability is using an ecosystem approach under the EBM program. This was discussed in Chapter 6 under the Relationship to Other Programs section. Energy efficiency and potential for on-site energy generation was also discussed under Sustainability in Chapter 6. Installation of recycling bins in the park and active recycling efforts will be done in concert with public education. This will increase public awareness of the need for recycling and increase sustainability beyond park borders.

Overall the Master Plan is designed to limit impacts to the environment and provides modest improvements to respond to the needs of park users. Although there will be an increase in formalized parking, design will mitigate impacts of both existing and new parking, and use will be within the carrying capacity of the park, as well as the adjacent areas.

The principles of EBM will be followed to the greatest extent possible in plan implementation. This plan integrates the interests and activities affecting the park while recognizing impacts and influences beyond the border. Where appropriate, work should be science based. OPRHP will strive to establish measurable objectives for projects and programs and will adapt management in response to monitoring and feedback. The plan also addresses ecosystems and their health and will promote their wise management and restoration where possible. The health and functionality of natural systems are being considered and promoted with the Master Plan. The agency and park staff continually reach out to our park partners, and strive to foster connections with the park's neighbors, the Village of Lloyd Harbor, and more regional agencies and organizations. The master planning process has considered public input from the early stage of planning and outreach, and the EIS process will further integrate public input with the plan.

Coastal Zone Management Program Consistency

For a state agency action in the coastal area, an EIS must address the action's consistency with the applicable state coastal policies, or when the action is in an approved local waterfront revitalization program area (LWRP), with the local program policies. The Village of Lloyd Harbor has an LWRP (Village of Lloyd Harbor 1995) approved by the NYS Department of State in accordance with Article 42 of the New York State Executive Law and 19NYCRR Part 601.

OPRHP has reviewed the proposed Caumsett Master Plan along with the LWRP policies and has determined that the plan is consistent to the maximum extent practicable with the LWRP.

The proposed plan as outlined in Chapter 6 and throughout this document is consistent with the key coastal policies contained in the LWRP, as listed and discussed below. Numbered policies are statewide policies; policies with letters following them are specific to the LWRP. There is also a Coastal Management Program (CMP) for Long Island Sound (State of New York 1999). The LIS policies were also consulted in this coastal consistency review and are referenced as relevant, though the LWRP policies take precedence over, while they are consistent with, the LIS policies.

Development Policies

- Policy 2 Facilitate the siting of water-dependent uses and facilities on or adjacent to coastal waters.
- Policy 2B Water-dependent uses on or adjacent to Lloyd Harbor shall be compatible with the conservation and preservation of this harbor as a sensitive environmental resource and habitat area.

  The park provides both water-dependent and water-enhanced uses. These uses will not be impaired, and will be encouraged under the master plan. Additional public access to the shore will be facilitated by providing parking that is more convenient for those park patrons unable to walk two miles to Long Island Sound from the entrance lot. The Northwest lot will be about three-quarters of a mile from shore. Patrons will be able to obtain permits for their car-top vessels and may utilize this lot or the Fisherman's lot by the shore if space is available. A new Northeast lot, while primarily intended for visitors to the Main House, will also promote water-dependent use of the Fresh Pond area. Provision of roads and parking areas to facilitate water-dependent uses are consistent with these policies. The master planning process examined past proposals and current practices with respect to access to Lloyd Harbor. It was determined that due to safety concerns and the lack of designated access to Lloyd Harbor, boat access from the park to the Harbor should be curtailed. This proposal is also consistent with the LWRP policy. The plan also avoids disturbance of shorelines and waters in this open space area and maintains the character of the community, consistent with LIS coastal policy 1. The plan is likewise consistent with LIS CMP policy 1.4 to maintain natural, recreational and open space values including those associated with large estates. LIS policy 1.5 to mitigate adverse impacts of new development and redevelopment will also be furthered by such actions as siting additional access inland, providing pervious parking and road treatments in sensitive areas, and providing drainage improvements to lessen runoff and erosion. Existing environmental education programming at the park will be expanded and will promote water-dependent activities. This will include interpretive signage along trails; scenic vistas including views to the Sound will also be designated.
- Policy 5 Encourage the location of development on areas where public services and facilities essential to such development are adequate.

  The master plan is consistent with this policy. No large-scale development is proposed pursuant to the master plan. Stormwater runoff will be managed to not increase, and perhaps decrease, runoff to surrounding surface water bodies. As a public park, Caumsett is enhanced by its non-urbanized setting and limited development in the park has little or no potential to generate and/or encourage further land development. The plan will also encourage rehabilitation and restoration of existing structures and facilities. Wetlands along Lloyd Harbor will not be developed due to significant habitat and water resource values.

Fish and Wildlife Policies

- Policy 7 Significant coastal fish and wildlife habitats, as identified on the coastal area map, shall be protected, preserved, and where practicable, restored so as to maintain their viability as habitats
- Policy 7A The Lloyd Point, Lloyd Harbor, and Cold Spring Harbor significant coastal fish and wildlife habitats shall be protected, preserved and, where practicable, restored to maintain their viability as habitats.

The Lloyd Point Significant Coastal Fish and Wildlife Habitat (SCFWH) is important for its coastal wetland ecosystem and one of the least disturbed salt marshes on the north shore of Long Island. The Lloyd Point SCFWH includes the beach areas used as nesting sites by terns and plovers. The Lloyd Harbor SCFWH is mostly open water, which serves as important nursery and feeding areas for a variety of fish species, and is used extensively by waterfowl. The master plan is designed to have no impact or beneficial impacts on these ecosystems and the fish and wildlife species that they support. The Park Preserve and NHA designations will promote recognition of significant fish and wildlife resources of the park and surrounding waters. Natural resource management of the low salt marsh, maritime beach and Fresh Pond will all promote this policy and repair or prevent impairment of the fish and wildlife habitats. Additional signage will be provided to inform park patrons of the sensitive nature of the nesting area and other threatened/endangered species stewardship activities will continue. An invasive species control plan will be developed to protect important fish and wildlife resources in and adjacent to coastal waters. Projects will be undertaken to curtail and/or reduce introduction of pollutants into the SCFWHs.

- Policy 8 Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing resources… Such efforts shall be made in a manner which ensures the protection of renewable fish and wildlife resources and considers other activities dependent on them preserved, and where practicable, restored so as to maintain their viability as habitats.

  Providing some increased access to recreational fish and wildlife resources at Caumsett State Historic Park Preserve will not lead to over-utilization of the resource or cause impairment of the habitat. The new Northwest and Northeast parking lots will be provided away from the significant habitats and will be of small size to limit additional use of habitat areas. Observation decks in the low salt marsh area would be provided to protect the habitat, and portions of Plank Road may be removed and sand trail provided. These actions would improve access while being sensitive to the habitats. Any applicable permits would be obtained and the SCFWH narrative will be consulted in developing plans for these projects.

  The master plan is also consistent with LIS CMP Policy 11 to promote sustainable use of living marine resources in LIS. Long-term health and abundance of marine fisheries resources and their habitats will not be impaired and efforts will be made to improve degraded habitat (e.g., control of *Phragmites* (common reed) in the marsh). The recreational use of living marine resources at Caumsett State Historic Park Preserve, while somewhat expanded through parking in the Northwest lot, is and will continue to be very limited. Other efforts, such as promoting eelgrass beds to provide habitat, will continue under the plan.

Flooding and Erosion Policies

- Policy 11 Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.
- Policy 11A New residential construction and substantial modification to existing structures are prohibited within the coastal high hazard areas (V Zones), as designated in the Flood insurance Rate Maps for the village of Lloyd Harbor.
- Policy 11BBuildings and other structures shall be allowed within special flood hazard area (A Zone).

  No new structures will be placed within a V Zone. It is not anticipated that observation decks would be proposed within the A Zone, but if any are located in this area, these would be elevated and anchored in accordance with flood standards. The plan will also be consistent with the LIS

CMP policy 4, specifically 4.1 to minimize losses of human life and structures from flooding and erosion hazards, and 4.3 to preserve and restore natural protective features. Alteration or interference with shorelines will be avoided and activities will be managed to minimize interference with the protective capacities of the natural shoreline.

- Policy 12 Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features, including beaches, dunes, barriers and bluffs. Primary dunes will be protected from all encroachments that could impair their natural protective capacity.
  Such natural features as bluffs found at Caumsett help safeguard coastal lands and property from damage. The bluffs, as well as the barrier spits at the Sand Hole, are designated as natural protective features to be protected from disturbance or encroachment by development or other incompatible land use activities. No such development or activities are proposed or envisioned under this master plan. No development is anticipated in designated Coastal Erosion Hazard Areas. Plans to provide pedestrian access on elevated platforms would be consistent with this policy.
- Policy 14 Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measureable increase in erosion or flooding at the site of each activity or development, or at other locations.
  There are no erosion protection structures at Caumsett, nor are any planned. This policy also relates to activities that would indirectly lead to an increase in flooding or erosion. Steep slopes or major drainage swales will not be altered in a manner that decreases their ability to accommodate and channel stormwater runoff. Any work that may disturb such features will be undertaken in a manner that will minimize and mitigate the amount and velocity of stormwater. Natural vegetation and topography will be retained to the greatest extent practicable to keep soils stabilized and reduce the volume of stormwater flow. Natural drainage patterns will be considered and protected in site design. Erosion protection measures will be used to ensure that sedimentation is minimized and mitigated when soil is disturbed, such as for entrance road improvements, and stormwater will be contained on site.

Public Access Policies

- Policy 19 Protect, maintain and increase the level and types of access to public water-related recreation resources and facilities so that these resources and facilities may be fully utilized in accordance with reasonably anticipated public recreation needs and the protection of historic and natural resources.
  The master plan calls for promoting passive access opportunities designed to minimize impacts to water quality, habitats and scenic resources, consistent with this policy. Implementation of the plan will not reduce access to public water-related recreation resources and the possibility of increasing access in the future is not eliminated. Implementation of the plan will promote access for water-related recreation consistent with the capacity of the resources in Caumsett State Historic Park Preserve and adjoining waters.
- Policy 20 Access to the publicly-owned foreshore and to lands immediately adjacent to the foreshore or the water's edge that are publicly-owned shall be provided and it shall be provided in a manner compatible with adjoining uses. Such lands shall be retained in public ownership.
- Policy 20A Public access shall be protected and enhanced to public trust lands and to the waters above such lands.
  Policy 20 is similar to the policy 19; refer to above discussion. The level of access to be provided is in accord with estimated public use and is within the physical capability of the coastal lands

and waters. The level of access will not cause significant impacts to important natural resources including wetlands, habitats, natural protective features, and protected species.

Public trust lands are lands underwater and foreshore lands subject to tidal flow, and the right of public access to such lands is protected. The master plan will protect these lands and assure appropriate public access, considering public safety and resource protection.

Recreational Policies

- Policy 21 Water-dependent and water-enhanced recreation will be encouraged and facilitated, and will be given priority over non-water-related uses along the coast provided it is consistent with the preservation and enhancement of other coastal resources and takes into account demand for such facilities. In facilitating such activities, priority shall be given to areas where access to the recreation opportunities of the coast can be provided by new or existing public transportation services and to those areas where the use of the shore is severely restricted by existing development.
- Policy 21A Protect water-dependent recreational uses, such as swimming, shellfishing and finfishing, that require a high level of water quality by controlling activities that introduce contaminants into waters used for such recreation.

  Policy 21 is similar to the access policies; additional relevant discussion is provided here. Water-related recreation compatible with the resources should be increased and have a higher priority than non-water-dependent uses, and the master plan is thus consistent. Contaminant sources will also be minimized through stormwater control, working with the Town of Huntington to enforce restrictions on vessel waste discharges, and non-point source mitigation (see Policy 37). The master plan is also consistent with LIS CMP Policy 9 and will assist in providing access and recreational opportunities to more than local residents.

Historic and Scenic Resources Policies

- Policy 23 Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archeology or culture of the State, its communities, or the Nation.

  As a State Historic Park, BHS provides guidance for the management of Caumsett consistent with its historic, archeological and cultural resources, and has been a part of the agency's master planning team for Caumsett. All projects proposed pursuant to the plan have been developed by or in close consultation with BHS. An overall goal of the plan is to protect, preserve and interpret important historic structures, landscapes and archeological resources within the park. The plan places an emphasis on use/reuse of historic facilities consistent with their significant qualities. Cultural landscape would also be better identified and enhanced under the plan. Maintenance, repair or proper restoration shall be planned and conducted in accordance with The Secretary of the Interior's Standards for the Treatment of Historic Properties. Continued consultation with BHS will take place as appropriate for plan implementation to assure that these standards are properly applied.

  The FSB has also been consulted during preparation of the master plan and will ensure compliance with Section 14.09 review requirements. An archeological resources survey will be prepared and any actions that may impact known sites or areas of archeological sensitivity will be evaluated for further study in accordance with the procedures of the SHPO.

- Policy 25 Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the scenic quality of the coastal area.

- Policy 25A Maintain and enhance visual access to important scenic resources by preventing vegetative growth from interrupting sight lines and by developing specific plans for enhancing the enjoyment of visual resources at suitable locations.

  Development will be located back from shorelines to maintain the attractive quality of the shoreline and to retain views to and from the shore. Historic buildings are incorporated and will be maintained, repaired or restored under the master plan. Control of invasive plants will maintain or create views of coastal waters. The plan will also designate scenic vistas in the park.

Water and Air Resources Policies

- Policy 33 Best management practices will be used to ensure the control of stormwater runoff into coastal waters.

  As indicated elsewhere in the plan and this chapter, BMPs will be utilized in park development and rehabilitation. On-site recharge will be used to manage stormwater, without direct discharge to surface waters, marshes and wetlands. Any water discharge from such attenuation techniques as vegetated buffer areas will be of a quality consistent with surrounding waters. Native vegetative buffer zones will be retained and enhanced if necessary by control of invasive plants. Design of paving will use permeable surfaces wherever possible.

- Policy 34 Discharge of waste materials into coastal waters from vessels will be limited so as to protect significant fish and wildlife habitats, recreational areas and water supply areas.

- Policy 34A The Town and villages shall seek to implement a no-discharge zone in the entire Huntington/Northport Bay Complex.

  As indicated in the LWRP, the ultimate goal for control of vessel wastes within the area is inclusion of the entire Huntington/Northport Bay Complex, Cold Spring Harbor and The Sand Hole in the no-discharge zone. OPRHP would like to see this happen and encourages adequate enforcement presence. OPRHP will deploy suitable signs at prominent locations to indicate the location of pump-out facilities and which describe the environmental damage associated with discharge of vessel wastes into the water. OPRHP will also institute water quality monitoring of coastal waters such as in the Sand Hole.

- Policy 37 Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.

- Policy 37A Public education efforts should be undertaken to help achieve the objectives of this program, particularly with respect to the minimization of point source pollutant discharges.

  Policy 33 covered most aspects of Policy 37. Chemical fertilizers and pesticides will also be avoided. Public education will also be undertaken as indicated above with respect to vessel discharges, as well as additional education regarding the importance of the resources at Caumsett State Historic Park Preserve. Consideration will also be given to education on the impacts of waterfowl feeding, should this activity become a problem at Caumsett.

- Policy 34A The quality and quantity of groundwater supplies will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.

  All of Long Island's groundwater supply is designated as a sole source aquifer. As indicated previously, stormwater runoff generated by new development will be discharged on site. As explained in this policy discussion in the LWRP, discharging to surface waters results in a loss of water from the aquifer. Landscape planting design was discussed in this chapter under Plants and

will be guided by the CLR, also stressing the use of indigenous vegetation, which should not require fertilizer or irrigation.

- Policy 44 Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.

  The master plan includes strong provisions to protect the tidal and freshwater wetlands of the park and adjacent waters. Wetland vegetation will be maintained, except invasive vegetation, and every effort will be made to use control measures that will not adversely affect wetland resources. A buffer zone will be promoted around Fresh Pond by relocating a trail away from the pond's edge.

Summary

Based on the foregoing coastal policy discussion, it is OPRHP's initial determination that the action will not substantially hinder the achievement of any of the policies and purposes of the Lloyd Harbor LWRP.

Supplemental Environmental Review

Portions of this Master Plan, such as natural resource management strategies, are somewhat general or conceptual. Decisions regarding the type and extent of certain actions will be dependent on the findings from more specific studies or analysis still to be completed. For example, the archeological survey may point out the need for additional analysis or study. The findings from these site specific evaluations may identify impacts that were not addressed in this plan/EIS. Under such a circumstance, an additional or supplemental environmental review will be required. As part of the agency's responsibility under the State Environmental Quality Review Act, OPRHP will review proposed implementation projects with respect to consistency with this plan and EIS. Projects found by OPRHP to be consistent with the plan can go forward without any additional review. Other types of proposals may require additional review, ranging from completion of an environmental assessment form to perhaps a site specific environmental impact statement.

To assist in this consistency evaluation, the following types of actions have been identified as likely to require additional review under SEQR:

- Any new actions not addressed within the Master Plan that do not meet the Type II categories (no significant impact) in Part 617, the rules and regulations implementing SEQR;
- Any change from the preferred alternative for recreational and facility elements which would result in significant environmental impacts;
- Any leases, easements, memoranda of understanding, or other agreements between OPRHP and private entities or other agencies that affect resources in a manner that is not sufficiently addressed in this plan;
- Expansion of equestrian facilities in the licensed area;
- Any project determined through SHPO review to have an Adverse Impact on historic resources at the Park;
- Further analysis will be done to assess the feasibility of restoring sections and reverting portions of the former Plank Road into sand pathways. The present concept would reduce the present impact of the road. The need for additional environmental review would be evaluated based on more site specific planning.
- Additional analysis regarding possibly relocating park maintenance and associated facilities is also needed and will be treated in a similar manner as above. Restoration of the existing site would not require additional environmental review. As mentioned in Chapter 5, gas pumps and

storage tanks at the existing facility would need to be remediated if the maintenance facility is relocated. OPRHP has an ongoing program and works with DEC on removal and remediation of tanks.

- Development of guidelines for special events is consistent with this master plan and will not in themselves require additional environmental review. The guidelines will set forth the types of events and conduct of events that are compatible with Caumsett. The guidelines will also define the types and/or scope of events that may require additional environmental review in order to be approved.
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