COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

| | |
|---|---|
| Name of Area: | **Caumsett State Park** |
| County: | **Suffolk, Nassau** |
| Town(s): | **Huntington** |
| 7½' Quadrangle(s): | **Lloyd Harbor, NY** |
| Designated: | **October 15, 2005** |

| **Assessment Criteria** | **Score** |
|---|---|
| **Ecosystem Rarity (ER)--the uniqueness of the plant and animal community in the area and the physical, structural, and chemical features supporting this community.** | |
| ER assessment: One of the largest forested ecosystems on Long Island, unusual in the region. | 25 |
| **Species Vulnerability (SV)--the degree of vulnerability throughout its range in New York State of a species residing in the ecosystem or utilizing the ecosystem for its survival. (E = Endangered, T = Threatened, SC = Special concern)** | |
| SV assessment: Osprey (SC) nesting, but extent of use is not adequately documented. | 0 |
| **Human Use (HU)-- the conduct of significant, demonstrable commercial, recreational, or educational wildlife-related human uses, either consumptive or non-consumptive, in the area or directly dependent upon the area.** | |
| HU assessment: Area provides significant opportunities for birdwatching, fishing, nature and educational study of county-level significance. | 4 |
| **Population Level (PL)--the concentration of a species in the area during its normal, recurring period of occurrence, regardless of the length of that period of occurrence.** | |
| PL assessment: Concentrations of non-game migratory birds are among the largest on Long Island, of regional significance. | 9 |
| **Replaceability (R)--ability to replace the area, either on or off site, with an equivalent replacement for the same fish and wildlife and uses of those same fish and wildlife, for the same users of those fish and wildlife.** | |
| R assessment: Irreplaceable. | 1.2 |

**Habitat Index = [ER + SV + HU + PL] = 38** **Significance = HI x R = 45.6**

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

**Caumsett State Park**

LOCATION AND DESCRIPTION OF HABITAT:

Caumsett State Park is located on the north shore of Long Island, on Lloyd Neck in the Village of Lloyd Harbor, Suffolk County (7.5' Quadrangle: Lloyd Harbor, NY). The shorefront is under Nassau County jurisdiction below the mean high water line. This approximately 1,369 acre area is bounded by the Lloyd Harbor Significant Coastal Fish and Wildlife Habitat to the south, the Caumsett State Park boundary to the east, Long Island Sound to the north, and the park and Lloyd Point Significant Coastal Fish and Wildlife Habitat boundaries on the west. The fish and wildlife habitat includes all of the land within Caumsett State Park (outside of the Lloyd Point Significant Coastal Fish and Wildlife Habitat portion of Caumsett State Park) as well as narrow areas of maritime beach and tidal flats along the Park's north shore. The Park is bordered by residential development and limited areas of undeveloped woodlands to the east and west.

Caumsett State Park contains a diversity of ecological community types, including tidal mudflats, maritime beach, mature woodlands, freshwater pond, and open fields. Significant areas of coastal oak-hickory forest and oak-tulip tree forest comprise much of the habitat. These forests display excellent species diversity, with limited intrusion by exotic species.

FISH AND WILDLIFE VALUES:

The Caumsett State Park habitat comprises one of the largest and most diverse coastal forests on the north shore of Long Island This area is important to many fish and wildlife species throughout the year. Concentrations of non-game migratory birds in Caumsett State Park during nesting and migrations seasons are among the largest on Long Island and the park has been designated as a New York State Bird Conservation Area. The high bluffs along the Long Island Sound shoreline are noted for their large populations of bank swallows. Species nesting include red-bellied woodpecker, great crested flycatcher, Carolina wren, wood thrush, gray catbird, warbling vireo, bank swallow, tufted titmouse, yellow warbler, pine warbler, common yellowthroat, American redstart, scarlet tanager, eastern towhee, song sparrow, rose-breasted grosbeak, pine siskin, and American goldfinch. Sporadic nesting of osprey (SC) occurs at Fresh Pond in the northeast corner of Caumsett State Park, but regular use of the area by nesting osprey (SC) has not been adequately documented.

Recreational uses of Caumsett State Park include surf fishing, walking, hiking, bird watching, nature study, bicycling, and horseback riding. In addition to the environmental programs provided through the State Park, Queens College operates its Center for Environmental Teaching and Research at Caumsett State Park. The shallow waters along the north edge of the Park provide opportunities for recreational surf fishing. Sportfish that frequent these shallows include snappers, bluefish, tautog, fluke, flounder, striped bass, weakfish, porgies, and Atlantic mackerel.

IMPACT ASSESSMENT:

Any activity that would substantially degrade water quality and/or terrestrial natural resources in Caumsett State Park would adversely affect the biological productivity of this area. All species of fish and wildlife would be affected by water pollution, such as chemical contamination (including food chain effects resulting from bioaccumulation), oil spills, excessive turbidity, and waste disposal.

Elimination of intertidal areas, through loss of tidal connection, excavation, or filling, would result in a direct loss of valuable habitat area. Construction of shoreline structures, such as docks, piers, bulkheads, or revetments, in areas not previously disturbed by development, may result in the loss of productive areas which support the fish and wildlife resources of Caumsett State Park. Alternative strategies for the protection of shoreline property should be examined, including innovative, vegetation-based approaches. Control of invasive nuisance plant species, through a variety of means, may improve fish and wildlife species use of the area and enhance overall natural resource values.

Unrestricted use of motorized vessels including personal watercraft in the protected, shallow waters of the area could have adverse effects on aquatic vegetation and fish and wildlife populations. Use of motorized vessels should be controlled (e.g., no wake zones, speed zones, zones of exclusion) in and adjacent to shallow waters.

Elimination or disturbance of adjacent wetland and forested habitats would adversely affect certain wildlife species that are relatively uncommon on Long Island, and would diminish the existing character of the Caumsett State Park habitat area. Human disturbance of wetlands includes illegal dumping of household and commercial waste, the use of all-terrain vehicles on trails and shorelines, disruption of pond shores (including raking, mowing, trampling, or clearing of native vegetation), and destruction or removal of plants as a result of development or poor land management of adjacent areas. Control of invasive plant species, through a variety of means, may improve fish and wildlife species use of the area.

Activities designed to enhance human access to the area for fish and wildlife related recreation may be compatible with protection of existing resources. The addition of trails through sensitive areas, however, may promote the invasion of invasive and exotic species, and should be conducted in a manner to avoid and minimize impacts.

HABITAT IMPAIRMENT TEST:

A **habitat impairment test** must be applied to any activity that is subject to consistency review under federal and State laws, or under applicable local laws contained in an approved local waterfront revitalization program. If the proposed action is subject to consistency review, then the habitat protection policy applies, whether the proposed action is to occur within or outside the designated area.

The specific **habitat impairment test** is as follows.

In order to protect and preserve a significant habitat, land and water uses or development shall not be undertaken if such actions would:

- destroy the habitat; or,
- significantly impair the viability of a habitat.

*Habitat destruction* is defined as the loss of fish or wildlife use through direct physical alteration, disturbance, or pollution of a designated area or through the indirect effects of these actions on a designated area. Habitat destruction may be indicated by changes in vegetation, substrate, or hydrology, or increases in runoff, erosion, sedimentation, or pollutants.

*Significant impairment* is defined as reduction in vital resources (e.g., food, shelter, living space) or change in environmental conditions (e.g., temperature, substrate, salinity) beyond the tolerance range of an organism. Indicators of a significantly impaired habitat focus on ecological alterations and may include but are not limited to reduced carrying capacity, changes in community structure (food chain relationships, species diversity), reduced productivity and/or increased incidence of disease and mortality.

The *tolerance range* of an organism is not defined as the physiological range of conditions beyond which a species will not survive at all, but as the ecological range of conditions that supports the species population or has the potential to support a restored population, where practical. Either the loss of individuals through an increase in emigration or an increase in death rate indicates that the tolerance range of an organism has been exceeded. An abrupt increase in death rate may occur as an environmental factor falls beyond a tolerance limit (a range has both upper and lower limits). Many environmental factors, however, do not have a sharply defined tolerance limit, but produce increasing emigration or death rates with increasing departure from conditions that are optimal for the species.

The range of parameters which should be considered in applying the habitat impairment test include but are not limited to the following:

1. physical parameters such as living space, circulation, flushing rates, tidal amplitude, turbidity, water temperature, depth (including loss of littoral zone), morphology, substrate type, vegetation, structure, erosion and sedimentation rates;

2. biological parameters such as community structure, food chain relationships, species diversity, predator/prey relationships, population size, mortality rates, reproductive rates, meristic features, behavioral patterns and migratory patterns; and,

3. chemical parameters such as dissolved oxygen, carbon dioxide, acidity, dissolved solids, nutrients, organics, salinity, and pollutants (heavy metals, toxics and hazardous materials).

Although not comprehensive, examples of generic activities and impacts which could destroy or significantly impair the habitat are listed in the impact assessment section to assist in applying the habitat impairment test to a proposed activity.

KNOWLEDGEABLE CONTACTS:

Habitat Unit
NYS Department of State
Division of Coastal Resources
41 State Street
Albany, NY 12231
Phone: (518) 474-6000

NYSDEC—Region 1
State University of New York, Building 40
Stony Brook, NY 11790-2356
Phone: (631) 444-0354

Bureau of Marine Resources
NYSDEC
205 N. Belle Meade Road, Suite 1
East Setauket, NY 11733
Phone: (631) 444-0430

New York Natural Heritage Program
625 Broadway, 5th Floor
Albany, NY 12233-4757
Phone: (518) 402-8935

Office of Ecology
Suffolk County Dept. of Health Services
Bureau of Environmental Management
County Center
Riverhead, NY 11901
Phone: (516) 852-2077

New York State Office of Parks, Recreation, and Historical Preservation
Agency Building 1
Empire State Plaza
Albany, NY 12238
Phone (518) 474-0409

LLOYD POINT

CAUMSETT STATE PARK

Target Rock National Wildlife Refuge

EATON'S NECK POINT

NORTHPORT BAY

HUNTINGTON BAY

Lloyd Point

Fly Island

The Sand Hole

Fresh Pond

Water Towers

L L O Y D N E C K

CAUMSETT STATE PARK

OYSTER BAY

Northwest Bluff

Whitewood Point

Oyster Bay National Wildlife Refuge

Marina

LLOYD HARBOR

TARGET ROCK NATIONAL WILDLIFE REFUGE

East Fort Point

Eatons Neck Point Light

U.S.C. Station

Flat

Tidal

EATONS NECK

NORTH

Hobart Beach

Hobart Beach Park

Prince Bend

West Beach

Sand City Island

NORTH

East Beach

Lloyd Beach

OYSTER BAY AND COLD SPRING HARBOR

Lloyd Harbor

Immaculate Conception Seminary

Lloyd Neck Beach Club

Wincoma Point

Wincoma

Huntington Bay

Crescent Beach

Crescent Beach Town Park

SUFFOLK CO
NASSAU CO

INDEFINITE BOUNDARY

N

0 2000 feet

# Significant Coastal Fish and Wildlife Habitats

Caumsett State Park
Eatons Neck Point
Huntington Bay
Lloyd Harbor
Lloyd Point
Sand City (Eaton's Neck)
Cold Spring Harbor (In Part)
Northport Bay (In Part)

New York State Department of State
Division of Coastal Resources