

**Attachment B:**

COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

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Name of Area: **Cupsogue County Park**  
Designated: **March 15, 1987**  
Date Revised: **December 15, 2008**  
County: **Suffolk**  
Town(s): **Brookhaven, Southampton**  
7½' Quadrangle(s): **Eastport, NY; Moriches, NY**

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**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: Relatively large segment of undeveloped barrier beach, adjacent to a major inlet; rare in New York State. Geometric mean:  $\sqrt{25} \times \sqrt{64} = 40$ . **40**

**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: Piping plover (E, T-Fed), common tern (T), least tern (T) nest. Osprey (SC) foraging and nesting. Additive division:  $36+25/2+25/4+16/8= 56.75$  **56.75**

**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: Used as a study area for a federal wildlife research project in 1982; however, no significant fish or wildlife related human uses prior to or since that study. **0**

**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: Historically one of the largest nesting concentrations of least terns in New York State. **0**

**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**

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**Habitat Index: ( ER + SV + HU + PL) = 96.75**

**Significance: (HI x R) =116.1**

NEW YORK STATE  
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT  
NARRATIVE

**CUPSOGUE COUNTY PARK**

LOCATION AND DESCRIPTION OF HABITAT:

Cupsogue County Park is an approximate one mile stretch of barrier beach which forms the southern border of Moriches Bay, east of Moriches Inlet. This approximate 222 acre area is located in the towns of Brookhaven and Southampton, Suffolk County (7.5' Quadrangles: Moriches, N.Y.; and Eastport, N.Y.). The fish and wildlife habitat includes open beach and an extensive primary dune zone, reaching elevations of up to 20 feet. Due to the dynamic nature of the Atlantic shoreline, the southern boundary of the Cupsogue County Park significant habitat will reflect the most current land forms, extending to mean low water. Ecological communities within Cupsogue County Park include the maritime beach and maritime dune communities. The habitat is comprised of maritime dunes fronted by maritime beach, with small scattered inland interdunal swales. Maritime beach is a sparsely vegetated community dominated by beach grass (*Ammophila breviligulata*). Maritime beach occurs on unstable sand, gravel, or cobble ocean shores above mean high tide, where the shore is modified by storm waves and wind erosion. The community is an important nesting ground for beach nesting shore birds. The maritime dune community is comprised of grasses and low shrubs in a mosaic of vegetated patches dominated by beach grass and seaside goldenrod (*Solidago sempervirens*). High and low salt marsh communities occur around the fringes of the bayshore edge and are associated with smooth cordgrass (*Spartina alterniflora*), salt hay grass (*Spartina patens*), and spike grass (*Distichlis spicata*). A portion of the primary dune area is posted as a bird nesting area, but still receives much disturbance by pedestrians and off-road vehicle traffic.

FISH AND WILDLIFE VALUES:

Cupsogue County Park is an important segment of undeveloped barrier beach on Long Island. While this ecosystem type is generally rare in New York State, portions of the area have been degraded by recreational use. Nevertheless, this area is valuable habitat for a variety of wildlife species. Cupsogue County Park was investigated by the U.S. Fish and Wildlife Service in 1982 (prior to development of public use facilities in the area) as one of four primary sites for baseline studies of natural coastal habitats on Long Island's south shore. These studies documented the presence of at least 20 species of breeding birds, 6 species of mammals, and 2 species of reptiles. The primary dune and dredged material area serve as an important nesting site for least terns (T), with colonies present 1982 - 1985. In those years, an estimated 150 pairs, 430 pairs, 33 pairs, and 35 breeding pairs, respectively, of least terns (T) were observed in the area. The least tern (T) population at this site in 1983 was the largest on Long Island that year, of statewide significance. Shorebird surveys estimate for the 9 year period from 1997-2005, an annual average of 28 least tern (T) pairs (90 in peak year), and 20 common tern (T) pairs (92 in peak year). Piping plovers (E) also nest at Cupsogue County Park, with 2-6 pairs present in 1983, 1984 and 1985, and an average of 6 pairs from 1997-2005 (9 in peak year). Long Island comprises one of two population centers in New York State for breeding osprey (SC). An annual average of at least one osprey (SC) breeding pair was recorded for the 5 year period from 1999-2003 nesting at Cupsogue County Park. Other probable or confirmed nesting bird species in the area include mallard, horned lark, willet, sharp-tailed sparrow, and seaside sparrow. Barrier beach dunelands such as that found on Cupsogue

County Park are also essential resting and feeding areas for migrating raptors, especially falcons and accipiters, which move south through a very narrow corridor along the south shore. These birds forage extensively among the undeveloped barrier beaches, where concentrations of small mammals, migrant shorebirds, and passerine birds provide an important prey base. The wetlands in Cupsogue County Park provide valuable feeding areas for a variety of shorebirds and waterfowl throughout the year, and contribute significantly to the biological productivity of Moriches Bay. Diamondback terrapin have been confirmed breeding in sandy areas adjoining these marshes. White-tailed deer, eastern cottontail, raccoon, and opossum also inhabit Cupsogue County Park. Additionally, Cupsogue Beach is a popular haulout area for harbor seals using the Moriches Bay in the winter. While there are no significant recreational uses specifically associated with the wildlife resources of this area, portions of Cupsogue County Park provide moderate recreational use for bathing, hiking, and important access for mobile sportsfishermen who use off-road vehicles to reach the valuable surf fishery at this site.

#### IMPACT ASSESSMENT:

Nesting shorebird species inhabiting the barrier beaches of Long Island are highly vulnerable to disturbance by humans from March 15 through August 15. Significant pedestrian traffic or recreational use of the upper beach, dredged material deposits, primary dune area and adjacent areas (e.g., boat and personal watercraft landing, off-road vehicle use, picnicking) would be likely to eliminate the use of this site as a nesting area and should be minimized during this period. Reduction, or loss of the area presently utilized by nesting colonies could significantly affect the bird populations in this vicinity. Predation of chicks and destruction of eggs or nests by unleashed pets (e.g., dogs, cats) and natural predators may also occur, and predator control should be implemented where feasible. Appropriate placement of trash receptacles and signs promoting proper trash disposal would be beneficial to the habitat as beach lying trash may attract additional predators to sensitive populations. Fencing and/or annual posting of the bird nesting area should continue (and be enforced) to help protect the nesting bird species.

Unregulated dredged material placement in this area would be detrimental to the habitat area, but such activities may be designed to maintain or improve the habitat, by setting back vegetative succession. Disturbance of the natural dune and wetland communities, as occurred through development of public use facilities in the park, would adversely affect concentrations of a wide variety of wildlife species. Construction of adjacent recreational facilities should be designed to minimize impacts to the nesting areas. Elimination of salt marsh areas, through excavation, filling, or construction of shoreline structures, may result in a direct loss of productive areas which support fish and wildlife resources within and adjacent to Cupsogue County Park. Construction of shoreline structures, such as docks, piers, bulkheads, or revetments, in areas not previously disturbed by development (e.g., natural salt marsh, tidal flats, or shallows), would result in the loss of productive areas which support the fish and wildlife resources of Cupsogue County Park. Maintenance of existing erosion control structures which interfere with natural coastal processes should be carefully evaluated for need and where possible, non-structural solutions should be utilized.

#### 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:

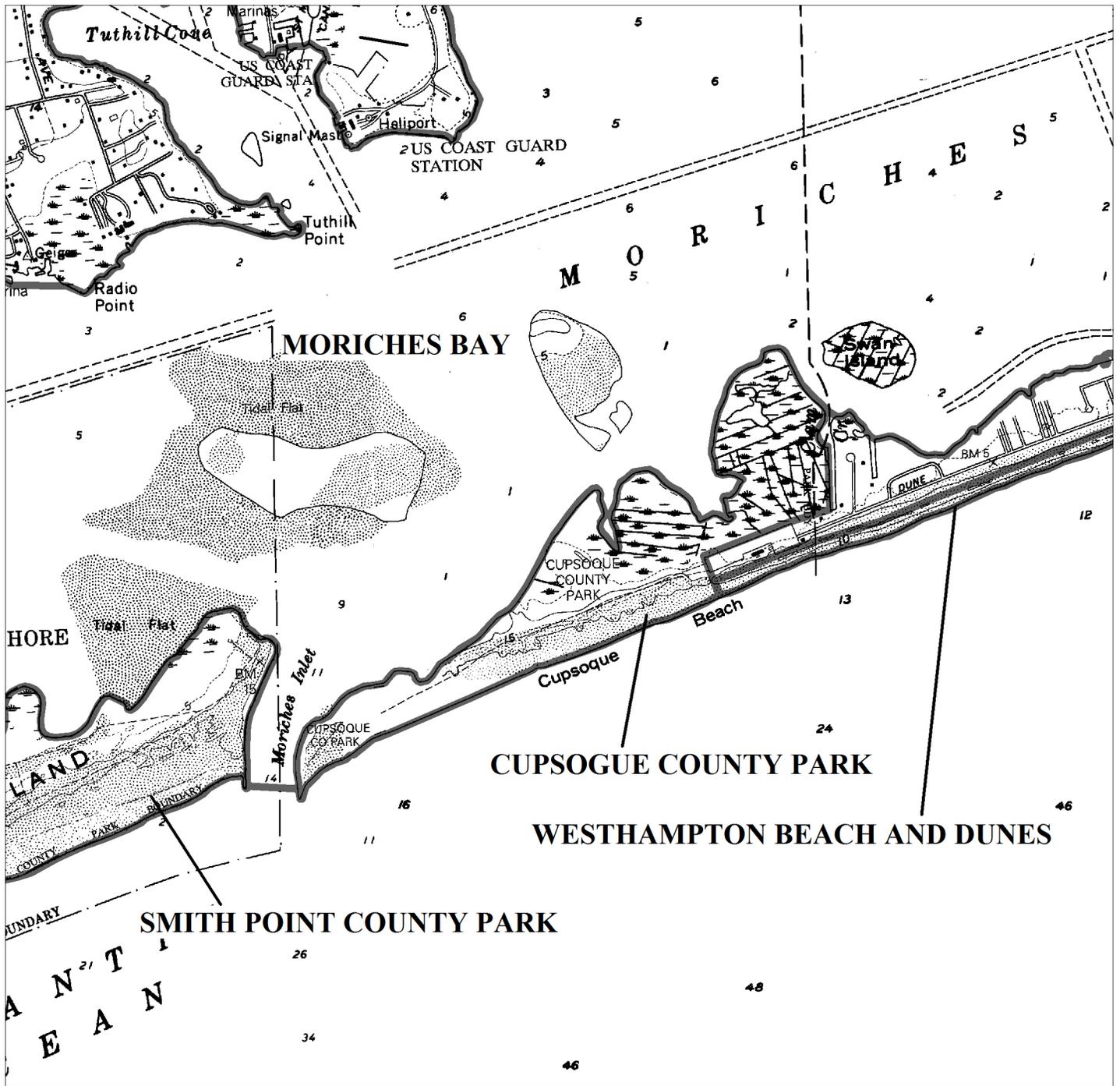
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## Significant Coastal Fish and Wildlife Habitats



New York State  
 Department of State

Division of  
 Coastal Resources

Cupsogue County Park  
 Smith Point County Park (In Part)  
 Moriches Bay (In Part)  
 Westhampton Beach and Dunes (In Part)

