Attachment B:

COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area:	**Jones Beach East**
Designated:	**December 15, 2008**
County:	**Suffolk**
Town(s):	**Babylon**
7½' Quadrangle(s):	**Bay Shore West, NY; West Gilgo Beach, NY**

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: Undeveloped marine barrier beach is rare in New York State; rarity diminished somewhat by recreational use in the vicinity. 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), least tern (T), and common tern (T) nesting. Historically significant concentrations of nesting roseate tern (E) and black skimmer (SC), but none in recent years. Additive division: 36 + 25/2 + 25/4 = 54.75 **54.75**

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: Research activities are significant at a level between the Northeastern United States and New York State (Geometric mean: $\sqrt{16 + 25} = 20$); Recreational fishing of statewide significance; Bird watching locally important. Additive division: 20+ 16/2+ 4/4 = 29 **29**

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: Population of nesting least tern (T) significant for Long Island. **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) = 132.75 **Significance: (HI x R) = 159.3**

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

JONES BEACH EAST

LOCATION AND DESCRIPTION OF HABITAT:

Jones Beach East is located on the Jones Beach barrier island, on the south shore of Long Island, in the Town of Babylon, Suffolk County (7.5' Quadrangle: Bay Shore West, N.Y.; and West Gilgo Beach, N.Y.). The area extends from the Nassau/Suffolk County Line, along the beach south of Ocean Parkway, extending waterward along mean low water to Oak Beach, on the northern side of Fire Island Inlet. Due to the dynamic nature of the Atlantic shoreline, the southern boundary of the Jones Beach East significant habitat will reflect the most current land forms, extending to mean low water. The fish and wildlife habitat consists of a broad, long section of barrier beach with maritime dune communities fronted by maritime beach, with scattered 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*). The dunes are fragmented by recreational facilities and a paved road bisects the length of the island. Exotic plants are intruding near the roads causing the presence of scattered patches of brackish interdunal swales/reedgrass purple loosestrife marsh. Individual swales occur as small patches positioned between foredunes, primary dunes, and secondary dunes within the dunes system. Brackish interdunal swales are also a rare ecological community in New York State. The community is dominated by grasses, sedges, and rushes, including salt hay grass (*Spartina patens*), and is noted for its importance to wildlife, including piping plover (E, T-Fed), oystercatchers, yellowlegs, fiddler crabs, odonates, and various insects. The area receives moderate to heavy recreational use from pedestrians and off-road vehicle use by sportsfishermen.

Thousands of seabeach knotweed (T) (*Polygonum glaucum*) plants can be found on a broad section of barrier beach that contains a series of salt water ponds covering 10 acres within the Jones Beach East habitat. Seabeach knotweed is rare in New York State with fewer than 35 occurrences, and only 21 to 100 plants occur globally. Seabeach amaranth (E, T-Fed) (*Amaranthus pumilus*), commonly associated with piping plovers (E, T-Fed), has also been observed at this site. The population included within the Jones Beach East significant habitat is one of the best global populations. Seabeach amaranth (E, T-Fed) has been eliminated from two-thirds of its historic global range with typically fewer than 5 occurrences in New York State. Salt-meadow grass (E) (*Diplachne maritima*) and seaside bulrush (E) (*Scirpus maritimus*) may be found within the Jones Beach East significant habitat as well.

FISH AND WILDLIFE VALUES:

Undeveloped marine barrier beach habitat such as Jones Beach East are becoming less common on Long Island and are rare in New York State. This ecosystem type is rare on Long Island and only occurs at a limited number of locations along the south shore, although development and use of the adjacent recreation facilities has resulted in some degradation of the habitat. Jones Beach East significant habitat

supports one of the best piping plover-tern nesting colonies on Long Island. Historically, the concentration of nesting common tern (T) was the largest on Long Island. From 1993 to 2005, an estimated annual average of 109 pairs of nesting least terns (T) were observed on Jones Beach East (253 in peak year). Common tern (T) has rarely been observed at the site from 1999-2005, but an estimated annual average of 661 breeding pairs (1,850 in peak year) of common tern (T) were observed from 1993 to 1998. Terns typically nest in simple scrapes built in sand and gravel, sparsely lined with small shells or other debris (i.e. seaweed). Tern breeding colonies may contain several hundred to several thousand birds, including roseate (E), least (T), common (T), and gull-billed terns, along with black skimmer (SC). Productivity of the surrounding waters is of vital importance to tern species because they feed by striking the water in shallow dives, or skimming the surface for small fish. Piping plover (E, T-Fed) also are commonly found nesting in association with least tern (T). From 1993 to 2005, nesting piping plover (E, T-Fed) at Jones Beach East averaged approximately 12 pairs per year (18 in peak year). Piping plover (E, T-Fed) nests resemble those of least tern, but plover nests are usually placed well above the high tide mark on open, grassless sand beaches, or areas containing dredged material. Their diet consists primarily of marine worms, insect larvae, beetles, crustaceans, and mollusks they obtain from foraging on beaches, dunes and tidal wrack. Research is being conducted at this site in order to better understand predation and productivity of piping plover (E, T-Fed). Historically, this site has also been important for nesting roseate tern (E) and black skimmer (SC). The brackish interdunal swales along this site constitute a feeding and staging area for various species of colonial waterbirds, particularly piping plover (E, T-Fed).

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 (e.g., boat and personal watercraft landing, off-road vehicle use, picnicking) of the upper beaches, dunes and adjacent areas of the Jones Beach East habitat could easily 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. Introduction or attraction of mammalian predators to the area would also be detrimental to the populations of nesting birds. 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 be provided 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.

Physical alteration of the habitat would also have a significant impact on these bird populations. Construction of adjacent recreational facilities should be designed to minimize impacts to the nesting areas. Elimination of adjacent salt marsh or tidal flat would result in the loss of productive areas which support the fish and wildlife resources at Jones Beach East. Construction of new or maintenance of existing erosion control structures which interfere with natural coastal process should be carefully evaluated for need and where possible, non-structural, soft solutions should be utilized. Any potential impacts in this area should be reviewed for compatibility with research programs that are being conducted here.

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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Town of Babylon
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New York State
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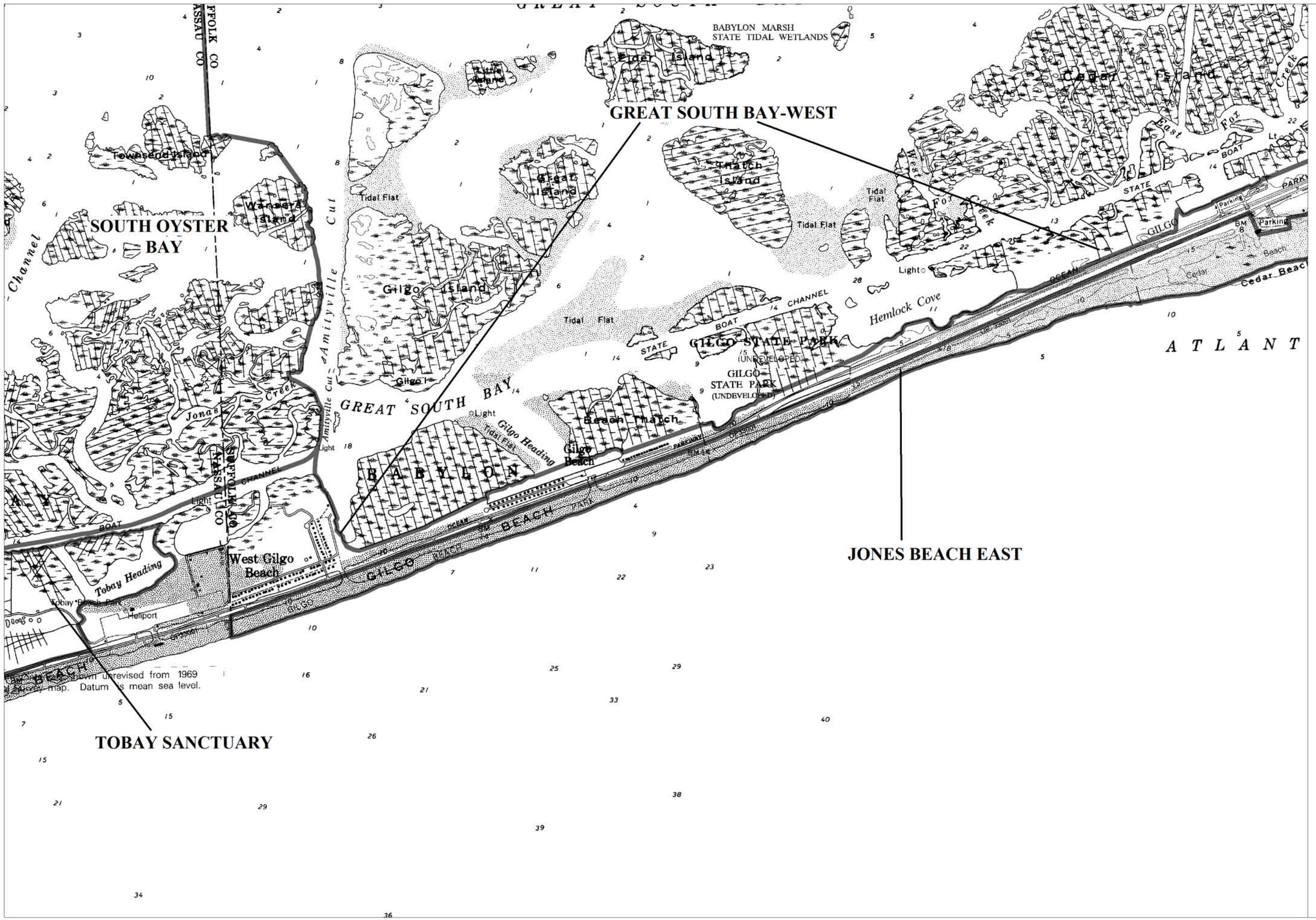

Significant Coastal Fish and Wildlife Habitats

Jones Beach East (In Part)
part 1 of 2
Great South Bay West (In Part)
South Oyster Bay (In Part)
Tobay Sanctuary (In Part)

New York State Department of State
Division of Coastal Resources

GREAT SOUTH BAY-WEST

JONES BEACH EAST

DEMOCRAT POINT

ATLANTIC OCEAN

0 2000 feet

Significant Coastal Fish and Wildlife Habitats

Jones Beach East (In Part)
part 2 of 2
Great South Bay West (In Part)
Democrat Point (In Part)

New York State
Department of State
Division of
Coastal Resources