

Attachment B:

COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area: **Jones Beach West**
Designated: **December 15, 2008**
County: **Nassau**
Town(s): **Hempstead**
7½' Quadrangle(s): **Jones Inlet, 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 segments of marine barrier beach habitat are rare in New York, but rarity is diminished somewhat by roadways and recreational use.
Geometric mean: $\sqrt{64} \times \sqrt{25} = 40$

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. Northern harrier (T) may nest in area, but not well documented. 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: Bird watching locally significant. The site provides access to recreational fishery of statewide significance. Additive division: $16 + 4/2 = 18$

18

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: Concentration of nesting piping plover is significant at the New York State level.

16

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) = 128.75

Significance: (HI x R) = 154.5

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

JONES BEACH WEST

LOCATION AND DESCRIPTION OF HABITAT:

Jones Beach West is located in Jones Beach State Park, southeast of Jones Inlet, and extends east along the coastline for approximately 3 miles to the Jones Beach Causeway. This approximately 320 acre habitat is owned by the Long Island State Park Commission, and is within the Town of Hempstead, Nassau County (7.5' Quadrangle: Jones Inlet, N.Y.). The fish and wildlife habitat is located on the western half of Jones Beach State Park up to the Jones Beach Causeway, and is defined by mean low water on the south and west sides. Due to the dynamic nature of the Atlantic shoreline, the southern boundary of the Jones Beach West significant habitat will reflect the most current land forms, extending to mean low water. Jones Beach Island is a barrier island that has an extensive maritime dune system fronted by maritime beach, with small scattered inland interdunal swales that are periodically flooded. 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, seaside goldenrod (*Solidago sempervirens*), and the globally rare seabeach knotweed (T) (*Polygonum glaucum*).

Hundreds of seabeach knotweed (T) plants can be found in a highly disturbed area within the Jones Beach West habitat. Seabeach knotweed is rare in New York State with fewer than 35 occurrences, and only 21 to 100 plants occur globally. Marsh straw sedge (T) (*Carex hormathodes*), another rare plant species is also found within the Jones Beach West significant habitat. According to current documentation, less than 20 site occurrences exist for marsh straw sedge (T) in New York State. Seaside bulrush (E) (*Bolboschoenus maritimus* ssp. *Paludosus*) is found within the brackish interdunal swales of Jones Beach West. Seaside bulrush (E) is restricted in New York State to the south and eastern shores of Long Island with typically 5 or fewer occurrences.

FISH AND WILDLIFE VALUES:

Relatively undeveloped barrier island habitats and the maritime dune community which dominates the landscape are rare in New York State. However, development and use of the adjacent recreation facilities have resulted in some degradation of the habitat. Jones Beach West serves as an important site for several beach nesting shorebirds. For the 13 year period from 1993 to 2005, an annual average of 102 nesting pairs (275 in peak year) of least tern (T) were observed on Jones Beach West. The least tern (T) breeds in colonies as large as 200 birds including roseate (E), common (T), and gull-billed terns, along with black skimmer (SC). Least tern (T) nests are simple scrapes built in sand or gravel, and may be sparsely lined with shells and other debris (e.g. seaweed). Least tern (T) feeds 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, approximately 21 pairs of piping plover (E, T-Fed) nested annually within the Jones Beach West significant habitat (46 in peak year). Piping plover (E, T-Fed) nests resemble those of least tern (T), 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. The ephemeral pools and interdunal swales located behind the dunes provide optimal foraging areas for piping plover. Other bird species regularly observed in the area include horned lark, marsh wren, common tern (T), killdeer, willet, black skimmer (SC), American oystercatcher, and mallard. Northern harrier (SC) was listed as a possible breeder in this area in the past, but no recent data is available.

Although over 250,000 people visit Jones Beach State Park during the summer months, there are limited human use activities specifically associated with the wildlife resources at Jones Beach West. The Theodore Roosevelt Nature Center is located on the West End of Jones Beach State Park, and provides environmental education opportunities of county-level significance. The parking lot near the nature center was restored to dunes and ephemeral pools as a part of a piping plover (E, T-Fed) habitat restoration project. Jones Beach State Park also provides 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. Any activity affecting the tern and skimmer colonies, including human intrusion and the introduction or attraction of mammalian predators, during the critical nesting period would adversely impact these species. At present, recreational use of the back dune areas limits the suitability of much of the area for bird nesting. Reduction, or loss of the area presently utilized by nesting colonies could significantly affect the bird populations in this vicinity. Although nesting sites may change from year to year, human disturbance of the upper beach, dunes, and wetlands (above the spring high tide line) must be avoided in order to preserve these sites' value as a nesting habitat. Significant pedestrian traffic or recreational use of Jones Beach West and adjacent areas (e.g., boat and personal watercraft landing, off-road vehicle use, picnicking) could easily eliminate the use of this site as a breeding area and should be minimized during this period. 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. Introduction or attraction of mammalian predators to the area would be detrimental to reproduction and nesting of piping plover populations and to the possible return of least tern nesting and should be avoided. 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.

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 West. The wet swale area west of the parking lot should remain undisturbed as an area for various bird species to use for feeding, resting, and bathing. 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 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.

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