

Attachment B:

COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area: **Nassau Beach**
Designated: **March 15, 1987**
Date Revised: **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: Relatively undisturbed barrier beach habitat is rare in Nassau County. **9**

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 black skimmer (SC) nesting.
Additive division: $36 + 25/2 + 16/4 = 52.5$ **52.5**

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: No significant fish or wildlife related human uses of the area. **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: Population of nesting least terns (T) is one of the largest concentrations on 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) = 70.5

Significance: (HI x R) = 84.6

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

NASSAU BEACH

LOCATION AND DESCRIPTION OF HABITAT:

Nassau Beach is located approximately one half mile west of Point Lookout, on the Long Beach Island barrier island on Long Island's south shore. The Nassau Beach significant habitat includes Lido Beach, and the adjoining beach to its east, extending waterward to mean low water, including Nassau Beach County Park, and the westernmost beach area of Malibu Beach Town Park, in the Town of Hempstead, Nassau County (7.5' Quadrangle: Jones Inlet, N.Y.). Due to the dynamic nature of the Atlantic shoreline, the southern boundary of the Nassau Beach significant habitat will reflect the most current land forms, extending to mean low water. The Nassau Beach significant habitat consists of approximately 214 acres of maritime beach with scattered dunes through most of the site. Maritime beach is a sparsely vegetated community that 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.

Seabeach amaranth (E, T-Fed) (*Amaranthus pumilus*), commonly associated with piping plover (E, T-Fed), has been observed at this site since 1997. 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.

FISH AND WILDLIFE VALUES:

The Nassau Beach fish and wildlife habitat consists of a small segment of relatively undisturbed barrier beach ecosystem. Nassau Beach serves as an important nesting site for least tern (T), black skimmer (SC), and piping plover (E, T-Fed). During the period from 1993 to 2005, the site averaged 234 nesting pairs (752 in peak year) of least tern (T) annually. For the 13 year period from 1993 to 2005, the Nassau Beach least tern (T) breeding colony remained among the largest on Long Island and represented approximately 10% of the total Long Island Population. Least terns (T) typically nest in simple scrapes built in sand or gravel, sparsely lined with small shells or other debris (e.g. seaweed). Least tern (T) breeding colonies may contain several hundred birds, including roseate (E), common (T), and gull-billed terns, along with black skimmer (SC). Least terns (T) feed by striking the water in shallow dives, or skimming the surface for small fish. Black skimmer (SC) also utilize Nassau Beach as a nesting site. Thirty-four pairs (149 in peak year) of black skimmer (SC), on average, nested within the Nassau Beach significant habitat annually from 1993 to 2005.

From 1993 to 2005, nesting piping plover (E, T-Fed) at Nassau Beach averaged 10 pairs per year (17 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. Piping plover generally nest with a least tern (T) colony. Their diet consists primarily of marine worms, insect larvae, beetles, crustaceans, and mollusks they obtain from foraging on beaches, dunes and tidal wrack.

There are no significant human use activities specifically associated with the wildlife resources at Nassau Beach, but continued human pressures such as coastal development, recreational activities, and disturbance from off-road vehicles has resulted in some degradation of the habitat.

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, dunes 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 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 Nassau Beach 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.

Construction of adjacent recreational facilities should be designed to minimize impacts to the nesting areas. 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.

KNOWLEDGEABLE CONTACTS:

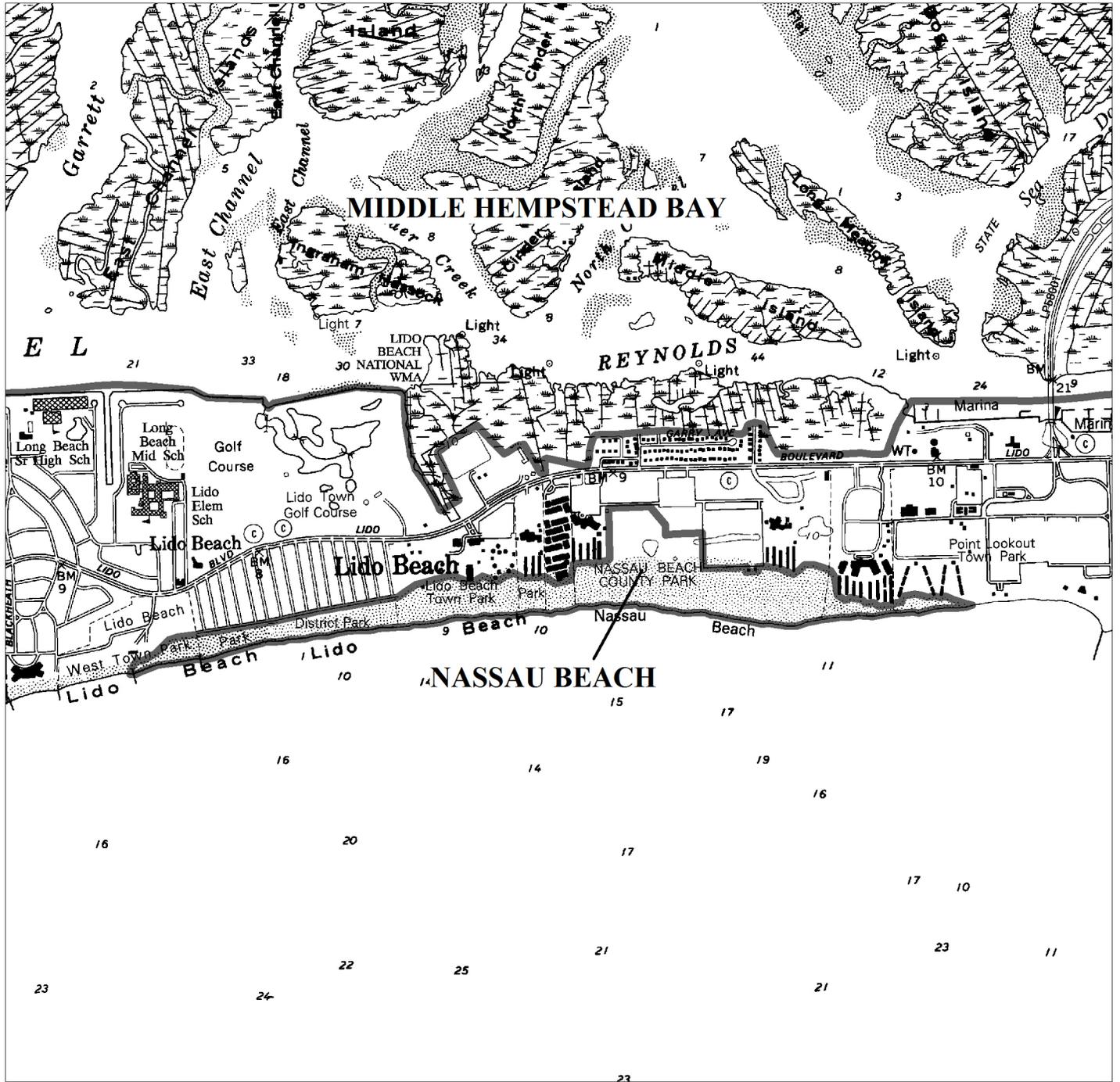
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Significant Coastal Fish and Wildlife Habitats

Nassau Beach
Middle Hempstead Bay (In Part)



New York State
Department of State
Division of
Coastal Resources

