
COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area: **Herod Point Shoal**
County: **Suffolk**
Town(s): **Riverhead, Brookhaven**
7½' Quadrangle(s): **Riverhead, NY; Middle Island, 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: Shallow, rocky waters exposed to open Long Island Sound conditions, supporting a high diversity of fish and wildlife species, rare in New York State. **64**

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: Documented roseate tern (E) foraging area. Possible use by Atlantic ridley (E) and loggerhead (T) sea turtles, but use not well documented. **36**

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: Commercial surf clam shellfishery of importance on the north shore of Suffolk County. The area also supports a significant recreational finfishery, of importance in Suffolk County. **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 foraging roseate terns (E) significant in New York State. **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] = 120 **Significance = HI x R = 144**

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

Herod Point Shoal

LOCATION AND DESCRIPTION OF HABITAT:

The Herod Point Shoal habitat is located on the north shore of Long Island, between Shoreham to the west and Baiting Hollow to the east (an approximately 4.5 mile stretch), in the Towns of Riverhead and Brookhaven, Suffolk County (7.5' Quadrangle: Wading River, NY; Middle Island, NY). This is approximately a 2,080 acre area that includes the coastal waters of Long Island Sound within the 20 foot (at mean low water) bathymetric contour, extending into the Sound about 1 1/2 miles north from Herod Point. This shallow water habitat is bordered by narrow maritime beaches and wooded bluffs nearly throughout. Adjacent land uses include Wildwood State Park along the eastern portion of the habitat, low-density residential areas along the central part of the habitat, and a high-density residential area along the beach at the western end adjacent to Wading River Marsh. Mean tidal range at this Long Island Sound location is approximately seven feet.

The Herod Point Shoal habitat consists of shallow, rocky marine waters extending northward from the mean high water mark along the Long Island Sound shoreline. Similar habitat areas are rare in New York State, especially on the north shore of Long Island.

FISH AND WILDLIFE VALUES:

The shallow waters and fish species of Herod Point Shoal have attracted foraging roseate tern (E) for a number of years. American sand lance (which are found in the pockets of sand located throughout this mostly rocky bottom area) and bait fish are the primary food source of roseate terns (E). Roseate terns (E) using the area for foraging nest on Falkner Island, off the Connecticut shoreline. The populations of roseate terns (E) using the Herod Point Shoals area for feeding is significant in New York State.

Herod Point Shoal provides a combination of shallow water and rocky shoal habitat that supports a great diversity of shellfish resources. Surveys of the shoal reveal the presence of significant numbers of surf clams, along with slipper shell, knobbed whelk, hard clam, razor clam, channeled whelk, moonsnail, spider crab, lady crab, rock crab, Jonah crab, common sea star, and hermit crab.

A significant commercial fishery for surf clams centers on the Herod Point Shoal area, with the shellfish harvest utilizing mechanical techniques. Due to shallow water habitat, a rocky bottom, and other environmental factors, this shoal area supports an important recreational finfishery along the north shore of Long Island, including tautog, striped bass, winter flounder, summer flounder, and bluefish.

The Herod Point Shoal area may provide important habitat for several sea turtles, including Atlantic

ridley sea turtle (E), and juvenile loggerhead sea turtle (T), but use of the area by these species is not well documented. Beluga whale and bottlenose dolphin have been observed in the area, however their use of Herod Point Shoal is not well documented. Additionally, Herod Point Shoal has been identified as a harbor seal winter haul-out area, but the importance of the area for this use is not well documented.

IMPACT ASSESSMENT:

Any activity that would substantially degrade water quality at Herod Point Shoal would adversely affect the biological productivity of this area. Degradation of water quality in the sound, or to its water sources, from chemical contamination (including food chain effects), oil spills, excessive turbidity or sedimentation, and waste disposal (including vessel wastes) would adversely affect all fish and wildlife. Efforts should be made to improve water quality, including the control and reduction of discharges from vessels and upland sources. Vegetated upland buffer zones should be protected or established to further reduce water quality impairment from upland sources.

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 the Herod Point Shoals area. Alternative strategies for the protection of shoreline property should be examined, including innovative, vegetation-based approaches. Elimination of the shoal and intertidal areas, through loss of intertidal connection, ditching, excavation, or filling, would result in a direct loss of valuable habitat.

Thermal discharges, depending on time of year, may have variable effects on use of the area by marine species and wintering waterfowl. Installation and operation of water intakes could have a significant impact on juvenile (and adult, in some cases) fish concentrations, through impingement or entrainment. The significant human use which this area supports depends upon maintaining recreational and commercial fisheries within the productivity limits of the resource.

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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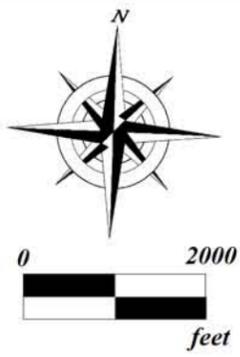
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Significant Coastal Fish and Wildlife Habitats

Herod Point Shoals
Wading River Marsh and Beach

