

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Breezy Point**

Designated: **September 15, 1992**

County(ies): **Queens**

Town(s): **New York City (Queens)**

7½' Quadrangle(s): **Coney Island, NY**

<u>Score</u>	<u>Criterion</u>
40	Ecosystem Rarity (ER) Undeveloped segments of marine barrier beach habitat are rare in New York State, but rarity diminished by recreational disturbance in a portion of the habitat. Geometric mean: $(25 \times 64)^{1/2}$.
60	Species Vulnerability (SV) Least tern (E), piping plover (E), and common tern nesting (T). Additive division: $36 + 36/2 + 25/4 = 60$.
20	Human Use (HU) Significant research activities at a level between northeastern United States and State of New York; birdwatching and sportsfishing of local importance. Geometric mean: $(25 \times 16)^{1/2}$
24	Population Level (PL) Concentrations of nesting least terns and piping plovers significant at the State level. Additive division: $16 + 16/2 = 24$.
1.0	Replaceability (R) Uncertain of ability to replace population level and cost of replacement would be prohibitive.

SIGNIFICANCE VALUE = $[(ER + SV + HU + PL) \times R]$

= **144**

DESIGNATED HABITAT: BREEZY POINT

HABITAT DESCRIPTION:

Breezy Point is at the westernmost tip of a 10 mile long segment of barrier beach fronting Jamaica Bay and forming New York City's Atlantic Ocean shoreline. Breezy Point is partly within the National Park Service's Gateway National Recreation Area and partly within private ownership. The approximately 290 acre habitat is in the Borough of Queens, Queens County (7.5' Quadrangle: Coney Island, NY). The fish and wildlife habitat is primarily the sparsely vegetated dune areas and sand beaches extending north and east from Rockaway Point.

FISH AND WILDLIFE VALUES:

Breezy Point fish and wildlife habitat consists of a marine barrier beach, associated dunelands, and some associated residential development. This habitat also contains a small swale area with some brackish wetlands. This is the only relatively undeveloped barrier beach in Queens County, as well as in New York City. Breezy Point provides important habitat for breeding colonies of endangered and threatened shorebird species. During the period from mid-April through July, common terns (T), least terns (E), and piping plovers (E), nest in the sand and grassy mounds in front of and among the dunes. In the period from 1982 through 1988, there were an estimated 137 piping plovers, 2091 least terns, and 37 common terns observed breeding within the habitat boundary. This habitat has good productivity of least terns, as well as the largest concentrations of piping plovers and least terns in New York State.

Breezy Point fish and wildlife habitat is also used as a staging and stop-over site for migrating piping plovers. Counts taken between July 16 and August 15, 1988, documented an average of 16 migrant plovers (with a maxima of 25) per day feeding on the beach. The area is used by many other bird species during the nesting season including: killdeer, horned lark, American black duck, tree swallow, song sparrow, northern mockingbird, and mourning dove. Numerous shorebird, raptor, and passerine species migrate over the Rockaway peninsula, especially in the fall. In fall and winter, peregrine falcons (E) and northern harriers (T) have been observed in and around the Breezy Point habitat.

Breezy Point habitat is and has been the subject of significant research activities, including efforts by USF&WS, NPS, DEC, The Nature Conservancy, and many students. One such ongoing research activity is the Breezy Point Raptor Banding Station which bands hundreds of raptors each year. The Park Service protects nesting areas within Gateway National Recreation Area through fencing, monitoring, and patrolling. The nesting areas on private lands are currently unprotected.

IMPACT ASSESSMENT:

A **habitat impairment test** must be met for 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** that must be met 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 below to assist in applying the habitat impairment test to a proposed activity.

Any activity affecting the plover and tern colonies, including human intrusion and the introduction or attraction of mammalian or avian predators during the critical nesting period from mid-March through September, would adversely impact these species. Reduction or loss of the area presently used for nesting by these species could cause significant negative impacts to the bird populations using the habitat. In addition to protection of the nesting sites, unimpeded access from the nesting area and dunes to the feeding areas at the water's edge must be provided to protect habitat values and to ensure successful rearing of young, particularly plovers. Major disturbances to local feeding areas in adjacent waters for terns engaged in rearing young must also be minimized in order to protect habitat values.

Public access on the lower beaches can be provided in a manner which is compatible with the habitat use of the upper beach and dunes, providing that direct disturbance of the nesting site or disruption of access to feeding areas does not occur. This may require restriction of motor vehicle traffic, ball playing, and walking unleashed dogs on the beach and dunes at critical nesting times, which may run from March 15 through August 15, depending on seasonal conditions. Restrictions on these and other disruptive activities would extend at least to the high tide line when young birds are present in order to protect access between the nesting area and the wrack line on the beach which provides the young birds with a rich source of invertebrate food items. Where public access to the beach is in conflict with the habitat values at this site, it is appropriate to base seasonal restrictions on actual species use as determined through a professional monitoring program. Spatial separation of public and habitat uses should also be considered where specific zones reserved for habitat values could be established.

Specific bird nesting sites should be annually fenced to limit human disturbance. Although actual nesting sites vary from year to year, the entire area has potential habitat value and human disturbances in the upper beach and dunes must be limited during nest site selection in order to protect the site's value for these species. The underlying dune community which supports these habitat values should be preserved. Development and physical alteration in general should be limited, including beach and dune grading, mechanical beach cleaning, bulkheading, walkway construction, and other construction activities. Since the habitat values for these species depends on sparse to little vegetation being present, it may be appropriate to manage for these species by limiting succession of beach community plants between spring high tide and the base of dunes. Beach stabilization programs which include beach grass plantings may reduce habitat values at this site.