

COASTAL FISH & WILDLIFE HABITAT RATING FORM

Name of Area: **Pralls Island**

Designated: **September 15, 1992**

County: **Richmond**

Town(s): **New York City (Staten Island)**

7½' Quadrangle(s): **Arthur Kill, NY-NJ**

<u>Score</u>	<u>Criterion</u>
25	Ecosystem Rarity (ER) Relatively large, undisturbed, island, with salt marsh and wood-land communities; rare in the New York City metropolitan area (Manhattan Hills ecological region).
0	Species Vulnerability (SV) No endangered, threatened or special concern species are known to reside in the area.
0	Human Use (HU) No significant fish or wildlife related human uses of the area.
9	Population Level (PL) One of only 5 large heronries active in the Manhattan Hills ecological region.
1.2	Replaceability (R) Irreplaceable.

SIGNIFICANCE VALUE = [(ER + SV + HU + PL) X R]

= **41**

DESIGNATED HABITAT: PRALLS ISLAND

HABITAT DESCRIPTION:

Pralls Island is located in the Arthur Kill, approximately two miles north of Fresh Kills, in the Borough of Staten Island, Richmond County (7.5' Quadrangle: Arthur Kill, NY-NJ). The fish and wildlife habitat is an approximate 80-acre, uninhabited island, with a central wooded area (occupying former dredge spoil deposits), and tidal wetlands around the perimeter. The woodland portion of Pralls Island is dominated by dense stands of tree-of-heaven, gray birch, and cherry less than 30 feet tall . Pralls Island is owned by the City of New York, and is managed by the New York City Audubon Society as an urban wildlife refuge.

FISH AND WILDLIFE VALUES:

Pralls Island provides an undisturbed upland and wetland environment for wildlife that is rare in the New York City metropolitan area. It is one of the largest and least developed of the islands occurring in the Manhattan Hills ecological region. The primary significance of this habitat is its use for nesting by relatively large numbers of colonial waterbirds (herons, especially), one of only about 5 such concentration areas in the region. This nesting area probably accounts for many of the egrets and night herons seen around Staten Island, and on the opposite shore of New Jersey. The Pralls Island heronry was discovered in 1978, and in 1989 was estimated to have over 200 pairs of these birds nesting in the area, including 7 pairs of cattle egrets, 88 pairs of glossy ibis, and 77 pairs of black-crowned night herons. As of 1985, Pralls Island appeared to be the largest in active heronry in the region, and may comprise one of the largest in New York State. Other species reported breeding on the island include great egret, snowy egret, yellow-crowned night heron, and little blue heron. The long term use of this and other New York City area sites suggests that there is a relative shortage of suitable colonial waterbird nesting areas in this region. These birds nest in the relatively small trees on the island, but most nests are placed at least 5 feet above ground. Common barn-owls (SC) are known to prey significantly on young herons on Pralls Island, however, the extent to which barn owls may roost and/or nest on the island is not well documented. In addition to the heron populations, Pralls Island has nesting colonies of herring gull and great black-backed gull with 1989 nests totalling 800 and 20, respectively. Waterfowl known to nest on Pralls Island include American black duck, gadwall, mallard, and Canada goose. There are no significant fish or wildlife related human uses of Pralls Island.

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.

It is essential that any potential impacts on Pralls Island be evaluated with respect to the area management program developed jointly by the New York City Audubon Society, New York City, and NYSDEC. Any activity that would disturb the Pralls Island heronry during the nesting period (mid-March - August), including significant pedestrian use or boat landings, could adversely affect these bird populations. Freedom from human disturbance while early spring roosts are established and maintained may also be critical to colony use and success in the ensuing breeding season. Controlled human access for compatible educational, scientific, or management purposes is acceptable provided that appropriate guidelines for the protection of the habitat are established. Removal of the island's woodland habitat would have a significant impact on heron populations in the New York City area. Disturbance or elimination of preferred wetland feeding areas (including but not limited to Goethals Bridge Pond and Sawmill Creek Marsh) may also affect birds nesting at Pralls Island. Introduction or attraction of mammalian predators, including pet animals, into nesting areas could also be detrimental to the colonial bird populations.