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COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

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Name of Area: **Port Jefferson Beaches**  
County: **Suffolk**  
Town(s): **Brookhaven**  
7½' Quadrangle(s): **Port Jefferson, NY**  
Originally Designated: **March 15, 1987**  
Modified: **October 15, 2005**

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**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 barrier beach peninsula, rare on north shore of Long Island. 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), common tern (T) nesting. Use of beaches by Atlantic ridley sea turtle (E), but further documentation is needed. 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: No significant fish or wildlife related human use 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: Concentration of nesting least tern (T) significant in Suffolk County. 4

**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

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**Habitat Index = [ER + SV + HU + PL] = 67.75**

**Significance = HI x R = 81.3**

NEW YORK STATE  
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT  
NARRATIVE

**PORT JEFFERSON BEACHES**

LOCATION AND DESCRIPTION OF HABITAT:

Port Jefferson Beaches are located at the northern end of Port Jefferson Harbor, on the north shore of Long Island. The beaches extend from Old Field Point to Mt. Misery Point, in the Town of Brookhaven, Suffolk County (7.5' Quadrangle: Port Jefferson, NY). The fish and wildlife habitat is approximately 197 acres, and consists of an approximately 1.5 mile stretch of undeveloped barrier beach peninsula (Old Field Beach) west of the harbor inlet, and a one mile segment of barrier beach east of the inlet, in McAllister County Park. The habitat includes a mosaic of sparsely vegetated dunes, sand and pebble beach, dredged material placement areas, intertidal flats, and salt marsh. Ownership of the area is mixed, including public and privately owned property. The nesting areas are fenced, posted and monitored by the New York State Department of Environmental Conservation in cooperation with Suffolk County. The inlet to Port Jefferson Harbor has been stabilized by jetties and is maintained to accommodate ferry boat service from Port Jefferson to Bridgeport, Connecticut. Much of the dredged material has been placed east of Mt. Misery Point to stabilize the eroding beach and headlands.

FISH AND WILDLIFE VALUES:

A large portion of the Port Jefferson Beaches habitat has been designated as part of the National Coastal Barrier Resources System. The habitat consists of a large area of undeveloped barrier beach ecosystem. This ecosystem type is rare on the north shore of Long Island, and serves as an important nesting site for piping plovers (E, T-Fed), least terns (T), and common terns (T). Least tern (T) and piping plover (E, T-Fed) nest west of the inlet at Old Field Beach, as well as east of the inlet along the beach at Mt. Misery Point. From 1994 to 2002, an estimated annual average of 4 pairs (10 in peak year) of piping plover (E, T-Fed) nested within the habitat area. During the same time period, the estimated annual average of 67 nesting pairs of least terns (T) were observed, with a total of 120 pairs in 1997. The population trend for least tern (T) nesting in the habitat area has generally been one of steady decline, although the mid-1990s have shown moderate increases in least tern (T) population levels. Roseate terns (E) were observed at Old Field Beach in 2000 (three individuals, loafing). Common terns (T) were documented at Mt. Misery between 1987 and 1990, with a peak of 150 pairs in 1989, and at Old Field Beach in moderate numbers until 1992. The decline in the population of nesting terns at the Port Jefferson Beaches in recent years may be attributable to human and domestic dog disturbance, presence of mammalian predators, or flooding. Although the Port Jefferson Beaches receive moderate recreational use during the summer, there are no significant human use activities specifically associated with the wildlife resources of this habitat.

Use of Port Jefferson Beaches by Atlantic ridley sea turtle (E) has been observed, but further documentation is needed.

#### IMPACT ASSESSMENT:

Any activity that would disturb or eliminate marsh, natural beach, and duneland plant communities would result in a loss of valuable habitat for a number of important wildlife species. Elimination and fragmentation of the natural dune and wetland communities, through excavation, filling, or other land developments would adversely affect concentrations of wildlife.

Nesting shorebirds inhabiting Port Jefferson Beaches are highly vulnerable to disturbance by humans, especially during the nesting and fledging period (March 15 through August 15). Significant pedestrian traffic or recreational use of the beach (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. Fencing and/or continued annual posting of shorebird nesting areas should be provided to help protect these species. Control of vegetative succession, through beneficial use of dredged material or other means may improve the availability of nesting habitat in this area.

Any activity that would substantially degrade the water quality near the Port Jefferson Beaches shores would adversely affect the biological productivity of this area. All species of fish and wildlife would be affected by water pollution, such as chemical contamination (including food chain effects resulting from bioaccumulation), oil spills, excessive turbidity, and waste disposal (including vessel wastes) would adversely affect all fish and wildlife that rely on these waters as a food source, or utilize these waters during a portion of their life-cycle.

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 Port Jefferson Beaches. Development of the area for residential or recreational use would result in a direct loss of wildlife habitat. Alternative strategies for the protection of shoreline property should be examined, including innovative, vegetation-based approaches. Control of invasive nuisance plant species, through a variety of means, may improve fish and wildlife species use of the area and enhance habitat wetland values.

Alteration of tidal patterns in the waters adjacent to Port Jefferson Beaches, by modification of inlet configurations or other means, could have negative impacts on the biotic communities present. No new navigation channels should be excavated within the area. Dredging to maintain existing boat channels should be scheduled between September 15 and December 15 to minimize adverse effects on aquatic organisms, and to allow for the upland placement of dredged material when wildlife populations are least sensitive to disturbance. This is especially critical during the nesting and fledging period for colonial nesting birds from March 15 through August 15. Dredged material placement in this area would be detrimental, but such activities may be designed to maintain or

improve the habitat for certain species of wildlife. Existing and proposed dredging operations in this area should incorporate the use of best management practices to avoid and reduce adverse effects.

Elimination of salt marsh and intertidal areas, through loss of tidal connection, ditching, excavation, or filling, would result in a direct loss of valuable habitat area. 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 Port Jefferson Beaches. Alternative strategies to the use of structures to protect shoreline property should be examined, including innovative, vegetation-based approaches. Control of invasive nuisance plant species, through a variety of means, may improve fish and wildlife species use of the area and enhance overall wetland values.

#### 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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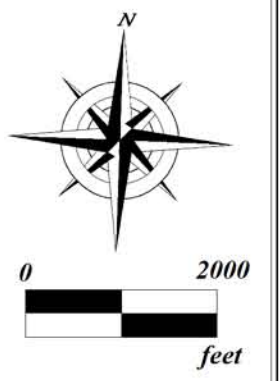
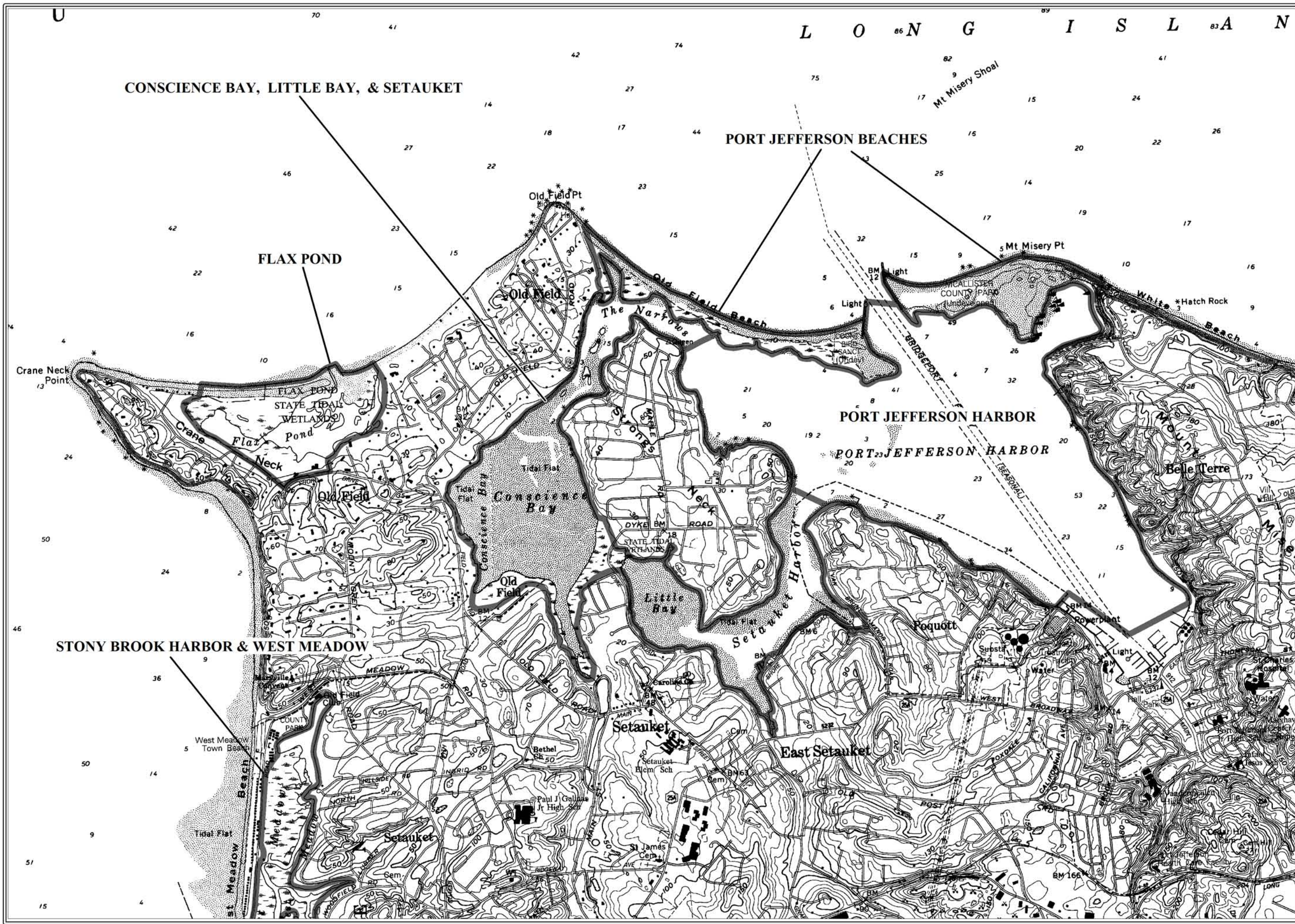
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**Significant Coastal Fish and Wildlife Habitats**

- Flax Pond
- Conscience Bay, Little Bay & Setauket
- Port Jefferson Harbor
- Port Jefferson Beaches
- Stoney Brook Harbor & West Meadow (In Part)

