

Attachment B:

COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area: **Tobay Sanctuary**
Designated: **March 15, 1987**
Updated: **December 15, 2008**
County: **Nassau**
Town(s): **Oyster Bay**
7½' Quadrangle(s): **West Gilgo Beach, 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: The diversity of undeveloped barrier island habitat types 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: Common tern nesting (T). Northern harrier (T), and Cooper’s hawk (SC) nesting and foraging grounds. Additive Division: $25 + 25/2 + 16/3 = 42.83$ **42.83**

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: Birdwatching important to Long Island residents, of regional significance. **9**

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: American black duck concentrations of statewide significance. **25**

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) =76.83

Significance = (HI x R) = 92.2

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

TOBAY SANCTUARY

LOCATION AND DESCRIPTION OF HABITAT:

Tobay Sanctuary is located on the landward side of Tobay Beach, on the barrier island which extends from Jones Inlet to Fire Island Inlet, on the south shore of Long Island. This approximately 550 acre area is within, and owned by, the Town of Oyster Bay, Nassau County (7.5' Quadrangle: West Gilgo Beach, N.Y.). The fish and wildlife habitat includes all of Tobay Sanctuary (also known as the John F. Kennedy Memorial Wildlife Sanctuary) north of Ocean State Parkway, and undeveloped portions of Tobay Beach Park. An outstanding feature of this area is Guggenheim Pond, an approximate 40 acre brackish pond. Much of the remaining area is comprised of a dense maritime shrubland community, woodlands, large ditched expanses of high and low salt marsh communities, high dunes, and open water (in Tobay Heading). Characteristic species of these communities include smooth cordgrass (*Spartina alterniflora*), salt hay grass (*Spartina patens*), bayberry (*Myrica pensylvanica*), shining sumac (*Rhus copallinum*), and sand-rose (*Rosa rugosa*). Carolina clubmoss (*Lycopodiella caroliniana*), a state endangered plant, has also been observed at the site. The sanctuary proper is essentially undeveloped, except for access roads and a wildlife observation tower, whereas portions of Tobay Heading have been developed for use as a public beach and marina.

FISH AND WILDLIFE VALUES:

Tobay Sanctuary contains a diversity of natural barrier beach habitat types that are unusual in Nassau County. Consequently this area is extremely valuable to wildlife throughout the year. Guggenheim Pond, a large, brackish pond, is one of the most important waterfowl wintering areas (November - March) on Long Island. Mid-winter aerial surveys of waterfowl abundance for the thirteen-year period from 1986-1998 (excluding 1997) indicate average concentrations of over 2,570 ducks in the pond each year (5,800 in peak year), including approximately 2,431 American black ducks (4,650 in peak year), and 139 mallards (1,300 in peak year) with lesser numbers of blue-winged teal, green-winged teal, northern shoveler, and American wigeon. American black duck concentrations within the sanctuary constitute approximately 12% of New York State's American black duck population and are of statewide significance. Significant concentrations of brant were reported for the ten-year period 1975-1984. Waterfowl use of the pond during winter is influenced in part by the extent of ice cover each year. Concentrations of waterfowl also occur at Tobay Sanctuary during spring and fall migrations (March-April and October-November, respectively).

In addition to waterfowl use, Tobay Sanctuary is an important foraging area for terns, herons, ibis, and a variety of shorebirds throughout the summer. Shorebird surveys, for the 13 year period from 1993-2005, indicate average annual concentrations of 521 common tern (T) breeding pairs (1,110 in peak year) nesting in Tobay Sanctuary. During spring and fall, this area also provides valuable feeding and resting areas for migratory passerine birds and raptors. Bird species nesting at Tobay Sanctuary in recent years include northern harrier (T), great and snowy egrets, black-crowned and yellow-crowned night herons,

and glossy ibis. Maritime shrublands within the sanctuary host many species of migratory land birds such as warblers, vireos, and thrushes; two declining species, great egret and black-crowned night heron, are directly associated with the maritime shrubland community. Breeding northern harrier (T) and Cooper's hawk (SC) have been found at the site. Northern harrier (T) are known to nest on the ground in nests made from a conglomeration of sticks and grass arranged in an elevated position. Diamondback terrapin that inhabit the adjoining marshes and waters nest in the sanctuary's sandy dunes.

As a result of the year-round concentrations of birds at Tobay Sanctuary, and its accessibility, the area is very popular as a birdwatching area, attracting visitors from throughout Long Island. The sanctuary has an observation tower and well maintained trails. The area is open to the public for birdwatching, but visitors must first obtain a permit from the Town of Oyster Bay Department of Parks.

IMPACT ASSESSMENT:

The wildlife resources at Tobay Sanctuary would be significantly affected by habitat modification or extensive human intrusion. Modification of the salinity or tidal patterns in Guggenheim Pond would alter its value as a migratory bird feeding area. In particular, conversion of the pond to a freshwater impoundment would enhance ice formation in winter, reducing its importance as a waterfowl wintering area. Reduction, or loss of the area presently utilized by nesting colonies could significantly affect the bird populations in this vicinity. Elimination or disturbance of salt marsh, intertidal areas, shrublands, or adjacent areas, through excavation or filling, would result in a direct loss of valuable habitat area. Such areas should be protected, and where possible restored in order to maintain and/or improve habitat quality. Extensive clearing of upland vegetation in the area, especially the pines stand south of Guggenheim Pond, would eliminate suitable habitat for nesting herons and other wildlife. Any significant disturbance (including pedestrian traffic and recreation use) of the bird colonies (when active) should be avoided during the nesting period, which extends from April through August 15. Increased pedestrian use of the area, if restricted to existing trails, should not significantly affect the wildlife species present. Other recreational uses of Tobay Sanctuary should be minimized to avoid disturbance of the diverse natural communities in the area. 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.

Construction of adjacent recreational facilities should be designed to minimize impacts to the nesting areas. Construction of shoreline structures, such as docks, piers, bulkheads, or revetments, in areas not previously disturbed by development (e.g., natural salt marsh, tidal flats, or shallows), would result in the loss of productive areas which support the fish and wildlife resources of Tobay Sanctuary.

Activities to protect or restore wetland habitat in Tobay Sanctuary, consistent with best management practices, (including the restoration of historic tidal regime, planting of native vegetation, control of invasive species, etc.) may enhance habitat values for fish and wildlife species.

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:

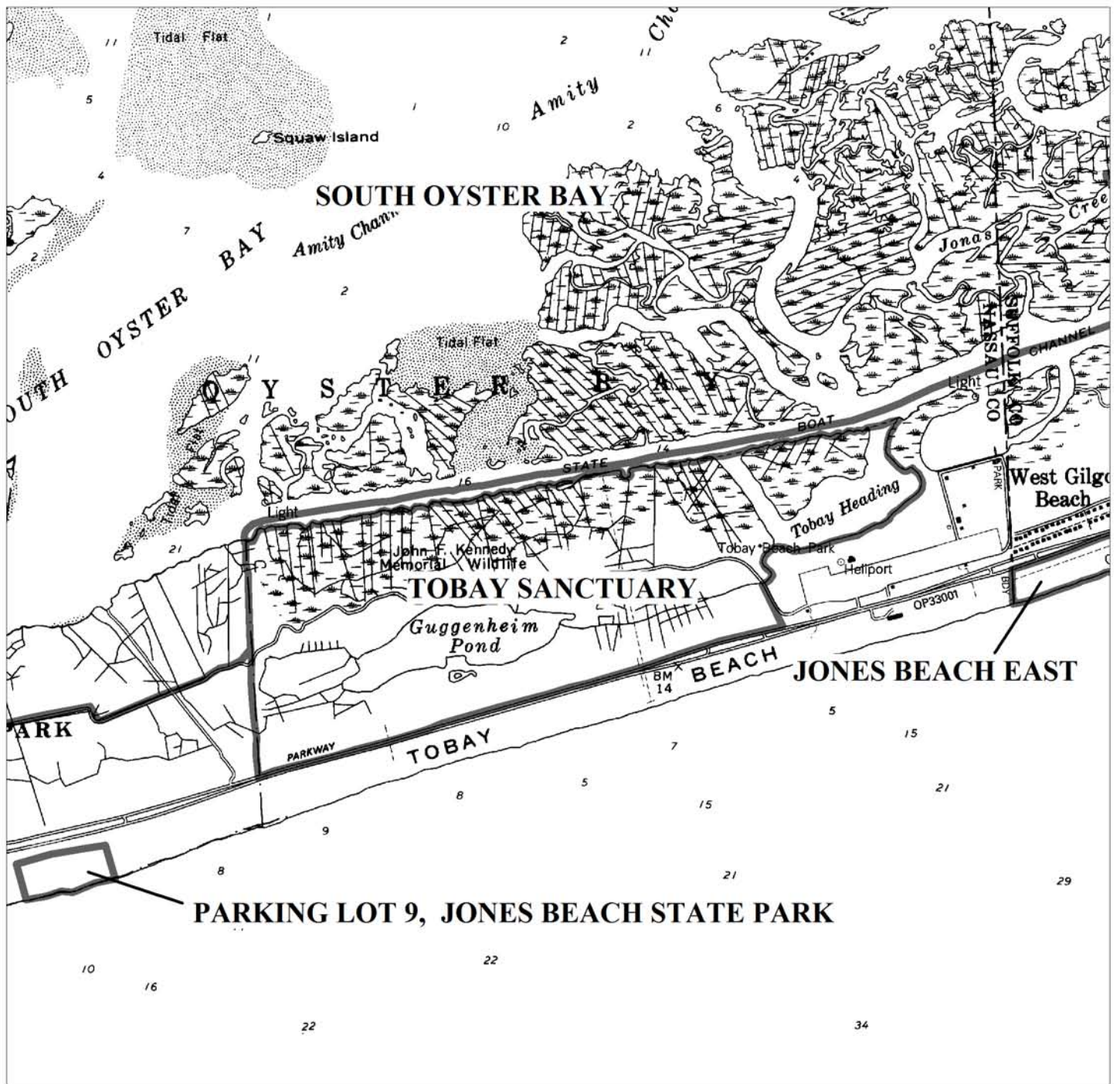
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Significant Coastal Fish and Wildlife Habitats

Tobay Sanctuary
 Parking Lot 9, Jones Beach State Park
 South Oyster Bay (In Part)
 Jones Beach East (In Part)

