COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area:	**Northport Bay**
County:	**Suffolk**
Town(s):	**Huntington**
7½' Quadrangle(s):	**Lloyd Harbor, NY-Conn.; Northport, NY**
Originally Designated:	**March 15, 1987**
Modified:	**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: One of several major embayments on the north shore of Long Island; rare in ecological subregion.	**16**
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: No endangered, threatened or special concern species reside in the area. Possible use by Atlantic ridley (E) sea turtle, but more documentation is needed.	**0**
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: Recreational finfishery of regional significance. Commercial and recreational shellfisheries of county-level significance. Additive Division: 9 + 4/2 = 11	**11**
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: One of about five major waterfowl areas on the north shore of Long Island, of regional significance.	**9**
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] = 36.0 **Significance = HI x R = 43.2**

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

NORTHPORT BAY

LOCATION AND DESCRIPTION OF HABITAT:

Northport Bay is located on the north shore of Long Island, between Eaton's Neck and the Village of Northport, in the Town of Huntington, Suffolk County (7.5' Quadrangles: Lloyd Harbor, N.Y.- Conn.; and Northport, N.Y.). The bay is approximately 2,370 acres in size. The fish and wildlife habitat consists of open water, intertidal flats, and vegetated tidal wetland areas in the bay, extending from West Beach (Sand City) on the west to Northport Harbor on the east. The habitat includes Duck Island Harbor. Most of Northport Bay ranges from 6 to 30 feet in depth below mean low water, with maximum depths of over 50 feet. This area has a tidal range of approximately 7 feet. The bay is bordered by moderate to dense residential development and extensive recreational boating facilities, with only a few areas of undeveloped salt marsh remaining.

FISH AND WILDLIFE VALUES:

Northport Bay is one of several major embayments on Long Island's north shore. This protected coastal bay is important to fish and wildlife throughout the year.

Northport Bay is one of 5 major waterfowl wintering areas (November - March) on the north shore. Mid-winter aerial surveys of waterfowl abundance for the 11 year period from l986-l996 indicate average concentrations of over 900 birds in the bay each year (1,606 in peak year), including approximately 310 greater and/or lesser scaup (1,200 in peak year), 110 American black ducks (350 in peak year), 158 canvasbacks (500 in peak year), and 64 red-breasted merganser (178 in peak year), along with lesser numbers of mallard, Canada goose, common goldeneye, bufflehead, long-tailed duck, and American wigeon. Not included in these figures are the waterfowl populations in Duck Island Harbor. Estimated concentrations in that area, for the same period, averaged 282 birds in the harbor each year (1,050 in peak year), including approximately 63 greater and/or scaup (250 in peak year) and 133 American black ducks (650 in peak year), along with lesser numbers of long-tailed duck, Canada goose, red-breasted merganser, bufflehead, and mallard. Waterfowl use of the bay during winter is influenced in part by the extent of ice cover each year. Concentrations of waterfowl are also documented in Northport Bay during spring and fall migrations (March-April and October-November, respectively).

Northport Bay is a highly productive area for marine finfish and shellfish. The bay serves as a nursery and feeding area (from April 1 - November 30, generally) for scup, bluefish, Atlantic silversides, Atlantic menhaden, striped bass, and blackfish. Winter flounder are documented in

the bay throughout the year, and spawn during the winter months (January - March). As a result of the abundant fisheries resources in the bay, Northport Bay supports an important recreational fishery, of regional significance. Northport Bay is an important shellfish producing area in Suffolk County, with nearly 90% of the area certified for shellfish harvesting. Oysters are generally found in waters greater than 6 feet deep, with spawning occurring in early summer. Limited recreational and commercial harvesting of oysters occurs in North Port Harbor. Fiddler crabs, ribbed mussels, and hard clams are also abundant in the area. The hard clam populations provide a commercial and recreational harvest of county-level significance.

Northport Bay may also be an important resting and feeding habitat for juvenile Atlantic ridley sea turtles (E). More documentation is needed on the use of the area by sea turtle species, including Atlantic ridley.

IMPACT ASSESSMENT:

Any activity that would substantially degrade the water quality in Northport Bay would adversely affect the biological productivity of this area. Degradation of water quality in the bay, or to its water sources, from chemical contamination (including food chain effects), oil spills, excessive turbidity, and waste disposal (including vessel wastes) would adversely affect all fish and wildlife. Efforts should be made to improve water quality in the bay, 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.

Alteration of tidal patterns in Northport Bay could have major impacts on the fish and wildlife communities present. Dredging to maintain existing navigation channels should be scheduled between September 15 and December 15 to minimize adverse effects on aquatic organisms, and to allow for dredged material placement when wildlife populations are least sensitive to disturbance. 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.

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 Northport Bay. 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. 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 overall wetland values.

Unrestricted use of motorized vessels including personal watercraft in the protected, shallow waters of this habitat area could have adverse effects on aquatic vegetation and fish and wildlife populations. Use of motorized vessels should be controlled (*e.g.*, no wake zones, speed zones, zones of exclusion) in and adjacent to shallow waters and vegetated wetlands.

Thermal discharges, depending on time of year, may have variable effects on use of the area by marine species, such as sea turtles and overwintering 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.

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:
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> - 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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Bureau of Marine Resources
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New York Natural Heritage Program
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Office of Ecology
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Significant Coastal Fish and Wildlife Habitats

Crab Meadow Wetlands and Beach
Eaton's Neck Point (In Part)
Northport Bay
Huntington Bay (In Part)
Sand City (Eaton's Neck)

N

0 2000 feet

New York State Department of State

Division of Coastal Resources