

COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area: **Orient Harbor**
Designated: **March 15, 1987**
Date Revised: **May 15, 2002**
County: **Suffolk**
Town(s): **Southold**
7½' Quadrangle(s): **Orient, NY-CT; Greenport, NY**

Assessment Criteria

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: Moderately shallow open water bay area; common in Peconic Bays area, but rare on Long Island. Eelgrass beds of statewide significance. 64

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.

SV assessment: Osprey (SC) nesting. Atlantic ridley turtle (E), green turtle (T), loggerhead turtle (T) occur in the area. Calculation: $36 + (25/2) + (25/4) + (16/8) =$ 56.75

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: Commercial bay scallop shellfishery is significant in the northeast region of the United States. 25

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: Concentrations of bay scallops significant in the northeast region of the United States; waterfowl concentrations significant between county and regional level. 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] = 170.75

Significance = HI x R = 204.9

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

ORIENT HARBOR

LOCATION AND DESCRIPTION OF HABITAT:

Orient Harbor is located near the eastern end of the north fork of Long Island, in the Town of Southold, Suffolk County (7.5' Quadrangles: Orient, NY-CT; and Greenport, NY). This area is approximately 1900 acres in size, consisting primarily of open water area in the harbor, along with an undeveloped tidal wetland area and Dam Pond area on its north shore. Water depths in most of the harbor are generally less than 20 feet below mean low water. The harbor is bordered by much undeveloped land, including Orient Beach State Park to the east and south, and low density residential development on the west.

FISH AND WILDLIFE VALUES:

Orient Harbor is generally representative of the Peconic Bays ecosystem, in being a broad expanse of moderately shallow water. This habitat type is unlike the very shallow bays on the south shore of Long Island or the relatively narrow bays on the north shore. The tidal wetlands area adjoining Orient Harbor are an important component of this ecosystem, contributing to the biological productivity of the area. The Harbor supports extensive, healthy eelgrass beds, of statewide importance. Orient Harbor is an important habitat for a variety of fish and wildlife species.

From November through March, Orient Harbor supports wintering waterfowl concentrations of regional significance. Mid-winter aerial surveys of waterfowl abundance for the ten year period 1975-1984 indicate average concentrations of over 500 birds in the area each year (1,825 in peak year); for the 1986-1996 period the annual average concentration of birds was almost 200 (354 in peak year). Species observed included American black duck, mallard, mute swan, merganser, scaup, goldeneye, bufflehead, oldsquaw, and Canada goose. Orient Harbor is also inhabited by several nesting pairs of osprey (SC) during the breeding season, which utilize man-made nesting platforms located in the salt marsh north of the harbor. The potential exists for additional nesting pairs at this site. Diamondback terrapin have been observed here but the extent to which the area is used by this species is not adequately documented. This area may also provide important breeding habitat for horseshoe crab, but additional documentation is required.

Orient Harbor is a productive habitat for marine finfish and shellfish. A 1996 Peconic Estuary Program study found extensive eelgrass beds fringing Orient Harbor, supporting abundant bay scallop populations. This area is one of the top scallop producing areas on Long Island, supporting a commercial shellfishery significant in the northeast region of the United States. Between May 15 and October 31, an administrative closure for shellfishing is in effect for the area immediately north of the Orient Yacht Club.

The harbor also serves as a nursery and feeding area (from April-November, generally) for many estuarine fish species, and is an important spawning area for weakfish, winter flounder, and scup. Recent research has shown that this general area may be an important summer feeding and nursery area for juvenile Atlantic ridley sea turtle (E). Atlantic ridley, green (T), and loggerhead (T) turtles have all been documented in this habitat.

IMPACT ASSESSMENT:

Any activity that would substantially degrade water quality in Orient Harbor would affect the biological productivity of this area. All species of fish and wildlife would be adversely affected by water pollution, such as chemical contamination (including food chain effects resulting from bioaccumulation), oil spills, excessive turbidity or sedimentation, stormwater or road runoff, and waste disposal (including boat wastes). It is essential that high water quality be maintained in the area to protect the bay scallop fishery.

Unrestricted use of motorized vessels including personal watercraft in the protected, shallow waters of bays, harbors, and tidal creeks can 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 and wintering 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.

Construction of shoreline structures, such as docks, piers, bulkheads, or revetments, in areas not previously disturbed by development (*e.g.*, natural beach or salt marsh), may result in the loss of productive areas which support the fish and wildlife resources of Orient Harbor. 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. Docks may be detrimental to nearshore eelgrass beds because of shading, and review of proposed new docks in Orient Harbor should be conducted with these potential impacts to eelgrass beds in mind. Restoration opportunities for eelgrass may exist in the bay if water quality parameters are appropriate, and should be explored.

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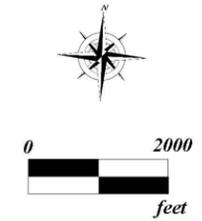
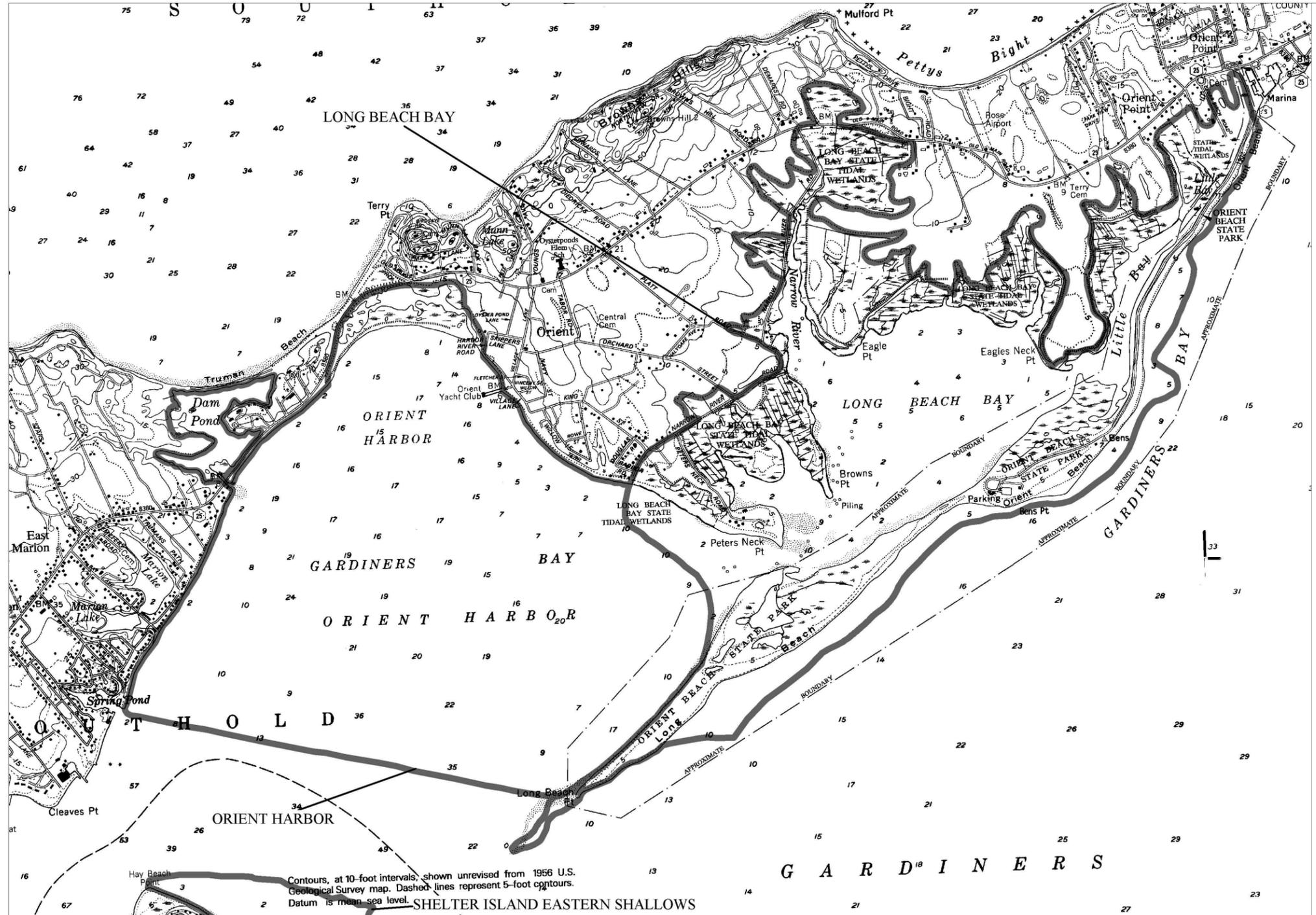
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Significant Coastal Fish and Wildlife Habitats

- Long Beach Bay
- Orient Harbor
- Shelter Island Eastern Shallows (In part)

New York State
Department of State
Division of
Coastal Resources

Contours, at 10-foot intervals, shown unrevised from 1956 U.S. Geological Survey map. Dashed lines represent 5-foot contours. Datum is mean sea level.

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