COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area:	**Flanders Bay Wetlands**
Designated:	**March 15, 1987**
Date Revised:	**May 15, 2002**
County:	**Suffolk**
Town(s):	**Southampton**
7½' Quadrangle(s):	**Mattituck, 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: One of the largest and best preserved coastal wetland areas on Long Island. 25

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: Least tern (T), common tern (T), piping plover (E, T-Fed), black skimmer (SC), and osprey nesting (SC), common loon (SC) overwintering, eastern mud turtle (T), and spotted turtle (SC) present. Calculation: 36 + (25/2) + (25/4) + (25/8) + (16/16) = 58.9

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: Waterfowl hunting and shellfishery are locally important. 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: Concentrations of wintering waterfowl and nesting least terns are unusual in eastern Long Island, of county level significance. 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

Habitat Index = [ER + SV + HU + PL] = 87.9 **Significance = HI x R = 105.5**

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

FLANDERS BAY WETLANDS

LOCATION AND DESCRIPTION OF HABITAT:

The Flanders Bay Wetlands area is located along the south shore of Flanders Bay and Great Peconic Bay, between Goose Creek Point and the eastern end of Red Creek Pond, in the Town of Southampton, Suffolk County (7.5' Quadrangle: Mattituck, NY). The fish and wildlife habitat consists of approximately 820 acres of salt marsh, sand beach, tidal bays, creeks, mudflats and shoals. The are several New York Natural Heritage Program identified communities and rare plants at this site. Open water areas are maintained by four freshwater tributaries (Goose Creek, Birch Creek, Mill Creek, and Hubbard Creek) which flow through the wetlands into Flanders Bay. Red Creek Pond flows into Great Peconic Bay and floods into the Flanders Bay wetlands during high tides. Wehrman's Pond lies across the road to the south of Red Creek Pond, and is hydrologically connected to the system. This area is located within Suffolk County parkland, and is bordered to the south by extensive undeveloped woodlands - consisting primarily of red cedars, pitch pines, sassafras, wild cherry, red maple and oaks - encompassing most of the area's watershed. Residential development is present along the western side of the area at Red Cedar Point and east of Red Creek Pond. However, most of the Flanders Bay Wetlands area receives little human disturbance.

FISH AND WILDLIFE VALUES:

Flanders Bay Wetlands comprise one of the most undeveloped large coastal wetland ecosystems on Long Island, encompassing the rare sea level fen community and an excellent example of the salt shrub community. This diverse area is one of the most valuable fish and wildlife habitats in the Peconic Bays section of Long Island. The Flanders Bay Wetlands are within the "Peconic Bays/Flanders Bay" Important Bird Area, one of 127 such sites identified in New York by the National Audubon Society.

Goose Creek Point, Red Cedar Point, and Red Creek Pond in the Flanders Bay Wetlands site have served for many years as nesting sites for least terns (T) and piping plovers (E, T-Fed), with both species present 1983-1996. Although nesting pair concentrations are not unusual in Suffolk County, the two nesting areas are significant in having a history of use since at least 1976. During the 1987-1996 period, the annual average number of piping plover nesting pairs in the Flanders Bay Wetlands site was 3; an increasing trend is observed for this period with a peak number of 5 pairs in 1996. For least tern during the same period, the annual average was 54 pairs, with a peak number of 96 pairs in 1992 (9-85 pairs all other years).

Common tern (T) have nested sporadically at Goose Creek Point and Red Cedar Point since the mid-1980s; peak concentrations of 10-15 nesting pairs of this species occurred in the early 1990s.

Black skimmer (SC) have nested sporadically in small numbers at Goose Creek. Other sites within Flanders Bay Wetlands which have been used for nesting by least tern, common tern, and black skimmer, include a small beach at the mouth of Mill Creek and a marsh island at the mouth of Birch Creek.

The extensive salt marshes and shallow bay waters are highly productive, and serve as important feeding areas for the nesting terns, herons, and other wildlife. This area may provide important breeding habitat for horseshoe crab, but additional documentation is required. Osprey (SC) have historically nested in the vicinity (at Penny Pond and Mill Creek), and Flanders Bay Wetlands is a prime foraging area for these birds. Other probable or confirmed nesting bird species in the area include mute swan, green heron, black-crowned night heron, Canada goose, mallard, American black duck, wood duck, belted kingfisher, red-winged blackbird, quail, northern harrier (T), mourning dove, yellow-shafted flicker, downy woodpecker, eastern kingbird, barn swallow, tree swallow, American crow, bluejay, black-capped chickadee, mockingbird, American robin, common yellowthroat, brown-headed cowbird, common grackle, chipping sparrow, swamp sparrow, song sparrow, and Savannah sparrow.

The Flanders Bay Wetlands area is one of the most important waterfowl wintering areas (November - March) in eastern Long Island. Mid-winter aerial surveys of waterfowl abundance for 1975-1984 indicated average concentrations of approximately 225 birds in the area each year (1,240 in peak year), including American black ducks (1,050 in peak year) and lesser numbers of common loon (SC), mallard, Canada geese, bufflehead, red-breasted merganser, mute swan, and oldsquaw. During the 1986-1996 period, an average of 125 birds was observed in the wetlands area annually (1,170 in peak year), comprised of American black duck, mute swan, merganser, scaup, and bufflehead.

Concentrations of waterfowl observed in Flanders Bay proper also feed extensively in the Flanders Bay Wetlands area. Waterfowl concentrations in the adjacent bay waters for the 1975-1984 period averaged approximately 720 birds each year (1,658 in peak year), including scaup (1,000 in peak year), American black ducks (590 in peak year), and Canada geese (950 in peak year), along with significant numbers of red-breasted merganser, mute swan, mallard, common goldeneye, bufflehead, and oldsquaw. During the 1986-1996 period, an annual average of 700 birds (2,045 in peak year) was observed by aerial surveys of the bay during winter, comprised mostly by mallard (419 in peak year), American black duck (1,760 in peak year), mute swan (230 in peak year), and sometimes merganser and scaup. Waterfowl use is influenced in part by the extent of ice cover each year. Concentrations of waterfowl also occur in the area during spring and fall migrations (March - April and October - November, respectively).

In addition to having significant bird concentrations, Flanders Bay Wetlands is a productive area for marine finfish, shellfish, and other wildlife. The marshes, tidal flats, and creeks contribute significantly to the biological productivity of Flanders Bay. The area serves as a nursery and feeding area for many estuarine fish species, including winter flounder, fluke, menhaden, weakfish, and scup. This is also the only known concentration area on Long Island for rough silverside, a relatively uncommon fish species in the region.

Hard clams and bay scallops are also harvested in the area, providing locally important shellfishing opportunities. Two shellfish aquaculture sites are situated in Flanders Bay: one off Red Cedar Point and one off Goose Creek Point. Goose Creek, Birch Creek, and Mill Creek, and their tributaries, are closed to shellfishing year round. Hubbard Creek and its tributaries is closed to shellfishing between May 1 and November 30.

Diamondback terrapin have been reported inhabiting the marshland and beaches, spotted turtles (SC) inhabit the Red Creek Pond area and spotted and mud turtles (T) may be present in several of the major creeks emptying into Flanders Bay. Eastern mud turtle (T) has been documented by the New York Natural Heritage Program in Wehrman's Pond, which is hydrologically connected to Red Creek Pond to the north. Eastern hog-nosed snake (SC) has been observed in the Red Creek Pond area but the importance of the area to this species is not well documented.

A number of rare plant species have been documented in the Flanders marshes by the New York Natural Heritage Program, including saltmarsh aster (*Aster tenuifolius*), seaside plantain (*Plantago maritima*), seabeach knotweed (*Polygonum glaucum*), coast flatsedge (*Cyperus polystachyos* var. *texensis*), dwarf glasswort (*Salicornia bigelovii*), marsh straw sedge (*Carex hormathodes*), slender blue flag (*Iris prismatica*), swamp sunflower (*Helianthus angustifolius*, T), and possum-haw (*Viburnum nudum*, T). This location contains the best examples of marsh fimbry (*Fimbristylis castanea*, T) and salt marsh loosestrife (*Lythrum lineare*, E) in New York State.

The Flanders Bay Wetlands are an important recreational area for hiking and kayaking. This area is a linkage for the Paumonauk Path, a 100+ mile trail extending from Rocky Point to Montauk Point. Most of the area is open to the public for waterfowl hunting, with a level of use of local significance.

IMPACT ASSESSMENT:

Any activity that would substantially degrade the water quality in Flanders Bay Wetlands 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 boat wastes). Nonpoint source pollution is of increasing concern in the Flanders Bay area. The Town of Southampton has installed a network of road drainage structures west of Goose Creek and one on Red Creek Road with more work planned.

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.

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

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 (*i.e.*, natural salt marsh and intertidal areas) may result in the loss of productive areas which support the fish and wildlife resources of Flanders Bay Wetlands. Alternative strategies for the protection of shoreline property should be examined, including innovative, vegetation-based approaches. Dredged material disposal in this area would be detrimental, but such activities may be designed to maintain or improve the habitat for certain species of wildlife. Alterations in water circulation patterns for habitat and water quality management and improvement, including Open Marsh Water Management may be beneficial to fish and wildlife in the area. 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. Significant increases in human activity within this wetland area could adversely affect certain fish and wildlife populations.

Nesting shorebirds inhabiting Flanders Bay Wetlands are highly vulnerable to disturbance by humans, especially during the nesting and fledging period (March 15 through August 15). Significant pedestrian traffic or recreational vehicle use of the beach could easily eliminate the use of this site as a breeding area and should be minimized during this period. Recreational activities (*e.g.*, boat and personal watercraft landing, off-road vehicle use, picnicking) in the vicinity of bird nesting areas 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 at Goose Creek Point and Red Cedar Point 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.

Alteration of freshwater inputs or increased sediment loading of the tributary streams could also detrimentally impact this habitat. The extensive woodlands bordering the marshes should be preserved as a buffer for the Flanders Bay Wetlands.

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