



LAKE MONTAUK WATERSHED MANAGEMENT PLAN



Appendix I

NYSDOS Significant Coastal Fish & Wildlife Habitat Assessments

COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area: **Lake Montauk**
 Designated: **March 15, 1987**
 Date Revised: **May 15, 2002**
 County: **Suffolk**
 Town(s): **East Hampton**
 7½' Quadrangle(s): **Montauk Point, 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: Relatively large, protected, coastal bay, bordered by much development; not rare in Suffolk County. 0

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: Freshwater tributaries feeding into the Lake have significant concentrations of spotted turtle (SC). Overwintering common loon (SC).
 Calculation: $16 + (16/2) =$ 24

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 fishery important on a level between New York State and Long Island. Commercial hard clam fishery and bait fishery of county-level significance. Calculation: $\sqrt{(16 \times 9) + (4/2)} =$ 14

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, bay scallop, and winter flounder 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] = 40

Significance = HI x R = 48

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

LAKE MONTAUK

LOCATION AND DESCRIPTION OF HABITAT:

Lake Montauk is located three miles west of Montauk Point on the South Fork of Long Island in the town of East Hampton, Suffolk County (7.5' Quadrangle: Montauk Point, NY). Lake Montauk was the largest freshwater lake on Long Island, but it has been estuarine since its inlet into Block Island Sound to the north was permanently opened in the 1920's. The approximately 900 acre lake had a healthy growth of eelgrass on the bottom. Presently, eelgrass beds are located only in the northern and western portions of the lake. The fish and wildlife habitat also includes a small freshwater pond (Stepping Stones Pond) off the southwest shoreline of the lake. The lakeshore has been extensively disturbed by residential, commercial and marine development. The water quality is progressively deteriorating due to chronic runoff, boat wastes and increasing subsurface wastewater contributions from shoreline development.

FISH AND WILDLIFE VALUES:

Lake Montauk was a rare ecosystem when it was freshwater but as a coastal embayment, with a maintained inlet and extensive shoreline development, it is not unusual in Suffolk County. Despite the development, Lake Montauk remains a high quality estuary supporting significant populations of fish and wildlife. A comprehensive study of the lake found nearly fifty species of birds, primarily shore and water birds, feeding, nesting, or roosting along the lake shore. Over-wintering waterfowl include common loon (SC), American black duck, red-breasted merganser, Canada goose, white-winged scoter, scaup, goldeneye and bufflehead. During the 1987-1996 period, the annual average number of waterfowl observed was 153 individuals; a peak value of 477 birds was observed in the early 1990s. Other wildlife includes the spotted turtle (SC) which resides in the freshwater tributaries and the small freshwater pond adjacent to Lake Montauk.

The Lake Montauk area provides a variety of marine and estuarine habitats for a wide diversity of fish and invertebrates. The commercial bay scallop fishery is significant on Long Island and other regions of New York State. The hard clam and bait fisheries are significant in Suffolk County. Portions of this habitat area are closed to shellfishing between April 1 and December 14, and between May 15 and October 15. The lake is also the only enclosed embayment on the South Fork supporting a large lobster population.

Fish species that reside and are harvested in the area include bluefish, weakfish, fluke, flounder, blowfish, white bait and striped bass. Lake Montauk is an important commercial fishing port on the South Fork (in 1989 Montauk Harbor was the largest commercial fishing port in the state with respect to landing and number of vessels); the concentration of bait fish is important to this fleet.

In the vicinity of Stepping Stones Pond, the New York Natural Heritage Program has documented several listed and rare plant species, including: coast flatsedge (*Cyperus polystachyos* var *texensis*), long-tubercled spikerush (*Eleocharis tuberculosa*, T), and the best example in New York State of salt marsh spikerush (*Eleocharis halophila*).

IMPACT ASSESSMENT:

Any activity that would further degrade the water quality in Lake Montauk would adversely affect the biological productivity and viability of the commercial fishery in this area. All species of fish and wildlife may be affected by water pollution, such as chemical contamination (including food chain effects), oil spills, excessive turbidity, waste disposal (including boat wastes) and stormwater runoff. Use of pumpout facilities in the no-discharge zone should be encouraged and enforced. Existing sources of pollution, both point and non-point, should be identified and then eliminated or reduced so as to improve water quality in Lake Montauk. The fringing wetlands around Lake Montauk have been impacted and/or lost by increased development along the lake shore. Restoration of wetlands in and around this area should be explored to reduce water pollution in the lake. Restoration opportunities may exist at this site for eelgrass beds, but improvement of water quality may be required before this is possible.

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 Lake Montauk could have major impacts on the fish and wildlife communities present. Dredging to maintain the inlet and boat channels in the lake 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. Dredging and its effects are a particular threat to submerged aquatic vegetation habitats, such as eelgrass, in Lake Montauk.

Elimination of salt marsh and intertidal areas through excavation, filling, or loss of tidal connection, 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 beach, tidal flat, or salt marsh), may result in the loss of productive areas which support the fish and wildlife resources of Lake Montauk. 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.

Also, the increasing resident mute swan population in this area may contribute to nutrient loading in small or enclosed waterbodies, and may affect usage by other waterfowl species. Mute swan control or removal may be beneficial to native waterfowl use of these waterbodies.

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New York Natural Heritage Program
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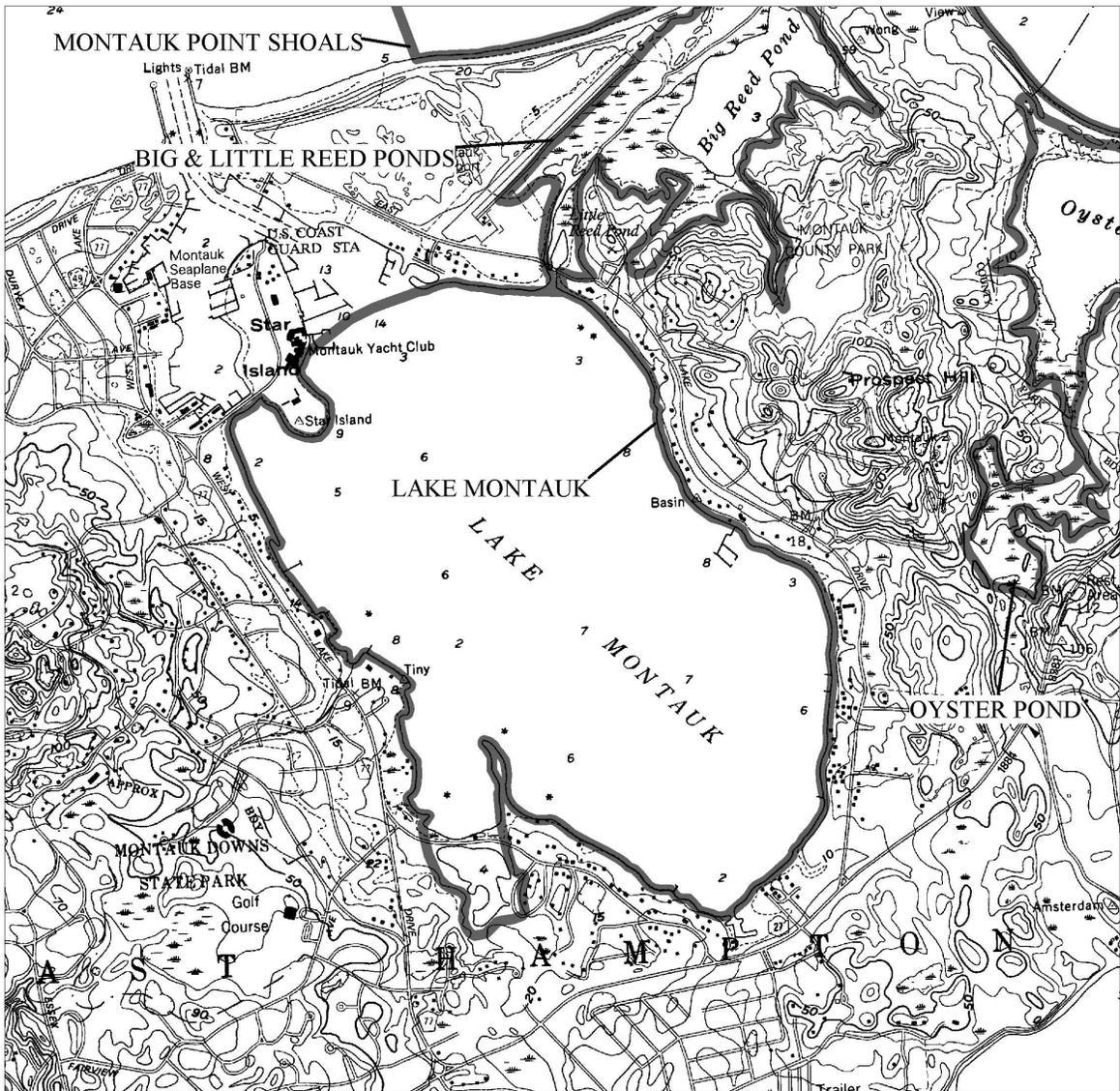
The Nature Conservancy
Long Island Chapter
250 Lawrence Hill Road
Cold Spring Harbor, NY 11724
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Group for the South Fork
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Bridgehampton, NY 11932
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East Hampton Dept. of Natural Resources
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300 Pantigo Place, Suite 105
East Hampton, NY 11937-2684
Phone: (631) 324-0496

East Hampton Baymen's Association
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Amagansett, NY 11930
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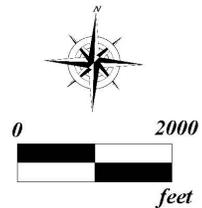
Office of Ecology
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Significant Coastal Fish and Wildlife Habitats



Lake Montauk
Big and Little Reed Ponds (In part)
Montauk Point Shoals (In part)
Oyster Pond (In part)



COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area: **Big and Little Reed Ponds**
Designated: **March 15, 1987**
Date Revised: **May 15, 2002**
County: **Suffolk**
Town(s): **East Hampton**
7½' Quadrangle(s): **Montauk Point, 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: Relatively large wetland complex containing a transition from brackish to freshwater communities; rare on Long Island. 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.

SV assessment: Northern harrier (T) and least bittern (SC) nesting; blue-spotted salamander (SC) and spotted turtle (SC) breeding; bald eagle (T), short-eared owl (E), and osprey (SC) feed and overwinter in the area. Calculation: $36 + (25/2) + (25/4) + (16/8) + (16/16) =$ 57.8

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 fishing use 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: One of only 4 major documented alewife spawning streams in Peconics region. Concentrations of blue-spotted salamanders are also unusual in the region. 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] = 91.8

Significance = HI x R = 110.2

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

BIG AND LITTLE REED PONDS

LOCATION AND DESCRIPTION OF HABITAT:

Big and Little Reed Ponds are located northeast of Montauk Harbor, on the south fork of Long Island, in the Town of East Hampton, Suffolk County (7.5' Quadrangle: Montauk Point, NY). The fish and wildlife habitat is approximately 200 acres in size, and includes a large freshwater pond (Big Reed Pond), extensive cattail marsh, a brackish pond and marsh (Little Reed Pond), and surrounding wetlands and woodlands. Big Reed Pond supports a rich population of submerged aquatic vegetation, and Little Reed Pond supports beds of widgeon grass. A small stream flows from Big Reed into Little Reed Pond, which is connected to Lake Montauk by a tidal creek channel. Most of the habitat is located within undeveloped County parkland. The area is bordered on the west side by a landing strip for small aircraft.

FISH AND WILDLIFE VALUES:

Big and Little Reed Ponds comprise a relatively uncommon ecosystem type on Long Island. Big Reed Pond is one of only three areas on Long Island that have been designated as National Natural Landmarks by the National Park Service. The cattail marsh adjoining Big Reed Pond is one of the largest contiguous areas of emergent freshwater wetland in the region, whereas Little Reed Pond is an undeveloped brackish wetland area. Together, Big and Little Reed Ponds represent an unusual example of the natural transition between these habitat types, and contain a relatively diverse assemblage of fish and wildlife species.

Bird species breeding in this area include northern harrier (T), least bittern (SC), Canada goose, mallard, and American black duck. Red-shouldered hawk (SC) historically bred in this area, but has not been documented recently. Immature bald eagles (T) use the area, and short-eared owls (E) frequently overwinter here. Big and Little Reed Ponds serve as valuable feeding areas for these species, as well as for osprey (SC), redhead, hooded merganser, herons, egrets, and many passerine birds.

Blue-spotted salamanders (SC) have been reported breeding in the moist wooded swales draining into Big Reed Pond. This is one of the few locations on Long Island where this species is known to occur. The populations of this species in Montauk are unique because they are comprised of non-hybridized, sexually-reproducing animals. Most mainland populations of blue-spotted salamander have hybridized with Jefferson salamander. Spotted turtles (SC) are found in the ponds and adjacent wetlands. The adjacent wetland and upland areas are valuable as hunting areas for northern harrier and red-shouldered hawk. In addition, the rare coastal heathland cutworm moth (*Abagotis crumbi benjamini*) is found at this site.

Big and Little Reed Ponds also comprise a significant warmwater fisheries habitat. This area contains one of only four major documented spawning streams in the Peconics region for alewives, which migrate from the ocean to spawn in shallow freshwater in spring. Recreational fishing opportunities in Big Reed Pond, primarily for largemouth bass, attract residents from throughout Long Island to the area.

The New York Natural Heritage Program has documented several rare plant species in this area, including clustered bluets (*Hedyotis uniflora*, T), sandplain wild flax (*Linum intercursum*, T), pine-barren sandwort (*Minuartia caroliniana*), southern arrowwood (*Viburnum dentatum*), and the best example of water-pennywort (*Hydrocotyle verticillata*, E) in New York State.

IMPACT ASSESSMENT:

Any activities that would degrade water quality, increase turbidity, or alter water depths would have a significant impact on fish and wildlife species inhabiting Big and Little Reed Ponds. All species may be affected by water pollution, such as chemical contamination (including food chain effects resulting from bioaccumulation), oil spills, excessive turbidity, waste disposal (including boat wastes), and stormwater runoff. Warmwater fish species would be most sensitive from April 1 through July 30, when spawning takes place. Barriers to fish migration, whether physical or chemical, would have a significant effect on the biological resources of this area. Passage into Big Reed Pond is difficult and intermittent, and removal of debris and other impediments should be considered for enhancement of migratory fish habitat.

Wildlife species would be most sensitive during the breeding season, which generally extends from April 1 through August 30. Collection of amphibians and reptiles from this area or adjacent areas could have a significant impact on an important population of blue-spotted salamanders. The introduction of exotic, non-native fish, wildlife or plant species should be prohibited.

Any substantial alteration or human disturbance of the wetland and upland vegetative communities, such as changes to wetland or stream hydrology or configuration, filling, introduction of invasive or exotic species, and/or reduction or fragmentation of woodland buffer areas within or adjacent to the habitat may adversely affect wildlife species in the area. The cattail marsh in this habitat area is the largest on the South Fork and is notable in being largely free of *Phragmites australis*. 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. Expansions or alterations to the existing air strip could impact wildlife species and their habitat at this site.

Access to the area during appropriate time periods for compatible recreational uses of fish and wildlife should be maintained.

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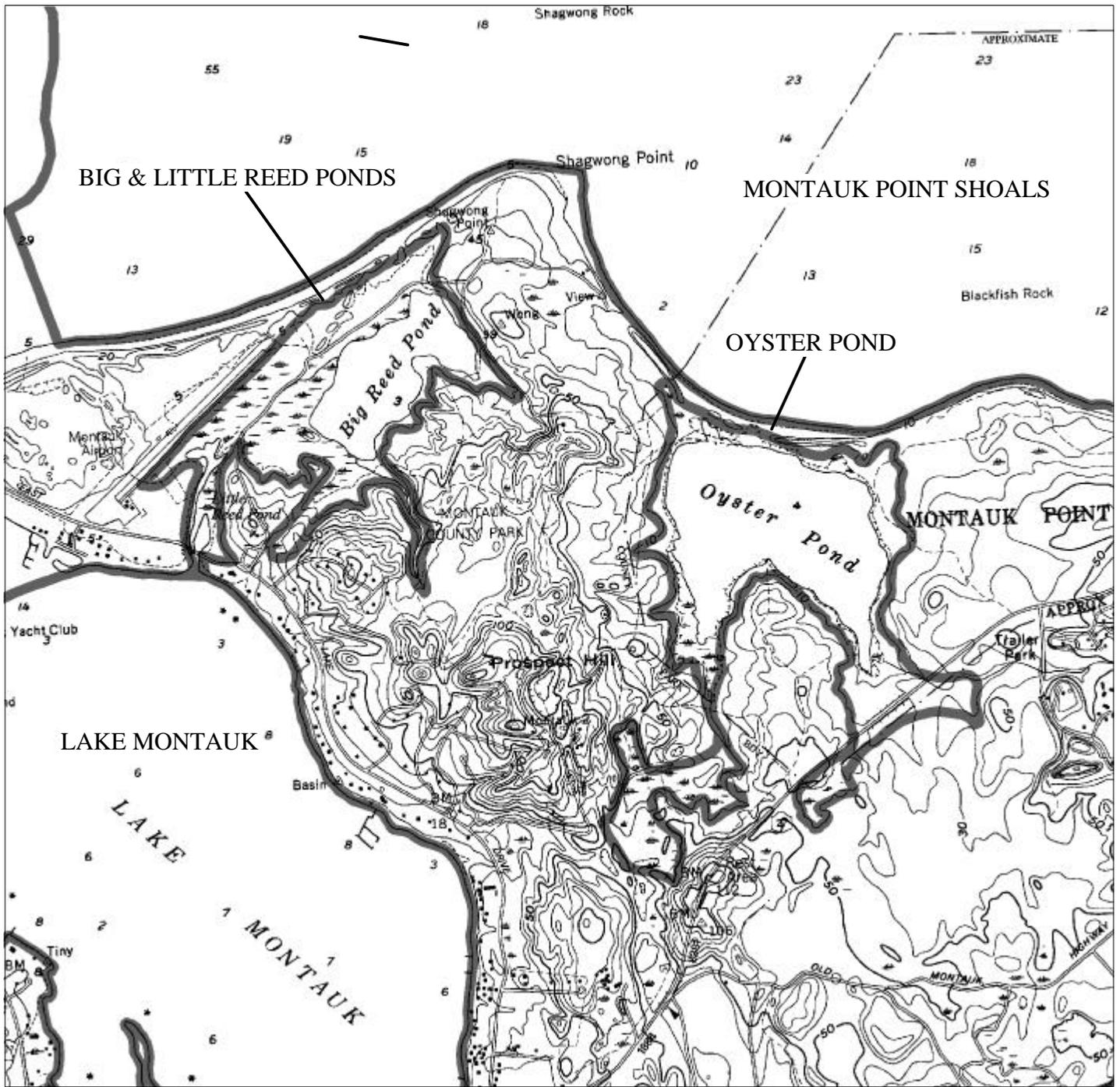
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Significant Coastal Fish and Wildlife Habitats



New York State
Department of State
Division of
Coastal Resources

Big and Little Reed Ponds
Oyster Pond
Lake Montauk (In part)
Montauk Point Shoals (In part)



COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area: **Culloden Point**
Designated: **March 15, 1987**
Date Revised: **May 15, 2002**
County: **Suffolk**
Town(s): **East Hampton**
7½' Quadrangle(s): **Montauk Point, 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: Complex perched kettle and stream course system draining to Block Island Sound; marshy meltwater depressions at seaward end of watercourse system. Rare 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: Blue-spotted salamander (SC) and eastern box turtle (SC). Northern harrier (T) probable breeder. Calculation: $16 + (16/2) =$ 24

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 fishing use of regional significance. Nature study, hiking, fishing from shore, of county-level significance. Access for offshore diving. Calculation: $9 + (4/2) =$ 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: Very large concentrations of blue-spotted salamander and eastern newt, significant on Long Island. 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] = 69

Significance = HI x R = 82.8

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

CULLODEN POINT

LOCATION AND DESCRIPTION OF HABITAT:

Culloden Point consists of 222 acres located on Block Island Sound and Fort Pond Bay in northern Montauk in the Town of East Hampton, Suffolk County (7.5' Quadrangle: Montauk Point, NY). This tract was subdivided and developed in the early 1990s, resulting in the creation of 54 residential lots and 188.3 acres of protected land in a contiguous block. The protected block is a Town of East Hampton, Suffolk County, and New York State preserve, encompassing all of the property's wetlands. The fish and wildlife habitat at this site consists of varied knob and kettle terrain with a surface area consisting of about 20% wetlands and 80% uplands. The wetlands are of the riparian and kettlehole type. The uplands are vegetated with alternating areas of oak-hickory hardwoods and brushy downs grasslands.

FISH AND WILDLIFE VALUES:

The Culloden Point area is a relatively uncommon ecosystem type on Long Island. The varied knob and kettle terrain provides an excellent habitat for several species of fish and wildlife.

The fern covered stream banks and regularity of stream flow (running to Block Island Sound) make this an ideal habitat for certain amphibians, particularly the blue-spotted salamander. A very large group of blue-spotted salamander (SC) lives in the stream system. Forty-five individuals were found occupying one small breeding hole in 1985. A 1992 herpetological survey in the area encountered 18 individuals. Other species observed were: Four-toed salamander, spring peeper, bull frog, green frog, gray tree frog, snapping turtle, painted turtle, eastern box turtle (*Terrapene carolina*, SC), eastern ribbon snake, and eastern garter snake. The eastern newt occupies several kettleholes including the largest freshwater pond, Culloden Pond.

The habitat area is also important to several species of birds for feeding and nesting. A 1993 breeding bird survey found 25 species of breeding birds here, and is an especially important site for yellow-billed cuckoo, blue-grey gnatcatcher, American goldfinch, and blue-winged warbler. Nest density reached 137 nests per 100 acres. Great horned owls breed in the Culloden Point habitat area; northern harrier (T) is a probable breeder but is not confirmed. Colonies of bank swallows nest in the coastal bluff faces of the area, and wild turkeys and ruffed grouse are found at this site. The littoral zone of Culloden Point is a prime feeding area for the common loon (SC) which overwinters in large numbers (several hundred) in the inshore waters between Montauk Point and Napeague Harbor each year. Other overwintering species observed in the area include Canada goose, common eider, white-winged scoter, bufflehead, red-breasted merganser, oldsquaw, and mallard.

A variety of mammals occupy the area, most notably the gray fox which is quite rare on Long Island.

The long, undisturbed coastline is an important area in the winter months as a haul-out area for harbor seals that feed in Block Island Sound and Fort Pond Bay.

The New York Natural Heritage Program has documented several listed and rare plants at this site, including scotch lovage (*Ligusticum scothicum*, E) and southern arrowwood (*Viburnum dentatum* var *venosum*).

IMPACT ASSESSMENT:

The fish and wildlife resources of Culloden Point would be affected primarily by major habitat alterations, or modification of public access to the area. Habitat modifications which substantially change the natural character of the area, such as residential, commercial, or industrial developments which would fragment important vegetative communities, clear woodlands, or disturb wetlands vegetation, would have a significant impact on the wildlife species in this area. *Phragmites australis* is encroaching on the wetlands in this 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.

Any activity that would degrade water quality or increase turbidity in the streams and wetlands of Culloden Point would also have a significant impact on fish and wildlife resources. All species may be affected by water pollution, such as chemical contamination (including food chain effects resulting from bioaccumulation), oil spills, excessive turbidity, waste disposal (including boat wastes), and stormwater runoff.

Collection of amphibians or reptiles from this area, as well as other fauna or flora, could have a significant impact on survival of species of special concern in New York State. Any permanent alteration or human disturbance of the harbor seal haulout area along the coastline of Culloden Point would adversely affect this species.

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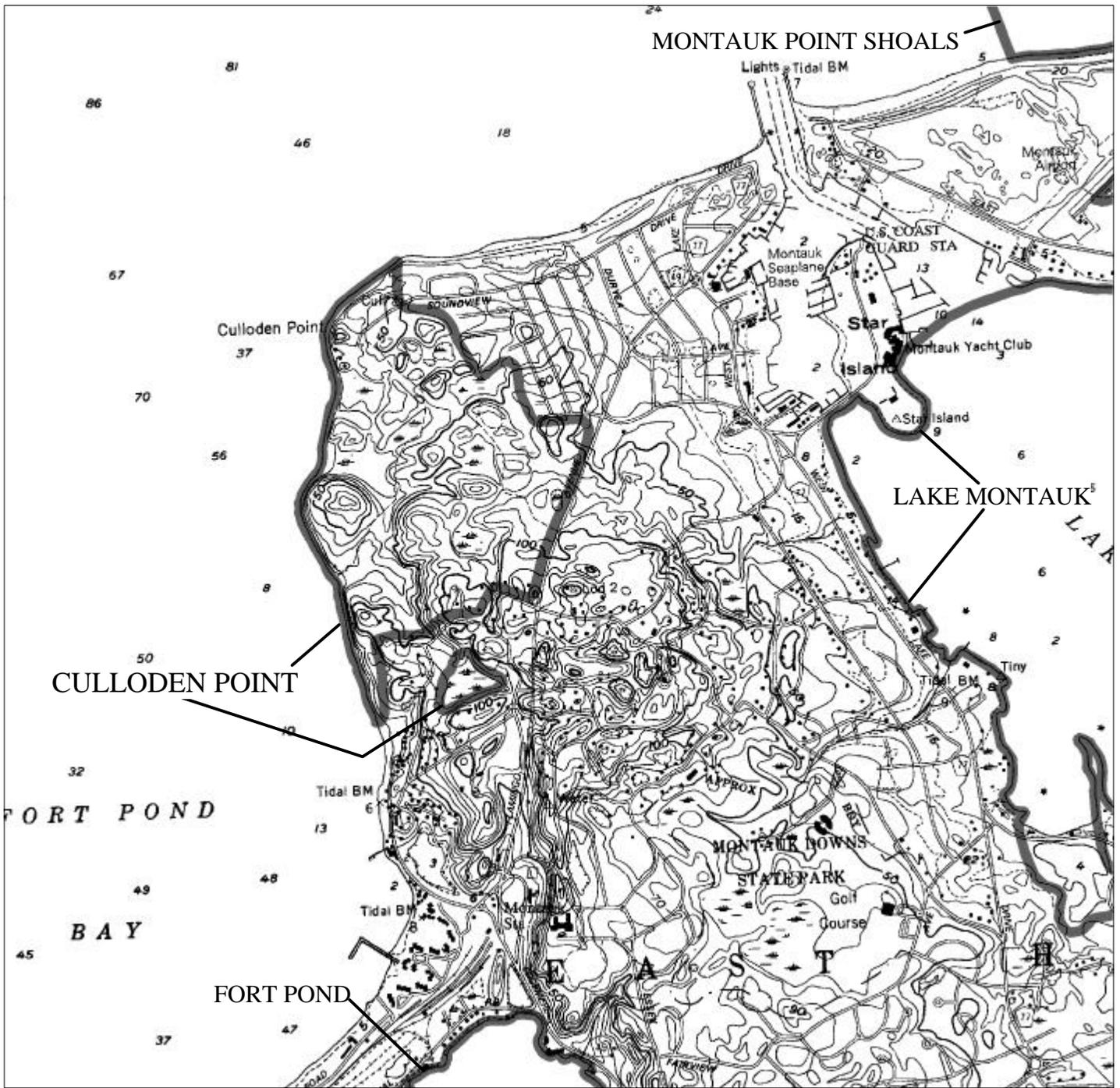
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Significant Coastal Fish and Wildlife Habitats



New York State
Department of State
Division of
Coastal Resources

Culloden Point
Fort Pond (In part)
Lake Montauk (In part)
Montauk Point Shoals (In part)

