

COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area: **Gardiners Island**
Designated: **March 15, 1987**
Date Revised: **May 15, 2002**
County: **Suffolk**
Town(s): **East Hampton**
7½' Quadrangle(s): **Gardiners Island East, NY; Gardiners Island West, 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: Large, undeveloped marine islands are rare in the United States. 81

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: Roseate tern (E), least tern (T), common tern (T), peregrine falcon (E), Northern goshawk (SC), bald eagle (T, T-Fed), osprey (SC), northern harrier (T), black skimmer (SC), yellow-breasted chat (SC), seaside sparrow (SC) found here.
Calculation: $36 + (36/2) + (25/4) + (25/8) + (25/16) =$ 64.94

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: Human use not significant (oyster beds in vicinity, but not included). 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: Concentration of ospreys (T) is one of the largest in the eastern United States. One of the largest double-crested cormorant colonies in New York State.
Populations of nesting shorebirds (terns and black skimmers) significant in New York State. 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] = 170.94

Significance = HI x R =

205.1

NEW YORK STATE SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT NARRATIVE

GARDINERS ISLAND

LOCATION AND DESCRIPTION OF HABITAT:

Gardiners Island is situated in Gardiners Bay between the north and south forks of Long Island. The approximate 3,300 acre island is located in the Town of East Hampton, Suffolk County (7.5' Quadrangles: Gardiners Island East, NY and Gardiners Island West, NY). Gardiners Island is a large, nearly undeveloped, marine island with tidal and freshwater wetlands, beaches, dunes, bluffs, woodlands, pine barrens, brushland, and meadows. Cartwright Island and Cartwright Shoals at the southern end of Gardiners Island are included in this habitat. The eelgrass beds fringing the shores of Gardiners Island on the eastern and southeastern sides are included in this habitat. The island is privately owned, and there is no road access; however, a small private airport exists.

FISH AND WILDLIFE VALUES:

Gardiners Island is an extremely rare ecosystem because of its nearly pristine condition. The diversity of habitats present makes Gardiners Island especially valuable as a coastal wildlife refuge. Species found on the island include many that are on New York State's Endangered (E), Threatened (T), or Special Concern (SC) lists. The island is particularly valuable to ground nesting birds because few mammalian predators are present.

Roseate terns (E, E-Fed) have been observed nesting intermittently at this site during the 1987-1996 period, with a peak number of 119 pairs observed in 1987. After a several year absence, about 50 pairs of roseate tern produced young in 1995. Several hundred nesting pairs of common tern (T) have also been observed annually after an absence during the late 1980's and early 1990's. Around 95 pairs of this species were observed at the island in 1994-1995. Least tern (T) were also observed nesting at this location in the mid-1990's, after being absent since the 1980's. Several hundred least tern adults were observed in 1994-1995. Despite the existence of appropriate habitat, piping plover (E, T-Fed) have not been observed nesting at Gardiners Island since the early 1980's.

Tern populations on Cartwright Shoals may be receiving significant nest site competition from gulls, which are primary roseate tern competitors. Gulls (great black-backed gull) were observed at an annual average population of 2,544 pairs during the 1987-1996 period; the peak number reached 4,171 pairs in 1991.

Gardiners Island contains the largest concentration of nesting osprey (SC) in New York State and

possibly the largest on the East coast of the United States. Historically, over 300 pairs of osprey nested on Gardiners Island, primarily occupying ground nests (due to the unavailability of suitable trees for nesting and the paucity of mammalian predators). Northern harrier (T) and red-tailed hawk also nest regularly on the island; winter populations of raptors on Gardiners Island are large and diverse, including rough-legged hawk, snowy owl, Cooper's hawk, northern goshawk (SC), peregrine falcon (E), merlin, and American kestrel. Bald eagle (T, T-Fed) also use the island during winter. A spruce plantation on the island supported nesting long-eared owls in the past; barn owls, screech owls, and great-horned owls are year-round residents.

Gardiners Island has been one of the largest double-crested cormorant colonies in New York State. The annual average population of double-crested cormorant during the 1987-1996 period was 685 pairs, increasing from around 400 pairs in the late 1980's to over 1,000 pairs in the early and mid-1990's. The cormorant colony occurs at Home Pond on the island's western shore. The island also supports a variety of nesting waterbirds, including glossy ibis, black-crowned night heron, great egret, snowy egret, black skimmer (SC), American oystercatcher, and little blue heron. Canada goose, yellow-breasted chat (SC), bank swallow, gadwall, red-tailed hawk, wild turkey, sharp-tailed sparrow and seaside sparrow (SC) also nest here. The island and its adjacent waters provide excellent waterfowl wintering areas, with annual average concentrations for the 1987-1996 period exceeding 1,500 individuals. Wintering species that occur by the hundreds include American black duck, brant, greater and lesser scaup, oldsquaw, common goldeneye, bufflehead, red-breasted merganser, ruddy duck, and white-winged scoter.

The island's moist woods contain four-toed and spotted salamanders. Diamondback terrapin occur in the coastal ponds of Gardiners Island. Gardiners Island may provide important breeding habitat for horseshoe crab, but additional documentation is required. Harbor seals and grey seals use sites on the east side of the island for winter haulout.

There are commercial oyster beds in the vicinity of Gardiners Island. Local residents harvest oysters and fish from waters surrounding the island for commercial and recreational uses. These waters have never been closed to shellfishing as a result of contamination. Some recreational, waterside tours for the purpose of viewing seals are conducted in the vicinity of Gardiners Island. The eelgrass meadows fringing the island contribute to the nearshore habitat value of the island for juvenile fish and shellfish species. The island is privately owned, and public recreational uses are not allowed.

The New York Natural Heritage Program has documented a variety of listed and rare plant species on Gardiners Island, including: northern gamma grass, seabeach knotweed, Small's knotweed, woodland agrimony, and bushy rockrose (*Helianthemum dumosum*, T). This areas also supports the best location of featherfoil (*Hottonia inflata*, T), and one of only two populations of sea purslane (*Sesuvium maritimum*, E), in New York State. Bostwick Forest on the northwest side of Gardiners Island is among the oldest and largest on Long Island, and supports white oak, black oak, scarlet oak, yellow birch, sweet birch, sassafras, tupelo, red maple, and one of only a few populations on Long Island of fruiting persimmons.

IMPACT ASSESSMENT:

Increased human use and development of Gardiners Island would have a major impact on the nesting habits of many bird species using the area. Introduction of mammalian predators (such as domestic pets) would be highly detrimental to important populations of nesting birds and other wildlife. Critical areas of the island to preserve for nesting shorebird species include the Fort Tyler ruins off the northern tip for common terns and roseate terns, and Cartwright Shoals off the southern tip for common terns, roseate terns and least terns. Terns are vulnerable to disturbance during the May 1 through August 15 breeding season. Control of the expanding great black-backed gull populations at Cartwright Shoals may enhance production of the protected tern species.

The island is unique because of its nearly pristine condition. Any disturbance to the upland, shoreline, wetland, or nearshore habitats that contain many endangered, threatened, and special concern species would be highly detrimental. This is especially critical during the breeding period (generally April 1 through August 30). Degradation of water quality near Gardiners Island, from chemical contamination (including food chain effects resulting from bioaccumulation), oil spills, excessive turbidity, and waste disposal (including vessel wastes), would adversely affect all fish and wildlife, especially important eelgrass meadows and nearshore shellfish populations. The potential for oil spills from the sea lanes 10 miles offshore represents a significant threat to Gardiners Island. The double-crested cormorant colony is a source of excess nutrients. Hickories and tupelos used by cormorants for nesting are experiencing a decline. Limiting the expansion of this colony may be beneficial for maintaining ecosystem health.

The maritime forests of Gardiners Island are exemplary with respect to their age, size and low level of disturbance, especially Bostwick Forest at the island's northwest end; preservation of such areas should be considered a high priority. Disturbance or fragmentation of these habitats or the introduction of exotic or nuisance species would substantially alter the fish and wildlife values of the island.

Docks may be detrimental to nearshore eelgrass beds because of shading, and review of any proposed new docks in the area should be conducted with potential impacts to eelgrass beds fully considered. Restoration opportunities for eelgrass may exist if water quality parameters are appropriate. A 1996 Peconic Estuary Program study recommends the area surrounding Cartwright Point for eelgrass restoration, one of four such sites identified throughout the estuary.

KNOWLEDGEABLE CONTACTS:

Habitat Unit
NYS Department of State
Division of Coastal Resources
41 State Street
Albany, NY 12231
Phone: (518) 474-6000

NYSDEC—Region 1
State University of New York, Building 40
Stony Brook, NY 11790-2356
Phone: (631) 444-0354

Wildlife Manager
NYSDEC—Region 1
State University of New York, Building 40
Stony Brook, NY 11790
Phone: (631) 444-0310

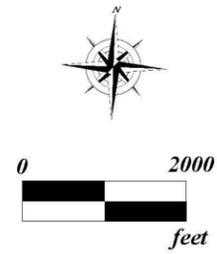
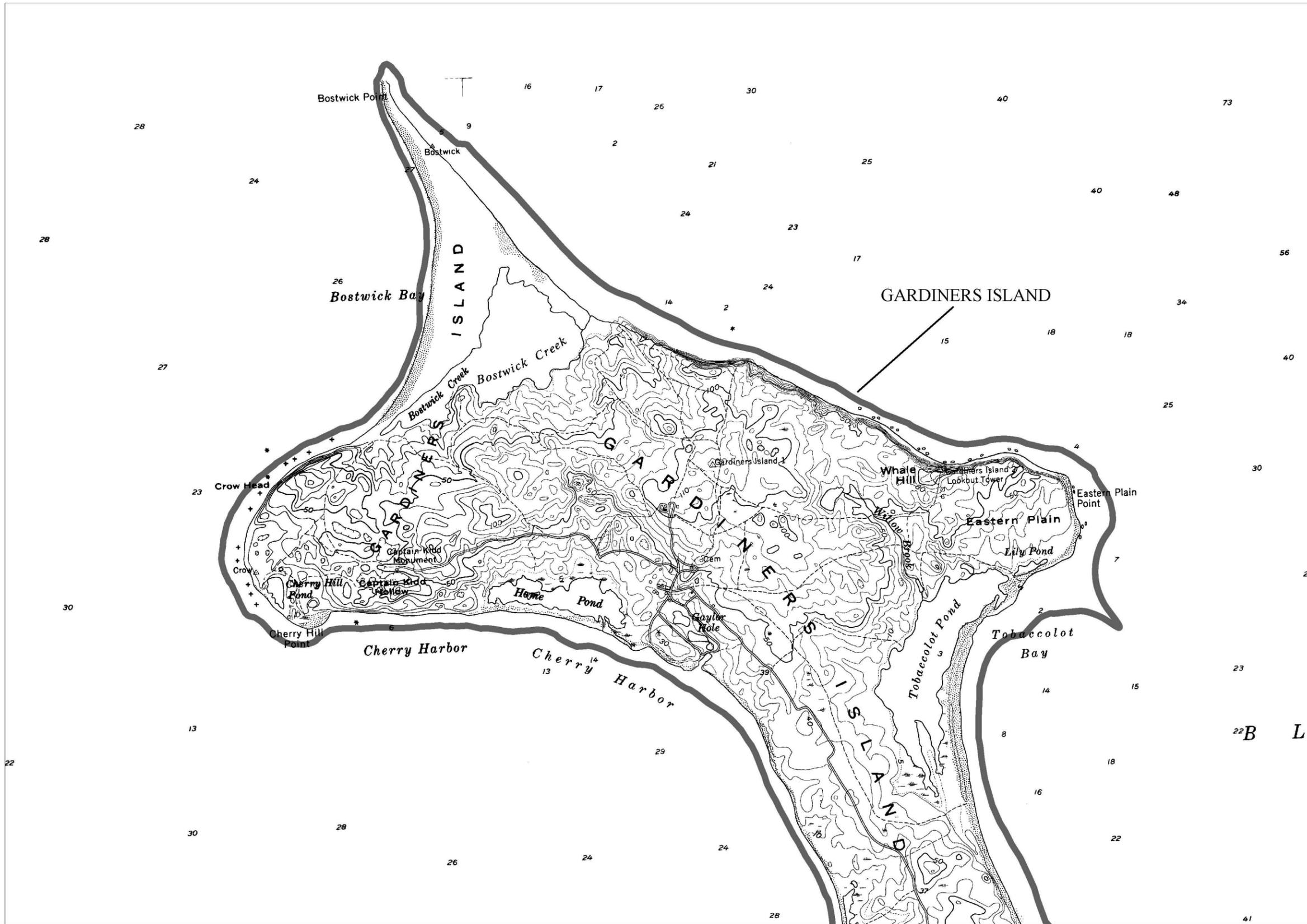
Bureau of Marine Resources
NYSDEC
205 N. Belle Meade Road, Suite 1
East Setauket, NY 11733
Phone: (631) 444-0430

Finfish and Crustaceans
NYSDEC
205 N. Belle Meade Road, Suite 1
East Setauket, NY 11733
Phone: (631) 444-0436

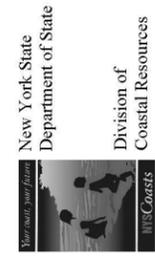
New York Natural Heritage Program
Wildlife Resources Center
700 Troy-Schenectady Road
Latham, NY 12110
Phone: (518) 783-3932

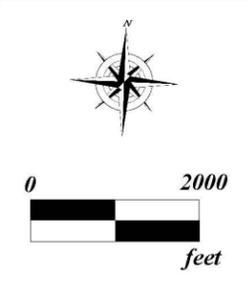
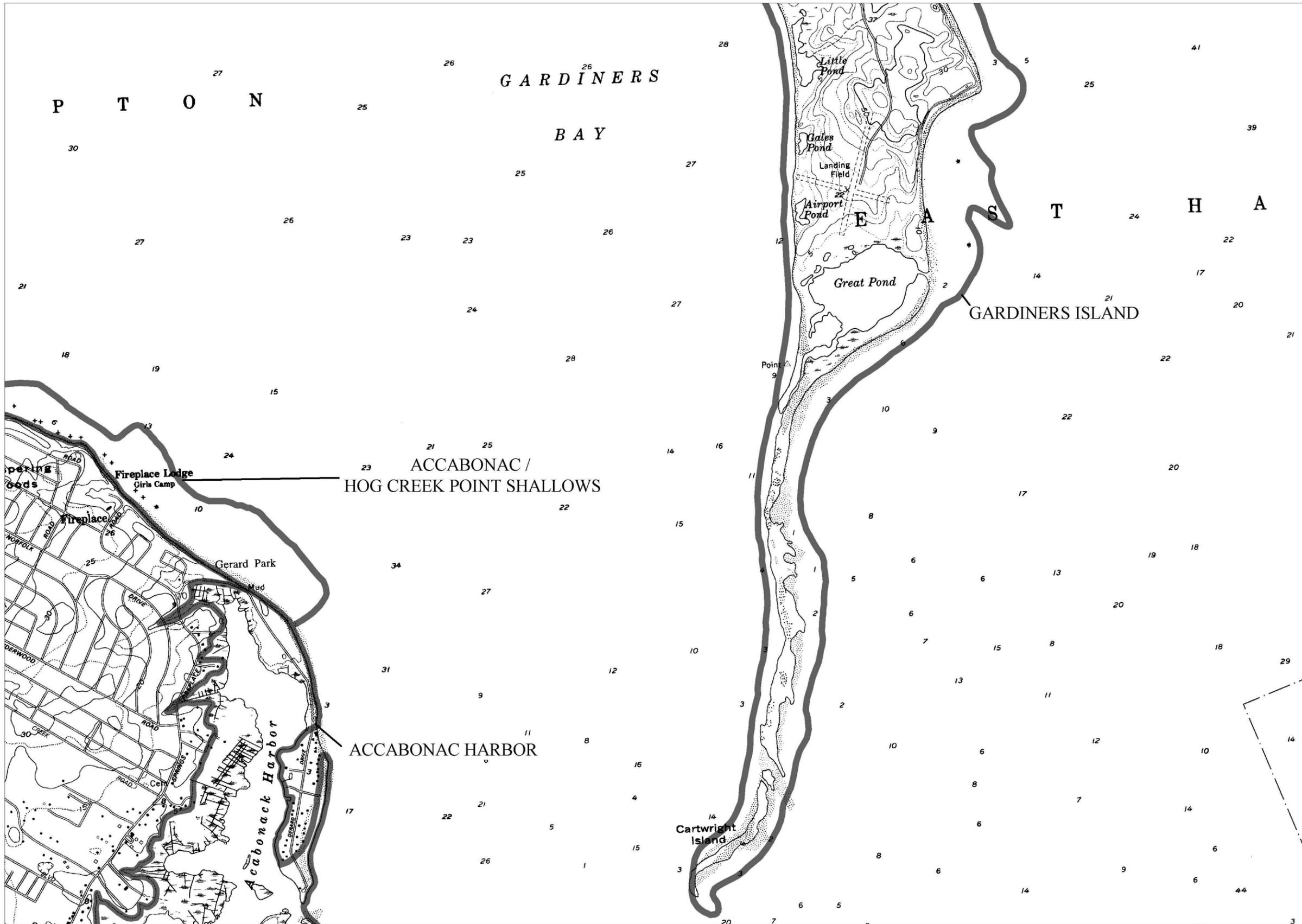
East Hampton Dept. of Natural Resources
Town of East Hampton
300 Pantigo Place, Suite 105
East Hampton, NY 11937-2684
Phone: (631) 324-0496

Office of Ecology
Suffolk County Dept. of Health Services
Bureau of Environmental Management
County Center
Riverhead, NY 11901
Phone: (631) 852-2077



Significant Coastal Fish and Wildlife Habitats
 Gardiners Island (In part)
 Part 1 of 2





Significant Coastal Fish and Wildlife Habitats

- Gardiners Island (In part)
- Accabonac Harbor (In part)
- Accabonac / Hog Creek Point Shallows (In part)

New York State
Department of State



Division of
Coastal Resources