

Attachment B:

COASTAL FISH & WILDLIFE HABITAT ASSESSMENT FORM

Name of Area: **Tiana Beach**
Designated: **March 15, 1987**
Updated: **December 15, 2008**
County: **Suffolk**
Town(s): **Southampton**
7½' Quadrangle(s): **Quogue, Shinnecock Inlet, NY**

Assessment Criteria

Score

Ecosystem Rarity (ER)–the uniqueness of the plant and animal community in the area and the physical, structural, and chemical feature supporting this community.

ER assessment: Large, generally undeveloped, segment of barrier beach; rare in New York State.

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. (E = Endangered, T = Threatened, SC = Special concern)

SV assessment: Piping plover (E, T-Fed), peregrine falcon (E), least tern (T), northern harrier (T), and Cooper’s hawk (SC) foraging and nesting grounds.
Additive division: $36 + 36/2 + 25/4 + 25/8 + 16/16 = 64.375$

64.375

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: Birdwatching and birdbanding in the area are of county level significance.

4

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 the largest concentrations of nesting least terns (T) on Long Island of statewide significance. Concentrations of falcons and accipiters are unusual in New York State.

16

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) = 148.375

Significance: (HI x R) = 178.05

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

TIANA BEACH

LOCATION AND DESCRIPTION OF HABITAT:

Tiana Beach is a seven mile segment of barrier island which forms the southern border of Shinnecock Bay, west of Shinnecock Inlet. This approximately 500 acre area is in the Town of Southampton, Suffolk County (7.5 Quadrangles: Quogue, N.Y.; and Shinnecock Inlet, N.Y.). The Tiana Beach habitat is a mixture of town and county owned parklands. The fish and wildlife habitat includes all undeveloped lands located between the ocean beach and Dune Road, from Shinnecock Inlet to the intersection of Dune Road and Post Lane. Due to the dynamic nature of the Atlantic shoreline, the southern boundary of the Tiana Beach significant habitat will reflect the most current land forms, extending to mean low water.

This area consists of a nearly continuous primary dune (up to 18 feet in elevation), open sandy beach (Tiana Beach and Hampton Beach), and a back dune area between the primary dune and Dune Road. Characteristic ecological communities occurring in Tiana Beach include the maritime beach and maritime dunes communities. Maritime beach is a sparsely vegetated community dominated by beach grass (*Ammophila breviligulata*). Maritime beach occurs on unstable sand, gravel, or cobble ocean shores above mean high tide, where the shore is modified by storm waves and wind erosion. The community is an important nesting ground for beach nesting shore birds. The maritime dune community is comprised of grasses and low shrubs in a mosaic of vegetated patches dominated by beach grass and seaside goldenrod (*Solidago sempervirens*). Additionally, several small wet meadows dominated by cordgrass are present in the interdune area. As a result of residential development in the 1980's, most of the ocean beach currently receives at least light recreational use during the summer months.

Seabeach amaranth (E, T-Fed) (*Amaranthus pumilus*), commonly associated with piping plovers (E, T-Fed), has been observed at this site. Seabeach amaranth (E, T-Fed) has been eliminated from two-thirds of its historic global range with typically fewer than 5 occurrences in New York State.

FISH AND WILDLIFE VALUES:

Undeveloped barrier beach ecosystems of this size are rare in New York State. Portions of the habitat have been designated as part of the National Coastal Barrier Resources System. Tiana Beach serves as foraging and nesting habitat for shorebird species including piping plover (E, T-Fed) and least tern (T). Shorebird surveys for the 13 year period from 1993-2005 indicate average annual concentrations of 13 breeding pairs (25 in peak year) of piping plover (E, T-Fed) and 184 least tern (T) breeding pairs (791 in peak year). Historically (i.e., since 1982), population concentrations for piping plover (E, T-Fed) and least tern (T) paralleled those presently found in Tiana Beach.

Tiana Beach represents a significant segment of the fall migration corridor for raptors moving south along the Atlantic coast. Undeveloped barrier beach dunelands such as this provide critical foraging and

resting areas for thousands of migrating raptors each year. These birds forage extensively among undeveloped barrier beaches, where concentrations of small mammals, migrating shorebirds, and passerine birds provide an important prey base. Large concentrations of hawks, primarily accipiters and falcons, travel southward in a narrow corridor, which specifically follows the outer barrier beaches on Long Island. The most numerous species seen at Tiana Beach are American kestrel, merlin, northern harrier (T), osprey (SC), Cooper's hawk (SC), and peregrine falcon (E). The concentrations of raptors passing through Tiana Beach makes this area one of the most popular fall hawk watching areas on Long Island. Portions of Tiana Beach also provide important access for mobile sportsfishermen who use off-road vehicles to reach the valuable surf fishery at this site.

IMPACT ASSESSMENT:

Nesting shorebird species inhabiting the barrier beaches of Long Island are highly vulnerable to disturbance by humans from March 15 through August 15. Significant pedestrian traffic or recreational use (e.g., boat and personal watercraft landing, off-road vehicle use, picnicking) of the upper beach, dunes and adjacent areas could easily eliminate the use of this site as a nesting area and should be minimized during the bird nesting season and the fall raptor migration period (September - October, primarily). Although nesting sites may change from year to year, human disturbance of the upper beach and dunes (above the spring high tide line) must be avoided in order to preserve these sites' value as a nesting and feeding habitat. Reduction, or loss of the area presently utilized by nesting colonies could significantly affect the bird populations in this vicinity. Fencing and/or annual posting of the bird nesting area should be provided to help protect the nesting bird species. Unregulated dredged material placement in this area would be detrimental to the habitat area, but such activities may be designed to maintain or improve the habitat, by setting back vegetative succession.

Any activity that would disturb or eliminate marsh, natural beach, and duneland plant communities would result in a loss of valuable habitat for a number of important wildlife species. Elimination of natural interdune habitats may severely reduce small mammal populations and adversely affect migrating raptors which depend upon this food resource. Unregulated dredged material placement in this area would be detrimental to the habitat area, but such activities may be designed to maintain or improve the habitat for certain species of wildlife, by setting back vegetative succession. Dredged material disposal should be scheduled between late fall and early spring to minimize potential impacts on migratory birds using the area.

Development of the area for residential or extensive recreational use would result in a direct loss of valuable habitats and increase human disturbance impacts on certain wildlife species. However, limited development of areas to protect or improve the habitat for fish and wildlife, or increase access for compatible human use of these resources may be desirable. Construction of adjacent recreational facilities should be designed to minimize impacts to the nesting areas. Introduction or attraction of mammalian predators to Tiana Beach, including pet animals, would be detrimental to the populations of nesting birds. 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. Appropriate placement of trash receptacles and signs promoting proper trash disposal would be beneficial to the habitat as beach lying trash may attract additional predators to sensitive populations.

Construction of new or maintenance of existing erosion control structures which interfere with natural coastal process should be carefully evaluated for need and where possible, non-structural solutions should be utilized.

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:

- 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:

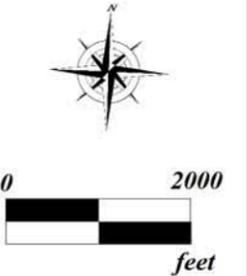
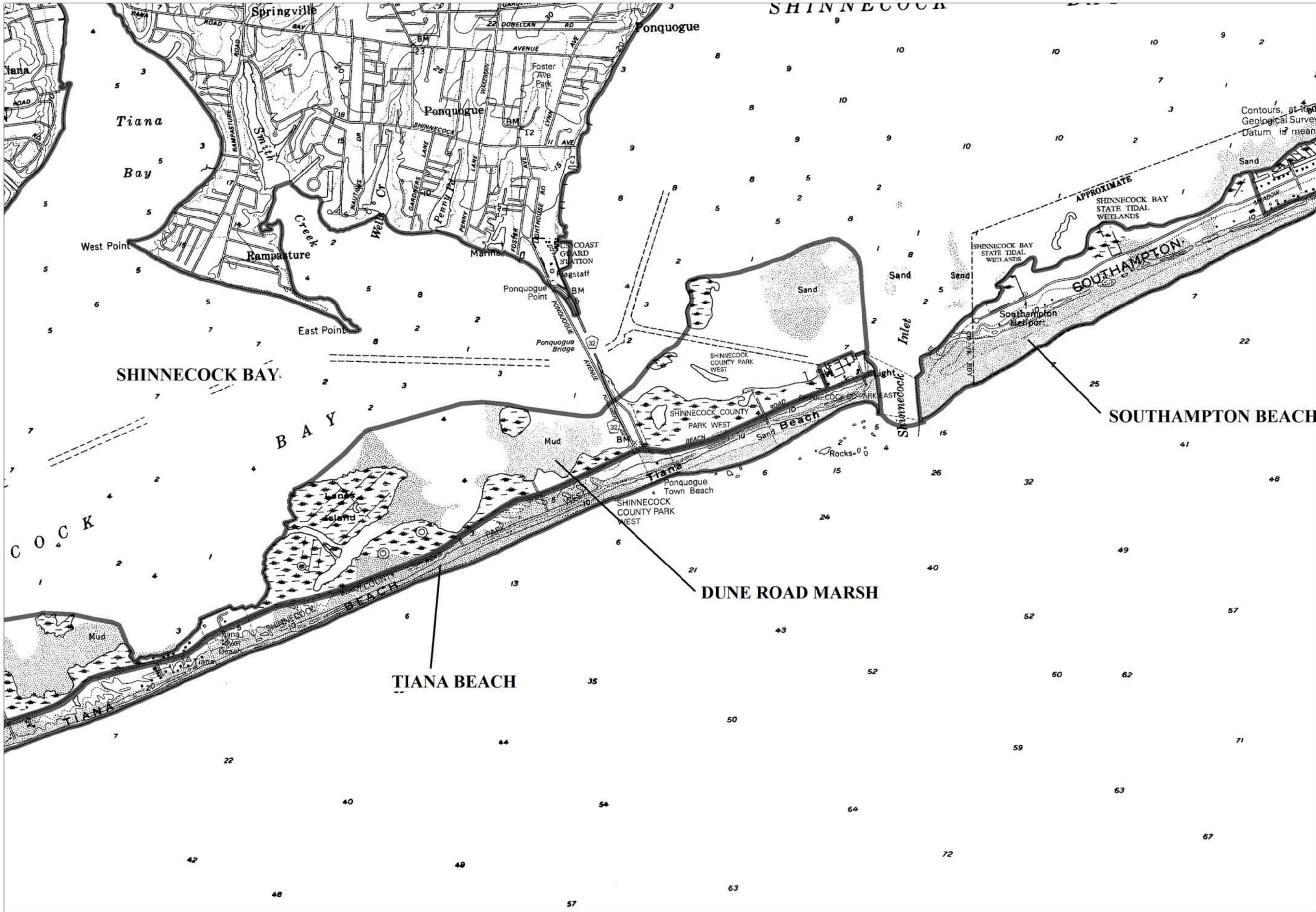
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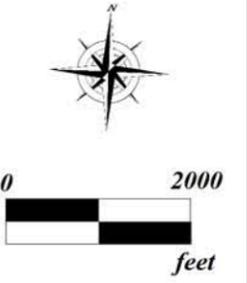
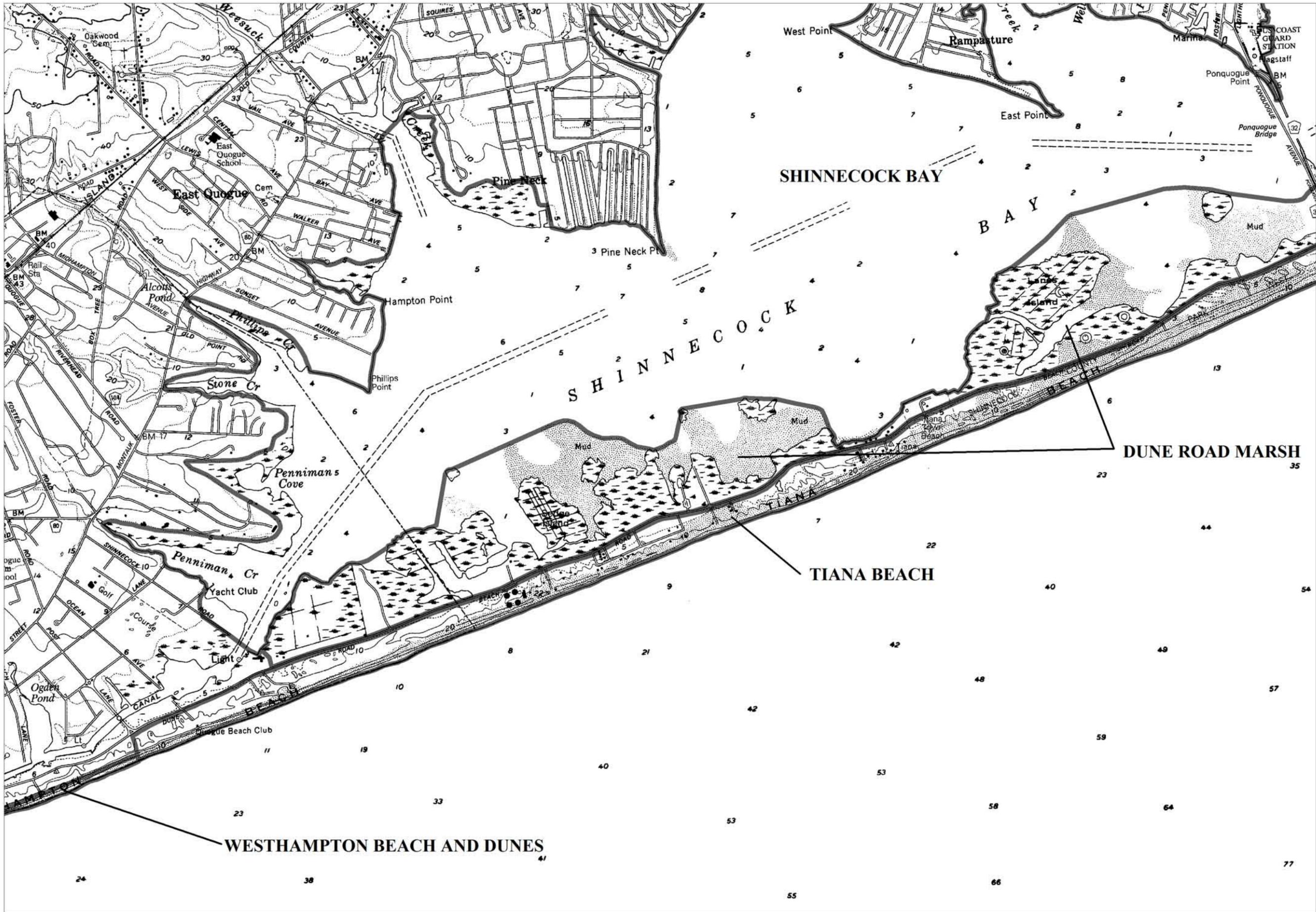
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Significant Coastal Fish and Wildlife Habitats

- Tiana Beach (In Part)
- part 1 of 2
- Dune Road Marsh (In Part)
- Shinnecock Bay (In Part)
- Southampton Beach (In Part)



Significant Coastal Fish and Wildlife Habitats

- Tiana Beach (In Part)
- part 2 of 2
- Dune Road Marsh (In Part)
- Shinnecock Bay (In Part)
- Westhampton Beach and Dunes (In Part)