

NEW YORK STATE
SIGNIFICANT COASTAL FISH AND WILDLIFE HABITAT
NARRATIVE

Grandifolia Sandhills

LOCATION AND DESCRIPTION OF HABITAT:

The Grandifolia Sandhills habitat is located on the north shore of Long Island, between Jericho Landing and Roanoke Landing, in the Town of Riverhead, Suffolk County (7.5' Quadrangle: Riverhead, NY). This approximately 125 acre area is bounded by the Reeves Park community on the east, Sound Avenue on the south, Warner Drive to the west, and Long Island Sound to the north. The fish and wildlife habitat includes both wooded slopes and uplands as well as narrow areas of maritime beach along the Sound shoreline. This body of habitats runs nearly 3/4 of a mile long and vary from nearly a hundred yards to nearly a half mile inland from the Sound. The habitat is bordered to the west and east by residential development and limited areas of undeveloped woodlands, and by a golf course with associated residences to the south. Land above mean high water encompassed by the Grandifolia Sandhills habitat is privately owned and does not presently offer public recreational amenities.

The Grandifolia Sandhills habitat includes significant coastal forests, including globally rare plant communities in association with steep bluffs. Most of the habitat is comprised of coastal oak-beech forest, one of the largest examples of this plant community on Long Island. The forests at this location display excellent species diversity, with limited intrusion by exotic species. The area contains a diversity of community types, including maritime beach, wooded bluffs, and mature woodlands. Also known as Friar's Head forest, the slopes of the Grandifolia Sandhills habitat includes areas of maritime beech forest (approximately 30 acres) dominated by American beech (*Fagus grandifolia*) trees, often less than 12 feet in height, predominantly stunted, multi-stemmed, and gnarled due to the effects of salt spray and wind. The area also includes about 40 acres of maritime pitch pine dune woodland, which is considered rare in New York State as well as globally.

FISH AND WILDLIFE VALUES:

This habitat is important to many wildlife species throughout the year, especially for non-game birds during fall and spring migrations. Concentrations of non-game migratory birds in the Grandifolia Sandhills area during nesting and migration seasons are among the largest on Long Island and are of regional importance. Among the confirmed breeding bird species in this area are eastern wood peewee, eastern kingbird, northern rough-winged swallow, Carolina wren, wood thrush, red-eyed vireo, American redstart, ovenbird, scarlet tanager, rose-breasted grosbeak, rufous-sided towhee, chipping sparrow, song sparrow, eastern meadowlark, and northern oriole. The area's woodlands provide habitat for the largest breeding group of ruby-throated hummingbirds on Long Island.

IMPACT ASSESSMENT:

Any activity that would substantially degrade water quality and/or terrestrial natural resources in the Grandifolia Sandhills habitat would adversely affect the biological productivity of this area. Degradation of water quality in the sound, from chemical contamination (including food chain effects), oil spills, excessive turbidity, and waste disposal (including vessel wastes) would adversely affect fish and wildlife. Buffer zones should be protected or established to protect the rare forest habitat.

Construction of shoreline structures, such as docks, piers, bulkheads, or revetments, in areas not previously disturbed by development, may result in the loss of productive areas which support the fish and wildlife resources of the Grandifolia Sandhills. Alternative strategies for the protection of shoreline property should be examined, including innovative, vegetation-based approaches. Elimination of terrestrial areas, through loss of intertidal connection, ditching, excavation, or filling, would result in a direct loss of valuable habitat. Control of invasive nuisance plant species, through a variety of means, may improve fish and wildlife species use of the area and enhance overall natural resource values.

Unrestricted use of motorized vessels including personal watercraft in the shallow waters of the area 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.

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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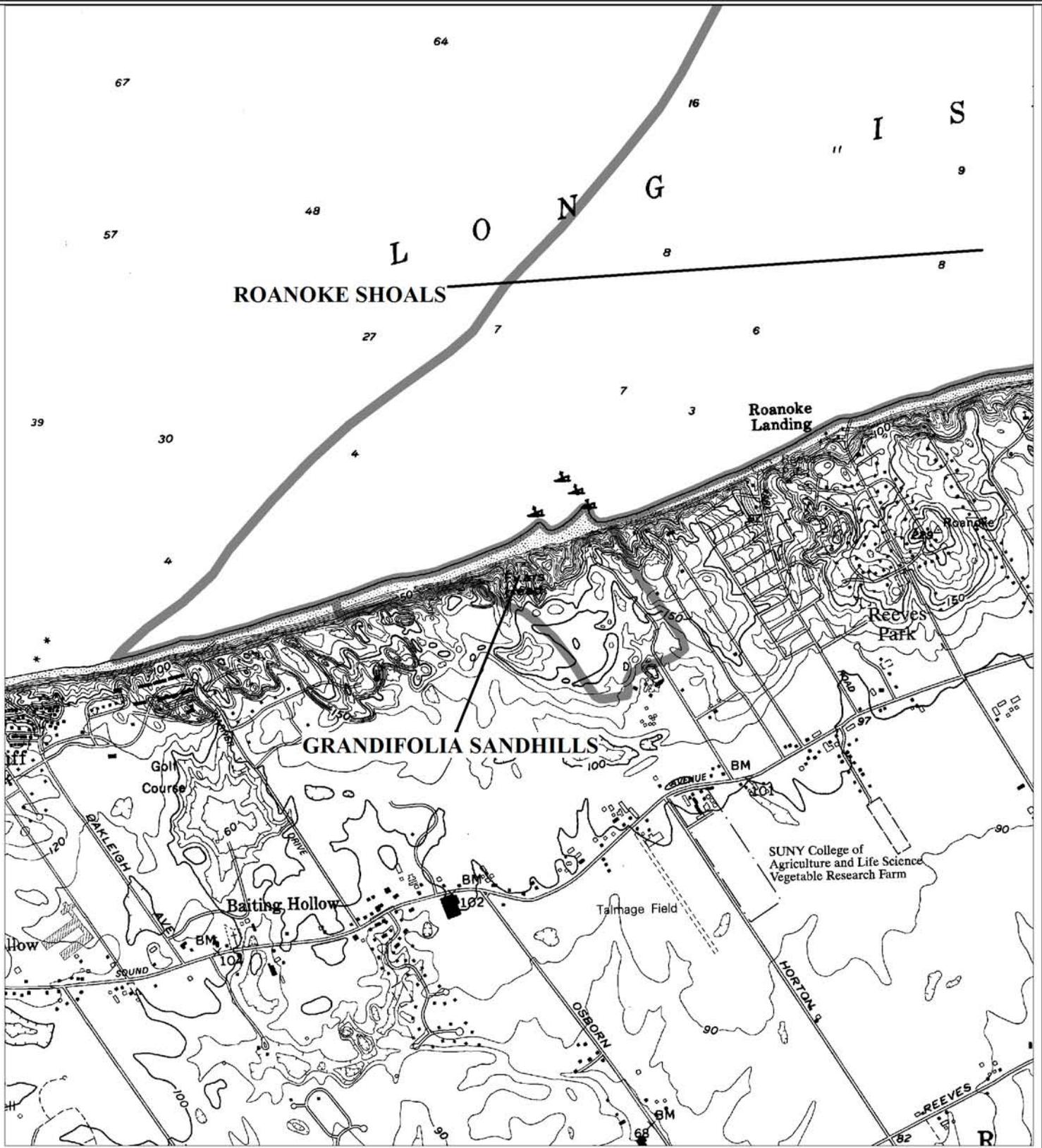
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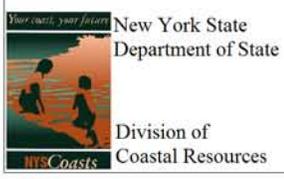
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Significant Coastal Fish and Wildlife Habitats



Grandifolia Sandhills
Roanoke Shoals (In part)

