general management plan

FIRE ISLAND



NATIONAL SEASHORE / NEW YORK

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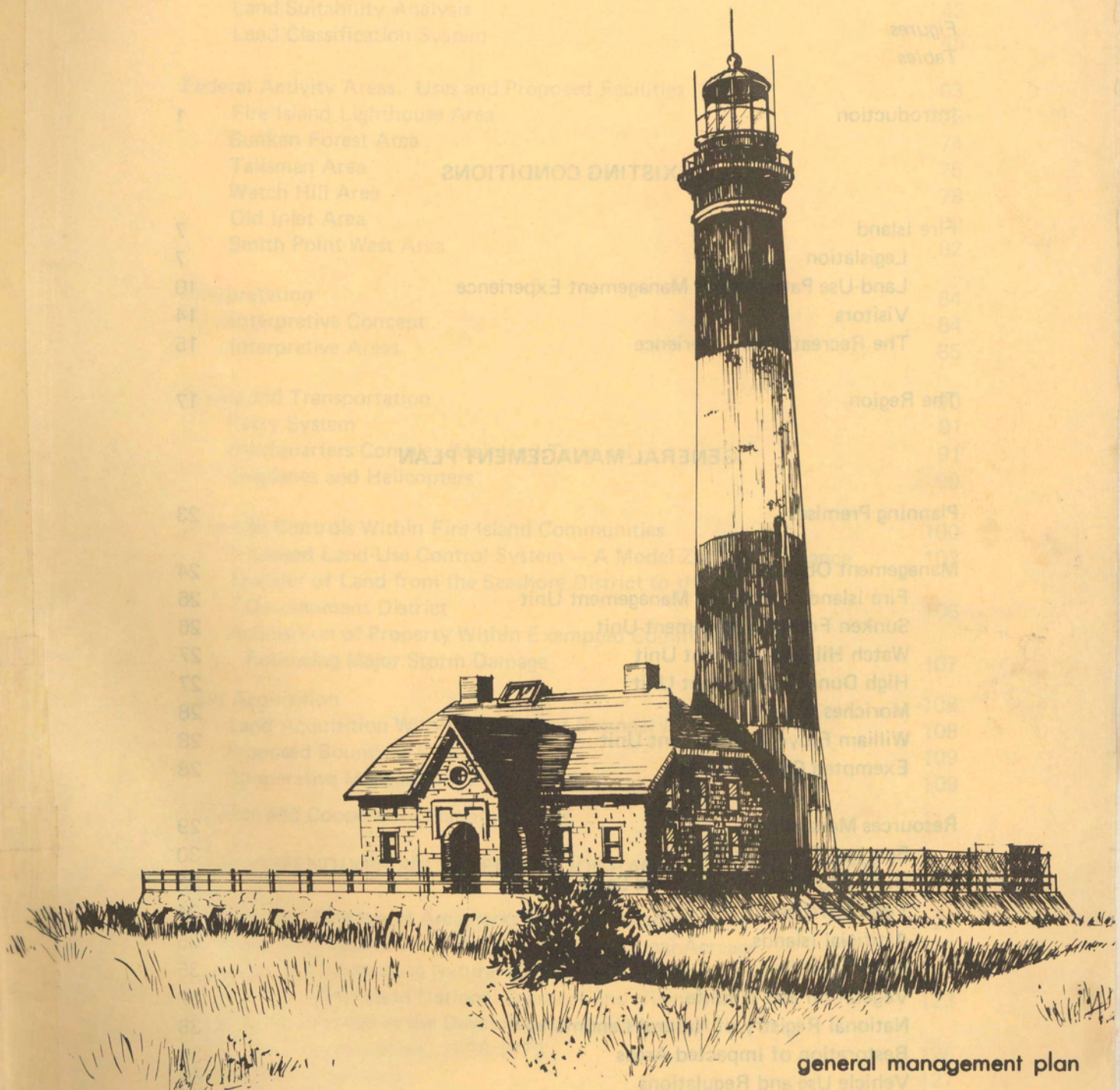
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UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE



general management plan

Fire Island National Seashore

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INTRODUCTION

Fire Island, a 32-mile-long barrier island paralleling the southern shore of Long Island, New York, has long provided an exceptional recreational resource to the residents of the New York metropolitan area (see figure 1). In 1964, in the midst of widespread controversy over proposals for a highway extending the length of Fire Island, Congress designated approximately 26 miles of this barrier island as Fire Island National Seashore.

The national seashore has within its authorized boundary a variety of landowners and governmental jurisdictions, including 17 private residential communities, several town-owned beaches, a highly used county park, and a long segment of county-owned beach. The communities are subject to indirect federal control, while private inholdings are subject to more direct control by the National Park Service. Robert Moses State Park on the western end of the island is not included within the national seashore.

Planning for the use of Fire Island National Seashore was begun in 1964. Since that time several plans have been proposed: The first plan was prepared in 1965, but it was not until 1967 that a plan was first adopted; and additional planning was initiated in 1971. Three plans have been proposed since 1971, none of which has received substantial public support. This general management plan is the result of planning efforts begun in July 1975. It outlines an environmentally sound management basis for the national seashore to ensure the protection and perpetuation of the beaches, dunes, and other natural features as well as to provide reasonable access and facilities for public day-use recreation.

The relationships between the 17 exempted communities, the several town- and county-owned beaches, and the National Park Service have remained ill-defined and subject to widespread individual conjecture. This plan proposes to rectify

land-use control problems through clarification of zoning ordinances and responsible authorities, through certain cooperative management agreements, and in some cases through direct land acquisition. The plan identifies the role of the federal and local governments in setting and enforcing zoning regulations.

The seashore presently receives mostly day-use recreation, largely during the summer season; some off-season use also occurs because of the temperate climate and year-round recreation opportunities such as surf-fishing and beachcombing. Preservation of traditional uses, diversification of recreational and interpretive/ educational opportunities, and determination of maximum visitation levels for federal activity areas are listed in the planning proposals.

Most national seashore visitors who do not own or have access to private boats use ferries from the mainland to reach federal activity areas. The National Park Service has no mainland transportation staging facilities and almost no contact with visitors before they reach the island. Consequently, a proposal for developing a headquarters complex and mainland ferry terminal is included in this plan.

There is no continuous hard-surfaced road running the length of Fire Island, and the two causeways from Long Island — one ending at a paved parking area in a state park at the extreme western end of Fire Island, and the other at a parking lot in a county park at the eastern end — provide the only means of automobile access. Vehicular circulation on Fire Island is restricted to travel along the beach and through dune crossings into communities and recreational developments. The regulation of vehicular traffic on the beach by both the towns and the National Park Service has been a long-standing source of controversy. Thus, vehicle use and regulation is a major subject of this general management plan.

Since Fire Island functions to some degree as a barrier shielding the urbanized communities along the south shore of Long Island from the damaging impacts of hurricanes and extratropical storms (northeasters), the flood protective role of the island has been considered in the management proposals for Fire Island. In addition, transportation plans and resources management proposals have taken into account potential impacts on the shellfishing industry, which is one of the major industries of the Great South Bay.

Because of the complex land-use patterns, landownerships, development patterns, and the number of governmental authorities affecting Fire Island, continuing dialogue and cooperation between the National Park Service and the numerous interests affected by Park Service activities on Fire Island are critical to the long-term success of coastal-zone planning in the region. Consequently, cooperative planning needs are considered throughout the plan. Only a high level of cooperation among all parties concerned about the future of Fire Island will assure the success of this general management plan.



Figure 1
Vicinity Map
Fire Island National Seashore
New York

existing conditions

FIRE ISLAND

LEGISLATION

A national seashore on Fire Island was established by an act of Congress on September 11, 1964, and is one of ten National Park Service areas located on barrier islands and spits of the Atlantic and Gulf coasts (see figure 2). It was established "for the purpose of conserving and preserving for the use of future generations certain relatively unspoiled and undeveloped beaches, dunes, and other natural features within Suffolk County, New York, which possess high values to the Nation as examples of unspoiled areas of great natural beauty in close proximity to large concentrations of urban population" (Public Law 88-587, 78 Stat. 928; see appendix E). The legislation also allows traditional recreational activities to be provided at environmentally compatible areas of the seashore.

The boundaries of the national seashore, as defined in section 1(b) of the enabling legislation, include the area "from the easterly boundary of Robert Moses State Park eastward to Moriches Inlet," various nearby islands in adjacent bays, and "the waters surrounding said area to distances of one thousand feet in the

Atlantic Ocean and up to four thousand feet in Great South Bay and Moriches Bay." Section 2(a) authorizes the Secretary of the Interior to acquire by purchase, donation, transfer, exchange, or otherwise, "the lands, waters, and other property, and improvements thereon and any interest therein, within the boundaries of the seashore." The act further provides for land exchange between the federal government and other interests within the boundaries of the seashore.

According to section 2(e) of the act, the Secretary may acquire, without the consent of the owners, lands necessary for public access to the beach, but he may not acquire without consent other lands where compliance with "a duly adopted, valid, zoning ordinance that is satisfactory to the Secretary" has been demonstrated. The Secretary is authorized by section 3(b) to "issue regulations, which may be amended from time to time, specifying standards that are consistent with the purposes of this Act for zoning ordinances which must meet his approval." Such standards may prohibit certain new commercial or industrial uses and promote "the protection and development . . . of land within the national seashore by means of acreage, frontage, and setback requirements." Section 3(d) states that such regulations must be incorporated into provisions of local zoning ordinances, which will not be approved by the Secretary if they contain "any provision that he considers adverse to the protection and development . . . of the area comprising the national seashore." These provisions give the federal government considerable authority to regulate land use and development on lands within the boundaries of the seashore that are not in federal ownership.

Section 2(e) specifically authorizes the Secretary to acquire property by condemnation "in an approximately eight-mile area from the easterly boundary of . . . Davis Park . . . to the westerly boundary of the Smith Point County Park." Owners of property in this zone on July 1, 1963, were given the option of a life tenancy, or up to a 25-year tenancy, in lieu of vacating the property after selling it to the federal government. This zone and the Sunken Forest area are afforded special protection by sections 7(a) and 7(b) from the incursion of roads and ecologically incompatible uses.

The role of the Corps of Engineers in environmental manipulation is stipulated in section 8(a): "The authority of the Chief of Engineers, Department of the Army, to undertake or contribute to shore erosion control or beach protection measures on lands within Fire Island National Seashore shall be exercised in accordance with a plan that is mutually acceptable to the Secretary of the Army and the Secretary of the Interior and that is consistent with the purposes of this act."



Scale 1 : 7,500,000
0 100 200

Figure 2

National Park Service Lands On Spits And Barrier Islands Of The Atlantic And Gulf Coasts

Fire Island National Seashore

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The act and the history of administrative policy for recreational areas support the fact that the National Park Service's land acquisition policy must first be directed to the conservation and preservation of natural, undeveloped areas.

Concern and controversy has grown each year since the establishment of the national seashore. The primary arguments center around interpretation of the legislation as it applies to recreational use of federal areas and to federal control of private development in the 17 exempted communities. In the past, local governments have been reluctant to actively enforce zoning regulations within the exempted communities. In fact, only two of the four local governments have submitted zoning ordinances to the Secretary of the Interior for approval. Local and federal actions concerning zoning are awaiting release of the general management plan. The question of zoning and federal versus local control is addressed in the Land-Use Control section (pp. 100-107).

In formulating standards and additional legislation for protection and development of the national seashore in accordance with provisions of the enabling act, the federal government has a responsibility to utilize all the relevant information from research studies on barrier islands that has been accumulated since passage of the act. Such information has contributed substantially to knowledge of barrier-island systems and should be brought to bear on their management.

LAND-USE PATTERNS AND MANAGEMENT EXPERIENCE

Currently, there are three principal types of land use on Fire Island, all oriented to summer recreation: community developments; federal, state, and county parks; and municipal parks. Encompassing a variety of recreational resources, each of these land uses provides for the common needs of different user-groups and for the different needs of single user-groups.

Community Developments

Fire Island's community developments consist mostly of summer residences, commercial establishments, and related utilities. They are situated primarily at the western end of the island, within the boundaries of the national seashore. Collectively, these communities provide the island's greatest variety of recreational facilities (mostly private), virtually all of its overnight accommodations, and most of its commercial establishments. No highways or lateral ferry systems link the communities with public recreation areas, and public facilities in the communities are largely inaccessible to visitors who do not own boats. The residential areas are political subdivisions of Long Island's towns of Islip and Brookhaven and the villages of Ocean Beach and Saltaire, which provide limited municipal services.

Assurance of acceptable environmental quality in these communities is in part the responsibility of the Secretary of the Interior, who may issue regulations governing land-use development and island protection and must approve all zoning ordinances pertaining to these areas. The federal government has discretionary authority to exert control over activities in these communities. In practice, however, the community developments function as semi-autonomous units within the national seashore. Park visitors are not encouraged to spend time in the communities.

Land-use control, through Department of the Interior zoning regulations, was the explicit responsibility of the four local governments controlling the 17 communities of Fire Island. Widespread confusion has developed since establishment of the national seashore regarding which governmental authority should do what to enforce land-use controls. In general, local and federal authorities have failed to exercise proper responsibility.

The use of four-wheel-drive vehicles has become an increasing concern to visitors, some property owners, local governmental officials, and National Park Service managers. Where vehicle use is particularly heavy, both federal and non-federal lands are adversely affected. Although the number of permits has been reduced in recent years (412 permits in 1976), more restrictive measures will be required in the immediate future to provide the environmental quality due visitors and users of this unique barrier island. The reduction of vehicle use to the absolute minimum is a common objective of the federal and local governments.

Federal, State, and County Parks

Public parks on Fire Island are managed either by federal, state, or county agencies, and the type of recreational opportunities available depends on the managing agency. State and county parks offer high-density recreational activities, while the national seashore offers low- to medium-density activities.

Fire Island National Seashore. In February 1977, the National Park Service managed 5,943 acres within the seashore boundaries, of which 2,792 acres were owned in fee and 3,151 acres were controlled through an easement granted by New York State (from the mean high waterline seaward 1,000 feet). The lands managed by the Park Service represent about 31 percent of the total acreage of land and water (19,356 acres) within the boundaries. Most federally owned lands were acquired during a 6-year period following passage of the enabling act in 1964. At present, Park Service holdings on Fire Island consist of four large bay-to-ocean strips totaling 1,639 acres and six smaller bay-to-ocean strips totaling 183 acres. All of East Fire Island and its satellite islands (156 acres), as well as most of West Fire Island (102 acres), are also federal lands. In addition to these lands, which were included within the original boundary, Congress added in 1965 the 612-acre William Floyd Estate, a historic mainland property north of Moriches Bay near the eastern end of Fire Island.

The Department of the Interior has expended $15,731,000 of the $16 million originally authorized for land acquisition and purchases of interests in land, and the remaining $269,000 has been included in the 1977 Park Service budget request. In 1976 Congress authorized an additional $2 million for land acquisition at Fire Island National Seashore.

After April 1977, 42 residences will remain occupied under tenancy options; after September 1977, only 20 residences will remain occupied. As tenancy option agreements expire, residential structures and associated developments on federally acquired lands are slowly being removed, and the lands are being used for public day-use recreation or natural preservation.

The federal government does not own the beach, the primary dune line, the marshlands, or other unimproved lands on Fire Island that are outside the boundaries of its existing holdings, and it has no bay-bottom acreage, except for a small tract at Sunken Forest that is 1,000 feet out into the bay and follows a line 1,350 feet east and west of the centerline of the marina. The national seashore act gave the National Park Service legislative authority over waters for a distance up to 4,000 feet in Great South Bay, as indicated by the seashore boundary on figure 1. In 1966, New York State granted the Park Service use and occupancy rights (easements) over waters for a distance of 1,000 feet into the Atlantic Ocean from the high waterline on the beach.

National Park Service concerns in exercising jurisdiction in Great South Bay are fourfold. First is the concern about the health, safety, and welfare of the general public using waters within the national seashore's boundaries and the effects such uses might have on adjacent seashore lands. Within this framework, the Park Service might reasonably be expected to assure that adequate safety equipment is aboard boats within seashore waters and that the use of these boats complies with applicable U.S. Coast Guard regulations. A second area of regulatory concern relates to hunting migratory waterfowl within seashore boundaries, a concern that is addressed through a cooperative hunting agreement between the Park Service and New York State. A third area of concern is the introduction of pollutants, wastes, or other materials into bay waters, which would adversely affect the quality of bay waters or bayside shorelines and their related marine plant and animal life. This concern could be addressed by regulating wastewater discharge into bay waters by private and commercial vessels and by encouraging boaters to use land-based disposal facilities. A final concern deals with resource protection and preservation, which is covered by regulations found in the *Code of Federal Regulations,* Title 36, Sections 1 through 6.

The present authority of the National Park Service within the 4,000-foot jurisdiction does not permit regulation of commercial or recreational shellfishing

nor the regulation of bay-bottom activities. It is the position of the National Park Service, as one of many enforcing agencies with jurisdiction in this area, *not* to increase its patrol function to include regular checks on all bay waters within the presently mapped boundary, but to concern itself with those areas already referred to as resources management (for example, water quality) and public safety interests.

The National Park Service staff has faced several problems in managing Fire Island National Seashore, including unsatisfactory vehicle-use controls, lack of resources management policies, inadequate zoning regulations, no appropriate national seashore headquarters or ferry terminal area, and insufficient visitor parking.

Visitors who do not have access to private boats may have to endure many frustrations before reaching Fire Island National Seashore. Those who arrive by car may have to battle several hours of traffic on Long Island highways, only to become lost en route to the ferry slip because routes are poorly marked. At the ferry slip, public parking costs $2 to $3 per day, and the insufficient parking area is often full. Visitors must then leave their cars some distance away, occasionally at the risk of an illegal parking fine. Their frustration may be magnified when they see that the parking lot contains many empty stalls, which are reserved for the exclusive use of local residents. If visitors miss a ferry connection, they may have to wait an hour or more for the next run. Once on the ferry, visitors have about a 30-minute ride to the island; round-trip ferry rides cost $3.00 to $3.75 per person. At Fire Island National Seashore, disembarking visitors temporarily crowd the docks and nearby facilities until various interests motivate them to disperse and seek different recreational attractions and activity centers in or near the developed area.

Robert Moses State Park. Robert Moses State Park is located at the extreme western end of the island and is reached via the Robert Moses State Parkway. High-density recreation there has little effect on activities elsewhere on Fire Island. The nearest federal development is 6 miles east at Sunken Forest, and the lighthouse tract and private communities block the eastward movement of people. Construction of recreational developments on this recently formed land probably has little short-term effect on the natural evolution of the rest of the island. The state park is an important recreation area for Long Island residents and it received 2,122,200 visits during 1976 (see appendix A).

Smith Point County Park. Smith Point County Park, a 1-mile-long bay-to-ocean strip that is managed by Suffolk County, is part of a 6.3-mile segment at the eastern end of Fire Island. The park lies completely within the

authorized boundary of the national seashore and contains facilities for high-density recreation near the end of William Floyd Parkway. The county lands east of the park are largely undeveloped. Smith Point County Park's major recreational development is adjacent to the largest natural area in the national seashore. A relatively small percentage of visitors to the county park also visit this prime natural area, and the presently minimal adverse environmental effects of visitor use occur primarily within a 1- to 2-mile area west of the parking lot. Annual visitation for Smith Point County Park during 1976 was 735,256 (see appendix A).

Municipal Parks

The towns of Islip and Brookhaven and the village of Bellport maintain five small private parks for the use of their residents. Two, Barrett Beach and Bellport Beach, are of particular importance with respect to the national seashore because they are included within major federal tracts. Barrett Beach is a 7-acre bay-to-ocean strip of land owned by the town of Islip and developed as a recreational beach, and it transects the federally owned Talisman tract; both Barrett Beach and the Talisman tract are receiving increased use. The beach consists of a graded, unstabilized fill zone through the middle of the narrowest part of the island.

Bellport Beach, a similar but less extensively developed private municipal park, was constructed for the use of residents of the village of Bellport. The land is leased under a long-term special permit from the National Park Service. Today, this 200-foot-wide strip is located in the middle of an outstanding natural area. Bellport Beach's interior swale has been covered with fill material, and the rest of the tract has been filled and graded from bay to dune line.

VISITORS

Fire Island is situated in the most densely populated region of the United States. For several reasons the regional population does not represent the potential visitors to the national seashore. In terms of accessibility, Long Island is one of the most isolated areas in the Northeast. Long Island Sound, the Atlantic Ocean, and most importantly the New York City metropolitan area all act as barriers to the efficient movement of people to and from Long Island. The area has long been a bedroom community for workers and a playground area for residents of New York City, to which it is linked by an overcrowded highway network and an

often inefficient mass-transportation system. Long Island has undergone rapid population growth in the last decades, with many people moving out of the city to attempt semi-rural living. As the urbanization of western Long Island has intensified, people have moved farther and farther eastward. For these people, New York City impedes westward mobility and tends to increase the importance of the island's recreational facilities by restricting access to recreation areas north and west of the city. Similarly, the congested highways discourage motorists from New York, New Jersey, and southern New England who might otherwise consider a trip to the seashore. Other natural and recreational resources in more accessible locations are available for these populations. The scarcity of inexpensive lodging on Fire Island and in nearby Long Island communities further limits use, particularly by those who live too far away to drive to and from Fire Island in one day. In New York City, a small percentage of people maintain cars because of their associated expenses and inconveniences; therefore, to reach the seashore, many urbanites must use public transportation, which is inconvenient, undependable, and expensive.

Considering thse conditions, it is not surprising that the majority of visitors to federal areas within the national seashore surveyed in a 1969 study resided in the 19 south-shore Long Island communities in Nassau and Suffolk Counties, and only 7 percent came from out of state. The analysis of survey questionnaires revealed that the national seashore primarily attracts people who inhabit single-family residences in suburban communities of small to moderate size (10,000 to 100,000 people), are well educated (typically having college degrees), have above-average incomes, and are usually employed in the professions. The seashore, therefore, serves relatively affluent New York suburbanites, and primarily those residing in Suffolk and Nassau Counties. The provision of an inexpensive, convenient means of public transportation is the only way by which the national seashore is likely to become more accessible to a variety of socioeconomic groups. The possibility of such a system appears relatively remote.

THE RECREATIONAL EXPERIENCE

Fire Island is a relatively small piece of land compared to many other natural areas of the National Park System, but the diversity of its landscape and the variety of recreational activities that are offered are greater than in areas many times its size. Constantly reworked by wind and wave, the sand that makes up the island is molded into an orderly mosaic of dunes and flats, which are continually built, then destroyed. Fire Island's vegetative communities are widely differentiated due to great changes in environmental conditions from place to

place. In some areas, visitors can take a walk through windswept grasslands, moist maritime forests, and saltwater tidal marshes – each community being associated with its own particular environment. It is obvious that visitors will not feel the same on the beach as they do at the edge of a vast tidal marsh or in a secluded holly forest, and the visitors' opportunity to relate with the sounds, sights, smells, and sensations of each of these outstanding natural environments, without interference from development, is an integral part of the Fire Island recreational experience.

Although Fire Island is primarily a summer recreation area, when both air and water are warmest, other seasons bring an array of new experiences. During autumn, shrubs are often laden with edible fruits; the tidal marshes turn yellow, orange, and crimson; and migratory birds make seasonal stops en route to winter feeding grounds. In winter, the weather is cold, storms are frequent, and the island becomes desolate. Yet, to a hardy few, the starkness provides a peculiar attractiveness. The advent of spring brings the sights, sounds, and smells of reawakening life: Birds return to the island, ecological productivity increases, and the island is again cloaked in green.

Only two areas of Fire Island National Seashore have been developed to provide for traditional recreational activities – Sunken Forest and Watch Hill. Undeveloped federal lands tend to attract visitors with special interests, and use of these areas is light. The extensive tidal marshes of East Fire Island provide some of the seashore's best waterfowl habitats and excellent sites for bird-watching. The outstanding natural area between Watch Hill and Smith Point West provides opportunities for long-distance hikes and exploration by both casual and serious students of natural history.

THE REGION

As previously stated, Fire Island is located in the most densely populated region of the United States – some 20.8 million inhabitants live within a 100-mile radius in the states of New York, New Jersey, and Connecticut (see figure 3). The immediate environs – Nassau and Suffolk Counties, New York – comprise a land area of 1,200 square miles, with a 1976 population of approximately 2.76 million, which represents a 7.9 percent increase from the 1970 population. Nassau County, covering the western half of Long Island, listed 1,460,421 inhabitants in 1976, and Suffolk County, to the east, had a population of 1,297,256.

The rapid population growth witnessed for decades in Nassau County had sharply decreased by 1970 due to the lack of available land for housing and related development. From 1960 to 1970 the county grew by only 9.9 percent, a rate larger than the 8.4 percent increase for New York State, but well below the 13.3 percent rate of national population growth.

Much of the decline in Nassau County growth and development was counterbalanced by large population increases in eastern Suffolk County towns such as Islip, Babylon, and Brookhaven. From 1960 to 1970 Suffolk County's population increased 69 percent, while the town of Brookhaven had a dramatic 95 percent growth rate. The population of Suffolk County is concentrated in central and southern Long Island, with 65 percent of the total in the south-shore towns of Babylon, Islip, and Brookhaven. Given the existing population distribution in Suffolk County, at least 750,000 persons reside within 30 minutes of one of the Fire Island ferry staging areas.

Long Island inhabitants are relatively young. Islip, Brookhaven, Huntington, Smithtown, and Babylon rank one through five among the townships in the two-county region in size of school-age population. Migration of young families into Suffolk County accounted for at least 70 percent of the county's growth in the recent decade.

Current evidence concerning the housing market and industrial growth indicates a probable decline in the rapid growth rate of Suffolk County. The apparent abandonment of plans for a cross-sound bridge linking Suffolk County with Connecticut will also aid in slowing the growth rate, although these same factors can be expected to produce increases in local demands on recreational resources.

Recreational resources within Nassau and Suffolk Counties vary widely. Suffolk County currently has a surplus of undeveloped recreational lands; Nassau County is faced with a significant shortage. The Nassau-Suffolk Regional Planning Board predicts no significant increase in open space through the year 2000, but population increases of 900,000 people are expected by 1985. (Appendix B illustrates existing recreational lands and recommended future needs for the New York metropolitan area.)

Large populations, predominance of young families, high income levels, and increasing amounts of leisure time add to the needs for recreational resources, and needs will increase if Suffolk County repeats Nassau County's development history. Because the housing shortage is a major problem, and because little land is available in Nassau County for additional building, future residences will be high-density townhouse complexes and condominiums, with minimal recreational areas.

The barrier-beach system of southern Long Island provides recreational opportunities for a large number of the region's residents. Due to the extreme shortages of recreational space within the region, Robert Moses State Park and Smith Point County Park, both adjacent to Fire Island facilities, are heavily used on peak summer days. These two parks will continue to serve high-density recreational needs for the Fire Island region.

One of the most important industries in the vicinity of Fire Island is shellfishing, and Great South Bay has historically been a leader in the production of hard-shell clams – approximately 40 percent of the world's supply is harvested from Suffolk County's Great South Bay region. The retail value of shellfish production on Long Island has been conservatively estimated at $100 million. The hard-shell clam industry in the region is made up of private companies, individual operators, and others who harvest clams for personal and recreational use. In Suffolk County, there are approximately 8,000 licensed individuals who harvest shellfish, and approximately 500 people are employed in onshore shellfishing activities. From 1960 to 1974, shellfishing increased approximately 60 percent with a 1974 dockside sales of $12.4 million. This value is probably an underestimation because some of the clam harvest is independently marketed and is not reflected in annual dockside value.

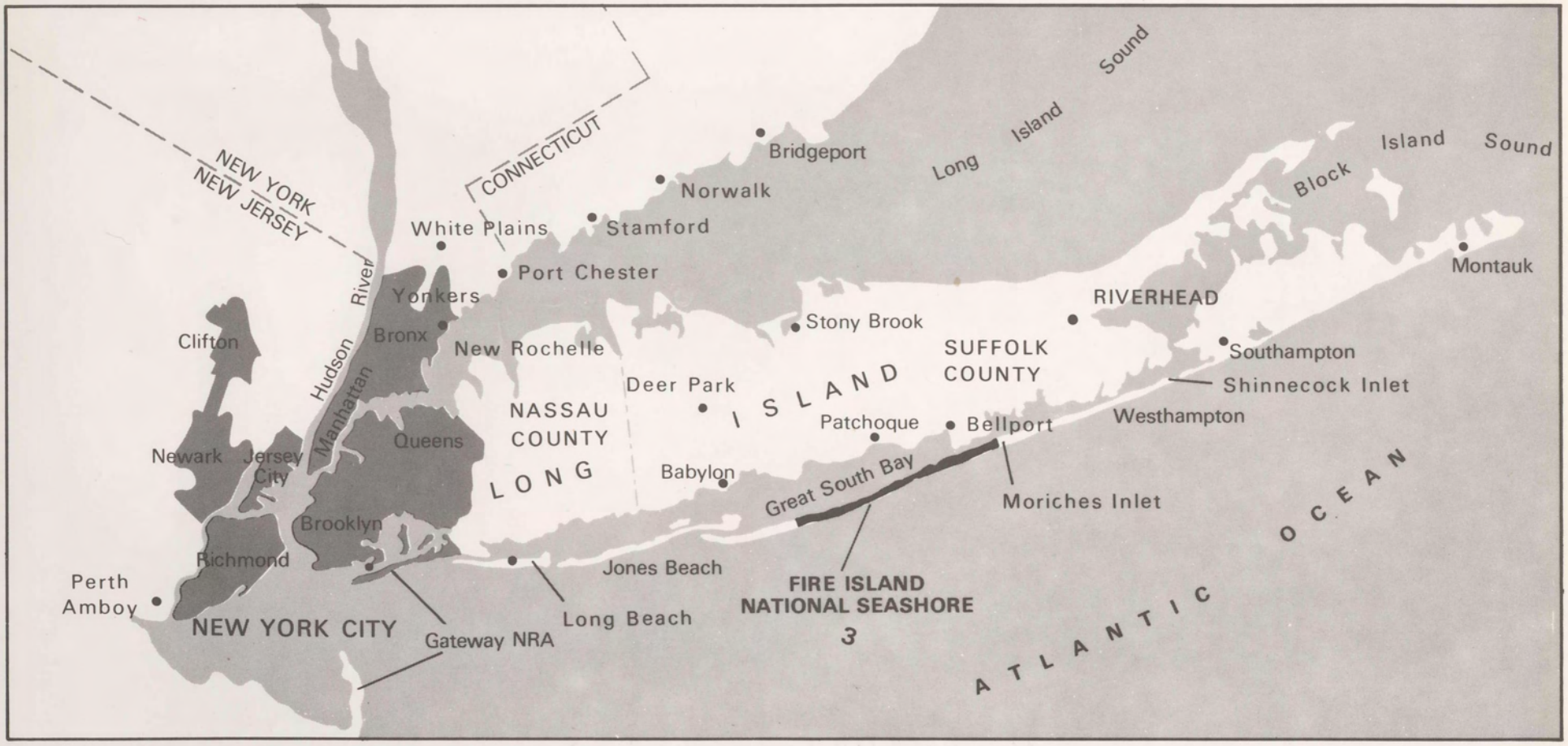


Figure 3

The Region

Fire Island National Seashore

UNITED STATES DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE

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general management plan

PLANNING PREMISES

This general management plan is based on the following planning premises:

The primary management concern is preservation and enhancement of the serenity and natural beauty of the island, which includes protection of the beaches, dunes, and other natural features fundamental to the concept of Fire Island National Seashore.

Planning for management, use, and recreational facilities at Fire Island is based on the knowledge that the island is a dynamic, changing resource and today's configuration and environment may not be tomorrow's. Design of facilities should be guided by the uncertainty of natural events on barrier islands.

Increased use of federal recreational areas will be minimal, with emphasis placed on the quality of facilities and visitor experiences and not on quantitative increases.

The plan recognizes that certain resource management actions are necessary to fulfill the legislated mandate for the national seashore. Fire Island is a culturally manipulated barrier-island system, and it cannot be managed as if natural geomorphic processes had been totally unimpeded.

Fire Island National Seashore does not exist as an isolated entity, rather it is located within the nation's largest urbanized area, and cooperative planning between local publics and governmental authorities is required to ensure that mutually compatible goals are achieved.

Proper land-use controls and related regulations within the communities of Fire Island are necessary for the long-term preservation of the resource, thereby requiring National Park Service involvement in community zoning activities, as intended by the 1964 Fire Island National Seashore Act.

The plan is intended to serve the long-term management needs of the national seashore; however, implementation of planning proposals is based on a 10-year time frame.

Certain land acquisitions and cooperative management agreements are desirable for improved management of the national seashore.

This general management plan recognizes that Fire Island National Seashore serves a definable population of known and potential visitors. Basically, Fire Island provides for, and will continue to serve, the recreational needs of Suffolk and Nassau Counties and to a lesser degree the needs of New York City.

MANAGEMENT OBJECTIVES

The National Park Service will manage Fire Island National Seashore in accordance with the legislated mandate to preserve the island's natural resources while providing diverse recreational opportunities. The following objectives will be used to guide management and operation of the national seashore:

To provide for the preservation of unspoiled beaches, dunes, and natural features for the use of future generations.

To protect and preserve natural plant and animal communities.

To manage Fire Island in ways that will enhance natural processes and mitigate the impacts of human interference with these processes.

To control visitor use in areas of prime wildlife habitat as required to maintain wildlife populations.

To maintain and/or restore all areas not required for public or administrative use to a natural condition using aesthetically appealing and environmentally compatible methods.

To identify and preserve cultural resources.

To maintain acceptable water quality in marinas and adjacent waters through management of visitor use.

To advise and consult with appropriate agencies concerning offshore oil drilling and production and to ensure National Environmental Policy Act compliance for any related activities that may occur within national seashore jurisdiction.

To continue to work with the U.S. Coast Guard and other involved agencies in the detection, monitoring, and cleanup of any sludge or other pollutants brought ashore by wind and wave action.

To foster public understanding and appreciation of Fire Island's natural and cultural resources.

To provide for the continued reduction of vehicle use until such use is at an absolute minimum.

To maintain and provide only those dune crossings (vehicular and pedestrian) required for the proper use and preservation of the area.

To allow for vector control activities within federally managed properties of the national seashore in times of established public health emergencies.

To provide a wide range of quality interpretive activities that emphasize the natural features and processes of the seashore's lands and waters, man's relationship with his environment, and the historical and other cultural values of the area.

To coordinate a full program in environmental education with local schools so that the area can be used to its fullest advantage as a place where children from all walks of life can experience, enjoy, and learn from a natural setting the relationships between man and the barrier beach, and his impacts on it.

To place underground all aerial utility lines.

To utilize Fire Island's resources in providing recreational facilities and opportunities that are generally unavailable elsewhere in the region while maintaining the serenity and beauty of the barrier island.

To provide for the continuation of traditional low-density recreational activities.

To make the national seashore accessible to a cross section of the national and regional population.

To encourage cooperation in the management of adjacent recreational lands to prevent unnecessary duplication of facilities and to provide the greatest diversity of recreational opportunities on Fire Island.

To promote and enhance a harmonious relationship between the exempted seashore communities and the National Park Service.

To integrate planning and management for Fire Island National Seashore into regional planning and economic considerations.

Fire Island National Seashore has been divided into management units to facilitate management and to improve operations immediately. Each unit will have specific management objectives as discussed below.

FIRE ISLAND LIGHTHOUSE MANAGEMENT UNIT

This unit includes the 90-acre lighthouse tract, bay-to-ocean strips, Sexton Island, West Island, and East Island. Management objectives for this unit are as follows:

To preserve and interpret the historic resources of the lighthouse complex.

To manage natural resources within the lighthouse tract and the adjacent bay islands for interpretation, environmental education, research, and preservation.

To rehabilitate and preserve bay-to-ocean strips.

SUNKEN FOREST MANAGEMENT UNIT

This unit extends from the eastern boundary of Point O'Woods to the western boundary of Davis Park. The following objectives have been defined for the Sunken Forest unit:

To continue special protection for the old maritime holly forests of the Sunken Forest.

To manage the Sunken Forest developed area as a center for natural history interpretation and recreation, and to de-emphasize overnight use by boaters.

To assist with the preservation of the outstanding maritime forests in the community of Point O'Woods through the implementation of an agreement with the Point O'Woods Association.

To establish an environmental educational center with limited overnight accommodations at the Talisman site.

To determine the desirability of artificial tidal marsh construction within federally managed lands by building an experimental marsh adjacent to Barrett Beach.

WATCH HILL MANAGEMENT UNIT

The Watch Hill unit encompasses the lands from the eastern boundary of Ocean Ridge to the eastern end of the Watch Hill campground. The primary objectives for its management are:

To manage the Watch Hill developed area as a national seashore center for day-use recreation and camping.

To protect and enhance the natural environment of undeveloped lands east of the Watch Hill developed area.

To eliminate those dune crossings that can be closed without increasing behind-the-dune travel and related impacts.

To remove unnecessary dwellings and other structures upon the expiration of existing use and occupancy agreements at Bayberry Dunes.

To maintain adequate water depth for ferry and boat access to marinas.

To provide a level of camping and associated facilities (water and sanitation) that will not adversely impact the environment.

HIGH DUNE MANAGEMENT UNIT

This unit extends from the eastern boundary of the Watch Hill management unit to the western boundary of Smith Point County Park. Its objectives are:

To protect the natural qualities of the high dune management unit and to provide for traditional low-density recreational uses.

To provide minimal facilities and programs for interpreting the outstanding natural resources of this area.

To maintain primitive qualities of this unit so as not to preclude potential wilderness classification.

To remove man-made structures within the management unit and to restore these sites.

To manage the unit as a primitive area.

MORICHES AREA

This section of the barrier island, which extends from the eastern end of Smith Point County Park to Moriches Inlet, is the property of Suffolk County and is managed by the Suffolk County Parks Department. The National Park Service has the following objectives:

To share ideas and philosophies with Suffolk County regarding the management of this section of the barrier island.

To manage these lands as a unit of the national seashore should Suffolk County decide in the future to donate these lands to the National Park Service.

WILLIAM FLOYD MANAGEMENT UNIT

This unit includes the 612-acre William Floyd Estate. The following objectives for its management have been established:

To interpret the history and to preserve the historical resources of the estate as a continuum of the William Floyd family.

To maintain the features of the existing landscape and current land-use practices, and to stabilize existing structures until use/occupancy agreements expire and future public uses are determined.

EXEMPTED COMMUNITIES

The following objective relates to the 17 exempted communities located within the boundary of the national seashore:

To establish direct federal involvement with local governmental jurisdictions in a cooperative effort to provide appropriate land uses within the exempted communities of the national seashore.

RESOURCES MANAGEMENT

Fire Island is part of one of the world's longest chains of barrier islands, which fringes the Atlantic and Gulf coasts of the United States from Massachusetts to Texas. Collectively, the islands represent one of the nation's most valuable natural and recreational resources as well as one of the most difficult to manage.

Barrier islands are among the most dynamic natural resources because their construction material – sand – is one of the world's most mobile geological materials. Wherever large amounts of sand are available for transport by wind or water, landforms are dynamic. The geographic areas where sand is being molded and remolded into natural landforms have long-term stability, but the individual geomorphic units within these areas may be here today and gone tomorrow. Long Island's barrier-island system has existed since the end of the last ice age, and it will continue to be a coastline feature for ages to come unless it is destroyed by society. However, the system's position in relation to the continental landmass will continue to shift as the barrier islands respond to storms and changes in sea level. We can interdict the natural forces of change, but only for a short time.

Fire Island is perpetuated by some combination of the following sand-moving processes: littoral drift, onshore bottom currents, wind, inlet formation, tidal delta growth, and to a lesser degree, overwash. All are essential if the island is to maintain a dynamic equilibrium with the changing sea level and the natural forces that continually reshape it. Barrier islands differ in the rate of change and the type of sand-moving processes that dominate at a specific time; Fire Island is less dynamic and changes more slowly than other active, high-energy barrier islands.

Sand is carried in the littoral drift, which moves in a westerly direction along the beaches of Fire Island. Some of the sand is washed up on the beach, where it dries out and is picked up by wind. Beach grass and other vegetation that grows on the landward part of the beach trap the blowing sand, which begins to accumulate, eventually forming low dunelets. The perennial dune plants root and grow upward through the accumulating sand. If natural catastrophes or human activities do not interrupt the process, a dune eventually forms. Anything that reduces sand in the littoral drift may deprive the dune system of natural enrichment, thus reducing or eliminating the dunes' protection of the land behind them.

During hurricanes and other severe storms, onshore winds and waves redistribute large volumes of sand. The ocean may sweep over and between the dunes, carrying sand from offshore deposits, beaches, and dunes to the back of the island, forming terraces and increasing the elevation of backshore lands. Storm tides pushed over the island accumulate in the bay. Where the dunes are weak, the land low, and the island narrow, an inlet may form. If an inlet remains open, a tidal delta eventually develops in the form of shoals behind the inlet. As the inlet slowly closes due to the accretion of sand on the updrift side of the inlet,

vegetative stabilization of the deltaic sediments begins the process of tidal-marsh formation. After closure of the inlet, periodic overwash sedimentation may build the bayside of the island. Because the sea level is now slowly rising, Fire Island's bayside may experience increased erosion. Enrichment periodically by new supplies of sediment from overwash and deltaic sedimentation mitigates the erosion process.

Fire Island's resources management plan is based on the following premises:

Fire Island will be managed to preserve the nationally significant natural resources while providing for environmentally compatible recreation.

Fire Island is not a uniformly natural barrier-island system; many island locations have been significantly altered by human activities, although the island environment remains relatively natural in several locations.

Attempts will be made to repair human disturbances of natural geomorphic conditions within certain segments of the island with the idea of then allowing natural processes to maintain these conditions.

Attempts will be made to restore and maintain the dune and beach system by environmentally compatible methods that acknowledge the inevitable erosional transformation of the island, a result of a rising sea level, great hurricanes, and severe northeasters.

Fire Island's resources management strategy must be integrated into a larger management strategy for the entire south shore of Long Island.

The needs of the seashore's exempted communities, as well as the economic interests on Long Island that are directly linked to Fire Island, Great South Bay, and adjacent lands and waters, will be considered in the resources management strategy for the national seashore.

The provisions and components of the resources management plan will be periodically evaluated, and the plan will be modified as necessary to continually reflect new information, changing conditions, and experience gained from management of other similar resources.

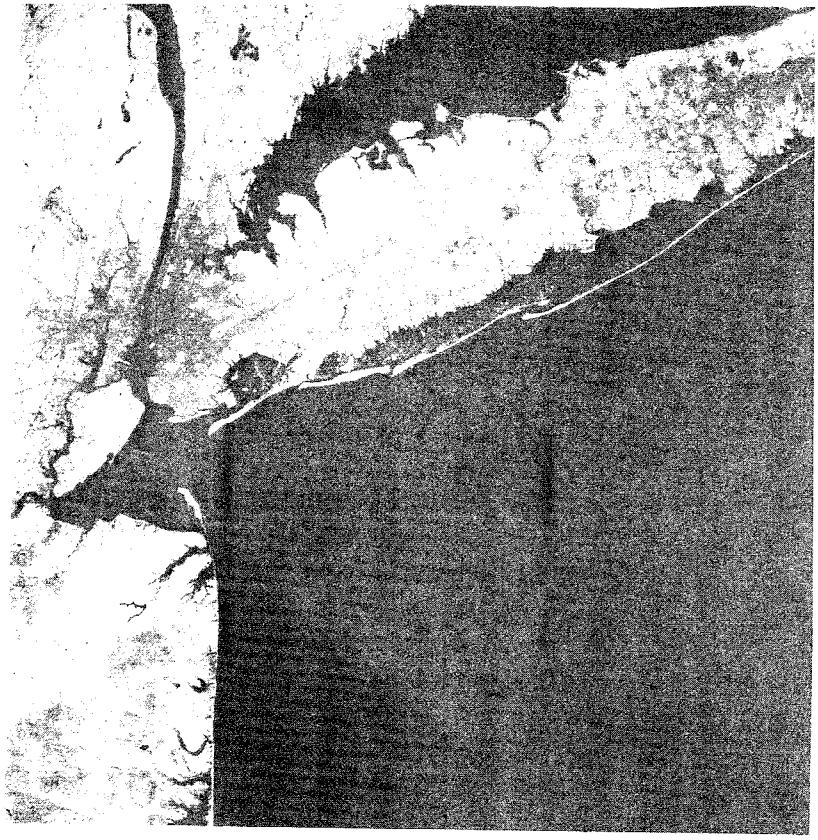
The National Park Service will continue to comment on actions outside the authorized boundary that may impact lands within the national seashore.

BEACHES, DUNES, AND INLETS

Man's activities on and adjacent to Fire Island have resulted in widespread impacts on the resource. Interference with the littoral drift at inlets along the south shore



Impacts of groins upon beach erosion at Ocean Beach



Aerial view of barrier islands in the Long Island and Greater New York area



Sunken Forest, Fire Island National Seashore's maritime holly forest



Dune crossing within Fire Island National Seashore

of Long Island has resulted in a pirating of sediments from the littoral drift into the inlets. Sand is trapped in the throat of the inlets and the bay areas behind the island. Consequently, downdrift of the inlets, a reduction occurs in the size of the offshore bar, and widespread erosion of the beach and in places the ocean-facing dunes also occurs. Interruption of the drift has played a major role in the acceleration of erosion of Fire Island's beaches.

The natural geomorphic processes need to be restored in order for the offshore bar, beach, and island system to reestablish some degree of equilibrium. Resources management efforts will be initiated to increase the sand supply in the littoral drift, to repair damage to the ocean-facing dunes, and to further study the physical and economic feasibility of direct sand nourishment on Fire Island's beaches and dunes.

The National Park Service, working with the Corps of Engineers and state and local governments, will encourage the immediate installation of an already authorized sand-bypass system at Moriches Inlet and authorization and installation of a sand-bypass system at Shinnecock Inlet. Sand presently being trapped in the inlet will thus be returned to the littoral drift by means of a mechanical bypass system. Dredging necessary for the bypass systems will be sufficient to provide navigable channels for access to the ocean from the bays, and for proper water exchange between the ocean and the bays. Maintenance by dredging of Fire Island and Moriches Inlets is vital in assuring sufficient salt content in bay waters to maintain shellfish habitat. The Corps of Engineers will consult with the National Park Service for suggestions on the placement of dredged material from Shinnecock and Fire Island Inlets (outside national seashore boundaries) as these inlets are part of the Fire Island geomorphic system.

No new inlets will be opened artifically within the national seashore boundaries. Should new inlets open naturally within the boundaries, they will be immediately evaluated for effects on Fire Island's ecosystem, the regional economy, access, and navigation. When adverse impacts outweigh benefits, new inlets will be closed by the Corps of Engineers.

Recent planning activities conducted by the National Park Service, the Corps of Engineers, New York State, and interested local concerns have explored the concept of sand nourishment of eroding beaches and dunes. Experts in coastal geomorphology and ecology have been consulted throughout the planning process. More recently an erosion control district has been proposed that would extend from Watch Hill west to Robert Moses State Park and would contain 61,550 feet of the seashore. Many vital questions regarding impacts of sand nourishment on certain beach and dune segments remain unanswered. The National Park Service will continue to analyze new information and improvements in coastal zone management techniques to determine the following: Should sand nourishment be initiated; to what height should the dune and berm be reconstructed; does a suitable borrow area exist in the ocean or bay

for dredging large amounts of sand; what is a fair federal, state, and local cost allocation system; what are the long-term cost and probable benefits; and will current ocean dredging methods be improved so that this technique can be used at Fire Island.

Following the completion of current studies by the Corps of Engineers and their consultants, National Park Service managers and planners will determine the feasibility of sand nourishment. If sand nourishment is begun, the large federal tract east of Watch Hill would not be included in the project area. Adequate time would be necessary for the Park Service to determine results and impacts. All sand nourishment activities would be closely monitored by the Park Service and Corps of Engineers. Also, sand nourishment projects would not be permitted until the Moriches Inlet and Shinnecock Inlet sand-bypass systems are operational.

Fire Island resources management policy will include a general prohibition on installation of additional groins, bulkheads, revetments, and other artificial beach-stabilization devices (except for existing inlet jetties). Snow fences will be permitted for stabilization purposes in areas where vegetation is sparse and rapid erosion is occurring.

Ocean-facing dunes will be repaired or restored as needed. Planting with native, perennial dune-stabilizing species to encourage revegetation will be initiated throughout the seashore. Dune blowouts and other naturally occurring bare-sand areas will be repaired or replanted in the seashore district when compelling considerations – such as threat to major developments – dictate such action (the seashore district includes all federal and non-federal public recreational lands outside the exempted communities). In the development district, dune blowouts that endanger homes during extreme high tides or moderate-intensity storms may be filled and replanted, following evalutation of the need for such action. Such measures will be undertaken by affected communities.

Man-caused damage to the dune system will be minimized through the establishment of a dune district. A definition of the dune district and associated regulations are listed in the zoning section of the plan (see pp. 100-107).

DUNE CROSSINGS AND UNPAVED SAND TRAILS

All public pedestrian dune crossings in the seashore will be elevated boardwalks, which minimize localized impacts on the dunes. Vehicular dune crossings will be eliminated wherever possible. Closed crossings will be repaired and possibly revegetated with native, perennial vegetation. Dune crossings that are essential for management or emergency purposes will be stabilized with suitable materials. All active dune crossings will be numbered, and maps will be made available to the public.

Vehicular travel on unpaved sand trails will be limited to that necessary for essential access and management. Park managers will designate specific trails to be used. Other trails will be returned to a natural condition. A discussion of vehicle management, permit categories, and objectives begins on page 38.

TIDAL MARSHES

The establishment and maintenance of ditches in Fire Island tidal marshes as means of mosquito population control are extremely disruptive to the natural evolutionary processes of the ecosystem. Furthermore, the effectiveness of the grid drainage system for mosquito control is generally believed to be of little, if any, value. Considering the National Park Service's mandate to preserve Fire Island's natural environment and the lack of knowledge of ditching effects, the maintenance of existing ditches will be terminated on all Park Service owned lands. Ditching activities on other lands within the legislated boundary of Fire Island National Seashore should also be terminated with the exception of designated experimental sites. The cessation of ditching as a mosquito control method will remain in effect until its utility can be proven and its effectiveness is shown to outweigh the associated environmental degradation.

The use of insecticides, herbicides, and other chemical and petroleum products as widely applied flora and fauna control methods on federally owned tidal marshes and other lands will not be allowed. Use of these substances on non-federally owned lands within the legislated boundary of Fire Island National Seashore will be discouraged. In the event of an offically declared health emergency as determined by the U.S. Public Health Service, the Director of the National Park Service must approve use of any pesticide or other chemical control substance, and application procedures shall be in accordance with Environmental Protection Agency (EPA) regulations and other applicable laws.

A long-term tidal marsh research program will be initiated to answer basic ecological questions concerning the effectiveness of ditching and the application of chemicals for mosquito control. Under cooperative agreements with the towns of Babylon and Islip, Suffolk County, and New York State, the study will include Long Island's only remaining unditched salt marsh (north and west of Oak Beach), the ditched marshes on Captree Island, and the ditched marshes on East Fire Island within the national seashore.

The desirability of artificial tidal marshes created by utilizing suitable dredged materials on the bayside of Fire Island is being evaluated at the recently established small experimental tidal marsh in the vicinity of Barrett Beach. Additional artificial marshes along this shoreline will not be constructed until the

experimental model is evaluated and its effects over a long-term period are determined. If environmental benefits from artificially created tidal marshes can be demonstrated, future marshes might be recreated along the shoreline east of the Sunken Forest unit, which has historically been a tidal marsh area.

ARTIFICIAL ISLANDS

Artificial islands in the bay waters adjacent to Fire Island have been made by the accumulation of dredged materials that resulted from the Corps of Engineers' dredging operations. These islands have coincidentally become prime breeding habitats for colonial water birds such as gulls and terns. Many of these species formerly utilized areas of Fire Island for breeding, but man's expanded activities on the island have reduced the availability of these areas, and the artificial islands now serve as a relatively undisturbed breeding area for the birds.

Artificial islands at Moriches Inlet are owned by the town of Brookhaven, and the National Park Service proposes a cooperative management and research agreement with the town for the maintenance and protection of these valuable habitats. Utilization of these islands would be restricted to research activities and general visitation would be excluded, except by special permission.

Material from dredging operations will be used to enlarge existing islands, extend marshes, or create new artificial islands. The location, and perhaps size and shape, of any new islands will be determined through a cooperative program between the Corps of Engineers and the National Park Service. If the location of new islands occurs in areas not under federal jurisdiction, but of vital interest to the preservation of Fire Island's natural environment, cooperative management and research agreements with the appropriate owners will be initiated.

Ultimately, Brookhaven or other owners of existing or newly created artificial islands may wish to donate them to Fire Island National Seashore for use as bird sanctuaries.

WATER QUALITY

The water quality of Great South Bay and of aquifers underlying the Fire Island area is a major concern of residents, visitors, and seashore managers. A high priority of the resource management plan will be to guard against contamination of potable water supplies and closure of shellfish beds because of pollutants, and to prevent health hazards to boaters, swimmers, hunters, and other water-contact recreationists. Maintenance of a high standard of water quality is vital to the preservation of the resource and the assurance of a quality visitor experience.

Exempted communities will be encouraged to upgrade their sewage systems and treatment methods. Boat marinas in these communities should have adequate pumping stations for evacuating boat sewage holding tanks and should dispose of these wastes in an environmentally acceptable manner.

New York State has established a program for monitoring water quality in the vicinity of Fire Island. The National Park Service will not duplicate this program but will contribute to an expanded monitoring effort through cooperative activities with the state. The National Park Service will collect water samples from areas under federal jurisdiction, such as marinas, offshore anchorages, near sewage treatment facilities, in wells, and at any other sampling sites established by agreement with the state monitoring agency. These samples will be collected for laboratory analysis by the state agency under a previously agreed upon sampling schedule so that remedial actions can be taken and health hazards prevented. In turn, the New York Department of Environmental Conservation will provide accurate water quality data for the National Park Service so that future management decisions can be reached.

The National Park Service will assist the state in enforcing any closure of shellfish beds in areas under federal jurisdiction where contamination occurs because of disposal of boat wastes into bay waters. Park visitors arriving by boat and other water-oriented recreationists will be informed at visitor-contact stations, such as marinas and docks, of waters that are closed to shellfishing. The detrimental effects of dumping boat wastes and the health hazards associated with eating contaminated shellfish will be emphasized as a means of encouraging visitors to refrain from utilizing closed areas.

In keeping with the National Park Service's objective of maintaining a high level of water quality in the Fire Island National Seashore region, the need for adequate sewage treatment systems is recognized. The establishment of new treatment facilities and improvement of existing facilities will preclude the addition of pollutants to regional waters. Low-density visitor-use areas will utilize established septic tank systems, which will be rehabilitated as necessary to provide treatment that meets or exceeds EPA standards. Sewage treatment at the four moderate-density visitor-use areas of Smith Point West, Watch Hill, Sunken Forest, and Fire Island Lighthouse will be more demanding because of the sewage volume, and septic tank treatment alone will be inadequate.

Several secondary and tertiary treatment systems were analyzed for potential use on Fire Island, including the transportation of sewage sludge to the mainland for treatment and the feasibility of using Clivus Multrum systems. Because of the unusual wastewater treatment problems existing at federal activity areas on Fire Island, physical/chemical treatment systems will be used at these areas unless

more suitable techniques are developed. Regardless of the treatment systems used, air quality, space limitations, and visual, noise, and odor factors will be important considerations in establishing sewage treatment facilities at these sites. Adequate facilities for pumping out boat sewage tanks will be provided at all federally operated marinas, and boaters will be strongly encouraged to utilize these facilities. Boat sewage that contains toxic preservatives detrimental to domestic sewage treatment facilities will be treated by a physical/chemical process at each major federal activity area on Fire Island.

The National Park Service opposes all oceanic or other sewage treatment plant outfalls that fail to recharge treated effluent into Magothy and Lloyd aquifers. Although available data do not indicate any present problems in obtaining sufficient fresh water for most of Suffolk County, if oceanic discharge continues, eventual saltwater intrusion into these aquifers may occur, contaminating Fire Island's water supply. Ongoing groundwater quantity and quality studies under the auspices of the Nassau-Suffolk County Planning Board with assistance from the Geological Survey and Princeton University Department of Geology should provide additional information on the water regime of Long Island's south shore.

VEGETATION AND WILDLIFE

Management of the Sunken Forest unit will emphasize preservation of the outstanding maritime holly forest as directed by the enabling legislation.

The outstanding natural area of Fire Island located between Watch Hill and Smith Point West will be managed in accordance with the enabling legislation directive to preserve and maintain the diversity of natural habitats and the native flora and fauna. Within the confines of this area, a high dune management unit will be established. Hiking will be permitted on the beach and designated trails behind the dunes.

Hunting, fishing, and shellfishing activites are authorized in the enabling legislation as appropriate recreational uses on lands and waters of Fire Island National Seashore. The harvesting of these resources will be governed by New York State regulations and applicable federal laws. The National Park Service may seasonally or permanently close areas within the national seashore to recreational hunting and/or fishing activities if these pursuits are potentially injurious to the flora and fauna, as determined by a cooperative wildlife management agreement between the Park Service and the New York Department of Environmental Conservation.

Recreational boating in Great South Bay waters within the 4,000-foot National Park Service jurisdiction will be managed so as to preclude detrimental impacts on the shellfish resources.

No intentional introduction of nonnative animals will be permitted within the seashore boundaries. No introduction of new exotic plants or proliferation of existing exotic plants will be permitted on federal lands. The National Park Service will encourage exempted communities to preserve native vegetation wherever it occurs, particularly the maritime forests in Point O'Woods, Cherry Grove, Fire Island Pines, and the Clam Pond salt marsh in Saltaire.

The inventories of existing floral and faunal populations on Fire Island will be completed. Additional research on natural resources will be conducted as necessary to establish management practices for these biological resources.

NATIONAL REGISTRY OF NATURAL LANDMARKS

The National Park Service recognizes the outstanding ecological value of the maritime holly forest in the community of Point O'Woods and the unditched tidal marsh north of Oak Beach, owned by the town of Babylon. These natural resources appear to meet the criteria for natural landmarks. The cooperation of administering landowners will, therefore, be sought in preparing papers for their nomination to the National Registry of Natural Landmarks.

RESTORATION OF IMPACTED AREAS

Certain locations within the national seashore have been degraded by random and careless disposal of waste material (old cars, household appliances, construction materials, etc.), which has created unsightly conditions and has damaged vegetation. The National Park Service is removing waste materials, particularly within the federal bay-to-ocean strips on the western end of the island. The national seashore staff will work cooperatively with residents of communities to deter disposal of additional waste on federal lands. Impacted areas will be allowed to revegetate. Structures and any remaining debris will be transported from the high dune management unit and impacted areas will be revegetated.

VEHICLE USE AND REGULATIONS

The use of vehicles within the boundary of the national seashore has generated extensive debate among opponents, proponents, the National Park Service, and

local governmental enforcement agencies. Presently, the requirements of *Code of Federal Regulations,* Title 36, Section 7.20 (36 CFR Section 7.20) establish the permit system for vehicular travel on the seashore, and they stipulate the times and types of travel allowable. Park Service staff have developed certain criteria that will be used as supplemental guidelines. These criteria will be public information prior to implementation of revisions to existing regulations. The purposes for revising the regulations remain the same as for the original Section 7.20: to protect federal lands and interests in lands within Fire Island National Seashore, to protect members of the public using such properties, and to provide such use of seashore lands by motor vehicle operators for recreational and other purposes as will not conflict with the conservation of the natural resources of the area.

Revisions to vehicle regulations will result in changes in periods and times of travel to further limit vehicle operation during the visitor-use season on all seashore lands; to limit the general operation of all classes of vehicles on Fire Island, including those of public utility companies, to certain sections of the national seashore and to certain hours during periods of high visitor use; and to provide for vehicular ingress and egress by residents and property owners only during those periods when alternate public transportation methods are unavailable or unreasonable. The number of vehicle permits for residents will be set at the existing number, and no additional permits will be granted. Certain unnecessary dune crossings will be closed, and occupants of properties outside exempted communities will be required to use designated dune crossings and trails (segments of the Burma Road) until the expiration of private property ingress/egress agreements. Vehicles will not be permitted on the beach during periods of high water when the surf is near the seaward base of the primary dune. A requirement that all vehicles on Fire Island be of the four-wheel-drive type is presently in effect.

Additional research on vehicle use on Fire Island will be conducted to determine ecological and erosional effects that may result from this activity, and such data will be used to provide further guidance for vehicle management. A study to determine impacts of vehicle use will be initiated during the 1977 season.

Vehicle checkpoints at Fire Island Lighthouse and Smith Point West have been relocated to increase efficiency of operations (see figures 5 and 10). Checkpoint stations will be operated on a year-round basis to assure compliance with established regulations. Proper enforcement will depend upon cooperation and assistance from local governmental agencies and the Suffolk County Police Department, which have enforcement responsibility within the communities.

Vehicular-use permits are issued by category of use, with certain considerations pertaining to each category. By definition, a motor vehicle is any self-propelled

land vehicle. All vehicles other than police vehicles must have a permit to be operated across seashore lands. The categories and objectives for vehicular regulations discussed below will be promulgated in the *Federal Register* following issuance of the general management plan.

Official Vehicle Permits
The objective for the official vehicles category is to limit official vehicular travel to an absolute minimum.

Utility Vehicle Permits
The objective of this category is to limit utility vehicle trips to those that are absolutely necessary. Because present use of the beach by utility vehicles is excessive and unwarranted, utility companies will be encouraged to have their employees travel to the island by private boat or ferry and to utilize maintenance equipment stored within the island communities.

Construction/Service/Contractor Vehicle Permits
The objective for this category of use is to minimize travel by construction/service/contractor vehicles. Because present use of the beach for access by this group is unnecessary, national seashore officials will initiate regulations that will require such users to barge needed materials to the island from Long Island. Sufficient time will be given for contractors and others to arrange appropriate water transport prior to implementation of the regulations.

Residents' Vehicle Permits
The objective for this category is to minimize impacts of vehicles within the island swale, with a gradual reduction in the number of vehicle permits.

Vehicle Permits for Residents With Special Health Problems
This category proposes no change from existing use.

Recreational Vehicle Permits
The objectives of this category are to limit use of recreational vehicles and to ensure that such vehicles are used in appropriate areas to minimize damage to the resources. National seashore managers will initiate the following regulations:

> Recreational vehicle use will be limited to a specific number of vehicles at a given time within federal property between Smith Point West and Long Cove.
>
> Recreational vehicles will continue to be restricted to driving on the seaward side of the beach and will not be permitted behind the dunes in the island swale.

RESEARCH ACTIVITIES

Numerous research investigations have been conducted at the national seashore since its establishment in 1964, as well as on the other Atlantic coast barrier islands. Most research efforts have been directed toward description of the natural environment and evaluation of ecological and geological processes that are important in the perpetuation of the island's life-forms and landforms. The research findings have been instrumental in permitting development of an environmentally sound management philosophy for Fire Island. Current research projects – mostly federally funded and university sponsored – should be continued and expanded as necessary to provide information needed to manage the island and to perpetuate it. Research projects that will be undertaken by the National Park Service are discussed below.

The National Park Service proposes to begin research on the effects of various types of manipulation of the tidal-marsh environment, including closure of mosquito-control ditches by various methods. The Oak Beach marsh and marshes on Captree Island would be used as unmanipulated control areas for these experiments. East Fire Island is geographically isolated and contains one of the seashore's finest tidal marshes. Although extensively ditched for mosquito control, its marshes still retain outstanding ecological value. If the mosquito ditches were closed, the island would, together with the Oak Beach and Captree Island marshes, provide a laboratory for studying and interpreting the ecological changes resulting from this action.

Research on the use of dredged material for constructing artificial tidal marshes on the Great South Bay shoreline of Fire Island east of the Sunken Forest management unit will be conducted by constructing a small experimental tidal marsh near the Barrett Beach area. The suitability of dredged material for constructing these marshes will be determined and the ecological alterations caused by these marshes will be evaluated. No other artificial tidal marshes will be constructed until the long-term effects of the experimental marsh have been evaluated, and then additional marshes will be constructed only if positive ecological benefits can be achieved.

The National Park Service will complete the inventory of plants and animals that inhabit Fire Island National Seashore. Additional research on Fire Island flora and fauna will be conducted as needed to provide data for management of these biological resources.

Research on the use of vehicles on Fire Island will be conducted by the National Park Service. Their use, compatibility with other seashore activities, and impacts on natural resources and the sociological environment will be evaluated. Some

studies will be initiated during the 1977 season and will be continued for the next two seasons.

Research on the effects of coastal engineering projects will not be initiated by the National Park Service. However, data from these kinds of research projects conducted by the Corps of Engineers, other agencies, and institutions will be collected and evaluated to aid in management of Fire Island National Seashore.

Support facilities for the variety of research projects intended for Fire Island National Seashore are desirable. However, establishing several fixed facilities at widely dispersed locations to achieve coverage for research projects scattered throughout the seashore area is not desirable. A single houseboat-type floating facility is proposed to meet support facility needs. Self-contained water and sewage facilities, limited laboratory space and equipment, and limited overnight accommodations for researchers would be included in the design of this floating facility. This self-contained facility concept precludes environmental degradation that would be associated with research activities in areas where no housing or water and sewage systems exist. Furthermore, the mobility of a floating facility permits a single unit to support any or all research areas.

The William Floyd Estate has potential value as an archaeological site, perhaps containing artifacts from Revolutionary, Colonial, or pre-Colonial times. Archaeological studies are being conducted prior to development for public use, and no area will be disturbed if it is determined to have significant archaeological value. Archaeological studies are being conducted in conjunction with planning activities for the estate. The National Park Service has also begun a historical survey of the William Floyd Estate. This survey will include the availability of existing artifacts and the conditions of structures.

Archaeological studies are underway for the 90-acre Fire Island Lighthouse tract. When the studies are completed, the resulting data will be considered in future site development. National Park Service architectural historians will survey existing structures on the site and make recommendations for their maintenance or restoration.

The New York State historic preservation officer has been requested to provide information on other structures or sites within the seashore that may be eligible for nomination to the National Register of Historic Places. If such structures or sites are identified, the National Park Service will prepare the necessary materials to nominate them and will ensure that any potential sites on existing federal property are not disturbed or in any way altered until their significance has been assessed and their eligibility for designation to the National Register has been determined. If they are determined to be eligible, the Park Service will ensure that the sites are preserved and made available to the public for interpretation.

LAND CLASSIFICATION

LAND SUITABILITY ANALYSIS

The land suitability analysis process began with a comprehensive description of Fire Island's environmental resources. Various data about the natural, cultural, economic, and social environments were compiled, mapped, and analyzed. Since 1970, the National Park Service has commissioned several major studies to develop suitable resources information for planning and management. The first of these was completed in 1971 and provides information on existing federal lands in the national seashore. This study includes reports on climate, fauna, flora, hurricane-protection measures, geology and coastal processes, and estuarine water quality. Geology and vegetation maps were also prepared.

In 1974, the inventory was expanded to include several islandwide studies and a comprehensive description of the non-federal lands in the national seashore area. Emphasis was placed on acquiring information about the exempted communities. The inventory considers land use, landownership, development, carrying capacity for particular uses, evidences of environmental manipulation (groins, jetties, artificially stabilized dunes, etc.), pollution sources and levels, topography, geology and coastal processes, soils, groundwater hydrology, flora, fauna, estuarine water quality, storm-damage assessments, and historic resources. The final report includes detailed maps showing land use, landownership,

development, soils, geologic features, topography, vegetation, and historic/archaeologic resources. The base maps and graphics illustrating this data and the plan's proposals are essentially accurate; however, several small facility modifications have occurred since 1974, such as additions to boardwalks and removal of structures. In those cases where the base map differs from the text of the plan, the text will reflect the plan's intent.

Additional studies were undertaken during 1975 to gather information and provide recommendations regarding land-use controls and zoning questions within the communities. Major issues addressed included congressional intent for zoning and development, and responsibilities for control of zoning within the seashore boundary.

After acquisition of comprehensive environmental information, all lands and waters within the national seashore were evaluated to determine their suitability for the desired land uses and their general capability to withstand these uses. These lands fall into four general categories: lands for protection and interpretation, lands for environmental preservation, lands requiring protection because of inherent values, and lands suitable for low- to moderate-intensity recreation and support facilities. In conducting the land suitability analysis, lands requiring protection because of their natural and interpretive values were identified first. The suitability of the remaining lands for recreational use was then evaluated. The following presentation reflects the approximate sequence of the steps in the suitability analysis.

Lands for Protection and Interpretation

In evaluating environmental resources, lands containing outstanding natural resources or significant historic resources were identified first. These resources are regionally if not nationally significant and will be given the greatest possible level of protection. They are also areas that are of great existing or potential interest to visitors and hence are especially suitable for interpretation. No developments that might impair ecological integrity (natural resources), historical authenticity (historic resources), or aesthetic quality (both) will be permitted. Because of the vulnerability of these lands to the adverse effects of incompatible uses on adjacent lands, they must be adequately buffered by sufficient acreage to preserve special qualities. (The outstanding natural and historic resources of the seashore are identified in appendix C.)

Lands for Environmental Preservation

Federal lands other than those specifically designated as outstanding natural areas were evaluated for their desirability as an environmental preserve in a primitive

classification. Lands were identified where there was no substantial disturbance of the natural environment or existing recreational activities, and where there was sufficient acreage to allow protection and a reasonable degree of isolation from development and recreational activities on the island. These lands included the marshes on East Island and Sexton Island, the segment of Fire Island lying between Long Cove and Smith Point West, tidal marshes of the William Floyd Estate, and segments of Suffolk County lands east of Smith Point County Park.

The majority of federal lands in the 8-mile zone are recommended for protection under a special classification — environmental protection/primitive zone. A wilderness review will be initiated prior to 1980 to determine which, if any, of the federal lands in the 8-mile zone might be recommended for wilderness designation.



Lands Requiring Protection Because of Inherent Values

Certain lands not included as outstanding natural resources or primitive areas do meet important natural area criteria and should be protected because of inherent values. Some of these lands may be suitable for very limited recreation; however, substantial interpretation is not anticipated. Lands with inherent values include the dune area, wetlands, and small areas of maritime forest. (See appendix C for a listing of these lands.)

Lands Suitable for Recreation and Support Facilities

Lands that would be most suitable for low- and moderate-intensity recreational activity areas were determined by the following process: Lands previously identified as outstanding, primitive, or requiring protection because of inherent values were eliminated; lands had to have a substantial primary dune and preferably a good secondary dune; elevation and distance from ocean to bay were considered; the existence of a natural deepwater channel or a channel that would require limited dredging was a major determining factor; availability of utilities was considered; and areas of existing development or areas that had once contained structures were considered as more suitable for additional recreational facilities.

LAND CLASSIFICATION SYSTEM

The land classification system at Fire Island National Seashore takes into account the suitability of certain areas for specific uses. Four use zones have been defined for the national seashore: natural, historic, general outdoor recreation, and special-use. Each of the zones is described below; and permitted uses, facilities, and activities are listed. Figure 4 at the end of this chapter delineates the land classification zones.

Class I – Natural Zone

I A – Environmental Protection/Primitive Zone. Lands and waters possessing particular value as wildlife habitat and/or research areas with outstanding physical and biological characteristics.

Uses: Protection of valuable habitats, outstanding ecological features, and other environmental values.

Permitted Facilities: Sand trails, elevated pedestrian dune crossings (2 to 3 feet high), and boardwalks (limited to 5 feet in width) in certain locations where future visitor use would result in damage to natural features.

Recreational Activities: Hiking, surf-fishing, hunting (where permitted by law), and limited natural history interpretation.

I B – Outstanding Natural Feature Zone. Geological and biological features possessing intrinsic value or uniqueness.

Uses: Interpretation of natural features, research, and environmental education.

Permitted Facilities: Boardwalks (limited to 5 feet in width), interpretive signs, and elevated pedestrian dune crossings.

Recreational Activities: Hiking on sand trails and boardwalks, natural history interpretive activities, environmental education, and hunting (where permitted by law).

I C – Natural Environment Zone. Lands that require protection of the natural environment but can accommodate environmentally compatible activities.

Uses: Limited public day-use recreation, natural history interpretation, and environmental education.

Permitted Facilities: Minimal facilities to provide for public safety and protection of the natural resource, such as boardwalks (limited to 5 feet in width), primitive type campsites, small-boat docks, open showers, sewage facilities, and interpretive signs.

Recreational Activities: Hiking, beachcombing, surf-fishing, ocean swimming, surfing, hunting (where permitted by law), natural history studies (both National Park Service directed and individual activities), recreational clamming, and picnicking.

Class II – Historic Zone

This category includes areas managed to preserve and interpret significant historic structures, as well as lands containing resources listed on or eligible for the National Register of Historic Places. Authenticity and integrity of the historic scene should be maintained with compatible uses of all historic structures. First-order structures are normally restored and preserved. Historic structures of lesser importance can be used for a variety of compatible purposes.

Uses: Interpretive activities relating to the historic resources and the study of the cultural environment, with secondary activities such as environmental education.

Permitted Facilities: Restored historic structures, interpretive boardwalks and paths, interpretive exhibits, and other limited improvements necessary for visitor appreciation of the historical environment.

Recreational Activities: Historical interpretation, walking, environmental education activities, and limited picnicking.

Class III – General Outdoor Recreation Zone

This zone includes lands and waters where visitor use has altered or may moderately alter the natural environment. Facilities on lands within this zone serve the needs of park managers in providing medium-density recreational opportunities. Facilities and structures should not dominate the natural environment and should be architecturally compatible with the resource.

Uses: Traditional moderate-density beach recreation (see table 1 for visitation levels associated with moderate-density beach recreation), natural history interpretation, and environmental education.

Permitted Facilities: Minimum-scale bathhouses, supervised beaches, boardwalks, individual and group campgrounds, maintenance stations, concessioner facilities (snack bars and food-marina stores), seasonal and year-round housing for park staff, seasonal concessioner housing, picnic areas, ranger stations, visitor centers, existing marinas, ferry slips, utilities, and necessary support facilities such as wastewater treatment.

Recreational Activities: General day-use beach recreation, hiking, beachcombing, docking of boats in marinas and related social activity, camping, surf-fishing, picnicking, recreational clamming, and various natural history interpretive activities.

Class IV – Special-Use Zones

IV A – Community Development Zone. This zone includes private lands within the 17 communities located within the boundary of the national seashore. Federal control within the communities is limited by existing legislation to certain zoning standards. Otherwise, the communities are exempted from direct federal control.

Uses: Private development (single-family residential and some commercial) that conforms with local jurisdictional zoning ordinances approved by the Secretary of the Interior.

Permitted Facilities: Structures and improvements that conform with local zoning ordinances approved by the Secretary of the Interior.

Recreational Activities: Activities typical of seashore communities, ranging from surf-fishing and beachcombing to nightclub dining and dancing.

IV B – Major Park Development Zone. Lands within this zone are limited to major large-scale facilities, public bathhouses, and parking lots located within Smith Point County Park, Suffolk County.

Uses: High-intensity beach recreation.

Existing Facilities: Large-capacity facilities, such as extensive parking lots, major bathhouses, drive-in campgrounds, boardwalks, trails, concessioner facilities, and related support facilities.

Recreational Activities: Swimming, picnicking, surf-fishing, playground activities, shellfishing, and other recreational activities permitted in zones I and III.

IV C – Dune District. The dune system of Fire Island National Seashore, which is subject to frequent and severe storm damage, is vital to the protection and perpetuation of the resource. Certain segments of the dune system within the seashore have been severely damaged by man's activities. All dunes not included in the environmental protection/primitive zone will be protected from additional damage by inclusion in this district.

Uses: Public recreational use prohibited.

Permitted Facilities: A small number of vehicular and pedestrian dune crossings necessary for access to areas located behind the dunes.

Recreational Activities: All recreational activity prohibited within the dune district because of the exceptionally fragile nature of the dune system.

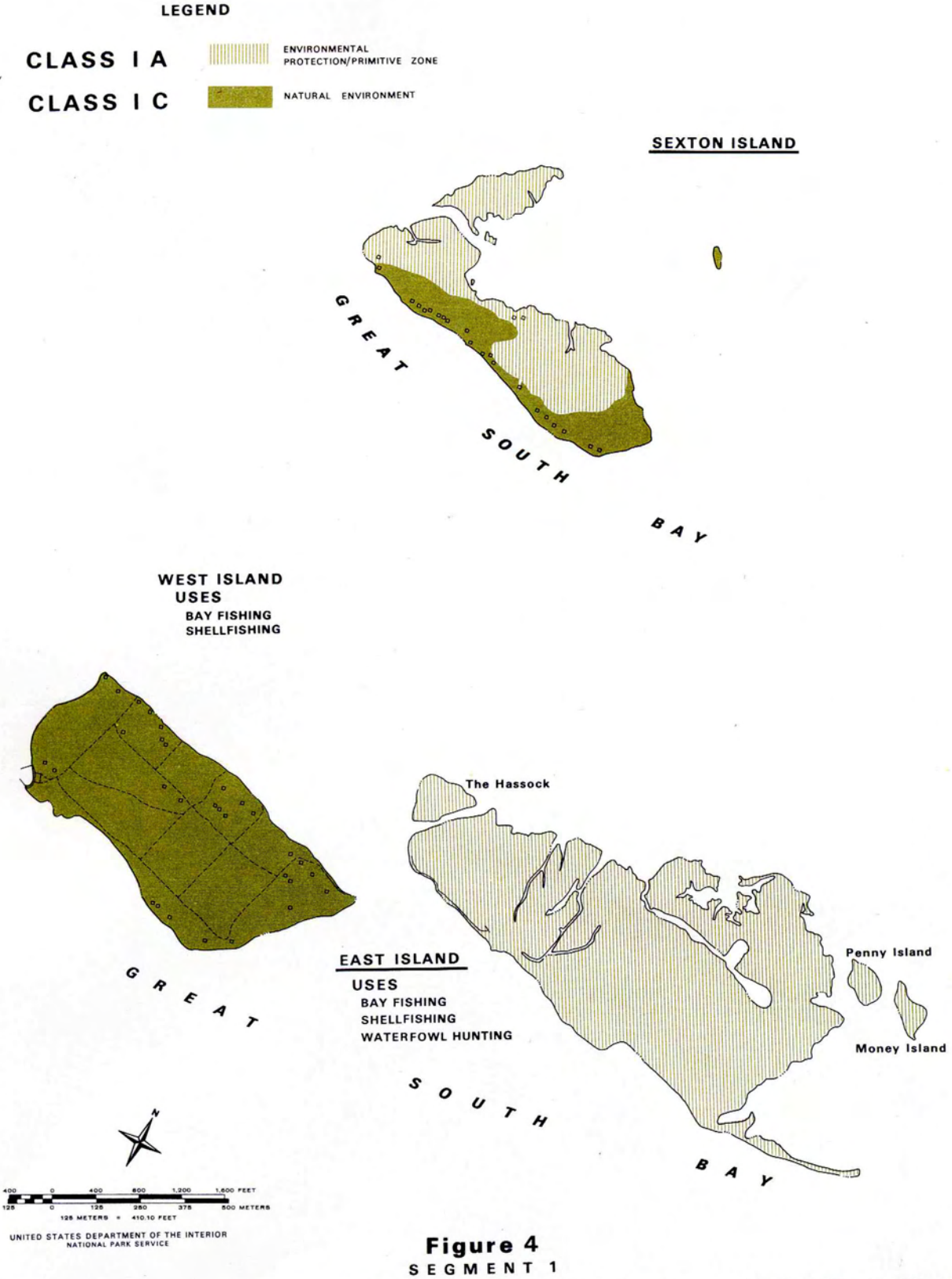


Figure 4
SEGMENT 1

Land Classification, Public Uses, and Facilities

Fire Island National Seashore
NEW YORK

615	40,009 C
MAR 77	DSC

LIGHTHOUSE MANAGEMENT UNIT

LIGHTHOUSE TRACT (PROPOSED NPS AREA)

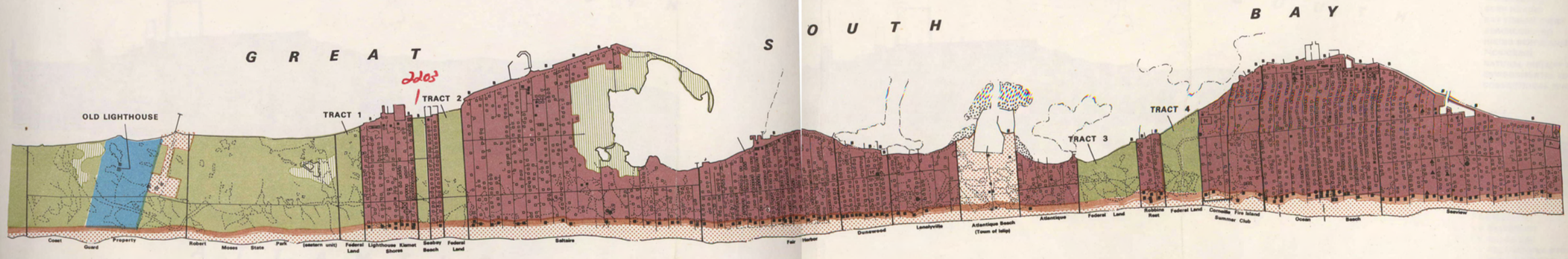
USES (PROPOSED)

- HISTORICAL INTERPRETATION
- NATURAL HISTORY INTERPRETATION
- ENVIROMENTAL EDUCATION

TRACTS 1-4
BAY-TO- OCEAN STRIPS

USES

- ENVIRONMENTAL PRESERVE



FACILITIES (PROPOSED)

- ENVIRONMENTAL EDUCATION CENTER
- INTERPRETIVE TRAIL
- MAINTENANCE STATION
- RANGER STATION
- N.P.S. RESIDENCE
- INTERPRETIVE CENTER/MARITIME MUSEUM
- VEHICULAR CHECKPOINT
- DUNE CROSSING (PEDESTRIAN)
- DOCKING (SMALL BOAT)
- HISTORIC STRUCTURE

CLASS I A	ENVIRONMENTAL PROTECTION/PRIMITIVE ZONE
CLASS I C	NATURAL ENVIRONMENT
CLASS II	HISTORIC ZONE
CLASS III	GENERAL OUTDOOR RECREATION
CLASS IV A	COMMUNITY DEVELOPMENT
CLASS IV C	DUNE DISTRICT

STRUCTURES

- RESIDENCE
- STRUCTURES SUBJECT TO SEVERE FLOOD DAMAGE
- COMMERCIAL STRUCTURE
- INSTITUTION, STRUCTURE, OR PUBLIC UTILITY
- INCINERATOR
- WATER TANK OR WATER TOWER
- SWIMMING POOL

OTHER DEVELOPMENTS

- TENNIS COURTS
- DREDGED CHANNEL
- DOCK
- BULKHEAD
- SEAWALL
- SHORELINE OR WATER BOUNDARY
- SAND TRACK OR PATH
- BOARDWALK OR SIDEWALK
- POLITICAL BOUNDARY

N

400 0 400 800 1,200 1,600 FEET
125 0 125 250 375 500 METERS
125 METERS = 410.10 FEET

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Figure 4
SEGMENT 2

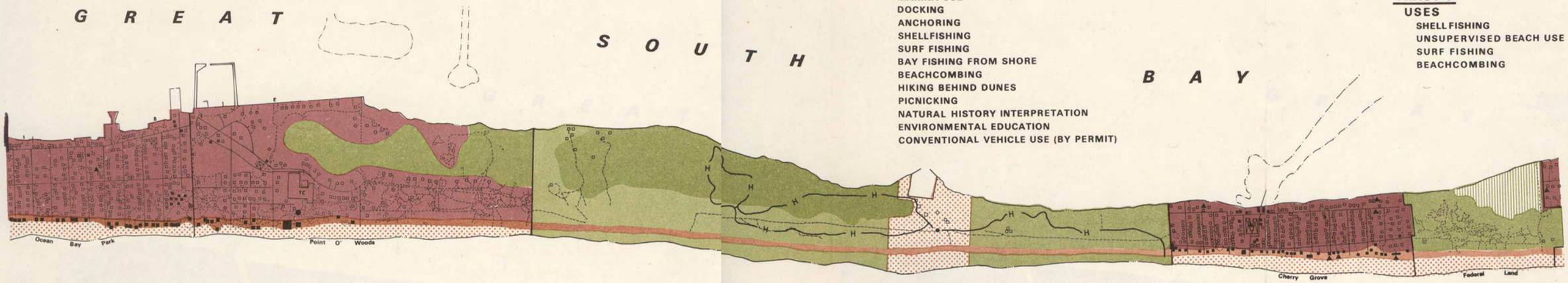
Land Classification, Public Uses, and Facilities

Fire Island National Seashore
NEW YORK

615 40,010 D
MAR 77 DSC

SUNKEN FOREST UNIT

GREAT SOUTH BAY



ATLANTIC

OCEAN

SUNKEN FOREST

USES
- SUPERVISED BEACH USE
- SURFING
- MARINA USE
- DOCKING
- ANCHORING
- SHELLFISHING
- SURF FISHING
- BAY FISHING FROM SHORE
- BEACHCOMBING
- HIKING BEHIND DUNES
- PICNICKING
- NATURAL HISTORY INTERPRETATION
- ENVIRONMENTAL EDUCATION
- CONVENTIONAL VEHICLE USE (BY PERMIT)

FACILITIES
- ** BATHHOUSE
- ** SNACK BAR
- * FOOD-MARINA STORE
- DUNE CROSSING (ELEVATED PEDESTRIAN & VEHICULAR)
- ENVIRONMENTAL EDUCATION
- FERRY SLIP
- HORSE STABLE
- INTERPRETIVE TRAIL
- LIFEGUARD STATION
- MAINTENANCE STATION
- MARINA (34 SLIPS)
- ** LIQUID WASTE PUMPING STATION
- ** PICNIC SITES
- ** RANGER STATION
- ** RESIDENCE, N.P.S.
- STORAGE FACILITY
- ** WASTEWATER TREATMENT
- ** INTERPRETIVE CENTER (INFORMATION)

* PROPOSED
** EXPANSION

TRACT 5

USES
- SHELLFISHING
- UNSUPERVISED BEACH USE
- SURF FISHING
- BEACHCOMBING

FACILITIES
- DUNE CROSSING (ELEVATED PEDESTRIAN)

LEGEND

CLASS I A	ENVIRONMENTAL PROTECTION/PRIMITIVE ZONE
CLASS I B	OUTSTANDING NATURAL FEATURE ZONE
CLASS I C	NATURAL ENVIRONMENT
CLASS III	GENERAL OUTDOOR RECREATION
CLASS IV A	COMMUNITY DEVELOPMENT
CLASS IV C	DUNE DISTRICT
H	HIKING (SAND TRAIL)

STRUCTURES
- RESIDENCE
- STRUCTURES SUBJECT TO SEVERE FLOOD DAMAGE
- COMMERCIAL STRUCTURE
- INSTITUTION, STRUCTURE, OR PUBLIC UTILITY
- INCINERATOR
- WATER TANK OR WATER TOWER
- SWIMMING POOL

OTHER DEVELOPMENTS
- TENNIS COURTS
- DREDGED CHANNEL
- DOCK
- BULKHEAD
- SEAWALL
- SHORELINE OR WATER BOUNDARY
- SAND TRACK OR PATH
- BOARDWALK OR SIDEWALK
- POLITICAL BOUNDARY

N

400 0 400 800 1,200 1,600 FEET
125 0 125 250 375 500 METERS
125 METERS = 410.10 FEET

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Figure 4
SEGMENT 3

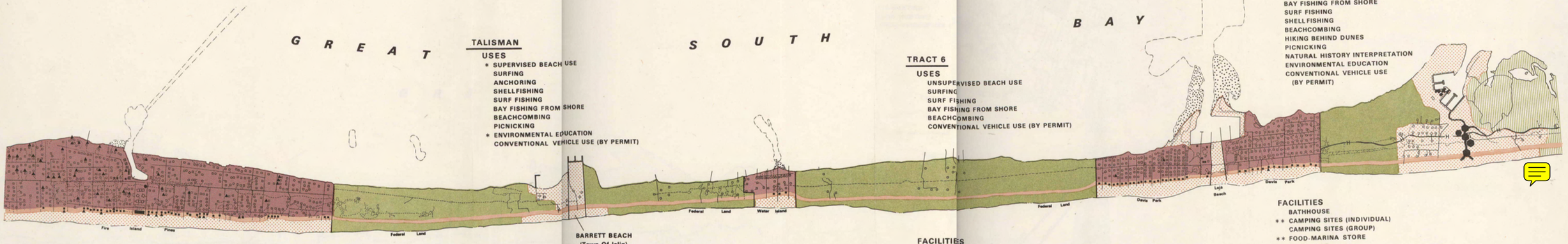
Land Classification, Public Uses, and Facilities

Fire Island National Seashore
NEW YORK

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MAR 77 | DSC

TALISMAN AREA

WATCH HILL UNIT



TALISMAN

USES
- * SUPERVISED BEACH USE
- SURFING
- ANCHORING
- SHELLFISHING
- SURF FISHING
- BAY FISHING FROM SHORE
- BEACHCOMBING
- PICNICKING
- * ENVIRONMENTAL EDUCATION
- CONVENTIONAL VEHICLE USE (BY PERMIT)

FACILITIES
- ** DOCK (TO BE REMOVED DURING OFF-SEASON)
- DUNE CROSSING (PEDESTRIAN)
- * ENVIRONMENTAL EDUCATION CENTER (OVERNIGHT LODGING)
- * FERRY SLIP (REMOVED DURING OFF-SEASON)
- MAINTENANCE STATION (STORAGE)
- ** PICNIC SITES
- ** RANGER STATION
- ** RESIDENCE, N.P.S.
- ** WASTEWATER TREATMENT
- * LIMITED SHOWER STALLS
- ** LIFEGUARD STATION

* PROPOSED
** EXPANSION

BARRETT BEACH
(Town Of Islip)

TRACT 6

USES
- UNSUPERVISED BEACH USE
- SURFING
- SURF FISHING
- BAY FISHING FROM SHORE
- BEACHCOMBING
- CONVENTIONAL VEHICLE USE (BY PERMIT)

FACILITIES
- DUNE CROSSING (VEHICULAR)

WATCH HILL UNIT

USES
- SUPERVISED BEACH USE
- SURFING
- MARINA USE
- DOCKING
- ANCHORING
- BOAT RENTALS
- CAMPING (INDIVIDUAL & GROUP)
- BAY FISHING FROM SHORE
- SURF FISHING
- SHELL FISHING
- BEACHCOMBING
- HIKING BEHIND DUNES
- PICNICKING
- NATURAL HISTORY INTERPRETATION
- ENVIRONMENTAL EDUCATION
- CONVENTIONAL VEHICLE USE (BY PERMIT)

FACILITIES
- BATHHOUSE
- ** CAMPING SITES (INDIVIDUAL)
- CAMPING SITES (GROUP)
- ** FOOD-MARINA STORE
- SNACK BAR
- DUNE CROSSING (PEDESTRIAN & VEHICULAR)
- FERRY SLIP
- HORSE STABLE
- INTERPRETIVE TRAIL
- LIFEGUARD STATION
- MAINTENANCE STATION (STORAGE)
- MARINA (158 SLIPS)
- ** LIQUID WASTE PUMPING STATION
- ** PICNIC SITES
- RANGER STATION
- ** RESIDENCE, N.P.S.
- ** WASTEWATER TREATMENT
- INTERPRETIVE CENTER
- VISITOR INFORMATION CENTER

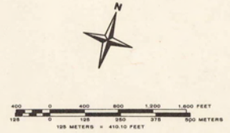
* PROPOSED
** EXPANSION

LEGEND

CLASS I A	ENVIRONMENTAL PROTECTION/PRIMITIVE ZONE
CLASS I C	NATURAL ENVIRONMENT
CLASS III	GENERAL OUTDOOR RECREATION
CLASS IV A	COMMUNITY DEVELOPMENT
CLASS IV C	DUNE DISTRICT
H	HIKING (SAND TRAIL)

STRUCTURES
- RESIDENCE
- STRUCTURES SUBJECT TO SEVERE FLOOD DAMAGE
- COMMERCIAL STRUCTURE
- INSTITUTION, STRUCTURE, OR PUBLIC UTILITY
- INCINERATOR
- WATER TANK OR WATER TOWER
- SWIMMING POOL

OTHER DEVELOPMENTS
- TENNIS COURTS
- DREDGED CHANNEL
- DOCK
- BULKHEAD
- SEAWALL
- SHORELINE OR WATER BOUNDARY
- SAND TRACK OR PATH
- BOARDWALK OR SIDEWALK
- POLITICAL BOUNDARY



UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Figure 4
SEGMENT 4

Land Classification, Public Uses, and Facilities

Fire Island National Seashore
NEW YORK

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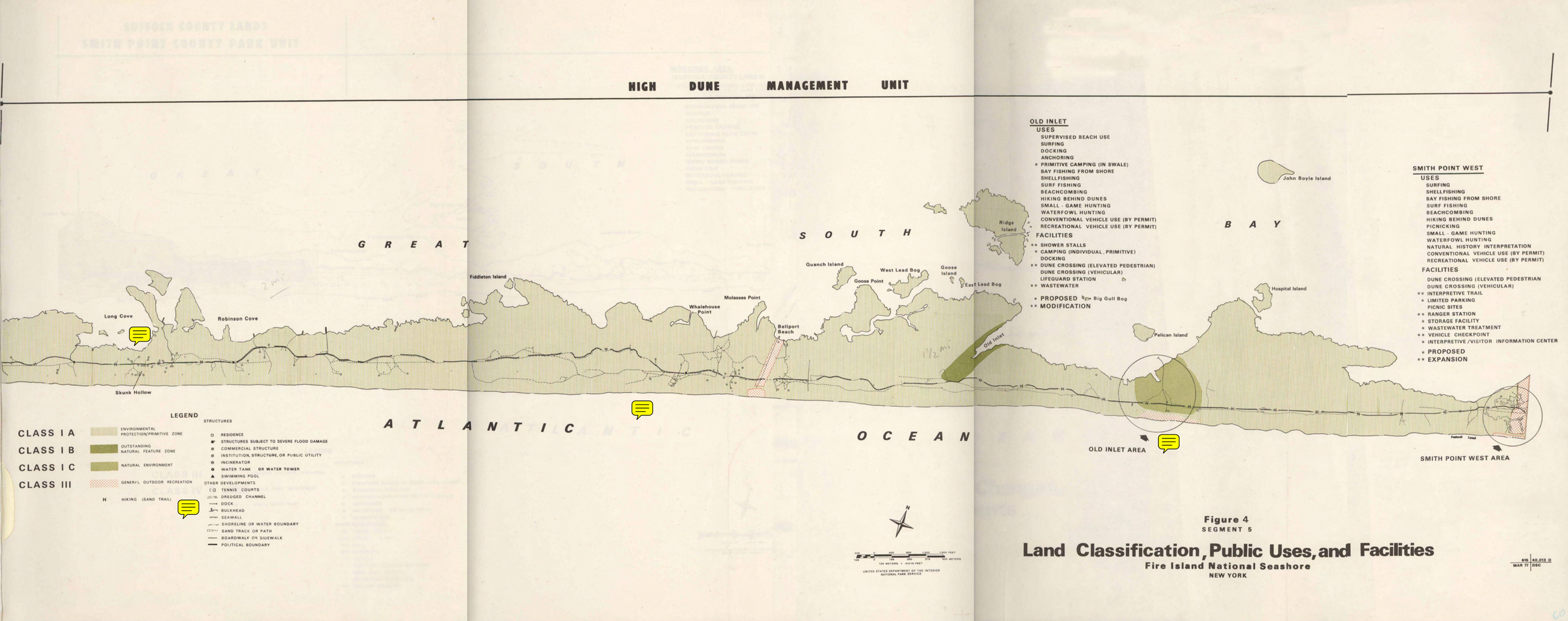


Figure 4
SEGMENT 5

Land Classification, Public Uses, and Facilities

Fire Island National Seashore
NEW YORK

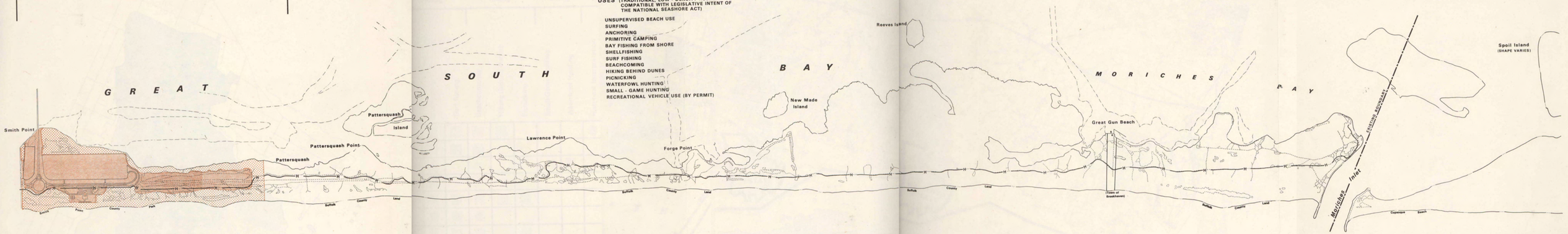
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SUFFOLK COUNTY LANDS
SMITH POINT COUNTY PARK UNIT

MORICHES AREA

MORICHES AREA
(SUFFOLK COUNTY LANDS)
USES (TRADITIONAL, LOW - DENSITY RECREATION COMPATIBLE WITH LEGISLATIVE INTENT OF THE NATIONAL SEASHORE ACT)

- UNSUPERVISED BEACH USE
- SURFING
- ANCHORING
- PRIMITIVE CAMPING
- BAY FISHING FROM SHORE
- SHELLFISHING
- SURF FISHING
- BEACHCOMING
- HIKING BEHIND DUNES
- PICNICKING
- WATERFOWL HUNTING
- SMALL - GAME HUNTING
- RECREATIONAL VEHICLE USE (BY PERMIT)



LEGEND

CLASS III — GENERAL OUTDOOR RECREATION
CLASS IV B — MAJOR PARK DEVELOPMENT
H — HIKING (SAND TRAIL)

STRUCTURES
- RESIDENCE
- STRUCTURES SUBJECT TO SEVERE FLOOD DAMAGE
- COMMERCIAL STRUCTURE
- INSTITUTION, STRUCTURE, OR PUBLIC UTILITY
- INCINERATOR
- WATER TANK OR WATER TOWER
- SWIMMING POOL

OTHER DEVELOPMENTS
- TENNIS COURTS
- DREDGED CHANNEL
- DOCK
- BULKHEAD
- SEAWALL
- SHORELINE OR WATER BOUNDARY
- SAND TRACK OR PATH
- BOARDWALK OR SIDEWALK
- POLITICAL BOUNDARY

N

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Figure 4
SEGMENT 6

Land Classification, Public Uses, and Facilities

Fire Island National Seashore
NEW YORK

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MAR 77 | DSC

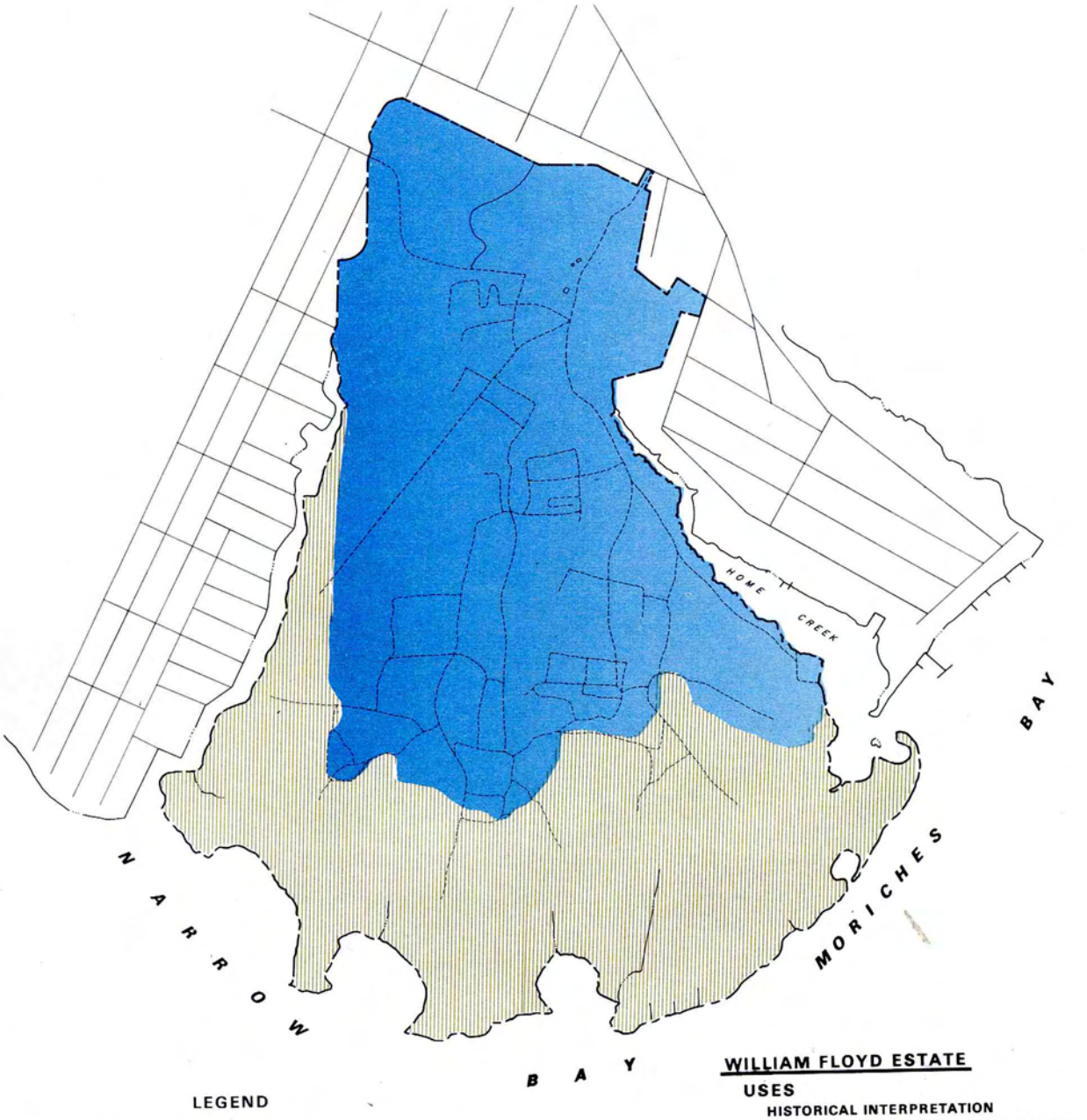


Figure 4

SEGMENT 7

Land Classification, Public Uses, and Facilities

Fire Island National Seashore

NEW YORK

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MAR 77 | DSC

62

FEDERAL ACTIVITY AREAS: USES AND PROPOSED FACILITIES

The National Park Service will maintain facilities for those types of public recreation that are compatible with continued preservation, conservation, and perpetuation of the "relatively unspoiled beaches, dunes and other natural features" lying within the federally managed areas of Fire Island National Seashore. To attain this goal, the natural resources of this barrier island will be made available to the public for use and enjoyment, and the island's natural values will be interpreted to ensure that environmental features and values the Park Service seeks to preserve will be appreciated.

The National Park Service recognizes its responsibility to make the federal lands on Fire Island available to a cross section of the public while placing primary emphasis on preservation and perpetuation of the resource. Therefore, day-use recreational beach areas rather than additional marina development will be emphasized. Overnight accommodations will be limited to a small number of campsites.

As enumerated under Management Objectives, the seashore will contain six management units: the Fire Island Lighthouse management unit, Sunken Forest management unit, Watch Hill management unit, high dune management unit, Moriches area (Suffolk County lands managed by Suffolk County Department of Parks and Recreation), and the William Floyd management unit (see figure 4). In the units, recreational and interpretive centers are located around the Fire Island Lighthouse, Sunken Forest, Talisman, Watch Hill, Old Inlet, and Smith Point West. Future interpretive and educational activities at the William Floyd Estate will be established following expiration of lease/occupancy agreements. All uses and proposed facilities will be in accordance with general management objectives and specific objectives for each unit of the seashore (see pp. 24-28).

Table 1 lists the 1987 maximum numbers of daily visits to existing and proposed federal activity areas within the seashore. A comparison is included in the table listing 1976 maximum visitation and 1987 projections. Tables 2, 3, and 4 provide a detailed listing of existing and proposed public uses, existing and proposed facilities, and existing and proposed sizes of recreational facilities. Location and numbers of sites of such facilities as campgrounds are also listed.

TABLE 1

MAXIMUM DAILY VISITS TO EXISTING
AND PROPOSED FEDERAL ACTIVITY AREAS

	1976 Existing Daily Visits[a]	1987 Optimum Daily Visits
Federally Managed Areas		
Lighthouse Tract	—[b]	1,000
Sunken Forest	2,300	2,500
Talisman	450	700[c]
Watch Hill	1,500	2,000
Old Inlet	350	320
Smith Point West	1,800	2,500
William Floyd Estate	50	150
Total Capacity	**6,450**	**9,170[d]**

a) Visitors counted in areas of principal use; figures do not include transients.

b) Lighthouse tract is presently not a National Park Service area.

c) The National Park Service will not increase use at Talisman until federal facilities are provided.

d) This figure represents the total 1987 projected maximum number of daily visitors to Fire Island National Seashore compared to the March 1975 draft master plan projection of 17,450 daily visitors by the 1987-90 period.

TABLE 2

EXISTING AND PROPOSED PUBLIC USE OF FEDERAL AND NON-FEDERAL COOPERATIVELY MANAGED LANDS OF FIRE ISLAND NATIONAL SEASHORE

AREA	Bathing & Beach Use		Boating				Camping			Fishing			Hiking			Hunting		Interpretation			Vehicular Use	
	Supervised Beach Use	Surfing	Marina Use	Docking	Anchoring	Rowboat Rentals	Organized Camping (individual)	Organized Camping (group)	Primitive Camping in Swale	Bay Fishing from Shore	Shellfishing	Surf fishing	Beachcombing	Hiking (behind dunes)	Picnicking	Small-Game Hunting	Waterfowl Hunting	Historical Interpretation	Natural History Interpretation	Environmental Education	Conventional Vehicle Use (by permit)	Recreational Vehicle Use (by permit)
Lighthouse Tract		■		●						■	■	■	■	■				●	●	●		◆
Tracts 2, 3, 4											■	■	■									◆
East Island										■	■						■					
West Island										■	■						■					
Sunken Forest	■	■	■	■	◆					■	■	■	■	■	■				■	◆		◆
Tract 5		■									■	■	■									
Talisman	●	■		■	■					■	■	■	■		■					●		◆
Tract 6		■								■	■		■									◆
Watch Hill	■	■	■	■	■	■	■	■		■	■		■	■	■					■	■	◆
Old Inlet		■		■	■				●	■	■	■	■	■		■	■		●		◆	◆
Smith Point West		■								■	■	■	■	■	■	■			■		◆	◆
William Floyd Estate				●											●			●	●	■		
Other Bay Islands																	■					

■ Existing Use

● Proposed Use

◆ Reduced

TABLE 3 EXISTING AND PROPOSED FACILITIES OF FEDERAL AND NON-FEDERAL COOPERATIVELY MANAGED LANDS IN FIRE ISLAND NATIONAL SEASHORE

AREA	Bathhouse	Shower Stalls	Campground (individual)	Campground (group)	Food–Marina Store	Snack Bar	Docking	Dune Crossing (elevated pedestrian)	Dune Crossing (vehicular)	Environmental Education Center/Lodging	Ferry Slips	Historic Structure	Horse Stable	Interpretive Trail	Lifeguard Station	Maintenance Station	Marina	Marina—liquid waste pumping station	Parking Area	Picnic Sites	Ranger Station	Residence—NPS	Residence—private	Storage Facility	Electricity	Telephone Cable	Water	Wastewater Treatment	Vehicle Checkpoint	Interpretive Center	Visitor Information Center	No Proposed Facility
Lighthouse Tract							2	2	1	1				2		1			1		1	1		1				1	1	1	1	
Tracts 2, 3 4									1																							X
East Island																																X
West Island																																
Sexton Island																																X
Sunken Forest	2				1	1				2								1		1	1	2						1		2		
Tract 5																																X
Talisman		2					2	1		1	2				2	1				1	1	1		1				1				
Tract 6																																X
Watch Hill			1		1								1					1		2		1						1				
High Dune Management Unit																					2											
Old Inlet		1	1			1		1	1																	1	1	1				
Smith Point West									1					1							1			1				1	1	1		
William Floyd Estate																												2		2		
Other Bay Islands																																X
Patchogue River (Staging Area)						1	1				1					1			1		1			1	1	1	1	1		1	1	

- Existing, no major expansion or modification required
- 1 Expansion or modification 1977-1982
- 1 Proposed, implementation 1977-1982
- Triangle To be removed where possible, no implementation date
- 1 Removal 1977-1982
- 2 Expansion or modification 1983-1987
- 2 Proposed, implementation 1983-1987
- 2 Removal 1983-1987
- X No proposed facilities

TABLE 4 EXISTING AND PROJECTED SIZE OF CERTAIN RECREATION FACILITIES AT FIRE ISLAND NATIONAL SEASHORE 1977-1987

	Campground—Individual (No. Sites)			Campground—Group (No. Sites)			Campsites Primitive (No. Sites)			Interpretive Trails (Approx. Miles)			Picnic Sites			Marina			Docking (No. Boats)			Anchoring (No. Boats)			Parking Lots (No. Cars)			Environmental-Education Lodging (No. Pillows)		
	*E	P	M	E	P	M	E	P	M	E	P	M	E	P	M	E	P	M	E	P	M	E	P	M	E	P	M	E	P	M
Lighthouse Tract	–	–	–	–	–	–	–	–	–	–	1.0	1.0	–	–	–	–	–	–	15	0	15	–	–	–	–	20	20	–	50	50
Tracts 2, 3, 4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
East Island	–	–	–	–	–	–	–	–	–	–	0.5	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
West Island	–	–	–	–	–	–	–	–	–	–	0.5	0.5	–	–	–	–	–	–	–	10	10	–	–	–	–	–	–	–	–	–
Sexton Island	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sunken Forest	–	–	–	–	–	–	–	–	–	2.0	–	2.0	40	20	60	34	–	34	–	–	–	300	–	125	–	–	–	20	–	0
Tract 5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Talisman	–	–	–	–	–	–	–	–	–	–	–	–	5	15	20	–	–	–	0	10	10	50	–	50	–	–	–	–	50	50
Tract 6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Watch Hill	20	15	35	1	–	1	–	–	–	1.0	–	1.0	40	20	60	158	–	158	–	–	–	100	–	100	–	–	–	–	–	–
Old Inlet	–	–	–	–	–	–	–	2	2	–	–	–	–	–	–	–	–	–	20	0	20	40	–	40	–	–	–	–	–	–
Smith Point West	–	–	–	–	–	–	–	–	–	1.0	–	1.0	5	–	5	–	–	–	–	–	–	–	–	–	10	0	10	–	–	–
William Floyd Estate	–	–	–	–	–	–	–	–	–	0	2.0	2.0	5	5	10	–	–	–	0	10	10	–	–	–	–	20	20	–	–	–
TOTALS	20	15	35	1	–	1	–	2	2	4.0	4.0	8.0	95	60	155	192	–	192	35	30	65	490	–	315	10	40	50	20	100	100

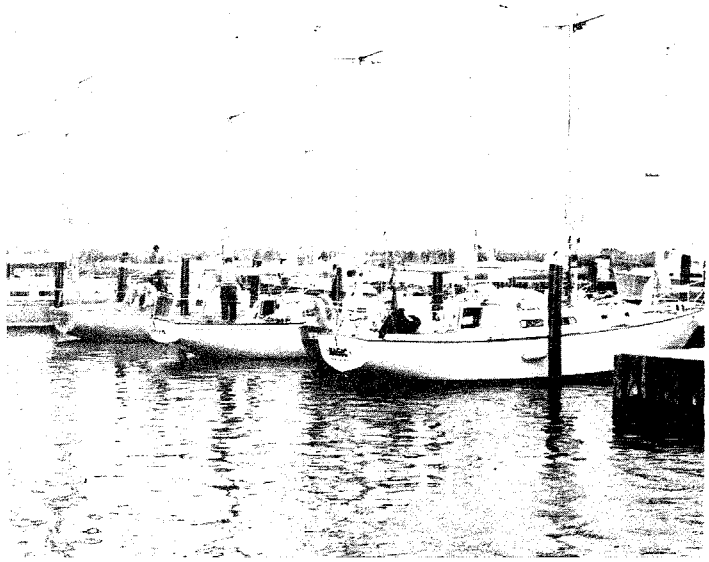
*E – Existing Facilities
P – Proposed Additions
M – Maximum Facilities – 1987





Recreational activities at Fire Island National Seashore





FIRE ISLAND LIGHTHOUSE AREA

Because the 90-acre lighthouse tract has recently been classified as surplus property by the U.S. Coast Guard, the National Park Service proposes to acquire it through surplus property procedures from the General Services Administration. The lighthouse is eligible for inclusion on the National Register of Historic Places. The lighthouse area will provide future visitors with recreational opportunities at the western end of the national seashore. Access to the lighthouse tract will be primarily by foot from the parking area at Robert Moses State Park.

Proposed Uses

When the lighthouse tract is acquired, it is proposed that major historical interpretation, natural history interpretation, and environmental education be the primary visitor activities provided at this extremely important complex. The existing lighthouse will be made available for limited, conducted interpretive tours, with not more than 16 visitors per hour within the lighthouse. The lighthouse keeper's quarters will be used as a small maritime museum, interpretive center, and information center to tell visitors about the maritime history of the seashore area, the whaling industry, and lifesaving activities of the former U.S. Life Saving Service. The lighthouse tract will provide low-density beach use to complement the high-density beach activity at Robert Moses State Park. Surfing at this area exists and it will be allowed to continue. Surf-fishing, shellfishing, bay-fishing from the shore, and beachcombing exist and will continue to be allowed for visitors seeking this type of recreation. Conventional vehicle access by permit will be permitted in this area.

Proposed Facilities

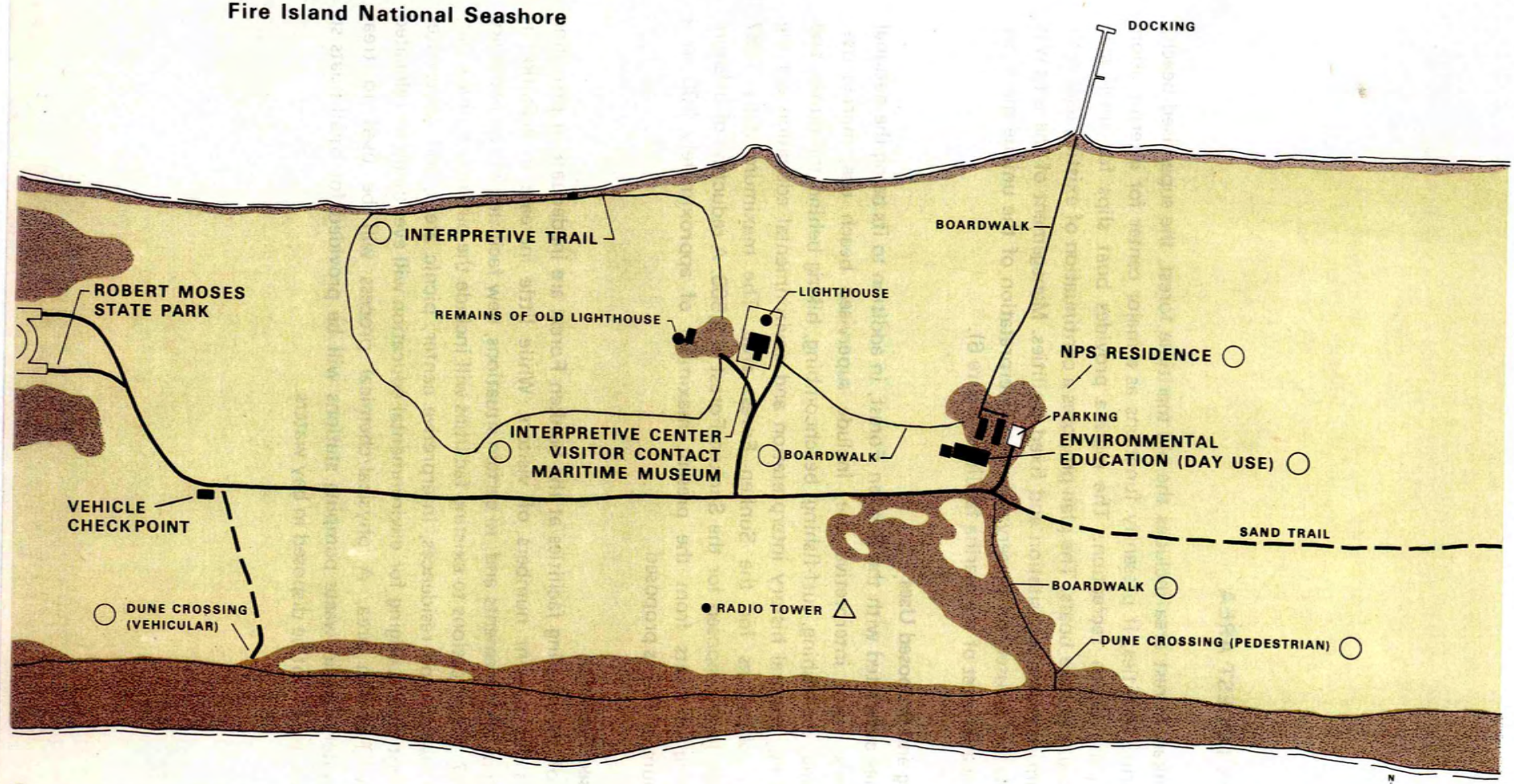
The existing historic lighthouse structure will be preserved, while the lighthouse keeper's quarters will be maintained as a museum. The Coast Guard Annex complex will be renovated and utilized as a day-use environmental education center. An interpretive trail of approximately 1 mile will be established to assist in explaining the natural history of the area. Docking for a maximum of 15 boats will be provided as well as parking for school buses and National Park Service vehicles (figure 5). The vehicle checkpoint at the entry to the lighthouse tract will remain. Also a residence/ranger station is proposed for year-round, 24-hour ranger services for the western end of Fire Island. A small maintenance station in conjunction with the existing storage building at the old Coast Guard Annex is proposed. It is expected that the maximum daily visitation to the lighthouse area by 1987 will be 1,000. It is anticipated that approximately 200 visitors may use the environmental education center during a peak day, and 700 to 800 the interpretive facilities at the lighthouse and proposed museum. Wastewater treatment will be provided by a small physical/chemical treatment system. No facilities will be provided at the bay-to-ocean strips, and the behind-the-dunes area will be restored and preserved in its natural state.

Figure 5

Fire Island Lighthouse Area

Proposed Facilities

Fire Island National Seashore



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SUNKEN FOREST AREA

The Sunken Forest area includes the old maritime forest, the supervised beach, and marina facilities; it presently functions as a major center for interpretation and day-use beach recreation. The marina provides boat slips for small and medium-size private boats. The plan proposes a continuation of existing uses with minimum increases in visitation and fixed facilities. Management of the area will primarily be focused on preservation and interpretation of the unique maritime forest located west of the marina facilities (figure 6).

Existing and Proposed Uses

Activities associated with the Sunken Forest, in addition to its being the national seashore's major interpretive site, include supervised beach use, marina use, anchoring, shellfishing, surf-fishing, beachcombing, hiking behind the dunes, and picnicking. Natural history interpretation and environmental education are the primary objectives for the Sunken Forest area. The maximum daily 1987 visitation level proposed for the Sunken Forest is 2,500. A reduction of offshore anchoring of boats from the present maximum of approximately 300 to a maximum of 125 is proposed.

Proposed Facilities

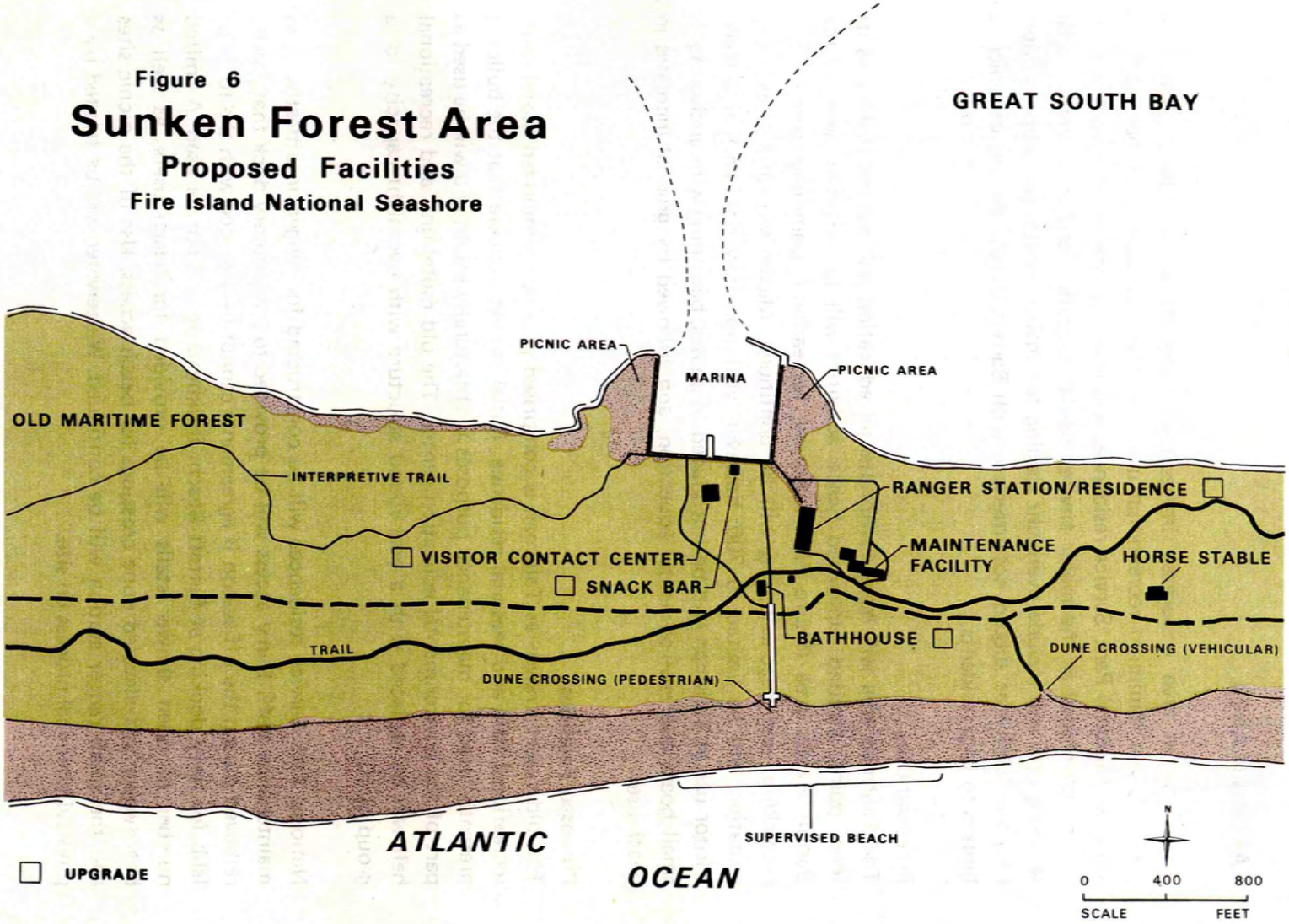
Many of the existing facilities at the Sunken Forest are inadequate in providing services for present numbers of visitors. While little increase in visitation is proposed, improvements and, in certain situations, new facilities will be necessary by 1987. Modifications to existing facilities will include the bathhouse, snack bar, ranger station and residences, interpretive center, picnic areas, and wastewater treatment sites. Lodging for environmental education will eventually be relocated to the Talisman area. A physical/chemical process will be used to treat wastewater. Liquid waste pumping stations will be provided for small boats so that waste will not be disposed in bay waters.

Figure 6

Sunken Forest Area

Proposed Facilities

Fire Island National Seashore



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TALISMAN AREA

The Talisman area is located immediately west of Barrett Beach. The area presently has minimum recreational uses. Existing structures have been used as seasonal National Park Service residences and maintenance operations. Talisman will be developed as the major environmental education center of the national seashore and will include overnight lodging for environmental education groups. Proposed activities should not interfere with Barrett Beach, the use of which is limited to Islip residents.

Proposed Uses

The Talisman area will have environmental education and natural history as its focal point. Limited supervised beach activities will be initiated west of the Barrett Beach area (figure 7). Anchoring, recreational clamming, surf-fishing, picnicking, and beachcombing will be continued. Maximum 1987 peak daily visitation will be limited to 700; however, visitation may not reach this level. Visitor use at Talisman will be introduced in phases, beginning with anchoring of small boats and environmental education, and followed by gradual increases in beach use.

Proposed Facilities

The old resort known as Talisman is comprised of a non-winterized motel unit, recreational hall, and seasonal residence. Initial studies indicate that the building presently used for maintenance purposes is structurally sound and will be used as part of the environmental education center. The old motel unit and recreational hall will be replaced with a year-round structure with overnight capacity for a group of 40.

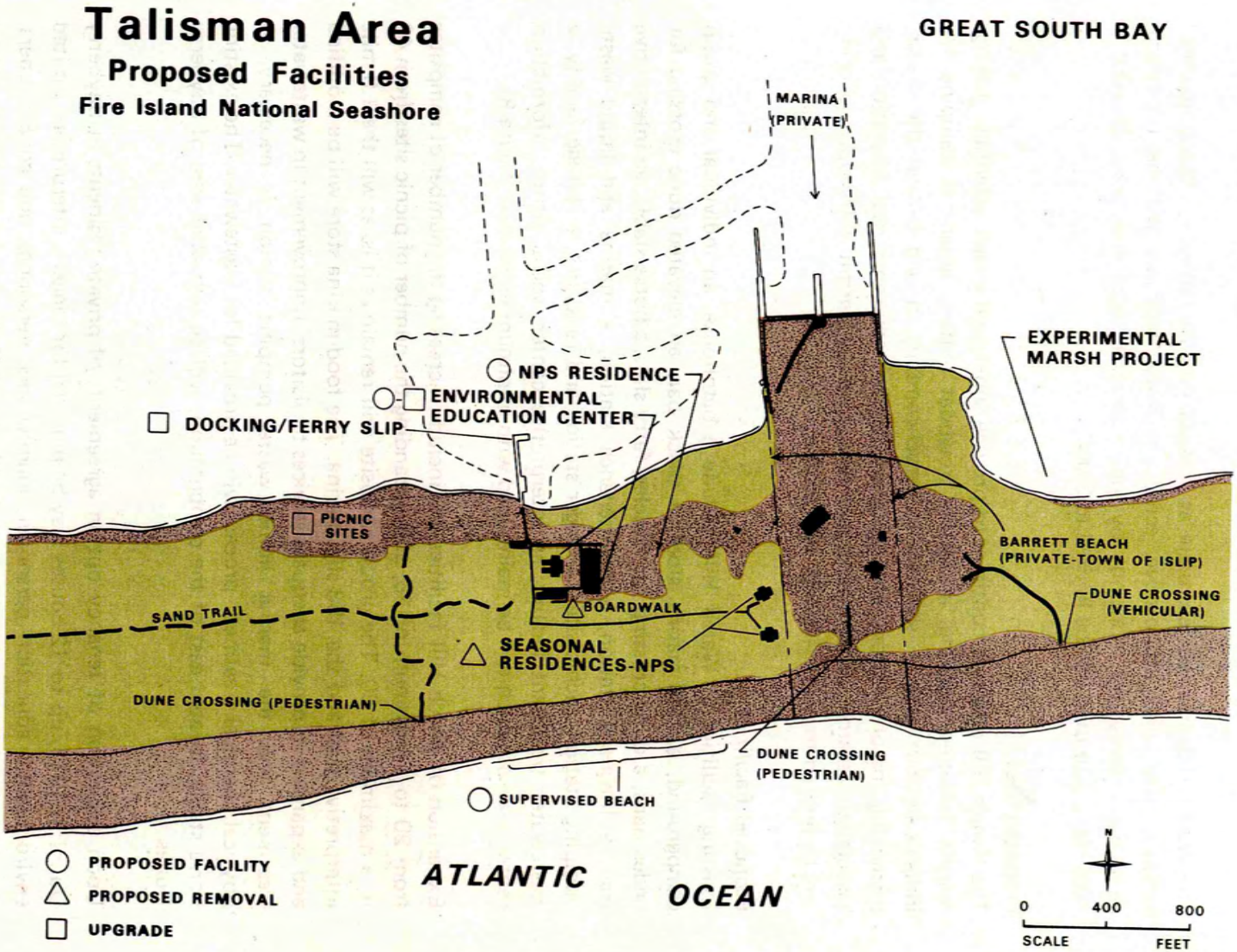
National Park Service residences will be constructed for ranger, interpretive, and maintenance staff. Ferry access will be provided to a temporary dock that can be removed during the off-season if agreements cannot be arranged with the town of Islip for ferry docking at Barrett Beach. Bulkheading will not be used. A limited number of open shower stalls will be provided for beach users, as well as boardwalks and elevated dune crossings for beach access. Use of the picnic sites and the small ranger station will be continued. Wastewater will be treated by a physical/chemical process on site.

Figure 7

Talisman Area

Proposed Facilities

Fire Island National Seashore



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WATCH HILL AREA

The Watch Hill area will continue as a major day-use recreation beach, marina, camping area, and interpretive center. Primary emphasis will be on beach recreation. Access will continue by means of small boat and ferry. Maximum 1987 daily visitation will be limited to 2,000.

Proposed Uses.

The Watch Hill area will continue to provide supervised beach activities, surfing, marina facilities, docking, anchoring, rowboat rentals, organized camping for individuals and groups, shellfishing, beachcombing, hiking behind the dunes, picnicking, natural history interpretation, limited environmental education and associated research, and conventional vehicle use by permit. Offshore anchoring will be limited to approximately 100 boats.

Proposed Facilities

Existing facilities at Watch Hill include a bathhouse, an individual and group campground, a food-marina store, a snack bar, an elevated dune crossing for pedestrians, a dune crossing for vehicles, ferry slips, a horse stable, an interpretive trail, a lifeguard station, a maintenance station, a marina and liquid waste pumping station, picnic sites, a ranger station and residence, a storage facility, a wastewater treatment facility, an interpretive center, and a visitor information center -- all of which will be maintained with minimum expansion (figure 8).

Expansion of Watch Hill facilities will include increasing the number of campsites from 20 to a maximum of 35, and expanding the number of picnic sites from 40 to a maximum of 60. The group campsite will remain as it is, as will the 1.0-mile interpretive trail and the 158-slip marina. The food-marina store will be modified and expanded to provide adequate services to visitors. Improvement in wastewater treatment and the marina liquid waste pumping station is necessary. A physical/chemical treatment process will be provided for wastewater. The existing horse stable, located east of the campground, will be relocated west of Bayberry Dunes.

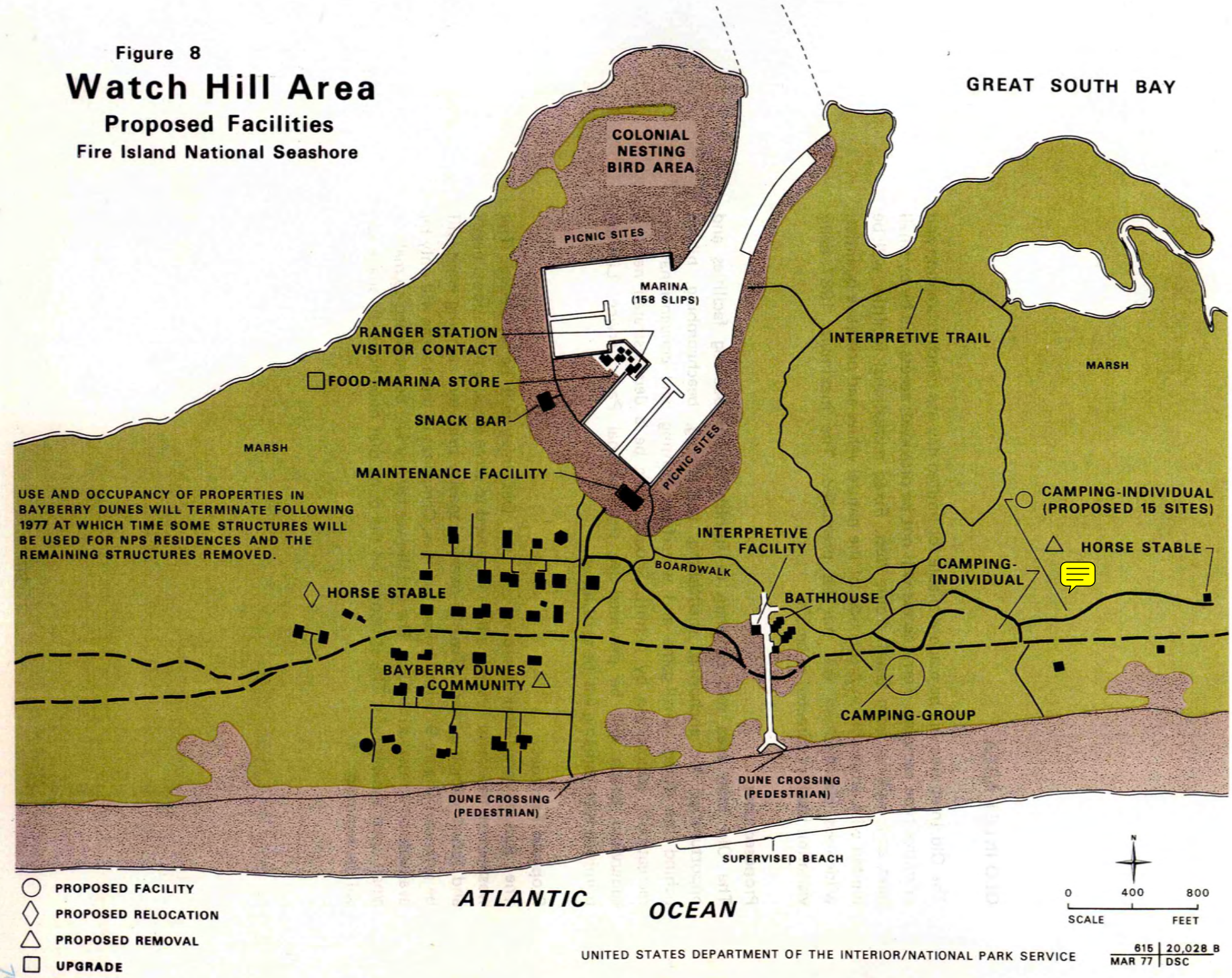
Upon expiration of tenancy option agreements of private residents in Bayberry Dunes in 1977, up to 12 houses may be required for rangers, interpreters, limited environmental education personnel, maintenance personnel, and concessioners. Remaining residences will be removed and impacted areas restored to their natural state. Electrical utilities will be placed underground.

Figure 8

Watch Hill Area

Proposed Facilities

Fire Island National Seashore



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OLD INLET AREA

The Old Inlet area will be made available for limited day-use beach recreation and primitive-type camping. Ferry access will not be provided; access will be by small boat and walking from Smith Point West. Fixed recreational facilities will be limited with emphasis on protection of the natural values and primitive qualities; wilderness classification will not be precluded. The maximum 1987 daily visitation level is estimated to be 320.

Proposed Uses

The Old Inlet area will continue to furnish limited docking facilities and opportunities for anchoring, shellfishing, surf-fishing, beachcombing, hiking behind the dunes, small-game and waterfowl hunting, and conventional and recreational vehicle use by permit. Should there be a demonstrated need, a supervised beach will be provided by the National Park Service. Limited primitive-type camping will be established.

Proposed Facilities

The docking area and boardwalk at the Old Inlet will be upgraded. The wastewater treatment system will be improved to serve day-use recreational needs and future camping needs. Two 15-person capacity primitive camping areas will be provided (figure 9) with limited facilities. Campsites in these areas will only be available on a reservation basis. The old shower facility will be modified to make a small open shower unit. The structure on the dune that once housed a snack bar will be removed.

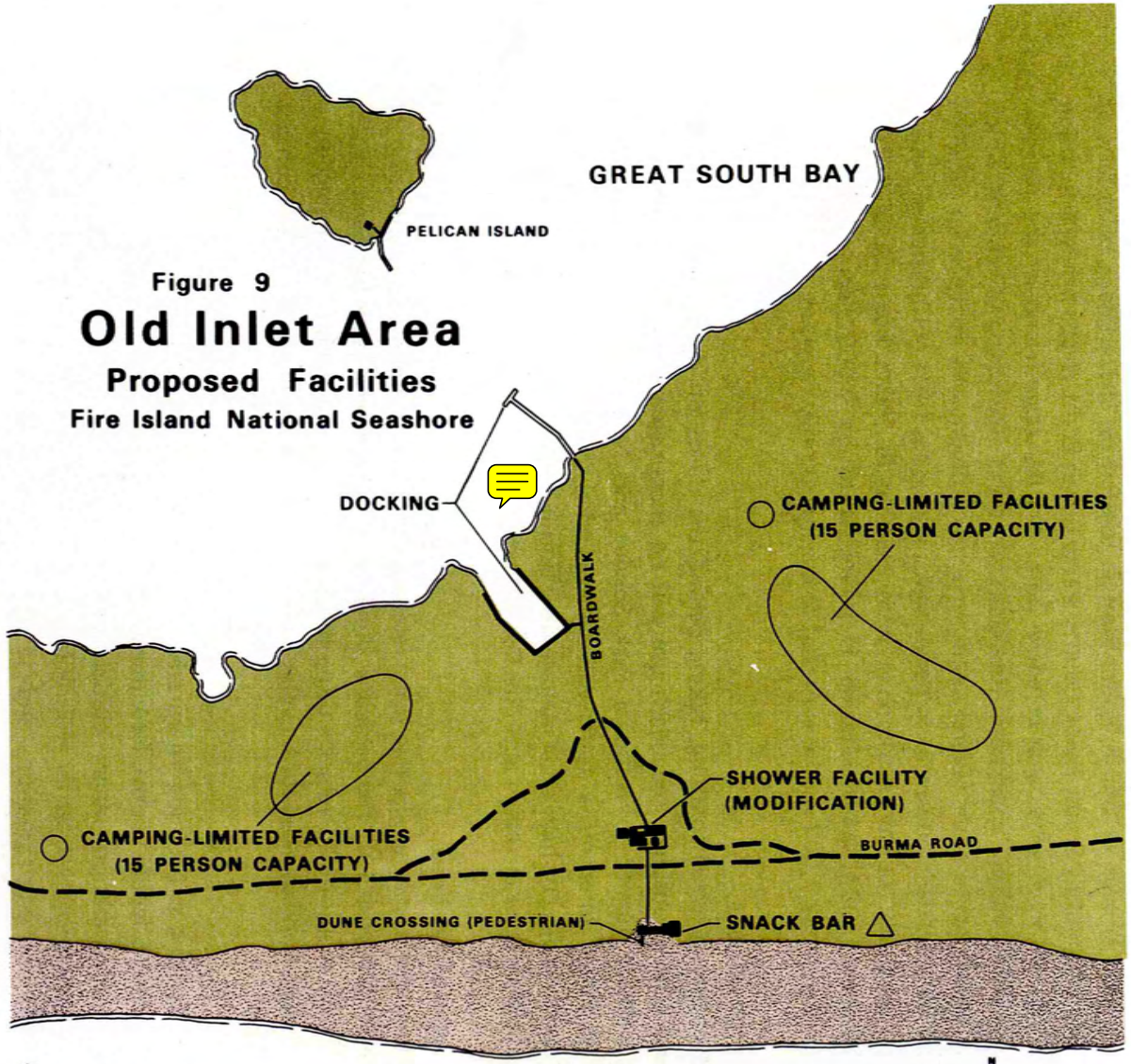


Figure 9

Old Inlet Area

Proposed Facilities

Fire Island National Seashore

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SMITH POINT WEST AREA

The area known as Smith Point West is located on the western boundary of Suffolk County's Smith Point County Park. Smith Point West's primary function will be to serve as a walk-in entry point on the eastern end of the national seashore. A vehicle checkpoint provides year-round monitoring of vehicles, which are permitted to enter federal lands. New management and interpretive facilities will be provided; however, no permanent parking facilities are proposed. Access will generally be by automobile with parking in Smith Point County Park. Maximum 1987 daily visitation is projected to be 2,500 people, of which approximately 1,000 will be expected to use interpretive facilities.

Proposed Uses

Surf-fishing, beachcombing, hiking behind the dunes on designated sand trails, and general unsupervised beach use will be encouraged. Waterfowl hunting will continue, subject to National Park Service and New York State regulations. Self-guided interpretive tours will be expanded along with guided interpretive tours of adjacent high dune management unit lands. Monitoring and control of all vehicles will be increased at Smith Point West.

Proposed Facilities

The vehicle checkpoint has been relocated to provide improved monitoring of vehicles (figure 10). The vehicular dune crossing on federal lands has been closed, thereby requiring all vehicles using the beach to enter at the park boundary dune crossing. Parking areas for bicycles will be provided adjacent to the visitor contact center.

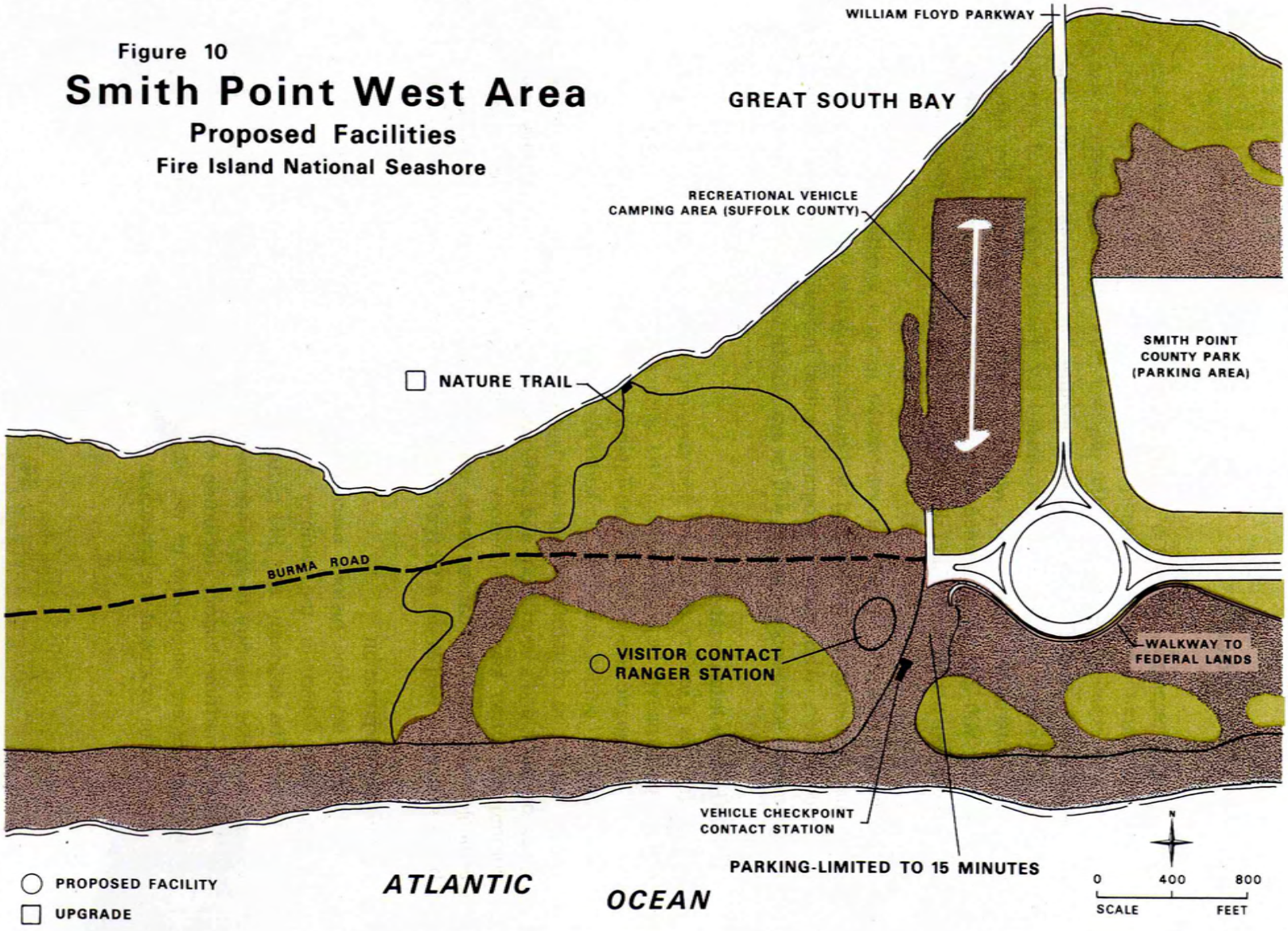
The existing self-guiding interpretive trail will be upgraded with boardwalks (not to exceed 5 feet in width). New management and interpretive facilities will consist of a combination ranger station and interpretive center. The new ranger station/interpretive center will replace the existing trailer that contains a vehicle checkpoint/ranger station, and it will include appropriate storage space. A physical/chemical treatment system will be provided for wastewater. Location and design of facilities will be guided by the need to minimize environmental impacts.

Figure 10

Smith Point West Area

Proposed Facilities

Fire Island National Seashore



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INTERPRETATION

INTERPRETIVE CONCEPT

Fire Island's interpretive concept is centered around sand, wind, the smell of salt spray, the sound of surf hammering the beach, gulls screeching, bright sunshine – in essence, the whole of the physical resources. The concept is also concerned with constant change – however minute – with dramatic beauty, and with an abundance of life-forms surrounded by diverse evidences of human endeavors. Interpretive objectives, while obviously emphasizing the natural environment, will also be concerned with recreational endeavors, the history of man's use of the barrier island, and the effects of the island on man's activities.

Life, beauty, change – all will be interwoven using a variety of interpretive programs. A number of guided and self-guided programs will be available to interested visitors. Also, evening programs, guided interpretive trips, and several environmental educational activities will be available at various activity centers.

Natural History Interpretation

Fire Island has a variety of natural and physical resources. Ecological processes and life patterns will be emphasized in the seashore's interpretive programs. The ecology of aquatic life-forms will be interpreted through displays, interpretive walks, and self-guided activities. Sunken Forest will continue as the focal point for interpretation of terrestrial vegetation, barrier-island ecology, effects of salt spray on the island's vegetation, and other characteristics of the maritime forest community. Other key natural history interpretive themes will include stages of ecological succession of barrier beach vegetation, and the importance of barrier beach systems as well as the effects of human manipulation of these systems.

Historical Interpretation

Fire Island's maritime history precedes colonization of Long Island. Indians hunted and fished in the vicinity long before Colonial settlements were established. The economy and life patterns of residents have centered around Great South Bay and Fire Island since the area was first settled. Interpretation of the island's maritime history, including the old whaling industry, the U.S. Life Saving Service era, habitation of the island, shipwrecks, and the local fishing industry, will be located at the lighthouse complex.

Other important aspects of Fire Island's maritime history to be included in the interpretive program will be the history of waterfowl hunting in Great South Bay, the shellfishing industry, and the hotel/resort era of the island. A maritime museum will be located in the lighthouse keeper's quarters adjacent to the lighthouse. The 612-acre William Floyd Estate, originally owned by one of the signers of the Declaration of Independence, is a major historic resource of the Long Island area. Following the expiration of lease/occupancy agreements and appropriate surveys, the site will be used for interpreting the history of the Revolutionary period, Long Island's estate and plantation economy, and the history of Long Island settlement.

Recreational Interpretation

Fire Island's interpretive program will also focus on the pursuit of leisure activities – the multifaceted phenomenon of recreation. Recreational clamming, surf-fishing, sailing, and boating of all types will be interpreted. Aspects of safety will be included along with instructional programs. Beachcombing, a very popular leisure activity at Fire Island, will be combined with other natural history aspects of the interpretive program.

INTERPRETIVE AREAS

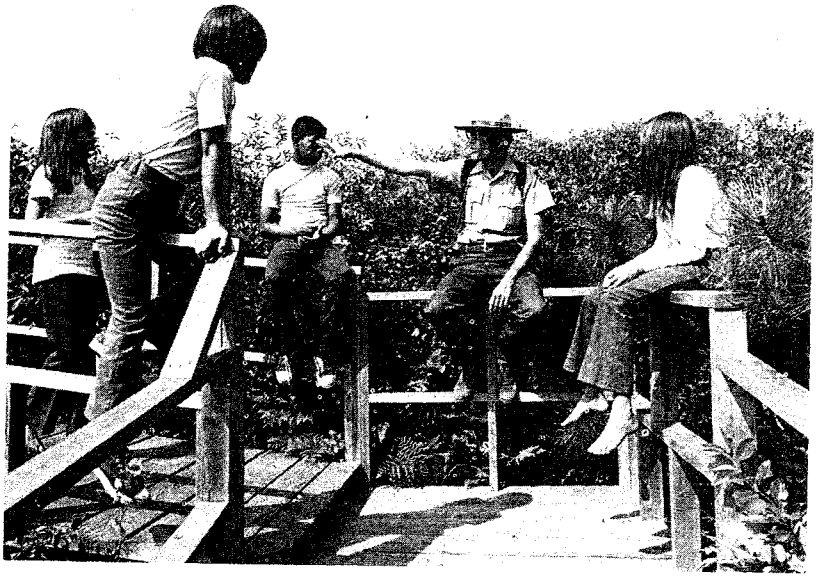
Fire Island Lighthouse Area

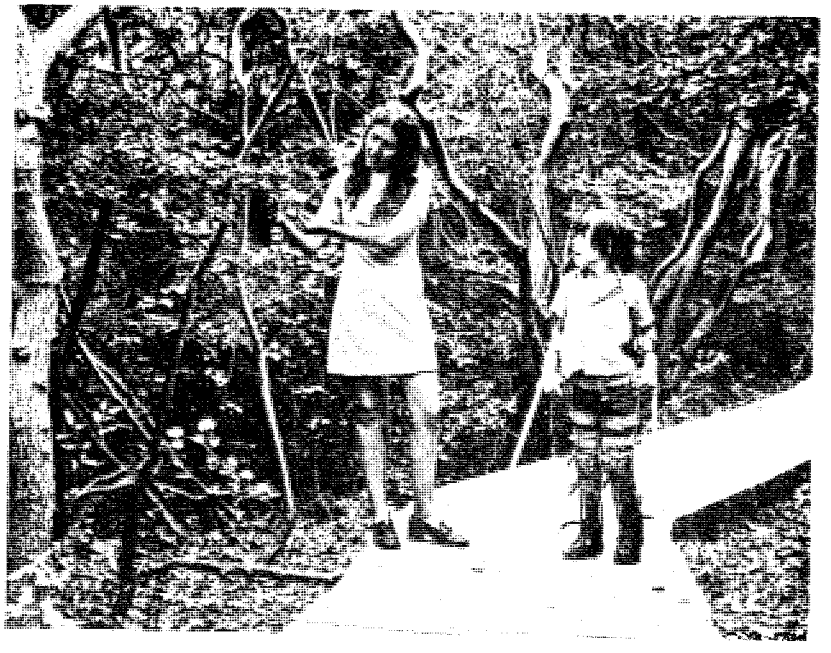
The lighthouse tract (90 acres) will be used to emphasize the historic, cultural, and natural resources of the island. The former quarters of the lighthouse keeper will be used as a maritime museum and interpretive center. Interpretation of the maritime history of the island will make use of exhibits, drawings, and supergraphics. Themes for interpretive programs will include the early whaling industry, the history of Coast Gaurd lifesaving station activities in the Fire Island vicinity, and the importance of the lighthouse as a navigational aid.

The lighthouse will be made available for limited, conducted interpretive tours. Visitation to the lighthouse will be limited to a maximum of 16 individuals per hour.

Natural history interpretation at the lighthouse will be provided by interpretive signs and displays along the proposed interpretive trail west of the lighthouse.

Major facilities will consist of the lighthouse, the lighthouse keeper's quarters, and the U.S. Coast Guard Annex complex, which will serve as a day-use environmental education center. The old lighthouse will be stabilized and used for limited





Interpretive activities at Fire Island National Seashore



interpretive purposes. Restoration will be undertaken as funds are made available. A 1-mile trail is proposed for interpreting the natural environment and geomorphology of the area.

Sunken Forest Area

Fire Island National Seashore has abundant natural resources, but Sunken Forest is unique. Interpretation at the maritime forest will continue to acquaint visitors with aquatic life-forms, formation of the maritime forest, vegetative types, and the relationship of vegetation to maintenance of the barrier island. The importance of tidal marshes as breeding habitat for aquatic life-forms and waterfowl will also be interpreted. An information kiosk will be established adjacent to the ferry terminal in Sayville.

Opportunities exist in this area for recreational interpretation of the effects on marine environments of using motorboats and the advantages of sailboats. Also recreational clamming, surf-fishing, and seining are possible interpretive subjects.

The existing 2-mile interpretive trail will be continued. The interpretive center will be enlarged, and fixed metalphoto exhibits will be used to aid in the interpretation of the area. The amphitheater will also continue to be used for group orientation and interpretive purposes. Environmental education and associated lodging at Sunken Forest will be discontinued following establishment of the environmental education complex at the Talisman area.

Talisman Area

The Talisman area is proposed as the location for an environmental education center concentrating on the natural history of Fire Island. Interpretive emphasis will be placed on the terrestrial and aquatic ecosystems, the importance of vegetation in the ecological chain, stabilization of the dunes, and the effects of exotics on the island. Land uses, their appropriateness, and their effects on the ecology of the island will be studied as well as the effects of the numerous extratropical storms and hurricanes that have struck the island. Other important interpretive concepts at Talisman will include information on the geomorphology of the barrier island, effects of erosion, and the continued accretion of land and movement of the island westward. Information on commercial fishing and the clamming industry in the surrounding area and the effects of pollution on beach activities and these industries will be provided.

The proposed environmental education center, with lodging up to 40 pillows, will require a new structure.

Watch Hill Area

The Watch Hill area programs will offer interpretation in the study of ocean and bay environments, vegetation of the island, dune and beach dynamics, importance of tidal marshes as breeding habitats, and the wildlife of the island.

Recreational interpretation consisting of sailing, motorboating, related impacts on the marine environment, water safety, and uses of the marina will be initiated at Watch Hill. Beach and bay activities such as beachcombing, lifesaving techniques, illustrations of recreational clamming, surf-fishing, and seining are to be included in the program for recreational interpretation. Fixed interpretive facilities at Watch Hill consist of a small interpretive center located in the ranger station. This function will be continued with occasionally modified exhibits to afford visitors additional interpretive opportunities. The small manned interpretive kiosk located on the boardwalk will be used to provide information on the ecology of the island and interpretive services. The existing 0.3-mile self-guiding interpretive trail will be retained and a few metalphoto plaques may be installed for visitor information. An information kiosk will also be located at the Patchogue ferry terminal.

Old Inlet Area

The Old Inlet area will be maintained in its natural state, and natural history interpretation of the high dune area will be the primary objective. The geomorphology of the Old Inlet will also be interpreted. A few small metalphoto plaques will be located along the existing boardwalk for interpretive purposes.

Smith Point West Area

Smith Point West is an ideal location for an interpretive facility to provide natural history interpretation of the eastern segment of Fire Island. Emphasis will be on the ecology of the area, and the primary objective is to interpret the high dune area in order to inform visitors about the formation of the dune area, vegetation, wildlife, and the fragile nature of the resource.

The area is a good location for interpreting beach and bay recreational activities (consisting of beachcombing, surf-fishing, shellfishing, and water safety) by providing illustrations of these activities and appropriate instructions. Also, visitors should be given safety tips for recreational hiking behind the dunes along the Burma Road sand trail. Occasionally, guided interpretive trips will be conducted in the high dune management unit.

Fixed facilities will be limited in this area because of the established Smith Point County Park adjacent to Smith Point West. This plan proposes to continue an interpretive facility with some expansion to provide visitors to the eastern end of Fire Island with interpretive exhibits explaining the island's geomorphology,

aquatic life-forms, terrestrial wildlife, ecology of the island, and features of the high dune area. The existing nature trail will be upgraded with a boardwalk and a few metalphoto interpretive plaques. Primary interpretive themes will be the barrier beach dynamics, erosion, upland vegetation, and marsh ecology.

William Floyd Estate

Interpretation at the William Floyd Estate will focus on the historical importance of William Floyd (one of the signers of the Declaration of Independence), the importance of the estate to Long Island history as well as to American Revolutionary history, and the natural history of the estate grounds. The Floyd Estate is on the National Register of Historic Places.

The National Park Service will provide tours of the manor house and outbuildings by reservation to groups with a demonstrated interest in history or historical research. Tours may also include the estate grounds presently owned by the National Park Service with emphasis on such features as the cemetery grounds. School groups and natural history groups will be encouraged to use the estate grounds as an environmental study area.

Appropriate interpretive exhibits will be provided for outbuildings, and the estate cemetery and gounds. There will also be an automated audiovisual program for visitors to the manor house.

Immediate curatorial services will be undertaken for the care and protection of furnishings and artifacts. Items will be cataloged, and necessary preservation treatment and appropriate storage will be provided. Short-term park efforts will also concentrate on the identification and location of items that relate to the history of the estate and are suitable for display.

The National Park Service, with assistance from cooperative associations, will make available to visitors appropriate publications concerning William Floyd, the estate and Long Island history, American Revolutionary history, and the natural history of the estate grounds.

Headquarters Complex/Mainland Terminal

The proposed headquarters complex and mainland ferry terminal area, to be established at the head of the Patchogue River, will provide visitors with initial interpretation of Fire Island. This plan proposes minimum interpretation with emphasis on visitor orientation and information. Interpretation of the clamming industry and other Great South Bay activities will be located at the Patchogue River site.

ACCESS AND TRANSPORTATION

Fire Island National Seashore has no continuous hard-surfaced road, and vehicular circulation is confined to the state and county park areas at either end of the seashore. A limited number of vehicles are granted permits to travel along the beach and through dune crossings into communities and certain recreational developments.

Traditionally access to Fire Island has been by small boat or ferry. The communities are served by commercial ferry, and the federal activity areas are reached by means of a ferry system controlled by the National Park Service. Most seashore visitors and community residents reach the mainland ferry terminals by automobile, although an increasing number travel from New York City to the vicinity of the ferry terminal on the Long Island Railroad.

Another means of access to Fire Island from Manhattan is by seaplane from the East River. However, the National Park Service prohibits use of seaplanes and other aircraft for access to federal activity areas.

Access to Fire Island National Seashore will continue to be primarily by traditional transportation modes. Private vehicle access will be limited to the Robert Moses State Parkway and the William Floyd Parkway. Visitors utilizing facilities at the Fire Island Lighthouse will park in existing lots at Robert Moses State Park while those visitors entering the national seashore at Smith Point West will park at Smith Point County Park.

Visitor access to recreational areas at Sunken Forest, Talisman, and Watch Hill will be by means of ferry or small boat or on foot. Old Inlet access will be limited to small boat and pedestrian travel, although recreational vehicle enthusiasts with valid permits will be permitted to use the beach between Smith Point West and Long Cove.

Ferry service between the communities and the mainland and between the communities and federal developed areas will remain the responsibility of the communities themselves. Similarly, ferry service to town beaches will be provided by the mainland municipalities. Water taxi service between island communities will continue to be provided by private commercial interests.

FERRY SYSTEM

The proposed ferry system will provide future service to federal activity areas within the national seashore and will include substantial service to Watch Hill and Sunken Forest (Sailor's Haven), with limited service to Talisman (see tables 5 and 6 for maximum numbers of daily visitors).

The March 1975 draft master plan included a combined future daily peak visitation of 9,800 people to Watch Hill, Sunken Forest, and Talisman, with 5,600 arriving by ferry and 4,200 by other means, mostly by private boats. This 1977 general management plan proposes a revised 1987 combined peak visitation of 5,200, with 3,292 arriving by ferry and 1,908 by small boat.

The major ferry routes to the federal areas will originate from a proposed terminal site on the Patchogue River in the village of Patchogue and from the existing private ferry operation located in Sayville (see figure 11). Discussions are underway with the Long Island State Parks Commission concerning a secondary ferry terminal, which would be located either immediately north of Heckscher State Park on a site known as Timber Point or on the eastern edge of the state park. If a Heckscher terminal becomes operational, the Sayville ferry service will be discontinued and all ferry access to Sunken Forest will originate from the Heckscher site. Construction of a ferry terminal at either of the Heckscher locations is contingent upon approval of the proposal by the Long Island State Parks Commission and Suffolk County and upon obtaining the right to dredge and maintain a ferry access channel.

Ferry service from the Patchogue terminal will be to Watch Hill and Talisman. The private ferry operation in Sayville will be improved and will provide service to Sunken Forest. However, the 1987 maximum projected number of daily visitors arriving at Sunken Forest by ferry (1,864) cannot be accommodated by expanding the Sayville terminal site. Until the planning problems associated with a Heckscher site are resolved, the Sayville operation will continue. Limited winter ferry service will be available from the Patchogue terminal, but service will not be on a scheduled basis.

HEADQUARTERS COMPLEX/MAINLAND TERMINAL

The 1964 legislation establishing the national seashore did not include provisions for acquiring land on the Long Island mainland. Consequently, private ferry operators under contract to the National Park Service provide ferry service to the island from docks in Patchogue and Sayville. The Park Service must also lease space for its various administrative and maintenance functions. The existing

TABLE 5

FEDERAL ACTIVITY AREAS WITH PRIMARY ACCESS BY AUTO:
1987 MAXIMUM NUMBERS OF DAILY VISITORS

Facility	People
Lighthouse	1,000
Smith Point West	2,500
William Floyd Estate	150

TABLE 6

FEDERAL ACTIVITY AREAS WITH PRIMARY ACCESS BY WATER:
1987 MAXIMUM NUMBERS OF DAILY VISITORS

Facility	Private Boats	People*
Watch Hill		
Boats Beached and Anchored	100	400
Marina Boat Slips	158	632
Ferries	—	968
Total Watch Hill		**2,000**
Sunken Forest		
Boats Beached and Anchored	125	500
Marina Boat Slips	34	136
Ferries	—	1,864
Total Sunken Forest		**2,500**
Talisman		
Boats Beached and Anchored	60	240
Ferries	—	460
Total Talisman		**700**
Old Inlet		
Boats Beached and Anchored	40	160
Boats at Small Docks	20	80
Total Old Inlet		**240**

* 4 people per boat

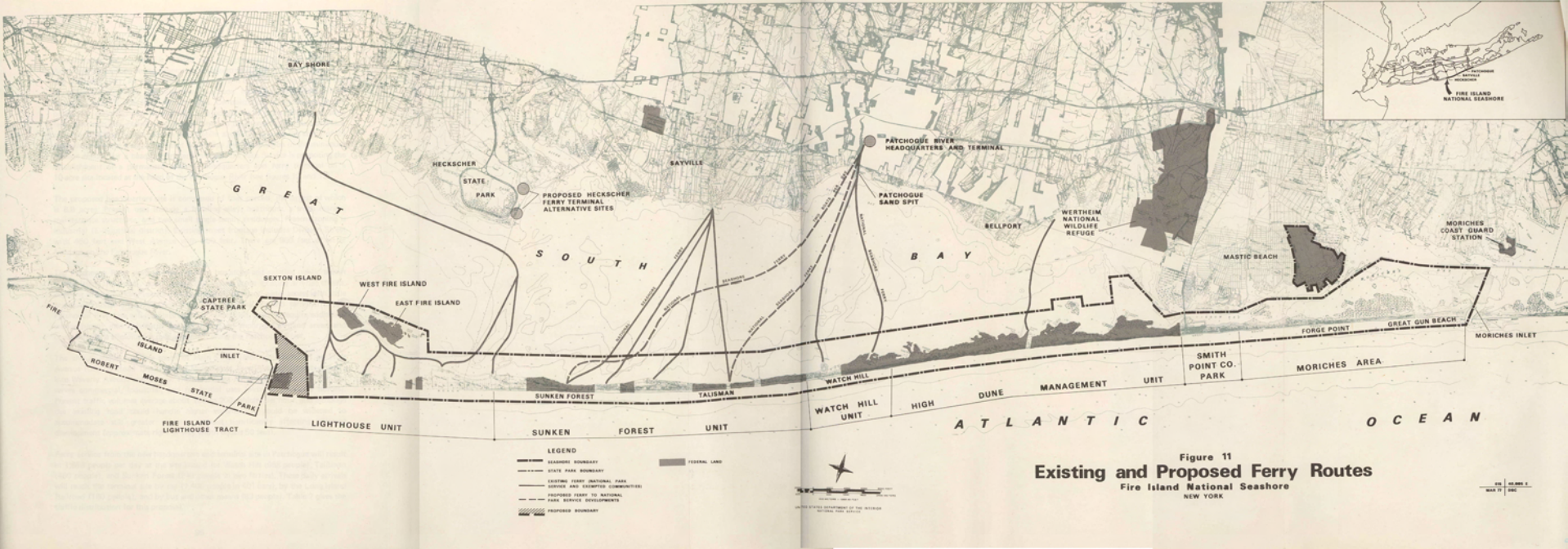


Figure 11

Existing and Proposed Ferry Routes

Fire Island National Seashore

NEW YORK

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administrative headquarters is located near the proposed ferry terminal area. According to existing lease agreements, administrative operations will remain at this site until 1981. At that time consideration will be given to acquiring the site in order to maintain administrative operation functions here rather than relocating them to the ferry terminal area. Centralization of operations at one permanent mainland area is desirable. The possibility of expanding the existing ferry terminals was examined and determined to be impractical because of a lack of open land and problems with automobile access. Following the study of 24 potential mainland sites along Great South Bay and reevaluation of the minimum acreage needed for a headquarters/terminal site, the Park Service is proposing the establishment of a permanent seashore headquarters and ferry terminal on a 10-acre site located at the head of the Patchogue River (see figures 12 and 13).

The proposed headquarters site is composed of four parcels, the largest of which is 6.8 acres. Present uses include a bowling alley, boathouse, a small marina, maintenance structures, and two small single-family residences. Present zoning is industrial (E-industrial district). Existing street frontage includes Division Street with 450 feet and West Avenue with 650 feet. There are 900 feet of water frontage on the Patchogue River.

The Patchogue River site has easy access to bus stops and existing public transit (Long Island Railroad), good automobile access from existing arterial streets, adjacent offsite parking (existing and proposed), and good water access with little or no additional dredging. Location of the headquarters and terminal at the Patchogue River site will facilitate use of public transit, will not require additional encroachment into residential neighborhoods or important wetland areas, and could serve as a stimulus for redevelopment along the Patchogue River.

The site is about 1/3 mile south of Main Street (Montauk Highway) on West Avenue (County Road 19). North of Main Street, West Avenue connects directly into Waverly Avenue and Sunrise Highway. West Avenue is 32 feet in width and serves commercial, industrial, and residential uses (older single-family homes). Present traffic volumes average about 150 to 200 vehicles per hour, and although the existing road could handle higher volumes, it could be widened to accommodate still greater volumes without significantly affecting adjacent development (approximate right-of-way width equals 50 feet).

Ferry service from the new headquarters and terminal site in Patchogue will result in 1,668 people per day at the site bound for Watch Hill (968 people), Talisman (460 people), and Sunken Forest (240 people in two ferries). These daily arrivals will reach the terminal site by car (1,405 people in 401 cars), by the Long Island Railroad (180 people), and by bus and other means (83 people). Table 7 gives the traffic distribution for this proposal.

TABLE 7

1987 HOURLY TRAFFIC DISTRIBUTION

Arrival at Mainland Terminal			Departure from Mainland Terminal		
Time	Percent[a]	Avg. Peak No. of Cars[b]	Time	Percent	Avg. Peak No. of Cars
8 to 9 a.m.	10	40	1 to 2 p.m.	2	8
9 to 10	15	60	2 to 3	5	20
10 to 11	25	101	3 to 4	10	40
11 to 12	30	120	4 to 5	25	101
12 to 1 p.m.	10	40	5 to 6	30	120
1 to 2	5	20	6 to 7	20	80
after 2	5	20	7 to 8	8	32
	100	401		100	401

a) Percentage of arrivals and time of arrivals were determined by surveys conducted with the assistance of the Nassau-Suffolk Planning Board and Vollmer Associates.

b) 3.5 people per car.

Morning peaks will result in about 100 to 120 vehicles per hour from 10 a.m. to 12 noon arriving at the terminal, and afternoon peaks will result in about 100 vehicles per hour from 4 p.m. to 6 p.m. departing from the site. Demand, at 140 percent of average peak volumes, may cause peaks from 140 to 170 vehicles per hour. The site, including the bowling alley property, could accommodate approximately 450 spaces, which would accommodate average peaks. Some minor use of adjacent railroad parking lot spaces may be necessary on extraordinary weekends.

National Park Service consultants have analyzed the feasibility of several vessel types for use as ferries. Large capacity, standard hull ferries, with steel or aluminum construction, and conventional screw propellers appear to be most feasible. Channel constraints on the upper Patchogue River favor a vessel with general dimensions that do not exceed 65 feet in length, 26 feet in width, and a 4½-foot draft.

The mainland terminal and seashore headquarters will contain facilities for administration, visitor orientation, a small concession, ferry terminal, maintenance and storage, wet and dry docks, visitor parking, and bicycle storage. The site plan in figure 13 is a general illustration of where certain facilities would be located on the 10-acre site. Table 8 lists minimum area requirements for planned facilities at the Patchogue terminal.

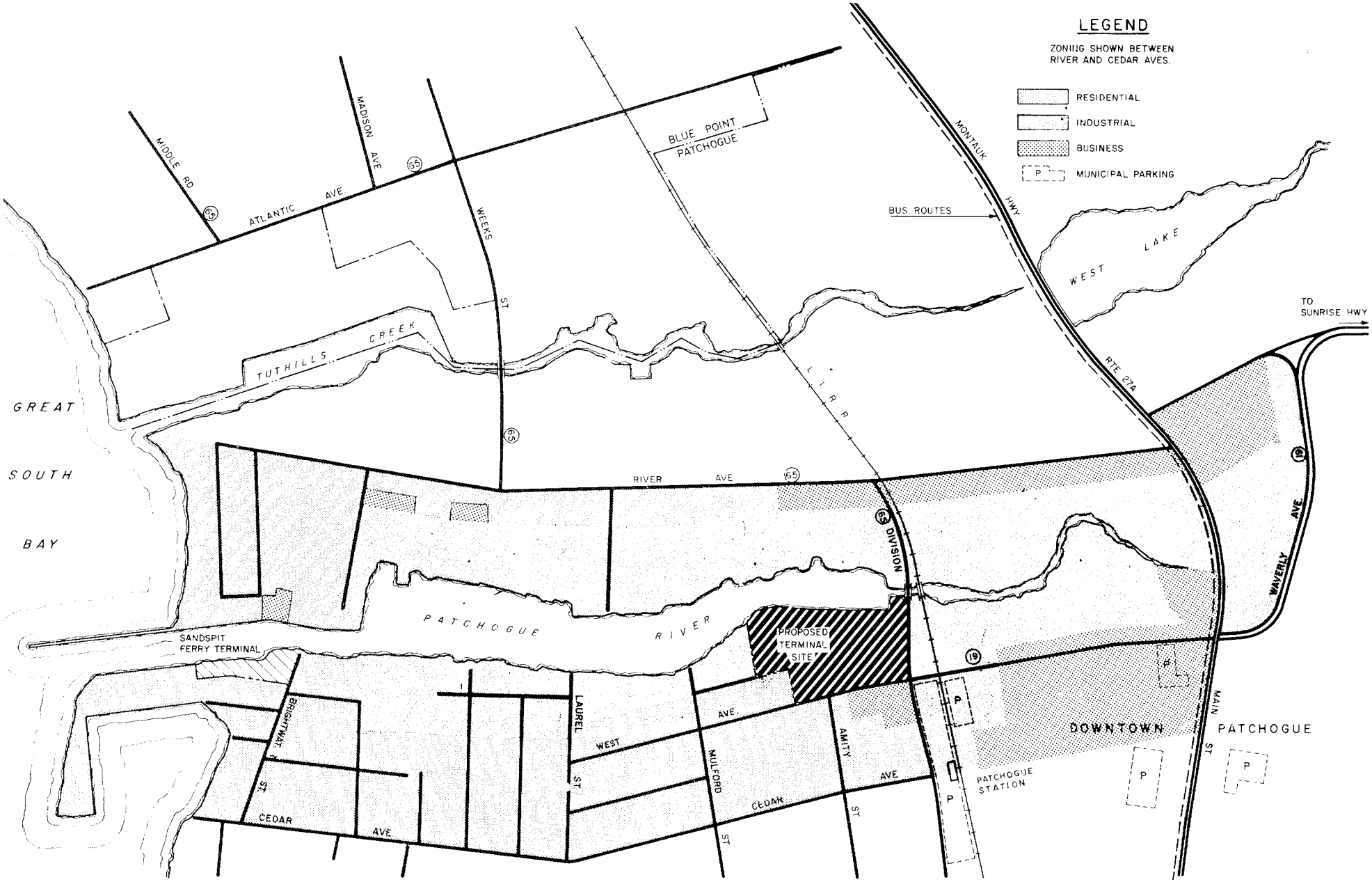


Figure 12

Existing Land Use Surrounding Patchogue River Site

Fire Island National Seashore

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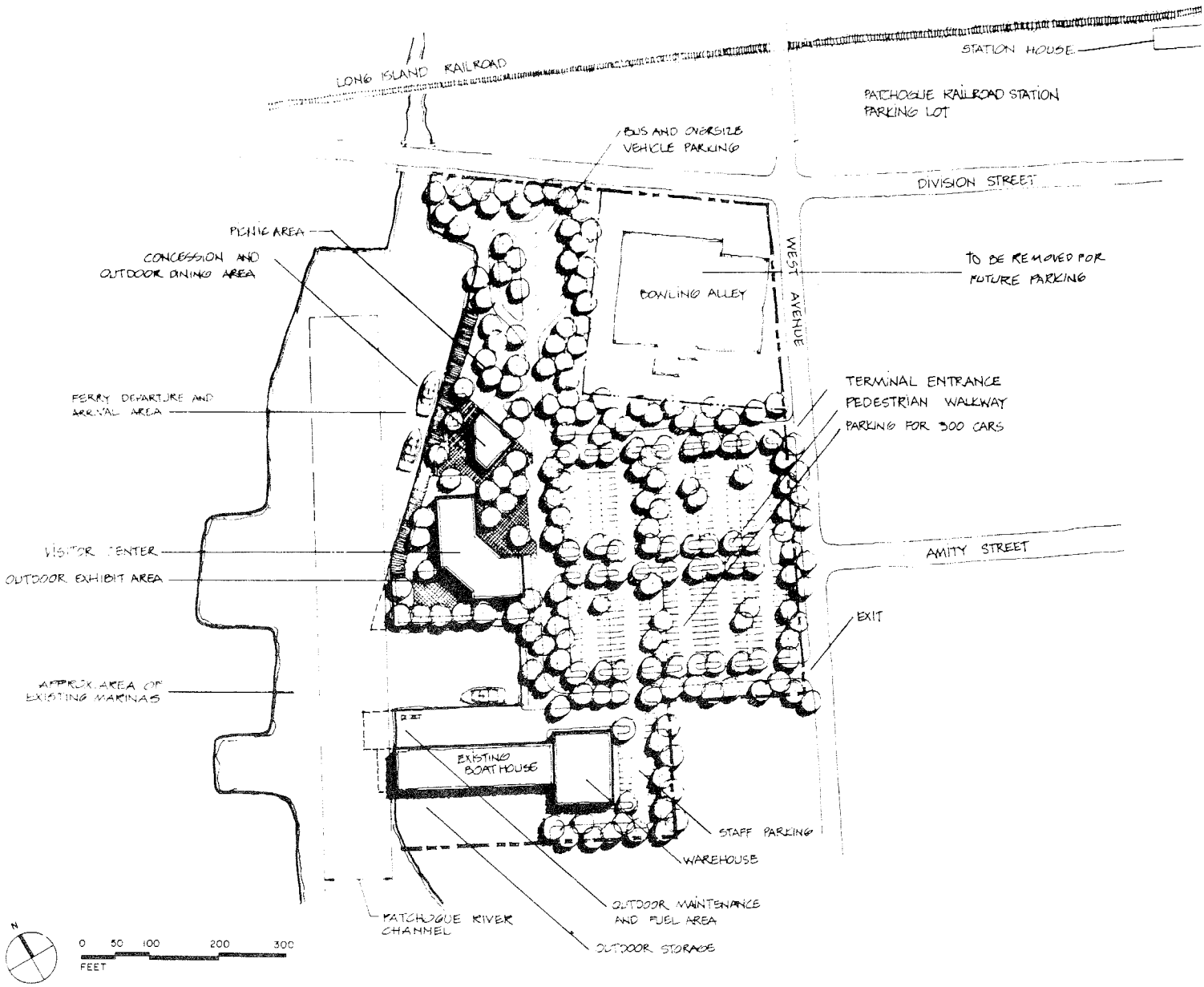


Figure 13

Headquarters/Terminal Area Site Plan

Fire Island National Seashore

NEW YORK

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DSC | FEB 76

TABLE 8

PATCHOGUE TERMINAL – MINIMUM AREA REQUIREMENTS

Facility	Floor Area (in sq. ft.)	Building Area (in sq. ft.)
Visitor Center and Administration Building * (two stories)	20,500	13,850
Comfort Station		500
Concession Area		10,000
Maintenance Area and Warehouse (two stories)	25,500	18,000
Visitor Parking (450 vehicles)		180,000
Ferry Terminal		6,500
Space Totals		228,850
Facilities Acreage		5.3 Acres
Open Space Allocation		4.0 Acres
Minimum Required Acreage		9.3 Acres

*Space requirements will be reduced if the present headquarters site is retained.

The Patchogue River site is located in an industrial/commercial area, and the river itself is lined with marina and industrial structures and uses. Design of the terminal complex will be somewhat compact with an urban character. The new terminal site will require some redevelopment for a suitable National Park Service area. The village of Patchogue and the Suffolk County Planning Commission will be encouraged to undertake a replanning and rezoning program for the surrounding terminal site area to complement the development of the site as a national seashore facility.

SEAPLANES AND HELICOPTERS

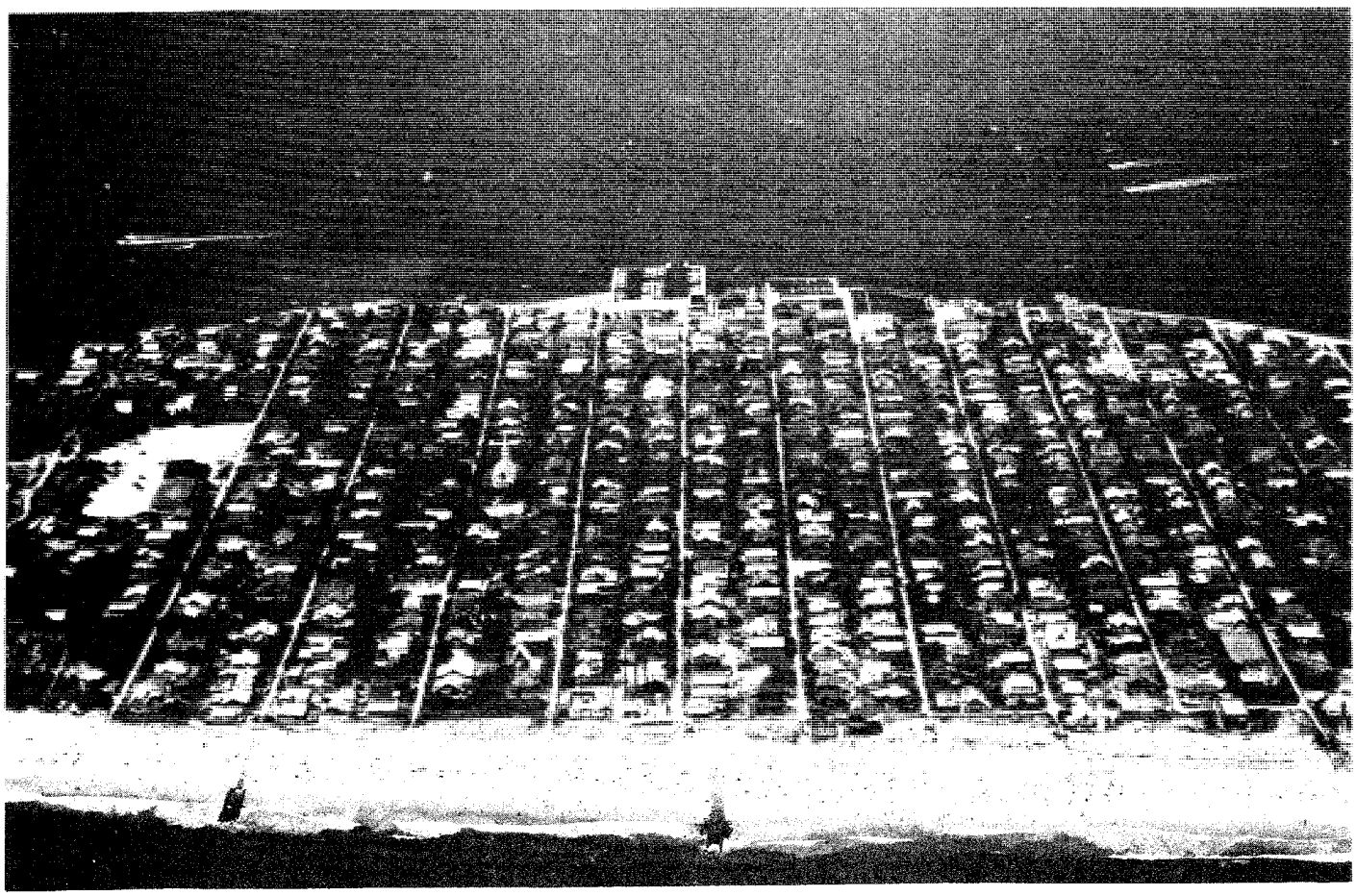
Public use of seaplanes and helicopters will not be allowed for access to national seashore lands. The communities will be encouraged either to prohibit the use of helicopters or to restrict their use to well-marked landing areas. The National Park Service has cooperated with the Federal Aviation Administration to develop a regulation to govern the use of seaplanes in waters adjoining the communities, to restrict this use to specific areas, and to minimize safety hazards.

Use of helicopters within federal areas will be for emergency and essential management purposes only (for instance, to conduct special studies). Helicopter landing areas will be designated near the Sunken Forest and Watch Hill areas.

LAND-USE CONTROLS WITHIN FIRE ISLAND COMMUNITIES

The 17 private residential communities within Fire Island National Seashore boundaries are located within the development district, where additional development or property improvements are permitted. Future development in the communities, according to the 1964 Fire Island National Seashore Act, was to conform with local zoning ordinances as approved by the Secretary of the Interior. The prohibition of additional land development on Fire Island was not intended. Private community development consistent with the conservation and preservation of the island is permissible. Development is to conform with the traditional low-density residential character of the communities prior to the establishment of the national seashore. Since 1964, widespread disagreement has arisen concerning the control of private land and the role of the federal government.

Only two of the four local governmental jurisdictions — the town of Islip and the village of Saltaire — have submitted zoning ordinances for the Secretary's approval (the Saltaire ordinance has not been acted upon). Over 300 variances have been granted, many of which have resulted in a definite change in the physical character and life-styles of the communities. The Secretary was given no legal power to compel local zoning authorities to submit zoning ordinances for approval; however, the National Park Service has made repeated requests. The Park Service does have authority to condemn private property in those communities where local zoning ordinances have not been submitted to the Secretary and approved.



Aerial view of Ocean Beach in July 1974, looking across Fire Island toward Great South Bay. Ocean Beach is the most commercially developed community within the authorized boundary of Fire Island National Seashore, and little vacant land remains.

Although this system of indirect federal control of private property has been relatively effective in certain National Park Service areas, such as Cape Cod National Seashore, federal control at Fire Island has been ineffective largely because the political situation is dramatically different. The island is separated from the mainland by Great South Bay with few island landowners voting in Islip and Brookhaven town elections. The remaining several thousand property owners maintain their residency elsewhere (mostly in New York City and Nassau County).

The towns of Brookhaven and Islip have regarded Fire Island land-use problems low in priority and think the basic responsibility for control was given to the federal government following the establishment of the national seashore. National Park Service control has been made difficult because of the Park Service's undetermined legal authority to enjoin local governments from granting variances, because of the unavailability of acquisition funds, and because of the reluctancy of the U.S. Department of the Interior to become directly involved.

The results of the existing system have been the granting of over 300 variances, establishment of several additional commercial uses and high-density residential uses, and an increase of groupers (large non-family related groups using single-family residences). Population densities and related support facilities have increased annually and could threaten the conservation and preservation mandate of the national seashore.

A major land-use control problem has been that New York law provides property owners the right to build single-family residences on substandard lots that were held in single and separate ownership prior to the enactment of local zoning ordinances. Legal decisions indicate that enforcement of zoning on such substandard lots would be an unconstitutional taking of private property rights without just compensation. Local zoning authorities can grant building permits without a variance procedure in such cases.

Condemnation by the National Park Service as the only sanction against illegal or improper uses has not been utilized. Continuation of the present land-use control system will probably result in development of nearly all lots, including substandard ones, dune properties, and wetlands. (See appendix D for past development patterns.) A greater danger with the present system is that no effective method will exist to resist pressures that would permit higher densities on already developed lots, including multiple-family dwellings and additional commercialization. Illegal conversion of single-family dwellings to multiple-family dwellings would continue. High-density uses and additional commercialization would be in contradiction to the conservation and preservation mandate of the Fire Island National Seashore Act.

PROPOSED LAND-USE CONTROL SYSTEM – A MODEL ZONING ORDINANCE

The National Park Service, in close cooperation with local governmental jurisdictions, will develop standards and criteria to be used in formulating a "model zoning ordinance" to be applied within the 17 private communities of the national seashore. The model ordinance will comprise the basis of a special Fire Island district to be included in the zoning ordinances of the towns of Islip and Brookhaven. Zoning regulations for the two small incorporated communities of Saltaire and Ocean Beach will essentially be composed of the standards as listed in the model ordinance. Certain unusual differences that exist in some communities may require special considerations.

The model ordinance will contain specific details regarding permitted land uses within the communities. The basic community land use will be single-family residential. Among the standards that will be included in the ordinance will be

controls on grading of sites and clearing of vegetation, sign limitations, maximum lot coverage, height restrictions, population density controls (such as floor-area ratios), permitted exotic vegetation, and numbers of bathrooms per structure. Certain secondary standards may be developed in cooperation with each community that could include such criteria as the size of yards, and the design and appearance of structures.

High-density residential uses such as townhouse apartments and multiple-family dwellings will not be permitted. Also, conversion of single-family residences to multiple-family dwellings will be prohibited. Any new subdivisions will be limited to large lots (half acre or larger).

An analysis of existing commercial and industrial uses will be undertaken to determine future needs for such activity. If the study reveals an excess of commercially and industrially zoned property, surplus areas will be "down-zoned" to permit residential uses only.

Wetlands District

Private and town-owned lands that are located within the fragile wetlands on the bayside of the island will be zoned as critical environmental areas to prevent further damage. These wetlands will be included in a wetlands district. Widespread encroachment has occurred within the wetlands of the communities since the passage of the Fire Island National Seashore Act, with resulting damage to valuable ecological areas.

Bay-shore tidal wetlands and inland wetlands are extremely important components of the Fire Island ecological system. Tidal wetlands also are important to the shellfish and finfish economy of the region. New construction, development, filling, or building of erosion-control devices (such as bulkheads) in these areas will be severely limited or in many cases prohibited. A definition of the wetlands district and buffer zone will be established during the formulation of model zoning ordinance standards.

The wetlands district will be formulated with the cooperation of local zoning authorities and the Suffolk County Planning Department. Site surveys to ensure the accuracy of existing tidal and inland wetlands maps will be necessary prior to the establishment of a wetlands district. Coastal zone management regulations currently being developed by the Nassau-Suffolk Planning Board and existing state laws will be used to provide additional protection for Fire Island wetlands.

Dune District

The model ordinance will contain a special dune district similar in concept to floodplain ordinances widely used in contemporary land-use planning. Extensive

damage has occurred along some segments of the dune system because of uncontrolled walking on the fragile dune vegetation, construction of buildings, destruction of vegetation because of vehicle use, and in some cases, insensitivity to the important protective function of the dunes.

The primary dune of Fire Island provides the basic line of defense against storms and floods. If the dune is to provide any protection from storms, it must be maintained in a natural condition with native vegetation. Recreational activity, development, and even walking on the dune should not be permitted. Pedestrian access across the dune will be restricted to boardwalks (see McHarg 1971).

A dune district on Fire Island will be established for the following purposes:

Assistance in maintaining a vital resource area of the island, which is fundamental to achieving the purposes for which the national seashore was established.

Prohibition of certain uses and activities that endanger the dune system and thereby jeopardize life and property of all island residents by increasing potential damage during severe storm activity.

Minimization of hazards to public health and safety within the communities of the national seashore by helping to maintain storm protection provided by the dune and by minimizing opportunities for breaching of the island at locations where major developments exist.

Eventual elimination of uses such as residential structures that create a continual demand for public expenditures for relief and protection.

The dune district will extend landward for a distance of 40 feet from a line representing the primary natural high dune crest, as determined from an aerial mapping survey in November 1976. Where breaches exist in the dune form, a line has been established that represents the general trend in the dune crest. The seaward limit of the district will be the mean high water mark. This dune district is included in an area that has been identified by the Federal Insurance Administration as being subject to "special flood hazards with velocity."

Where public land acquisition in the dune district is necessary, it will be done by direct federal acquisition. The National Park Service in this planning effort has explored alternatives to federal acquisition. These include complete deletion of all federal lands and communities west of Point O'Woods from the national seashore and a formula that would have resulted in local ownership of the dune properties over a period of time. The deletion alternative was overwhelmingly rejected by

the public. Local communities were also not interested in acquisition and management of dune properties. The National Park Service still feels that a high degree of local control is desirable in these communities but recognizes that the only land acquisition alternative that appears feasible at this time is direct federal acquisition, hence the proposal made in this plan.

This land acquisition is justified because of the important role played by the dune system in the geomorphology of the barrier island. Resource management efforts undertaken by the National Park Service will complement the natural dynamics of the system. Once this acquisition is completed, measures devised exclusively to protect private property values will not be undertaken. This limitation will be incorporated into the amendatory legislation to the seashore act.

Future use of lands within the dune district will be severely limited. Presently the district includes 257 structures, of which 48 are situated on the dune crest or seaward of it. Dune district regulations will prohibit additional structural development and stabilization devices other than snow fences. Essential vehicular dune crossings and elevated pedestrian dune crossings will be allowed. Some limited construction may be permitted along the landward edge of the dune district. Any construction would be required to meet certain performance standards, such as pilings for stability and coverage requirements.

The National Park Service will analyze 48 properties that have been identified as located on or seaward of the primary natural high dune crest for the following impacts: damage to the physical integrity of the dune system and endangerment of public safety. Based on the results of this analysis, structures and real property interests in up to 48 improved properties will be acquired by the National Park Service. There are approximately 250 unimproved dune properties included within the dune district boundary that will also be acquired to prevent additional development. Purchase of a property will not be undertaken if removal of a structure will result in long-term damage to the dune which cannot be remedied.

The other 209 properties in the dune district, and any of the 48 properties that are not acquired, will be permitted to remain indefinitely unless they are damaged by storms in excess of 50 percent of their fair market value. Major improvements on these structures will not be permitted (that is, no actions other than routine maintenance will be allowed). In the event of major damage to structures by a storm, the structures will be evaluated on a case by case basis for acquisition by the National Park Service. Property owners who have insurance on structures and

contents under the National Flood Insurance Program, as established under the Flood Disaster Protection Act of 1973, will be compensated for storm damage up to $70,000, the maximum coverage obtainable. The Park Service will expend federal funds only for acquisition of real property interests in storm damaged properties within the dune district.

Implementation

Once the zoning standards are developed cooperatively with the towns, implementation can be accomplished in a variety of ways. Local enforcement is the most desirable alternative. This approach assumes that local municipalities adopt and enforce a zoning ordinance that conforms to the standards. If these initial steps fail, other options and alternatives will be explored. Injunctive relief based on damage to the federal interest may be sought. Direct federal regulation will also be considered. Condemnation remains the final alternative, if these methods fail, to protect the interests of the seashore.

TRANSFER OF LAND FROM THE SEASHORE DISTRICT TO THE DEVELOPMENT DISTRICT

Lands within the seashore boundary are listed in either the seashore district or the development district, as defined by the Fire Island National Seashore Zoning Standards, *Code of Federal Regulations,* Title 36, Part 28. The seashore district includes all those lands of the seashore within the towns of Brookhaven and Islip that lie outside the delineated communities of the seashore (all federal lands and Suffolk County properties are within the seashore district). The development district is comprised of all those lands that belong to the towns of Brookhaven and Islip and the villages of Saltaire and Ocean Beach and that are located within the delineated communities of the national seashore. Development district properties are subject to federally approved zoning ordinances, but are otherwise under the control of local governmental jurisdictions.

It was the clear intention of the Fire Island National Seashore Act that all lands within the seashore district, except certain improved properties as of July 1, 1963, be acquired as appropriations are made available to the National Park Service. Accordingly, unimproved properties of the seashore district are subject to condemnation and acquisition as are improved properties built upon after July 1963.

The National Park Service proposes the transfer of 41 acres of land at Davis Park, which includes the Ocean Ridge development, from the seashore district to the development district. The 41 acres include 115 improved properties and 3 unimproved properties. These lands are not essential to the management of the seashore district and should be managed according to the Park Service policy regarding exempted communities within the national seashore. Following adoption of the general management plan, Park Service managers will initiate legislative action to transfer the previously excluded parts of the community, as was intended during the new area study and by subsequent establishment of Fire Island National Seashore.

The plan proposes a modification in the western boundary of Water Island to conform with the community boundary as mapped in figure 4, segment 4. This proposal will transfer four parcels bounded on the west by Charach Walk from the seashore district to the development district. These four parcels were not listed by the Water Island Association as being included in the official Water Island platting when the seashore was established. Prior to legislative action on the boundary, the Water Island Association will have to change the official platting as listed with the town of Brookhaven.

ACQUISITION OF PROPERTY WITHIN EXEMPTED COMMUNITIES FOLLOWING MAJOR STORM DAMAGE

Frequency of great hurricane damage in the Fire Island region is estimated to be three times per century. Although the National Park Service believes that the establishment of a dune district and possible sand nourishment within this district will assist in protecting communities from future storm damage, severe damage may yet occur. In some island locations, particularly within communities, little of the primary dune remains because of human disturbance. This plan proposes a legislative amendment to permit the Park Service to acquire private lands within exempted communities of the national seashore if major storm activity destroys 90 percent or more of all structures within a community, and damage to each structure is in excess of 50 percent or more of its fair market value. Lands where structures were destroyed would be acquired in fee by the Park Service.

Structures that were not destroyed would remain in private ownership as inholdings exempt from condemnation. These properties would not be acquired unless they too were destroyed by a storm at some future time. Properties acquired by the Park Service would be managed similarly to other lands presently in the seashore district. Rebuilding on lands that are in fact unsuitable for community development would therefore be limited.

LAND ACQUISITION

LAND ACQUISITION WITHIN THE PRESENT BOUNDARY

The National Park Service proposes to acquire by donation, exchange, or fee purchase approximately 53.15 acres of fastland in 80 parcels within the authorized boundaries of the national seashore. The proposed acquisitions are listed in table 9 and shown graphically in figure 14. Acquisition of all improved property within the authorized boundaries of the seashore will be in accordance with the enabling act and with provisions in the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646).

Private inholdings within federal tracts totaling 29.13 acres will be acquired in fee when offered for sale on a willing seller/willing buyer basis. Inholdings are privately owned property within the seashore district of the national seashore. Such property is not subject to condemnation, but can be acquired by the federal government if offered for sale by property owners.

The bay-to-ocean strip known as tract 2203, consisting of 8.50 acres, will be acquired in fee to prevent imminent development in this area.

The National Park Service will acquire 200 to 250 unimproved dune district properties and 48 improved dune district properties located seaward of the dune crest. The Park Service will also acquire real property interests in an additional 209 improved dune district properties where structures are located landward of the dune crest if storms damage structures in excess of 50 percent of their fair market value (see page 104-106).

Non-federal lands on West Island, consisting of 11.52 acres (8.83 acres in private holdings), will be acquired in fee on an opportunity purchase basis.

Recommended for acquisition by donation or exchange are 0.29 acre of Suffolk County land and 2.40 acres of town of Islip land on West Island. When these lands are acquired, West Island will be entirely in federal ownership, ensuring the preservation of the environmental amenities of the island.

PROPOSED BOUNDARY CHANGES

The National Park Service proposes to acquire certain additional lands outside the present boundary that are needed to fulfill the national seashore's management objectives and the legislative intent of the Fire Island National Seashore Act. The following acquisitions will require legislative amendments:

Acquisition by fee purchase of four parcels of land totaling 10 acres at the head of the Patchogue River in the village of Patchogue for the purpose of establishing a mainland ferry staging area, national seashore headquarters, visitor orientation/information center, and parking area.

Acquisition through surplus property procedures of the U.S. Coast Guard lighthouse tract, consisting of approximately 90 acres, for the purpose of protecting and interpreting the historic and natural resources of the lighthouse tract.

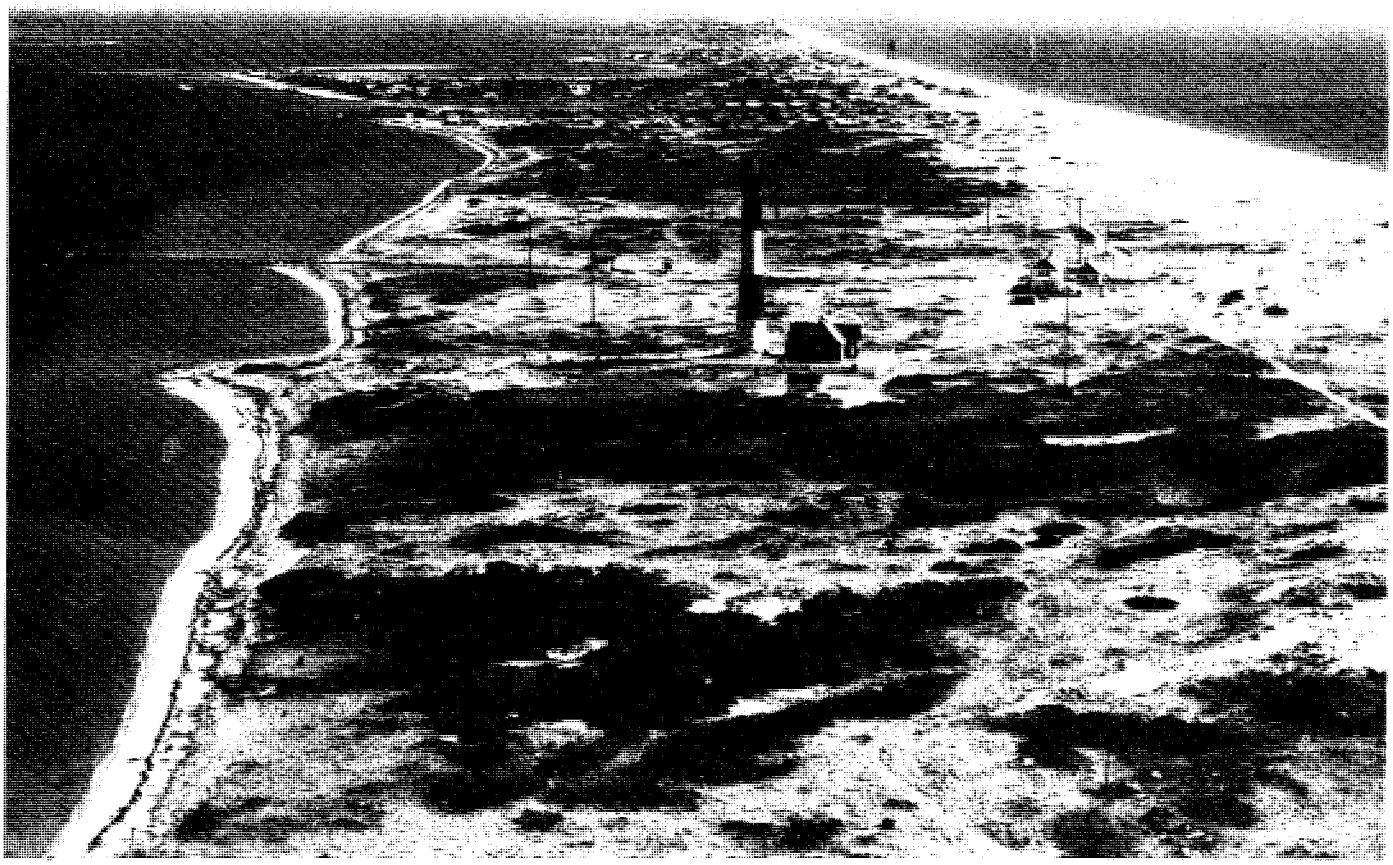
Pursue transfer of a 21-acre parcel of land adjacent to Heckscher State Park and owned by New York State. This parcel will be used for a secondary ferry terminal to provide service to Sunken Forest and will be operated by the National Park Service.

Transfer of a tract of land east of the lighthouse tract and currently owned by the Long Island State Parks and Recreation Commission. The National Park Service will pursue with New York State the feasibility of transferring this tract to federal ownership in order to unify management of this island segment. If transfer is not possible, the National Park Service will cooperate with the state to ensure compatible day-use recreation on federal and state lands.

The National Park Service will seek legislative amendments to increase the authorized funding ceiling for future land acquisition.

COOPERATIVE MANAGEMENT AGREEMENTS

This plan proposes to enter into cooperative agreements with Suffolk County for the 4.5-acre Hospital Island and with the town of Brookhaven for approximately



Aerial view of Fire Island Lighthouse, which will be transfered to the national seashore, and adjacent state and private lands.

54 acres of small islands in Great South Bay – John Boyle Island, Pelican Island, Ridge Island, and the seven small islands north of Old Inlet – to protect and preserve their outstanding natural features. In addition, the National Park Service will encourage collaboration between municipalities, federal and state conservation agencies, and private conservation organizations for the protection and preservation of wildlife feeding and breeding areas on lands adjacent to the park.

The National Park Service will also seek a cooperative agreement with the town of Islip to manage the undeveloped wetlands of Sexton Island (56 acres) as an environmental preserve.

The National Park Service and Suffolk County Department of Parks and Recreation will continue to share ideas and philosophies regarding management of Fire Island barrier beaches. Management will be consistent with the wishes of the public, environmentally sound procedures, and the mandates of existing authorities. Should Suffolk County donate lands west of Moriches Inlet and east of Smith Point County Park to the National Park Service, the Park Service would manage these lands as a unit of Fire Island National Seashore.



Figure 14

Proposed Land Acquisitions, Boundary Changes, and Cooperative Management Agreements

Fire Island National Seashore

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TABLE 9
PROPOSED LAND ACQUISITIONS AND COOPERATIVE MANAGEMENT AGREEMENTS

Acquisitions*	Acreage	District	No. of Parcels	Ownership	Method of Acquisition	Legislative Boundary Change
Patchogue River headquarters site	10.00	—	4	Private	In fee	Yes
Lighthouse tract	90.00	—	1	U.S.C.G.	Surplus property	Yes
Tract 2203	8.50	S	1	Private	In fee	No
Inholdings within federal tracts						
Oakleyville	4.30	S	9	Private	In fee	No
Improved properties located between Barrett Beach and Water Island	14.22	S	16	Private	In fee	No
Blue Point	10.61	S	14	Private	In fee	No
Non-federal lands on West Island	11.52	S	39	Private—8.83 acres Suffolk Co.—0.29 Town of Islip—2.40	In fee, donation, or exchange	No
Inholding within Saltaire	4.00	D	1	Private	In fee	No
Lands adjacent to Heckscher State Park	21.00	—	1	New York State	Exchange	Yes
Lands east of lighthouse tract	90 (approx.)	—	1	New York State	Exchange	Yes
Total Proposed Acquisition	**264.15**		**87**			
Management Agreements (in lieu of acquisitions)						
Sexton Island (marshland)	56.00	S	1	Town of Islip	None	
Small islands in Great South Bay						
Hospital Island	4.50	S	1	Suffolk County	None	
John Boyle Island	6.00	S	1	Town of Brookhaven	None	
Pelican Island	3.10	S	1	Town of Brookhaven	None	
Ridge Island	35.70	S	1	Town of Brookhaven	None	
Seven small islands north of Old Inlet	9.46	S	7	Town of Brookhaven	None	

* Acquisition of properties located within the dune district is discussed on pages 104-106.

REGIONAL AND COOPERATIVE PLANNING NEEDS

Because Fire Island is located in an urbanized region influenced by many governmental units and agencies, and because actions taken by the National Park Service affect local villages and towns just as much as local governmental actions affect the Park Service, a variety of cooperative planning activities will be necessary for the implementation of proposals as listed in this general management plan. Cooperative planning needs between the Park Service and local governmental agencies and interests are discussed below.

Village of Patchogue: Close cooperation between the National Park Service and the village of Patchogue will be necessary for the establishment of the headquarters complex/ferry terminal on the Patchogue River. A new land-use plan for the immediate surroundings of the Patchogue site will be necessary for redevelopment. Limited rezoning also will be required to implement the new land-use plan. Minor street upgradings and signal changes may be required by the village to improve traffic flow to and from the headquarters site.

Towns of Islip and Brookhaven, and Villages of Ocean Beach and Saltaire: The National Park Service will, in cooperation with the four local governments, develop standards to be used as the basis of a model zoning ordinance. Following establishment of the zoning ordinance, all governmental agencies must collectively accept responsibility to assure that future private development in the communities conforms with the zoning ordinance. Agreements with the four local governments will be needed if they acquire the undeveloped dune properties.

Community Associations on Fire Island: The National Park Service and local community associations will work to inform residents and property owners of the need to use vehicles properly, to maintain the dunes, and to prevent additional improper disposal of solid waste. Residents will be told of planning and management proposals as listed in this general management plan.

Nassau-Suffolk Regional Planning Board: The Nassau-Suffolk Regional Planning Board is responsible for planning activities within the two-county region, which encompasses the communities of the immediate Fire Island area. Typical concerns include land use and transportation, as well as commercial, industrial, and recreational planning on Long Island. Future operations of Fire Island National Seashore are vitally linked to mainland communities' transportation patterns, the recreational needs of the region, and the July 1970 Nassau-Suffolk Counties regional plan, which directs bi-county growth and development through 1980. Regional and national seashore planning activities must be interwoven to optimize opportunities and to ensure efficiency. The National Park Service will continue to seek input from the planning board on issues affecting communities and towns of Long Island.

Suffolk County Department of Parks and Recreation: Suffolk County operates a major high-density recreational facility at Smith Point County Park immediately east of the federally managed Smith Point West development. The National Park Service will work with the parks department to establish controlled foot access to the Smith Point West area. The vehicular dune crossing on federal lands will be closed, thereby requiring all vehicles to use the Suffolk County crossing. The Park Service's vehicle checkpoint will be relocated to the Suffolk County dune crossing. The Park Service will encourage Suffolk County to manage the 5-mile island segment located east of Smith Point County Park for traditional recreational use.

Suffolk County Department of Environmental Conservation: The Suffolk County Department of Environmental Conservation is responsible for monitoring activities that are planned or are being implemented within the lands and waters of the coastal zone as defined by New York State in compliance with the Coastal Zone Management Act of 1972 (P.L. 92-583). Local governmental agencies that issue permits for construction or other alteration of existing natural conditions within the coastal zone must cooperate with state and federal agencies to ensure effective management, beneficial use, protection, and perpetuation of important natural resources. The National Park Service will cooperate with Suffolk County in the protection of the fragile coastal zone of Fire Island and adjacent lands under the jurisdiction of Suffolk County.

New York State Department of Environmental Conservation: As defined in the Coastal Zone Management Act, New York State will, in cooperation with federal and local governmental entities, develop an effective management program for the use of coastal zone lands and waters. Management decisions and resulting actions by the National Park Service on Fire Island affect the coastal zone adjacent to Fire Island and Great South Bay. Thus, the national seashore staff will cooperate with the state in developing an appropriate management plan for those coastal-zone areas affected by actions taken at Fire Island National Seashore. Other cooperative programs with the department will include erosion control, hunting and wildlife management, and monitoring of water quality.

Town of Babylon: The Oak Beach marsh, which is under the jurisdiction of the town of Babylon, is the only unditched tidal marsh of any consequence remaining near Long Island, and it has great value for research and education. The National Park Service proposes to begin research on the effects of various types of manipulation of the tidal-marsh environment, including closure of mosquito-control ditches by various methods. The Oak Beach marsh would be used as an unmanipulated control area for these experiments. A cooperative agreement with the town of Babylon will be needed to ensure that the marsh is not disturbed by ditching or development and to facilitate use of the marsh for research purposes. Specific provisions will also be sought to begin necessary

procedures for nominating the Oak Beach marsh to the National Registry of Natural Landmarks, to allow use of the marsh for interpretive purposes, and to prohibit hunting and other uses that might be incompatible with preservation and research programs.

Point O'Woods Association: The northeastern part of Point O'Woods supports an outstanding maritime forest association identical in species composition to the Sunken Forest of the adjacent federal tract on the east. The Point O'Woods forest communities are generally undisturbed and form a vegetational community continuous with their Sunken Forest counterpart. An agreement with the Point O'Woods Association will be necessary to begin procedures to nominate the Point O'Woods forest to the National Registry of Natural Landmarks, to facilitate management of the entire zone of undeveloped forests on Fire Island as a single ecological unit, and to prohibit incompatible uses in this area.

Blue Point Company: The Blue Point Company is a central figure in the vital shellfishing industry of Great South Bay. Authorization granted under the Dongan patent gives the Blue Point Company exclusive shellfishing rights to approximately 6,000 acres of bay bottom in Great South Bay from the Blue Point community on Long Island's south shore to the waters adjacent to Talisman on Fire Island. Recreational clamming, which will be allowed in the bay waters just west of Talisman, must be carefully managed so that clammers do not interfere with the operations of the company. Recreational clamming is generally limited to the waters within 200 feet of the Fire Island shore adjacent to Talisman and in other locations where shellfishing rights are legally protected.

Village of Bellport: The National Park Service will work cooperatively with the village of Bellport for revegetation of the graded, bare-sand areas of Bellport Beach by planting native species common to the high dune area in which the Bellport tract is located. All facilities on this tract should be compatible with national seashore management objectives.

Long Island State Parks and Recreation Commission: The Long Island State Parks and Recreation Commission maintains several major recreational developments close to the federally managed lands of Fire Island, and all of these developments will continue to affect and be affected by management of the national seashore. Transportation routes, facilities, recreational opportunities, and resources management objectives of the national seashore are closely interrelated. The National Park Service will cooperate with the parks commission for the management of the western segment of Fire Island. Any proposed use of state park lands adjacent to Heckscher State Park for a ferry terminal will require agreements with New York State for the transfer of property and provisions for access from Heckscher State Parkway.

Suffolk County Police Department: New York State and Suffolk County have not relinquished jurisdiction over the seashore. National Park Service jurisdiction

is proprietary on federal lands, where it enforces federal regulations, but it may call on the Suffolk County police for assistance in law enforcement and for emergency rescues. In the exempted communities, federal involvement is minimal, and the county police have responsibility for law enforcement. The Park Service will continue to cooperate with the Suffolk County Police Department to effect maximum protection and service to the residents of Fire Island and visitors to the seashore. Collective actions will be undertaken to limit the use of vehicular patrols along the beaches of Fire Island. The police department will be encouraged to locate officers on the island during the summer, thereby minimizing the use of vehicles.

U.S. Department of the Army, Corps of Engineers: Section 8(a) of the Fire Island National Seashore Act states that the "authority of the Chief of Engineers, Department of the Army, to undertake or contribute to shore erosion control or beach protection measures on lands within the Fire Island National Seashore shall be exercised in accordance with a plan that is mutually acceptable to the Secretary of the Interior and the Secretary of the Army and that is consistent with the purposes of this act." The National Park Service will assist the Corps of Engineers in seeking authorization and subsequent implementation funds for the Shinnecock Inlet and Moriches Inlet sand-bypass systems. Sand nourishment programs proposed for Fire Island beaches and dunes will be evaluated following final Corps of Engineers feasibility analyses. If limited sand nourishment programs appear feasible, work will begin on the western segment of Fire Island beaches. Initial efforts will be evaluated for impacts and effectiveness prior to additional work. Sand nourishment on beaches of major federal landholdings will not be undertaken. Dredging (except to maintain navigational channels) and traditional methods of barrier-island stabilization that are not in harmony with the proposed management objectives of the national seashore will not be implemented within the seashore's boundaries. Coastal engineering projects planned by the Corps of Engineers will be evaluated for their possible effects on the natural evolution of Fire Island. Projects contemplated for the area between Southampton and Moriches Inlet involving interruption of the littoral transport of sediment will be opposed by the Park Service.

U.S. Department of Transportation, Coast Guard: Presently, the National Park Service has a special-use agreement with the Coast Guard to use the Fire Island Lighthouse and certain Coast Guard facilities west of Kismet for interpretive and management purposes. Following the listing of the lighthouse tract as surplus property, the Park Service will assume ownership and management of the tract. The special-use agreement will then not be necessary.

U.S. Department of the Interior, Fish and Wildlife Service: The National Park Service will cooperate and share management philosophies with the Fish and Wildlife Service for the management of federal park and wildlife preserve lands and other ecologically valuable areas in the Fire Island vicinity.

appendixes
selected bibliography
planning team

APPENDIX A

FIRE ISLAND AREA PARKS
1971-1976 ANNUAL VISITATION

Year	Smith Point County Park	Robert Moses State Park	All Mid-Long Island State Parks
1971	735,210	2,518,400	19,582,500
1972	775,000	2,443,200	19,318,700
1973	917,460	2,756,700	21,943,800
1974	939,920	2,526,500	20,362,556
1975	1,130,000	2,517,600	20,338,100
1976	735,256	2,122,200	19,042,900

FIRE ISLAND AREA PARKS
1971-1976 PERCENT CHANGE IN ANNUAL VISITATION

Year	Smith Point County Park	Robert Moses State Park	All Mid-Long Island State Parks
1971-72	5.4	-3.0	-1.4
1972-73	18.4	12.8	13.6
1973-74	2.5	-8.4	-7.2
1974-75	20.2	-0.4	-0.1
1975-76	-34.9	-15.7	-6.4
1971-76	0.0	-15.7	-2.8

Annual park visitation for state and county parks in the Fire Island vicinity was relatively stable or slightly on the increase from 1971 through 1975. Visitation at Robert Moses State Park has fluctuated, but there was an average 0 percent growth rate through 1975. If a parallel causeway was constructed, Robert Moses State Park could experience substantial visitor increases. The 1976 decreased visitation occurred mostly in beach areas and is primarily attributed to the sludge that washed ashore on Long Island during much of the summer season.

APPENDIX B

RECOMMENDED REGIONAL RECREATIONAL ACREAGE (FOR ALL-DAY EXCURSIONS WITHIN 2 HOURS OF HOME)

Area	Existing Acreage — 1970	Additional Recommended*
Nassau	14,100	400
Suffolk	20,300	17,600
Westchester	1,100	16,500
New York City	—	2,100

* Data based on 12 acres per thousand population standard

RECOMMENDED SUBREGIONAL RECREATIONAL ACREAGE (FOR PART-DAY OUTINGS WITHIN 20 MINUTES OF HOME)

Area	Existing Acreage — 1970	Theoretical Additional Acreage Needed*
Suffolk	41,200	0
Nassau	19,810	6,490
Westchester	25,700	0
Bronx	5,590	22,430
Kings	5,370	39,580
New York	2,600	22,790
Queens	7,600	28,950
Richmond	5,160	3,320

* Data based on 18 acres per thousand population standard

Source: Adapted from *Outdoor Recreation in a Crowded Region,* Tri-State Regional Planning Commission, September 1973. Theoretical standards for estimating future recreational land needs are based on 12 and 18 acres per thousand population.

APPENDIX C

OUTSTANDING NATURAL AND CULTURAL RESOURCES OF FIRE ISLAND NATIONAL SEASHORE AND VICINITY

Place Name	Ownership	Significance
Historic Resources		
Fire Island Lighthouse	Coast Guard	Principal historic structure on Fire Island
William Floyd Estate	Park Service	Architectually and historically significant; manor house and grounds formerly owned by signer of Declaration of Independence
Natural Resources		
Skirted pine, Fire Island Lighthouse tract	Coast Guard	Rare manifestation of salt-spray effects on plant life
Sunken Forest	Park Service	Excellent example of maritime American holly/sassafras/ shadbush forest
Maritime forest	Point O'Woods	Excellent example of maritime American holly/sassafras/ shadbush forest
Old Inlet	Park Service	Site of former inlet; high secondary dunes; diverse vegetation, including freshwater marshes within dune area
Area south of Hospital Island	Park Service	Diverse high-marsh vegetation; island's best stand of beach grass
Watch Hill interpretive area	Park Service	Representative upland marsh communities of Fire Island, containing small stands of maritime forest; valuable as a diverse area for natural history interpretation near seashore's largest federal development

LANDS REQUIRING PROTECTION BECAUSE OF INHERENT VALUES

Area	Ownership	Values
Dune line	Variable	The line of dunes fringing the beach provides aesthetic continuity and serves as the island's main natural defense against erosive forces. Maintenance of a dune system without development is essential to the perpetuation of the island's ecological diversity and productivity.
Bog habitats	Variable	These rare freshwater habitats, with high degree of isolation, high species diversity, and unique assemblages of species, are rarely more than a few square yards in area. Bogs and freshwater marshes are scattered throughout the interdunal portion of the island and have been identified in the Fire Island Lighthouse tract, the eastern unit of Robert Moses State Park, Point O'Woods, the Sailor's Haven area, along the interpretive trail east of Watch Hill, near Old Inlet, and at various locations on Suffolk County lands.
Clam Pond	Saltaire	The small coves with fringing cordgrass marshes are most extensive and diverse in the tidal-marsh community west of Watch Hill.

Area	Ownership	Values
Maritime forest habitats	Variable	The American holly/sassafras/ shadbush forest is best developed west of Sailor's Haven where it has long been considered an outstanding natural resource. Major stands are present in the eastern section of Point O'Woods. Smaller stands, many no more than patches within a matrix of high thicket, have been identified at Talisman and Watch Hill, and more may exist. These stands develop only in areas that are relatively stable geologically for a century or more; they are relatively rare components of the natural ecosystem complex, and have become progressively rarer as stands are cleared or thinned for development.
John Boyle Island	Brookhaven	John Boyle Island contains one of the last remaining nesting sites in the Long Island area for the common tern.
Tidal marshes, swamps, and ponds on William Floyd Estate	Park Service	This is the only tidal marsh and tupelo swamp on the Long island mainland within the seashore, and it provides valuable estuarine habitat.
Tidal marshes on Fire Island	Variable	Tidal marshes have special value as natural habitat wherever they occur. Their importance in preserving the quality and productivity of tidal estuaries is progressively increasing as marshes elsewhere are consumed for development. All wetlands and marshes within the communities also require protection because of their ecological value.

APPENDIX D

TRENDS IN THE DEVELOPMENT OF FIRE ISLAND COMMUNITIES 1928-1973 (BASED ON AERIAL PHOTOGRAPHS AND TOPOGRAPHIC MAPS[1])

Community	Approximate Number of Structures by Year										Mesa Number Structures/Year					
	1928	1938[3]	1947	1955	1962	1964	1966	1969	1972	1973	1938-1962	1938-1947	1947-1955	1955-1962	1966-1973	Years to Full Development
Lighthouse Shores/ Kismet/Seabay Beach	13	7	8	32	72	285	109	149	170	188	3	0	3	6	11	6
Saltaire	158	73	107	120	158		220	264	283	311	4	4	2	5	11	41
Fair Harbor/Dunewood/ Lonelyville/Atlantique	73	37	70	177	311	351	404	440	476	526	11	4	13	19	17	17
Robbins Rest/Corneille Estates/Ocean Beach	401	319	365	494[2]	605	834	643	637[2]	625	676	12	5	16	16	4	44
Seaview	60	90	87	161[2]	226		293	296[2]	299	320	6	0	9	9	4	45
Ocean Bay Park	20	50	61	144[2]	217	400	257	263	273	297	7	1	10	10	6	11
Point O'Woods	152	104	130	137[2]	144		146	146	149	151	2	3	1	1	1	390
Cherry Grove	49	8	64	187	150	230	263	263	265	271	6	6	15	-5	1	36
Fire Island Pines	5	7	8	97	282	332	411	434	453	509	11	0	11	26	14	11
Water Island	14	12	17	28	29	26[2]	23	25	28	29	1	1	1	0	1	12
Davis Park	3	0	7	63	123	241	152	152	154	144	5	1	7	9	-1	
Ocean Ridge	1	0	16	20	70		106	106	120	126	3	2	1	10	3	1
TOTALS	**949**	**707**	**940**	**1260**	**2387**	**2699**	**3032**	**3175**	**3295**	**3548**	**71**	**27**	**89**	**106**	**72**	**25[4]**

[1] Air Map Corporation of America 1928, 1:24000; Fairchild Aerial Surveys Inc. 1938, 1:24000; U.S. Geological Survey 1947, 1:24000; U.S. Geological Survey 1955, 1:24000; Lockwood, Kessler, & Bartlett Inc. 1962, 1:1200; Lockwood, Kessler, & Bartlett Inc. 1969, 1:4800; Webster, Sheffield, Fleischman, Hitchcock & Brookfield 1964; Grumman Ecosystems Corp. 1972, 1:4800; Aerial Data Reduction Inc. 1973, 1:4800.

[2] Data unavailable. Interpolation made based on rate of change between proximal surveys.

[3] Following the great hurricane of 1938.

[4] Based on past trends, 25 years would be the average period required for full development of presently undeveloped lands.

APPENDIX E: LEGISLATION

Public Law 88-587
88th Congress, S. 1365
September 11, 1964

An Act

To establish the Fire Island National Seashore, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) for the purpose of conserving and preserving for the use of future generations certain relatively unspoiled and undeveloped beaches, dunes, and other natural features within Suffolk County, New York, which possess high values to the Nation as examples of unspoiled areas of great natural beauty in close proximity to large concentrations of urban population, the Secretary of the Interior is authorized to establish an area to be known as the "Fire Island National Seashore". Fire Island National Seashore. Establishment.

(b) The boundaries of the national seashore shall extend from the easterly boundary of Robert Moses State Park eastward to Moriches Inlet and shall include not only Fire Island proper, but also such islands and marshlands in the Great South Bay, Bellport Bay, and Moriches Bay adjacent to Fire Island as Sexton Island, West Island, Hollins Island, Ridge Island, Pelican Island, Pattersquash Island, and Reeves Island and such other small and adjacent islands, marshlands, and wet lands as would lend themselves to contiguity and reasonable administration within the national seashore and, in addition, the waters surrounding said area to distances of one thousand feet in the Atlantic Ocean and up to four thousand feet in Great South Bay and Moriches Bay, all as delineated on a map identified as "Fire Island National Seashore No. OGP–0002", dated June 1964. The Secretary shall file said map with the Federal Register, and it may also be examined in the offices of the Department of the Interior. Boundaries.

SEC. 2. (a) The Secretary is authorized to acquire, and it is the intent of Congress that he shall acquire as appropriated funds become available for the purpose or as such acquisition can be accomplished by donation or with donated funds or by transfer, exchange, or otherwise, the lands, waters, and other property, and improvements thereon and any interest therein, within the boundaries of the seashore as established under section 1 of this Act. Any property or interest therein owned by the State of New York, by Suffolk County, or by any other political subdivision of said State may be acquired only with the concurrence of such owner. Notwithstanding any other provision of law, any Federal property located within such area may, with the concurrence of the agency having custody thereof, be transferred without consideration to the administrative jurisdiction of the Secretary for use by him in carrying out the provisions of this Act. In exercising his authority to acquire property in accordance with the provisions of this subsection, the Secretary may enter into contracts requiring the expenditure, when appropriated, of funds authorized by this Act, but the liability of the United States under any such contract shall be contingent on the appropriation of funds sufficient to fulfill the obligations thereby incurred. Acquisition of land. 78 STAT. 928. 78 STAT. 929.

(b) When the Secretary determines that lands and waters or interests therein have been acquired by the United States in sufficient quantity to provide an administrative unit, he shall declare the establishment of the Fire Island National Seashore by publication of notice in the Federal Register. Publication in Federal Register.

(c) The Secretary shall pay not more than the fair market value, as determined by him, for any land or interest therein acquired by purchase.

(d) When acquiring land by exchange the Secretary may accept title to any nonfederally owned land located within the boundaries of the national seashore and convey to the grantor any federally

owned land under the jurisdiction of the Secretary. The lands so exchanged shall be approximately equal in fair market value, but the Secretary may accept cash from or pay cash to the grantor in order to equalize the values of the lands exchanged.

(e) With one exception the Secretary shall not acquire any privately owned improved property or interests therein within the boundaries of the seashore or any property or interests therein within the communities delineated on the boundary map mentioned in section 1, except beach or waters and adjoining land within such communities which the Secretary determines are needed for public access to the beach, without the consent of the owners so long as the appropriate local zoning agency shall have in force and applicable to such property a duly adopted, valid, zoning ordinance that is satisfactory to the Secretary. The sole exception to this limitation on the power of the Secretary to condemn improved property where appropriate zoning ordinances exist shall be in the approximately eight-mile area from the easterly boundary of the Brookhaven town park at Davis Park, in the town of Brookhaven, to the westerly boundary of the Smith Point County Park. In this area only, when the Secretary deems it advisable for carrying out the purposes of this Act or to improve the contiguity of the park land and ease its administration, the Secretary may acquire any land or improvements therein by condemnation. In every case in which the Secretary exercises this right of condemnation of improved property the beneficial owner or owners (not being a corporation) of any improved property so condemned, provided he, she, or they held the same or a greater estate in the property on July 1, 1963, may elect as a condition of such acquisition by the Secretary any one of the following three alternatives:

78 STAT. 929.
78 STAT. 930.

(1) that the Secretary shall take the said property in fee simple absolute and pay the fair market value thereof as of the date of such taking;

(2) that the owner or owners shall retain a life estate in said property, measured on the life of the sole owner or on the life of any one person among multiple owners (notice of the person so designated to be filed in writing with the Secretary within six months after the taking) or on the life of the survivor in title of any estate held on July 1, 1963, as a tenancy by the entirety. The price in such case shall be diminished by the actuarial fair market value of the life estate retained, determined on the basis of standard actuarial methods;

(3) that the owner or owners shall retain an estate for twenty-five years. The price in this case shall likewise be diminished by the value of the estate retained.

"Improved property."

(f) The term "improved property" as used in this Act shall mean any building, the construction of which was begun before July 1, 1963, and such amount of land, not in excess of two acres in the case of a residence or ten acres in the case of a commercial or industrial use, on which the building is situated as the Secretary considers reasonably necessary to the use of the building: *Provided*, That the Secretary may exclude from improved properties any beach or waters, together with so much of the land adjoining such beach or waters as he deems necessary for public access thereto.

Regulations.

SEC. 3. (a) In order to carry out the provisions of section 2, the Secretary shall issue regulations, which may be amended from time to time, specifying standards that are consistent with the purposes of this Act for zoning ordinances which must meet his approval.

(b) The standards specified in such regulations shall have the object of (1) prohibiting new commercial or industrial uses, other than commercial or industrial uses which the Secretary considers are con-

sistent with the purposes of this Act, of all property within the national seashore, and (2) promoting the protection and development for purposes of this Act of the land within the national seashore by means of acreage, frontage, and setback requirements.

(c) Following issuance of such regulations the Secretary shall approve any zoning ordinance or any amendment to any approved zoning ordinance submitted to him that conforms to the standards contained in the regulations in effect at the time of adoption of the ordinance or amendment. Such approval shall remain effective for so long as such ordinance or amendment remains in effect as approved.

(d) No zoning ordinance or amendment thereof shall be approved by the Secretary which (1) contains any provisions that he considers adverse to the protection and development, in accordance with the purposes of this Act, of the area comprising the national seashore; or (2) fails to have the effect of providing that the Secretary shall receive notice of any variance granted under, or any exception made to, the application of such ordinance or amendment.

(e) If any improved property, with respect to which the Secretary's authority to acquire by condemnation has been suspended according to the provisions of this Act, is made the subject of a variance under, or becomes for any reason an exception to, such zoning ordinance, or is subject to any variance, exception, or use that fails to conform to any applicable standard contained in regulations of the Secretary issued pursuant to this section and in effect at the time of passage of such ordinance, the suspension of the Secretary's authority to acquire such improved property by condemnation shall automatically cease. 78 STAT. 930.

(f) The Secretary shall furnish to any party in interest upon request 78 STAT. 931.
a certificate indicating the property with respect to which the Secretary's authority to acquire by condemnation is suspended.

Owners' use of property.

SEC. 4. (a) Owners of improved property acquired by the Secretary may reserve for themselves and their successors or assigns a right of use and occupancy of the improved property for noncommercial residential purposes for a term that is not more than twenty-five years. The value of the reserved right shall be deducted from the fair market value paid for the property.

(b) A right of use and occupancy reserved pursuant to this section shall be subject to termination by the Secretary upon his determination that the use and occupancy is not consistent with an applicable zoning ordinance approved by the Secretary in accordance with the provisions of section 3 of this Act, and upon tender to the owner of the right an amount equal to the fair market value of that portion of the right which remains unexpired on the date of termination.

Hunting and fishing.

SEC. 5. The Secretary shall permit hunting, fishing, and shellfishing on lands and waters under his administrative jurisdiction within the Fire Island National Seashore in accordance with the laws of New York and the United States of America, except that the Secretary may designate zones where, and establish periods when, no hunting shall be permitted for reasons of public safety, administration, or public use and enjoyment. Any regulations of the Secretary under this section shall be issued after consultation with the Conservation Department of the State of New York.

SEC. 6. The Secretary may accept and use for purposes of this Act any real or personal property or moneys that may be donated for such purposes.

Sunken Forest Preserve.

SEC. 7. (a) The Secretary shall administer and protect the Fire Island National Seashore with the primary aim of conserving the natural resources located there. The area known as the Sunken Forest Preserve shall be preserved from bay to ocean in as nearly its present state as possible, without developing roads therein, but con-

tinuing the present access by those trails already existing and limiting new access to similar trails limited in number to those necessary to allow visitors to explore and appreciate this section of the seashore.

(b) Access to that section of the seashore lying between the easterly boundary of the Brookhaven town park at Davis Park and the westerly boundary of the Smith Point County Park shall be provided by ferries and footpaths only, and no roads shall be constructed in this section except such minimum roads as may be necessary for park maintenance vehicles. No development or plan for the convenience of visitors shall be undertaken therein which would be incompatible with the preservation of the flora and fauna or the physiographic conditions now prevailing, and every effort shall be exerted to maintain and preserve this section of the seashore as well as that set forth in the preceding paragraph in as nearly their present state and condition as possible.

(c) In administering, protecting, and developing the entire Fire Island National Seashore, the Secretary shall be guided by the provisions of this Act and the applicable provisions of the laws relating to the national park system, and the Secretary may utilize any other statutory authority available to him for the conservation and development of natural resources to the extent he finds that such authority will further the purposes of this Act. Appropriate user fees may be collected notwithstanding any limitation on such authority by any provision of law.

Shore erosion control.
78 STAT. 931.
78 STAT. 932.

SEC. 8. (a) The authority of the Chief of Engineers, Department of the Army, to undertake or contribute to shore erosion control or beach protection measures on lands within the Fire Island National Seashore shall be exercised in accordance with a plan that is mutually acceptable to the Secretary of the Interior and the Secretary of the Army and that is consistent with the purposes of this Act.

(b) The Secretary shall also contribute the necessary land which may be required at any future date for the construction of one new inlet across Fire Island in such location as may be feasible in accordance with plans for such an inlet which are mutually acceptable to the Secretary of the Interior and the Secretary of the Army and that is consistent with the purposes of this Act.

Fire Island National Advisory Commission. Establishment.

SEC. 9. (a) There is hereby established a Fire Island National Seashore Advisory Commission (hereinafter referred to as the Commission). The Commission shall terminate on the tenth anniversary of the date of this Act or on the declaration, pursuant to section 2(b) of this Act, of the establishment of the Fire Island National Seashore, whichever occurs first. The Commission shall consist of fifteen members, each appointed for a term of two years by the Secretary, as follows:

(1) Ten members to be appointed from recommendations made by each of the town boards of Suffolk County, New York, one member from the recommendations made by each such board;

(2) Two additional members to be appointed from recommendations of the town boards of the towns of Islip and Brookhaven, Suffolk County, New York;

(3) One member to be appointed from the recommendation of the Governor of the State of New York;

(4) One member to be appointed from the recommendation of the county executive of Suffolk County. New York;

(5) One member to be designated by the Secretary.

(b) The Secretary shall designate one member to be Chairman.

(c) A member of the Commission shall serve without compensation.

(d) The Commission established by this section shall act and advise by affirmative vote of a majority of the members thereof.

(e) The Secretary or his designee shall, from time to time, consult with the members of the Commission with respect to matters relating to the development of Fire Island National Seashore and shall consult with the members with respect to carrying out the provisions of sections 2, 3, and 4 of this Act.

(f)(1) Any member of the Advisory Commission appointed under this Act shall be exempted, with respect to such appointment, from the operation of sections 281, 283, 284, and 1914 of title 18 of the United States Code and section 190 of the Revised Statutes (5 U.S.C. 99) except as otherwise specified in paragraph (2) of this subsection. Conflict of interest. 76 Stat. 1126.

(2) The exemption granted by paragraph (1) of this subsection shall not extend—

(i) to the receipt of payment of salary in connection with the appointee's Government service from any sources other than the private employer of the appointee at the time of his appointment; or

(ii) during the period of such appointment, and the further period of two years after the termination thereof, to the prosecution or participation in the prosecution, by any person so appointed, of any claim against the Government involving any matter concerning which the appointee had any responsibility arising out of his appointment during the period of such appointment. 78 STAT. 932. 78 STAT. 933.

SEC. 10. There is hereby authorized to be appropriated not more than $16,000,000 for the acquisition of lands and interests in land pursuant to this Act. Appropriation.

Approved September 11, 1964.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 1638 accompanying H. R. 7107 (Comm. on Interior & Insular Affairs).
SENATE REPORT No. 1300 (Comm. on Interior & Insular Affairs).
CONGRESSIONAL RECORD, Vol. 110 (1964):
Aug. 6: Considered and passed Senate.
Aug. 20: Considered and passed House, amended, in lieu of H. R. 7107.
Aug. 21: Senate concurred in House amendments.

Public Law 89-244
89th Congress, H. R. 8035
October 9, 1965

An Act

79 STAT. 957

To authorize the Secretary of the Interior to accept a donation of property in the county of Suffolk, State of New York, known as the William Floyd Estate, for addition to the Fire Island National Seashore, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior is authorized to accept the donation of approximately six hundred and eleven acres of lands, submerged lands, islands, and marshlands or interests therein, known as the William Floyd Estate, located in the town of Brookhaven, county of Suffolk, and State of New York, delineated on a certain map entitled "Map of the Fire Island National Seashore, Including the William Floyd Estate", numbered OGP-0003, dated May 1965, which map or a true copy thereof shall be filed with the Federal Register and may be examined in the offices of the Department of the Interior. Such donation may be accepted subject to such terms, covenants, and conditions as the Secretary finds will be in the public interest.

Fire Island National Seashore, N. Y. Additional land.

Filing with Federal Register.

SEC. 2. The Secretary is also authorized to accept the donation of the main dwelling on said lands, which was the birthplace and residence of General William Floyd (a signer of the Declaration of Independence) and the furnishings therein and any outbuildings, subject to like terms, covenants, and conditions. The Secretary is authorized to lease said lands, dwellings, and outbuildings to the grantors thereof for a term of not more than twenty-five years, at $1 per annum, and during the period of the leasehold the Secretary may provide protective custody for such property.

Lease of lands, dwellings, etc.

SEC. 3. Upon expiration or surrender of the aforesaid lease the property shall become a detached unit of the Fire Island National Seashore, and shall be administered, protected, and developed in accordance with the laws applicable thereto subject, with respect to said main dwelling and the furnishings therein, to such terms, covenants, and conditions which the Secretary shall have accepted and approved upon the donation thereof as in the public interest.

Approved October 9, 1965, 6:30 a.m.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 980 (Comm. on Interior & Insular Affairs).
SENATE REPORT No. 763 (Comm. on Interior & Insular Affairs).
CONGRESSIONAL RECORD, Vol. 111 (1965):
Sept. 20: Passed House.
Sept. 23: Considered and passed Senate.

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As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.