

Fire Island

National Park Service
U.S. Department of the Interior

Fire Island National Seashore
Long Island, New York



2003 Annual Report

Soundings



This Land is Your Land...

Fire Island National Seashore is an extraordinary place. It includes 26 miles of a dynamic barrier island with high dunes, centuries-old maritime forests, glimpses of wildlife, and desolate beaches, far from the sounds and pressures of the city. It features the home of one of Long Island's signers of the *Declaration of Independence*; New York State's only designated wilderness; and one of the tallest lighthouses in the United States. It provides an opportunity to leave the car behind and enjoy miles of boardwalk and trails; public marinas; a campground; life-guarded beaches; and visitor centers and programs that help you learn about the park's resources. Interspersed are 17 vibrant, diverse communities seemingly miles away from civilization. The lives of millions of people are enriched by visiting the Seashore each year.

The mission of the National Park Service is to preserve Fire Island's natural and cultural resources unimpaired for the benefit of future generations, while providing for the park's use and enjoyment by our generation.

In May, I was appointed as the park's sixth superintendent and within a month Secretary of the Interior Gail Norton, NPS Director Fran Mainella, and Northeast Regional Director Marie Rust visited Fire Island. These visits signaled a new emphasis on partnering with stakeholders and

communities to fulfill the NPS education mission, and to broaden its contexts, to protect and preserve the Seashore, while consistently engaging the public in policy decisions that affect their lives.

A report by the National Park Service advisory board, *Rethinking the National Parks for the 21st Century*, concluded with an observation that "as a nation, we protect our heritage to ensure a more complete understanding of the forces that shape our lives and future. National parks are key institutions created for that purpose, chapters in the ever-expanding story of America.... By caring for the parks and conveying the park ethic, we care for ourselves and act on behalf of the future. The larger purpose of this mission is to build a citizenry that is committed to conserving its heritage and its home on earth." This vision can only be accomplished through a collaborative partnership of the NPS and its stakeholders.

This is the first in a series of newsletters that Fire Island National Seashore will distribute to better communicate current information about programs and issues. Issue Number 1 of *Soundings* summarizes the major programs and events of 2003. I hope you find it informative. If you have further questions or would like more information, please stop by our office in Patchogue or give us a call at 631-289-4810.

David Spirtes

Volume I, Number 1 December 2003

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Fire Island Lighthouse Preservation Society President Tom Roberts congratulates NPS Director Mainella on the selection of Fire Island National Seashore's new leader.

Fire Island's Latest Superintendent Takes the Helm in May 2003

David Spirtes moved from remote National Park Service sites in Alaska to direct operations at Fire Island National Seashore on Long Island. Superintendent Spirtes is a veteran NPS manager with a wide range of experience in diverse geographical regions of the United States. He has directed science/research operations, law enforcement, museum/cultural preservation facilities, maintenance and engineering operations, and mining and minerals oversight.

Dave Spirtes began his NPS career thirty years ago as a seasonal park ranger at White Sands National Monument. He spent several more seasons at national parks including Grand Canyon, Everglades, and Glacier, before committing to a career job at Gulf Islands National Seashore in 1977. There his ranger duties included working as a boat operator, scuba diver and lifeguard supervisor and living year-round on a barrier island offshore of Ocean Springs, Mississippi.

Spirtes was a subdistrict ranger at Yellowstone National Park, then chief ranger at Glacier Bay National Park, with 1,100 miles of coastline and many bays and estuaries. He also served as chief ranger at North Cascades National Park.

In 1994, Spirtes first rose to the rank of superintendent and for two years headed the Bering Land Bridge, a 2.7-million-acre national preserve. There he not only negotiated approval for a cooperative management plan with Alaska's Department of Fish and Game along with other stakeholders, but he increased local support for the Beringian Heritage International Park.

The recipient of numerous awards for wilderness management, assisting with the *Exxon Valdez* oil spill response, managing search and rescue operations and safety, Spirtes was honored with the Secretary of Interior's Meritorious Service Award in 2000. A graduate of the University of Pittsburgh with a Bachelor of Arts Degree in history (1970) prior to joining the NPS, he served as a pathfinder and infantryman with the 101st Airborne Division in Vietnam.



Northeast Regional Director Marie Rust joins park staff and volunteers to welcome new superintendent David Spirtes to Fire Island National Seashore.

New Fire Island Lighthouse Exhibits Unveiled



Visitors get a chance to test their skills at one of the Fire Island Lighthouse Museum interactive exhibits, "Sailing by Lights."

After years of planning and seeking funding, followed by two more years of design and production, new interactive exhibits were completed inside the Keepers' Quarters of the Fire Island Light Station. Two new films (an orientation to Fire Island National Seashore and Fire Island Lighthouse) were also finalized in 2003.

Fire Island Lighthouse Preservation Society staff and volunteers now keep the museum open year-round.

A large inventory of maritime books and memorabilia is also available for sale. Reservations are recommended for tower tours. Call today and plan your visit.

Phone: 631-661-4876

www.fireislandlighthouse.com

Negotiated Rulemaking Used to Craft New Driving Regulations

Fire Island National Seashore was established in 1964 by a coalition of organizations who opposed Robert Moses' plans to construct a parkway the length of Fire Island. Perhaps the only driving issues that almost everyone agreed on since then is that the "blue book" driving regulations, in effect since 1987, need to be rewritten and simplified.

In August 2003, the Seashore completed a three-year process using negotiated rulemaking committees to help revise the island's driving regulations.

Under a relatively new negotiated rulemaking process, the Secretary of the Interior appointed a committee of local citizens who would be affected by new regulations to participate in a working group to negotiate new regulations. The committee met eight times in public meetings to dialog and attempt to reach consensus on driving issues. They agreed on two basic principles:

- "Overall driving should be reduced."
- "What can come by water will come by water."

The working group succeeded in reaching consensus on many key issues. This allows significant interests of stakeholders to be met through dialogue and negotiation, rather than through the traditional process, which can be adversarial and litigious.



National Park Service Director Fran Mainella honors staff, partners and volunteers during ceremony at Fire Island Lighthouse in June.

DOI, NPS Officials See Renewed Spirit of Civic Engagement on Fire Island in 2003

The U. S. Secretary of the Interior Gale Norton, National Park Service Director Fran Mainella, and NPS Northeast Regional Director Marie Rust each had an opportunity to visit Fire Island National Seashore this past summer. In addition to welcoming the new park superintendent, these high-ranking officials were able to meet the park's partners and volunteers, neighbors and other stakeholders.

Secretary Norton espoused commitment to her 4C's philosophy: "Consultation, Cooperation, and Communication in the Service of Conservation."

Latest Park Research Shared During Fourth Biennial Science Conference

Fire Island National Seashore's resource management staff coordinated a one-day conference this spring at Brookhaven National Laboratory to update staff and the public about the latest scientific research in the park. Coordinated by park biologist Marie Lawrence, speakers presented illustrated talks about the progress of their programs. Topics included:

- Migratory Birds' Infestation by Deer Ticks
- Monitoring Natural Resources in Northeast Coastal Parks
- Scales of Coastal Fore-dune Mobility
- Monitoring Salt Marsh Development and Sea-Level Rise
- Persistence of a Remnant Maritime Holly Forest
- Inventory of Invasive Exotic Plants at Fire Island
- Method of Abundance Estimation of White-Tailed Deer on Fire Island
- Herpetological Inventory of Fire Island National Seashore Including the William Floyd Estate
- Summary of Marine Mammal and Sea Turtle Strandings Recovered from Fire Island
- Ecology and Management of Vector-Borne Pathogens on Fire Island
- Monitoring Mosquitoes at Fire Island: 1998-2002

A synopsis of the eleven presentations is on the park's web site.

www.nps.gov/fiis/2003FIIS-SciConAbstracts.pdf



The goal of the new regulations is to provide necessary services and access for communities and residents while protecting the island's natural resources and the quality of experience at Fire

Island. While complete consensus was not attained, the exercise gave diverse stakeholders a voice in the procedure and a better appreciation of the contentious issues of island transportation.

Fire Island New Driving Regulations Timeline

August 2003	Final Negotiated Rulemaking (Neg-Reg) Meeting
March 2004	New Regulations Drafted
June 2004	Committee Reviews Completed
September 2004	Environmental Assessment for New Regulations Drafted
March 2005	Public Review
June 2005	Final Driving Rules Enacted

Highlights of 2003 Hurricane Isabel Spares Fire Island

Fire Island National Seashore braced for the worst as Category V Hurricane Isabel roared toward Long Island in late September 2003. With forecasts of up to 100-mile-per-hour winds, the storm posed a potential threat to Fire Island.

Striking the East Coast to the south and west of New York City, the island suffered only minor beach erosion and wind damage.



Beach in front of Wilderness Visitor Center gained sand during Hurricane Isabel, while Watch Hill beach and dunes (right) were eroded.

Even when not affected by hurricanes, barrier beaches are still constantly in motion.

Coastal dunes have a “sediment budget” that complements the “beach budget.” Dr. Norbert Psuty of Rutgers University, who has studied nearly 20 years of annual beach profile measurements for Fire Island, notes that foredunes can migrate, erode and recover as a part of their normal long-term and short-term variations. Cells of beach erosion migrate from east to west on Fire Island in the prevailing longshore current.



Barrier beaches are constantly in motion. Barrier island plants and animals are adapted to these harsh unstable conditions.

Short-term Fire Island Beach Renourishment Projects Begin in Fall 2003



While coastal erosion is a normal barrier island process, it doesn't respect property lines and poses a threat to human constructions.

After some initial delays in the approval process, Fire Island National Seashore sanctioned two projects to dredge beach-compatible sand from more than a mile offshore, and deposit it onto the beach in front of several Fire Island communities.

The National Park Service funded the revised environmental assessment, but the projects were paid for entirely with private funds. Sensitive to sentiment against using federal dollars for projects that benefit relatively few taxpayers, homeowners from participating communities are being assessed to cover the cost of dredging. The effect of beach nourishment at any specific site is ephemeral, as the sand will gradually move westward with the longshore current.

Projects must undergo stringent environmental reviews and have a brief window of opportunity for completion.

Before any dredging work begins, permits must be granted from the New York State Department of Environmental Conservation, U.S. Army Corps of Engineers and National Park Service.

The western communities of Saltaire, Fair Harbor, Dunewood and Lonelyville expect to add about 84 feet of beach to 1.4 miles of shoreline. The procedures was last conducted in 1993/94.

Fire Island Pines plans to widen its 1.2-mile beach about 78 feet. This beach was last nourished in 1997.



Fire Island Pines planned to add 1.2 million cubic yards of sand to its beach. Western Fire Island communities will restore 700,000 cubic yards.

Photos © Ray Forbes (below); © Tom Pierno, Coastal Planning & Engineering of NY, Inc.

2003 Most Productive Season for Fire Island's Threatened and Endangered Species

A total of five federally listed threatened and endangered species are located within Fire Island National Seashore. The National Park Service has been monitoring these five species since 1986, and this season has proved to be the most productive. There were 20 breeding pairs of piping plovers, 52 breeding pairs of least terns, and 2 breeding pairs of roseate terns. Observers found 805 seabeach amaranth plants and 1,077 seabeach knotweed plants.

Thirty-five piping plover hatchlings and one least tern hatchling successfully fledged this season.

Nesting activity and plant production also occurred in regions of Fire Island where they had never been observed before. Enhanced monitoring protocols and habitat protection were the two major contributors to this year's success.

Human activity was an evident cause for this season's shorebird nest disturbances and weather elements were the most documented problem for germination success of both vegetation species. It is projected that chick production and plant abundance will continue to increase in the upcoming years.



Roseate tern
(*Sterna dougalli*)
In 2003, 2 breeding pairs were located within Fire Island National Seashore.



Least tern
(*Sterna antillarum*)
In 2003, Fire Island's 52 breeding pairs fledged a single least tern hatchling.

Terns nest in small colonies.



Seabeach Knotweed
(*Polygonum glaucum*)
In 2003, 1,077 plants were located, ten times the number found in 2002.



Seabeach Amaranth
(*Amaranthus pumilus*)
In 2003, 805 plants were recorded, 22 times more than in 2002.

These rare beach plants are inconspicuous but valuable components of a healthy dune system.



In early spring, volunteers and staff install signs and symbolic fencing to protect previously-used nesting and germination sites, and monitor progress weekly.

Restrictions on driving begin on March 1 in the Otis Pike Fire Island High Dunes Wilderness Area.



When the piping plovers establish territory and begin to nest, monitors construct cages, or exclosures, around each nest and monitor progress daily.



Piping plover
(*Charadrius melodus*)

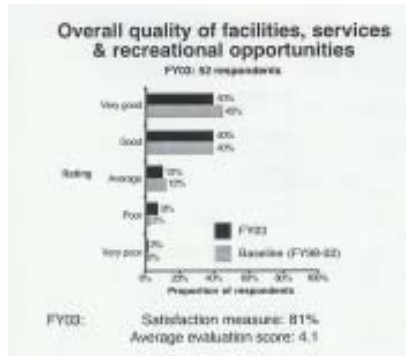
In 2003, 35 piping plover chicks were fledged from 20 nests on Fire Island.

The long-term viability of the endangered Atlantic Coast population of the piping plover will be reached when 2,000 breeding pairs are sustained for over five consecutive years. Of that total number, 575 pairs must be located within New York and New Jersey to be considered successful and be de-listed.



Highlights of 2003

Facilities and Operations



Annual Visitor Survey Results

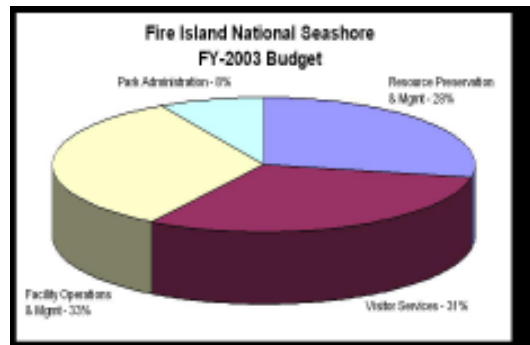
Since 1998, the National Park Service has conducted an annual survey to assess visitors' perceptions of the parks they visit. To meet the national goal, under the Government Performance and Results Act (GPRA), "80% of park visitors are satisfied with appropriate park facilities, services, and recreational opportunities."

In 2003, Fire Island National Seashore met this goal with an overall Visitor Satisfaction rate of 81%.

Ratings for park facilities have continued to decline since 1998, perhaps reflecting the effects of the harsh environment on resources.

The park has been successful in competing for funds to repair its infrastructure. Hopefully the improvements will be reflected in next year's survey.

Fire Island National Seashore's \$3.5 million operating budget is used to monitor and mitigate the impacts of over 800,000 visitors to park facilities and over 2 million visitors to communities within park boundaries. The park issues and monitors almost 450 driving permits, and maintains and protects a variety of facilities and resources.



FY03 Operating Budget: \$3,473,000
2003 Annual Park Visitation: 803,876
Annual Fire Island Visitation: 2.2 million



Local work crews, hired from special accounts that supplement the park's operating budget, replace boardwalks and complete other projects.



In response to previous years' comments, canoe programs continued and evening programs were revived at Watch Hill in 2003, helping raise the visitor satisfaction rate for personal services.

Fire Island National Seashore Resources and Facilities

- Almost 20 islands and more than 79 miles of shoreline, including 26 miles of barrier island oceanfront beach; 19,579 acres
- Extensive portions of the Great South Bay, Narrow Bay and Moriches Bay
- More than 420 plant species, 330 bird species, 30 mammal species, 60 fish species, about 30 reptile and amphibian species
- 31 federal or state listed threatened or endangered species and species of special concern (plants, birds, reptiles, amphibians, and marine mammals)
- Diverse vegetation communities: ocean, beach, dune and swale, maritime forest and thicket, freshwater marsh and bog, salt marsh and bay
- 41 historic structures, 1 historic cemetery, a number of archeological sites, about 30,000 historic objects and 25,000 archeological artifacts, 1,200 biological specimens, 81,000 pieces of paper in the archival collection
- More than 12 miles of boardwalks
- 4 public docks, 2 public marinas with snack bars, 1 convenience store, 1 restaurant (not open since 2001), 1 public campground, 3 picnic areas with grills
- Ferry service from 3 Long Island towns
- 2 life-guarded beaches
- 3 visitor centers, 1 museum, lighthouse tower tours and historic home tours
- New York State's only federally designated wilderness area (1,365 acres)

Otis Pike Fire Island High Dunes Wilderness

Less than 60 miles away from New York City metropolitan area's 8.5 million people, the Otis Pike Fire Island High Dune Wilderness Area remains the only federally-designated wilderness in the state of New York. Established in 1980, it is now comprised of a total of 1,363 acres, within a 7-mile stretch of barrier island along the Great South, Bellport and Moriches bays.

Fire Island's designated wilderness—located from Smith Point west to Long Cove, about a mile east of Watch Hill—includes patches of seaside plants and thickets among the backsides of dunes; it extends across pine forests with hidden hardwood groves near the sheltered mainland side of the island. There is a natural abundance of poison ivy, ticks and mosquitoes in the wilderness.

In 2003, the park issued 220 backcountry camping permits for overnight stays in the wilderness. Waterfowl hunting is permitted from the wilderness shoreline.

Seasonal sportsmen's driving permits are sold at the Wilderness Visitor Center from September 15 through December 31.



Superintendent Spirtes gets an orientation to seashore resources from Chief Ranger Wayne Valentine. New horses were brought to Watch Hill in 2003, for use in beach patrols and for traversing the roadless wilderness.

In 2003, rangers sold 140 sportsmen's permits for accessing ocean fishing and for hunting, which is permitted in a small part of the park. Year-round fishing attracts anglers who cast for bluefish, striped bass, winter flounder, and other saltwater species from the beaches in front of the wilderness area.



The accessible boardwalk west of the Fire Island Wilderness Visitor Center was partially refurbished during the fall of 2003.



More than 1,000 students participated in educational programs at the Wilderness Visitor Center in 2003. The visitor center was open 182 days, with 6,099 visitors.

Old Inlet



Thanks to generous contributions and cooperative efforts, an environmentally friendly replacement for the Old Inlet comfort station was installed in the wilderness area.

A solar-powered composting toilet was installed at Old Inlet, in the Fire Island High Dunes Wilderness. The National Park Service provided half of the \$14,000 cost, with matching funds donated by interested groups and individuals.

Among the contributors were Friends of Fire Island National Seashore, the Fire Island Wilderness Committee, the Post-Morrow Foundation, Brookhaven Village Association, and Jane Quappe, in memory of her late husband, Lincoln.

Facilities and Operations

Watch Hill

Facilities at Watch Hill required an extra dose of maintenance to correct problems from previous storm damage. Due to severe ice conditions, twenty-three pilings had to be reset in the marina. A portion of the loop nature trail boardwalk over the salt marsh was also heaved from the ground; it remains closed until it can be rebuilt. A hail storm struck Watch Hill in 2002 shortly after buildings were painted, and emergency funds have not yet become available to repaint.

In 2003, the park maintenance staff restored restrooms at the beach and resurfaced most of the boardwalk with recycled plastic lumber that is splinter-free and has a ten-year life. Vegetation was removed from around all structures to provide a proper fire break, and debris was removed to assist in rodent control.

Davis Park Marine Services again ran the campground, store, marina and snack bar at Watch Hill. They filled in at the last minute after the new concession contract was withdrawn because of legal challenge.



Volunteers helped park staff keep the Watch Hill Visitor Center open 7 days per week from late June through Labor Day. Nearly 10,000 people visited this small museum in 2003.

Ferry service began on May 15, when Watch Hill opened for the season.

Although visitation was light through the spring due to weekend rain, Davis Park Ferry reported record visitation at Watch Hill on July 4.

Lifeguards were on duty at Watch Hill beach from Memorial Day weekend through Labor Day, and on weekends in May and September.

Many of the weekend canoe programs were cancelled due to inclement weather, but evening programs were brought back to Watch Hill in 2003. Several special guest speakers supplemented talks presented by park interpreters.

Superintendent Spirtes lived at Watch Hill and twice met with park visitors to discuss issues regarding park operations. In response to the meetings, a group of long-term boaters created a nonprofit organization to support recreational use of the Watch Hill area. When the midsummer mosquito population grew to a nuisance level, the park's friends groups proposed donating propane-powered CO₂ mosquito traps to reduce their numbers near the marina.

Visitation continued into the fall until Columbus Day. Cool weather brought the striped bass and bluefish inshore where surf casters were able to land fish.

Watch Hill facilities were winterized and secured for the winter and will be ready for the 2004 season. Ferry service is expected to resume and campground and marina are expected to reopen on May 14, 2004.

Barrett Beach/Talisman Improvements Near Completion

The Barrett Beach site was donated to Fire Island national Seashore by the Town of Islip in 1998. The popular site has been without regular ferry service, lifeguards, and other amenities since the end of that season, when all facilities were closed for safety reasons.

The NPS received funding in 2001 to remove the deteriorated marina, restrooms, and concession building, and to construct replacement facilities. The Talisman restroom and picnic area were improved in 2002. A new concession and maintenance building was completed in 2003. The ferry loading dock and a dock for visitors to off-load private boats is nearing completion.

Some services are expected to be restored in 2004.



Talisman picnic facilities in 2003.



The Barrett Beach ferry dock was designed and built to withstand severe wave action at its location, one of the broadest parts of the Great South Bay. This is also the narrowest part of Fire Island.

Sailors Haven/Sunken Forest

Like those at Watch Hill, Sailors Haven facilities are showing signs of their age. Before the marina could open in 2003, 3 pilings had to be replaced and a serious leak in the concession store roof had to be repaired after a severe winter with ice damage. Additional forces affect this site.

Erosion at each end of the bulkhead at Sailors Haven Marina is a serious threat. Communities with hard structures on the bay side of Fire Island face similar circumstances, as bulkheads disrupt the normal flow of wave energy and sediment deposition. The effects can be observed year by year. The channel leading into Sailors Haven was dredged in 2002, and is already beginning to refill. Both the erosion and fill are the result of the eastward movement of the current in the Great South Bay.

In 2002, the National Park Service received funding to conduct the required environmental studies and to design a new marina for Sailors Haven. Construction funding has not yet been secured. The channel is expected to be dredged along with marina construction.

In 2003, park maintenance staff trimmed vegetation and removed storm-damaged trees along the Sunken Forest boardwalk. Restrooms will be rehabilitated in 2004.

Howard T. Rose Company received an extension to their existing contract in order to operate the Sailors Haven marina, gift shop and snack bar in 2003. Ferry service began on May 15, but opening of the other facilities was delayed until winter storm damage repairs were completed.

By stretching staff out thinly, the Sailors Haven Visitor Center was able to be open 7 days a week in the summer of 2003. Park staff and volunteers painted the interior of the building, and interpreter Kristin Santos began work on a new mural for the center.



Sailors Haven facilities show signs of deterioration. Plans for the new marina were reviewed in 2003.

To insure a safe boating experience on the Great South Bay, Fire Island National Seashore's visitor protection and law enforcement staff participated in a special multi-agency boating safety operation. Several thousand boats were stopped and inspected for safety equipment and sobriety of the operator.

In late October, Sailors Haven facilities were secured for the winter and will be ready for the 2004 season. Ferry service is expected to resume and the marina is expected to reopen on May 14, 2004.



NPS staff and volunteers welcomed almost 10,000 students to the Sunken Forest in 2003. Sailors Haven Visitor Center was open 132 days (13,877 visitors).

Lifeguard Operations

Currently summer lifeguard operations are provided at designated ocean swim beach locations at Sailors Haven and Watch Hill. Lifesaving services are provided daily from the end of June through Labor Day weekend. All lifeguards are trained in first aid including CPR and Automated External Defibrillator (AED).

Recent additions to both beach operations this past summer were inflatable rescue boats equipped with 25 horsepower outboard motors. These boats will permit rapid deployment rescue along the oceanside beaches.

This past summer, lifeguards at Sailors Haven and Watch Hill performed approximately 32 assists and rescues.



Life guards practice rescue skills at Sailors Haven Beach.

Facilities and Operations

Facilities and Operations



Improvements at Fire Island Lighthouse

Both Fire Island Lighthouse Preservation Society (FILPS) staff and volunteers and Fire Island National Seashore maintenance staff were kept busy at the lighthouse this year.

In addition to painting, reroofing, and other work, the FILPS developed a new temporary exhibit in the old boathouse.

Fire Island Lighthouse is one of Long Island's major attractions.



The old boathouse (top), the historic oil house (above: "before"; right: "after"), and other outbuildings were painted and some were reroofed this year.



Plastic lumber sheathing was installed on some of the boardwalk at the lighthouse tract.

William Floyd Estate 2003 Temporary Exhibit: *Porcelains, Potteries and Pagodas*

The Floyd Estate staff produced a new temporary exhibit, using over 400 pieces in the collections to illustrate the history and technology of the ceramics.

In the reception room of the main house, one exhibit case displayed examples of ceramic types, designs and decorative techniques. Another showcased some of the finer pieces in the collections.

Six rooms in the historic house were used to show more than 350 historic objects. Dining room tables were set with dinner wares, the parlor was the scene of an after dinner coffee featuring Imari-style cups and saucers. One of the upstairs bedrooms was the home of a children's tea party, complete with dolls and hand embroidered napkins from the late 19th century.

Staff produced an eight-page guide booklet to supplement information from the site's interpreters and exhibit text.



Curriculum-based education programs at the William Floyd Estate include an activity in the Floyd family cemetery. In 2003, 900 students participated.



Status of Cultural Resources



A vista was cleared to restore the historic view from the William Floyd Estate manor house to the bay.



The park maintains miles of fire breaks throughout the grounds of the old estate.

Curatorial Work Continues at William Floyd Estate

One of Fire Island National Seashore's historic resources is the William Floyd Estate. Its major feature is the Floyd family manor house. Managing a 260-year-old 25-room wood frame house presents many challenges.

Exterior surfaces need to be weather tight to prevent damage to interior surfaces and collections. Interior climate control requires a balanced approach that seeks to eliminate extremes in temperatures and humidity levels. Wood boring insects and rodents such as squirrels and raccoons are ongoing problems that are very difficult to control.

Take the case of wood boring insects that thrive when humidity levels are above 35%. In a coastal environment even with current technologies available (HVAC) it may not be possible to maintain critical humidity levels in an un-insulated wooden structure.

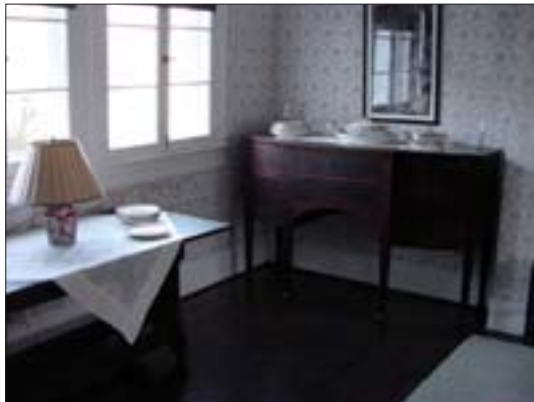
Other threats to the William Floyd Estate collections—such as sunlight—are not so difficult to mitigate. Over time, sunlight (visible light) is very damaging to collections. Textiles (fabrics) and wall coverings become bleached and brittle when exposed to direct sunlight.

To mitigate the effects of sunlight on resources within the museum, the estate staff has established a light monitoring program. Several

times a year light readings are taken at pre-selected areas within the museum, curatorial storage facility and the Fire Island Lighthouse exhibit areas. Because of this monitoring, it became apparent that special UV film applied to the William Floyd Estate museum windows 12 years earlier was failing.

During the summer of 2003 the Estate staff had special funding to replace the failing UV film. This project was managed by the park curator who created a data base to track the project. Every phase of the project proved to be very labor intensive. To remove the failing UV film each individual application had to be treated with a special solution prior to scraping. Special attention was needed as almost every window included historic glass. After the surface preparation was completed, new UV film had to be cut and fitted into each window pane.

After several months of hard work the results were impressive: 55 windows containing 500 panes of glass sported new UV film. In addition 39 storm sashes with 53 individual panes had also been treated. During the winter of 2003/04 the Estate maintenance staff will be constructing new storm sashes with UV protection for select windows in need of further protection.



Natural Resources Management

Fire Island National Seashore Monitors Mosquito Populations

The Fire Island National Seashore mosquito surveillance and management program is the foundation for mosquito monitoring programs throughout the National Park Service. It was implemented in 1998 in response to public concern over Eastern Equine Encephalitis (EEE). In 1999, when another mosquito-borne disease—West Nile Virus (WNV)—was discovered in the New York metropolitan area, the program expanded. The goal of this program is to reduce human health risk from mosquito-borne diseases while adhering to the NPS legal mandate to protect the natural resources of the park.

The Fire Island monitoring program focuses on the collection and analysis of salt marsh mosquitoes (*Ochlerotatus sollicitans*, formally classified as the genus *Aedes*), which are potential vectors for EEE, and various freshwater species (*Culex spp.*), including the common house mosquito, which are potential vectors for WNV. Fire Island National Seashore's salt marshes (and salt marsh mosquitoes) are located mainly on the bay side of the eastern end of Fire Island and along the shoreline at the William Floyd Estate. *Culex* mosquitoes are usually found in standing fresh water with a high organic matter content.

The park's mosquito trapping season begins the first week of June and terminates the middle of October. Twelve mosquito traps are maintained at five different study sites in the park.

The five study sites chosen to monitor mosquito populations are usually the Fire Island Light-house Tract, Sailors Haven, Watch Hill, the



Wilderness Area and the William Floyd Estate. The monitoring program uses two types of traps to collect mosquitoes: CDC gravid traps, intended to collect egg-bearing *Culex* species, and CDC light traps, intended to collect host-seeking adult female mosquitoes of all species.



In 2003, 7 CDC gravid traps were set at 5 locations. One trap at the William Floyd Estate caught 154 mosquitoes.



5 CDC light traps were set in 2003. The highest total was 21,329 mosquitoes obtained from a light trap at the Fire Island Wilderness Area.

In 2003 the highest light trap total was an estimated 21,329 mosquitoes obtained from a trap located in the Fire Island Wilderness Area. This light trap included 6,398 *Culex* species and 7,234 *O. sollicitans* (salt marsh mosquitoes). The highest gravid trap total, obtained from the William Floyd Estate, was 154 mosquitoes, 137 of which were *Culex* species. Of the 40 species of mosquitoes recorded in Suffolk County, at least 25 different species have been found within Fire Island National Seashore.

The park also monitors for dead birds (especially crows, jays and raptors), vector carrier species which may have died because of WNV. The results of the monitoring programs help the park determine management actions. Criteria in the mosquito surveillance protocols dictate the proper steps to take in handling potentially infected carrier animals (dead birds), notifying the public about potential hazards, and authorizing spraying for mosquitoes or closing areas of the park to the public.

Evidence of WNV-infected mosquitoes has been detected within the park every year since 2000, when it was detected in the community of Saltaire. In 2001 it was detected at Watch Hill. In 2002 it was detected again at Watch Hill (near the border of the Davis Park community) and in the Wilderness Area. In 2003, WNV was isolated from William Floyd Estate mosquitoes, and the park's first WNV positive bird was also collected in the community of Cherry Grove. Interestingly, a mosquito-borne virus that is new to the park, Cache Valley Virus, was found this year at Watch Hill. This new virus is pathogenic to livestock and is not thought to infect humans.

Because of its effect on the environment, especially on fisheries and water quality, spraying is the action of last resort. However, after consultation with the Center for Disease Control (CDC) and the USGS Research Center, the park may authorize spraying when specified levels of infection are detected.

What You Can Do To Insure Your Health and Safety

- Safely apply appropriate insect repellents (28-30% DEET or citronella).
- Wear hat, long sleeves, pants and socks or net "bug out" suits when in mosquito habitat.
- Time your outdoor activities to avoid each species' particular feeding time. Use extra protection if you are out at dawn or dusk.
- Check your surroundings for sources of stagnant water (gutters, birdbaths, septic systems, buckets and open containers, tarps, puddles) that provide breeding habitat for freshwater mosquitoes. Empty standing water.

Fire Island National Seashore Still Battles Invasive Species

National parks provide habitat for many unique and valuable native plants and animals, in addition to the endangered species they help protect. Outside park boundaries, critical habitat may be threatened by destruction due to urban, suburban and industrial developments. Within park boundaries, native species should be expected to thrive. However, an insidious threat exists within protected park lands.

Invasive plants (weeds) and animals threaten to out-compete native species. Because of this, the National Park Service has begun to wage war on invasive species.

Within the past two years, Fire Island National Seashore staff have surveyed and mapped invasive plants on park lands and given presentations on invasive plants. The Seashore also negotiated a contract to manage the Norway Rat (*Rattus norvegicus*) in park buildings and began planning a comprehensive **integrated pest management** program.

Integrated Pest Management

Integrated pest management is a comprehensive approach to managing pests that seeks to minimize the use of harmful pesticides and other ecologically unsound practices. Pests are first controlled by exploiting known facts about their behavior to find and remove sources of food and shelter. Pesticides are used only if no other method will work or if a quick remedy is necessary, such as in a human health emergency.

What's Next?

Within the next year, Fire Island National Seashore plans to complete the writing of a comprehensive Integrated Pest Management Plan, which will address all the major pest issues in the park. Some issues of major complexity and impact (such as invasive plants) may require that separate planning documents be prepared. In addition the Seashore will continue to monitor the spread of invasive plants and take steps to eradicate them.

Invasive Plant Mapping Helps Assess Threats to Native Vegetation



In 2002, the park conducted a survey of invasive plants on park lands. The results: weeds were coming in wherever there was vehicular or pedestrian traffic, or in disturbed areas such as along boardwalks, and around buildings.

The good news: nutrient-poor soils, desert-like conditions and salt spray of the barrier island prevent many weeds from gaining a strong foothold in the Seashore. Weeds also find it difficult to make inroads where native vegetation is thick and impenetrable. The 2002 survey found fifteen invasive plant species on Fire Island.

Autumn olive (*Eleagnus umbellata*), **nodding thistle** (*Carduus nutans*) and **spotted knapweed** (*Centaurea aculosa*) are Fire Island's most abundant weeds.



Exotic plants are located then mapped, recording their latitude and longitude with a GPS (Global Positioning Satellite) device. The information is then entered into a mapping program.



Natural Resources Management

Researchers Study Vegetation in the Maritime Forest on Fire Island

For four decades, botanists have been recording the size and number of species of plants in plots within Fire Island's rare maritime holly forest remnants. The current studies are being conducted by the State University of New York, College of Environmental Sciences and Forestry.

Measurement of trunk diameters indicate that the main canopy species—*Ilex opaca* (American holly), *Sassafras albidum*, and *Nyssa sylvatica* (black gum)—are increasing in size, but smaller stems and understory plants are not being replaced.



Sunken Forest understory, 1967 (left) and 2002.

SUNY's study is investigating the mode of regeneration for this unique forest with a seed bank experiment, and examining specimens to determine historical effects of hurricanes and drought.

Herbivore enclosures have been erected to allow researchers to monitor seedling establishment under the canopy, and help evaluate the impact of deer on native vegetation.



Herbivore enclosures allow researchers to monitor seedling establishment in Fire Island's rare maritime holly forests. Impacts of deer may threaten the regeneration of ancient American holly trees in Sunken Forest.

Deer Immunocontraceptive Program Continues on Fire Island

The National Park Service completed another year of cooperation with the Humane Society of the United States (HSUS) and SUNY Syracuse, conducting a deer research project to determine whether a contraceptive vaccine can be a useful deer management tool on Fire Island. HSUS has been involved with the program on Fire Island since 1993.



Between September 4 and 16, 2003, 180 does were darted with the immunocontraceptive vaccine, PZP (porcine *zona pellucida*). None of the deer were injured during the darting. The vaccine is 85%- 90% effective in preventing vaccinated does from becoming pregnant. The goal of treating more than 90% of the female deer population was met in the west end communities and was less successful further east.

Preliminary deer counts from a concurrent study indicate that in some areas, deer numbers have decreased 50% or more from the 1998 level.



Bait stations are used to provide food which lures in the deer without the association of people. PZP is delivered by a dart, propelled by gun from a certified deer "darter."

Coexisting with Deer on Fire Island

A first-time visitor to Fire Island is probably thrilled to see the seemingly tame deer on the island. However, these deer are potentially dangerous wild animals, posing both health and safety risks for humans. The number of deer on some parts of Fire Island is believed to be at an unhealthy density, which also puts pressure on other animal and plant populations.

Almost forty years of vegetation studies in Fire Island's Sunken Forest reveal an alarming reduction in the number of herbaceous plants and small trees in the understory of this rare maritime forest. Some scientists are concerned that the century-old holly, sassafras, black cherry, black gum and other trees may not be able to regenerate. The lack of establishment of new seedlings coincides with the implementation of wildlife protection policies on Fire Island in the 1970s.

In 1974, Fire Island's deer herd was estimated at 50 individuals; by 1989, it was close to 500. From population density studies conducted over the past five years, it is estimated that 500-700 deer live on Fire Island.

Average density varies widely between locations. 2002 Estimates:

Robert Moses State Park	18 deer/km ²
Lighthouse Tract	60 deer/km ²
Kismet-Lonelyville	44 deer/km ²
Ocean Bay Park/Seaview	65 deer/km ²
Fire Island Pines	75 deer/km ²
Davis Park	68 deer/km ²
Fire Island Wilderness	30 deer/km ²



For the past eight years, the National Park Service has conducted a research project cooperatively with university scientists from SUNY Syracuse, the Humane Society of the United States, and several communities to determine whether an immunocontraceptive vaccine can be useful at Fire Island as a deer management tool. In September, bait stations are set up to lure deer into appropriate areas. Female deer are darted with PZP (porcine *zona pellucida*), which prevents does from becoming pregnant.

In 2004, the National Park Service will begin the processes necessary to develop a deer management plan, relying on the research information accumulated to date from both of these projects. The park's objective is to determine what management actions are needed in order to keep the deer population within a range that will not significantly impact natural populations of vegetation within the boundaries of the park.



Deer can be dangerous, especially during rut.

Deer easily overturn garbage containers and spread litter, which attracts rats and other rodents.

Deer prefer to eat succulent ornamental plants, and their population density has grown quite large where abundant food and shelter is available in communities.

Where unnaturally large populations of deer are able to thrive, even native plants are showing signs of distress.

Natural Resources Management

You Can Help Keep Wildlife Healthy and Wild

- Never feed deer or other wildlife
- Be sure your garbage and recyclables are securely contained
- Support the park's "Carry In/Carry Out" policy
- Plant native vegetation around homes and businesses
- Use architectural barriers to keep deer out from underneath homes
- Keep pets leashed, pet food inside
- Control rodents without the use of poisons

Friends and Partners

VIPs—Volunteers in Parks

This year, 144 volunteers contributed more than 16,000 hours to help Fire Island National Seashore in its mission to protect resources and provide services. The Volunteer Senior Ranger Corps was recognized for its very productive year during an awards luncheon at Stony Brook University. The park's VIP Coordinator, Irene Rosen, was honored for her valuable contributions to the program.



NPS Director Fran Mainella (right) presents award to VIP Coordinator Irene Rosen.



FILPS's annual Barefoot Black Tie fund-raiser is held in August.

Friends of Fire Island National Seashore—FFINS

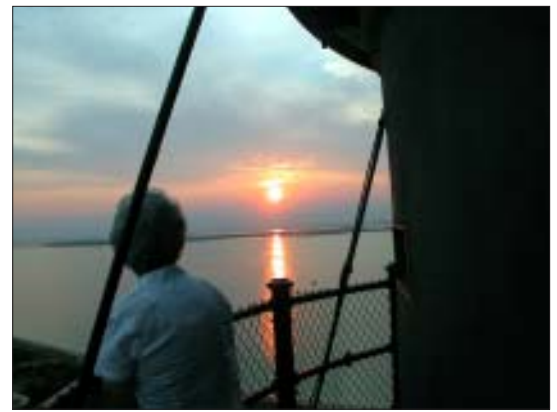


The nonprofit organization, Friends of FINS, established in 2000 to advocate for more support for the park, saw one of its projects materialize this year with the installation of the Old Inlet Comfort Station.

The group is still looking for more members and contributions to help fund additional services for visitors to Fire Island.

For more information, contact:

Friends of Fire Island National Seashore
P.O. Box 504
Patchogue, NY 11772-0504
www.ffins.org



Sunset Tower Tours were a popular addition this year at the Fire Island Lighthouse.

Fire Island Lighthouse Preservation Society

This may have been one of the most successful years yet for the Fire Island Lighthouse Preservation Society (FILPS). Volunteers and staff are now keeping the facility open year round, and celebrated their 100,000th visitor for the year in October.

The Lighthouse Junior Ranger Program concluded with an impressive outdoor play featuring participants and volunteers. The Society conducted four fund-raising events, which helped maintain and operate the Fire Island Lighthouse this year. Volunteer training and recognition banquets are a nice touch for those who contribute their time and talents. For more information or membership forms, contact:

Fire Island Lighthouse Preservation Society
4640 Captree Island
Captree Island, NY 11702-4601
631-661-4876
www.fireislandlighthouse.com

NPS Signs Cooperative Agreements with Local Universities

The National Park Service (NPS) at Fire Island National Seashore entered into agreements with two universities this year to conduct research within the park.

In March 2003, an agreement was signed with Dowling College to support and conduct scientific and educational research in the park.

In November 2003 the National Park Service and Stony Brook University entered into a long-term partnership to expand the university's role in conducting and applying research to natural and cultural resource management issues at several national parks. In one of the first projects at Fire Island National Seashore, scientists at the SBU's Marine Sciences Research Center (MSRC) will study fisheries management issues along the shoreline of the Great South Bay.

New Rules and Boundaries for Personal Watercraft

Since 2002, as the result of a lawsuit, personal watercraft have been prohibited in all National Park Service waters including Fire Island National Seashore. This was the result of a legal challenge over the effects of PWCs on other visitors, their safety, water and air quality; submerged and shoreline vegetation, and wildlife and its habitat.

This June, new regulations are scheduled to go into effect that will allow PWCs in some Fire Island National Seashore waters. The regulations were drafted with public participation in a series of meetings and after the effects of PWCs on park resources and other users were fully evaluated. Under the new regulations:

- PWCs are **allowed** in the intracoastal waterway and in marked channels into any private communities on Fire Island that allow them.
- PWCs are **not** allowed in Sailors Haven, Barrett Beach, Watch Hill or Old Inlet
- PWCs are **prohibited** within 1,000 feet of shore in the Great South Bay from Robert Moses State Park to the western boundary of Sunken Forest.
- PWCs are **prohibited** within 4,000 feet of shore in the Great South Bay from the western boundary of Sunken Forest to Smith Point County Park.



For a copy of the park brochure map call 631- 289-4810 or visit the web site at www.nps.gov/fiis.

New Concession Contract To Be Re-advertised

In November, Fire Island National Seashore advertised a 10-year contract for providing marina, restaurant, hotel, campground, and retail store and snackbar services at Watch Hill, Sailors Haven, and Barrett Beach. Under the NPS Concession Improvement Act of 1998, proposals from prospective concessionaires were solicited through the issuance of a prospectus that described the terms and conditions of the concession contract. The NPS received one offer. A panel of technical experts in concessions management evaluated the offer and found that it did not meet the minimum requirements of the proposed concession contract and prospectus. The NPS withdrew the offer and will be advertising a new prospectus this spring.

Need for Homeland Security Measures Realized

When terrorists attacked new York City on September 11, 2001, Fire Island National Seashore sent two boats into Manhattan to help secure the harbor and protect the Statue of Liberty.

The law enforcement staff at Fire Island has added intensive training in counter-terrorism to its annual agenda to provide enhanced security and handle hazardous materials. In cooperation with Suffolk County Police Department, the park has stepped up security measures on Fire Island, which is adjacent to an international boundary.



Specialty trained and equipped federal law enforcement officers from Fire Island National Seashore were called to duty at other NPS sites.

The new prospectus will have a revised set of terms and conditions designed to provide a good business opportunity, to get a reasonable return to the U.S. government and taxpayers, provide quality services to visitors, and to ensure the preservation and enhancement of Fire Island National Seashore.

The NPS will be issuing an emergency one-year contract to provide commercial services at Watch Hill, Sailors Haven, and Barrett Beach this summer. Services will be similar to 2003. Questions regarding the concession operation at Fire Island National Seashore may be directed to Jean Blakeslee at (631) 289-4810 ext. 222 or by sending an e-mail to: Jean.Blakeslee@nps.gov

Park Management and Planning

Park Management and Planning

Planning Continues for Patchogue Ferry Terminal & Visitor Center

The plans for a new park visitor center and ferry terminal in Patchogue, which were developed in 1999, have been approved and the drawings are about 95% complete for both buildings. The new facilities will include:

- Ticket sales booth to ride the ferry to Watch Hill and/or Sailors Haven
- Visitor Center with both fixed and changing exhibits, including interpretation of natural resources for the river, bay and the barrier island, and the maritime history of the area
- Restrooms
- New headquarters building to replace the converted residential facility on Laurel Street

The Seashore is working closely with the Village of Patchogue as a member of the Riverfront Advisory Committee. Because the village project will impact visitor use at the park facility, and conversely the park's proposed construction will affect the village's planning efforts for riverfront improvements, both parties are sharing their plans. We are looking for ways to enter into a partnership that enables us to coordinate our efforts for open space, access, and parking, with the Fire Island National Seashore Visitor Center serving as an anchor to the Patchogue Riverfront improvements.



Fire Island to Montauk Point Reformulation Study

Fire Island and the south shore of Long Island are vulnerable to flooding and storm damage from hurricanes and winter northeasters. The 1938 hurricane alone destroyed 265 houses, killed 45, created eleven new inlets, and flooded 20 square miles of the mainland. A March 6, 1962 storm destroyed 47 homes and damaged another 75 on Fire Island.

The U. S. Army Corps of Engineers is preparing a reformulation plan for the 83 miles of shoreline along the south shore of Long Island, New York between Fire Island Inlet and Montauk Point.

The purpose of the plan is to reduce storm damage within the project area while maintaining or enhancing natural resources.

The study area includes 26 miles of the Fire Island National Seashore, which is under the jurisdiction of the National Park Service. The plan will identify, evaluate and recommend long-term solutions for hurricane and storm damage reduction that will not impair ecosystem integrity and coastal biodiversity. The Fire Island to Montauk Point Reformulation Plan (FIMP) will evaluate shore stabilization structures,

dredging practices, beach renourishment and dune stabilization measures. The plan will describe potential environmental impacts and any potential mitigation requirements and be accompanied by an Environmental Impact Statement.

At present the Corps of Engineers is finalizing a vision statement for the project and conducting, collecting, analyzing, and reviewing technical and scientific data to gain an improved understanding of the hydrologic, geomorphic, and ecological factors. The study is scheduled to be completed by June 2006.

The Corps of Engineers welcomes comments from the public throughout the planning process. Information on the Reformulation Study is available on-line at the USACE New York District web site:

<http://www.nan.usace.army.mil/fimp/index.htm>

Park Prepares for New General Management Plan

Fire Island National Seashore is in the preliminary stage of preparing a new General Management Plan (GMP). The GMP outlines how natural and cultural resources, public uses, and park operations should be managed over the next 10-20 years. The planning process addresses significant issues or challenges that the park is facing, proposes management solutions, and establishes management priorities.

The GMP will reflect on the reasons the park was established and will review its full ecological, scenic, and cultural context within the National Park System and as part of the Long Island region. The GMP delineates zones or districts for which appropriate prescriptions will apply, based on resource conditions, visitor experience, and appropriate management activities that reflect the differences in specific areas of the Seashore. The decisions documented in the GMP will be based on the full and proper utilization of current scientific and scholarly understanding of park ecosystems, existing and potential resource conditions and cultural contexts, and the socioeconomic environment.

The plan will be prepared by an interdisciplinary team of National Park Service (NPS) planners, park managers and technical experts in consultation with the park staff, NPS leadership, local and state government officials, other agencies, nongovernmental organizations, other knowledgeable persons, and the general public. The NPS Northeast Regional Director is the official responsible for approving the GMP.

We expect that it will take about three years to develop Fire Island National Seashore's GMP. Since public involvement is vital to the successful development of the Fire Island National Seashore GMP, we invite and encourage your participation. Even more, it offers an incredible opportunity to form a more meaningful partnership with the people most closely associated with Fire Island National Seashore. Active participation helps build a greater sense of ownership in the Seashore.



Directory

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120 Laurel Street
Patchogue, NY 11772

Web:

www.nps.gov/fiis

Phone:

Park Headquarters

631-289-4810

Fax: 631-289-4898

William Floyd Estate

631-399-2030

Fire Island Lighthouse

631-321-7028

Wilderness Visitor Center

631-281-3010

Sailors Haven Visitor Center

631-597-6183

For More Information

At present, we are focusing on compiling and analyzing information about park resources and visitor use which will provide a framework for the GMP. The following briefing papers and reports are presently being prepared:

- Administrative History of the past 40 years of Fire Island National Seashore
- Ethnographic Overview and Assessment
- Archeological Overview and Assessment
- Fire Island National Seashore Museum Collections Management Plan
- Geomorphology and Processes of the Ocean Shoreline
- Physical Processes of the Bay Shoreline
- Habitat Ecology and Water Quality of Great South Bay
- Fisheries Management (Finfish and Shellfish)
- Vector-borne Diseases (Lyme Disease, West Nile Virus)
- White-tailed Deer Ecology and Management



National Park Service
U.S. Department of the Interior

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Fire Island

National Park Service
U.S. Department of the Interior

Fire Island National Seashore
Long Island, New York



Soundings



Fire Island Inlet at Sunset

*The National Park Service
cares for special places
saved by the American
people so that all may
experience our heritage.*

Fire Island has been a special place for a diversity of plants and animals and people for centuries. Today, its unspoiled beaches provide habitat for sensitive flora and fauna, and solitude and spiritual renewal to civilization-weary people.

Fire Island National Seashore provides a variety of opportunities to explore and enjoy an Atlantic Coast barrier island ecosystem and its history. Thank you for helping protect and preserve this American treasure.