

"I went up there a little while ago. I took friends in the boat up the river, and there's nothing like it. There will be nothing like it-ever. It's a wilderness marvel but it'll be really a marvel in fifty years-a hundred years from now. There's so little of that natural world left. Never did Dad make a better decision than that one."

Nathaniel Reed

IV. MANAGEMENT DIRECTION

Introduction

There are many challenges in managing the refuge. Goals and objectives are the heart of any plan and require critical thinking and thoughtful effort. Thus, in a tiered approach, the reader will find described in this chapter, the refuge vision statement and proposed plan for managing the refuge over the next 15 years.

Contained in the proposed plan are the goals, objectives, and strategies for achieving the refuge vision. The proposed management actions in this plan are dependent upon much needed increases in staffing and funding. Without the outlined increases, many of the management actions will not be accomplished within the 15-year time frame of the comprehensive conservation plan.

The planning team evaluated four alternatives for managing the refuge, and selected the Ecosystem Emphasis Alternative as the "preferred alternative" since it best serves the purposes and vision of the refuge. The other alternatives evaluated were: Maintain Current Management; Biological Emphasis; and Public Use Emphasis. These alternatives are described in the alternatives section of the Environmental Assessment.

In essence, the proposed action will result in increased protection of threatened, endangered, and trust species; increased invasive exotic plant eradication and control; habitat restoration; protection of migratory shorebird and songbird stopover sites; restoration of imperilled scrub habitat; enhanced resident wildlife populations; cultural resource protection; increased compatible wildlife-dependent recreation; and environmental education and interpretation.

A common theme throughout this proposed plan is that wildlife conservation assumes first priority in refuge management. Public uses are allowed if they are appropriate and compatible with wildlife and habitat conservation, the refuge vision, the purposes and mission of the National Wildlife Refuge System, and consider the impact to surrounding landowners. Specifically, wildlife-dependent recreational uses (fishing, wildlife observation, wildlife photography, and environmental education and interpretation) will be emphasized in keeping with the needs of adjacent landowners.

Refuge Vision

Hobe Sound National Wildlife Refuge serves as a beacon of hope that wild places can still exist in south Florida. It is the reflection of the generous and farsighted early residents of Jupiter Island who were inspired by its beauty and who sought to protect it from the onslaught of development. As a result, Hobe Sound National Wildlife Refuge is an outstanding example of an Atlantic coastal ridge and barrier island environment. Through scientifically careful ecosystem management, inspirational environmental education, and creative partnerships, this public asset will be protected, restored, and enhanced. The refuge will

someday be a contiguous tract of land that provides safe corridors for native wildlife and plants to flourish, and where wildlife abundance and high quality facilities will attract thousands of students and visitors each year. As the south Florida landscape continues to undergo change through development, Hobe Sound National Wildlife Refuge will serve as a sanctuary for threatened and endangered species, as well as an oasis for people who wish to experience what the early days of Florida were like. The refuge will hopefully inspire others to protect other wild places for future generations.

Refuge Goals

The following four goals were developed in keeping with the refuge's vision and purposes:

Wildlife Habitat and Population Management

Restore and conserve diverse habitats, species populations, and biological integrity.

Resource Protection

Conserve natural and cultural resources through partnerships, protection, and land acquisition.

Wildlife-Dependent Recreation and Environmental Education

Develop appropriate and compatible wildlife-dependent recreation, environmental education, and interpretation programs that lead to enjoyable experiences and a greater understanding of fish, wildlife, and habitat conservation.

Administration

Implement an appropriate management regime for the refuge and improve infrastructure; add support staff to meet the needs of an expanding visitor public and to facilitate responsible biological, maintenance, and law enforcement programs.

Comprehensive Conservation Plan Summary

The proposed management plan outlines the enhancement of wildlife populations and associated habitats over the next 15 years, while improving the student and visitor experience. The goals, objectives, and strategies of this plan reflect that the refuge is a portion of the much larger south Florida Atlantic coastal system. The actions considered and taken to implement this plan will affect the Atlantic Coastal Ridge; barrier island; Indian River Lagoon; state, county, and local municipalities; and adjacent landowners. A majority of the comments made during the public scoping meeting and subsequent written comments conveyed a desire to protect the natural resources of the refuge and to educate the public about these resources. The priority of the refuge will remain to conserve and restore native populations of threatened and endangered species. However, the National Wildlife Refuge System Improvement Act

requires that the Service facilitate high-quality and safe opportunities for wildlife-dependent recreation in a way that is compatible with refuge purposes and the refuge system mission. The decisions to allow or prohibit certain public uses, as determined by the professional judgement of the refuge manager, are based upon the refuge's purpose and potential adverse effects of these proposed uses on the natural resources of the refuge (Appendix VI). A wide range of partnering opportunities will be actively pursued and fostered to protect natural and cultural resources.

The refuge will be managed using an ecosystem approach to maintain natural processes or to mimic those processes of a natural fire regime and natural vegetative succession. Maintaining a healthy sand pine scrub community with successful populations of endemic species is a priority for the refuge. The refuge will work with state and private organizations to implement a sand pine scrub habitat restoration plan for areas along the length of the Atlantic Coastal Ridge.

The refuge will play a greater role in determining compatible uses and management activities on the Indian River Lagoon. It will provide input to agencies involved with managing the seagrass beds, manatee populations, and maintaining the Intracoastal Waterway and its inlets.

The refuge will collaborate with the Florida Inland Navigation District and the Florida Department of Environmental Protection to remove exotic species and manage spoil islands and mounds on the mainland and barrier island along the Indian River Lagoon for wildlife. Mangrove wetlands will be restored along the length of the refuge.

Successful dune restoration on the barrier island will require an intensive investigation of dune dynamics and the effects of inlet creation and maintenance. Beach renourishment projects on Jupiter Island will be closely monitored to ensure an appropriate substrate is available for populations of shorebirds and benthic invertebrates, as well as a compatible beach for nesting sea turtles.

Invasive exotic plants and animals will remain the focus of intensive management on the refuge. Contracts will continue to be established with the private sector to remove exotic plants and non-native sea turtle predators; refuge staff will monitor the effects of removal efforts. The refuge will support efforts to reduce and halt the spread of feral cat populations (estimated at 25,000 to 50,000) in Martin County.

Providing quality environmental education and interpretation will also remain a primary focus of the refuge. The partnership with Hobe Sound Nature Center, Inc., will be enhanced to explore new roles in the community and region.

Goals, Objectives, And Strategies

The goals, objectives, and strategies presented below are the Service's responses to the issues and concerns expressed by the planning team, by the public at the open meeting, and comments submitted by the public. The goals, objectives, and strategies are

**Section A.
Draft Comprehensive
Conservation Plan**

**CHAPTER IV -
Management Direction**



*Scrub trail
USFWS Photo*

presented in hierarchical format. Following each goal is a list of objectives, and under each objective, is a list of strategies. The Plan Implementation section identifies the projects associated with various strategies.

These objectives and strategies reflect the Service's commitment to achieve the mandates of the National Wildlife Refuge System Improvement Act of 1997, the mission of the National Wildlife Refuge System, and the Endangered Species Act of 1973. The refuge's purposes guided the development of the vision and goals for the refuge. With adequate staffing and funding, as outlined in the Plan Implementation section, the Service intends to accomplish these goals, objectives, and strategies during the next 15 years.

Goal 1. Wildlife Habitat and Population Management

Restore and conserve diverse habitats, species populations, and biological integrity.

Discussion: Management will seek to protect and enhance state and federally listed species and trust species as a priority. In all management actions, the possible impacts to trust species will be examined before an action is taken.

In place of single species management, ecosystem and landscape habitat management will be emphasized. With this emphasis, the removal of exotic plants and the restoration of native plants will support genetically diverse populations of native wildlife. All native populations of non-invasive plants and wildlife will be fostered to enhance the future health of these species.

Native habitats of the barrier island and Atlantic Coastal Ridge will be managed in accordance with historical patterns of succession. The sand pine scrub will be treated with a mechanical process and prescribed fire to emulate the effects of natural wildfire, without the associated risks to property and life. This technique will hopefully generate optimum conditions for endemic species and the overall health of the community. The effectiveness of the technique will be evaluated as part of an active biological monitoring program. Because this management method is relatively new and somewhat controversial, adaptive management will be responsive to evaluation results.

The Atlantic coastal dune will be managed to protect its shoreline from erosion and to provide optimal beach conditions for nesting sea turtles and shorebirds. The vegetative community will be managed for a diversity of native plants and wildlife. Monotypic stands of exotic plants as well as invasive natives will be treated, burned, and monitored according to an approved dune management plan. Isolated hammocks contribute 20 percent of the vegetative species found on the refuge and are critical for migrating birds. Hammocks are imperilled due to invasive species encroachment. These special areas will be reclaimed and allowed to grow pest free.

The mangrove swamps lining the banks of the Indian River Lagoon will be protected from erosion and exotic infestation. Historical mangrove wetlands will be restored using current and improved planting techniques. Partnerships and volunteer assistance will be pursued.

Objective 1: Manage 125 acres of sand pine scrub within the Atlantic Coastal Ridge by mimicking the natural fire regime (Figure 24).

Strategies:

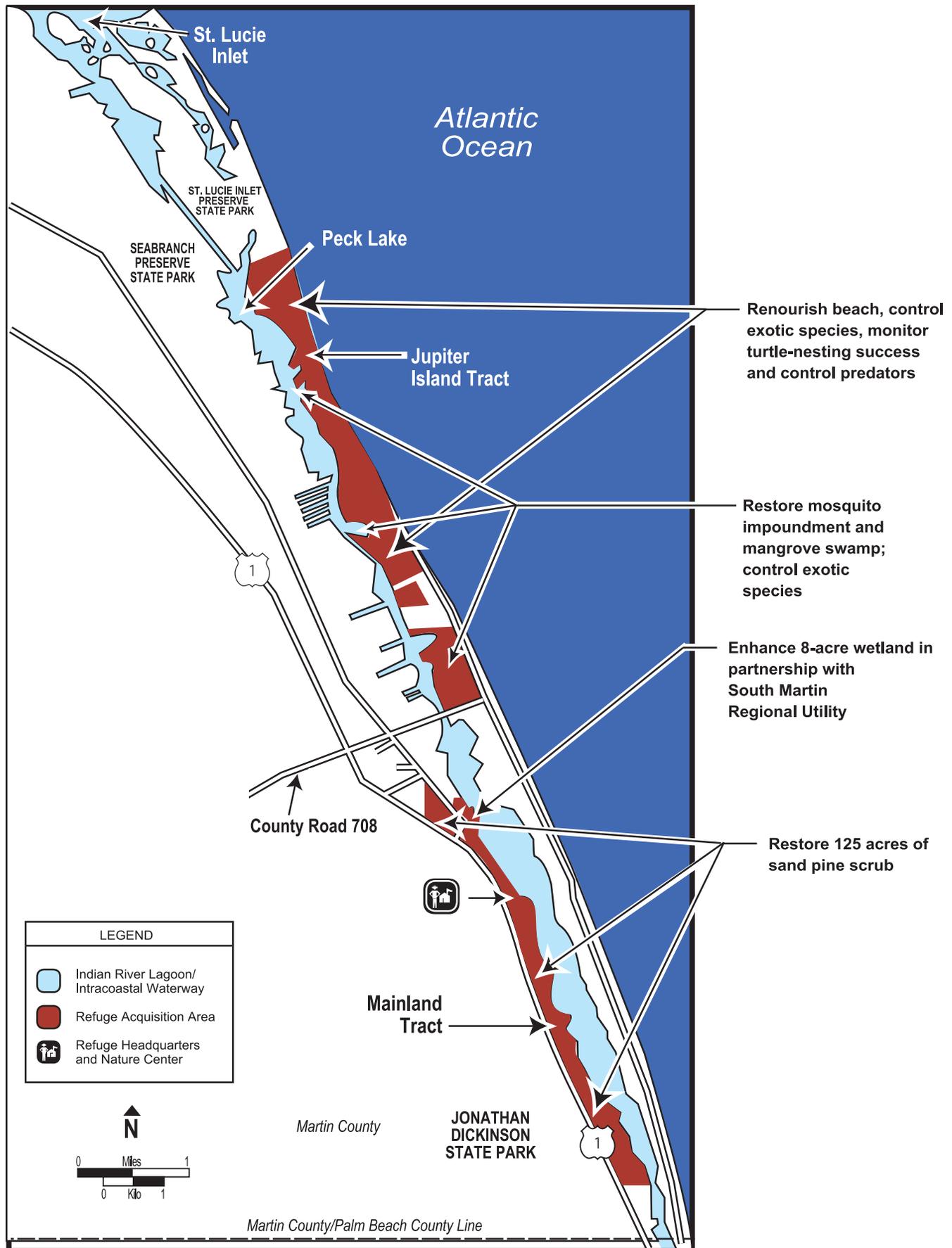
- Update the Sand Pine Scrub Habitat Restoration Plan by 2004, and in the same year, begin implementing the revisions. This plan will explore new options of disturbance to mimic the natural fire regime. It will enhance feeding, nesting, and roosting components for scrub community species.
- Monitor the effects of the refuge's sand pine scrub management plan on wildlife and the vegetative community.
- Foster partnerships with the Florida Park Service, The Nature Conservancy, the U.S. Forest Service, the Bureau of Land Management, Martin County, and others to assist with the inventory of scattered sand pine scrub sites; develop plans for fire and mechanical disturbance; and monitor the recruitment of native species and overall habitat response.
- Encourage other state, county, local, and private property owners to use the developed management techniques to treat aging sand pine scrub tracts along the Atlantic Coastal Ridge.
- Actively control invasive exotic species invading from ruderal or disturbed areas.
- Support and implement listed species recovery plans.
- Attempt to maintain a visual screen of U.S. Highway 1 from Jupiter Island using native plants.
- Prevent habitat destruction from all-terrain vehicles through enhanced law enforcement.

Objective 2: Restore 100 acres of the native Atlantic coastal dune system on the Jupiter Island Tract by 2009.

Strategies:

- Draft a coastal dune habitat management plan by 2007, to include appropriate restoration techniques, exotic species control, renourishment, and revegetation.
- Remove and control invasive exotic plant species on the Atlantic coastal dune system, including Australian pine, beach naupaka, Brazilian pepper, Old World climbing fern, and other Category I and II species (Figure 24).
- Install sand fencing compatible with sea turtle nesting, in appropriate areas, for dune restoration.
- Continue supporting beach renourishment efforts until a more effective alternative is developed.
- Monitor the effects of beach renourishment on sea turtle nesting, shorebird usage, native vegetation, benthic invertebrates, erosion,

Figure 24. Proposed wildlife habitat and population management activities, Hobe Sound National Wildlife Refuge



near-shore habitat, and public use. (Future management decisions about renourishment will be based on this information.)

- Use partnerships and volunteers to implement an aggressive management plan that will encourage historical native species diversity.
- Develop and support volunteers in restoration efforts.
- Maintain and foster partnerships with St. Lucie Inlet Preserve State Park and adjacent private landowners to prevent reinfestation of all exotic plants on the foredune.
- Support and implement listed species recovery plans.

Objective 3: Restore and conserve 300 acres of mangrove and hammock systems by 2016.

Strategies:

- Develop a mangrove swamp restoration plan by 2004. This plan will restore the three mosquito control impoundments through partnerships with Jupiter Island, Martin County, and private landowners (Figure 24). Water levels should be managed for native fish and bird species, invasive exotic species control, and biting insect control.
- Foster partnerships and volunteers to promote healthy mangrove, wetland, and hammock communities on the barrier island.
- Draft and implement an exotic pest plant removal plan by 2008. The plan will identify sensitive habitats such as hammocks and trust species to prioritize exotic plant removal efforts. The plan will emphasize the aggressive treatment and removal of all of the exotic vegetation within 15 years, with the ultimate goal of maintenance level control that encourages native species recruitment.
- Convert dredge spoil sites to natural communities by 2016 with partnerships from Jupiter Island, the Florida Inland Navigation District, Army Corps of Engineers, Martin County Mosquito Control, and others.
- Restore 50 percent of the degraded mangrove habitat along the Indian River Lagoon.
- Explore methods to mitigate impacts of the boat wakes on the mangrove shoreline.
- Support and implement listed species recovery plans.
- Explore avenues to reduce boat speeds near the refuge.

Objective 4: Monitor, map, and inventory all federal trust and state listed species, populations, and habitats by 2008, to provide a basis for refuge management actions, to measure accomplishments, and to implement adaptive management.

Strategies:

- Create a comprehensive biological community inventory and monitoring plan by 2008. Follow standardized inventorying and monitoring protocols for all trust species, when available. Implement regionally used inventory and monitoring protocols in case standardized methods are not established.
- Compile historic data and establish a continuous data collection and analysis program.
- Develop a geographic information system capability at the refuge.

This capability will enable the refuge to map biotic and abiotic attributes and monitor changes in these attributes in response to management scenarios.

- Assess the demographic characteristics of scrub community flora and fauna, as well as trust species.
- Monitor changes in wildlife, fish, and habitat, and implement adaptive management techniques as appropriate.
- Support the Partners-in-Flight initiative by implementing appropriate migratory bird surveys.
- Collaborate with area universities and other research facilities to enhance the recovery of trust species, natural communities, and native species, as well as to control exotics.

Objective 5: Provide conditions for sea turtle nesting to achieve a 75 percent hatchling survival rate from nests to ocean waters. (Strategies to achieve this objective will contribute to sea turtle recovery plans.)

Strategies:

- Implement and monitor the effects of an active predator control plan, which seeks to reduce nest predation levels at or below 10 percent (Figure 24).
- Reduce beach erosion to provide a sufficient amount of habitat for nesting sea turtles.
- Increase partnerships with other law enforcement agencies to prevent human nest predation.
- Control exotic plants, especially Australian pines on the foredune.
- Continue participation in the Statewide Index Nesting Beach Survey monitoring program, which results in data essential to enhancing sea turtle nesting success.
- Monitor turtle hatchling success by evaluating: (1) a minimum of 20 percent of the loggerhead nests or 100 nests, whichever is greater; and (2) all endangered sea turtle nests (e.g., green and leatherback sea turtles).
- Continue participation in the sea turtle stranding and salvage network, which provides information on turtle survival.
- Advance knowledge about and contribute to sea turtle biology by reporting results of refuge efforts in peer-reviewed journals.

Objective 6: Provide favorable feeding, nesting, and roosting habitat for trust species on 75 percent of the refuge.

Strategies:

- Enhance habitats of trust species through habitat management techniques such as prescribed fire, exotic plant control, and restoration.
- Ensure that wildlife requirements are met in the context of multi-species management.
- Provide data and perform analysis to update the Multi-Species Recovery Plan for South Florida.
- Enhance nesting success for migratory songbirds and shorebirds by reducing human disturbance and providing quality nesting, roosting, and foraging habitat.

- Implement appropriate management actions, including temporary beach closures to reduce the impacts of visitor use to shorebirds.
- Participate in, contribute to, and attend meetings of Partners-In-Flight, Shorebird Network, Manatee Working Groups, Exotic Pest Plant Council, Scrub Jay Recovery Team, Native Plant Society, and other professional organizations.

Goal 2. Resource Protection

Conserve natural and cultural resources through partnerships, protection, and land acquisition.

Discussion: Many of the resource management problems with which a refuge manager is concerned (e.g., air pollution, water quality, and exotic plants) originate outside the refuge boundary. To address these often significant problems affecting the wildlife and plant communities of the refuge, management seeks to develop partnerships with state and county natural resource agencies; conservation organizations; and perhaps most importantly, neighboring landowners. It is through a common mission, which emanates from a partnership, that a healthy ecosystem—and refuge—can be achieved.

Hobe Sound National Wildlife Refuge will not only enhance existing partnerships, but also seek new ones to advance the protection of the natural and cultural resources of the South Florida Ecosystem. Among the critical issues to be addressed by these partnerships are invasive exotic plants, water quality, beach erosion, commercial development, coastal lighting, and cultural and natural resource poaching. Public awareness and education are keys to resolving many of these resource issues. As a partner, the Service would monitor progress in addressing existing threats to the refuge; identify future threats; offer technical advice; evaluate potential land acquisition opportunities from willing sellers; and promote and execute public awareness and education programs. It is through these roles that the refuge seeks to become a community leader in natural and cultural resource protection.

Objective 1: Establish cooperative agreements and memorandums of understanding, and pursue joint funding opportunities with government agencies and non-government organizations to protect the ecosystem and promote public awareness and use.

Strategies:

- Develop a memorandum of understanding with the town of Jupiter Island's Public Safety Department, Martin County Sheriff's Office, the Florida Fish and Wildlife Conservation Commission, and the Florida Park Patrol to enhance the protection of natural and cultural resources, the visiting public, and the facilities of the Jupiter Island and Mainland tracts.
- Develop new and continue existing partnerships for research and monitoring of exotic and invasive species with the Florida Exotic Pest Plant Council, the Treasure Coast Upland Invasive Plant Working Group, and the Florida Department of Environmental

Protection's Bureau of Invasive Plant Management.

- Promote the development of a non-profit facility to propagate native plants to be used for restoration efforts on the refuge and in the surrounding communities.
- Actively pursue grants and funding opportunities with regard to environmental and cultural education, exotic plant control, spoil site restoration, mangrove wetland restoration, and sand pine scrub management.
- Partner with the Service's Office of Ecological Services and the Florida Fish and Wildlife Conservation Commission to identify areas within the Indian River Lagoon that have high manatee mortality, as well as to establish and enforce appropriate protection zones, educate the public, and host public meetings.
- Explore the development of a partnership with organizations such as the Marine Life Center, Juno Beach, Florida, to aid in the rehabilitation of selected species of marine life.
- Collaborate with the Hobe Sound Nature Center, Inc., to enhance both on- and off-refuge curriculum and an in-service training for teachers.
- Enhance cooperation and communication with the Florida Department of Environmental Protection; Martin County; and the Hobe Sound Nature Center, Inc., to improve sea turtle interpretive programs and to develop marine mammal and other natural resource related programs.
- Coordinate with the Florida Department of Transportation and the Florida Turnpike Commission to erect directional signs for the refuge along Interstate 95, the Florida Turnpike, and U.S. Highway 1.

Objective 2: Work with partners to improve aquatic habitats bordering the refuge that are essential to manatees, fish, and other species.

Strategies:

- Partner with state and county agencies to enhance and restore seagrass and hard bottom habitats, and to conduct research projects to assess and monitor impacts from boating, dredging, and freshwater releases.
- Coordinate with agencies such as Florida Department of Environmental Protection; National Estuary Program; Florida Inland Navigation District; Martin County; Army Corps of Engineers; South Atlantic Fishery Management Council; Atlantic States Marine Fisheries Commission; National Marine Fisheries Service; South Martin Regional Utility; and South Florida Water Management District for the restoration and enhancement of the Indian River Lagoon and nearshore Atlantic habitats.

Objective 3: Work with adjacent communities to protect and enhance neighboring lands for native wildlife and plants.

Strategies:

- Promote greenway development, exotic free buffer zones, and wildlife corridors to connect natural land tracts, where appropriate.
- Encourage neighboring residents to maintain a healthy buffer along the refuge's boundary.

**Section A.
Draft Comprehensive
Conservation Plan**

**CHAPTER IV -
Management Direction**

- Promote communication with adjacent landowners to restore and maintain native habitats on their properties.
- Recruit volunteers with botanical skills to assist with preparing landscape plans for refuge neighbors. These plans would focus on elimination of exotics and encourage the use of native plants.
- Encourage the town of Jupiter Island and Martin County to adopt and enforce an ordinance that requires homeowners to remove all Category I invasive exotic plants from their yards within 5 years.
- Develop a partnership with the Jupiter Island Garden Club and the town of Jupiter Island to promote, through an educational program to residents, the use of native plants in the landscaping of new homes, as well as in subdivisions and other large scale developments nearby.
- Partner with current adjacent landowners to manage inholdings for optimal plant and wildlife habitat.

Objective 4: Enhance and develop partnerships with other agencies to protect natural resources, both on and adjacent to the refuge.

Strategies:

- Establish and/or update memorandums of understanding with neighboring law enforcement agencies.
- Pursue the possibility of joint training programs with law enforcement agencies.
- Cooperate with other agencies in support of their efforts to control and regulate vessel traffic and speed in the Intracoastal Waterway.
- Cooperate with other agencies to identify and report contaminants on roadways and near-shore waters to assure cultural and natural resource protection.
- Partner with other agencies to minimize sea turtle poaching.
- Increase law enforcement patrols to prevent unpermitted removal of resources such as saw palmetto berries and Cladonia lichens.
- Pursue mitigation from those parties responsible for causing beach erosion, mangrove destruction, and other damage.
- Minimize species exposure to contaminants on the refuge by implementing current spill plans.

Objective 5: Enhance mechanisms for cultural resource protection by 2006.

Strategies:

- Write and implement a Cultural Resources Protection Plan by 2006.
- Comply with federal and state historic preservation mandates.
- Continue to partner with the National Park Service and the South East Florida Archaeological Society to inventory and assess the refuge's cultural resources.
- Work with local law enforcement agencies to eliminate looting and vandalism of cultural resource sites.
- Determine the significance of known cultural resources (i.e., site limits, activity areas, chronology, and integrity of archaeological deposits).

- Develop and implement procedures for obtaining input from Native American tribes regarding management, public use, and interpretive activities.
- Stabilize appropriate sites as needed to avoid further damage.
- Develop partnerships, including local universities and archaeological groups, to provide tours to the public, while protecting cultural resources.

Goal 3. Wildlife-Dependent Recreation and Environmental Education

Develop appropriate and compatible wildlife-dependent recreation, environmental education, and interpretive programs that lead to enjoyable experiences and a greater understanding of fish, wildlife, and habitat conservation by the public.

Discussion: The refuge will provide opportunities for compatible wildlife-dependent recreation. These opportunities will create a greater awareness of the biological environment and instill a conservation ethic in refuge visitors. Recreational fishing, wildlife observation, wildlife photography, and environmental education and interpretation will be allowed as primary public uses of the refuge (Appendix VI). Recreational hunting will not be allowed for a variety of reasons, including the limited size of the refuge and its proximity to developed communities/highways. Compatible wildlife-dependent uses will receive priority in the implementation of this plan.

The refuge has enjoyed a long and successful relationship with the Hobe Sound Nature Center, Inc. Established by Jackson Burke and Elizabeth Kirby for the Jupiter Island Garden Club, this Nature Center opened its doors to the public in 1973. Since then, it has hosted nearly 500,000 visitors. Through a cooperative agreement, the Nature Center provides environmental education for all ages and interpretation to refuge visitors, area school groups, and community centers. To support these efforts, the refuge provides administrative services such as office space, utilities, maintenance of grounds and buildings, and equipment.

As we move into the 21st Century, this unique symbiosis is expected to bring notoriety to the Nature Center and the refuge as a regional leader in environmental education and wildlife conservation. With the proposed expansion of the refuge headquarters and Nature Center into a new facility, the partnership would be able to advance its common mission to instill a greater awareness in the public's eye of the delicate balance between man's enjoyment of, and protection for, the Atlantic Coastal Ridge and barrier island environments.

Objective 1: Increase public accessibility to new areas of the refuge by 20 percent and enhance other opportunities by 50 percent for fishing, wildlife observation, and wildlife photography, as long as these opportunities do not conflict with wildlife needs.

*Hobe Sound
National Wildlife Refuge*

**Section A.
Draft Comprehensive
Conservation Plan**

**CHAPTER IV -
Management Direction**



*Chickee
USFWS Photo*

Strategies:

- Enhance interpretive kiosks at Peck Lake. Construct an elevated bird observation tower with a fixed mounted telescope on the beach trail (Figure 25).
- Explore the feasibility of extending a water line to the refuge's beach parking lot to enable the development of a rinsing shower and a drinking fountain.
- On the Jupiter Island Tract, improve restroom facilities, construct outdoor shower, and create interpretive trail behind the sand dune to Indian River Lagoon.
- Create a new trail (up to 3 miles) on the Jupiter Island Tract. The trail will begin at the beach parking lot; wind through the coastal strand, mangroves, and mosquito impoundments; and end at the Indian River Lagoon.
- Construct an interpretive trail to the mosquito impoundment through the mangroves at Lake Francis.
- In partnership with the town of Jupiter Island, explore the feasi-

bility of creating a parking area at the old Coast Guard Station or near Lake Francis to provide access for fishermen and others to a trail system for wildlife viewing and photography.

- Construct an interpretive boardwalk to view an enhanced wetland area in partnership with South Martin Regional Utility.

- Construct new Service offices, Nature Center, exhibit area, gift shop, and restrooms at the headquarters area.

- Extend and enhance the scrub trail from the headquarters area to the Indian River Lagoon.

- Create two additional access points for fishermen from U.S.

Highway 1 to the Indian River Lagoon by converting firebreaks to trails.

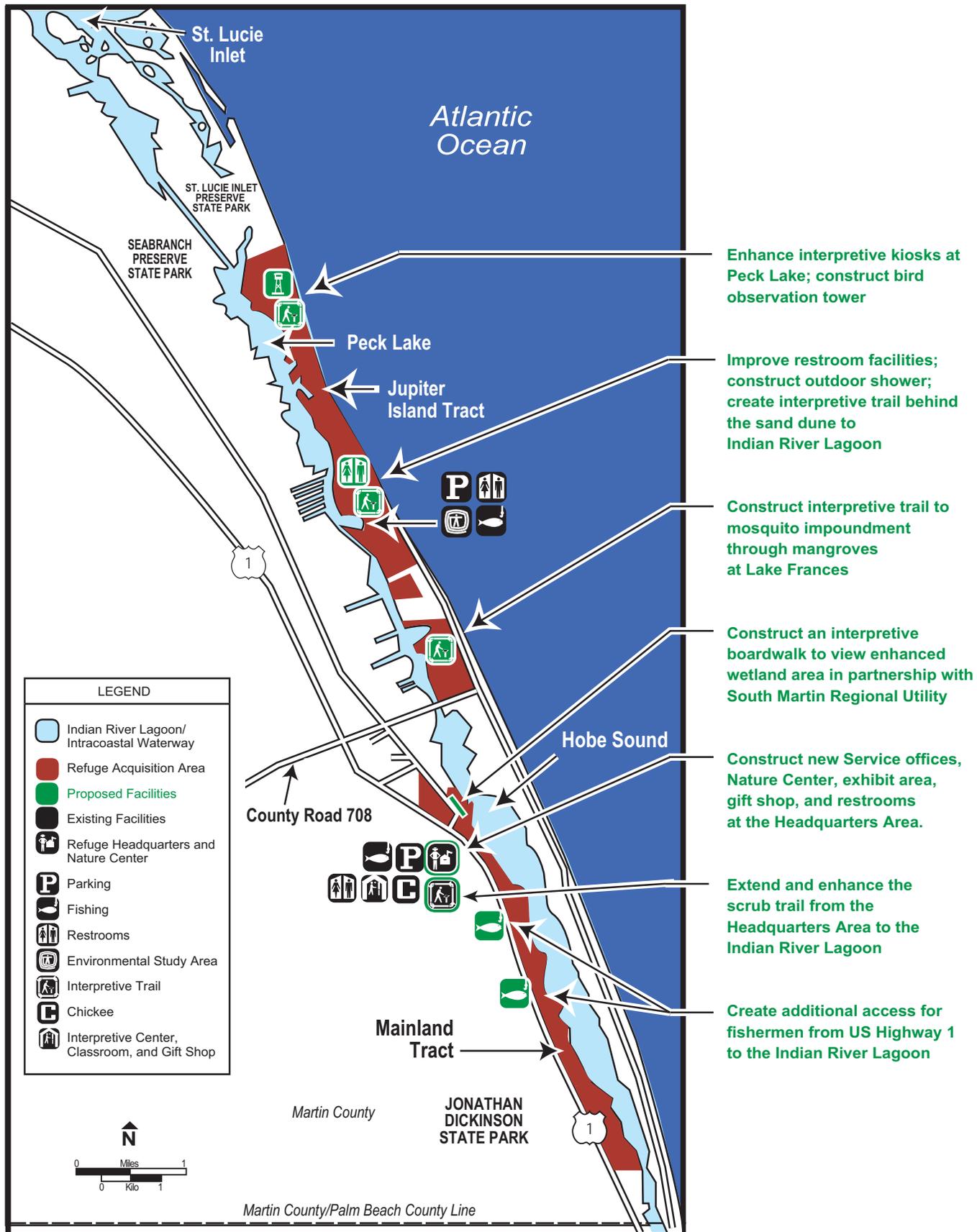
- Install monofilament recycling box at each new access area.
- Increase interpretive signs on all trails throughout the refuge.

Objective 2: Expand our partnership with the Hobe Sound Nature Center, Inc., and explore the development of new environmental education opportunities, both on and off the refuge, targeted toward students beyond the elementary school level and toward adults.

Strategies:

- Develop an environmental education curriculum which is focused on biotic communities (e.g., sand pine scrub, barrier island, and Indian River Lagoon) common to the refuge, St. Lucie Inlet

Figure 25. Location of existing and proposed recreational and administrative facilities, Hobe Sound National Wildlife Refuge.



Preserve State Park, Jonathan Dickinson State Park, and the Blowing Rocks Preserve.

- Develop an environmental education program which uses volunteers as roving guides.
- Coordinate satellite downlinks with the Service and area schools and create a downlink site when the new learning center comes on-line.
- Develop an interactive web site to provide current information about ongoing and new refuge projects and Nature Center activities and program schedule with links to supporting sites.
- Create a video that showcases refuge biological systems, visitor facilities, and Nature Center environmental education and interpretation programs.
- Address, in the lecture series, key issues of concern to the refuge and the Service.
- Promote a "leave no trace" ethic through education and appropriate signage.
- Use environmental education, targeted toward homeowners and builders, to promote the use of native plants in landscaping.

Objective 3: By 2005, assist the Nature Center to expand experiences to 100,000 visitors per year and guarantee a healthy work environment for staff and volunteers. To accommodate the planned annual visitation and to also attract a greater spectrum of the community, the center will set lengthier and more convenient hours of operation, provide staff on the weekends, and accommodate multiple school and meeting groups.

Strategies:

- Work with the Hobe Sound Nature Center's Board of Directors to showcase the center's vision, generate community interest, and raise funds.
- Develop new partnerships to promote development of the center.
- Design the learning center to be aesthetically pleasing to the community and to fit into the sand pine scrub landscape.
- Provide a classroom/meeting area for presentations and to show videos.
- Provide adequate work space for a growing volunteer force and staff.
- Develop a library containing current and historic documents pertaining to refuge management, research, inventory, and monitoring projects.
- Provide space for wildlife art exhibits and contests.
- Develop exhibits to display the ecology and management of natural communities (e.g., dune dynamics, biodiversity of tropical hardwood hammocks, and healthy sand pine scrub management).

Objective 4: Expand opportunities for environmental interpretation.

Strategies:

- Create, replace, and maintain interpretive/educational signs.
- Initiate ranger-guided and self-guided tours to explain the ecology of the South Florida Ecosystem.

- Initiate annual photo and art contests.
- Collaborate with the Southeast Florida Archaeological Society and the Hobe Sound Nature Center to develop and implement a cultural resource interpretive program.

Objective 5: By 2005, add 50 volunteers to assist with resource protection, environmental education, and interpretive programs.

Strategies:

- Explore opportunities for greater public investment in the refuge.
- Expand the volunteer force to increase the number and frequency of beach clean-ups, exotic vegetation removal, and native plantings.
- Explore the feasibility of creating an "adopt-a-beach" program within the community.
- Train roving volunteer interpreters.

Goal 4. Administration

Implement appropriate management regime for the refuge and improve infrastructure; add support staff to meet the needs of an expanding visitor public and to facilitate responsible biological, maintenance, and law enforcement programs.

Discussion: When Hobe Sound National Wildlife Refuge was established 33 years ago, few people could have envisioned the vital role that this refuge would play in protecting globally imperilled wildlife and habitat. Nevertheless, over the years, this "sleepy little refuge" found itself engaged in major controversies, endangered species issues, large partnerships, maintenance backlogs, exotic species invasions, law enforcement issues, and visitation in the hundred thousand plus category. However, the three permanent staff and small budget provided through its satellite relationship with A.R.M. Loxahatchee National Wildlife Refuge are inadequate to address pressing management issues.

Given the tremendous promise for Hobe Sound Refuge, encapsulated in its vision statement, it is essential that this refuge receive the resources needed to achieve this vision. Adequate equipment, staff, and facilities will better enable the refuge to assume its appropriate role in the south Florida community and to better protect the resources for which it was established.

Objective 1: The refuge will add 6 key positions to its staff to achieve the goals, objectives, and strategies of this plan.

Strategies:

- Create a management structure that offers greater flexibility in meeting funding and staffing needs.
- Develop a permanent staff to achieve the vision, goals, and objectives of this plan.

Objective 2: Replace the existing administrative headquarters building, Nature Center, and maintenance shop with a facility that is safe, efficient, and worthy of a national wildlife refuge.

**Section A.
Draft Comprehensive
Conservation Plan**

**CHAPTER IV -
Management Direction**

Strategies:

- Work with the Nature Center to raise funds for a replacement facility.
- Ensure that Refuge Operating Needs System (RONS) and Maintenance Management System (MMS) projects submitted to the Service's Regional Office are well designed and appropriately prioritized.

Objective 3: Procure and maintain safe equipment to facilitate maintenance of grounds, buildings, and facilities, and provide appropriate equipment to conduct proposed biological inventories and monitoring.

Strategies:

- Replace faulty and old equipment.
- Bring all quarters and building structures up-to-code.

*Hobe Sound
National Wildlife Refuge*

**Section A.
Draft Comprehensive
Conservation Plan**

**CHAPTER IV -
Management Direction**