

Florida Keys National Marine Sanctuary Revised Management Plan



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National Ocean Service

National Marine Sanctuary Program

This document is the revised management plan for the Florida Keys National Marine Sanctuary. It replaces the management plan that was implemented in 1996 and will serve as the primary management document for the Sanctuary during the next five years.

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Note to Reader

In an effort to make this document more user-friendly, we have included references to the Florida Keys National Marine Sanctuary Web site rather than including the entire text of many bulky attachments or appendices that are traditionally included in management plans. Readers who do not have access to the Internet may call the Sanctuary office at (305) 809-4700 to request copies of any documents that are on the Sanctuary's Web site. For readers with Internet access, the Sanctuary's Web site can be found at floridakeys.noaa.gov.

ABOUT THIS DOCUMENT

This document is a report on the results of NOAA's five-year review of the strategies and activities detailed in the 1996 *Final Management Plan and Environmental Impact Statement* for the Florida Keys National Marine Sanctuary. It serves two primary purposes: 1) to update readers on the outcomes of successfully implemented strategies - in short, accomplishments that were merely plans on paper in 1996; and, 2) to disseminate useful information about the Sanctuary and its management strategies, activities and products. The hope is that this information, which charts the next 5 years of Sanctuary management, will enhance the communication and cooperation so vital to protecting important national resources.

Sanctuary Characteristics

The Florida Keys National Marine Sanctuary extends approximately 220 nautical miles southwest from the southern tip of the Florida peninsula. The Sanctuary's marine ecosystem supports over 6,000 species of plants, fishes, and invertebrates, including the nation's only living coral reef that lies adjacent to the continent. The area includes one of the largest seagrass communities in this hemisphere. Attracted by this tropical diversity, tourists spend more than thirteen million visitor days in the Florida Keys each year. In addition, the region's natural and man-made resources provide recreation and livelihoods for approximately 80,000 residents.

The Sanctuary is 2,900 square nautical miles of coastal waters, including the 2001 addition of the Tortugas Ecological Reserve. The Sanctuary overlaps four national wildlife refuges, six state parks, three state aquatic preserves and has incorporated two of the earliest national marine sanctuaries to be designated, Key Largo and Looe Key National Marine Sanctuaries. Three national parks have separate jurisdictions, and share a boundary with the Sanctuary. The region also has some of the most significant maritime heritage and historical resources of any coastal community in the nation.

The Sanctuary faces specific threats, including direct human impacts such as vessel groundings, pollution, and overfishing. Threats to the Sanctuary also include indirect human impacts, which are harder to identify but are reflected in coral declines and increases in macroalgae and turbidity. More information about the Sanctuary can be found in this document and at the Sanctuary's Web site.

Management Plan Organization

Within this document, the tools that the Sanctuary uses to achieve its goals are presented in five management divisions: 1) Science; 2) Education, Outreach & Stewardship; 3) Enforcement & Resource Protection; 4) Resource Threat Reduction; and 5) Administration, Community Relations, & Policy Coordination. Each management division contains two or more *action plans*, which are implemented through supporting *strategies* and *activities*. The strategies described in the 1996 *Management Plan* generally retain their designations in this document. As in the 1996 plan, two or more action plans may share a strategy where their goals and aims converge. The 1996 plan can be accessed on the Sanctuary's Web site floridakeys.noaa.gov

Accomplishments and Highlights

The Sanctuary's programs and projects have made significant progress since the original management plan was implemented 1996. An overview of these accomplishments is provided in the Introduction. In addition, each action plan contains bulleted lists of accomplishments since the 1996 management plan was adopted.

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Acronyms

ACHP	Advisory Council on Historic Preservation
AGRRA	Atlantic and Gulf Rapid Reef Assessment Program
ASA	Abandoned Shipwreck Act
ATBA	Areas to Be Avoided
AWT	Advanced Wastewater Treatment
CAD	Computer Automated Dispatch
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERP	Comprehensive Everglades Restoration Plan
CFR	Code of Federal Regulations
CRCP	Coral Reef Conservation Program
DARP	Damage Assessment and Restoration Program
DEP	Florida Department of Environmental Protection
DTNP	Dry Tortugas National Park
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
F.S.	Florida Statutes
FAC	Florida Administrative Code
FDACS	Florida Department of Agriculture and Consumer Services
FDCA	Florida Department of Community Affairs
FDHR	Florida Division of Historical Resources
FDOT	Florida Department of Transportation
FKNMS	Florida Keys National Marine Sanctuary
FKNMSPA	Florida Keys National Marine Sanctuary Protection Act
FPS	Florida Park Service
FR	Federal Register
FWC	Florida Fish and Wildlife Conservation Commission
FWRI	Fish and Wildlife Research Institute
FY	Federal Fiscal Year
GIS	Geographic Information System
GMD	Growth Management Division (Monroe County)
GMFMC	Gulf of Mexico Fishery Management Council
GPS	Global Positioning System
HAZMAT	Hazardous Materials
ICS	Incident Command Structure
ICW	Intra-coastal Waterway
IMO	International Maritime Organization
MBTA	Migratory Bird Treaty Act
MEERA	Marine Ecosystem Event Response and Assessment
MHR	Maritime Heritage Resources
MMPA	Marine Mammal Protection Act
MMS	Minerals Management Service
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding

MRD	Marine Resources Division (Monroe County)
NCCOS	National Centers for Coastal Ocean Science
NEPA	National Environmental Policy Act
NGO	Non-governmental Organization
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NMS	National Marine Sanctuary
NMSA	National Marine Sanctuary Act
NMSF	National Marine Sanctuary Foundation
NMSP	National Marine Sanctuary Program
NOAA	National Oceanic and Atmospheric Administration
NOAA/OLE	NOAA Office of Law Enforcement
NOS	National Ocean Service
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRDA	Natural Resource Damage Assessment Claims
NURC	National Undersea Research Center
OFW	Outstanding Florida Waters
OSDS	On-Site Disposal System
OSTDS	On-Site Sewage Treatment and Disposal System
PREP	National Prepared for Response Exercise Program
PSSA	Particularly Sensitive Sea Area
RECON	Reef Ecosystem Condition Program
REEF	Reef Environmental Education Foundation
RNA	Research Natural Area
RSMAS	University of Miami/Rosenstiel School of Marine and Atmospheric Science
SAFMC	South Atlantic Fishery Management Council
SAP	Science Advisory Panel
SAV	Submerged Aquatic Vegetation
SCR	Submerged Cultural Resources
SEFSC	Southeast Fisheries Science Center
SFWMD	South Florida Water Management District
SHIELDS	Sanctuary Hazardous Incident Emergency Logistics Database System
SPA	Sanctuary Preservation Area
SWIM	Surface Water Improvement and Management Act
SWM	Stormwater Management
TAC	Technical Advisory Committee
TNC	The Nature Conservancy
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDOC	U.S. Department of Commerce
USDOI	U.S. Department of Interior
USDOS	U.S. Department of State
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WAMS	Waterway Assessment and Marking System

WMA Wildlife Management Area
WQPP Water Quality Protection Program
WQSC Water Quality Steering Committee



1.0 INTRODUCTION

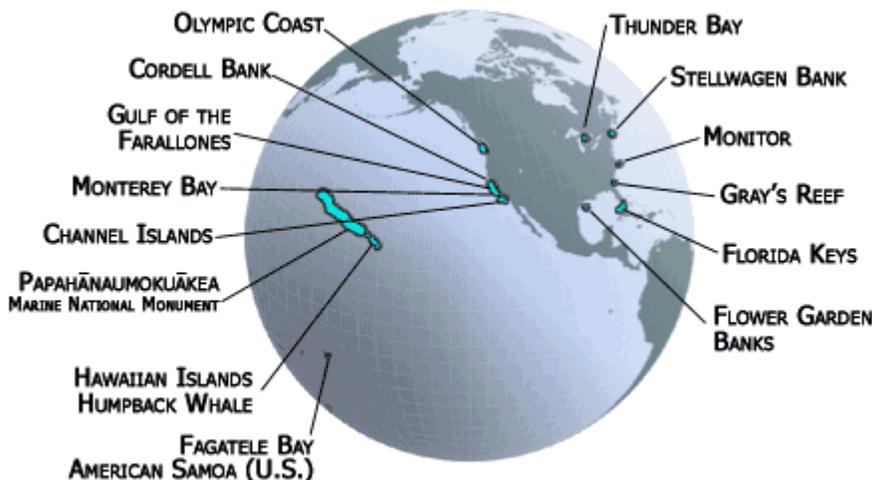
1.1 The National Marine Sanctuary Program (NMSP)

The National Marine Sanctuary Program (NMSP) is a network of 14 marine protected areas (Figure 1.1), encompassing marine resources from Washington State to the Florida Keys, and Lake Huron to American Samoa. The National Oceanic and Atmospheric Administration's (NOAA) National Ocean Service (NOS) has managed the nation's marine sanctuary system since passage of the Marine Protection, Research and Sanctuaries Act of 1972. Title III of that Act is now called the National Marine Sanctuaries Act (NMSA), which is found in Appendix A.

Today, the national marine sanctuary system contains deep-ocean gardens, near-shore coral reefs, whale migration corridors, deep-sea canyons, and underwater archaeological sites. They range in size from one-quarter square mile in Fagatele Bay, American Samoa, to almost 138,000 square miles of Pacific Ocean including the Northwest Hawaiian Islands - the largest marine protected area in the world. Together, these sites protect nearly 150,000 square miles of coastal and open ocean waters and habitats. While some activities are managed to protect resources, certain multiple uses, such as recreation, commercial fishing, and shipping are allowed to the extent that they are consistent with each site's resource protection mandates. Research, education, outreach, and enforcement activities are major components in each site's program of resource protection.

The NMSP is recognized around the world for its commitment to management of marine protected areas within which primary emphasis is placed on the protection of living marine resources and our nation's maritime heritage resources.

Figure 1.1. The National Marine Sanctuary System



The NMSP Vision:
People value marine sanctuaries as treasured places protected for future generations.

The NMSP Mission:
To serve as the trustee for the national system of marine protected areas to conserve, protect, and enhance their biodiversity, ecological integrity and cultural legacy.

1.2 The Florida Keys National Marine Sanctuary (FKNMS)

Historical Setting

Warning signs of the fragility and finite nature of the region's marine resources have been present in the Florida Keys for years. In 1957, a group of conservationists and scientists met at Everglades National Park to discuss the demise of the coral reef resources at the hands of those attracted by its beauty and uniqueness. The conference resulted in the 1960 creation of the world's first underwater park, John Pennekamp Coral Reef State Park. However, in the following decade, public outcry continued over pollution, overfishing, physical impacts, overuse, and user conflicts. The concerns continued to be voiced by environmentalists and scientists alike throughout the 1970s and into the 1990s.

As a result, additional management efforts were instituted to protect the Keys' coral reefs. In the Upper Keys, Key Largo National Marine Sanctuary was established in 1975 to protect 103 square nautical miles of coral reef habitat from north of Carysfort Lighthouse to south of Molasses Reef. In the Lower Keys, the 5.32 square nautical mile Looe Key National Marine Sanctuary was established in 1981.

Despite these efforts, oil drilling proposals and reports of deteriorating water quality occurred throughout the 1980s. At the same time, scientists were assessing coral bleaching and diseases, long-spined urchin die-offs, loss of living coral cover, a major seagrass die-off, and declining reef fish populations. Such threats prompted Congress to act. In 1988, Congress reauthorized the National Marine Sanctuary Program and ordered a feasibility study for possible expansion of Sanctuary sites in the Florida Keys - a directive that signaled that the health of the Keys ecosystem was of national concern and an endorsement of the NMSP's management successes at Key Largo and Looe Key National Marine Sanctuaries.

The feasibility studies near Alligator Reef, Sombrero Key, and westward from American Shoal were overshadowed by several natural events and ship groundings that precipitated the designation of the Florida Keys National Marine Sanctuary (FKNMS). Three large ships ran aground on the coral reef during one 18-day period in the fall of 1989. Although people cite the ship groundings as the issue triggering Congressional action, it was, in fact, the cumulative degradation and the threat of oil drilling, along with the groundings. These multiple threats prompted the late Congressman Dante Fascell to introduce a bill into the House of Representatives in November of 1989. Congressman Fascell had long been an environmental supporter of South Florida and his action was very timely. Senator Bob Graham, also known for his support of environmental issues in Washington and as a Florida Governor, sponsored the bill in the Senate. Congress gave its bipartisan support, and on November 16, 1990, President George H.W. Bush signed the bill into law.

With designation of the Florida Keys National Marine Sanctuary in 1990, several protective measures were implemented immediately, such as prohibiting oil and hydrocarbon exploration, mining or otherwise altering the seabed, and restricting large shipping traffic by establishing an Area To Be Avoided (ATBA). Additionally, protection to coral reef resources was extended by restricting anchoring on coral, touching coral, and collecting coral and live rock (a product of the aquarium

trade). Discharges from within the Sanctuary and from areas outside the Sanctuary that could potentially enter and affect local resources were also restricted in an effort to comprehensively address water quality concerns.

Administration and Legislation

The Sanctuary uses an ecosystem approach to comprehensively address the variety of impacts, pressures, and threats to the Florida Keys marine ecosystem. It is only through this inclusive approach that the complex problems facing the coral reef community can be adequately addressed.

The goal of the Sanctuary is to protect the marine resources of the Florida Keys. It also aims to interpret the Florida Keys marine environment for the public and to facilitate human uses of the Sanctuary that are consistent with the primary objective of sanctuary resource protection. The Sanctuary was created and exists under federal law, and became effective in state waters with the consent of the State of Florida. It is administered by NOAA and is jointly managed with the State of Florida under a co-trustee agreement. The Florida Governor and Cabinet, sitting as the Board of Trustees for the State of Florida, designated the Florida Department of Environmental Protection (DEP) as the state partner for Sanctuary management. The Florida Fish and Wildlife Conservation Commission (FWC), created in 1999, enforces Sanctuary regulations in partnership with Sanctuary managers and the NOAA Office of Law Enforcement. Throughout this document when the term FKNMS managers is used in reference to a responsible or responsive entity it refers to the NOAA and State of Florida co-trustees and their designated representatives from the NMSP, DEP and FWC working cooperatively to implement the strategies outlined in this plan.

NOAA, DEP and FWC are large and diverse organizations. In some cases we have identified specific organizations we work closely with within the broader agencies but are generally separate from the direct organizational chain of the staff working at the Sanctuary. For instance, FWC also houses the Fish and Wildlife Research Institute (FWRI), which conducts and coordinates scientific research and monitoring. In addition, the Sanctuary works cooperatively with multiple state and federal agencies, numerous universities and non-governmental organizations. The relationship with some, like the US Environmental Protection Agency (EPA), is based in the legislation creating the Florida Keys National Marine Sanctuary. Other relationships have evolved through cooperative agreements and information arrangements based upon shared boundaries, shared mission and goals, and/or shared interests.

National marine sanctuaries are typically designated by the Secretary of Commerce through an administrative process established by the National Marine Sanctuary Act (NMSA). However, recognizing the importance of the Florida Keys ecosystem and the degradation of the ecosystem due to direct and indirect physical impacts, Congress passed the Florida Keys National Marine Sanctuary and Protection Act (FKNMSPA) in 1990, (P.L. 101-605) (Appendix B) designating the Florida Keys National Marine Sanctuary to be managed as a national marine sanctuary under the NMSA. President George H. W. Bush signed the FKNMSPA into law on November 16, 1990.

The FKNMSPA and NMSA require the preparation of a comprehensive management plan and implementing regulations to protect Sanctuary resources. This *Revised Management Plan* responds to the requirements of the FKNMSPA and NMSA. The implementing regulations, effective as of 1 July

1997, are found at 15CFR922 and in Appendix C. The designation document¹ for the FKNMS is found in Appendix D.

Sanctuary Boundaries

The Sanctuary's enabling legislation designated 2,800-square-nautical miles of coastal waters surrounding the Florida Keys as the Florida Keys National Marine Sanctuary. The Sanctuary's boundary was amended in 2001 when the Tortugas Ecological Reserve was designated, significantly increasing the marine resources requiring protection.

Currently, the boundary encompasses approximately 2,900 square nautical miles (9,800 square kilometers) of coastal and ocean waters and submerged land (Figure 1.2). The boundary extends southward on the Atlantic Ocean side of the Keys, from the northeastern-most point of the Biscayne National Park along the approximate 300-foot isobath for over 220 nautical miles to the Dry Tortugas National Park. The boundary extends more than 10 nautical miles to the west of the Park boundary, where it turns north and east. The northern boundary of the Sanctuary extends to the east where it intersects the boundary of the Everglades National Park. The Sanctuary waters on the north side of the Keys encompass a large area of the Gulf of Mexico and western Florida Bay. The boundary follows the Everglades National Park boundary and continues along the western shore of Manatee Bay, Barnes Sound, and Card Sound. The boundary then follows the southern boundary of Biscayne National Park and up its eastern boundary along the reef tract at a depth of approximately 60 feet until its northeastern-most point.

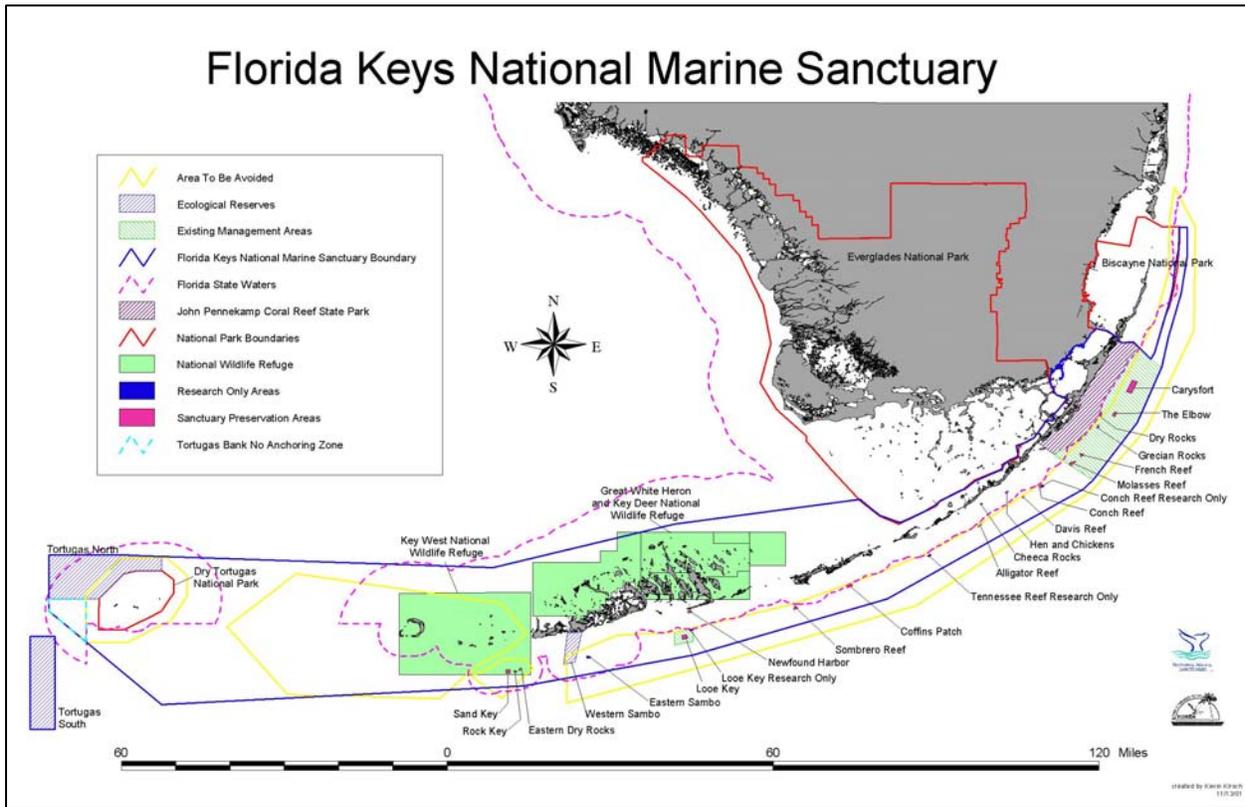
A separate, non-contiguous, 60 square nautical mile area off the westernmost portion of the Sanctuary is called the Tortugas Ecological Reserve South. The area's shallowest feature is Riley's Hump which rises to a depth of only 90 feet of water.

The Sanctuary boundary overlaps two previously existing national marine sanctuaries (Key Largo and Looe Key); four U.S. Fish and Wildlife Service (USFWS) refuges; six state parks, including John Pennekamp Coral Reef State Park; three state aquatic preserves; and other jurisdictions. Everglades National Park, Biscayne National Park and Dry Tortugas National Park are excluded from Sanctuary waters, but each shares a contiguous boundary with the Sanctuary.

The shoreward boundary of the Sanctuary is the mean high-water mark, except around the Dry Tortugas where it is the boundary of Dry Tortugas National Park. The Sanctuary boundary encompasses nearly the entire reef tract, all of the mangrove islands of the Keys, and a good portion of the region's seagrass meadows.

¹ The NMSA defines the term designation (also known as the designation document) of a sanctuary as the geographic area of the sanctuary, the characteristics of the area that give it conservation, recreational, ecological, historical, research, educational, or esthetic value, and the types of activities that will be subject to regulation to protect those characteristics.

Figure 1.2. The Florida Keys National Marine Sanctuary Boundaries



Socio-Economic Context

The environment and the economy are inextricably linked in the Florida Keys, making management and protection of existing resources and reducing impacts critical if the economy is to be sustained. Tourism is the number one industry in the Florida Keys, with over \$1.2 billion dollars being spent annually by over 3 million visitors. The majority of visitors participate in activities such as snorkeling, SCUBA diving, recreational fishing, viewing wildlife and studying nature. Recreational and commercial fishing are the next most important sectors of the local economy, annually contributing an estimated \$500 million and \$57 million respectively (marineeconomics.noaa.gov).

Because of the recreational and commercial importance of the marine resources of the Florida Keys, protecting these Sanctuary resources is valuable not only for the environment but also for the economy. The special marine resources of the region, which led to the area’s designation as a national marine sanctuary, contribute to the high quality of life for residents and visitors. Without these unique marine resources, the quality of life and the economy of the Keys would decline.

1.3 The Management Plan Review Process

What is management plan review?

In 1992, when Congress reauthorized the NMSA, it required all national marine sanctuaries to review their management plans every five years in order to monitor and evaluate the progress of the national mission to protect national resources. The Florida Governor and Cabinet, as trustees for the state, also mandated a five-year review of the Florida Keys National Marine Sanctuary Management Plan in their January 28, 1997 resolution.

The Sanctuary's management plan review creates a road map for future actions based on past experience and outcomes. The review reevaluates the goals and objectives, management techniques, strategies, and actions identified in the existing management plan. It provides the opportunity to take a close and comprehensive look at outcomes and plan for future management of the Sanctuary.

The 1996 Florida Keys National Marine Sanctuary Management Plan

After the initial six-year FKNMS planning process, a comprehensive management plan for the Sanctuary was implemented in July 1997. The management plan focused on ten action plans which were largely non-regulatory in nature and involved educating citizens and visitors, using volunteers to build stewardship for local marine resources, appropriately marking channels and waterways, installing and maintaining mooring buoys to prevent anchor damage to coral and seagrass, surveying maritime heritage resources, and protecting water quality. In addition to action plans, the 1996 management plan designated five types of marine zones to reduce pressures in heavily used areas, protect critical habitats and species, and reduce user conflicts. The efficacy of the marine zones is monitored Sanctuary-wide under the Research and Monitoring Action Plan.

The implementing regulations for the FKNMS became effective July 1, 1997. The 1996 management plan was published in three volumes: Volume I is the Sanctuary management plan itself (which this document updates); Volume II characterizes the natural and social environmental setting of the Sanctuary and describes the process used to develop the draft management alternatives, including environmental and socioeconomic impact analyses of the alternatives, and the environmental impact statement; Volume III contains appendices, including the texts of federal and state legislation that designate and implement the Sanctuary. All three volumes of the 1996 management plan are available on the Sanctuary Web site (floridakeys.noaa.gov) and from the Sanctuary's Key West office. Volume II is not being revised as part of this review. After public input, government review and final adoption of this five-year review and revised Management Plan, this document will replace Volumes I and III.

How does management plan review work?

Review of the 1996 management plan began in early 2001 with a meeting in Tallahassee, Florida, among federal and state partners responsible for Sanctuary management and various FKNMS and NMSP staff. The review included the FKNMS Sanctuary Advisory Council and the general public in every step of the process.

In the late spring and summer of 2001, FKNMS staff, working closely with the Sanctuary Advisory Council, held scoping meetings and re-convened action plan working groups that had been created during development of the 1996 plan. The scoping meetings were held in Marathon, Key Largo, and

Key West, and gave the public the opportunity to meet with Sanctuary Advisory Council members, Sanctuary managers, and FKNMS staff. The meetings included round-table discussions on every action plan, and participants had the opportunity to move freely between the various topics being discussed at each table.

The scoping period for the revised management plan lasted from June 8 through July 20, 2001. Approximately 30 comments were received - a sharp contrast to the more than 6000 public comments received during the comment period for the 1996 plan. In addition, the working groups held more than three dozen meetings between June and September 2001 to discuss, evaluate, revise and update action plans. Sanctuary Advisory Council members and FKNMS staff who had served on the working groups presented the proposed revisions to the Sanctuary Advisory Council at three meetings in October 2001. The full advisory council recommended minor changes and approved each action plan in this document. The Sanctuary Advisory Council membership and Action Plan Working Group membership lists are included in Appendix E.

Between 2001 - 2004, numerous drafts of each action plan and strategy were prepared and reviewed by the FKNMS Management Team, Action Plan Leads and National Marine Sanctuary Program Headquarters staff. In February 2005 the *Draft Revised Management Plan* was published and distributed for public review and comment. A notice was placed in the Federal Register. A series of three public meetings were held in the Florida Keys including a meeting in each of Key Largo, Marathon and Key West. This formal comment period extended from February 15, 2005 to April 15, 2005. Responses were received from approximately 20 commenters. Between May 2005 and February 2006 the comments were reviewed, consolidated into a single document and distributed for review and response to the FKNMS Management Team and Action Plan Leads. The responses to the comments were incorporated into the *Draft Revised Management Plan*, as appropriate. Between August 2006 and May 2007 FKNMS staff and staff in the NMSP and the FL Department of Environmental Protection headquarters units worked together to review, refine and ensure the *Draft Revised Management Plan* reflected the most recent and up-to-date information and management practices and policies.

The Role of Sanctuary Management as Facilitators

A sanctuary management plan is designed to identify the best and most practical strategies to achieve common goals, while getting the most out of public investment. Achieving this aim cannot be accomplished solely through the authorities and resources of an individual sanctuary management authority. It requires a broad partnership of programs, authorities, and resources, coordinated to meet the needs of both the sanctuary site and the broader region of which it is a part.

Consequently, the management plan review process first focuses on finding the most effective strategies to accomplish common goals. These strategies are the product of a process that brings together constituents, institutions, and interested parties in directed working groups to address specified problem areas. How these strategies are to be implemented – with whose authorities, investments, and personnel – is determined subsequent to developing the best strategies. While the Sanctuary program commits to carrying out specific strategies as budgets allow, in many cases implementation becomes the responsibility of other institutions such as state, federal, or local partners, that have the authorities, the appropriate program, and/or the resources required. The intent of identifying these responsibilities is not to create unfunded mandates for other agencies, but rather to integrate management actions so as to maximize protection of Sanctuary resources.

In this process, the sanctuary management plan becomes a framework in which the role of all partners is clarified. The sanctuary assumes the role of facilitator and integrator of a far larger body of activities and outcomes than are within the scope of its immediate authorities, programs, and resources. This facilitation role provides the mechanism for continued implementation, evaluation, and adaptation of the partnership activities documented by the plan, ensuring its continuity and overall success.

1.4 Accomplishments

There have been many accomplishments in the sanctuary beginning with the authority established under the Florida Keys National Marine Sanctuary and Protection Act of 1990 and the implementation of the management plan in 1997. An overview of the Sanctuary’s accomplishments is given here, and more details are provided within each Action Plan.

1. Area To Be Avoided. The “Area To Be Avoided” (ATBA) designation in 1990 has resulted in a significant decrease in the number of major ship groundings on the coral reefs. As Figure 1.3 illustrates, prior to 1990 there was a major ship grounding involving vessels greater than 50 m in length, nearly every year, while only two have occurred since the implementation of the ATBA. The United Nations International Maritime Organization (IMO) agreed that the ATBA should be given additional strength as a Particularly Sensitive Sea Area (PSSA) in 2002 (see Accomplishment 5 below). The ATBA regulations are at 15 CFR Part 922, Subpart P, Appendix VII. Figure 1.4 shows the ATBA, the PSSA and the Sanctuary boundary.

Figure 1.3. Reef groundings of vessels greater than 50m before & after ATBA designation.

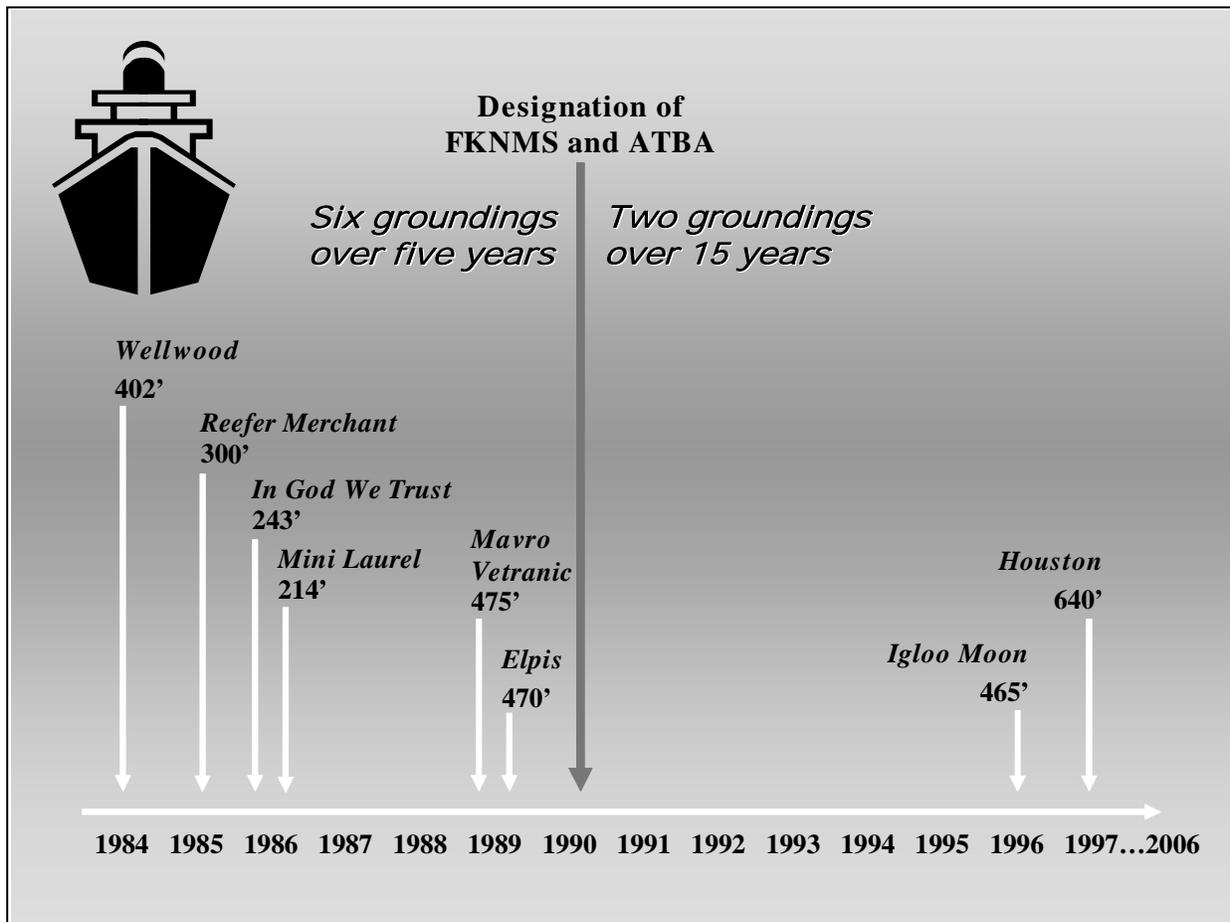
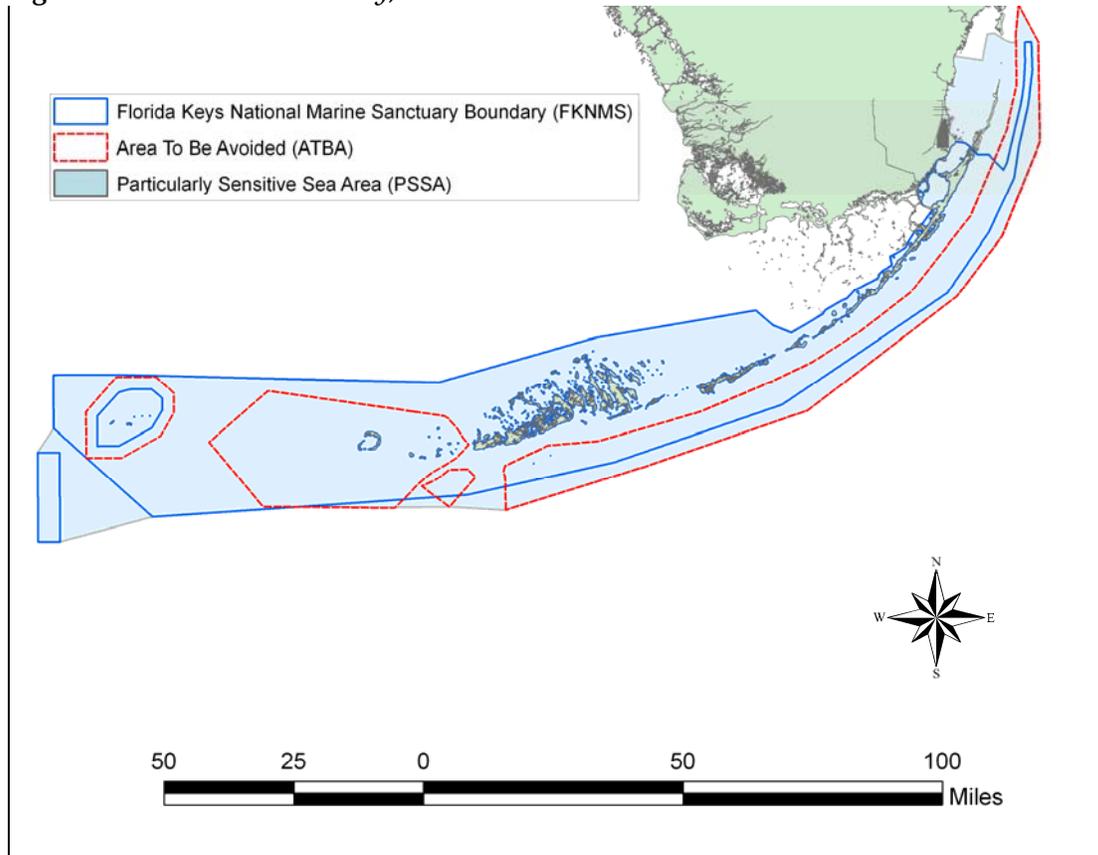


Figure 1.4. FKNMS boundary, ATBA and PSSA



2. Oil Drilling and Hard Mineral Mining Ban. A ban on these activities was established when the Sanctuary was created, and has prevented these activities from occurring in the Sanctuary.

3. The Water Quality Protection Program. This program has produced the first Water Quality Protection Program for a national marine sanctuary and has fully implemented 26 of 49 high-priority activities, many of which are carried out in cooperation with other action plans.

4. The Comprehensive Everglades Restoration Plan. The Sanctuary continues to participate in the implementation of the Comprehensive Everglades Restoration Plan (CERP). Sanctuary staff have been active on this project since 1993, including chairing a working group for the South Florida Ecosystem Restoration Task Force and staffing its science and education committees. The Sanctuary's participation seeks to protect the ecosystem's water quality by eliminating catastrophic releases of freshwater along the coastal waters of South Florida including Florida Bay following rain events. One of the goals of the CERP is to restore the water quality, quantity, timing and distribution to the South Florida ecosystem.

5. Designation of the Florida Keys as a Particularly Sensitive Sea Area. In November 2002, the United Nations International Maritime Organization approved designation of the Florida Keys as a PSSA. The designation is not accompanied by additional rules and regulations, but seeks to elevate public awareness of the threat of oil spills and hazardous materials to sensitive marine environments

and will ensure that the previously mentioned ATBA is noted not only on U.S. charts but also on nautical charts worldwide.

6. Long-term and continuing progress in the Research and Monitoring and Zoning action plans.

Research and monitoring has produced significant scientific data, hypothesis testing, mapping, trend documentation, and wide dissemination of these findings. Especially notable is the Keys-wide benthic map which provides valuable information for Sanctuary managers. In addition to the new protected zone in the Tortugas Ecological Reserve, the Sanctuary's zoning programs continue to provide invaluable data that demonstrate the success of the marine zoning program.

7. Education, Public Outreach, Sanctuary Stewardship, and Volunteerism. Through these inter-related efforts, information is flowing from scientists to managers and then to educators, who reach the next generation. More than 180,000 volunteer hours, an estimated \$2.9 million value, were donated to the Sanctuary between 1996 and 2006. Even more valuable than the dollar worth of the program is the stewardship created through volunteerism, which uniquely contributes to the long-term effectiveness of the Sanctuary.

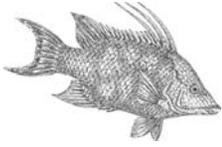
8. Enforcement and Regulations. Both the city of Key West and the State of Florida have declared Florida Keys waters under their jurisdictions as "no-discharge" zones. Additional accomplishments in implementing the Enforcement and Regulatory Action Plans are largely a tribute to the cooperative efforts among the Florida Fish and Wildlife Conservation Commission, the Florida Park Service, the U.S. Coast Guard (USCG), and NOAA. Notable among these is the cross-deputization of state-certified law enforcement officers, which allows them to enforce numerous federal laws, including fisheries regulations, the Endangered Species Act, the National Marine Mammal Act, the Lacey Act, etc.

9. Damage Assessment and Restoration. The Damage Assessment and Restoration Action Plan is new to this document but is based on accumulated data and lessons learned since 1982. The cross-disciplinary strategies will prove useful in reducing the number of vessel groundings in Sanctuary waters as well as restoring Sanctuary resources damaged by vessels.

10. Maritime Heritage Resources. The Maritime Heritage Resources Action Plan includes a close partnership of the state, NOAA, and the Florida Advisory Council on Historic Preservation described in a programmatic agreement for resource management that was originally signed in 1998 and then renewed in 2004 (see Appendix F for more information and a Web site link for the full document). Additionally, the 2002 discovery of a previously unknown wreck within the Sanctuary has brought about a community-endorsed research and interpretation plan for the site. Overall, the Action Plan represents excellent progress in balancing resource protection, investigation and interpretation.

11. Mooring Buoys and Waterway Management (formerly Channel Marking). The Mooring Buoy and Waterway Management Action Plans have implemented simple but effective strategies for reducing vessel damage to the coral reef and to seagrass beds. The long-term success of these programs – mooring buoy strategies have been used in local Sanctuary waters since 1981 when they were introduced at the Key Largo National Marine Sanctuary – has largely been due to a unique interface of education, outreach, enforcement and research and monitoring activities.

12. Operations. Since 1997, the Sanctuary has integrated the administrative functions of two former sanctuaries – at Key Largo and Looe Key – into a single headquarters umbrella with two regional offices. This integration streamlined delivery of human resources, community relations, and policy development. It also resulted in a series of accomplishments, ranging from an updated electronic financial reporting system to the 180+-episode television series, *Waterways*.



3.5 ADMINISTRATION, COMMUNITY RELATIONS AND POLICY COORDINATION

This management division includes two action plans: the Operations Action Plan and the Evaluation Action Plan. Effective Sanctuary management requires an administrative infrastructure and an operations program that supports the various management programs. The action plans in this management division describe the Sanctuary administrative and operations approaches to management and provide a mechanism to evaluate the effectiveness of Sanctuary management.

While often overlooked in the development of a management plan, this management division is an essential element to the overall management of the Sanctuary. This section describes the necessary administrative needs and operational requirements to support effective marine protected area management.

3.5.1 Operations Action Plan

Introduction

This action plan is different from the others in that it is divided into four sub-sections: 1) Sanctuary Administration; 2) Community Relations; 3) Policy Development; and 4) The Sanctuary Advisory Council. Each of these sub-sections represents a primary function of FKNMS operations and contains the following information:

- A description of the function
- Accomplishments since inception of the 1996 management plan
- Strategies and activities.

Goals and Objectives

The goals of the Operation Action Plan are to:

- Provide highly effective, day-to-day administrative functions
- Establish effective community outreach
- Develop and implement policy coordination.

To achieve these goals, the Sanctuary will work towards the following objectives:

- Ensuring cooperation among Sanctuary management and agencies with jurisdiction within or adjacent to the Sanctuary.
- Promoting informed decisions based on the best available research and analysis, taking into account the environmental, economic, and social impacts.
- Complementing coordination among appropriate authorities to enforce existing laws that fulfill Sanctuary goals.

Function 1: Sanctuary Administration

Summary

A professional administrative team that provides the services necessary to meet its trustee responsibilities carries out the Sanctuary's day-to-day operations. When the Sanctuary was designated and two existing sanctuaries (at Key Largo and Looe Key) were included into the broader boundary, their administrative functions had to be integrated. The Sanctuary is administered under a single administrative umbrella at headquarters, with two regional offices in Key Largo and Key West. There are several key components to Sanctuary administration, such as:

Human Resources

The staff is composed of federal and state employees, contractors, and volunteers, managed in accordance with policies established by the Federal Office of Management and Budget, Department of Commerce, NOAA, and the State of Florida. Elements of the human resources function include:

- *Recruitment and Retention* - Managers, on an on-going basis, evaluate position needs and possibilities for new recruitment. Managers follow federal and state policies and use open competition to attract the greatest number of qualified candidates and provide equal opportunity employment.
- *Training and Career Enhancement* - Training and development programs assist in achieving the Sanctuary's mission and performance objectives by improving employee and organizational performance. Employees, supervisors, management, NOAA's Workforce Management Office and the DEP Bureau of Personnel Services share responsibility for performance-based learning.
- *Employee Performance and Recognition* - A supervisor traditionally completes annual performance appraisals that are the basis for personnel action, including promotion and pay increases. Supervisors are encouraged to acknowledge outstanding accomplishments by staff via promotions, financial awards, and the Sanctuary's Team Member of the Year Award.
- *Discontinuation of Service* - Supervisors conduct exit interviews with employees who separate from service. The results are shared with Sanctuary management and recommendations from departing employees are considered when appropriate.
- *Time and Attendance* - Two staff members maintain official time and attendance records for federal and state staff. Employees who participate in projects relating to enforcement and damage assessment and restoration are required to maintain additional records for cost documentation purposes. These records are often used to obtain reimbursement through the legal system for vessel groundings.
- *Safety* - Occupant Emergency Plans, Continuity of Operations Plans and Hurricane Plans are prepared and updated annually for each Sanctuary site. Copies are distributed and posted. Program managers strive to recognize work-place hazards and improve working conditions to the greatest extent possible, with guidance from NOAA's Environmental Compliance and Safety Office. Federal and state labor laws and workman's compensation information are posted at all Sanctuary offices. FKNMS participates in annual safety week drills as well as annual first aid/CPR/AED staff training.

Financial Administration

The Sanctuary's financial administration includes annual financial planning for upcoming state and federal fiscal years, budget tracking, managing the financial portions of memoranda of agreement, and purchasing in accordance with federal and state policy and regulations. Elements of the financial administration function include:

- *Budget Planning and Tracking* - The Sanctuary management team is responsible for budget planning with the assistance of the Sanctuary's financial officer, including development of an Annual Operating Plan consistent with NMSP activities. National activities currently include education, research, marine zoning, enforcement, site characterization, GIS cultural resources, management plan review, system-wide monitoring, damage assessment and restoration, volunteer, outreach, water quality, Sanctuary Advisory Council, and core operations.

- *Alternative Sources of Funding* - Alternative fund sources include donations, civil penalty payments, and interagency fund transfers. Fundraising is also accomplished by nonprofit organizations, including Sanctuary Friends of the Florida Keys and the National Marine Sanctuary Foundation. Civil penalty funds, by law, generally can be used only for resource management and response costs and equipment. Additional funds come from parties responsible for repairing resource damage such as the National Fish and Wildlife Foundation, which administers fines related to ocean dumping.
- *Purchasing* - Administrators and managers adhere to numerous federal and state purchasing regulations stipulating required sources of supply, time frames, forms, approvals, and payment procedures. Some staff members have government purchase cards; the cardholder is accountable for using the card in accordance with government regulations. The financial officer is accountable for overseeing purchase orders, tracking expenses, alternative-fund accounting, issuing VISA checks, and overseeing purchase card use, among other responsibilities.

Information Technology

Information-technology support is provided through the sanctuary administrative office with regional office involvement. A computer-assessment team meets regularly to improve collaboration and communication and facilitate cooperation among field offices with the automated data processing and information technology staff at headquarters. The team assesses current hardware and software profiles for each office, oversees hardware and software purchases, assesses current and future needs, develops long-range plans, and evaluates requests for additions or upgrades.

In 1998, staff developed and implemented the Web site that is continuously updated. The local contact works with the NMSP Headquarters' webmaster assures that the site is relevant, timely, and useful. The webmaster responds to requests received through the site and logs comprehensive data about traffic, which is used to continually enhance and update this public service.

International Coordination

Over the last decade, coral reef health has become a global issue. Many of the issues addressed in this management plan are relevant to coral reef communities worldwide. International groups and foreign countries routinely contact the Sanctuary and the national program to discuss programs and conduct tours. The staff plans to develop a formal international program in the FKNMS coordinated with the NMSP international program.

Sanctuary Friends

Sanctuary Friends Foundation of the Florida Keys, Inc. is a nonprofit membership organization dedicated to raising awareness and building support for the programs, policies and goals of the Sanctuary. This organization, established in 2000, has a membership of nearly 100 individuals. A major membership campaign and a fundraising drive are upcoming.

Reporting

The Sanctuary staff generates reports as a necessary mechanism to share information with NOAA headquarters, the state, other agencies, stakeholders, and the public. The reports are available in hard copy and on the Sanctuary's web page. The Sanctuary management team provides weekly, monthly, and quarterly reports to fulfill various requirements established by NOAA and DEP. The reports

provide accountability for programs, funding, management and regulation. In addition, staff prepares an annual State of the Sanctuary Report, and annual reports to the Florida Governor and Cabinet.

Hurricane Planning

Each office annually reviews and updates its unique hurricane plan that addresses buildings, vessels, vehicles, equipment and evacuation. Evacuation plans are based on hurricane alerts issued by the National Weather Service. When evacuation plans are implemented, each person reports to a member of the management team on the progress of preparations. Offsite contact with evacuated personnel continues until the evacuation order is lifted.

Security

Building security in federal offices became a high priority after the 1995 bombing in Oklahoma City and the 2001 large-scale terrorist attacks on U.S. soil. For the Sanctuary, this translates into offices secured by lock and key and under electronic surveillance at all offices and sites. Where possible, a locked fence encloses outside storage. Sanctuary managers regularly evaluate security. Other property, including vessels and vehicles require separate security. Many of the Sanctuary's vessels are kept at marinas, and, although security measures vary, marina operators are meeting overall security goals. Staff security includes identification cards and fingerprinting of new employees and contractors according to Homeland Security Presidential Directive -12 (HSPD-12). Each of the FKNMS regional office locations has an Occupant Emergency Plan, a Continuity of Operations Plan and a Hurricane Plan. Each plan is reviewed and updated on an annual basis.

Real Estate

Staff are currently located in a combination of NOAA-rented office space and NOAA-owned property, with the exception of law enforcement offices at the Marathon Government Center. The Sanctuary acquired 2.94 acres and two former Navy buildings in Key West in December of 1999, through the Base Realignment and Closure program. The complex of buildings constructed on this property between 2004-2006 has been named The Dr. Nancy Foster Florida Keys Environmental Complex (Foster Complex), in recognition of Dr. Foster's tremendous contribution to protection of the nation's marine environment. It is the only real estate owned by the Sanctuary at this time. Congress appropriated approximately \$12 million to develop the site for offices and a world-class, multi-agency visitor center called the Florida Keys Eco-Discovery Center. The site houses the FKNMS headquarters office and Lower Keys regional offices, a maintenance facility, and docks that consolidates HQ and Lower Keys regional staff and vessels at one location. FKNMS staff moved into the Foster Complex in June/July 2006. The Florida Keys Eco-Discovery Center opened to the public in October 2006 with a grand opening celebration in January 2007.

Facilities

The Sanctuary currently leases its office and storage space in the Upper and Middle Keys areas. The Sanctuary owns the Foster Complex facilities which includes office, storage and maintenance space. Most leases include utilities, cleaning, building maintenance and repairs, grounds maintenance, parking, storage, and conference rooms. Dock space is leased in the Upper Keys. Dock space is provided by partner agencies in the Middle Keys, and owned in the Lower Keys.

Equipment and Supplies

Equipment includes vehicles, vessels, engines, machinery (e.g., mooring-buoy drills), and associated electronics, computers and traditional office equipment. Regional property custodians maintain a property inventory and maintenance schedules. Administrative staff orders material and supplies for offices and other routine functions as needed.

Records Retention

The administrative office ensures that federal and state records are maintained according to official record disposition schedules appropriate to each type of record and agency of origin. FKNMS has recently made arrangement for some of its records required to be retained for longer than ten years under the NOAA Records Disposition Schedule to be stored at the National Archives and Records Administration storage facility in Atlanta, Georgia. Storage of these records will ensure their property management and safety.

Communications

Sanctuary communications include written, verbal and electronic communication via office telephones, cellular phones, pagers, and two-way vessel radios, all governed by federal and state policies, directives, and regulations. The administrative assistant at each office is responsible for keeping current with policies and regulations. The three offices have a telephone system with voice messaging to maximize office efficiency. Cellular phones are used between administrative staff and staff on the water. Staff members who are assigned cellular telephones are responsible for the equipment and ensuring use for government purposes only. Two-way radios are installed on many vessels. Staff regularly evaluates its service providers to ensure that the most cost-effective pricing plans are in effect.

Maintenance

The office buildings in the Upper and Middle Keys are leased and regular maintenance is covered under the terms of the lease. The office buildings at the Foster Complex in Key West are maintained by FKNMS staff, are covered by warranty or annual service contracts as appropriate. The staff completes routine and preventive maintenance on its equipment, buildings, vehicles and vessels, including engines. The maintenance program is geared to lifecycle management and to ensure productive and safe use.

Vessels and Vehicles

Sanctuary programs require a variety of vehicles and vessels. All vehicles and vessels are used only for official government activity. Regulatory enforcement requires in-shore, offshore and long-range patrol capabilities and such vessels range from 28 feet to 63 feet. The Damage Assessment and Restoration program uses smaller vessels to access resource damage in shallow areas. The Law Enforcement Program uses a combination of smaller vessels for nearshore activities and the recently acquired 57' catamaran P/V *Peter Gladding* for off-shore enforce such as in the areas near the Dry Tortugas. Staff uses vehicles to travel to and from official meetings, to tow boats, transport gear, and to assist visiting dignitaries. Many vehicles are leased from the General Services Administration and staff abides by its regulations. The remaining vehicles are owned by either NOAA or the State of Florida. The Sanctuary's Vessel Policy covers operation, use, and maintenance, seeks to provide safe and productive vessel use and has become a model for other NOAA programs.

Accomplishments

There have been several administrative accomplishments since implementation of the 1996 management plan, including:

- Fully integrated the administration of two existing National Marine Sanctuaries and the newer, larger Sanctuary into a single unit with some functions retained by the regional offices.
- Successful implementation of Annual Operating Plan in the most complex and challenging National Marine Sanctuary in the nation.
- Developed and implemented a financial accounting system that has been adopted by other National Marine Sanctuaries to track expenditures by budget category (printing, travel, vessel repairs, salaries) and program (education and outreach, maritime heritage resources, enforcement).
- On-going recruitment in accordance with federal and state guidelines to hire and retain the highest caliber and best-qualified workforce.
- Created and implemented employee-recognition programs.
- Established and implemented regular management team meetings. Participants include the Superintendent, Chief of Staff, and the Upper Region and Lower Region managers. In addition, the superintendent holds “All Hands Meetings” at least once a year to bring the entire team together to discuss issues and share information.
- Continuous pursuit of alternative sources of funding, including from the National Fish and Wildlife Foundation, which administered fines resulting from litigation related to ocean dumping.
- Helped establish and continues support for Sanctuary Friends Foundation of the Florida Keys, Inc., a nonprofit organization that promotes the Sanctuary mission and goals, and raises funds for the Sanctuary.
- Developed and implemented hurricane plans for all three offices and Sanctuary vessels. Implementation has minimized hurricane damage to offices, vessels and vehicles.
- Acquired 2.94 acres and two buildings at Truman Annex in Key West for a world class, multi-agency visitor center and facilities for the Lower Keys regional office.
- Participated in the planning, design and oversight of the \$12 million Dr Nancy Foster Florida Keys Environmental Complex, featuring the world-class interagency visitor center the Florida Keys Eco-Discovery Center.
- Completed the co-location of the Lower Keys Regional staff and operations and the FKNMS headquarters staff to the Foster Complex.
- Successfully completed construction of the Florida Keys Eco-Discovery Center and opened it to general visitation by the public. To date, the Center has hosted more than 20,000 visitors from 50 US states and 20 countries on 6 continents.
- Participated in the design and planning of the 57 foot catamaran *P/V Peter Gladding* which is an enforcement vessel dedicated to patrolling the Tortugas Ecological Reserve and other parts of the FKNMS.
- Organized and implemented two regional offices with one each in the Upper Keys and Lower Keys.
- Developed and implemented a vessel policy for the operation, use, and maintenance of Sanctuary vessels as well as continued participation on the NMSP Small Vessel Working Group.

Function 2: Community Relations

Summary

Good community relations are an essential component of Sanctuary management. In addition, the Keys community is socially complex with a large turnover of residents and an ever-changing tourist population. In order to keep new residents and visitors informed, the media is regularly involved. Key components of the Sanctuary are administrative and operational policies that are consistent with federal and state policies and site-specific policies that address local needs.

There are several on-going Community Relations activities including:

- The Sanctuary's half-hour television show, "Waterways," produced in partnership with the National Park Service and the U.S. Environmental Protection Agency. The show is aimed at increasing awareness of the marine and terrestrial environments of the Florida Keys and the Everglades, and the efforts underway to protect and conserve them.
- Media packets that provide background information on current issues and topics to assist journalists in reporting on Sanctuary issues.
- News releases to address breaking news, notify the public of opportunities to participate in Sanctuary management decisions, and increase awareness of Sanctuary initiatives.
- Press conferences to brief media representatives and editors on significant issues through presentations and question-and-answer sessions with relevant personnel.
- Press trips to help media representatives gain firsthand knowledge of Sanctuary resources, threats to the ecosystem, and initiatives to protect and conserve them.
- Radio and television appearances by Sanctuary team members to publicize a variety of topics related to the sanctuary.
- Video production and editing of stock footage and other video products to document resources, threats to sanctuary resources, and sanctuary program activities and accomplishments.
- Regularly maintained communication plans on major issues to outline how the public receives timely and accurate information from the Sanctuary.

Accomplishments

Community relations activities were separated from the Education and Outreach function in 1993 with the hiring of a public-outreach coordinator. Since then, the program has achieved many accomplishments, including:

- Worked with the EPA and NPS, to produce over 230 episodes of "Waterways," a television show focusing on the unique aspects of the South Florida environment and the Sanctuary's efforts to understand and protect it.
- Coordinated outreach efforts leading to the establishment of the Tortugas Ecological Reserve by conducting media visits and providing information in various formats to national media entities and the public.
- Coordinated media coverage of reef restoration projects, including a comprehensive public awareness campaign for the *Columbus Iselin* restoration. The campaign included public meetings to inform dive shops, other businesses and local residents; production of a video explaining the restoration for dive shops to show to customers; production of a laminated card

explaining the restoration for use on board dive boats; coordination of a VIP and media trip to view the restoration site, which resulted in national coverage, including Reuters, *The Miami Herald* and The Associated Press.

- Coordinated media coverage for activities of the Sanctuary Advisory Council.
- Worked with Reef Relief, the City of Key West, Florida Fish and Wildlife Conservation Commission, and the USCG to conduct a public awareness campaign to achieve compliance with the new no-discharge zone designation for City of Key West Waters, including developing brochures and posters and conducting a series of visits with local editors.
- Developed and distributed press releases for all Sanctuary public meetings on significant issues, such as the Particularly Sensitive Sea Area proposal, correct use of mooring buoys, and installation of new buoys.
- Participated in or coordinated taped and live interviews, for local radio stations.
- Coordinated media coverage for three years of Sustainable Seas Expeditions in the Sanctuary; publicized and staged open houses.
- Provided images for use in publications and on the Internet, as well as provided footage for video projects, including television news and documentaries, and features on the Discovery and National Geographic channels.
- Coordinated media coverage for the placement of the world's first underwater geodetic survey marker, located at Molasses Reef.

Function 3: Policy Development and Coordination

Summary

This description is not intended as a comprehensive list of Sanctuary policies but as a guide for how policy matters are developed and addressed. Some facets of the policy structure are well established, while others have been identified for further development. There are three principal areas related to FKNMS policy development and coordination: administrative, resource and legal.

Administrative Policy

The Sanctuary is managed through a joint-trustee agreement between NOAA and the state. As such, the program is staffed with personnel from NOAA, DEP, and FWC. Each agency is subject to a unique set of agency directives, policies, and procedures. The Sanctuary's regional management structure relies on these staff members cooperating as a functionally seamless unit.

Administrative policies integrate the policies of federal and state agencies. This is accomplished through Standard Operating Procedures, maintaining supervisory and administrative staff familiar with specific policies, and holding regular management team meetings to identify and rectify potential inconsistencies. In addition, the Sanctuary Superintendent holds "All Hands Meetings" at least once a year to bring the entire Sanctuary team together to discuss issues and share information. The administrative officer focuses on developing and implementing consistent administrative policy to ensure compliance with agency directives and provide staff with clear administrative direction.

The Sanctuary superintendent is responsible for conducting management team meetings that include the superintendent, Upper Keys and Lower Keys regional managers and Chief of Staff. The Chief of Staff and regional managers may be required to assist in developing agendas.

Resource Policy

The Sanctuary recognizes the importance of active involvement in regional, national, and international policy-making that affects marine resources and marine protected areas. As one of the primary agencies involved in marine-resource management in South Florida and one of the world's largest marine protected areas, the Sanctuary and its staff are often consulted on emerging issues and practices. In many cases, the Sanctuary has a vested interest in the activities of other agencies and groups. Further, the visibility of the Sanctuary in the community as a leader in marine-resource management generates frequent inquiries regarding its policy or position on specific issues. Thus, supervised by the superintendent, the Sanctuary's administrative office coordinates policy development and distribution. Policy development and dissemination often involve NOAA headquarters, the state, regional staff, and other organizations. The policy-development process may use the Sanctuary Advisory Council or the Technical Advisory Committee to review an issue and determine its potential effects on Sanctuary resources or to provide a forum for public education and participation. Whenever possible, the Sanctuary relies on peer-reviewed science for policy development. In certain cases, a lack of scientific understanding on an issue may require the Sanctuary to initiate or request additional study before rendering an opinion.

Topics on which the Sanctuary has been asked for an opinion include:

- Artificial reefs
- Beach nourishment
- Central sewage
- Dredging
- Exotic species removal
- Fish and shark feeding
- Fishery management
- Climate Change
- Light pollution
- Marine mammal stranding
- Personal watercraft
- Shark attacks
- Transportation projects

Legal Review and Interpretation

As a regulatory entity, the Sanctuary is involved with activities that require legal review and interpretation. The administrative office coordinates legal reviews and seeks interpretations from state and federal legal or administrative staff.

The Sanctuary management team oversees the permit program, including the application, issuance, tracking and related assessments (see also the Regulatory Action Plan, Strategy R.1 - Maintain the Existing Permit Program). Under its regulatory authority, the Sanctuary may issue permits to conduct otherwise prohibited activities if the activities further the understanding and conservation of Sanctuary resources. Permits are generally issued for research, management, and educational projects and are tracked using a standardized database. Recently, a no-cost, paperless permit system was instituted to track entrance to and egress from the Tortugas North Ecological Reserve. The permit helps ensure that mooring buoys are available for permit holders and that vessels visiting the reserve understand the regulations. Another type of permit, also free, allows for the collection of baitfish from

the SPAs and requires holders to report catch and location data annually to the Sanctuary. Research, education, and bait fishing permits are centrally reviewed and processed in the Lower Region office; Tortugas North access permits are issued from the Marathon and Lower Region offices.

In addition to these permits, the Sanctuary works with federal and state agencies to review applications for sea floor dredging and filling to ensure that construction projects of significant scope or size, or those that threaten marine resources through cumulative impacts, are minimized or mitigated.

Accomplishments

There have been several policy-related accomplishments since implementation of the 1996 management plan, such as:

- Creation of the first Sanctuary Advisory Council in the National Marine Sanctuary Program.
- Implementation of on-going working groups as subcommittees of the Sanctuary Advisory Council that include its members, Sanctuary staff, and the general public, to address the action plans and other issues of community concern and interest.
- Establishment of Sanctuary policies on an as needed basis consistent with federal and state guidelines, policy and legislation.
- Worked closely with NMSP headquarters on the 2000 reauthorization of the National Marine Sanctuary Act to allow Sanctuaries to receive donations and disperse funds to non-governmental agencies for services provided.
- Worked closely with NMSP representatives to develop national, program policies to address issues in a consistent manner. This includes staff participation in national-level teams responsible for Management Plan Reviews, Education and Outreach plan development and implementation, and the Science/Research and Monitoring plan development.

Strategies

There are three strategies associated with this function:

- OP.1 Addressing Administrative Policy Issues
- OP.2 Addressing Resource Policy Issues
- OP.3 Addressing Legal Issues

Each of these strategies is detailed below. Table 3.15 provides estimated costs for implementation of each strategy over the next five years.

Table 3.15 Estimated Costs of the Operations Action Plan/Policy Development and Coordination Function.

Operations Action Plan Strategies	Estimated Annual Cost (in thousands)					Total Estimated 5 Year Cost
	YR 1	YR 2	YR 3	YR 4	YR 5	
OP.1: Addressing Administrative Policy Issues	500	525	550	575	600	2,750
OP.2: Addressing Resource Policy Issues	260	275	285	300	315	1,435

OP.3: Addressing Legal Issues	240	250	265	275	290	1,320
Total Estimated Annual Cost	<i>1,000</i>	<i>1,050</i>	<i>1100</i>	<i>1,150</i>	<i>1,205</i>	5,505

STRATEGY OP.1 ADDRESSING ADMINISTRATIVE POLICY ISSUES

Summary

The FKNMS is managed thru a co-trustee agreement between the State of Florida and NOAA. FKNMS staff come from three different agencies – two state and one federal. Successfully implementing this coordinated management requires clear and consistent administrative policies that meet not only the needs of the individual government agencies, but also the goals of the Sanctuary and the implementation of this management plan. Three activities have been identified to continue achieving the integration of policies and procedures that has allowed successful co-management since the Sanctuary was established.

Activities (3)

(1) Develop Standard Operating Procedures. Develop and maintain standard operating procedures based on federal, state and agency directives and regulations in order to provide staff and programs with consistent and clear direction.

Status: On-going.

Implementation: Currently, FKNMS has standard operating procedures for many program activities. The administrative office provides specific guidance. The administrative office, through direction and oversight of the superintendent, implements this activity. The administrative office will explore more formal development of standard operating procedures and continue to provide formal policy guidance. Topics to be addressed in a manner specific to the Sanctuary include such things as controlled correspondence, Freedom of Information Act requests, personnel, procurement, security, travel, and vessel and vehicle operations.

(2) Continue Staff Training. FKNMS maintains a staff familiar with applicable agency directives and regulations through a variety of training and communication strategies, including information technology-based reference and guidance.

Status: On-going.

Implementation: The administrative office is responsible for implementing this activity. FKNMS regional office staff may be required to assist.

(3) Conduct Management Team Meetings. The superintendent conducts regular meetings of the management team to address administrative policy matters and includes Upper Keys and Lower Keys regional managers and Chief of Staff.

Status: On-going.

Implementation: The superintendent convenes regular meetings of the management team and administrative policy issues are discussed at each of the meetings. These meetings have provided an important forum for addressing administrative policy issues and their implementation remains a priority.

STRATEGY OP.2 ADDRESSING RESOURCE POLICY ISSUES

Summary

There are in excess of 25 local, state and federal agencies in the Florida Keys. Successful management of the Sanctuary requires that sanctuary staff coordinate closely with these agencies in the development of local policies that address resource health and conservation. Two activities have been identified to implement this strategy.

Activities (2)

(1) Promote Interagency Collaboration in Policy Making. The administrative office communicates with organizations and agencies involved in resource impacts or regulation to: 1) determine potential effects to Sanctuary management interests; 2) help develop policy statements, and 3) consult with affected agencies regarding Sanctuary related policies.

Status: On-going.

Implementation: FKNMS continues its involvement with local, regional, national, and international organizations on policies affecting marine resources. The administrative office is responsible for implementation. Regional and national headquarters staff may be requested to assist.

(2) Provide Policy Information to the Public. Communicate valid and emerging resource concerns to the general public.

Status: On-going.

Implementation: The administrative office is responsible for organizing implementation of this activity, working with the Sanctuary Advisory Council, the public outreach and education coordinators, and other appropriate staff.

STRATEGY OP.3 ADDRESSING LEGAL ISSUES

Summary

The FKNMS administrative office coordinates legal reviews and interpretations as part of implementing a number of the activities described in this management plan. Permitting and regulatory development are two key areas heavily linked to legal considerations (see also the Regulatory Action Plan); however, legal guidance is also required for a variety of policy, management, and administrative functions.

Activity

(1) Strengthen Legal Review and Interpretation. The administrative office coordinates legal reviews and seeks interpretations from federal and state legal staff. Efforts to improve this coordination function and delivery of legal expertise might be expected to further enable efficient and effective management of the Sanctuary in achieving its goals.

Status: On-going

Implementation: FKNMS staff coordinate with legal counsel in federal and state government. Ways to strengthen this coordination are identified when possible.

Function 4: The Sanctuary Advisory Council

Summary

The Florida Keys National Marine Sanctuary and Protection Act called for the establishment of the National Marine Sanctuary Program's first Sanctuary Advisory Council to provide advice to Sanctuary Managers.

The Sanctuary Advisory Council was an integral part of the planning process when the original management plan was developed and continues to be a vital link to the community. The council represents user communities, including the dive industry, environmental community, boating community, commercial and recreational fishermen, the maritime heritage resources community and the research and education communities. The council meets every other month for regular sessions and hosts special meetings as needed to address Sanctuary resource issues and the five-year review of the Sanctuary's management plan. In addition, working groups, which function as sub-committees, address specific action plans and issues of concern.

Sanctuary Advisory Council members are selected through a multi-step process. Vacant positions are advertised locally in newspapers and on the radio, nationally in the Federal Register and by word of mouth through current council members. Application forms are available online, from the advisory council coordinator, or at any sanctuary office. After the application closing date, applications are reviewed by the Sanctuary management team, council chair and co-chair and the Regional Superintendent. Their recommendations are subjected to a LEXIS/NEXIS check. This check identifies any potential problems with natural resource law violations. Upon clearance through this check, recommendations are sent to the Governor of Florida for acceptance or rejection. Accepted applications are then sent to the Director of the National Marine Sanctuary Program for final approval. All approved applicants then take their seats at the next advisory council meeting, and unsuccessful candidates are notified.

Accomplishments

Advisory Council accomplishments since implementation of the 1996 management plan include:

- Recommended reconfiguration of the Area-to-be-Avoided to make international ship traffic safer. Eight RACON beacons have been installed to alert vessels of their proximity to the reef tract.
- Recommended that the NMSP seek International Maritime Organization designation of the Florida Keys as a Particularly Sensitive Sea Area. The designation was made in 2002.
- Formed the Tortugas 2000 Working Group, which included a broad spectrum of stakeholders, to design the largest marine protected area in North American waters. The group's *Preferred Alternative* was accepted by the Governor and Cabinet of the State of Florida, NOAA, the

South Atlantic Fisheries Management Council and the Gulf of Mexico Fisheries Management Council. The no-take Tortugas Ecological Reserve was officially implemented in 2001.

- Formed more than ten Action Plan Working Groups to review and commented on the *Florida Keys Draft Revised Management Plan*.
- Formed a Personal Watercraft Working Group to explore options for reducing resource impacts from this vessel type. As a result, WMAs have been implemented in particularly sensitive roosting areas and shallow seagrass areas.
- Addressed a number of highly contentious, local issues by holding special meetings that heard from expert panels, reviewed evidence, and made recommendations to the appropriate regulatory bodies. The Sanctuary Advisory Council forwarded recommendations on commercial sponging in Sanctuary waters as well as the special two-day sport lobster (mini-season) to the Florida Fish & Wildlife Conservation Commission (FWC.) Sanctuary Advisory Council recommendations on the marine mammal stranding network operations in the Florida Keys were addressed by NMFS.
- Formed a Large Vessel Working Group to address turbidity problems in the Key West area. The group reviewed information on the special dredging project conducted for the U.S. Navy in Key West Harbor and Shipping Channel and investigated the impacts of cruise ships on Sanctuary resources, with consistent input from the cruise industry. Sanctuary Advisory Council recommendations were taken by Sanctuary managers to the appropriate authorities in the Navy, USACE, the State of Florida, and NOAA.
- Based on a Working Group recommendation, asked Sanctuary managers to expand the special Baitfish Permit to allow selective taking of baitfish from certain SPAs using hairhooks. This pilot program was implemented in 2004.
- Developed *Desired Future Conditions* for the Biscayne National Park Fisheries Management Plan through a Working Group that operated in conjunction with the Park Service.
- Hosted FWC board members and members of the National Marine Sanctuary Program's Marine Protected Area Technical Advisory Council at mixers in 2003 and 2004.
- Participated in events coordinated by the National Marine Sanctuary Foundation in the Florida Keys as well as the Sanctuary sponsored meeting "Connectivity: Science, People and Policy in the Florida Keys National Marine Sanctuary" held in Key West in 2004.
- Provided instrumental support to the Sanctuary Friends of the Florida Keys, a non-profit organization dedicated to supporting the mission of the Florida Keys National Marine Sanctuary.

3.5.2 EVALUATION ACTION PLAN

Introduction

As part of an effort to improve overall management of sanctuaries, on-going and routine performance evaluation is a priority for the NMSP. Both site-specific and programmatic efforts are underway to better understand the Program's ability to meet stated objectives and to address the issues identified in this management plan.

Throughout the management plan review process, FKNMS staff have been working with NMSP staff to develop performance measures for the action plans in this management plan.

Goals and Objectives

The goals of the Evaluation Action Plan are to:

- Highlight successful (or not so successful) efforts of site management
- Keep the public, Congress, and other interested parties apprised of Sanctuary effectiveness
- Help managers identify resource gaps so that they may better manage their sites
- Improve accountability
- Improve communication among sites, stakeholders and the general public
- Foster the development of clear, concise and, whenever possible, measurable outcomes
- Provide a means for managers to comprehensively evaluate their sites in both the short and long term
- Foster an internal focus on problem-solving and improved performance
- Provide additional support for the resource-allocation process
- Motivate staff with clear policies and a focused direction.

The objectives of this Action Plan are to:

- Present a set of performance targets that demonstrate progress towards desired outcomes for each action plan.
- Effectively and efficiently incorporate performance measurement into the regular cycle of NMSP management.

Implementation

Evaluating performance as a formal part of the regular cycle of management is a relatively new concept for the NMSP. Periodic reviews have taken place over the course of the Program's existence, but a process for integrating a system for performance evaluation has not been implemented up to now. With the Program's new focus on the management plan review process, the importance of this system was elevated and the fact that very little had been done to measure management performance was an issue that staff (both site and headquarters), the Advisory Councils and the public recognized as one that should be addressed.

As a result, NMSP headquarters staff began working on models for integrating performance measurement into the management plan review process as well as for evaluating overall performance of the national program. The idea behind these models was simple, but implementing them has been challenging due to the inherent difficulties of performance measurement (developing quantifiable outcome-based targets, projecting outward for results, estimating needs, relying on outputs or products for results reporting, etc.). With the measures in this management plan, however, FKNMS is

initiating the performance measurement process and, therefore, beginning to establish a baseline of information that can be used by the NMSP and the state to evaluate effectiveness of both the site and the Program over time. *Strategy EV.1-Measuring Sanctuary Performance Over Time* describes this process in more detail.

Strategy

There is one strategy in this Evaluation (EV) action plan:

- EV.1 Measuring Sanctuary Performance Over Time

This strategy is detailed below. Table 3.16 provides estimated costs for implementation of each strategy over the next five years.

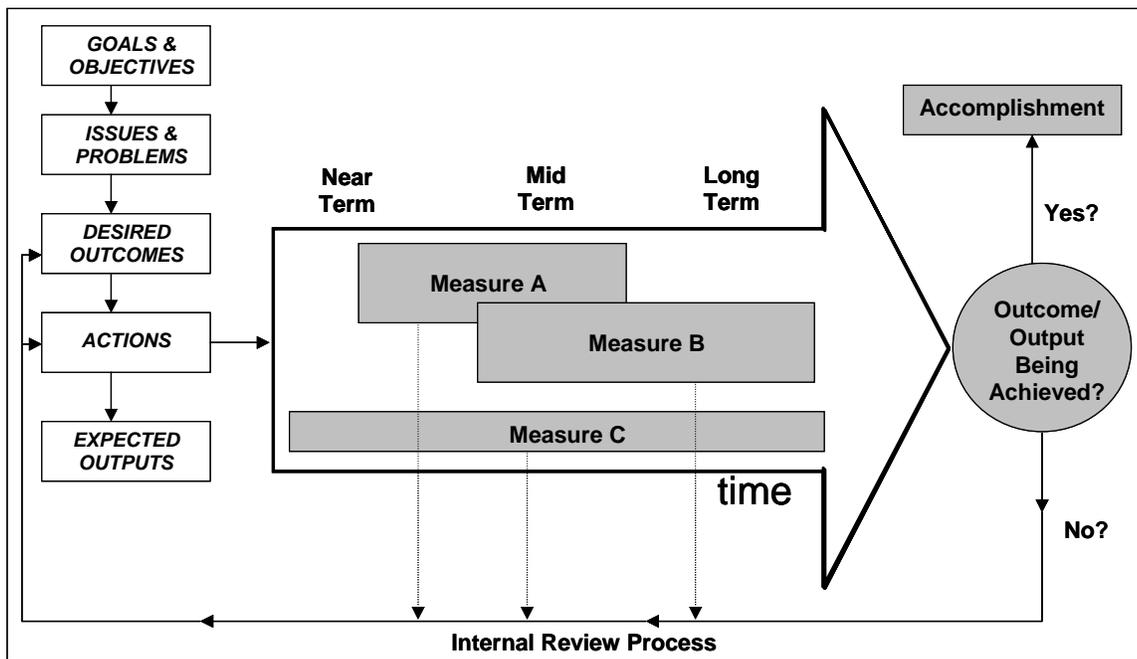
Table 3.16 Estimated Costs of the Evaluation Action Plan.

Strategy	Estimated Annual Cost (in thousands)*					Total Estimated 5 Year Cost
	YR 1	YR 2	YR 3	YR 4	YR 5	
EV.1: Measuring Sanctuary Performance Over Time	-	-	-	-	-	-
Total Estimated Annual Cost	-	-	-	-	-	-
* Because this is an internal exercise, it is estimated that costs for implementing this strategy will involve staff time only.						

Strategy Summary

This strategy details the process by which the Sanctuary will measure its management performance over time. Figure 3.1 depicts the basic idea behind this process, which will be implemented in all sanctuaries undergoing management plan review.

Figure 3.1 NMSP Performance Evaluation Logic Model



Issues and problems are identified during the scoping process relative to site goals and objectives. Staff then work to develop desired outcomes (targets based on a desired change in the status quo of something, such as the sanctuary’s environmental condition or management capacities). Actions (as identified in each of the action plans) are then grouped under the relevant outcomes. Expected outputs, or products, are also identified. Performance measures are then drafted, which identify the means by which the sanctuary will evaluate its progress towards achievement of the desired outcomes. As represented by the large arrow in Figure 3.1, measures can (and should) be developed to provide information on results over time, from the near term (within one year, for example) to the long term (over the span of ten years or more, for example). As these measures are monitored over time, data is collected on progress towards the achievement of outcomes and the production of outputs. Outcomes that are being achieved and outputs that are being produced are reported as accomplishments; inability to achieve outcomes or produce outputs are also reported, but as areas that are falling short of targets. In these areas, staff will work to identify the obstacles that are preventing management from reaching targets (represented in Figure 3.1 by the arrow that runs along the bottom of the graphic). This internal review is one of the primary benefits of performance evaluation process as it provides an opportunity for staff to think carefully about why particular actions are not meeting stated targets and how they can be altered to do so.

All performance measures for this revised management plan are found in tables 3.17 - 3.30. The information produced by performance measures in sanctuary management plans will be used not

only to improve the management of individual sanctuaries, but to inform programmatic performance evaluation as well. The NMSP Report Card will use action plan-specific performance information from the site management plans (along with information on headquarters-specific tasks) to evaluate the Program's performance in a wide variety of functional areas (such as education, research and monitoring, planning and policy, enforcement, and operations). Although this will be an internal process, results will be compiled, synthesized and then reported by the NMSP Director in a public document (such as the State of the Sanctuary Report).

There are four activities in this action plan. Each is designed to carry the Sanctuary through the performance evaluation process and integrate performance measurement into the regular cycle of site management. In the case of this action plan, it is not anticipated that there will be any additional costs beyond core operational expenses (labor and administrative overhead).

Activities (4)

(1) Assess Implementation of the FKNMS Management Plan Annually. This assessment will be conducted internally on an annual basis by FKNMS staff and will consider the progress and effectiveness of activities implemented over the previous year.

Status: Formal, annual assessments will begin with implementation of this revised management plan.

Implementation: FKNMS will lead this effort, coordinating with direct partners – notably FWC and EPA – as appropriate.

(2) Collaboratively Evaluate the Action Plans Found in this Document. As the NMSP continues to increase the rigor of its self-evaluation, the program would also like to increase the frequency with which partners formally join with the Sanctuary in assessing the effectiveness of our joint-management actions. Toward this end, regular evaluation of the action plans within this document is proposed. It is envisioned that each quarter, Sanctuary staff will facilitate collaborative evaluation of one action plan. As a result, a systematic rotation through the action plans will be completed every four years.

Status: Begins with implementation of this revised management plan.

Implementation: FKNMS will lead this effort collaborating with appropriate partners, notably the Sanctuary Advisory Council.

(3) Monitor Existing Performance Measures Consistently Over Time. FKNMS staff will conduct routine performance evaluations to collect and record data on Sanctuary performance over time. Using this data, staff will determine effectiveness by a) evaluating progress towards achievement of each action plan's desired outcomes and b) assessing the role or added value of those outcomes in the overall accomplishment of site goals and objectives. Effectiveness will be evaluated for both FKNMS performance measures as well as NMSP national performance measures where applicable. The performance measures that will be used in this exercise are outlined in Table 3.17 – Table 3.30 (below).

Status: Begins with implementation of this revised management plan.

Implementation: FKNMS will lead this effort, collaborating with partners – notably DEP, FWC and EPA – as appropriate.

(4) Report Results. Results from performance monitoring will be collected, analyzed and used to populate and inform the NMSP Report Card and, when necessary, state, NOS or NOAA-wide performance requirements. Performance data may also be presented in a site-specific annual report that would explain each measure, how it was evaluated, the site team that conducted the evaluation, and next steps. Based on this analysis, site staff, in cooperation with the Sanctuary Advisory Council, will identify accomplishments as well as work to determine those management actions that need to be changed to better meet their stated targets. The targets themselves may also be analyzed to determine their validity (if, for instance, they are too ambitious or unrealistic given current site capacities). The public may have opportunity to comment on the Sanctuary’s perception of its performance, ways in which the site could be more effective and methods for improving performance measurement when evaluation is on the agenda at future Sanctuary Advisory Council meetings.

Status: Begins with implementation of this revised management plan.

Implementation: FKNMS will lead this effort, collaborating with partners – notably DEP, FWC and EPA – as appropriate.

Table 3.17 Science Management and Administration Action Plan Performance Measure

Desired Outcome(s) For Science Management and Administration Action Plan			
Facilitate, permit, and manage scientific projects that propose to conduct prohibited activities. Broadly disseminate science program findings, with a focus on integrating this information into regional science efforts. Utilize technical expertise, both local and regional, in Sanctuary decision making.			
Performance Measures	Means of Evaluation	Baseline	NMSP Measure
By 2012, the number of research reports generated through permits will remain stable or have increased relative to expected fluctuations.	FKNMS will continue to manage a program to evaluate permit applications, issue research permits for pertinent research, and ensure receipt of permit reports.	Percent of research reports received for 2002 permits: 49% ¹	N/A
By 2012, the frequency of science reports and presentations will remain stable or increase to disseminate pertinent scientific findings.	FKNMS will continue to publish summaries of scientific findings and present results at scientific conferences and other meetings.	Number of reports and presentations in 2006: 1 and 2	
By 2012, the frequency of Technical Advisory Committee meetings and expert panels will remain stable.	FKNMS will continue to consult the Technical Advisory Committee and convene expert panels for the Sanctuary Advisory Council.	Frequency of meetings and panels: annual and biennial.	

¹ Percent reports received is based on a total of 93 research permits and amendments issued for the year 2002, and a total of 46 reports being submitted for the same group of permits and amendments.

Table 3.18 Science Research and Monitoring Action Plan Performance Measure

Desired Outcome(s) For Research and Monitoring Action Plan			
Resource and funding agencies with responsibilities for coral reef ecosystems increase efforts to identify and target critical knowledge gaps through cooperative assessment and planning.			
Performance Measures	Means of Evaluation	Baseline	NMSP Measure
By 2008, the second version of the Comprehensive Science Plan will be completed.	FKNMS will continue to update the Comprehensive Science Plan and finalize it for publication.	Number of CSP Revisions: 1	N/A
By 2011, the long term Zone Monitoring Program will be sustained at current sampling levels.	FKNMS will continue implementation of the zone monitoring program and prepare annual summaries of these efforts in relation to targeted Living Marine Resources.	Number of Zone Monitoring events: 5	Living Marine Resources

Table 3.19: Education and Outreach Action Plan Performance Measures

Desired Outcome(s) For Education and Outreach Action Plan			
Public interest and understanding of sanctuary issues and opportunities is mobilized to encourage responsible stewardship.			
Performance Measures	Evaluation	Baseline	NMSP Measure
By 2011, sanctuary centers and exhibits at partner locations will reach 500,000 people.	FKNMS will track the number of exhibition locations and visitor exposure.	Number of people reached by exhibits - 0	Public Awareness

Table 3.20: Volunteer Action Plan Performance Measures

Desired Outcome(s) for Volunteer Action Plan			
Increased involvement and integration of volunteers in FKNMS public awareness, and resource protection activities leads to increased productivity for targeted activities and enhances public stewardship of the sanctuary.			
Performance Measures	Evaluation	Baseline	NMSP Measure
By 2010, the Volunteer Program will increase the number of volunteer-hours contributed to sanctuary programs by 25%.	FKNMS will continue to track the number of volunteers and respective hours.	2500 hours	Volunteer

Table 3.21: Regulatory Action Plan Performance Measures

Desired Outcome(s) For Regulatory Action Plan			
To continue implementing an efficient and effective permitting program. To review and refine Sanctuary regulations based on management experience.			
Performance Measures	Means of Evaluation	Baseline	NMSP Measure
By 2010, the percentage of permits that are issued timely and correctly ¹ will increase to 100%.	FKNMS will track the issuance of permits via the OSPREY database and national program definition of "timely and correctly."	Percent of permits issued timely and correctly (2005) ² : 55%	Permits
By 2010, revised and updated sanctuary regulations will be published in the Federal Register Notice.	FKNMS will review and revise Sanctuary regulations and conduct the required NEPA analyses associated with the revisions.	Sanctuary regulatory revisions (2006): 0	N/A

¹ "Timely and correctly" is defined in the April 2006 National Permit Coordinators Workshop handbook as the percent of permits that received a "meets performance measure of 80%, excluding Decision Memo evaluation" score.

² Calculation made as follows: 49 permits were assessed from 1/1/05 to 8/18/05 by NMSP headquarters (includes one representative baitfish permit). 27 of those 49 permits (55%) received the "meets performance measure of 80%, excluding Decision Memo evaluation" score."

Table 3.22: Enforcement Action Plan Performance Measures

Desired Outcome(s) For Enforcement Action Plan			
Sanctuary resources are comprehensively protected through the sustained presence of law enforcement			
Performance Measures	Means of Evaluation	Baseline	NMSP Measure
By 2012, FKNMS law enforcement officers will maintain a 60%, or higher, allocation of their time on duty in a water patrol status.	FKNMS FWCC Law Enforcement Officers will continue to track duty hour status through use of "Activity Net" or comparable system.	60%	N/A

Table 3.23: Damage Assessment and Restoration Program Action Plan Performance Measures

Desired Outcome(s) For Damage Assessment and Restoration Program Action Plan			
To protect or restore the marine resources of the Sanctuary and to support the legal processes related to litigating resource injury claims.			
Performance Measures	Means of Evaluation	Baseline	NMSP Measure
By 2010, injury assessments will be conducted and assessment document prepared and ready for distribution to appropriate recipients within two weeks of the initial occurrence of the grounding (or other impact) incident.	FKNMS Damage Assessment and Restoration Program (DARP) team will keep track of the amount of time it takes to complete and distribute an assessment document from the time of occurrence.	Current data shows that the program averages 16 weeks from incident to completion and distribution of the Injury Assessment Report.	Habitat
By 2010, all seagrass and coral reef injury sites within the FKNMS will either be restored, in the process of restoration, or have a restoration plan in place and awaiting implementation within three months of the initial occurrence of the incident.	FKNMS Damage Assessment and Restoration Program (DARP) will keep track of the amount of time it takes to complete and distribute restoration plans, as well as the implementation of restoration alternative selected, from the time of occurrence.	Current data shows that the program averages 15 months to finalize a restoration plan, 31 months to implement restoration, and 38 months to implement restoration from the time of occurrence. Note: unless the restoration is deemed an emergency, restoration cannot be implemented until the case has been settled and funds have been distributed for use.	Habitat

By 2012, a certification training program will be in place and functioning to prepare towing and salvage operators working within the FKNMS. It may be integrated into a salvage operation activity permit structure should one be created.	FKNMS Damage Assessment and Restoration Program (DARP) team, with input from the Florida Fish and Wildlife Conservation Commission Division of Law Enforcement, will determine when the certification training program is functioning.	No permitting system or training program in place to educate salvors regarding minimal impact gear and best practices techniques of vessel removal	Habitat, Permit, Enforcement
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Table 3.24: Maritime Heritage Resources Action Plan Performance Measures

Desired Outcome(s) For Maritime Heritage Resources Action Plan			
Historical archeological resources are managed and protected.			
Performance Measures	Means of Evaluation	Baseline	NMSP Measure
By 2012, five additional historical shipwrecks will be documented and mapped with an accompanying Archaeological Report	Completion of projects and receipt and acceptance of Archaeological Reports from projects conducted	4 reports completed as of 2006.	MHR
By 2012, the FKNMS Atlas of Maritime Heritage Resources will have been updated twice and contain the most accurate information available	FKNMS will accumulate corrections, and additions to the database throughout the 5 year period for input into the Atlas. The Florida Master Site Files is maintained as public record by the Florida Bureau of Archeological Resources.	Draft Atlas created in 2006	MHR

Table 3.25: Marine Zoning Action Plan Performance Measures

Desired Outcome(s) For Marine Zoning Action Plan			
To maintain or increase species diversity, populations of key species, and habitat quality within zoned areas. To increase user compliance and satisfaction with zoned areas.			
Performance Measures	Means of Evaluation	Baseline	NMSP Measure
By 2010, the number of stony coral species in zoned areas will remain stable or increase over time relative to baseline fluctuations. ⁴	FKNMS will continue to support monitoring of zoned areas by the UNCW Coral Reef Rapid Assessment Monitoring and Modeling project, FWC Coral Reef Evaluation and Monitoring	Number of stony coral species at two habitat types and locations (2002) ¹ : Western Sambo	Living Marine Resources

	Program, and other projects to track species numbers.	Ecological Reserve (low-relief spur and groove habitat type): 27 Carysfort Reef SPA (low-relief hard-bottom habitat type): 22	
By 2010, the populations of key species in zoned areas will remain stable or increase over time relative to baseline fluctuations. ⁴	FKNMS will continue to support monitoring of zoned areas by the FWC and other projects to track species populations, such as spiny lobster	Mean abundance ² of legal-sized spiny lobsters in the Western Sambo Ecological Reserve (all habitats combined) during the closed fishing season (July 1998) ³ : 11.78	Living Marine Resources
By 2010, the habitat quality within zoned areas will remain stable or improve.	FKNMS will continue to support monitoring of zoned areas by the UNCW Coral Reef Rapid Assessment Monitoring and Modeling project, FWC Coral Reef Evaluation and Monitoring Program, and other projects to track habitat quality.	Mean percent cover of stony corals at two habitat types and locations (2002) ¹ : Western Sambo Ecological Reserve (low-relief spur and groove habitat type): 10.3% Carysfort Reef SPA (low-relief hard-bottom habitat type): 2.5%	Habitat

¹ Miller, S. L., D.W. Swanson, M. Vermeij, and D. Eaken, "Rapid Assessment and Monitoring of Coral Reef Habitats on the Florida Reef Tract, Summer 2002," in *National Oceanic and Atmospheric Administration, Florida Keys National Marine Sanctuary, U.S. Environmental Protection Agency, and State of Florida 2002-03 Sanctuary Science Report: An Ecosystem Report Card After Five Years of Marine Zoning*. May 2006; 378 pp.

² Abundance = # lobsters / 1 hour search time

³ Cox, C. and J. H. Hunt. "Change in size and abundance of Caribbean spiny lobsters *Panulirus argus* in a marine reserve in the Florida Keys National Marine Sanctuary, USA." *Mar Ecol Prog Ser.* Vol. 294: 227-239, 2005.

⁴ Baseline Fluctuations are defined as the variation documented in a long-term data set.

Table 3.26: Mooring Buoy Action Plan Performance Measures

Desired Outcome(s) For Mooring Buoy Action Plan			
Sensitive habitats in high use areas of the Sanctuary will be protected from anchor damage			
Performance Measures	Means of Evaluation	Baseline	NMSP Measure
By 2012, the FKNMS will continue to maintain, at minimum, the current number of mooring buoys at 95% availability.	FKNMS mooring buoy maintenance team provides written reports monthly on percent of buoys available for vessel mooring and zone marking	465 buoys	N/A

Table 3.27: Waterway Management Action Plan Performance Measures

Desired Outcome(s) For Waterway Management Action Plan			
Decline in boating related environmental damage to the submerged resources of the Sanctuary.			
Performance Measures	Evaluation	Baseline	NMSP Measure
By 2012, there will be a 10% reduction in the incidents of vessel groundings.	FKNMS will track the number of reported vessel groundings	500-600 vessel grounding reports per annum	Habitat, Living Marine Resources
By 2012 there will be a 10% reduction in total acres heavily scarred by boat propellers	FKNMS will track the number of acres of seagrass flats heavily scarred by boat propellers taking into account those areas under restoration and in recovery.	30,000 acres of grassflats heavily scarred by boat propellers	Habitat, Living Marine Resources

Table 3.28: Water Quality Action Plan Performance Measures

Desired Outcome(s) For This Action Plan			
Overall water quality is improved throughout the sanctuary and statistically validated through long term monitoring data			
Performance Measures	Means of Evaluation	Baseline	NMSP Measure
By 2010, FKNMS will have completed regulatory review ¹ , for the potential for inclusion of federal Waters within the FKNMS as a no-discharge zone consistent with the state waters of the FKNMS.	FKNMS will maintain an administrative record regarding this process.	0 – No Current Action	Water Quality
By 2012, FKNMS will maintain the current level of water quality monitoring, and undertake 3 special studies based on results of these data.	FKNMS will develop long term monitoring and special study reports to be maintained and published on the internet	Stations sampled quarterly =54 Special Studies=0	Water Quality

¹ The term *regulatory review* implies that FKNMS will:

- develop a recommended, or draft, preferred alternative, following requirements of the National Environmental Policy Act (NEPA);
- develop a proposed rulemaking if appropriate; and
- deliver the associated documents to HQ for the beginning of the clearance process.

Table 3.29: Operations Action Plan – Administration Function Performance Measures

Desired Outcome(s) For Operations Action Plan – Administration Function			
Increased protection of Sanctuary Resources through efficient use and leveraging of resources			
Performance Measures	Means of Evaluation	Baseline	NMSP Measure
Through 2012 FKNMS will continue to maintain strategic partnerships through memoranda of agreement and implement, at least, one joint project under each agreement that results in leveraging of fiscal resources or expertise, and/or meets a priority activity under this management plan. .	FKNMS will maintain records of executed agreements and associated activities under these agreements.	0 ¹ – Currently, various projects are in process under executed agreements.	Partnerships

¹ A baseline of 0 successfully implemented projects is being used to allow the accurate measure of new projects completed under this plan based on the date of its implementation.

Table 3.30: Operations Action Plan - Sanctuary Advisory Council Function Performance Measures

Desired Outcome(s) For Operations Action Plan -Sanctuary Advisory Council Function			
Meaningful stakeholder participation is maintained or strengthened to implement the vision, mission, goals and objectives of the FKNMS.			
	Means of Evaluation	Baseline	NMSP Measure
By 2010, the Sanctuary Advisory Council will provide significant input on 30 priority projects ¹	Council input on these types of issues will be recorded in the meeting minutes at each council meeting. With the aid of written and/or recorded meeting minutes, each sanctuary advisory council coordinator will track any significant input on a priority project/issue that occurred during the council meeting. Coordinators will also provide a brief justification (one or two sentences) as to why the input is "significant" and "priority".	6 - per year	SAC