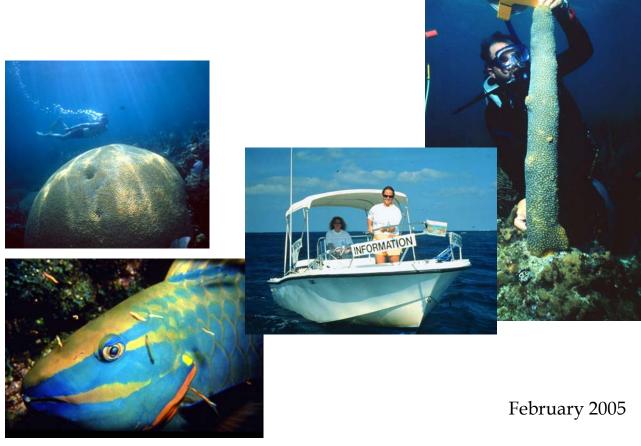
Florida Keys National Marine Sanctuary Draft Revised Management Plan





U.S. Department of Commerce

National Oceanic and Atmospheric Administration

National Ocean Service

National Marine Sanctuary Program

This document is the draft revised management plan for the Florida Keys National Marine Sanctuary. It replaces the management plan that was implemented in 1997 and will serve as the primary management document for the Sanctuary during the next five years.

Comments or questions on this management plan should be directed to:

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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) 743-2437 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: http://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 1997 *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 just five years ago; 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 livelihoods for approximately 80,000 residents.

The Sanctuary is 2,900 square nautical miles of coastal waters, including the recent addition of the Tortugas Ecological Reserve. The Sanctuary overlaps six state parks and three state aquatic preserves. Three national parks have separate jurisdictions, and share a boundary with the Sanctuary. In addition, the region 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 ship groundings, pollution, and overfishing. Threats to the Sanctuary also include indirect human impacts, which are harder to identify but seem to be 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: http://floridakeys.noaa.gov.

Management Plan Organization

Within this document, the tools that the Sanctuary uses to achieve its goals, are presented under 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 1997 *Management Plan* generally retain their designations in this document. As in the 1997 plan, two or more action plans may share a strategy where their goals and aims converge.

Accomplishments and Highlights

The Sanctuary's programs and projects have made significant progress since the original management plan was implemented 1997. An overview of these accomplishments is provided in the Introduction. In addition, each action plan contains bulleted lists of accomplishments since the 1997 management plan was adopted.

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Acronyms

ASA Abandoned Shipwreck Act

ATBAs Areas to Be Avoided

AWT Advanced Wastewater Treatment

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

CFR Code of Federal Regulations

DARP Damage Assessment and Restoration Program
DMR Department of Marine Resources (Monroe County)

EIS Environmental Impact Statement EPA Environmental Protection Agency

ESA Endangered Species Act

F.S. Florida Statues

FAC Florida Administrative Code

FDACS Florida Department of Agriculture and Consumer Services

FDHR Florida Division of Historical Resources

FDEP Florida Department of Environmental Protection FFWCC Florida Fish and Wildlife Conservation Commission

FKNMS Florida Keys National Marine Sanctuary

FKNMSPA Florida Keys National Marine Sanctuary Protection Act

FPS Florida Park Service

FWRI Fish and Wildlife Research Institute

FWS Fish and Wildlife Service

GIS Geographic Information System
GPS Global Positioning System
HAZMAT Hazardous Materials
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

NEPA National Environmental Protection Act

NGO Non-governmental Organization NHPA National Historic Preservation Act NMFS National Marine Fisheries Service

NMS National Marine SanctuaryNMSA National Marine Sanctuary ActNMSP National Marine Sanctuary Program

NOAA National Oceanic and Atmospheric Administration

NOS National Ocean Service

NPDES National Pollutant Discharge Elimination System

NPS National Park Service
OSDS On-Site Disposal System
PSSA Particularly Sensitive Sea Area

SAV Submerged Aquatic Vegetation SCR Submerged Cultural Resources SEFSC Southeast Fisheries Science Center

SFWMD South Florida Water Management District

SPA Sanctuary Preservation Area

SWIM Surface Water Improvement and Management Act

SWM Stormwater Management
TNC The Nature Conservancy
USACE U.S. Army Corps of Engineers

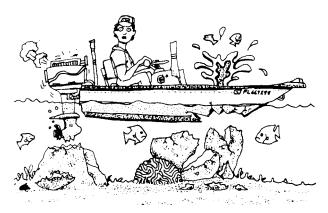
USCG U.S. Coast Guard

USDOC U.S. Department of Commerce USDOI U.S. Department of Interior USDOS U.S. Department of State

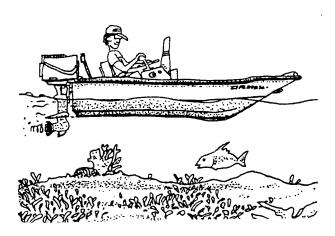
USDOT U.S. Department of Transportation

USGS U.S. Geological Survey WMA Wildlife Management Area

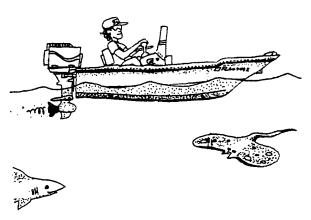
3.0 ACTION PLANS



BROWN, BROWN, RUN AGROUND



GREEN, GREEN, NICE AND CLEAN



BLUE, BLUE, SAIL ON THROUGH

What Are Action Plans?

Action plans are the means by which the Sanctuary identifies and organizes the wide variety of management tools it employs to manage and protect its marine resources. "Road maps" for management, action plans articulate the programs and projects used to address the resource issues identified in the Sanctuary and to fulfill the purposes and policies of the NMSA. Each action plan is composed of *strategies* sharing common management objectives and *activities*, which are the specific actions the Sanctuary and its partners will take to implement the strategies.

What Are The Action Plans In This Document?

The following chapters are the action plans that guide every aspect of sanctuary management. Readers should note that the 1997 Final Management Plan for the Sanctuary included ten action plans, presented in alphabetical order to address management needs related to:

- Channel/Reef Marking
- Education and Outreach
- Enforcement
- Mooring Buoys
- Regulatory
- Research and Monitoring
- Submerged Cultural Resources
- Water Quality
- Volunteer
- Zoning

In this revised management plan, four new action plans have been added: Science Management and Administration Action Plan, Damage Assessment and Restoration Action Plan, Operations Action Plan, and, Evaluation Action Plan. The Submerged Cultural Resources Action Plan has been changed to the Maritime Heritage Resources Action Plan, while the Channel/Reef Marking Action Plan has been renamed to more accurately reflect the intent, which is "Waterway Management", and the word "Marine" has been added to the Zoning Action Plan to clarify the title.

Management Divisions

In this revised management plan, the individual action plans have been grouped into five management divisions. This was done to both improve the organization of the plan as well as to highlight the management goals for each of the plans. The individual action plans for the Sanctuary are organized in the following divisions:

Sanctuary Science

- Science Management and Administration Action Plan
- Research and Monitoring Action Plan

Education, Outreach and Stewardship

- Education and Outreach Action Pan
- Volunteer Action Plan

Enforcement and Resource Protection

- Regulatory Action Plan
- Enforcement Action Plan
- Damage Assessment and Restoration Action Plan
- Maritime Heritage Resources Action Plan

Resource Threat Reduction

- Marine Zoning Action Plan
- Mooring Buoy Action Plan
- Waterway Management Action Plan
- Water Quality Action Plan

Administration, Community Relations and Policy Coordination

- Operations Action Plan
- Evaluation Action Plan

Implementing Action Plans

The FKNMS defines a place where many governmental and non-governmental organizations work in partnership to achieve the Sanctuary's goals: protect resources and their conservation, recreational, ecological, historical, research, educational, or aesthetic values through comprehensive long-term management. This management plan describes these collective efforts, and its implementation relies on resources and efforts from a variety of partners. Table 3.1 describes the extent to which each of the action plans and strategies within this revised management plan can be implemented under three funding scenarios. Funding from both NOAA and other partners, (e.g. EPA, Monroe County, etc.) is considered in ranking the level of implementation.

Table 3.1 Action Strategy Implementation Over Five Years Under Three Funding Scenarios

	60 I				
Iı	mplementation*	Implementation* with		0)	0)
W	rith NOAA Funding	Partner Funding	<i>₽</i> 0	5% rease	10% rease
•	• High • - Medium • - Low	◆ - High◆ - Medium◇ - Low	Scenario 1: Level Funding	Scenario 2: 5% per year increase	Scenario 3: 10% per year increase
Sar	nctuary Science				
	Science Management and A	Administration Action Plan			
	Strategy B.11 – Issuance of	Sanctuary Research Permits	•	•	•
	Strategy W.29 - Dissemina	tion of Findings	•	•	•
	Strategy W.32 - Maintainir	ng a Technical Advisory Committee	•	•	•
	Strategy W.34 - Regional S	cience Partnerships and Reviews	•	•	•
	Strategy W.35 - Data Mana	gement	*	*	•
	Research and Monitoring A	Action Plan			

_

^{*} Implementation ranking considers the priority of each strategy as well as the percentage of activities that could be initiated, maintained, and/or completed under differing funding scenarios.

		Strategy W.33 - Ecological Research and Monitoring	•	•	•+
		Strategy Z.6 - Marine Zone Monitoring	•	•	•
		Strategy W.36 - Conducting Socioeconomic Research	•	•	•
		Strategy F.3 – Researching Queen Conch Population Enhancement	•+	•+	•+
		Methods			
		Strategy F.7 - Researching Impacts from Artificial Reefs	●�	●�	•+
		Strategy F.6 - Fisheries Sampling	●◆	●�	••
		Strategy F.11 - Evaluating Fishing Gear/Method Impacts	00	00	●◆
		Strategy F.15 - Assessing Sponge Fishery Impacts	●◆	●◆	•+
		Strategy W.18 - Conducting Pesticide Research	00	00	●◆
		Strategy W.22 - Assessing Wastewater Pollutants Impacts	••	•	• •
		Strategy W.23 - Researching Other Pollutants and Water Quality	●◆	●◆	•+
		Issues			
		Strategy W.24 – Researching Florida Bay Influences	●◆	● ◆	•+
		Strategy W.21 - Developing Predictive Models	•♦	●�	•+
E		cation, Outreach and Stewardship			
	C	Outreach and Education Action Plan			
		Strategy E.4 - Developing Training, Workshops and School	0	•	•
		Programs			
		Strategy E.6 – Continuing the Education Working Group	_	O	
		Strategy E.10 - Establishing Public Forums	O		•
		Strategy E.11 - Participating in Special Events	0	0	•
		Strategy E.1 - Printed Product Development and Distribution		•	O
		Strategy E.2 - Continued Distribution of Audio-Visual Materials	0		0
		Strategy E.3 – Continue Development of Signs, Displays, Exhibits,	•	•	
		and Visitor Centers	•	•	•
		Strategy E.5 – Applying Various Technologies Strategy E.12 – Professional Development of Outreach and	0	0	0
		Education Staff			
	V	Volunteer Action Plan			
	v	Strategy V.1 - Maintaining Volunteer Programs	•	•	•
		Strategy V.2 - Working with Other Organization/Agency	Ō	0	0
		Volunteer Programs			
		Strategy V.3 - Providing Support for Volunteer Activities	0	0	•
Er	nfo	orcement and Research Protection			
		egulatory Action Plan			
		Strategy R.1 - Maintaining the Existing Permit Program	•	0	
		Strategy R.2 – Regulatory Review	•	•	•
	F	nforcement Action Plan			
		Strategy B.6 - Acquiring Additional Enforcement Personnel		•	•
	Г	Damage Assessment and Restoration Action Plan			
		Strategy B.18 - Injury Prevention	ТО	0	•
		Strategy B.19 - Implementing DARP Notification and Response	0	0	•
		Protocols		_	_
		Strategy B.20 - Damage Assessment and Documentation	•◊	•	• ♦
		Strategy B.21 - Case Management	•	•	•
		Strategy B.22 – Habitat Restoration	*	*	•
		Strategy B.23 - Data Management	0	•	•
	N	Maritime Heritage Resources Action Plan			

Strategy MHR.1 - MHR Permitting	•	•	•
Strategy MHR.2 - Establishing an MHR Inventory	0�	0�	●�
Strategy MHR.3 - MHR Research and Education	00	00	● �
Strategy MHR.4 - Ensuring Permit Compliance through	•	•	•
Enforcement			
Strategy MHR.5 - Ensuring Interagency Coordination	•	•	•
Resource Threat Reduction			
Marine Zoning Action Plan			
Strategy Z.1 - Wildlife Management Areas	0	•	
Strategy Z.2 - Ecological Reserves	•	•	•
Strategy Z.3 - Sanctuary Preservation Areas	0	•	•
Strategy Z.4 - Existing Management Areas	•	•	•
Strategy Z.5 – Special-use Areas	0	•	•
Mooring Buoy Action Plan			
Strategy B.15 - Mooring Buoy Management	•	•	•
Waterway Management Action Plan			
Strategy B.1 – Boat Access	•	•	•
Strategy B.4 - Waterway Management/Marking	♦		•
Water Quality Action Plan			
Strategy W.19 - Florida Bay Freshwater Flow	••	•+	•+
Strategy W.3 – Addressing Wastewater Management Systems	\Diamond	\Diamond	♦
Strategy W.5 - Developing and Implementing Water Quality	\Diamond	\Diamond	\Diamond
Standards			
Strategy W.7 - Resource Monitoring of Surface Discharges	•	•	•
Strategy W.11 – Stormwater Retrofitting	\Diamond	\Diamond	*
Strategy W.14 – Instituting Best Management Practices	•	*	•
Strategy B.7 – Pollution Discharges	●�	●�	•+
Strategy L.1 - Elimination of Wastewater Discharge from Vessels	●�	●�	•+
Strategy L.3 - Marina Operations	•	*	•
Strategy L.7 - Assessing Solid Waste Disposal Problem Sites	\Diamond	\Diamond	*
Strategy W.15 - HAZMAT Response	00	00	●�
Strategy W.16 - Spill Reporting	00	00	●�
Strategy L.10 - HAZMAT Handling	\Diamond	\Diamond	*
Strategy W.17 - Refining the Mosquito Spraying Program	\Diamond	\Diamond	*
Strategy W.10 - Addressing Canal Water Quality	\Diamond	\Diamond	*
Administration			
Operations Action Plan			
Strategy OP.1 - Addressing Administrative Policy Issues	•	•	•
Strategy OP.2 - Addressing Resource Policy Issues	•	•	•
Strategy OP.3 - Addressing Legal Issues	•	•	•
Evaluation Action Plan			
Strategy EV.1 - Measuring Sanctuary Performance Over Time	•	•	•