Florida Keys National Marine Sanctuary Revised Management Plan













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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
U.S. Environmental Protection Agency

ESA Endangered Species Act

F.S. Florida Statues

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 Water Quality Protection Program Water Quality Steering Committee WQPP WQSC



3.2 EDUCATION, OUTREACH, & STEWARDSHIP

There are currently two action plans that fall into this management division: the Education and Outreach Action Plan and the Volunteer Action Plan. While the purpose of these two action plans is different, each is more effective when they are integrated with one another because greater understanding leads to a greater desire to volunteer time for conservation goals, and *vice versa*.

Successful Sanctuary management relies on a well-informed public who understand their role in the overall management of the Sanctuary. The Education and Outreach Action Plan outlines management tools to reach key audiences, such as students or first-time visitors, with critical messages that enlist their support in protecting Sanctuary resources.

The Volunteer Action Plan addresses people wishing to spend time protecting and conserving Sanctuary resources. Volunteer efforts provide beneficial services and information to the Sanctuary as well as provide opportunities to increase a sense of stewardship among Florida Keys' constituencies.

3.2.2 Volunteer Action Plan

Introduction

The FKNMS Volunteer Program began as a formal partnership between The Nature Conservancy and NOAA from 1992 to 2004. In 2004, FKNMS took over the management of the volunteer program. Its programs are coordinated from all three Sanctuary offices and function as an important source for recruiting, training, placing and recognizing volunteers. Volunteers are a vital mechanism for involving the community and a valuable resource for accomplishing a variety of tasks, including research and monitoring, education and outreach programs, underwater projects, representation at certain events and functions, and administrative tasks. Volunteers support many activities that would otherwise not be accomplished as efficiently or cost effectively. There are numerous volunteer programs in the Florida Keys, many of which predate the FKNMS. In a holistic sense, some of these volunteer programs are enhancing Sanctuary resources. It is not the intent of this action plan to subsume or usurp these excellent programs. The FKNMS plans to continue to collaborate on volunteer activities within the Sanctuary with other volunteer organizations.

The FKNMS volunteer program works closely with other Sanctuary programs, outside organizations and agencies. Volunteers are matched to activities that align their interests and backgrounds. Because of the territory covered and the diversity of projects, project managers are also volunteer coordinators for their specific projects. The strength of the Volunteer Action Plan is its commitment to partnerships. Additional partnerships with the state, universities, and other non-governmental organizations have dramatically expanded the work begun by FKNMS staff. Volunteers today form an integral part of Research and Monitoring, Mooring Buoy, Water Quality, Education and Outreach, Maritime Heritage Resources, Damage Assessment and Restoration, and Administration action plans.

Goals and Objectives

The goals of the Volunteer Action Plan are to:

- Assist staff in accomplishing management objectives.
- Build a stewardship ethic in the community.

The objective of the Action Plan is to:

Develop a system of public involvement that supports the Sanctuary in a "hands-on" manner.

Accomplishments

There have been several accomplishments in the FKNMS volunteer programs since implementation of the 1996 management plan, including:

- Volunteers have donated over 180,000 volunteer hours to the Sanctuary between 1996 and 2006, the equivalent of \$2.9 million in cash contributions, based on a national formula.
- The Sanctuary has implemented many successful volunteer efforts including Adopt-A-Reef, Coral Reef Classroom, Reef Medics, Team OCEAN, Maritime Heritage Resources Inventory, and other projects.

- Some volunteer programs in the FKNMS such as Team OCEAN have been implemented nationwide in the NMSP.
- Mote Marine Laboratory Center for Tropical Research uses volunteers in the Marine Ecosystem Event Response and Assessment (MEERA) and the Coral Bleaching Watch Program
- The Ocean Conservancy's Reef Ecosystem Condition (RECON) RECON program trains volunteers to collect information about the reef environment and its health.
- Florida Fish and Wildlife Conservation Commission enlists volunteers for the Queen Conch Restoration Project and Lobster Watch.
- Old Dominion University and Florida State University use volunteers for the Spotted Lobster Population Study and Lobster Watch.
- Volunteers support the University of North Carolina, Wilmington with coral spawning research.
- The Dolphin Ecology Project: Atlantic Bottlenose Dolphin Study uses volunteers.
- Reef Environmental Education Foundation relies almost entirely on qualified volunteers to perform fish surveys and the Great Annual Fish Count.
- The Nature Conservancy continues to benefit from volunteer assistance with Florida Bay Watch and Sea Stewards Monitoring.

Strategies

There are three strategies in this Volunteer Action Plan:

- V.1 Maintaining Volunteer Programs
- V.2 Working with Other Organization/Agency Volunteer Programs
- V.3 Providing Support for Volunteer Activities

Each of these strategies is detailed below. Table 3.5 provides estimated costs for implementation of each strategy over the next five years.

Table 3.5 Estimated costs of the Volunteer Action Plan

Volunteer Action Plan Strategies		ed Ann	ual Cost			
		YR 2	YR 3	YR 4	YR 5	Estimated 5 Year Cos
V.1: Maintaining Volunteer Programs+	1	1	1	1	1	5
V.2: Working With Other Organization/Agency Volunteer Programs++	-	-	-	-	-	-
V.3: Supporting Volunteer Activities	75	75	85	85	85	405
Total Estimated Annual Cost	76	76	86	86	86	410

⁺ Funding for some of the activities in Strategy V.1 are accounted for in other action plans with related activities

⁺⁺ Funding does not reflect expenditures by organizations other than the NMSP.

STRATEGY V.1 MAINTAINING VOLUNTEER PROGRAMS

Strategy Summary

The FKNMS volunteer programs are as varied as the people who donate their time. The activities range from assisting the vessel maintenance staff to picking up litter on a reef by participating in the Adopt-A-Reef program. There are several activities associated with this strategy.

Activities (9)

(1) Coordinate the Reef Medics Program. Reef Medics is an innovative, hands-on program designed to use volunteers to assist in FKNMS restoration efforts. Volunteers have experience in vessel navigation and operation, snorkeling, and SCUBA diving. The Damage Assessment and Restoration Program (DARP) staff trains the volunteers in salvage and restabilization techniques. Currently, SCUBA certification is required for restoration efforts and DARP staff assists with the necessary approvals for diving through the NOAA Dive Program, The Nature Conservancy, Mote Marine Lab and other agencies. Reef Medics primarily assist DARP staff if the injury size falls below the threshold of a Natural Resources Damage Action claim or the responsible party is determined to be unviable or unknown, as in "hit and run" or "orphan" sites. Salvage and restabilization efforts of smaller viable fragments can be conducted by Reef Medics and trained volunteer divers using hand tools and cement or adhesives specifically formulated for marine applications.

Reef Medics support comes from compensatory funds from vessel grounding settlements, grants, and Sanctuary Friends of the Florida Keys, including contributions to purchase equipment and supplies, and vessel support.

Reef Medics are involved in follow-up documentation and monitoring repaired sites for two years after repairs. Expansion of the Reef Medics program will include activities not requiring SCUBA diving, with opportunities for participation by non-divers and volunteers. Mote Marine Laboratory has conducted a pilot Reef Medics "Base Camp" project and further development is underway. The content and materials for a new volunteer training course has been developed.

Status: Implemented and on-going.

Implementation: FKNMS

(2) Promote and Support Environmental Education in Monroe County and State Schools. Volunteers assist the education and outreach staff in bringing environmental education to schools in Monroe County. Coral Reef Classroom volunteers chaperone middle-school students during a snorkel trip to the reef and help students with water quality testing. The program is offered in the spring and fall. Volunteers are trained in the use of the equipment and procedures. Volunteers are also used to take programs such as Build a Coral Reef, Build a Seagrass Community, and Coral Reef Play to elementary classes in Monroe County.

Status: Implemented and on-going.

<u>Implementation</u>: FKNMS, The Nature Conservancy, the Ocean Conservancy, and Monroe County Schools.

(3) Provide Mechanisms Outside of the Law Enforcement Sector that can Deliver Resource Education at the Site of the Resource - Team OCEAN. Team OCEAN volunteers donate their time promoting safe and enjoyable public use of the marine environment of the Florida Keys National Marine Sanctuary, while advocating the protection of our natural resources. Trained volunteer teams using Sanctuary owned vessels are stationed at heavily visited reef sites during the peak recreational boating seasons. They educate and inform the public about the FKNMS, and encourage proper use of Sanctuary resources and basic safety precautions. Team OCEAN volunteers directly prevent groundings by being present, watching for errant boaters, and waving them off when they attempt to cross the shallow reef crest.

Status: Implemented and on-going.

Implementation: FKNMS

(4) Coordinate the Adopt-A-Reef Program. Local dive operators and volunteer divers "adopt" a reef and run special trips to the site so scuba divers can remove trash, fishing line and other debris. Many shops offer substantial discounts or social events to mark the clean-up. Certified divers are briefed on proper methods of cleaning the reef without damaging resources.

<u>Status</u>: On-going; looking for opportunities to expand.

Implementation: FKNMS, The Ocean Conservancy, and dive operators.

(5) Maintain the Maritime Heritage Resources Inventory. A bibliographic database has been created in a standard format and made accessible over the Internet. Volunteers and Sanctuary staff survey and identify site locations and site characteristics including name, age, integrity, and historical and cultural significance, sensitivity, and recreational value. Volunteers assist staff in collecting existing information, locating unrecorded sites, recording and documenting sites, assessing site significance, and developing sites for improved public access, interpretation, and protection.

Status: Implemented and on-going.

<u>Implementation</u>: Continue with assistance from Florida Department of Historical Resources. This activity is conducted in conjunction with the Maritime Heritage Resources Action Plan.

(6) Provide Support for Vessel, Dock, and Mooring Buoy Assistance and Maintenance. Volunteers assist Sanctuary staff with marine and dock maintenance activities including mooring buoy installation, repair, and cleaning; vehicle and boat maintenance, grounds maintenance, and storage and dock cleaning. Qualified volunteers also assist as captains and mates. This activity is also included in the Waterway Management Action Plan.

Status: Implemented and on-going.

Implementation: FKNMS

(7) Gather Support for Geographic Information Systems. Geographic information systems (GIS) technology can be used for scientific investigations, and resource management. Volunteers work with Sanctuary staff using GIS software and imagery to provide FKNMS managers with information and photographs. Some of volunteer products include:

- Aerial photographs of sea bottom features near coral reefs that provide baseline data on the percent of coral cover at the various reefs.
- Research regarding the location of monitoring stations in relation to benthic cover, and
 assistance to the mooring buoy specialists in pinpointing a location of a mooring buoy anchor
 when the mooring balls have been torn away.
- A comparison between the 1995 and 1999 color infrared photographs that show the damage over time of seagrass destruction and turbidity increases by boats transiting shallow areas.
- Baseline information on the current status of nearshore areas as baseline information to measure future changes.
- Satellite views of the entire Florida Keys that can be used to show areas of Sea Steward monitoring and other monitoring efforts.
- Nearshore aerial photos of research areas where benthic habitat studies are being conducted.

Status: Implemented and on-going.

<u>Implementation</u>: FKNMS and other non-governmental organizations also included in numerous other Action Plans.

(8) Maintain the Eyes On the Water Program. This new Program will provide professionals on the water, such as dive-boat captains and crew, with the opportunity to be the Sanctuary's "eyes and ears," by letting staff know when someone is behaving in a manner that may be inconsistent with Sanctuary regulations. The Sanctuary will follow up on the report with a letter and educational materials to the vessel owner. This activity also included in the Damage Assessment and Restoration, Education and Outreach and Enforcement Action Plans.

Status: Implemented and on-going.

<u>Implementation</u>: FKNMS trains volunteers and facilitates this program. Project lead and partners include the FKNMS, non-governmental organizations, and the public,

(9) Maintain Support For Other Volunteer Projects. Volunteer assistance is an integral part of FKNMS projects not associated with specific strategies, such as general office and computer support tasks, maintenance activities, fundraising, and other special projects.

Status: Implemented and on-going.

Implementation: FKNMS

STRATEGY V.2 WORKING WITH OTHER ORGANIZATION/AGENCY VOLUNTEER PROGRAMS

Strategy Summary

The National Marine Sanctuary Program has a history of using volunteers to assist with activities ranging from maintenance to public education. Volunteers also work with organizations not associated directly with the Sanctuary but whose interests coincide with Sanctuary goals. The volunteer programs and projects are an integral part of the Sanctuary and the community, providing information relating to the overall health of the ecosystem. The information presented by the organizations assists FKNMS managers in making better resource management decisions.

Activities (11)

(1) Assist Florida Keys Watch. (formerly Florida Bay Watch). This program trains volunteers to collect seawater samples and environmental data using standard scientific methods. Florida Keys Watch is designed to augment and assist scientific studies conducted by universities, agencies, and other institutions. This activity is also included in the Water Quality and Damage Assessment Action Plans.

<u>Status</u>: A redesign of this project is underway. <u>Implementation</u>: The Nature Conservancy and Florida International University

(2) Assist Reef Environmental Education Foundation. The Reef Environmental Education Foundation (REEF) is a grassroots, nonprofit organization that uses recreational divers who regularly conduct fish biodiversity and abundance surveys in the Keys and the Caribbean. These surveys are conducted as part of REEF's Fish Survey Project (The Great Annual Fish Count) and become part of a publicly accessible database. This activity is also included in the Research and Monitoring Action Plan.

<u>Status</u>: Implemented and on-going. <u>Implementation</u>: REEF, FKNMS

(3) Assist Queen Conch Restoration Activities. Volunteers assist with raising juvenile queen conchs at a hatchery located at Keys Marine Lab in Long Key, Florida. They also locate and tag wild adult conchs for population and reproduction studies and help relocate nearshore populations and monitor their progress. This activity is also included in the Research and Monitoring Action Plan.

<u>Status</u>: Implemented and on-going. <u>Implementation</u>: FWC and The Nature Conservancy

(4) Assist Dolphin Ecology Project. Throughout the year, Dolphin Ecology Project staff, scientists and volunteers photograph individual dolphins for identification, observe their activities, sample environmental parameters, and identify and measure the abundance of important dolphin prey. Volunteers and experienced boat operators conduct photo-identification surveys of Atlantic Bottlenose Dolphin. The project's educational goal is to increase public awareness about dolphins, the interrelated nature of the Keys' habitats, and the importance of South Florida ecosystem restoration. This activity is also included in the Research and Monitoring Action Plan.

<u>Status</u>: Implemented and on-going. *Implementation*: Dolphin Ecology Project, FKNMS staff, The Nature Conservancy

(5) Assist Reef and Coastal Cleanups. Reef and coastal cleanups are supported by a network of environmental and civic organizations, government agencies, industries, and individuals who volunteer to remove debris and collect information on the amount and types of debris. The information serves to educate the public on marine debris issues and encourage behavior that will reduce debris along beaches, coastal areas, reef tracts, and in the open ocean.

Status: Implemented and on-going.

<u>Implementation</u>: A partnership among FKNMS, FKNMS volunteers, Sombrero Reef Sweep, Barley Bay Festival, Clean Florida Keys, The Ocean Conservancy, Reef Relief, Friends and Volunteers of Refuges, The Nature Conservancy.

(6) Assist Marine Ecosystem Event Response and Assessment (MEERA). The MEERA Project seeks to provide early detection and assessment of biological events occurring in the Sanctuary and surrounding waters. The goal is to help the scientific community better understand the nature and causes of events, such as coral bleaching and disease outbreaks, fish kills, harmful algal blooms, "red tides," and other events that adversely affect marine organisms. Understanding the events will help scientists and managers determine if the events are natural or linked to human activities. The project relies on observations made by people who are frequently on the water, such as captains, recreational boaters, environmental professionals, and law enforcement personnel. This activity is also included in the Research and Monitoring Action Plan.

Status: Implemented and on-going.

Implementation: Mote Marine Lab's Tropical Research Center

(7) Assist Sea Turtle Activities. Sea turtles are protected under the U.S. Endangered Species Act (ESA) and Florida law. Volunteers protect and preserve sea turtles and their habitats. Volunteers monitor known and potential nesting beaches in the Keys. They mark and record the location of nests and document nest success. Volunteers staff a sea turtle stranding network. Injured turtles are ministered to and returned to the marine environment.

Status: Implemented and on-going.

<u>Implementation</u>: Save-A-Turtle, The Turtle Hospital, see also the Research and Monitoring Action Plan.

(8) Assist Save the Manatee Club. Manatees are endemic throughout South Florida waters. Save the Manatee Club has volunteers in the Keys and is active locally for education and monitoring. Volunteers regularly assist in removing monofilament line, a particular danger for the species.

Status: Implemented and on-going.

Implementation: Save the Manatee Club, Dolphin Research Center, Monroe County.

(9) Assist Marine Animal Rescue Activities. Volunteers throughout the Florida Keys regularly offer ready assistance to distressed marine mammals. Each stranding is unique, and the specific course of action depends upon individual circumstances. Volunteers assist marine mammal stranding to reduce the animal's pain and suffering, provide appropriate first aid, minimize possible threats of marine mammals to human health and safety, derive maximum scientific and educational benefits from both live and dead stranded marine mammals, and collect consistent, high-quality data to facilitate marine mammal conservation.

Status: Implemented and on-going.

<u>Implementation</u>: NMFS' Marine Mammal Health and Stranding Response Program and permitted partners.

(10) Assist Wild Bird Rehabilitation. Several wildlife rescue organizations in the Keys respond to injured birds, including sea gulls, pelicans, egrets, herons, osprey, and eagles. Volunteers rescue and rehabilitate birds at major rehabilitation centers in Tavernier, Marathon and Key West.

Status: Implemented and on-going.

<u>Implementation</u>: Florida Keys Wild Bird Rehabilitation Center, Marathon Wild Bird Center, and Wildlife Rescue of the Florida Keys.

(11) Assist Reef Ecosystem Condition (RECON). RECON trains volunteer divers to collect information about the reef environment, the health of stony corals, the presence of key reef organisms and obvious human-induced impacts. The goals of RECON are to broaden the scope of available information about the bottom-dwelling organisms on coral reefs, to alert local researchers and managers of changing reef conditions, such as coral bleaching and nuisance algal blooms, and to increase public understanding of the threats to coral reef ecosystems. This activity is also included in the FKNMS Research and Monitoring Action Plan.

Status: Implemented and on-going.

Implementation: The Ocean Conservancy, EPA

STRATEGY V.3 SUPPORTING VOLUNTEER ACTIVITIES

Strategy Summary

The Volunteer Program requires staff and administrative support for the program to function efficiently. Thus, FKNMS project managers strive to recruit, place, orient, train, evaluate, and recognize volunteers who work on a project. Just as each project requires specific training and orientation, each volunteer requires unique evaluation and recognition. Volunteers are asked to report to the project manager the number of hours worked on each project.

Because volunteers are capable of assisting FKNMS managers in diverse ways, this strategy helps identify future volunteer programs. As management needs change over time, the volunteer program continues to identify future projects to recruit volunteers to accomplish objectives. FKNMS staff determines where and how volunteers can assist in fulfilling management objectives. The staff continues to form partnerships with other organizations to use volunteers in a variety of projects. Areas that may be evaluated in the near future include volunteers for artificial reef monitoring and Sanctuary-wide ecological monitoring.

Activities (9)

(1) Recruit and Place Volunteers. Volunteers are recruited based on particular skills, experience, aptitude and especially their interest. Recruitment sources include community groups, churches, neighborhood associations, other volunteer groups, governmental agencies, universities, and local schools. Once recruited, volunteers are paired with a program matching their desire, expertise, and experience.

Status: Implemented and on-going.

Implementation: FKNMS

(2) *Orient and Train Volunteers.* Orientation is necessary so that volunteers become part of the Sanctuary program. Orientation allows new volunteers to feel welcomed and appreciated, and provides information that assists them in performing their work effectively. Training is specific to the volunteers and the project.

<u>Status</u>: Implemented and on-going. Orientation occurs two to three times a year in the Upper, Middle, and Lower Keys. Specific project training packages for volunteers and skills building training for project managers will be developed.

Implementation: FKNMS

(3) Ensure Volunteer Safety. Volunteer safety is a priority for every project manager. Each project has its own set of safety measures of which the project manager must be aware. Project managers and staff strive to recognize work place hazards and to improve working conditions to the greatest extent possible.

<u>Status</u>: Development of safety manuals for volunteer activities will be a priority in the next $\frac{1}{2}$

five years.

Implementation: FKNMS

(4) *Recognize Volunteers*. Recognition begins with placing the volunteer in a fulfilling position. Thereafter, formal and informal recognition and awards include an annual party, notes, cards, plaques, uniforms, and similar appropriate items associated with the service.

Status: Implemented and on-going.

Implementation: FKNMS

(5) *Evaluate Volunteer Projects*. The benefits of evaluation include identifying a project's strengths and weaknesses; anticipating project issues and dealing with them in advance; improving morale and involvement of volunteers and staff; discovering which staff or projects have the highest volunteer turnover; and uncovering new opportunities.

Status: Implemented and on-going.

Implementation: FKNMS

(6) Maintain Communication with Volunteers. Program managers, via a wide range of mechanisms including letters, telephone calls, and e-mail, communicate with volunteers. Volunteers are regularly highlighted through news articles, television specials and series, such as "Waterways," radio interviews and magazine articles that enhance recognition, funding, and recruiting. In addition e-mail and Internet sites are used to communicate goals and achievements. FKNMS maintains an information database about volunteer interests and skills, project activity, service hours, and other relevant data.

Status: Implemented and on-going.

Implementation: FKNMS

(7) *Identify and Maintain Funding*. Funding for the FKNMS volunteer projects is complex and achieved through a variety of partnerships and a range of sources.

<u>Status</u>: FKNMS regularly assists in developing funding sources for volunteer projects that provide FKNMS management information.

Implementation: FKNMS

(8) *Identify and Coordinate Internships.* FKNMS project managers regularly develop a wide variety of internships for a broad range of programs as well as educational or training levels. The managers provide project descriptions, supervision, training, scheduling, and support activities for the intern.

Status: Implemented and on-going.

Implementation: FKNMS

(9) *Develop and Enhance Volunteer Programs.* Opportunities to use volunteers in the Sanctuary on both long and short term situations will be developed on an as-needed basis.

Status: Implemented and on-going.

Implementation: FKNMS

PREVIOUS STRATEGIES

This review of the FKNMS Management Plan identified some Action Strategies that no longer warranted the priority attention they originally received in 1996. These strategies have not been removed from the plan; rather, they have been incorporated into the new strategies under broader headings. Many of the previous strategies listed in the original plan were tied to activities in other action plans that did not occur and others were not feasible due to liability. It was found that to have the majority of the Plan simply list specific ways that volunteers can be utilized was not very useful due to changing needs. In the revised Plan, the mechanisms to identify volunteer opportunities and needs are identified rather than the activities themselves.