

Sounding Line

News of the Florida Keys National Marine Sanctuary

Spring 2005

Law Enforcement Officers are Heroes for Marine Life and Habitats

Nancy Diersing, FKNMS Education Specialist

Even the most routine day can become a day to remember in the life of a law enforcement officer who patrols the waters of the Florida Keys. One such day came along not too long ago for Scott LaRosa, a sanctuary officer for the past 17 years. LaRosa was on routine patrol in his boat in the vicinity of Key Largo, when he was contacted by dispatch regarding a large sea turtle that was entangled in lobster trap lines. Two fishermen had apparently spotted the marine reptile and reported it to the Florida Wildlife Conservation Commission (FWC) using a cellular phone (1-888-404-FWCC).

FWC dispatchers sent LaRosa to the scene where he found a 5 to 6 foot leatherback turtle struggling with the trap lines and buoy wrapped around its flippers. The seas were rough that day and the turtle was riding up and down on the rolling seas. Without hesitation, LaRosa steered his boat alongside the leatherback and using a boat hook caught the tangle of trap lines. In one quick skillful move, he leaned over and cut the lines. The fishermen and LaRosa watched as the giant turtle swam away into the blue ocean.



Two fishermen reported a leatherback sea turtle that was tangled up in lobster trap line and a buoy. Sanctuary Officer LaRosa responded to the call and freed the endangered reptile. (Photo: Scott LaRosa)

LaRosa is not the only hero in this story. The two fishermen who cared enough to call FWC dispatch the location and condition of the marine animal should be commended as well. In many cases, it is boaters, fishermen, and dive operators who bring such matters to the attention of law enforcement, allowing them to respond appropriately.

Marine life rescues are only one part of the job for the professionals who patrol Keys waters. They may also be called to respond to an emergency or incident on the water at any time of day or night. It may be a search and rescue mission, boating accident, boat grounding, fishing violation, trap robbing or it may be something completely unexpected. Last year, officers were called to Fiesta Key when a tractor-trailer flipped off of Channel 5 bridge.

Later that same day, LaRosa came across a large yellow data collection buoy marked USFWS (United States Fish and Wildlife Service). LaRosa retrieved the buoy, and after returning to shore, contacted the USFWS to find out where it had originally been moored. Apparently, the buoy had been located in the waters off St. Croix in the Virgin Islands before becoming detached and floating north on the currents to reach Keys waters!

The typical day for most officers is spent out on the water observing and interacting with people, divers, snorkelers, boaters, and anglers. They routinely cruise through the popular diving spots, especially the Sanctuary Preservation Areas (SPAs), where hook and line, spearfishing, and other consumptive activities are prohibited. They also frequent popular fishing locations, making certain anglers comply with fishing and other regulations and are the first to

(continued on p. 7)

Inside this Issue

Superintendent's Message	2
Around the Sanctuary	3
Coral Reef Conference	4
Task Force Meeting	6
Florida's Seagrass Meadows	7
Management Plan Released	8



Florida Keys National Marine Sanctuary

Billy D. Causey
Superintendent

Kacky Andrews
State Co-trustee

Sanctuary Advisory Council

Bruce Popham--Chair
Boating Industry

Ken Nedimyer--Vice Chair
Commercial Fishing-
Marine/Tropical

Ralph Boragine
Commercial Fishing-
Shell/Scale

Jack Curlett
Citizen at Large-Upper Keys

Todd Firm
Diving-Upper Keys

Richard Fortmann, Citizen at
Large-Middle Keys

Richard Grathwohl
Charter Fishing-Flats Guide

Debra Harrison
Conservation and
Environment

David Hawtof
Citizen at Large-Lower Keys

Don Kincaid
Diving-Lower Keys

Mark Klingbeil
Recreational Fisher

Martin Moe
Education/Outreach

George R. Neugent,
Elected Official

Krueger Nicholson
Tourism-Upper Keys

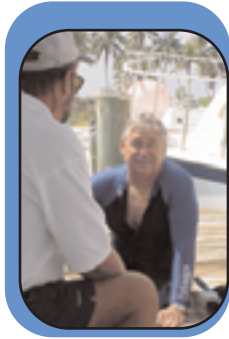
Kathleen Patton
Tourism-Lower Keys

Deborah A. Shaw
Research and Monitoring

Captain Robert Simonds
Charter Fishing/Sport Fishing

Vacant
Conservation and
Environment

Vacant
Submerged Cultural
Resources



Dear Readers,

This issue of *Sounding Line* is dedicated to a dear friend and hero of the Florida Keys, Peter Gladding. It is with deep sadness that I share with you the news of his passing since the publication of our last issue. Peter was a commercial fisherman who, along with his wife Mary, made his living catching fish the hard way, one at a time, by hand-lining. He was not always supportive of the Florida Keys National Marine Sanctuary and in the early days raised concerns that our actions could affect his livelihood without being effective at addressing the real issues that affect overfishing. Yet, like so many other commercial

fishermen that I know, Peter had more things in common with our management goals than differences. I could hear it in the passion of his comments at our public meetings and those of the fishery management councils. Peter wanted more fish and bigger fish, and he wanted the fisheries sustained for future generations.

Over time, Peter became less suspicious and began to work with the sanctuary. He was a member of the *Tortugas 2000 Working Group* and was largely responsible for aiding us in establishing the boundary of the sanctuary's Tortugas Ecological Reserve, this nation's largest fully-protected area in the marine environment. He gave up some of his most valued fishing spots, so that future generations would benefit from having an area set aside, where fish could become more abundant and grow larger. Peter Gladding practiced what he believed in as a fisherman, as he insisted that we include *Riley's Hump*, a known fish spawning aggregation site, as a part of the Tortugas Ecological Reserve. He recognized the importance of giving fish a chance to spawn before they were caught, rather than taking advantage of their high numbers during spawning.

Peter's legacy lives on for many reasons, but most notably for his heroic acts as a commercial fisherman with a vision. We will all miss Peter and his valuable insight and wisdom, but will look forward to carrying his vision forward in the Tortugas Ecological Reserve.

While on the subject of commercial fishing heroes, Tony Iarocci, another fisherman who has worked with the sanctuary since the mid-1990s, was presented with a prestigious conservation award, the *J. Paul Getty Wildlife Conservation Prize* by the World Wildlife Fund. Congratulations Tony, you deserve this tremendous recognition and we are proud of you!

Commercial fishing is the second largest industry in the Florida Keys, second only to tourism, the economic engine of the Florida Keys. Keys' fishermen land \$50-70 million dollars worth of seafood products each year. Yet, this traditional occupation is threatened. Land-use practices, such as the loss of access to the waterfront, are squeezing out many hard working fishermen. We need to help preserve this way of life and ensure that the commercial fishing industry has a place along the waterfront from which to operate businesses. Without access to the water, our fishermen can't land their catch and, over time, this traditional way of life will be replaced by commercial waterfront interests, thus eliminating a historical way of life in the Keys. The only way we can continue to have leaders in the commercial fishing industry work with us, like Peter and Tony, is to ensure that their way of life in the Keys is preserved. I want to encourage you to pay attention to this important issue in future years and to get involved.

Sincerely,

Billy D. Causey



Sanctuary Advisory Council News

Council Elects New Chair and Vice-Chair

Chair: Bruce Popham, Boating representative and President of Marathon Boatyard

Vice-Chair: Ken Nedimyer, Commercial Fishing-Marine/Tropical

A W A R D S

Tony Iarocci, a commercial fisherman and Sanctuary Advisory Council member, was presented the *J. Paul Getty Wildlife Conservation Prize* by the World Wildlife Fund. The annual prize honors outstanding contributions to international conservation. Tony was instrumental in helping bring commercial fishermen on board with the Tortugas Ecological Reserve and has done a tremendous job of representing commercial fishermen's interests on the Council. Congratulations to Tony for a very much deserved award and the recognition it brings.

Don DeMaria, former Council member, received the first *Peter Gladding Travel Award* from the Gulf and Caribbean Fisheries Association at its November meeting in St. Petersburg.



**Peter Gladding--
Commercial Fisherman/Council member**

At the October 2005 Council meeting, Mary Gladding, widow of commercial fisherman Peter Gladding, was presented with a plaque by Superintendent Billy Causey in honor of her husband's courage, vision, and generosity of spirit in helping to establish the Tortugas Ecological Reserve. Mr. Gladding, who served on the Council since 1999, promoted responsible fishing practices and made remarkable contributions to conserving marine habitats for future generations.

At its December meeting in Miami, the U.S. Coral Reef Task Force posthumously recognized Peter Gladding with an award for *Outstanding Community Level Participation*.



New Sanctuary Boat Ramp Signs Installed

Forty-six new boater information signs were installed at boat launches throughout the Florida Keys and at two places on the mainland. Each sign, which measures 3 feet high and 6 feet in length, features information about the Florida Keys National Marine sanctuary's buoys, natural and heritage resources, and ways people can conserve public resources.

Revised Management Plan Released for Public Comment

In February 2005, the final draft of the Florida Keys NMS management plan was released for public comment. The revised plan was the result of extensive work by the Sanctuary Advisory Council, working groups, and sanctuary staff. A public comment period is planned for February 15 through April 15. To review a copy of the document or to find out how to submit your comments, please visit: <http://floridakeys.noaa.gov>.

Like the original management plan released in 1997, this one is organized around a series of action plans, each of which contains strategies and activities implemented by the sanctuary to address management issues. Four new action plans appear in the 2005 management plan draft. The newly developed *Science Management and Administration Plan* identifies activities necessary to administer a complex science program. The *Damage Assessment and Restoration* responds to the large number of boat groundings and the restoration of damaged resources. The new *Operations Plan* describes the day to day administrative functions required to operate the sanctuary effectively and the new *Evaluation Plan* outlines steps that can be taken to assess the effectiveness of the management plan.

(continued on back cover)

Conference Focuses on Managing Coral Reefs for the Future

Nancy Diersing, FKNMS Education Specialist

“*Connectivity* seeks to bring science, people, and policy together to share what is known about managing the coral reefs of the world. It is our challenge to identify the gaps in knowledge and to do the common-sense things that we can do right now to help coral reefs thrive,” emphasized Florida Keys National Marine Sanctuary Superintendent Billy D. Causey in his introductory remarks at *Connectivity*, a three-day forum held in Key West last summer.

Connectivity was designed to engage people who are connected with the sea. Dive operators, anglers, commercial fishers, educators, environmentalists, and other concerned citizens were drawn to the sessions, which featured marine managers and scientists from around the world and across the U.S. The program was organized by topic; each topic was represented by a panel of experts who gave brief presentations and then entertained questions from the audience as a panel. The panel topics were: regional connections, fisheries resources, climate change, resource conditions, water quality, and coral and seagrass habitats.

According to conference organizer and Sanctuary Advisory Council liaison Fiona Wilmot, this is the first event of its kind and “we are very grateful to the Sanctuary Friends of the Florida Keys for sponsoring *Connectivity*.”

“Although the information presented is grounded in science, the conference was not meant to be a scientific or technical one, but rather a forum for sharing information about what works and doesn’t work in terms of managing coral reefs,” commented Sanctuary Science Coordinator Dr. Brian Keller. “We were fortunate to have many distinguished speakers sharing their collective expertise, which may prove invaluable in managing the coral reefs of the Florida Keys for the future”.

Dr. Terry Done, Senior Principal Research Scientist, Australian Institute of Marine Science (AIMS), explained that the Great Barrier Reef Marine Park (GBRMP) was subjected to the same pressures as most reefs throughout the world. In the last 10 years, however, the

Australian government has passed legislation that sets high water quality standards and called for the establishment of “no take” zones in 33% of the GBRMP. Through an exhaustive collaborative process that engaged the public, scientists, fishers and other stakeholders; certain areas were selected for this highest level of protection. With the implementation of these protected zones, GBRMP became the largest zoned underwater resource in the world.

Designing marine protected areas (MPAs) that will protect corals from being lost due to temperature stresses is a challenging task. “Corals are good indicators of climate change,” stated Dr. Rod Salm, scientist with The Nature Conservancy (TNC). When stressed by higher than normal seawater temperatures, corals often respond by bleaching and becoming diseased. However, not all colonies bleach, even when exposed to similar conditions. Instead, some corals appear to survive or recover rapidly, eventually becoming healthy again. Dr. Salm, who planned and now leads up a major TNC initiative within the Global Marine Initiative known as “Transforming Coral Reef Conservation,” explained the model he developed for designing effective marine protected areas. The Nature Conservancy’s Resilience Model is based on those factors that enable corals to survive high seawater temperatures (read more about the Resilience Model on page 5).

“Why should people be concerned about the Florida Keys National Marine Sanctuary?” was the rhetorical question posed by Dr. Salm in his second presentation at *Connectivity*. He readily provided the reasons. The sanctuary protects the only barrier coral reef in North America and this reef is the third longest barrier reef system in the world. In addition, over the years, excellent scientific and monitoring data that have been collected on this ecosystem. These data will be important in measuring the effectiveness of different management techniques. Finally, the acceptance or resistance of local residents and user groups to new management policies can be evaluated in a populated area like the Florida Keys.

Dr. Elliot Norse, President of the Marine Conservation Biology Institute and author of *Global Marine Biological Diversity: A Strategy for Building Conservation into Decision Making* (1993), offered insights about the conditions of the deeper ocean,

(continued on p.5)



During a short break in the program, University of Miami Geology professor Dr. Robert Ginsberg (front, right) demonstrated a “coral polyp” dance that he created to illustrate reproduction in coral polyps to his students. Mary Enstrom, National Marine Sanctuary Volunteer Program Manager, (left) and Dr. Rod Salm, TNC Scientist, (center) participated in the dance along with other members of the audience.



(continued from p. 4)



Dr. Carl Safina, co-founder and President of Blue Ocean Institute and author of the *Song for the Blue Ocean*, was the keynote speaker at the *Connectivity* dinner reception.

Dr. Safina captivated the audience with his presentation about the life of a female albatross, which included readings from his latest book, *Eye of the Albatross: Visions of Hope and Survival*, winner of the John Burroughs Medal.

including areas that are not well-understood, but have been exploited. He noted that the area of seafloor that is trawled annually using trawl gear is about the size of the lower half of the United States. Dr. Norse compared bottom trawling to clear-cutting forests.

This practice may affect the deep coral forests in some areas, like those in coastal Alaska. A possible solution was stated in the Pew Ocean Commission (2003) report, which recommends regulating trawling gear as a mechanism for reducing the destructive effects of this fishing method.

Dr. Norse warmly shared his early experiences as a student of marine biology. He pointed out that biologists are people who are captivated by life. Norse went on to explain that if a time machine were available, biologists would use it to learn what the world was like before it was altered by recent human practices. Undoubtedly, resource managers charged with restoring marine populations and habitats would benefit greatly with such information.

Other scientists have also considered the way ecosystems have changed in recent years. The concept that successive generations of people have become accustomed over time to lower biodiversity and reduced marine life populations in the ocean environment was the focus of a presentation by Dr. Steven Miller, research scientist. Dr. Miller introduced this concept, called “Shifting Baselines,” by showing 30 and 60 second public service announcements designed to bring attention to the changing ocean environment.

Dr. Frank Muller-Karger, member of the U.S. Ocean Commission and a professor at the University of South Florida, summarized the U.S. Ocean Commission Policy Report (2004). The report makes many recommendations, including calling for “Congress to pass and provide sustained funding for a Coral Protection and Management Act that covers research, protection and restoration of coral ecosystems.”

Other highlights of the *Connectivity* program came when J. Allison DeFoor III, EarthBalance, told the story of how early woman pioneers from the Coconut Grove Woman’s Club in Dade County worked diligently for years to get Everglades National Park established, in spite of the push by politicians and developers to drain and develop the Everglades.

Citizens, managers, educators, scientists, divers and fishers attending *Connectivity* undoubtedly came away knowing much more about the threats and issues facing the coral reefs and oceans of the world. Even more importantly, participants were given the most current tools, information and contacts, needed to manage these resources for the future in a changing world.

The Nature Conservancy Coral Resilience Model

There are four components in the Resilience Model that were described by Dr. Salm at the *Connectivity* program.

1. *Risk-spreading component:* In an attempt to spread the risk of losing a particular kind of coral community, set aside numerous examples of that type in different locations, thus ensuring that all community types survive into the future.
2. *Refugia component:* Incorporate those communities that have survived bleaching events in the past into the MPAs since they may survive similar events in the future.
3. *Connectivity component:* If the coral reef does not replenish itself with its own larvae, then include an “upstream” area that does provide replenishment of larvae, ensuring a continuous source of new marine life.
4. *Effective management component:* Apply effective management and protection techniques to promote survival of all corals and associated habitats into the future. Focus should be placed on managing water quality, coral predators and functional groups such as herbivores. Ideally, adaptive management techniques should be applied, including flexible MPA boundaries and strategies. Other factors to consider include: accessibility, high biodiversity, abundant fish populations and water quality.



Coral Reef Task Force Passes Resolutions at Miami Meeting

At the most recent biannual U.S. Coral Reef Task Force meeting (CRTF), Australia and the United States formalized an agreement to share scientific information about coral *resilience*, the natural ability for corals to survive and recover from pollution, disease, bleaching and other adverse conditions. A shared commitment to better understand, protect, and manage resilient corals may help ensure that coral reefs survive for future generations. The Great Barrier Reef Marine Park Authority, the Florida Keys National Marine Sanctuary (NMS), and the Florida Department of Environmental Protection (DEP) entered into the agreement on the opening day of the CRTF meeting in Miami. The Florida Keys NMS, which includes both state and federal waters, is jointly managed by the National Oceanic and Atmospheric Administration and Florida DEP.

Another announcement at the CRTF meeting demonstrates the continued cooperation between the U.S. and Australia. The Great Barrier Reef Marine Park posthumously honored Dr. Nancy Foster, longtime NOAA scientist and administrator, by naming a section of the Great Barrier Reef in her honor. Foster, who served in a variety of positions during her career with NOAA, is only the second American to be honored in this way. (Rachel Carson received the naming recognition in 1996.)

The CRTF also passed two resolutions that affect coral reefs throughout the world during its December 2004 meeting. The importance of coral spawning and recruitment of young corals is recognized in the first resolution, which calls for member agencies to use all available information to evaluate the impacts of human activities on coral spawning. Through this resolution, members agreed to include requirements or recommendations that reduce or eliminate negative impacts on coral spawning, reproduction or recruitment in the terms of permits issued for coral reef related activities. The resolution will be implemented through an Interagency Working Group.

The second resolution recommends that member agencies of the CRTF develop and implement improved compensatory mitigation policies and practices related to human activities done within coral reef ecosystems. To accomplish this task, agencies involved in issuing or reviewing permits for activities in coral reef areas agreed to: establish interagency working groups; identify appropriate participants, funding sources, and resources; and develop an interagency strategy for improved mitigation practices.

Local action strategies were launched at the December meeting. During the past year, each of seven geographic districts identified by the CRTF developed a local action strategy designed to address six key threats to coral reefs: lack of public awareness, overfishing, recreational misuse/overuse, land-based pollution, coral bleaching, disease and climate change. These "Three-Year Local Action Strategies" were created to translate the goals of the CRTF into concrete projects with measurable outcomes at the local level and to better coordinate interagency efforts in the realm of coral reef conservation. The seven districts that have local strategies are: Florida, Hawaii, the U.S. Virgin Islands, American Samoa, Puerto Rico, Guam, and the Commonwealth of the Northern Mariana Islands.

U.S. Coral Reef Task Force

The CRTF was established by a Presidential Executive Order in 1998 to lead U.S. efforts to preserve and protect coral reef ecosystems by building partnerships and strategies that promote conservation. The task force includes leaders from 12 federal agencies, seven U.S. states and territories and three freely associated states.

The next biannual CRTF meeting will be held on March 1-3, 2005 in Washington, D.C. For more information about the CRTF, please visit: www.coralreef.gov.

Coral Conservation & Ocean Websites

NOAA's Coral Reef Conservation Program--<http://www.coralreef.noaa.gov/>

Florida Department of Environmental Protection--http://www.dep.state.fl.us/secretary/news/2004/dec/1202_01.htm

Great Barrier Reef Marine Park--www.gbrmpa.gov.au/

Australian Institute of Marine Science (AIMS)--<http://www.aims.gov.au/>

TNC-Transforming Coral Reef Conservation--<http://nature.org/initiatives/marine/work/art12286.html>

NOAA's Coral Reef Information System (CORIS)--<http://www.coris.noaa.gov/>

U.S. Commission on Ocean Policy--<http://www.oceancommission.gov>

Pew Ocean Commission--http://www.pewoceans.org/oceans/downloads/state_oceans.pdf

Shifting Baselines Concept--www.shiftingbaselines.org

Marine Conservation Biology Institute--<http://www.mcabi.org/>



Florida's Seagrass Meadows Recognized by Governor Bush

Governor Bush has once again recognized March as “Seagrass Awareness Month” in the State of Florida. This proclamation, which declares the importance of the seagrass habitat to Florida’s fisheries, was issued at the request of the Seagrass Outreach Partnership, a Keys-based coalition of state, local, and federal government agencies, conservation groups and recreational fishers dedicated to reducing boating impacts to grassbeds through boater education.

In recent years, many of Florida’s seagrass meadows have suffered repeated damage from boat propellers and hulls. According to an aerial survey conducted by state research scientists, nearly 20 percent of grassy banktops in the Florida Keys were scarred, and 30 percent of these were severely scarred. Even grassy banks that are clearly marked with navigational aids have been repeatedly damaged. Once the plant’s underground rhizome system is destroyed, recovery may take years. In some incidences, it may not take place at all, even when resource biologists apply restoration techniques.



As seen in the photograph above, a boat propeller can cut deeply into the seagrass plant, damaging its roots and rhizomes. The resulting scar may take many years to heal. (Photo: Harold Hudson)

To learn more about the **Seagrass Outreach Partnership (SOP)** and the educational materials available, please visit:
<http://floridakeys.noaa.gov/edu/seagrassmonth/welcome.html>

(continued from p.1)



A U.S. Fish and Wildlife Service data collection buoy was retrieved by Officer LaRosa off Key Largo. The buoy was originally moored in St. Croix, Virgin Islands, before becoming detached and floating north on the surface currents. (Photo: Scott LaRosa)

respond to grounding incidents, where they work with the salvage operator to remove the boat as carefully as possible and assist the biologists with coral rescue efforts.

Members of the sanctuary offshore squad patrol the waters between the Tortugas and Key West, spending several days at sea before returning to shore. This squad was formed in 2000 when the sanctuary established the Tortugas Ecological Reserve in the relatively deep waters off the Dry Tortugas. In the near future, the squad will be acquiring a new vessel equipped with state-of-the art radar and other instruments.

Whether they serve on FWC’s sanctuary patrol or are regular FWC, the 47 officers who patrol the 2,900 square nautical miles of the Keys are graduates of the state of Florida’s FWC Academy in Tallahassee. Upon graduation, FWC officers are authorized, under state statute, to enforce all state statutes, city and county ordinances on land and on the water. Recently, two new academy graduates joined the sanctuary patrol and three joined the FWC squad in the Keys. In addition to the training these officers receive at the academy, all new officers spend three months riding with experienced ones before patrolling on their own.

During the past summers, officers from the Keys area responded to hurricane emergencies in the Panhandle, southwest coast and twice to the east coast of Florida. “We were happy to be of assistance in those areas that were so devastated by last summer’s hurricanes. Wherever and whenever we are needed, our officers are willing to go,” commented Captain Laurie Luher, for the sanctuary patrol. “One of our officers, Liz Reisz, a member of Florida’s Special Operations Group, responded to all four hurricanes,” she added.

Since September 11, 2001, FWC officers have also been tasked with homeland security functions to protect Florida’s seaports in conjunction with the United States Coast Guard and the Florida Department of Law Enforcement.



Florida Keys NM Sanctuary Releases Management Plan for Public Comment

(continued from p.3)

As part of the review process, the 12 original action plans were updated. The 2005 *Research and Monitoring Action Plan* places more emphasis on regional projects such as Everglades restoration and socioeconomic research. The revised *Water Quality Plan* builds on research and pilot projects that have been completed in recent years. Criteria for identifying and evaluating areas for additional marine zoning and establishing and implementing zones, where appropriate, are included in the updated *Marine Zoning Action Plan*.

The *Waterway Management Plan*, formerly called the *Reef/Channel Marking Action Plan*, streamlines the permitting process for Idle Speed/No Wake Shoreline buoys. The 2005 *Mooring Buoy Resource Plan* calls for larger mooring buoys to be installed in deeper waters to accommodate larger vessels and the removal of buoys from areas found to be detrimentally impacted by their presence.

More emphasis is placed on using the latest technological advancements and building community partnerships in the revised *Education and Outreach Action Plan*. The 2005 *Volunteer Action Plan* reflects the transfer of the sanctuary's volunteer program from The Nature Conservancy to the sanctuary.

Two strategies designed to enhance law enforcement actions were identified in the 2005 *Enforcement Action Plan*: increasing both the number of enforcement officers and the level of cross-deputization between officers from various agencies. A new strategy in the revised *Regulatory Action Plan* summarizes issues that were identified in the scoping process and warrant regulatory analysis and possible future regulatory actions (e.g. fish feeding, vessel sewage discharges, artificial reefs).

No changes were recommended for the *Maritime Heritage Resources Action Plan*, formerly called the *Submerged Cultural Resource Plan*.

The Florida Keys National Marine Sanctuary thanks everyone who contributed their articles, photographs, and editing expertise to *Sounding Line* newsletter. *Sounding Line* is produced by the Florida Keys National Marine Sanctuary. For more information or to be placed on the mailing list, email the editor at Nancy.Diersing@noaa.gov.



Florida Keys National Marine Sanctuary
P.O. Box 500368
Marathon, Florida 33050

<http://floridakeys.noaa.gov/>

