

# MARINE ZONES & ZONE MONITORING

## FLORIDA KEYS NATIONAL MARINE SANCTUARY

### Marine Zones are an Important Management Tool

Marine zones have been used around the world as an important resource management tool. They can help protect sensitive natural resources from overuse, separate conflicting visitor uses and preserve the variety of marine life, or biodiversity, of an area. When the Florida Keys National Marine Sanctuary was designated by Congress in 1990, its original legislation provided for the creation of several types of marine zones within sanctuary waters. In the sanctuary's zoning scheme, zoning is the setting aside of areas for specific activities to balance commercial and recreational interests with the need for a sustainable ecosystem.

### Public Helps Guide Creation of Marine Zones

As part of the process for creating and implementing zones, the sanctuary held a series of public workshops throughout the Keys in the early 1990s to seek input on zone types and locations. Over the course of several years, Florida Keys sanctuary staff, advisory council members and interested citizens worked together to develop criteria for each zone type and to suggest potential zone locations. In 1996, a sanctuary management plan was published to describe the new zones, which became effective in 1997. Large yellow buoys were installed to mark the boundaries of zones.



Large yellow buoys mark the boundaries of zones.

In 2001, after another extensive public process, the sanctuary added the Tortugas Ecological Reserve. This new reserve, which consists of two separate areas called Tortugas North and Tortugas South, expanded the sanctuary's original boundaries by 96 square nautical miles and was implemented with the approval of stakeholders and state and federal agencies. Commercial fishermen helped identify critical fish spawning grounds for inclusion in the reserve. In 2007, the sanctuary published a revised management plan to guide management decisions. The plan contains action plans, strategies and zone information.

### Protected Zones Help Preserve Habitats and Marine Life

Marine zoning helps to preserve ecosystems while allowing people to carry out activities that are compatible with the sanctuary's mission of resource protection. Highly protected "no-take" zones, which restrict consumptive activities like fishing, help reduce human impacts to marine life and habitats and can help prevent conflicts between users engaged in non-compatible activities such as diving and fishing. Large no-take zones that contain extensive mangrove, seagrass, hardbottom or coral reef habitat may contribute to the survival of marine life by protecting critical nursery grounds for young marine animals and spawning grounds for breeding adults. Larger zones not only increase connectivity between habitats, but also preserve the biodiversity of marine life and allow areas of high ecological significance to function naturally with minimal human influence.

### Scientists Study Highly Protected Zones

Research and monitoring are critical to achieving the sanctuary's primary goal of resource protection. Scientists from academic institutions, state and federal agencies, and non-governmental organizations regularly conduct scientific research and monitoring as part of the sanctuary's Marine Zone Monitoring Strategy (2007 management plan). Monitoring occurs in the three types of highly protected no-take zones: Ecological Reserves, Sanctuary Preservation Areas, and Special-use Areas. Generally, research programs are designed to determine whether these zones are an effective tool for conserving and sustaining marine life and habitat. Results from these studies and others will help sanctuary resource managers understand how to better conserve marine life for future generations. Findings from the Marine Zone Monitoring Program are posted on the sanctuary's research and monitoring home page at [http://floridakeys.noaa.gov/research\\_monitoring](http://floridakeys.noaa.gov/research_monitoring).

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



## Types of Marine Zones

**Ecological Reserves (ERs)** are marine zones that preserve biological and genetic diversity by setting aside areas with minimal human disturbance. Reserves protect the entire range of marine habitats found in the sanctuary and allow certain areas to return to evolve naturally. There are currently two ERs in the sanctuary, the Western Sambo Ecological Reserve and the Tortugas Ecological Reserve. Together, they cover 160 square nautical miles. These large, contiguous, diverse habitats help protect natural spawning, nursery, and permanent-residence areas needed for sustainable populations of fish and other marine life. Regulations for ERs are designed to meet the zone objectives by limiting consumptive activities while continuing to allow activities that do not threaten resource protection. Sanctuary-issued permits are required for some activities in the Tortugas Ecological Reserve.



Mooring buoys prevent boat anchors from damaging corals.

**Sanctuary Preservation Areas (SPAs)** protect shallow reefs along the reef tract. SPAs encompass discrete, biologically important areas that help sustain critical marine species and habitats. Regulations for this zone type are designed to limit consumptive activities and to separate users engaged in different kinds of activities. Diving, snorkeling and boating are allowed inside these zones. SPAs have mooring buoys for boaters to use in order to prevent anchor damage to corals. There are 18 SPAs, which together cover a total of 4.97 square nautical miles. The largest SPA is Carysfort/South Carysfort, and the smallest SPAs are Dry Rocks and Cheeca Rocks. Maps showing the location of mooring buoys in the SPAs can be downloaded from the sanctuary's website at [http://floridakeys.noaa.gov/research\\_monitoring/map.html](http://floridakeys.noaa.gov/research_monitoring/map.html).

**Special-use Areas (SUAs)** are set aside for discrete uses. Four Special-use Areas have been designated in the sanctuary for research purposes and are known as *Research-only Areas*. Research-only Areas are located at Conch Reef and Tennessee Reef in the Upper and Middle Keys, and Looe Key Patch reef and Eastern Sambo in the Lower Keys. Access to these highly protected zones is restricted to permitted entry only. While there are currently no other types of Special-use Areas within the sanctuary, there are three other types of Special-use areas possible in the zoning scheme. "Restoration" or "recovery areas" may be implemented for the recovery or restoration of injured or degraded resources; while "facilitated-use areas" can be created to prevent user conflicts and to enhance access or use of sanctuary resources. Regulations may confine or restrict activities such as personal watercraft operation and live-aboard mooring.

**Wildlife Management Areas (WMAs)** seek to minimize disturbance to sensitive or endangered wildlife and their habitats such as bird nesting, resting or feeding areas, and turtle nesting beaches. Regulations governing WMAs are designed to provide opportunities for public use while protecting wildlife and often include no-motor zones, idle speed only/no wake zones, and buffer and closed zones. Fishing, canoeing, kayaking and poling are activities enjoyed in WMAs. There are currently 27 WMAs in the sanctuary. Twenty of them are co-managed with the U.S. Fish and Wildlife Service as part of their plan for managing backcountry portions of the national wildlife refuges in the Florida Keys. The remaining seven WMAs are under sanctuary management.

**Existing Management Areas (EMAs)** are areas within the sanctuary that were established by NOAA or another federal agency prior to 1997 when sanctuary zoning regulations went into effect. EMAs have their own protections and restrictions above and beyond those that apply sanctuary-wide. Key Largo and Looe Key EMAs (formerly Key Largo and Looe Key National Marine Sanctuaries) are managed by NOAA, while the Great White Heron and Key West National Wildlife Refuges are EMAs managed by the U.S. Fish and Wildlife Service.

**State and National Parks** in the Keys and South Florida have their own rules and regulations. Biscayne, Everglades and Dry Tortugas National Parks are managed by the U.S. Department of the Interior. State parks and aquatic preserves are managed by the Florida Department of Environmental Protection.

The Florida Keys National Marine Sanctuary encompasses nearly 2900 square nautical miles of state and federal waters surrounding the Florida Keys and protects nationally significant coral reefs, seagrass meadows and mangrove shorelines. A set of general-use regulations applies to all sanctuary waters. Prohibitions include the removal of live coral or protected wildlife, discharging trash or pollutants, and operating a vessel in such a manner as to strike or injure coral or seagrass. More regulations can be found at <http://floridakeys.noaa.gov/regs>.

