



Florida Coral Reef Management Fellowship 2013-2014 Position Description

Project Location

The host agency for the 2013 - 2014 Coral Management Fellowship in Florida is the Florida Department of Environmental Protection (FDEP) Coral Reef Conservation Program (CRCP) in Miami. Spanning over 330 nautical miles from the Dry Tortugas to Stuart, the Florida Reef Tract is the only barrier reef in the continental United States. These beautiful coral reefs, lying just off the beaches of the most urbanized coastal region in the state, are an extraordinary biological, geological, and economic resource. Supporting a rich and diverse assemblage of more than 6,000 species, Florida's reefs are a marvelous source of recreation, education, scientific research, and public inspiration. Roughly one third of Florida's 18 million residents live within this region, which attracts over 38 million visitors a year. A study of natural and artificial reefs in southeast Florida and the Florida Keys showed that fishing, diving and boating-related expenditures generate \$6.3 billion in sales and income and sustain more than 71,000 jobs annually.

Program/Agency Background

The FDEP is the lead agency in the State of Florida's government for environmental management and stewardship. Comprised of three divisions – Regulatory Programs, Lands and Recreation, Water Policy and Eco Restoration – the FDEP serves to protect the state's air, water and land resources. Florida's environmental priorities include restoring America's Everglades, improving air quality, restoring and protecting water quality, conserving environmentally sensitive lands and providing recreation opportunities for citizens and visitors, today and in the future. Within the Division of Water Policy and Eco Restoration, the department's Office of Coastal and Aquatic Managed Areas directs the management of Florida's 41 Aquatic Preserves, three National Estuarine Research Reserves, the Florida Keys National Marine Sanctuary, and the CRCP.

Established in 2004, the FDEP CRCP coordinates coral reef research, monitoring, mapping, conducts education and outreach, develops management strategies, and encourages partnerships and stakeholder participation to advance protection of Florida's reefs. The State of Florida manages its coral reef resources cooperatively with federal, state and local agencies including NOAA, the National Park Service, the Florida Fish and Wildlife Conservation Commission (FWC), and the counties of Monroe, Miami-Dade, Broward, Palm Beach and Martin. Regulatory coordination with additional agencies including the U.S. Environmental Protection Agency, the U.S. Coast Guard, the U.S. Army Corp of Engineers and others supports the environmental conservation goals of the State. In 2006, the FDEP CRCP was also directed to coordinate and lead response to vessel groundings and anchor damage incidents in southeast Florida.

Through its role in supporting Florida's membership on the U.S. Coral Reef Task Force (USCRTF), and the U.S. All Islands Committee, the FDEP CRCP leads the implementation of Florida's Local Action Strategy - the Southeast Florida Coral Reef Initiative (SEFCRI). With guidance from the USCRTF, the FDEP and the FWC coordinated the formation of a team of marine resource professionals (local, state, and federal), scientists, non-governmental organization representatives, and other coral reef stakeholders. This team, named the SEFCRI

Team, gathered to develop local action strategies targeting coral ecosystems from Miami-Dade County through Broward, Palm Beach, and Martin counties. This region was chosen because its reefs are close to an intensely developed coastal region, with a large and diverse human population. Prior to the development of the SEFCRI, no coordinated education and outreach or management plan had been proposed for the coral reef ecosystem located north of the Florida Keys and Biscayne National Park.

The SEFCRI is targeting four focus areas that address threats to southeast Florida's coral reef ecosystems. The four focus areas are: (1) Land-Based Sources of Pollution (LBSP), (2) Maritime Industry and Coastal Construction Impacts (MICCI), (3) Fishing, Diving and Other Uses (FDOU), and (4) Awareness and Appreciation (AA). The SEFCRI Team members are working with the FDEP CRCP to develop and implement local action strategy projects. Of the many threats to the reef resources in the southeast Florida region, the Fellow will be responsible for assisting FDEP CRCP target responses to the following three threat issues:

Marine Disturbances (Marine Debris/Biological Disturbances/Reef Injuries) - Both visitors to and residents of southeast Florida actively use coral reefs in the region, with primary activities including fishing, scuba diving, snorkeling, and boating. Southeast Florida's coral reefs are vulnerable and at risk from incidents such as pollution, commercial and recreational misuse, and biological disturbances. Debris washed into the marine environment by canals, discarded on beaches, or lost by fishers, divers, and boaters can pollute the ocean and cause damage to sponges and corals, entangle fish and other reef organisms, and result in the injury or death of these animals. Navigation errors by commercial and recreational boaters may result in vessels running aground or anchoring on coral, which can directly harm reef resources. Finally, marine biological disturbances such as poor water quality, fish diseases and fish kills, invasive species, algal blooms, coral bleaching and coral disease may be indicators of larger, ecosystem-wide events that may devastate our reefs without proper intervention and a timely management response.

If left unaddressed, these marine incidents have the potential to severely impact southeast Florida's coral reefs. Over time, these disturbances may compound and result in the widespread loss of reef resources and associated services, such as their ability to attract tourists, support fisheries, and protect the shoreline from erosion and storms. Maintaining a program that is designed to improve the protection and management of southeast Florida's coral reefs by enhancing marine debris clean-up efforts, increasing response to vessel groundings and anchor damage, and providing early detection of potentially harmful biological disturbances is a priority.

Reef Resilience – Extremes in weather, significant variations in precipitation, high and low water temperatures and ocean acidification add to localized coral reef stressors such as land based sources of pollution, overfishing and coastal construction impacts, and can reduce reef survivorship. Florida's coral reefs are not immune to these events. Through the Florida Reef Resilience Program (FRRP), reef managers, scientists, conservation organizations and reef users across south Florida have developed an Action Plan for the Florida Reef System (2010-2014). The goals of the Action Plan are to increase resilience:

- Through active management of local reef impacts
- Enhance communication and awareness

- Conduct targeted research and develop new intervention measures.

Awareness and Appreciation – It is important to engage and educate both the local public stakeholders and state policy makers on the social, economic, and ecological importance of southeast Florida’s reef resources. This newfound awareness and appreciation for the coral reefs of southeast Florida will, in turn, support improved management of these coral reef resources as behaviors and practices are influenced throughout the region, and across the entire Florida Reef Tract, by the information provided.

Project Goals and Objectives

The Fellow will provide support for ongoing FDEP CRCP initiatives and projects, and will work closely with FDEP CRCP management and staff to implement program goals.

Specific goals for the Fellow will be to:

- Lead the coordination of the Southeast Florida Action Network (SEAFAN); including emergency response to disturbance events, and education and outreach activities associated with the program.
- Assist with the development and implementation of projects focused on coral reef resilience.
- Provide general support, as needed, to the FDEP CRCP and to facilitate continuing implementation of the SEFCRI.

Project Description

The Fellow will work closely with FDEP CRCP management and staff to implement CRCP programs and SEFCRI local action strategies, including encouraging and facilitating participation by, and input from, stakeholders and other government agencies. With guidance and direction from the Environmental Project Coordinator, in coordination with the FDEP CRCP Assistant Manager, the Fellow will oversee the coordination of SEAFAN, and assist with the planning and implementation of projects focused on coral reef resilience (and other CRCP projects, as directed). The Fellow will represent FDEP, CRCP, and the SEFCRI Team, as appropriate.

Task 1: Orientation (2 months)

Within the first month of orientation, the Fellow will complete required FDEP online training for new employees (e.g., public records, sexual harassment, etc.) to be repeated annually and, with input from the Mentor (the Environmental Project Coordinator, in coordination with the FDEP CRCP Assistant Manager), will develop a project work plan that will be re-evaluated after completion of year one.

The Fellow will be introduced to staff and management of the FDEP CRCP, other FDEP programs and partner agencies, and begin a review of background information regarding the SEFCRI, regional coral reef and marine protected areas initiatives, and other coastal management issues. The Fellow will participate with program staff in inter- and intra-agency meetings, as needed.

Outcomes/Deliverables:

- Completion of all required FDEP online training (annually).
- Project work plan for first year of Fellowship, with broad two year goals to be included.

Task 2: SEAFAN Coordinator (35% of time)

The Fellow will lead the coordination and implementation of the SEAFAN, a network of three separate programs (the Marine Debris Program – MDP, the Southeast Florida Marine Event Program – SEMERP, and the Reef Injury and Prevention Response Program – RIPR) under direction of the FDEP CRCP Assistant Manager and Environmental Project Coordinator. The fellow will lead the MDP and SEMERP, and assist the RIPR Coordinator on education and outreach activities only.

To ensure success and longevity of the Network, the Fellow will encourage participation through public presentations to stakeholder groups, attending outreach events, and build relationships with stakeholders and different user groups that frequent marinas, boat ramps, bait and tackle shops, and dive operators. Additionally, the Fellow will maintain the FDEP CRCP's toll-free SEAFAN hotline. This includes ensuring voicemail messages are checked on a regular basis and that follow up is coordinated and conducted, if applicable. The Fellow will also maintain an internet-based data entry form for stakeholders to report marine debris, biological disturbances, and reef injuries, and maintain a database to store information on these reported marine events. The Fellow will organize clean-up event(s) in each of the 4 counties in the southeast Florida region. The clean-up(s) will involve participation from FDEP CRCP as well as dive operators, dive clubs, and other agencies and NGOs. Clean-up dives will take place at previously reported marine debris locations. The Fellow will also produce a summary document containing an analysis of the reported and removed marine debris data, including classification of data into categories by type and by user group, calculation of volunteer hours and clean-up effort, and illustration of the distribution of marine debris.

The reporting and documenting of biological disturbances (e.g., harmful algal blooms, fish kills, coral bleaching or diseases, etc.) through the SEAFAN (as part of the SEMERP) will help to develop and analyze trend data that occur not only in the southeast Florida region, but along the entire Florida Reef Tract through coordination with MOTE Marine Laboratory. As the lead, the Fellow, upon notification of a disturbance, will: 1) coordinate with other FDEP CRCP staff and regional partners to schedule initial site assessments, 2) implement the appropriate event response protocol(s), 3) collect and analyze samples, and 4) manage all associated data sets. Data collected could be used to determine when certain types of events may occur and may also be useful in identifying triggers to such events. Any trends in the data will assist in the development of action strategies to better conserve the reef resources. The data will be made accessible online via the FDEP CRCP website which will provide a public access point for the reporting of marine events. Quarterly summary reports of events and data analysis information (if available) will also be uploaded to the FDEP CRCP website for public access and emailed to SEFCRI stakeholders.

Long-term management goal: The Fellow will support the FDEP CRCP long-term management goal of maintaining the SEAFAN in the southeast Florida region. This program will help to identify types and locations of marine disturbances, garner feedback from volunteers to help inform the efforts in subsequent years of the program, and will ultimately help to provide coral reef managers with data needed to reduce impacts to the southeast Florida coral reef resources.

Outcomes/Deliverables:

- Distribution of educational material regarding the network to encourage participation through public presentations, local outreach events, and scheduled meetings with reef users and stakeholder groups.
- Build and maintain relationships with stakeholders. Attend and present at two resource user group meetings per quarter.
- Maintenance and update of the SEAFAN Tracking Database as needed. Assist with the development of a RIPR database.
- Coordination of clean-up event(s) in each of the 4 counties in the southeast Florida region annually.
- Submission of quarterly SEAFAN reports that summarize the data collected at each event site (e.g. location, type of event, extent of the event), including data analysis (if available) that will be distributed via e-mail and uploaded to the FDEP CRCP website.
- Creation of an annual summary document containing an analysis of the reported and removed marine debris data, including classification of data into categories by type and by user group (source), calculation of volunteer hours and clean-up effort, and illustration of the distribution of marine debris. This report will also highlight any major program accomplishments, and provide recommendations for program improvement.
- Participation in the distribution of the annual report and data – including leading the implementation of any recommendations for program improvement identified in the report and by the SEAFAN project team.

Task 3: Develop and Implement Initiatives to Improve Coral Reef Resilience and Adaptation (40% of time)

The Fellow will lead, with assistance from the FDEP CRCP Assistant Manager and Environmental Project Coordinator, the planning and implementation of initiatives that improve the understanding of impacts to southeast Florida's coral reefs from causes such as, ocean acidification, coral bleaching, and disease, and increase coral reef resilience and adaptability by informing future management strategies.

To successfully focus resources in the future FDEP CRCP needs to gain a deeper understanding of past, current, and future reef resilience efforts, as well as data availability for the southeast Florida region. The Fellow will dedicate the first year to gathering and synthesizing existing information and efforts in the region and how these efforts relate to recommendations from the various planning documents specifically focused for the Florida Reef Tract. Once a synthesis is compiled existing strategies will be evaluated, and information translated into tangible management actions, which could include, but not limited to products to inform resource managers, decision-makers and public. In addition, the Fellow will represent the FDEP CRCP in the Florida Reef Resilience Program (FRRP) Disturbance Response Monitoring (DRM) Working Group.

Long-term management goal: The Fellow will support the goals and objectives as described in Florida's Coral Reef Management Priorities, FDEP CRCP's Strategic Plan, amongst others to address impacts from coral bleaching, disease and ocean acidification to southeast Florida's coral reef resources. Also, the Fellow will work to improve public awareness of Florida's coral reef ecosystems, the threats, and the FDEP CRCP.

Outcomes/Deliverables:

- Compile and synthesize existing information and data that addresses reef resilience issues.
- Identify tangible actions to address and implement goals and objectives, and recommendations as identified by Florida's Coral Reef Management Priorities, FDEP CRCP's Strategic Plan, and other related plans for the Florida Reef Tract.
- Implement top priority tangible action to educate southeast Florida stakeholders on reef resilience.
- Serve as the FDEP CRCP representative on the FRRP DRM Working Group.

Task 4: Coral Reef Monitoring & Assessment Data Collection and Coordination (10% of time)

The Fellow will work closely with the CRCP Assistant Manager to coordinate the CRCP dive team for the seasonal FRRP Disturbance Response Monitoring (DRM) surveys. The Fellow will undertake training dives as part of the program's quality control procedures to become part of the CRCP dive team. Once part of the dive team, the Fellow will collect data for the FRRP DRM program, and other assessments both in-house and partner related as assigned.

Long-term management goals:

The Fellow will support the long-term management goals of the FDEP CRCP to support related partnership efforts to conserve and improve management of the Florida Reef Tract.

Outcomes/Deliverables:

- Submit monthly dive logs with an annual total of about 12 dives, as projects permit. A description of data collected should be submitted if appropriate.
- Coordinate seasonal FRRP DRM dives for FDEP CRCP dive team.
- Lead data entry and data quality control procedures for the FRRP DRM program.

Task 5: General FDEP CRCP and Southeast Florida Coral Reef Initiative (15% of time)

The Fellow will assist the FDEP CRCP Assistant Manager in organizing, facilitating, and participating in FDEP CRCP and SEFCRI-related workshops and meetings, ensuring meetings are properly noticed, summaries are recorded, and program/project files are maintained. Additional assignments may include: creation and management of new Local Action Strategies (LAS), assisting with grant planning, helping to staff the SEFCRI booth at educational events, delivering FDEP CRCP and SEFCRI-related public presentations, providing assistance with logistics (e.g., planning/support, development of meeting agendas and summaries, etc.) and data gathering/synthesis for associated Florida coral reef management meetings. The Fellow will also acquire, analyze and review data and literature relevant to the CRCP, develop and update databases, prepare progress, financial and other reports, as assigned.

Long-term management goal:

The Fellow will support the long-term management goals of the SEFCRI including: 1) expanding the SEFCRI, and 2) improving public awareness of Florida's coral reef ecosystems and the SEFCRI.

Outcomes/Deliverables:

- Creation and management (as applicable) of new LAS projects.
- Staffing the SEFCRI booth at a minimum of 2 educational events annually.
- Delivering the SEFCRI overview presentation at a minimum of 3 public meetings annually.