

**Florida Keys National Marine Sanctuary
Marine Zoning & Regulatory Review
Coral Reef Ecosystem Restoration
April 3, 2013**

Working Group Meeting Summary

Meeting Agenda

1. Update on progress of Shallow Water Wildlife Habitat Protection working group
2. Presentation: Coral Reef Ecosystem Restoration Activities and Science, including successes
3. Discussion & Decision: Coral Reef Ecosystem Restoration Zones - Restoration & Research Only
4. Discussion & Decision: Finalize criteria the working group will use when developing options and recommendations for active coral reef ecosystem restoration sites. Primary focus of this meeting.
5. Discussion & Decision: Active Coral Reef Ecosystem Restoration Sites—Where & Why?
6. Exercise: identify options for active coral reef ecosystem restoration (tabled for next meeting)

Major Points of Discussion

1. Update on progress of the Shallow Water Wildlife Habitat Protection and the Ecosystem Protection: Ecological Reserves / Preservation Areas and Wildlife Protection working group
 - Shallow Water Wildlife and Habitat Protection Working Group:
 - Developed criteria to use when selecting options for sites.
 - Discussed impacts to Sanctuary resources from vessel groundings, prop scarring, and the potential for injury response and restoration.
 - Identified shallow water wildlife habitats including beaches, seagrass, coral reef, and hardbottom habitats and the associated species assemblages.
 - Demonstrated maps/data layers they will be working with for developing options.
 - Ecosystem Protection: Ecological Reserves/Preservation Areas and Wildlife Protection Working Group:
 - Discussed existing Sanctuary zones and associated regulations.
 - Discussed the existing condition of Sanctuary resources.
 - Identified resources of concern for ecosystem protection.
2. Presentation: Status of Coral Reef Ecosystem Restoration Activities and Science
Dave Vaughan working group member and Executive Director of the Mote Tropical Research Lab in the Florida Keys presented on the current science of coral reef ecosystem restoration, identified needs and opportunities, and discussed the potential for further innovation in restoration activities.
The full presentation can be found here: <http://floridakeys.noaa.gov/review/coralrestoration.html>

Working Group Discussion:

- Discussed the challenges with funding restoration and the need and potential opportunities for innovative funding mechanisms for restoration activities.
 - Discussed resilience of coral species, long-term success of restoration activities, and rate of potential loss due to cold spells and bleaching events.
3. Discussion & Decision: Coral Reef Ecosystem Restoration Zones - Restoration & Research Only

Working Group Discussion:

- Discussed a range of options for coral reef ecosystem restoration activities including:
 - Species specific and ecosystem restoration
 - Research driven restoration science
- Identified challenges with permitting restoration work and the need to streamline the permitting process
- Identified the need to select restoration areas/sites across the range of habitat types, and throughout the length of the Keys.
- Discussed the need and value of engaging the public in restoration activities identifying areas that promote visitation
- Discussed various options for marking zones to facilitate zone management and compliance
- Identified a range of activities to support through active coral reef ecosystem zone types:
 - Physical manipulation including cleaning algae, structured construction, sediment removal;
 - Ecological restoration and manipulation of species and ecosystem components; and
 - Managed access that promotes visitation and implements specific and targeted access restrictions that are compatible and support specific restoration goals.

4. Maps and Dataset Layers Updates

- Reviewed maps created by working group identifying draft areas for active coral reef ecosystem restoration.
- Identified the range of datasets available for the working group to consider when making recommendations including managed areas, mooring buoys in relation to SPAs/reserves, existing restoration sites, lobster trap exclusion zones, and species specific data including habitat.

Public Comment:

Public comment was provided by two individuals:

- Chris Bergh, The Nature Conservancy and Sanctuary Advisory Council representative. Noted the important role of this working group in identifying specific areas and sites for active coral reef ecosystem restoration and if time allows to identify and provide recommendations on other topics that have been raised by the working group members including species specific ecosystem components (apex predators including sharks) and other factors including water quality that directly impact coral reef ecosystem health.
- Tad Burke, Florida Keys Fishing Guides Association. Noted the importance of adaptive management and addressing management of the entire Florida Keys. Promoted the need for mandatory education and provided information on a potential partnership with GPS chip manufacturers to provide relevant zone and Sanctuary issue updates.

5. Discuss: Finalize criteria for identifying specific areas and zones for active restoration of coral reef ecosystem; these criteria that the working group will use when developing options / recommendations for active coral reef ecosystem restoration zones.

Working Group Discussion:

- Requested additional criteria: accessibility of zones for both restoration activities and public engagement
- Discussed the need for historical presence of targeted restoration species

- Discussed criteria to address both holistic biodiversity and project specific restoration
- Identified the need for two types of reference/monitoring areas that include research sites and control sites to understand impact of restoration activities
- Identified triggers for adaptive management
 - Restoration success or failure
 - New technologies and restoration processes
 - Change in status of species, for example listing under the Endangered Species Act
 - Changes in condition of site:
 - Groundings
 - Algae outbreaks
 - Invasive species introduction
 - Cold weather/storms
 - Disease/bleaching
 - Human disaster (oil spill)

6. Discussion: Active Coral Reef Ecosystem Restoration Sites – Where and Why?

Working Group Discussion:

- Reviewed the upper Keys region and the working group recommended sites for coral reef ecosystem restoration and discussed how criteria was applied to identify these sites.
- Discussed incentives for public engagement including Blue Star sponsorship, mandatory education for guides, potential for development of a fund to contribute to restoration activities and installing/maintaining mooring buoys.

Public Comment

Public Comment was provided by one individual:

Chris Bergh, The Nature Conservancy and Sanctuary Advisory Council Co-Chair. Consider progressive restoration activities, for example once an area has been restored provide complete open access and transition to a new zone, over time the entire reef tract could be restored. In addition, noted the value of engaging Blue Star operators.

Follow-Up Actions for Working Group Members

- Review and provide edits to the draft criteria for selecting active coral reef ecosystem zones.
- Review maps created by the working group and data provided to be prepared at next meeting to begin identifying restoration zones.

Decision Items of Note

No decision items were before the working group at this meeting.