

**Florida Keys National Marine Sanctuary  
Marine Zoning & Regulatory Review  
Coral Reef Ecosystem Restoration  
May 1, 2013**

**Working Group Meeting Summary**

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**Meeting Agenda**

1. Update on progress of Shallow Water Wildlife and Habitat Protection and Ecosystem Protection working groups
2. Review Marine Zoning and Regulatory Review Process & Timeline
3. Discussion & Decision: Criteria and Framework for Making Recommendations
4. Exercise: Identify recommendations for active coral reef ecosystem restoration zones

**1. Update on progress of Shallow Water Wildlife and Habitat Protection and Ecosystem Protection: Ecological Reserves / Preservation Areas and Wildlife Protection working groups**

- Shallow Water Wildlife and Habitat Protection Working Group:
  - Review and discuss commercial towing and salvage in the FKNMS.
  - Discussion to finalize criteria that will be used to develop options and recommendations.
  - Assessment of existing and proposed Wildlife Management Areas.
- Ecosystem Protection: Ecological Reserves / Preservation Areas and Wildlife Protection Working Group:
  - Discuss working group concept of Ecosystem Protection.
  - Identify potential criteria for identifying zones for ecosystem protection.
  - Review zone performance of Dry Tortugas National Park, Benthic data and fish data from zones in the FKNMS.
  - Next meeting will include information on the science of Fish Spawning Aggregations and habitat data

**2. Presentation: Marine Zoning and Regulatory Review Process and Timeline (Sean Morton)**  
Sean Morton, FKNMS Superintendent, gave a presentation on the marine zoning and regulatory review process and timeline including the role of the working group, Sanctuary Advisory Council and agency development of an Environmental Impact Statement.

The presentation can be found here: <http://floridakeys.noaa.gov/review/coralrestoration.html>

And further details are available at <http://floridakeys.noaa.gov/review/process.html>.

**3. Discussion & Decision: Criteria and Framework for Making Recommendations**

The working group finalized their review of the criteria they will use for site selection in making recommendations for active coral reef ecosystem restoration zones and reviewed a draft framework of recommendations.

**Working Group Discussion**

- Need to determine how to define success of a specific restoration zone – scientifically, ecologically, economically; project-dependent.

### Morning Public Comment:

Public comment was provided by two individuals:

- Davis and Laurie Pool, Eternal Seas Memorial. Provided handouts to working group to encourage creation of a new “Memorial Garden/Restoration zone” that could help provide funding for the cause of coral restoration. Summary-propose a patented process which will provide a true ‘burial at sea’ beneath cultivated reefs, and simultaneously, help to fund on-going coral restoration. This is a privately funded endeavor and gives back a ***significant*** amount (20% of each burial) to coral reef restoration and other environmental initiatives.

Propose to use the exact same techniques NOAA uses for mooring buoys, and utilize existing coral transplants and methods from Coral Restoration Foundation, Mote Marine, and The Nature Conservancy. The idea incorporates the need to protect corals and marine resources, cremation activities are on the rise in the Florida and the nation, many people are planning for their ‘after-life’. This does not include other intangible benefits that cannot be quantified.

### Video Demonstration: NOAA Puerto Rico Coral Nursery and Outplant Success Case Study

The working group viewed a time-elapsed photographic video of a demonstration project indicating dramatic success of Acroporid (*Acropora cervicornis*) coral restoration outplanting over a relatively short period of time.

4. Exercise and Discussion: Identify recommendations for active coral reef ecosystem restoration zones. The working group reviewed all individual maps for proposed active coral reef ecosystem restoration and proposed additional new areas for restoration. Discussion focused on reviewing the criteria used to identify options for active coral reef ecosystem restoration areas and sites. All regions were addressed including the Upper, Middle, and Lower Keys, Marquesas and Dry Tortugas.

Specific site selection considerations discussed included:

- Consider areas that are already zoned:
  - Existing management areas – to reduce visitor use impacts
  - Lobster Exclusion Zones: No trapping and no lobstering zones (Pennekamp) potential for Restoration Zones; consider buffer zones
- Vessel Grounding/Restoration sites
- Outplanting sites and nursery sites: Coral Restoration Foundation, The Nature Conservancy, Mote Marine Lab, Florida Wildlife Research Institute
- Inshore vs. offshore reef locations
- Visitor Use Data
- Historical Presence
- Homogeneity/comparison

Specific Upper Keys sites discussed include:

- Turtle Rocks and Turtle Harbor: Federal vs. State water resources and reef sites; Pennekamp research areas and high interest
- Molasses Reef: location of zones revisited and discussed, visitor use statistics; *Wellwood* grounding/restoration site

- Carysfort Reef: North & South zones, remote, low impact, low use/under-utilized areas, *Maitland* Restoration site
- Elbow Reef: visitor use areas avoided include *City of Washington* wreck site and middle section
- Basin Hill Shoals: Pennekamp research areas
- Key Largo Dry Rocks: high use, anchoring issues
- Horseshoe Reef: potential new site to consider
- Grecian Rocks: high visitor use on bad weather days; degraded, condition data available
- Higgeons Reef: cold spell 2010 damage, no trapping/lobster exclusion area
- White Banks Dry Rocks
- Sand Island: Elkhorn presence; open public access to show restoration activities
- Pickles Reef, Snapper Ledge: Acroporids presence, parent colony sites
- Inshore Patch Reefs: Basin Hill Shoals, Cannon Patch, Mosquito Banks identified zones
- Conch Reef and Little Conch: best sites area outside of the Sanctuary Preservation Areas
- Three Sister's Reef
- Davy Crocker Mooring Buoy: outside Sanctuary Preservation Area, good boulder coral

Specific Middle Keys sites discussed include:

- Cheeca Rocks: Sanctuary Preservation Area
- Hen and Chickens Reef: cold front 2010, grounding impacts; bolder coral and historical presence of elkhorn coral; degraded
- Caloosa Rocks
- Tennessee Reef: staghorn coral presence, open access restoration; existing management area – Research Only Zone
- East Turtle Shoal at Marker 45 Reef: good bottom, *Adeline Baker* shipwreck site, popular dive site, inshore patch reef/Hawks Channel location
- Marker 47: popular dive site, inshore patch-nice hardbottom, boulder corals – historical presence
- Marker 20: hardbottom; lobster exclusion zone
- Coffin's Patch West: Florida Wildlife Research Institute coral nursery site
- East Washerwoman shoal: hardbottom

Specific Lower Keys sites discussed include:

- Bahia Honda Shoal: Mote outplanting site
- Big Pine Shoal: Mote outplanting site
- Looe Key Reef/SPA: Heavily utilized Sanctuary Preservation Area (38 moorings, 2-3 boats/mooring), intense use; *Columbus Iselin* restoration site
- Looe Research Only zone: Mote coral nursery location, outplanting site
- Newfound Harbor Sanctuary Preservation Area: inshore patch reef, 2 restoration sites
- Cooks Island Patch Reefs: northeast of Newfound Harbor Sanctuary Preservation Area, multiple vessel groundings, cold spell 2010 mortality/degradation; Mote's proposed site for "re-skinning" demonstration project; open access managed area due to bad-weather day visitor uses (Seacamp)
- American Shoal Reef: Mote outplanting site, staghorn presence-parent colonies, rubble
- Western Sambos Reef: extensive public support for restoration, coral nursery proximity
- Eastern Dry Rocks Reef: historic presence of elkhorn, back reef elkhorn is recovering
- Pelican Shoals: degraded spur-and-groove reef, historic presence of staghorn, elkhorn;
- Mid-Channel Reefs: inshore patch reefs, inshore of Sambos Reefs and Toppino Reef
- Content Keys

Specific Marquesas sites discussed include:

- Lost Reef: historic presence of staghorn, elkhorn; eroded spur-and-groove reef
- Man Key Patch Reefs: inshore patch reefs, just seaward of island
- Vestal Shoals Reef: historic presence of staghorn, flat hardbottom
- Boca Grande Patch Reef: inshore patch reef coral heads, just seaward of island
- Marquesas Patch Reefs: inshore patch reef coral heads, just seaward of island
- Cosgrove Shoal: ledge drops off to 60' water, deep water stuff, fish (nocturnal zone/hidden)
- Grocery Reef: largest population of sharks and "Jewfish" [Goliath Grouper], coral heads in 50' of water, rise to within 15' of surface
- New Grounds: inshore patch reefs with Gorgonian growth, coral patch reefs, sponge grounds; *Henrietta Marie* slaver shipwreck;
- Cottrell Key: historic presence of staghorn, carpet anemones, brain coral/boulder corals, all killed after the blackwater event

Specific Dry Tortugas sites discussed include:

- Dry Tortugas Coral Nursery Discussion: to be established, National Park Service nursery
- Historic Staghorn Coral Presence Discussion: National Park Service restoration ongoing
- Pulaski Shoals: outside Park Service area, inside FKNMS, historic staghorn presence

#### **Follow-Up Actions for Working Group Members**

- Review and provide comment on draft recommendations for managing coral reef ecosystem restoration zones; and finalize criteria for site selection and making recommendations for active coral reef restoration zones.

#### **Decision Items of Note**

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