



Ecosystem Protection: Ecological Reserves / Preservation Areas & Wildlife Protection Working Group: Summary and work products

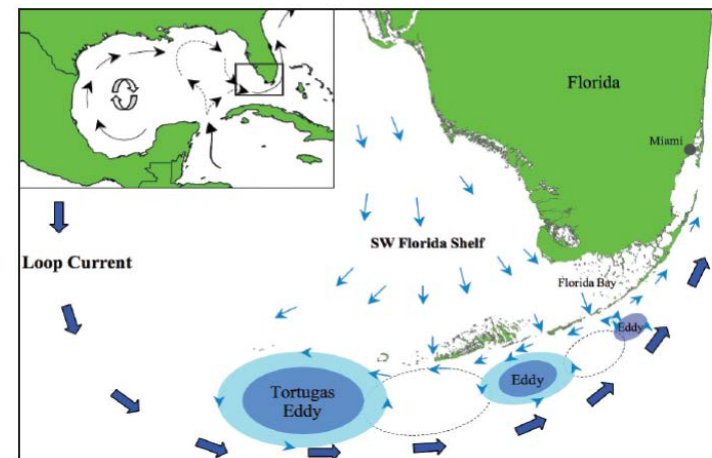


Chris Bergh
Sanctuary Advisory Council – Conservation & Environment
Working Group Chair

Summary of Recommendations



1. Classify all areas of the Sanctuary as a specific zone type (SAC principle 2).
2. Additional, regional meetings are needed to solicit community input for changes to existing or potential new zones for ecosystem protection.
3. Water quality, education, and enforcement should be addressed by the SAC.



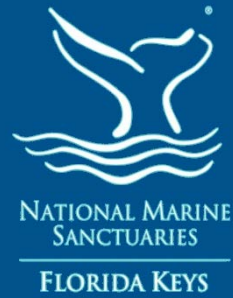
Source: redrawn from Lee et al. 2002

Working Group Membership: Sanctuary Advisory Council



- Chris Bergh, SAC Conservation and Environment
- Ben Daughtry, SAC Commercial Fishing – Marine/Tropical
- Ted Lund, SAC Fishing Charter Flats Guide
- Suzy Roebling, SAC Citizen at Large – Upper Keys
- Joe Weatherby, SAC Tourism

Working Group Membership: Other Community Members



- Maria Brandvold, Recreational Fisherman
- Tad Burke, Florida Keys Fishing Guides Association
- Mark Chiappone, NOVA Southeastern University
- Don DeMaria, Sea Sampler
- Tim Grollimund, SCUBA Diving Columnist/Underwater Photographer
- Manny Herrera, Florida Keys Commercial Fishermen's Association
- Ernie Piton, Florida Keys Commercial Fishermen's Association
- Scott Saunders, Fury Water Adventures
- Mimi Stafford, Reef Relief
- Dave Vandenbosch, Captain Hooks Dive Center and Marina

Working Group Objectives



1. Review and evaluate existing reserves designated for protection of coral reef ecosystems.
2. Review current exceptions to regulations in Sanctuary Preservation Areas and Ecological Reserves.
3. Review and evaluate Sanctuary Preservation Areas reduction of conflicting uses.
4. Recommend new or modified ecological reserves to ensure protection of a diversity of resources:
 - Spawning aggregations
 - Full suite of marine flora and fauna

Cont.

Working Group Objectives



5. Consider temporal zoning to address seasonal impacts associated with intense uses or seasonal ecological activities (i.e., nesting, breeding, spawning).
6. Ensure the FKNMS zoning scheme promotes sustainable use of the sanctuary resources and protects areas that represent diverse habitats as well as areas important for maintaining natural resources and ecosystem functions.

Seven Working Group meetings March - July



In Summary

March 14: Clarified Role and Authority of Working Group.

April 4: Identified primary habitats, resources, and data layers, as well as study areas and geographic regions to be considered.

May 2: Identified criteria and factors to consider for Ecosystem Protection.

May 23: Identified a range of ecosystem protection components to consider when making recommendations regarding fish spawning aggregations. (con't next slide)

Seven Working Group meetings March - July



May 23 (con't):

- WG members identify and map ecosystem components, areas, and uses.
- Homework assignment: Review SPA and ER spreadsheet and provide suggestions and justifications for any boundary modifications.

June 13: Identified:

- Select biological information in SPAs and ERs as it relates to the SAC and working group objectives.
- Discussed boundary modifications and justifications for existing SPAs and ERs.
- Additional GIS data needs for the working group.

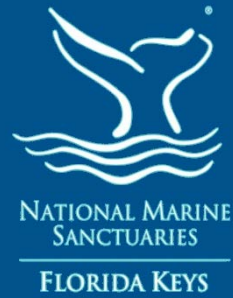
Seven Working Group meetings March - July



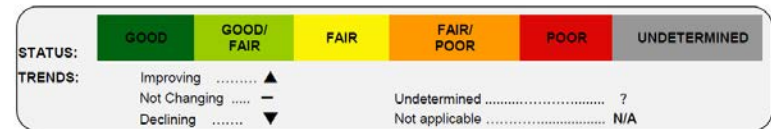
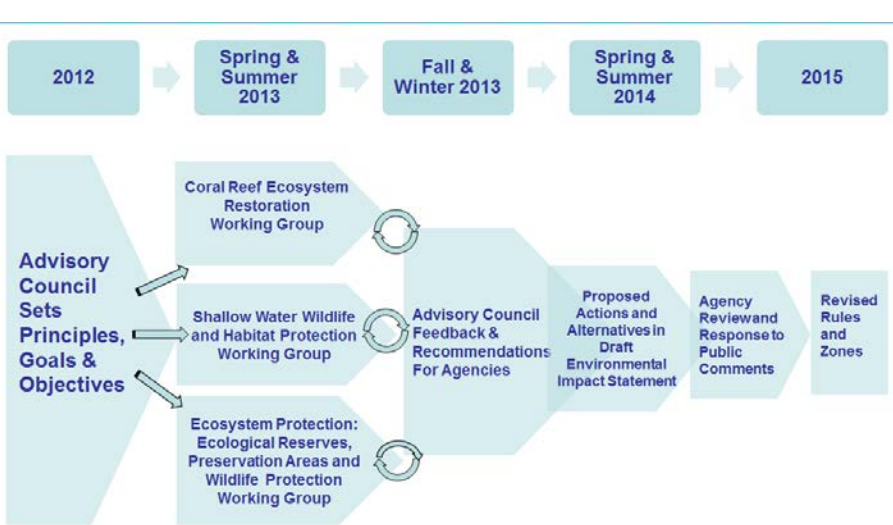
July 11: Assessed and discussed draft maps showing literal interpretations of members written and verbal suggestions.

July 29: Public comment, and vote to host regional meetings, and that water quality, education, and enforcement should be addressed by the SAC.

Working Group Presentations and Discussions



- ✓ Review working group process and timeline (Sean Morton)
- ✓ Existing zones, regulations, and exceptions (Mary Tagliareni)
- ✓ 2011 FKNMS Condition Report: Current condition and state of resources (Scott Donahue)

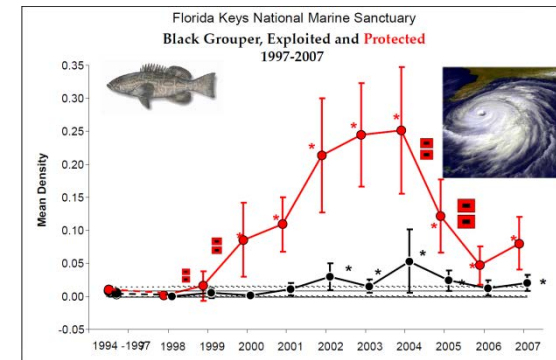
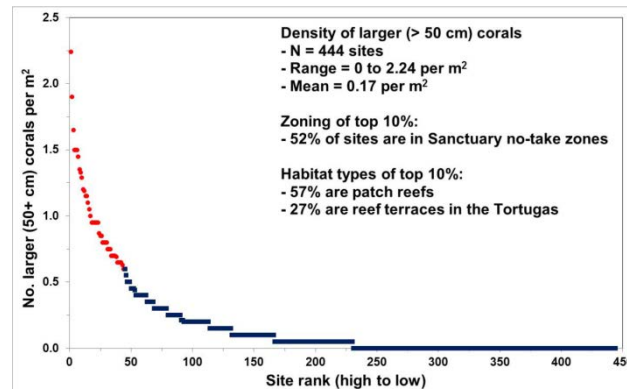
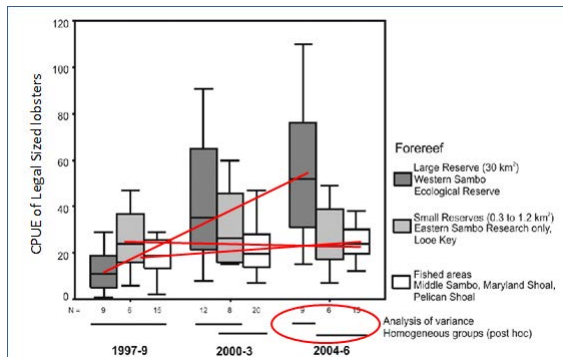


Question	Status and Trends	Basis for Judgment
Abundance/Distribution	GOOD	In general, mangrove and benthic habitats are still present and their distribution is unchanged, with the exception of the mangrove community, which is about half of what it was historically. The addition of causeways has changed the distribution of nearshore benthic habitats in their vicinity.
Structure	FAIR/POOR	Loss of shallow (<10 meters) <i>Acropora</i> and <i>Montastrea</i> corals has dramatically changed shallow habitats; regional declines in coral cover since the 1970s have led to changes in coral-algal abundance patterns in most habitats; destruction of seagrass by propeller scarring; vessel grounding impacts on benthic environment; alteration of hard-bottom habitat by illegal casitas.
Contaminants	UNDETERMINED	Few studies, but no synthesis of information.
Human Activities	FAIR/POOR	Coastal development, highway construction, vessel groundings, over-fishing, shoreline hardening, marine debris (including derelict fishing gear), treasure salvaging, increasing number of private boats, and consequences of long-term changes in land cover on nearshore habitats.

Working Group Presentations and Discussions



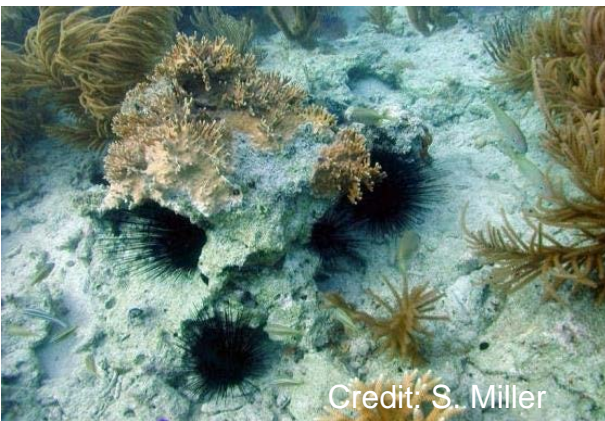
- ✓ Reef Ecosystem Resilience (Dr. Rob Van Woesik, FIT)
- ✓ Case Study – Tortugas Zone Performance (Dr. Tracy Ziegler, NPS)
- ✓ Benthic Communities and Zoning (Dr. Steven Miller, NOVA SE)
- ✓ Fish Communities and Zoning (Dr. Jerald Ault, UM - RSMAS)
- ✓ Spawning Aggregations (Danielle Morley, FWC)
- ✓ Performance Evaluation of Western Sambo Ecological Reserve (John Hunt, FWC)



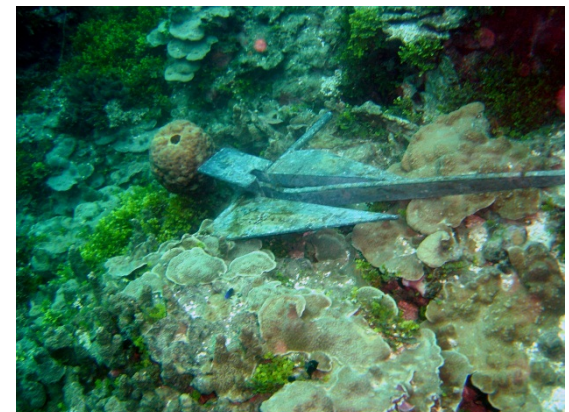
Cross-Cut Issue Discussion



- ✓ Consistency of application of zone regulations.
- ✓ Bait fishing inside SPAs.
- ✓ Catch and release trolling inside Conch, Alligator, Sombrero, and Sand Key SPAs.
- ✓ Anchoring inside SPAs and ERs.
- ✓ Consistency of regulations in the Ecological Reserves.



Credit: S. Miller



Discussion topics regarding Zone boundaries and potential modifications



- ✓ Status Quo – no changes needed to existing zoning.
- ✓ Expansion to the deep outlier reefs at 16 Sanctuary Preservation Areas to incorporate interconnected deep reef habitat.
- ✓ Creating three new zones to protect sensitive habitat and fish spawning aggregations.
- ✓ Modifying the existing Ecological Reserves to further protect ecosystem services and functions in that region.
- ✓ Modifying existing zones to add new Ecological Reserves - one in each region.

(SAC principle 3; Each habitat type should be represented in a non-extractive marine zone in each of the biogeographically distinct sub regions of Florida Keys National Marine Sanctuary to achieve replication...)

Discussion topics regarding Zone boundaries and potential modifications



- ✓ This working group discussed Fish Spawning Aggregations (FSAs) in the following ways:
 - FSAs are a fishery management issue that is already being addressed by those managers through size and bag limits – no special zoning required.
 - The working group agreed they should not consider species specific recommendations.
 - FSA are an important ecosystem feature in need of more protection (Objectives 4 & 6).
 - Could be protected either by temporal or fixed zoning strategy (Objective 4 & 5).

Work Products Developed



- ✓ Criteria for selecting zones for ecosystem protection purposes.
- ✓ Draft maps created by the working group showing areas of interest to the individual WG members.
- ✓ Draft maps created in an iterative process for use in developing potential recommendation. Maps included:
 - ✓ working group information
 - ✓ scientific data
- ✓ Ballot for voting on 105 individual working group proposals.

Example draft map for consensus vote

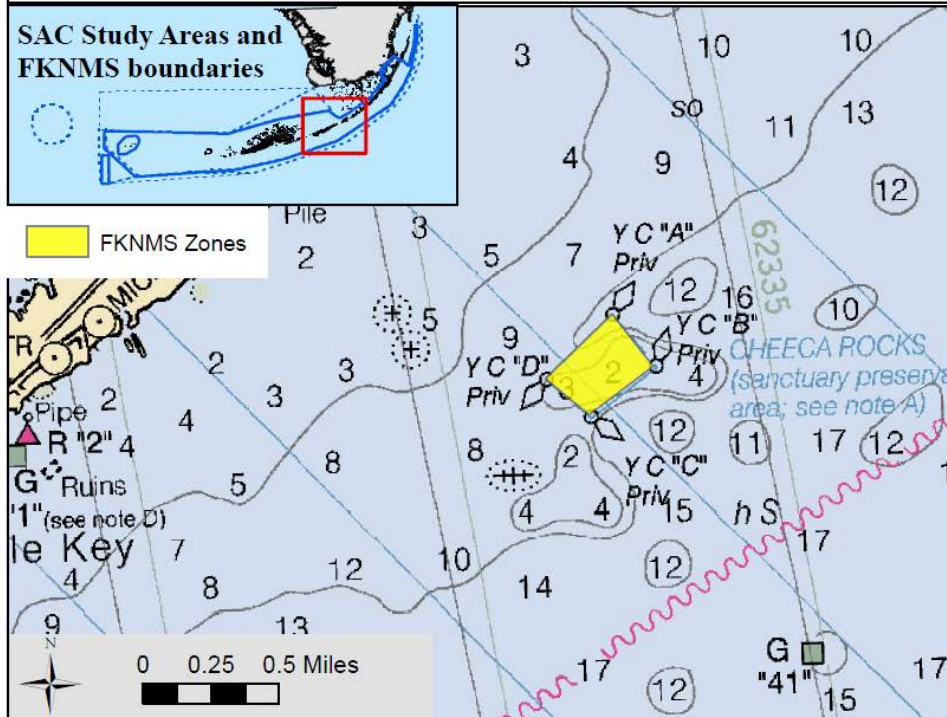


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Ecosystem Protection Working Group

DRAFT

- Recommended Changes to SPA Boundaries -
Cheeca Rocks



EPWG Recommendations:

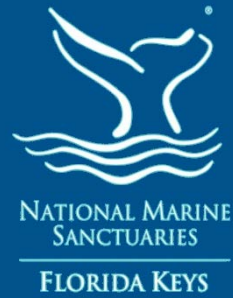
- 1) No modification to existing zone boundaries.

Justifications:

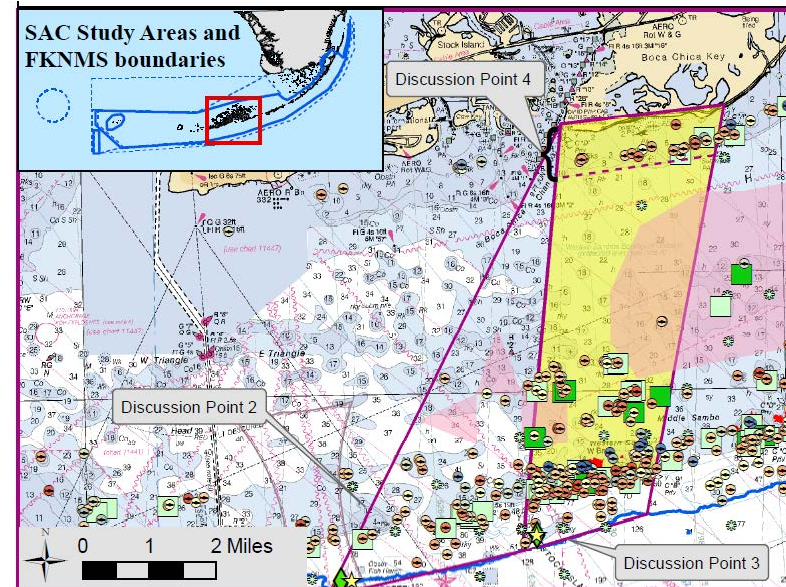
<None specified for the SPA>

NOTE - these are DRAFT interpretations of feedback from the Ecosystem Protection Working Group members as of 7/12/13, and they are being displayed as visual reference for the working group consensus decision making process.

Example ballot item



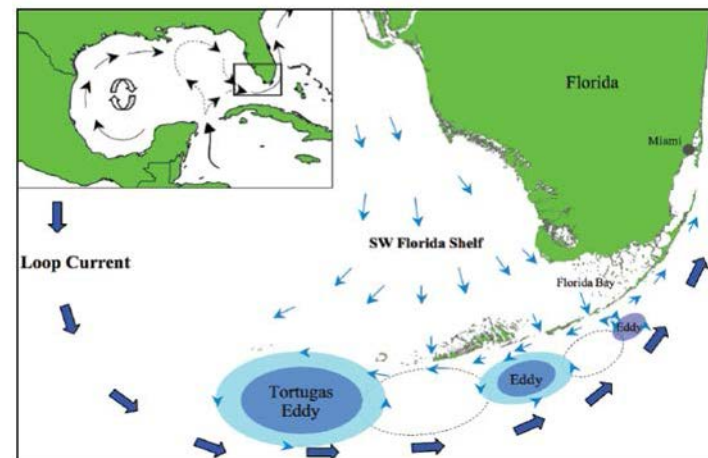
Zone	Discussion point(s)
Section I: Potential Modifications to Existing Ecological Reserves	
Western Sambo Ecological Reserve	Discussion point 1: No modification to existing zone boundaries.
	Discussion point 2: Expand to include all known fish spawning aggregations.
	Discussion point 3: Expand offshore to 30 m depth contour.
	Discussion point 4: Expand protection for near-shore habitat; include idle only in 6-ft. of water.



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Working Group Resources



Florida Keys National Marine Sanctuary Marine Zoning and Regulatory Review: floridakeys.noaa.gov

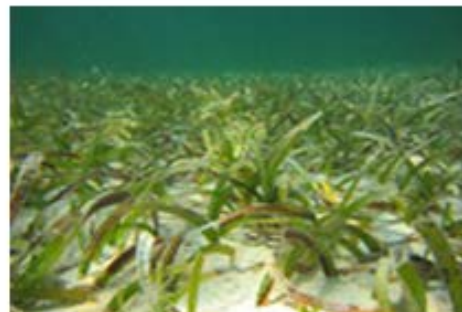


Marine Zoning & Regulatory Review

Maps, Data, and GIS Resources: http://ocean.floridamarine.org/fknms_zone_review



Coral Reef Ecosystem Restoration Working Group
Coral health in the sanctuary has declined over the past several



Shallow Water Wildlife and Habitat Protection Working Group
Hardbottom communities and



Ecosystem Protection: Ecological Reserves, Preservation Areas and Wildlife Protection Working Group

National Marine Sanctuaries
National Oceanic and Atmospheric Administration



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