

U.S. Coral Reef Task Force



*Injury Response and Mitigation
Working Group Update*

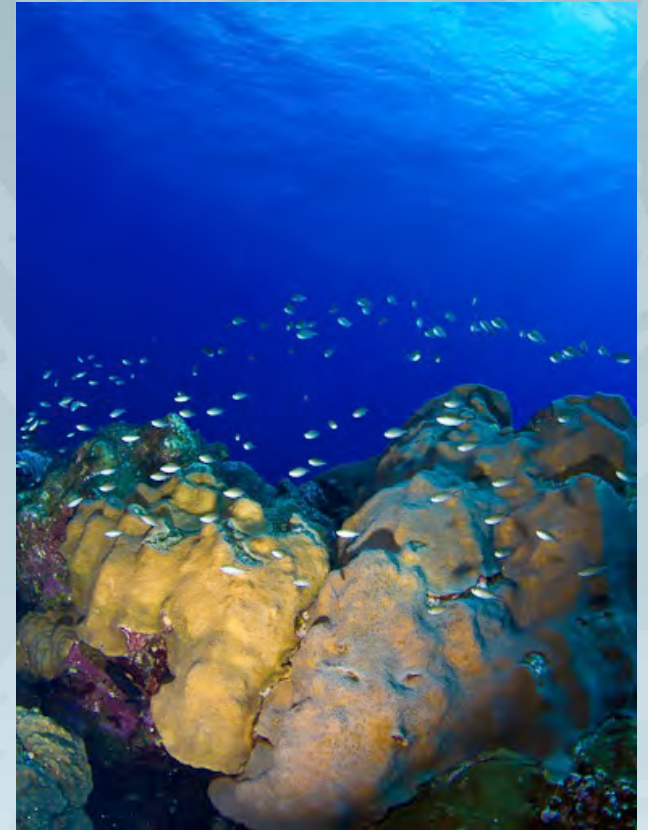
Injury Response and Mitigation WG

Terms of Reference

- Generate methods and processes to avoid planned and unplanned loss of reefs.
- Design a process to achieve successful mitigation projects and outcomes.
- Focus on developing guidance and tools for future mitigation and restoration
- Gather tools developed for other types of resource mitigation (wetlands e.g.) to extract valuable approaches and applications but also realize these may not translate well to coral reefs, therefore being limited in their use.

Injury Response and Mitigation WG Actions

- Develop a matrix of injury assessment tools, metrics, and methodology.
- Identify, Develop and Evaluate Compensatory Restoration Projects Appropriate for Reef Impacts.
- Develop Performance Criteria, Monitoring Protocols, and Mechanisms to Track Long-term Success of Mitigation and Restoration.



National Ocean Policy

Strengthen Interagency Coordination to Protect and Conserve Coral Reef Ecosystems:

1. Compile a reference library
2. Develop a Reef Managers Resource to Coral Reef Impact, Avoidance, Minimization, Mitigation, and Restoration



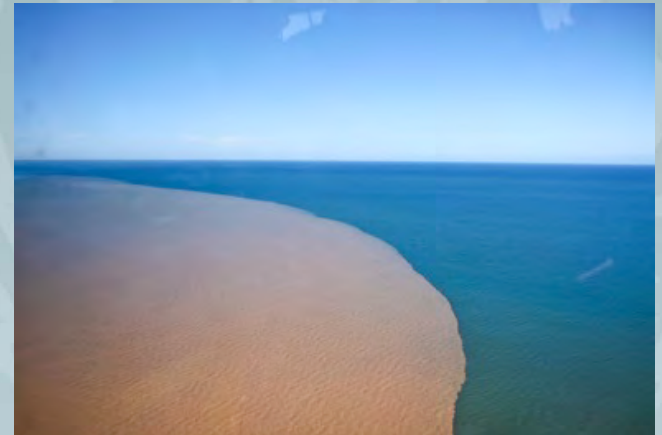
Working Group Sub-Groups



1. Legal & Policy
2. Assessment Protocols & Modeling
3. Mitigation & Restoration Strategies
4. Performance Criteria & Monitoring

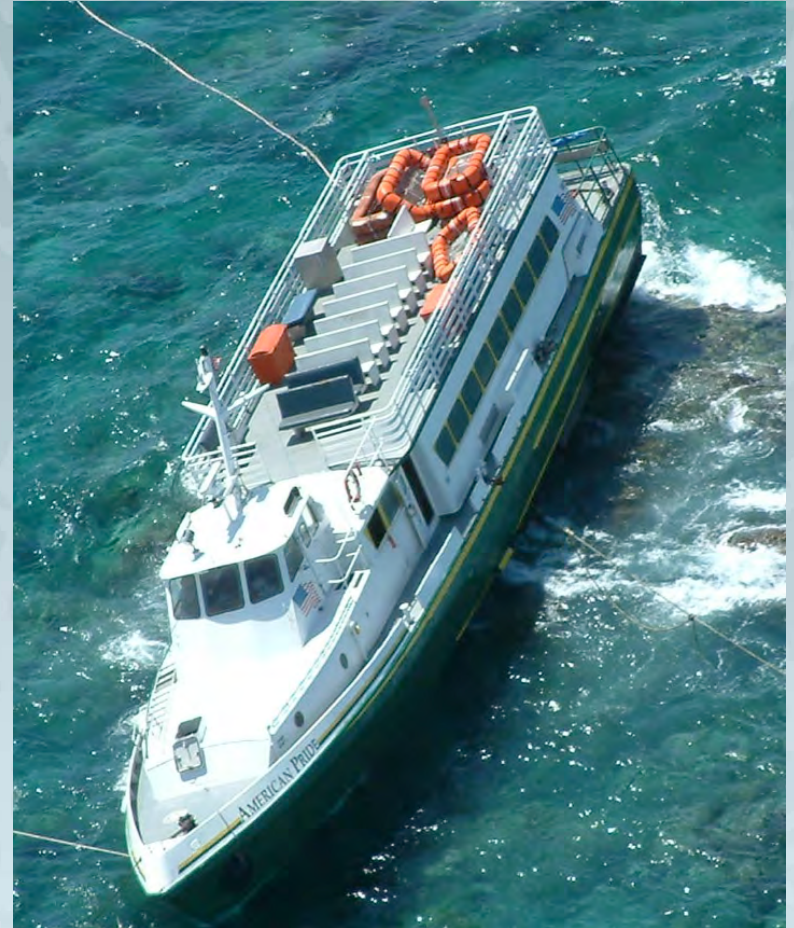
Legal & Policy

- Integration of National Ocean Components into Working Group Efforts
- Summary of Relevant Literature and Policies
- Working closely with EPA and USACE to understand and integrate the 2008 Mitigation Rule into planning Coral Reef Mitigation
- Development of Specific Recommendations that Agencies can take Immediately



Assessment Protocols & Modeling

- Conducted Detailed Briefings on Modeling Approaches and Developing a Reference Library
- Compiled a library of existing coral reef assessment protocols and models for scaling mitigation.
- Developing a Tiered Approach Data Collection



Tier 1: Minimum Biological Survey Resource Requirements

Survey	Data Collected	Information Provided
Habitat Mapping	[Varies due to different scales]	- Distribution of habitats within project/impact area
Stony Coral Survey	- Species - Colony size (Max Diameter) (can be placed into pre-defined size classes) - Growth form (Pacific)	- Estimates for: coral colony density, species richness, size class distribution
Octocoral Survey	- Size (H) using pre-defined size classes - Morphology (pre-defined categories)	- Estimates for: octocoral density and size class distribution
Sponge Survey	- Size (H) - Morphology (pre-defined categories)	- Estimate for sponge density and size class distribution
Benthic Cover	- Percent cover (using pre-defined categories)	- Estimate of benthic cover of project/impact site
Rugosity	Rugosity ($R = 1/d$) and/or Complexity ($C = 1 - d/1$)	- Estimate of topographic complexity of project/impact site

Mitigation & Restoration Strategies

- Ongoing evaluation of commonly considered strategies as well emerging techniques.
- Ongoing development of the tools and techniques needed to use these strategies to as compensatory mitigation and restoration.
- Considering the development of a pilot *in lieu of fee* program for coral reef compensatory restoration.



Restoration and Mitigation Options

Actions Under Continued Development

- Impact Site Actions
 - Emergency Restoration
 - Site Stabilization
 - Proactive Translocation
- Direct Threat Minimization
 - Anchorage Relocation
 - Recreational and Commercial Mooring Buoys
 - Marine Debris Removal
 - Invasive/Exotic Species Removal
- Active Population Enhancement
 - Coral Nurseries
 - Restore/Enhance Herbivory
- Shoreside Activities
 - Watershed Restoration
 - PS/NPS Water Quality Improvements
- Management Actions
 - Protect Sites (Marine Protected Areas)
 - Improve Regulation Enforcement
- Artificial Reefs



USCRTF Member Agency Needs

- Financial Support for Reef Managers Handbook
- Support for Continued Staff Participation and Travel to In-Person Meetings
- Development Coral Specific In-lieu of Fee Programs and Mitigation Banking Pilot Projects
- Senior Federal Leadership Commitments to:
 - Integrate Resource Agencies into Early Project Coordination Meetings
 - Conduct Quarterly Project-specific Coordination Meetings
 - Hold a Basin-wide Annual Meeting
 - Commit to Development of Functional Assessment Tool Specific for Coral Environments
 - Coordinate the Agency Services on Compliance and Assessment

