



US Army Corps
of Engineers
Jacksonville District

U.S. Army Corps of Engineers

A Learning Organization

The Corps is committed to the protection of coral reefs and the effective mitigation of any impacts. The Corps believes that there is a need to improve the understanding of mitigation so that we can fully offset unavoidable impacts to coral reefs.



Photo from Broward County DPEP



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Corps implementation of Executive Order 13089 for Coral Reef Protection

- Corps fully mitigates all direct and indirect impacts to resources
- Mitigation sequence of avoidance, minimization, & compensatory mitigation
- Restoration through planning and project capabilities



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Corps Actions to Improve Coastal Protection

Jacksonville District is actively participating in the
Southeast Florida Coral Reef Initiative
Local Action Strategy

Corps representatives to:

- Land Based Sources of Pollution Workgroup
- Maritime Industry and Coastal Construction Impacts Workgroup

<http://www.dep.state.fl.us/coastal/programs/coral/>



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Jacksonville Regulatory Division Efforts

- Avoid impacts to coral reefs to the maximum extent practicable
- Improve consistency of mitigation for marine impacts
- Improve tools for assessing marine mitigation
- Coordinate interagency workgroups



Photo from Nova Southeastern University, National Coral Reef Institute



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Pacific Ocean Division Coral Protection Efforts

- Hosted a Coral Reef Functional Assessment Workshop to explore the feasibility of developing a methodology for assessing impacts and mitigation
- Implementing mitigation, where appropriate, for harbor improvement projects in the Pacific



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Major Threats to Coral Reefs

- Maritime Industry and Coastal Construction Impacts (FL LAS MICCI)
- Land Based Sources of Pollution and Water Quality (FL LAS LBSOP)
- Fishing Diving & Other Uses (FL LAS FDOU)
- Florida Keys Reef Tract, Florida Bay & Gulf of Mexico – **Eutrophication**
- Miami-Dade to Palm Beach – **Construction and LBSOP**
- Puerto Rico & the U.S. Virgin Islands - **LBSOP**



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Dead coral heads off previously dredge-filled beaches, overgrowth of *Palythoa caribbeorum*, & algae growing on soft coral possibly due to eutrophication, LBSOP, and/or construction impacts



Photo from Cry of the Water



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Nearshore mitigation prone to burial by natural sand migration



Town of Palm Beach Artificial Reef Phipps Park

Print #40601001

Date:



Aerial Photography, Inc. 954-568-0484



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Corps Implementation of Coral Protective Measures

Regulatory Division

- Taking a broad view under NEPA for impacts to corals, including deep water species and indirect impacts
- Working closely with NOAA to implement regulatory authority under Essential Fish Habitat provisions of the Magnuson Stevenson Fisheries Act
- Maximizing avoidance & protection of high ecological value marine resources
- Fully offsetting all functional losses under the 1990 MOA on Mitigation
- Fully offsetting impacts under NEPA



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Mitigation for Impacts to Coral Resources

- Department of the Interior report,
“Investigations of Compensatory Mitigation for
Coral Reef Impacts in the U.S. Atlantic: South
Florida and the Caribbean”
 - Identified inconsistencies in mitigation
 - Focused on Corps regulatory program
- The Corps agrees:
 - Mitigation had been inconsistent
 - Mitigation is now improving
 - Corps is committed to continuing to improve
mitigation



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Mitigation for Impacts to Coral Resources

- Jacksonville Regulatory Division works closely with the local Federal Commenting Agencies
 - Ensures that impacts to coral resources are avoided to the maximum extent practicable
 - Ensures that impacts are fully and adequately mitigated
- Puerto Rico and the U.S. Virgin Islands Regulatory Division
 - Participates in a successful inter-agency working group
 - Discusses environmental impacts proposed by regulatory projects with a focus on avoidance



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A Demonstrated Need for Change

Past Unauthorized Impacts

- **Sunny Isles Beach Renourishment Project**
reef sedimentation resulted from inadequate buffers and around borrow areas
- **Hillsboro Inlet Dredging Project**
extensive coral damage due to cable drags
- **Calypso Pipeline Geotechnical Bores**
corals were relocated pre-construction, however, coral damage occurred due to missed targets by construction equipment



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This photo from Vone research shows damage to reef resources after the cable drag that occurred during the Hillsboro Inlet dredging project.





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Corps Response to Past Unauthorized Impacts

- Require hopper dredges to raise drag arms when turning or relocating
- Require floating anchor and tow lines or lines with mid line suspension
- Ensure adequate buffers between borrow areas and coral areas (typically 400 feet)
- Increase physical and biological monitoring requirements
- Increase avoidance of ecologically important resources



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Summary



Photo courtesy of NCRI

- The Corps is fully engaged and committed to implementing Executive Order 13089 for Coral Reef Protection
- The Corps is committed to working collaboratively with all stakeholders, including local interests
- The Corps is committed to improving mitigation of unavoidable impacts that are authorized by Regulatory permits
- The Corps is committed to instituting more resource protective permit conditions and providing effective compliance and enforcement of those conditions