SE Florida

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SE Florida
Natural Ecosystem

We are Connected
Many aspects of life on land affect coral reefs, and coral reefs are equally important to our way of life.

1. Mangroves and seagrasses serve as critical nursery habitats for reef fishes, including many species that are important to Florida's commercial and recreational fisheries.

2. Coastal dune protection and restoration reduces beach erosion and improves sea turtle nesting sites, which is important for wildlife and Florida’s tourism economy.

3. Seabirds that feed near reefs require sand spits for nesting and raising their young.

4. Coral reefs protect our beaches from erosion and sustain Florida’s economy by providing 71,000 jobs and generating $6.3 billion in sales and income annually.

5. Our seafood choices and fisheries regulations determine the population health of many reef species.

6. In addition to providing a food source, many reef species have anticancer and antimicrobial properties that are important to modern medicine.
Interaction of Artificial Reefs in Ecosystem

- INSHORE
Interaction of Artificial Reefs in Ecosystem

- OFFSHORE
Stakeholders & Primary Users

- Fishers
  - Charter, headboat, private, commercial
- Divers
  - Vessel (Charter/Private)
  - Shore (nearshore mitigation)
  - Tech divers
- Spearfishing
Artificial Reef Purposes & Aims

- Serve multiple purposes!
- Contribute to local economy (fishing, diving, & tourism) and take user pressure off of natural reefs
- Habitat enhancement
  - Coral nurseries
  - Mitigation
  - ‘Stepping stones’
  - Suitable/stable substrate in old dredge holes
- Memorial reefs
Reef Design & Construction Considerations

- Funding and material donations dictate design
- Connect/Expand existing reefs and habitats
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Reef Monitoring & Evaluation

- Palm Beach County—Volunteer Research Team

PBC Reef Team is seeking skilled divers to join our team!
Click the Join the Team link below for more information and dive with us in 2015.

Palm Beach County Reef Research Team

www.pbcreefteam.com
Reef Monitoring & Evaluation

- Palm Beach County—Volunteer Research Team
- Broward County—Research Projects by NSU
  - Thursday 1115: Comparison of Food Webs Among Limestone Boulder Artificial Reefs, Natural Reefs and Soft Bottom
- Miami-Dade
  - Reef Guard – Annual REEF surveys on Belzona Wreck Trek
  - Permit monitoring
  - Grant Studies – snap shot
  - Bal Harbour Mitigation
Are Reefs Meeting Objectives?

- **HABITAT**
  - Bal Harbour Mitigation
    - Y14 of Y20
    - Increasing benthic similarity, but slower now
    - Limited fish similarity because of reef structure

- **ECONOMIC Contribution**
  - 2001 Socio-economic study
    - >$732 million/year across the 4 counties
    - Looking for funding to update this study
How are Reefs Used?
Other Issues, Factors & Considerations

- **Funding**
  - Broward and Miami-Dade – No funding sources
  - Palm Beach - passed an ordinance in the late-1980s allocating a share of the vessel registration funds for artificial reefs

- **Permitting – Miami-Dade**
  - Years to issue re-authorization of Army Corps permits
    - NMFS Consult
  - Lost grant funding
Challenging/Unique Issues, Successes, Lessons Learned

- Palm Beach County
  - Stepping Stone Reefs
  - CCA Goggle Eye Reef
  - Smart phone app
Challenging/Unique Issues, Successes, Lessons Learned

- Broward – Focusing on future projects
Challenging/Unique Issues, Successes, Lessons Learned

- Miami-Dade County
  - Key Biscayne SMZ

- Belzona Wreck Trek project
- Website Upgrade
  http://gisweb.miamidade.gov/artificialreefs/
Challenging/Unique Issues, Successes, Lessons Learned

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Questions?

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