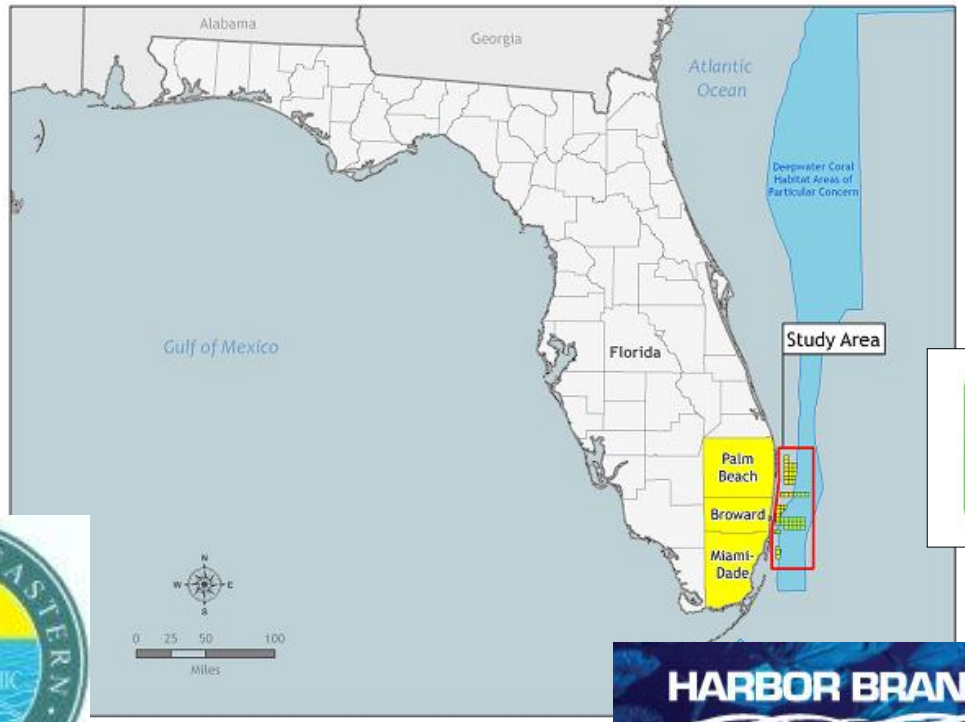

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Siting Study Framework and Survey Methodology for Marine and Hydrokinetic Energy Projects in Offshore Southeast Florida

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Purpose, Objectives, & Integration

Purpose:

- Investigate areas offshore southeast Florida that appeared most suitable for siting of marine and hydrokinetic energy conversion facilities that may be proposed in the Atlantic Ocean offshore of southeast Florida (offshore of Miami-Dade, Broward and Palm Beach Counties.)

Objectives:

- Development of an acceptable bottom habitat survey methodology and siting study framework in consultation and cooperation with regulatory and resource management agencies.
- Identification of general areas offshore southeast Florida that appear most suitable for installing marine and hydrokinetic energy facilities, including subsea electrical transmission cables to shore, based on the distribution of sensitive bottom habitats identified by existing and supplemental surveys conducted for this project.

Integration:

- This project seeks to demonstrate to resource management agencies how project proponents would use the information collected under this grant and exercise due diligence in evaluating possible pre-screened sites/areas in the Atlantic Ocean offshore of southeast Florida.
- Use existing available information and information collected under this grant in the early planning phase of a proposed project to avoid adverse impacts to the environment so that a proposed project is sustainable over its operational life. Project developers' selection of a specific project site from among pre-screened sites/areas will likely reduce time/effort that agencies would invest during the review process of the siting alternatives.
- The project results will be disseminated via the FAU website (http://coet.fau.edu/) and the NSU National Coral Reef Institute (NCRI) website (http://www.nova.edu/ncri/) beginning in December 2011 and through presentations at conferences by the grantee and subcontractors . The websites will acknowledge that all study information and results were developed by DA, LLC and its partners under a DOE Advanced Water Power grant.

Technical Approach

Step 1:

- The first step of the technical approach consisted of the compilation and review of the most recent and readily available studies on benthic substrate and habitat types in the Atlantic U.S. waters of southeastern Florida.
- The literature review was expanded beyond the proposed lease blocks to gain:
  - a much better understanding of benthic habitat seafloor mapping studies available in the southeastern Florida region.
  - knowledge and compile available mapping information of known coral reef and hard-bottom communities within a study area that extends from Offshore Miami-Dade County to Palm Beach County.

Step 2:

- Tier 1 – consisted of gaining overall insight about seabed conditions offshore southeast Florida by conducting a geophysical survey of pre-selected areas with subsequent post-processing and expert data interpretation by geophysicists and experienced marine biologists.
- Tier 2 – consisted of validation of benthic habitat types interpreted from the geophysical data by conducting benthic video and photographic field surveys of selected habitat types. The goal of this step was to determine the degree of correlation between the habitat types interpreted from the geophysical data and what actually exists on the seafloor based on the benthic video survey logs.

Plan, Schedule, & Budget

Schedule:

Siting Study for a Hydrokinetic Energy Project Located Offshore Southeast Florida	Completion Status
Summary of Tasks	
Task 1. Compile Habitat Mapping from Existing Data	Completed
Task 2. Develop Approach and Survey Methodology	Completed
Task 3. Geophysical and Benthic Video Surveys Analysis	Underway - To be completed by Oct. 30th, 2011
Task 4. Presentation of Siting Study Results	Begin Nov. 1, 2011 (Final Report due by Feb. 29, 2012)

Budget:

DE-EE0002655

AWPT-2

Budget History - DOE Peer Review

FY2010 Actual		FY2011 Budget		FY2012 Budget		Total	
10/01/09 - 09/30/10		10/01/10 - 09/30/11		10/01/11 - 09/30/12			
DOE	Cost-share	DOE	Cost-share	DOE	Cost-share	DOE	Cost-share
170,478	-	396,061	-	33,461	47,533	600,000	47,533

Accomplishments and Results
Challenges to Date

Accomplishments:

- The project team has accomplished all Tasks described under Steps 1 and 2 above of the Technical Approach. The Dehlsen team is performing final analysis of the collected data and will report findings by February 29th, 2012 (90 days or less from grant completion date of November 30, 2011).

Challenges to Date:

- The greatest challenge faced during the execution of this project was the management of the budget exacerbated by the massive oil spill that occurred in the Gulf of Mexico caused by the explosion on the Offshore Deepwater Horizon Oil Platform on April 20, 2010.
- Project team had to wait several months before a suitable vessel was located to execute the planned field activities associated with Tier 1 (Step2).
- Project is back on track and final reporting is planned for the end of February 29th, 2012 (90 days or less from grant completion date of November 30, 2011).

Next Steps

Under this Grant Award:

- Reporting of findings and conclusions at the end of February 2012.
- Beginning in December 2011, project results will be disseminated via the FAU website (http://coet.fau.edu/) and the NSU National Coral Reef Institute (NCRI) website (http://www.nova.edu/ncri/) and through presentations at conferences by the grantee and subcontractors during 2011/2012 timeframe.

Potential Expansion and Opportunities for Future Work:

- Budget was very limited and caused to streamline acquisiton of data for Tiers 1 and 2. Future work could include the acqusition of Tier 1 and Tier 2 information in other areas of the Atlantic Ocean offshore of southeast Florida (offshore of Miami-Dade, Broward and Palm Beach Counties).