

Science, Service, Stewardship




Hydrokinetic Activities off Florida and potential conflicts with SAFMC management initiatives

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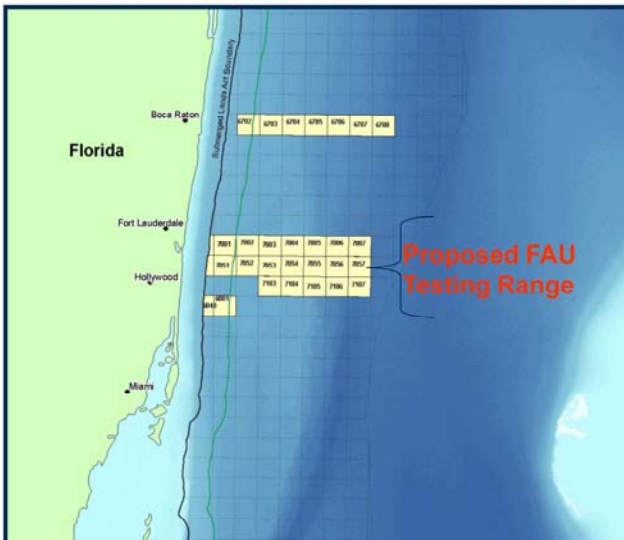
Florida Atlantic University Center for Ocean Energy and Technology

Phase 1a (current)

- 4 bottom mounted ocean current profiler systems



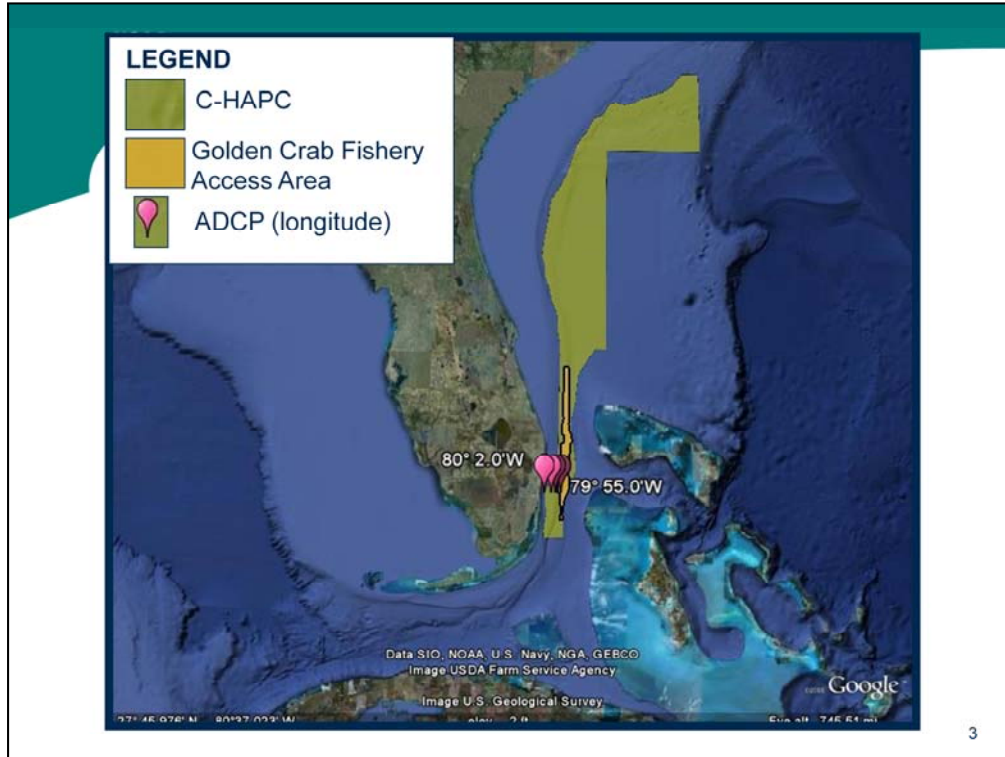
- 2 surface current radar stations, wave buoy, offshore communication node, acoustic modems for remote communications
- Onshore monitoring station



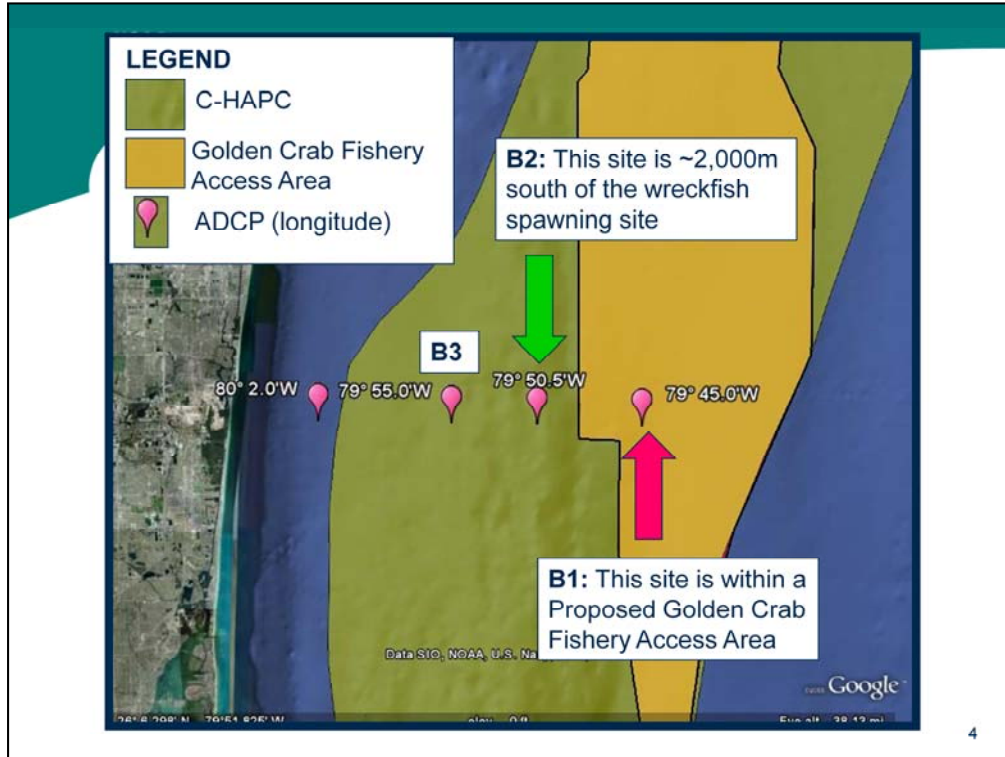
Florida Atlantic University has a grant to examine the feasibility of harnessing the Florida Current to drive an array of turbines that would provide electricity to the shore.

Phase 1a of this exploration includes studying current speeds and directions at various depths and waves at the surface. ADCPs are being used for the study (Acoustic Doppler Current Profilers), and they are able to characterize current direction and speed over a large portion of the water column.

Under nationwide permits that address the temporary placement of scientific monitoring devices, the Corps of Engineers has authorized FAU to conduct this work. Under this nationwide permit, the extent of coordination with resource agencies is at the discretion of the Corps.

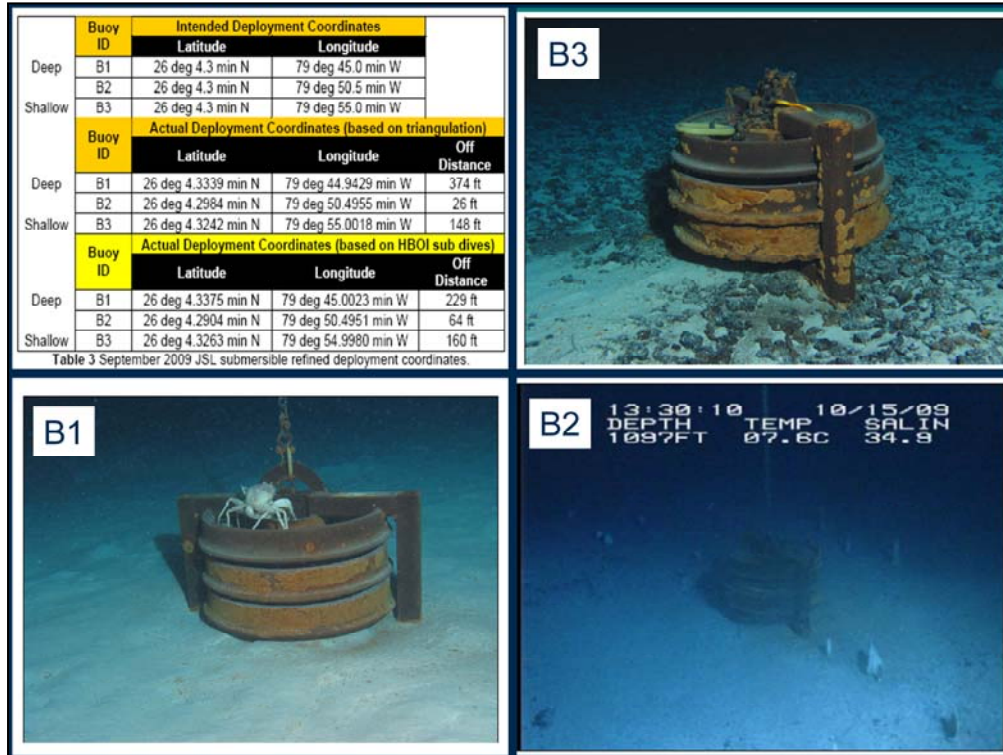


Three of the four bottom-anchored ADCPs being used by FAU are within the coralHAPC (which is about to achieve final designation) and one of these three is within the Golden Crab Fishery Access Area. Next slide makes this point more clearly.



So you can see the three easternmost ADCPs are within the coralHAPC and one of the three is also in the Crab Fishery Access Area. The middle ADCP also is near a known spawning site for wreckfish.

Our concern is avoidance of the controversy that may be looming on the horizon. Assuming the study shows an array of turbines is feasible, we suspect the proposed location would be within the study area. If much of the study area would present conflicts with fishing or management of protected areas, then we should make these points as early as we are able to do so that unnecessary delays to the project can be avoided.

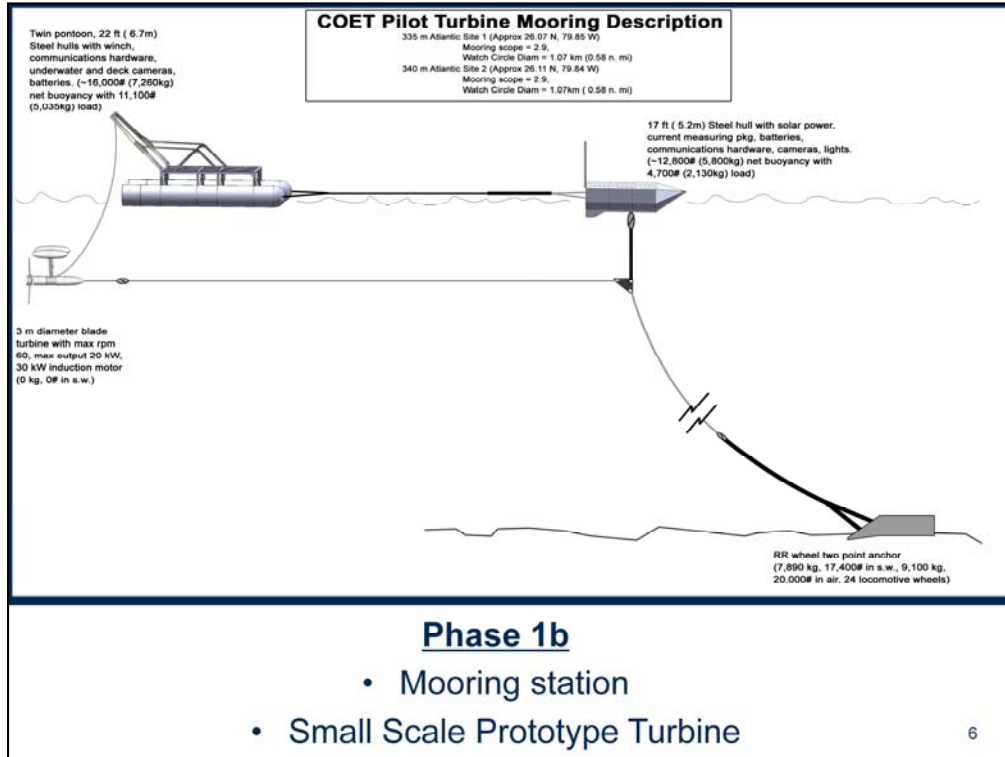


So far, NMFS SER has been making this point through two avenues.

1. During the limited interagency coordination associated with nationwide permit issued by the COE, NMFS SER recommended moving the ADCPs southward, outside of the Golden Crab Fishery Access Area and NMFS SER recommended mapping of corals and hardbottom be done to ensure the anchors for the ADCPs are not damaging deepwater corals and to shift the study area away from hardbottom habitat. The Corps has not conditioned their permits accordingly claiming they lack sufficient authority under Section 10 of the Rivers and Harbors Act.
2. NMFS SER has talked directly with FAU. While FAU has not expressed a desire to move southward, they have examined the anchors for the ADCPs that are in place to see if coral was damaged during placement.

Note: Golden crab on anchor B1; rock rubble at B3 scraped by anchor; siphonal canals of sea pens and sponges emerging from sand at B2 (rocky areas nearby but not in photo). **Aside:** The nationwide permit requires that no permanent placement of scientific gear occur. Yet the anchors for the ADCPs are not retrieved with the ADCP (see B3). Based on a short discussion, Mike Mastry (General Counsel Southeast) believes the planed intention to leave these anchors on the bottom renders the nationwide permit inapplicable, but NMFS SER has not pursued this further.

On May 20, 2010, SAFMC responded with a letter to MMS, which would have issue license for pilot and full scale deployments of the turbines. In that letter, SAFMC indicted the project may be heading towards a significant conflict with fishers and resource protection, and SAFMC further encouraged MMS to engage all parties early to resolve the matter. We are making every effort to get involved early before significant resources are spent on an alternative that we may find problematic, especially if the application process does not include studies of the issues most important to the Council



Where is the project headed?

Assuming the currents looks promising, Phase 1b is deployment of a small-scale turbine with 3-meter diameter blades. We expect an EIS would be done for this deployment, but it is not clear whether MMS or the COE would be the lead agency (these agencies need to work this out).



Possibly leading to 100 or more turbines and trunk lines to carry the electricity to shore. Siting scenarios need to consider the trunk line path and the resources that will need to be crossed.



Sources of Information

- <http://coet.fau.edu>
- FAU COET. 2010. Report to agencies: NOEL Phase 1a – Temporary Ocean Current Observing and Monitoring System. 21 pages.
- FAU COET. 2008. Presentation to Army Corps of Engineers and other agencies. 20 slides.