Programmatic Report

Grantee: MarineLab/Marine Resources Development Foundation

Contract Number: POR-2009-18 Interim Report

Project Title: MarineLab Student Water Quality Monitoring Project

Report Period: 5/1/10 – 10/31/10 – 6 month report

Project Manager/ Principle Investigator: Sarah Egner

Deliverables:
- Data at Fla Bay will be collected every two weeks at a minimum
- Data at offshore reef sites will be collected throughout the course of the year, dictated by the student groups at MarineLab
- All data collected will be submitted to GLOBE database within 24 hours
- Data at Fla Bay stations will be compiled and submitted to Dr. Boyer monthly

Accomplishments:
This project is now fully up and running. All new instruments have been purchased, calibrated, and have been implemented into our programs. The LaMotte water sampler was purchased on June 2, 2010, the turbidity meter was purchased on June 9, 2010 and a YSI Professional Plus Sonde, with capabilities to measure dissolved oxygen, salinity, pH and temperature was purchased 6/30/10. All instruments were implemented into the program once instruments were put together, calibrated, staff was properly trained and the appropriate school group was visiting MarineLab; this was within a few weeks for each instrument.

As described in our original scope of work, the water quality lab at MarineLab begins with a discussion on how abiotic factors, such as water quality, strongly influence the biotic components of a habitat. The parameters we measure at MarineLab- dissolved oxygen, turbidity, temperature, ammonia and salinity- are discussed, as well as the various instruments we use to collect data for these parameters. Students then practice with these instruments at
the “stations” described in the original scope. When the students go into the field, the water quality data is collected at an inshore and an offshore site. Reasons for disparity in the inshore versus offshore data are discussed.

The turbidity meter and water sampler are used during the AP level water quality programs. These tools have allowed MarineLab to expand the water quality program to better accommodate more advanced students. Now we can collect data for a single parameter (pH, salin, etc.) at a site, using different tools, some more precise than others, and can discuss any reasons for inconsistencies. Also, having additional tools allows more students, of all levels, to be hands on while in the field.

Staff and/or students collect water quality data with both the sondes and the other water quality instruments, as our programs allow; data is collected via a sonde in Florida Bay every two weeks, at a minimum. All data with a sonde, is recorded in the field and sent to Dr. Joe Boyer at FIU. Any data collected by students, using any of the tools, is entered into the GLOBE database. The partnerships established with both Florida International University’s Southeast Environmental Research Center and GLOBE remain strong.

The main problem we encountered was introducing a new aspect of the water quality program into our current curriculum. Staff was very much accustomed to previous methods so getting instructors comfortable with new tools, remembering to use them when teaching our water quality class, following new data entry procedures for GLOBE, etc. has been our biggest hurdle. With time and constant reminders, this has become much less of an issue. With more time, we expect the new tools and expanded program to run as seamlessly as the water quality program had in the past.

This grant has allowed MarineLab to purchase new water quality tools for our visiting students to use, expand our water quality curriculum, and allow more students to use water quality tools while in the field. Students not only get practice using these tools but have a better appreciation for the data they are collecting because it is being used by scientists.