Southeast Coastal Ocean Observing Regional Association

SECOORA and Ocean Observing In Action: *Florida*

Monitoring the Southeast's Coasts

The ocean and coastal waters of the southeast U.S. help drive local weather and regional climate conditions, support ecologically and economically significant ecosystems (which include important fisheries), and provide tourism, boating, and other recreational opportunities. The oceans and coasts annually provide over $675 billion dollars worth of economic impact in the southeast U.S.*

There are no state boundaries for ocean currents, marine wildlife, and weather patterns, so it is critical for states to work together to develop, implement and maintain a robust coastal and ocean observing system. SECOORA, the Southeast Coastal Ocean Observing Regional Association, is assisting NC, SC, GA and FL to integrate extensive and widely scattered information and data acquired in the RA footprint. SECOORA provides opportunities to leverage resources across the region and to pool expertise in addressing national and regional needs and response (e.g. Deep Water Horizon Oil Spill). Because SECOORA is one of 11 Regional Associations established through the Integrated Ocean Observing System (IOOS), it also brings national ideas and resources to the table.

Applications of Coastal and Ocean Observing Data in Florida

The following examples highlight how Florida is applying coastal and ocean observations to real world issues.

Using Radar for Coral Modeling

The University of Miami's Rosenstiel School for Marine and Atmospheric Sciences is providing WERA High Frequency (HF) Radar data to NOAA's Integrated Coral Observing Network program, whose mission is twofold: to install instrumented arrays at the world's most important coral reef areas to amass long-term data sets, and to integrate and utilize those and other data for purposes of ecological forecasting for coral reef areas. The HF radar data are critical for researchers modeling spawning and larval drift of the mustard coral in the Florida Keys. Scientists' predictions have been verified two years in a row through the use of this HF radar data, the only real-time display of ocean current patterns bordering that area and reaching north above to Port Everglades.

The medium and long-range Wellen Radars (WERA) deployed along the Florida Straits and the South Atlantic Bight have a spatial resolution of 1.2 to 3 km and sample at time scales of minutes. Photo: Nick Shay/WERA System/Crandon Park

SECOORA Members in Florida

- Dialytics
- Florida Atlantic University
- Florida Coastal Ocean Observing System Consortium
- Florida Fish and Wildlife Research Institute (FFWRI)
- Florida Institute of Oceanography (FIO)
- Florida Institute of Technology
- Florida International University - International Hurricane Research Center (FIU)
- Florida Sea Grant
- Florida State University
- Harbor Branch Oceanographic Institute
- Indian River State College
- Jacksonville University Marine Science Research Institute
- NortekUSA
- Nova Southeastern University (NSU
- Resolve Marine Group
- Roffer's Ocean Fishing Forecasting Service, Inc. (ROFFS™)
- University of Miami Rosenstiel School of Marine and Atmospheric Science (UM)
- University of Florida (UF)
- University of North Florida
- University of South Florida (USF)

*National Ocean Economics Program. J. Kildow, C. Colgan, J. Scorse, *State of the U.S. Ocean and Coastal Economies*, June 2009.

St. John's River State of the River Report

In 2006, Mayor John Peyton led the formation of the St. Johns River Accord, an agreement among local agencies to seek funding for a massive effort to clean up the river expected to cost $700 million over ten years. As part of this effort, the City of Jacksonville's Environmental Protection Board funded two years of study by SECOORA-member universities, Jacksonville University and the University of North Florida, to produce a compilation of the known science about the river in an online-accessible public report. The result was a 195-page report on the health of the river titled the "State of the River Report for the Lower St. Johns River Basin" and a short public brochure. This annual report is now in its fourth year.

Supporting Recreational Opportunities

Fred Howard Park, located on the Gulf of Mexico in the City of Tarpon Springs, is a popular destination for kite surfers, wind surfers, kayakers, and beachcombers. Knowing the weather and wind conditions in the area is a big deciding factor to help visitors plan their activities in the park. The Fred Howard Park meteorological/tidal station fills this data need. It is a part of the University of South Florida's (USF) Coastal Ocean Monitoring and Prediction System (COMPS). Located on the southwest corner of the second causeway bridge, it became an operational COMPS weather station in June 2004.In September 2008, the causeway bridges needed replacement, and the station was removed during construction for over a year. During the down time, the COMPS program received many inquiries about the status of the station and when/if it would be back online. Through a partnership of USF funding and Pinellas County support, the site's meteorological measurement capability was restored. Unfortunately, limited follow-on operation and maintenance funds exist. To address this need, the nonprofit group Friends of Fred Howard Park raised over $1,500 through donations of profits from wind surfing lessons held at the park to support continued station operation. Finally, SECOORA provided funding for restoring the in-water water level and temperature/conductivity sensors, of value to emergency managers as well as recreational users. SECOORA and member organizations like USF are working together with stakeholders to provide these critical observations.

Fred Howard Park meteorological/tidal station.

Member Support for Deep Water Horizon Gulf Oil Spill Response and Restoration

- Members were interviewed in numerous newspaper articles and appeared on television to explain the potential impacts and movement of the spill.
- Board member Dr. Robert Weisberg testified before the Subcommittee on Insular Affairs, Oceans, and Wildlife, Committee on Natural Resources, U.S. House of Representatives. (*http://resourcescommittee.house.gov/UploadedFiles/WeisbergTestimony06.15.10.pdf)*
- ROFFS™ delivered regularly updated alerts to the public and kept legislators, emergency managers, and the fishing community abreast of the changing nature of the spill.
- USF, UM, and North Carolina State University provided output from circulation models for the response efforts.
- Florida Fish and Wildlife Conservation Commission contributed scientific guidance and GIS mapping assistance to decision-makers developing response and cleanup strategies.
- FIU is characterizing the oil and assessing its impacts on organisms, as well as leading an effort to determine the impacts of the spill on deep-sea environments including top predators, like sharks, and other scavengers.
- SECOORA Vice Chair, Dr. Richard Dodge, NSU, and Dr. William Hogarth, FIO, were appointed to the Gulf of Mexico Research Initiative Research Board that will administer $500M in research funding from BP to the Gulf of Mexico Alliance.