

SECOORA News

SECOORA Officer Elections - The Board of Directors elected a new slate of officers on July 1, 2009. These officers and the Past-Chair comprise SECOORA's Executive Committee. Please welcome the following Board members to their new positions.

Chair: Harvey Seim; **Vice-Chair:** Richard Dodge; **Secretary:** Mitchell Roffer; **Treasurer:** Cliff Merz; **Past-Chair:** Rick DeVoe

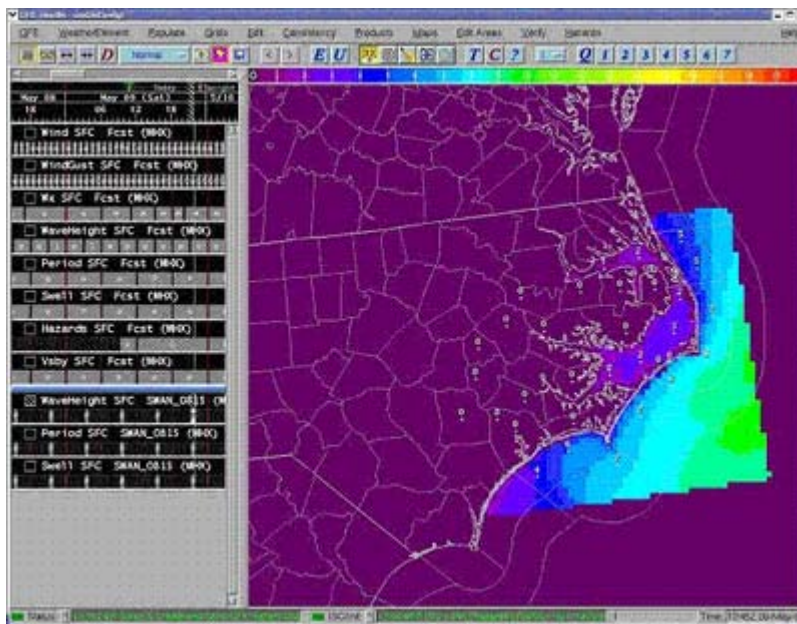
SUBREGIONAL Efforts - In this addition to the SECOORA newsletter we are highlighting a few of the ocean observing related projects ongoing in the SECOORA region. We would like to make this a regular part of our monthly newsletter. Please contact Susannah Sheldon at susannah@secoora.org with information about projects that would be of interest to our members, stakeholders and other partners.

Carolina RCOOS - The Carolinas RCOOS comprises multiple facets of an end-to-end observing system including: deployment and maintenance of observing systems, data management/analyses, model and application development, and outreach and partnership activities. Over the last 2 years, this subregional program has integrated two pre-existing sub-regional programs – the Carolinas Coastal Ocean Observing and Prediction System (Caro-COOPS) and the Coastal Ocean Research and Monitoring Program (CORMP). The transition to Carolinas RCOOS has focused on maintaining deployed and operational infrastructure that directly support other federally funded applications/programs such as the NWS Marine Weather Portal, the USACE Automated Model Evaluation and Diagnostics System (currently used to assess SWAN and NWS nearshore wind forecasts) and development of a Surf Conditions Nowcasting System (SCNS) by the Coastal Processes and Sediment Dynamics Laboratory at USC. Further, Carolinas RCOOS fills a critical NOAA/NWS need for observational data to forecast winds and waves in near-shore waters and sounds. The RCOOS has also expanded to add state, federal and private sector partners by focusing on leveraging partner resources in order to provide a cost effective increase in observational capabilities, to couple physical and environmental data for application development, and to provide observation data needed to improve and benchmark modeling/forecast products.

SECOORA data management efforts are directly supported by the Carolinas RCOOS and all data generated by the Carolinas RCOOS are incorporated into the SECOORA data management system and are available to support products and applications under development by its members. Active partners in the Carolinas RCOOS include: Caro-COOPS; CORMP; US Army Corps of Engineers Wilmington Office and USACE Field Research Facility in Duck, NC; NOAA's National Weather Service (NWS); National Data Buoy Center (NDBC); National Estuarine Research Reserve System (NERR); the Lower Cape Fear River Program; state agencies [e.g. SC Department of Natural Resources (SCDNR) and Department of Health & Environmental Control (SCDHEC)]; and, Down-East Instrumentation LLC. Each of these groups materially participates in the Carolinas RCOOS enterprise. Please contact Lynn Leonard at lynnl@uncw.edu for more information.

Florida Oceans Report - The Florida Ocean Alliance released a report: "Moving Ahead: The Next Step in Ocean Management for Florida." The report is accessible from the Florida RCOOS webpage: <http://www.marine.usf.edu/flcoos/about-us.php>. Scroll down to the "documents" section to view the report.

Integration of the SWAN Model Forecast to Three East Coast National Weather Offices - Funding from the COMET (Cooperative Program for Operational Meteorology, Education and Training) and NOAA IOOS programs has allowed the University of North Carolina (UNC) and the US Army Corps of Engineers (USACE) to set up the SWAN (Simulating Waves Nearshore) wave model at three east coast National Weather Service Weather Forecast Offices (Wakefield, VA; Newport, NC; and Wilmington, NC) and provide direct access to model results through their forecasting tools. The only wave model guidance these Weather Offices have had direct access to prior to this project is from the deep ocean model WW3 (WaveWatch III) ran by NCEP. The current version of WW3 does not have shallow water physics and thus does not capture important near shore phenomena such as refraction and bottom dissipation. Thus, WW3 cannot be trusted in waters shallower than approximately 20m where SWAN has proven to excel. Since the near shore coastal ocean (0-5 miles) is the most heavily used part of the vast ocean, accurate wave forecasting can greatly increase safety in this area for boaters, fishermen and recreational users.



The three offices will have SWAN running in their office by the end of the summer with a multitude of additional tools. Each time the model outputs data over each office's domain, the different wind-sea and swell wave systems present in the ocean are identified and tracked in space and time and the resulting grids are displayed in the forecaster's visualization tools. An example of the significant wave height is presented in Figure 1. In order to carefully assess the accuracy of the SWAN output, a validation routine compares the model output to available buoys. The results are archived and time series plots of this validation are accessible to the forecasters. Other products are also available for specific output points including forecast time series of the different wave systems and custom 'vector plots' of wave system evolution.

Please contact Eve Devaliere at Eve.M.Devaliere@usace.army.mil for further information.

Kill Devil Hills Beach Hazard Study - Rip currents remain the number one cause for rescues and drownings at the beach, yet our ability to accurately forecast strong rip currents is limited. To improve rip currents and other beach hazards (i.e. strong shorebreak) forecasts, we are performing a field study at Kill Devil Hills, NC for the summers of 2008 and 2009. The study is a cooperative effort between UNC Chapel Hill, The US Army Corps of Engineers Field Research Facility (FRF), the UNC Coastal Studies Institute and Kill Devil Hills (KDH) Ocean Rescue. The focus of the study is to better understand the underlying processes that control beach hazard activity and intensity both temporally and along shore.

A major component of the study is the collection of nearshore bathymetry and directional wave data to determine what factors most influence beach hazard activity and intensity. Detailed beach and nearshore bathymetry is being collected on a bi-weekly basis over the two summers. In addition, daily observations of beach hazards (i.e. the presence and character of rip currents and shorebreak) are recorded by KDH Ocean Rescue staff. This data provides us with an indication of where and when beach hazards have occurred, which can be correlated with the wave, weather and bathymetry conditions at the time of the hazard. A second component of the study is an analysis of historical records. KDH Ocean Rescue has been collecting detailed rescue data since 2001 that includes the type of rescue and where and when it occurred. Directional wave data is available from the nearby FRF also dating back to 2001 which can be correlated to the rescue data. This large historical data set provides valuable information regarding the spatial persistence of hazards and response of hazard activity to wave conditions over multiple years. A critical third component of the study is the testing of a directional wave forecast model (SWAN) being run at 3 Weather Forecast Offices for coastal North Carolina and Virginia. Observed waves will be compared to those predicted by SWAN to assess the model's ability to predict nearshore waves and their spatial variation. The expectation is that once the recent and historical hazards and rescue data and wave and bathymetry data are fully analyzed, a more detailed and accurate beach hazard forecast model will be created based in large part on the SWAN wave predictions.

Ultimately the revised beach hazard forecast model will be used by WFOs to provide spatially-explicit predictions of beach hazards in NC.

Please contact Greg Dusek at gdusek@email.unc.edu for further information.

DMAC-ODP The Florida Fish and Wildlife Research Institute ([FWRI](#)) will host the next SECOORA DMAC-ODP Committee meeting as a part of a joint meeting that includes a workshop focused on the integration of observing data for fisheries applications. The meeting will be held 20-21 August in St. Petersburg, FL and is being supported by two of our Ocean Data Partners, the University of South Carolina's [School of the Environment](#) and FWRI. Agenda details are forthcoming. Please contact [Sam Walker](#) (SECOORA) or [Kathleen O'Keefe](#) (FWRI) with any questions.

DMCC In the next several weeks, the SECOORA Data Management Coordinating Council (DMCC) will host a joint meeting with the SECOORA Operations & Maintenance Committee to provide technical support to the ongoing asset inventory effort in the Region. Details are forthcoming. Please contact [Sam Walker](#) with any questions.

Membership Map - The SECOORA web site includes a newly published Membership Map. This link can be found at the top of each page on the SECOORA site. The goal of this application is to enhance our communications and provide an easy method for identifying Members and points of contact. Special thanks to Jeremy Cothran (USC) for working with SECOORA to develop this important tool. We welcome your feedback on this site addition, please provide any input to Sam Walker (sam@secoora.org).

NATIONAL News

IOOS REGISTRY The *IOOS Observation Registry* (<http://obsregistry.org/map2009/index.php>) is a project initiated by the IOOS community to inventory ocean observing assets in the United States. With low barrier to participation the Registry provides a simple mechanism for regional data collectors to report on their real-time observations, enabling them to share the most recent descriptions of their deployments. With information streams coming in from all areas of the coastal U.S., Great Lakes, and Hawaiian Islands, the Registry provides the IOOS community with a fresh picture of observing activities every 24 hours. For several years the Regional Associations, Ocean.US, the U.S. GOOS Steering Committee, and NOAA have sought to identify and visualize “who has what”, observational assets in the water or on land, and where those assets are located. This information is needed to inform the planning of maintenance and deployment of platforms and sensors. In October, 2007 NOAA awarded the Monterey Bay Sanctuary Foundation a 2-year grant to maintain and enhance the Registry system. The recent enhancements include greater contributor participation across the nation, a new geographic interface and data access options, integration of Federal and non-Federal observing systems, and installation of a backup system with our partners at the College of Marine Science, University of South Florida. Data collectors who wish to participate in the Registry should contact John Ulmer (John.Ulmer@noaa.gov, 843.740.1228) at the NOAA Coastal Services Center and visit the 'Information for Providers' section of the Registry web site.

Smart Ocean Sensor Consortium SECOORA continues to participate in the Smart Ocean Sensor Consortium (SOSC), which is focused on developing industry standards for observational sensors. Recently, the SOSC has begun engaging the Cyber-Infrastructure (CI) component of the Ocean Observing Initiative (OOI). Please contact [Sam Walker](#) for additional information.

Regional DIF Implementation SECOORA will be hosting the collectively developed and shared Regional DIF Implementation status documentation for the Regional Associations. By hosting this important information on web service implementation SECOORA will provide efficient access and editing capability. The SCCOOS (24-25 August) and NERACOOS (data TBD) regions will be hosting Regional DIF Implementation training workshops in the coming months. Please contact [Sam Walker](#) for additional information.

MEETINGS

1. Looking for oceanography conferences and meetings? Follow this link to find national and international oceanographic events. <http://www.conference-service.com/conferences/oceanography.html>

2. Please consider attending the first joint MABPOM (Middle Atlantic Bight Physical Oceanography and Meteorology) and SECOM (Southeast Coastal Oceanography and Meteorology) Conference. The event will be held this August at North Carolina State University (NCSU) in Raleigh, NC. The conference website is: http://omgrhe.meas.ncsu.edu/MABPOM_SECOM/. For more information please contact conference co-chairs, Ruoying He (rhe@ncsu.edu) and John Bane (bane@unc.edu).
3. SECOORA's Information Management Coordinator, Sam Walker, is an invited panelist at the upcoming Southeastern United States - Canadian Provinces Alliance (SEUS-CP) 2009 Conference (<http://www.seuscp.org/>). Sam will be participating on the "Fostering Collaborations in Ocean Observation" panel along with representatives from Quebec, Mississippi, and Newfoundland and Labrador.
4. The next SECOORA Board meeting is scheduled for September 14 - 15 in Raleigh, NC. Contact Susannah Sheldon (susannah@secoora.org) for more information.

News to Contribute? - The SECOORA newsletter is published each month and focuses on regional, subregional, and national ocean observation topics, events, and success stories. Please email your comments or suggested new items to SECOORA's Program Coordinator, Susannah Sheldon (susannah@secoora.org).