

Subject: Save the Date!, Saving Lives, a Saved Buoy, and more...

From: MACOORA <info@macoora.org>

Date: Wed, 09 Sep 2009 12:45:05 -0400

To: MACOORA <info@macoora.org>



To: Friends of MACOORA, the Mid-Atlantic Coastal Ocean Observing Association
From: Judith T. Krauthamer, Executive Director
Date: September 9, 2009
Regarding: Ocean Observing Updates and More

Save the date:

Understanding the Coastal Ocean: Partnerships for a Changing World, NOV 17 and 18

[MACOORA's fourth annual conference](#), Understanding the Coastal Ocean: Partnerships for a Changing World, will be held November 17 and 18, 2009 in Portsmouth, VA. Our meeting venue is the beautiful Renaissance Hotel overlooking the Elizabeth River in Portsmouth Virginia, easily accessible by car



or inexpensive flights. Our hotel rate is under \$110 a night and the government rate is even less! Conference registration is complimentary, as are most meals and the evening event. Registration is now open and we cordially invite you to participate in this timely meeting.

We are proud to announce our first exhibition in conjunction with this year's annual meeting and MACOORA members are cordially invited to participate in the exhibition at no cost. We would like to offer all exhibitors this opportunity to let the ocean observing community learn about you and your organization. We anticipate an attendance of our colleagues from the military, industry, academia and government. Our meeting will focus on critical partnerships as we navigate through a changing ocean/climate environment, a growing coastal society, and diverging research and information needs. There will be ample networking opportunities throughout both days, and during the evening event at the Virginia Sports Hall of Fame. In fact, we encourage our exhibitors to display their materials in the dining areas of this exciting event. Space is limited, so please confirm your participation in the exhibition now. For more information, visit <http://www.macoora.org/annualmeeting.html> or please contact Liz Smith, exsmith@odu.edu, 757-683-5842.

November 17, 2009 . The meeting will open with the plenary, Visions of the Changing Ocean followed by panels. They are State Partnerships, moderated by Robert Tudor, Deputy Executive Director of the Delaware River Basin

Commission, Industry Partnerships, moderated by Jay Titlow of Weatherflow, Maritime Industry Partnerships, moderated by Ed Kelly, Executive Director of the Maritime Association of the Port of NY/NJ and Federal Partnerships.

November 18, 2009. The morning opening plenary Mid-Atlantic Ocean Observations: Future Directions will be followed by two consecutive workshops. Data Management and Communications (DMAC) De-Mystified, led by Eoin Howlett of ASA Inc. will explain in understandable terms the complex and highly sophisticated techniques utilized in ocean observations. Outreach and Education, led by Fredrika Moser of Maryland Sea Grant and Jeff Yapalater of the Freeport Tuna Club, will investigate reaching our many audiences.

Ocean Observations and Saving Lives: The Hudson River Story



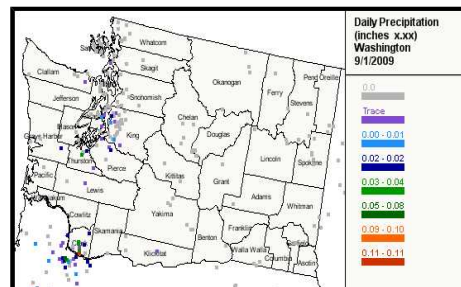
September 5, 2009. On Saturday August 8th, 2009, a small plane collided with a sightseeing helicopter carrying Italian tourists above the Hudson River, scattering debris into the water. The plane was carrying a pilot and two passengers, while the helicopter was part of 'Liberty Helicopter Sightseeing Tours' and carried the pilot, and 5 passengers. Immediately following notification of the collision, authorities from various agencies began the search for survivors, wreckage and clues as to what had occurred minutes before. Within an hour of the accident the Stevens Institute Chief of Police contacted the [Center for Maritime Systems \(CMS\)](#) at [Stevens Institute of Technology](#) for assistance. Dr. Michael Bruno, Dean of the [School of Engineering and Science](#), was called to the scene for analysis of currents and the proposed search area. "Our models indicated that the currents were incoming for the first hour after impact and then strongly outgoing. This helped the NYPD, NJ State Police, FBI Dive teams and the USCG aerial search teams to plan the search."

Three days after the collision, the search continued for the plane wings, the helicopter rotor assembly and other critically-important pieces of the wreckage. Mr. Nickitas Georgas, Senior Research Engineer in the Center for Maritime Systems was enlisted to provide simulations highlighting the extent of the possible search area. This search revolved around a prediction forecasting system known as the [New York Harbor Observing and Prediction System \(NYHOPS\)](#), an important observing system in the MACOORA footprint. NYHOPS is a [MACOORA-member] Stevens project led by Dr. Alan Blumberg and Dr. Bruno that has remained uninterrupted thanks to the ongoing support of the Stevens field crew and IT team, collaboration with industry and federal agencies, as well as long term funding from the [NJ DOT](#) and several other sources. Upon notification, they ran special drogue simulations based on the new 10-minute NYHOPS current fields and NOAA HAZMAT software. Two scenarios were tested. A surface drift report showed a wide search and recovery area extending from Monmouth County, NJ to Orange County, NY, while a sink-and-drift report highlighted a much smaller area --a few miles radius around the impact location. Three weeks after the incident, daily NYHOPS environmental forecasts have continued being requested by active National Transportation Safety Board (NTSB) recovery coordinators.

Deborah A. P. Hersman, the Chairman of the NTSB wrote, "I am writing on behalf of the NTSB investigative team to express our gratitude for the assistance offered to us by the Stevens Institute of Technology during the on-scene portion of the investigation of the mid-air collision over the Hudson River that occurred on August 8. The contribution and professionalism of the men and women of the Stevens Institute that assisted our team during

the initial hours and days after the accident was crucial to our ability to conduct a thorough and timely accident investigation. I would particularly like to commend Mr. Timothy Griffin, Dr. Michael Bruno, Mr. Nickitas Georgas, Dr. Thomas Herrington, Mr. Jeremy Turner, Dr. Peter Rogowski, Mr. Michael Raftery, and Dr. Alan Blumberg. These men assisted us for the on-scene portion of our investigation, and have volunteered to help should we need any future assistance. Our work would have been much more difficult if it were not for the assistance offered by the Stevens Institute.”

A New Delaware observer program goes live



September 1st, 2009. The Delaware Community Collaborative Rain, Hail and Snow Network (CoCoRAHS) observer program went live. CoCoRaHS is a unique, non-profit, community-based network of volunteers of all ages and backgrounds working together to measure and map precipitation. This program offers weather enthusiasts in Delaware an opportunity to participate in a nationwide network aimed at helping monitor and better understand the spatial variability of precipitation. By using low-cost measurement tools, stressing training and education, and utilizing an interactive Web-site, CoCORAHS's aim is to provide the highest quality data for natural resource, education and research applications. <http://www.cocorahs.org/>

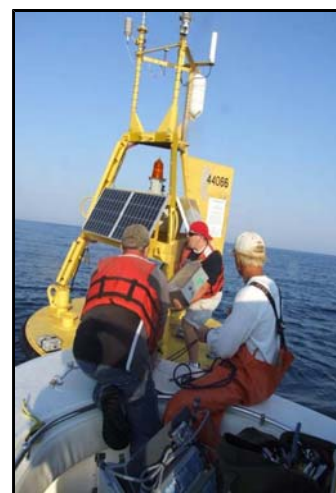
Tide Stations and Buoys used to analyze high sea level

According to a NOAA report

[High Sea Level Along U.S. Atlantic Coast Due To Ocean Current And Wind Changes](#), persistent winds and a weakened current in the Mid-Atlantic contributed to higher than normal sea levels along the Eastern Seaboard in June and July. Data from NOAA’s National Water Level Observation Network tide stations, Atlantic Oceanographic and Meteorological Laboratory, and National Data Buoy Center, are published in the report. NOAA scientists began analyzing data from select tide stations and buoys from Maine to Florida and found a weakening of the Florida Current Transport—an oceanic current that feeds into the Gulf Stream—in addition to steady and persistent Northeast winds. The highest atypical sea levels occurred closer to where the anomaly formed in the Mid-Atlantic, where cities like Baltimore experienced (at times) extreme high tides-- as much as two feet higher than normal.

44066-Texas Tower 4 Buoy Update

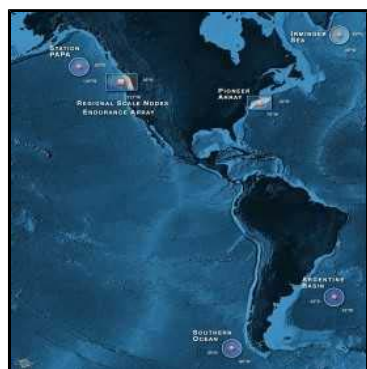
[The newly deployed 44066-Texas Tower 4 buoy](#) was repaired August 16 and is now



operating normally providing 24/7 real time offshore ocean conditions. Initially deployed June 19, a faulty cable

prevented the buoy from normal operation. High seas for seven weeks delayed the planned service call. When the ocean cooperated two technicians and a recreational fishing boat crew out of Babylon went on scene 75 miles out in the Atlantic to successfully repair this important buoy. This buoy is one of many along the coast of the US bringing continuous weather information to mariners.

[The Ocean Observatories Initiative \(OOI\) moves forward.](#)



September 2, 2009. The [National Science Foundation](#) (NSF) and the [Consortium for Ocean Leadership](#) have signed a Cooperative Agreement that supports the

construction and initial operation of the OOI. The five-year construction phase will begin this September. \$106 million of first-year funds from the American Recovery and Reinvestment Act of 2009, and \$5.91 million in NSF construction funds will support a wide range of construction efforts, including production engineering and prototyping of key coastal and open-ocean components (moorings, buoys, sensors), award of the primary seafloor cable contract, completion of a shore station for power and data, and software development for sensor interfaces to the network. In 2010 the program will add an Education and Public Engagement team that will take advantage of the cutting edge technology and combined science and education vision of the OOI.

OOI is managed and coordinated by the Consortium for Ocean Leadership in Washington, D.C., with three major Implementing Organizations responsible for the construction of the components of the full network, Woods Hole Oceanographic Institution and its partners, Oregon State University and Scripps Institution of Oceanography; University of Washington; and the University of California at San Diego. For more information contact [Kristin Mellon](#), Consortium for Ocean Leadership, 202-787-1644.

MARCOOS/HOPS Update

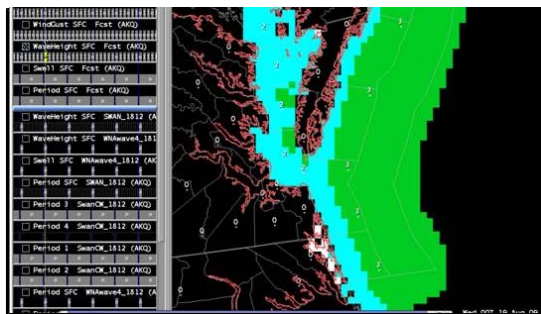
Weekly forecasts for the MARCOOS region [are available on-line](#). The MARCOOS/HOPS Real-Time Forecast System has been operational since March 9, 2009. The Harvard Ocean Prediction System (HOPS) is an integrated system of data analysis and assimilation schemes and a suite of coupled interdisciplinary (physical, acoustical, optimal, biochemical-ecosystem) dynamical models. It is composed of various program packages and its core is a primitive equation physical dynamical circulation model with modules composed of packages necessary for setting up the model domain. The MARCOOS/HOPS forecast system is presently assimilating 3-day composite SST from the Johns Hopkins University/Applied Physics Laboratory and similar AVHRR passes processed by the [MARCOOS](#) group at [University of Delaware/College of Marine and Earth Studies](#).

The week-long forecasts are issued generally by Wednesday morning; Monday zero-hour is a typical model initialization state, with SST assimilation carried out on Monday afternoon and Tuesday noontime. Real-time Glider data is being assimilated for several hindcast runs, which will become operational in the coming weeks. The forecast fields (Temperature, Salinity, Currents) [are available](#) for different levels at 6-hourly intervals for the full domain, for a zoom domain for Mid-Atlantic Shelf and for another zoom region for the Gulf of Maine.

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. This is particularly important for Chesapeake Bay and the nearshore ocean where guidance tools were greatly lacking. The three offices have had SWAN running in their office since July 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. 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.

COSEE NOW: share your experiences

The Centers for Ocean Sciences Education Excellence - Networked Ocean World (COSEE NOW)

<http://coseenow.net/>

is focused on the Ocean Observing Systems (OOS) community of scientists and educators as a high tech and compelling example of oceanographic research to engage the public and improve ocean literacy. COSEE NOW team member Ari Shapiro (508-289-3926) has been capturing the personal stories of scientists and their work in his [biweekly podcast](#) and encourages your colleagues, educators, students, and scientists to call in and share a story.

The Virginia Sea Grant/VIMS members of COSEE-NOW have collaboratively produced three new classroom activities that use ocean observing system data: *Don't Even Sink About it!* an activity that utilizes two components of ocean observing systems—AUVs and buoys—to explore density and how it affects the buoyancy of different objects; *Coral Bleaching: A White Hot Problem*; and *Can't Take the Heat?*

National Surface Current Monitoring Plan Released

Responding to clear requirements for increased and improved coastal surface current measurements throughout United States coastal waters, NOAA and its regional IOOS partners developed "A Plan to meet the Nation's Needs for Surface Current Mapping" to create a national surface current measurement, nowcast, and forecast capability. A cost-effective technology for meeting the present-day requirements of the 21st century is High Frequency Radar (HFR). The technology measures speed and direction of ocean surface currents in near real-time to improve search and rescue, oil spill response, harmful algal bloom monitoring, water quality assessments, and more. When evaluated retrospectively, these data also provide value in ecosystem assessments and fisheries management. For more information, email Jack.Harlan@noaa.gov or visit www.ioos.gov.

Annual Ronald C. Baird Sea Grant Science Symposium: Marine Wind Fames

On November 2-4, the 8th Annual Ronald C. Baird Sea Grant Science Symposium will take place in Newport, Rhode Island. The Symposium, *The Ecology of Marine Wind Farms: Perspectives on Impact Mitigation, Siting, and Future Uses*, will bring together international experts in wind energy, biotechnologies, seafoods, fisheries, aqua-culture, and leading legal and policy experts to discuss innovative methotegration of future uses into windfarm marine areas. Early registration ends October 2. For more information or to register: www.seagrant.gso.uri.edu, or contact Tracy Kennedy, (401) 874-6800.

The \$ Value of sensing and monitoring technologies

According to a new commercially available report, Environmental Sensing and Monitoring Technologies: Global Markets, the global market for environmental sensing and monitoring technologies was worth \$9.1 billion in 2008 and an estimated \$10.1 billion in 2009. This should reach \$13 billion in 2014, for a compound annual growth rate (CAGR) of 5.2%. Radon, GPS, remote sensing and new technologies have the largest share of the market, generating \$4.9 billion in 2008 and an estimated \$5.1 billion in 2009. This segment is expected to be worth \$6.8 billion in 2014, for a CAGR of 6.2%. Terrestrial sensing and monitoring technologies combine for the second-largest market share, generating \$2.6 billion in 2008 and an estimated \$2.7 billion in 2009. This is expected to grow at a CAGR of 4.7% to reach \$3.4 billion in 2014.

Membership has its benefits. [Join MACOORA NOW!](#) Are you interested in ocean observations, coastal management, and visionary leadership? Join MACOORA and be a part of the future.

Comments, questions, or concerns? Email info@macoora.org