



## NEWSLETTER OF THE GULF OF MEXICO COASTAL OCEAN OBSERVING SYSTEM

### GCOOS NEWS AND UPDATES FOR 2 DECEMBER 2011

#### GULF OF MEXICO REGIONAL NEWS

##### **LSU's Earth Scan Laboratory Identifies Loop Current Eddy Icarus**

Louisiana State University's Earth Scan Laboratory has identified the Loop Current Eddy Icarus, newly separated from the Loop Current. The animation has been posted at <http://www.esl.lsu.edu>. The Louisiana State University (LSU) Earth Scan Laboratory (ESL), established in 1988 with funds from the Louisiana Education Quality Support Fund, was the first university-based satellite data receiving station in the nation to be established wholly by state funds. Today, under the leadership of ESL Director [Dr. Nan Walker](#), it is one of the leading U.S. university facilities, receiving and processing environmental data from eight earth orbiting satellites for research, teaching and emergency response (see <http://www.esl.lsu.edu>). Numerous academic, state and federal researchers and emergency responders rely on ESL's vantage point that provides frequent and complete coverage of ocean, atmosphere and coastal regions of the Gulf of Mexico. Sea-surface temperature is one parameter of key importance in the surveillance of rapidly changing currents in coastal and deep water. GOES satellite imagery is well-known for tracking hurricanes, but ESL also uses GOES data, updated every 15 minutes, for tracking the Loop Current and its associated warm and cold eddies. This high frequency imagery has enabled ESL to develop new techniques for removing the pesky clouds that often obscure the Gulf's surface from view. Thus, GOES data has become a reliable resource for tracking both hurricanes and the ocean currents that can impact hurricane intensity changes. The image products and visualization tools developed are used in preparedness for, and real-time response to, hazards and threats including high velocity wind and current events, oil spills, floods and fires. The ESL web page products date back over 10 years and include: current Loop Current and atmospheric animations on the ESL front page, an archive of oil spill imagery on the ESL oil spill web page <http://www.esl.lsu.edu/oilspill/> and a wealth of historic imagery and animations on the Best of ESL page ([http://www.esl.lsu.edu/quicklinks/best\\_of\\_esl/](http://www.esl.lsu.edu/quicklinks/best_of_esl/)). The tools developed also support important research to understand ocean-atmosphere interactions that drive Earth's heat budget and subsequently, weather and climate. The ESL is looking forward to enhancing its capture and processing capabilities for the recently launched (10/28/2011) NPP satellite (National Polar-orbiting Operational Environmental Satellite System Preparatory Project). The NPP VIIRS sensor provides many advances compared to its predecessor, MODIS, for both ocean color and temperature. The most notable is that spatial resolution will improve significantly (from 1 sq km pixels to 0.5 sq km pixels) providing greater detail in coastal regions where it is most needed for real-time surveillance and study of coastal ecosystem changes, sediment distribution and transport, algal biomass, temperature fronts, and surface oil, as examples. These new advanced satellite products will provide much needed validation data for numerical modeling of circulation, fisheries resources, and hypoxia. The understanding and management of marine resources is sure to benefit.

#### GCOOS REGIONAL PARTNERS

##### **Roffer's Ocean Fishing Forecasting Service, Inc. (ROFFS™)**

Roffer's Ocean Fishing Forecasting Service, Inc. (ROFFS™) is a scientific consulting company based in West Melbourne, Florida leverages skills and experience in remote sensing and operational oceanography. Best

known for its strategic fisheries forecasts, ROFFS™ clients have won more than five thousand tournaments over the past decade, including a 2011 Gulf of Mexico record for bigeye tuna, *Thunnus obesus*, in Mississippi. Founded in 1987 by Mitchell A. Roffer (Ph.D.), the company's seven employees do far more than integrate satellite and oceanographic data for fishermen and fisheries research. They also integrate and package the suite of satellite and oceanographic data, including water temperature, water color, currents, and bathymetry, to address a broad range of projects from ship routing, oil and gas drilling operations, environmental monitoring, and applied scientific research. Examples of how the data have been applied to support a variety of federal, state, and academic researchers and emergency responders, and benefit Gulf of Mexico citizens include 1) creating daily maps showing the location and movement of potentially polluted coastal water masses following Hurricanes Katrina and Rita in 2005; and 2) providing real-time updates on the near field and far field ocean circulation including the position of the Loop Current and its associated eddies during the *Deepwater Horizon* Oil Spill to aid the NOAA Office of Response and Restoration's mitigation efforts. ROFFS™ is currently funded by the National Aeronautics and Space Administration (NASA) to study the effects of climate and ocean variability on pelagic fish resources and to develop easy-to-use tools for resource managers. In addition to being a member of NASA's Ecological Modeling and Forecasting Research Team, Dr. Roffer serves on the Products and Services Committee of GCOOS, Chairs the Florida Coastal Ocean Observing System Consortium, is on the Board of Directors of the Southeast Coastal Ocean Observing Regional Association, and is Director of the Florida COOS Consortium. "ROFFS™ depends on data derived from IOOS on a daily basis and with this data we have been able to support additional jobs in the private sector, as well as, support operations and research in the Gulf of Mexico" Says Dr. Roffer.

## IOOS NEWS

### U.S. IOOS 2011 Report to Congress Delivered to the Hill

As required by the IOOS Act of 2009, the IOOS office has completed the first biennial U.S. IOOS Report to Congress (2011). Per the Act, the final report was transmitted to Congress by the National Ocean Council - Deputy level on 10 November 2011. The report can be accessed from the [ioos.gov](http://www.ioos.gov) website at: [www.ioos.gov/about/governance/ioos\\_report\\_congress2011.pdf](http://www.ioos.gov/about/governance/ioos_report_congress2011.pdf) or at the GCOOS website at [http://gcoos.tamu.edu/documents/ioos\\_report\\_congress2011.pdf](http://gcoos.tamu.edu/documents/ioos_report_congress2011.pdf)

### CenCOOS in Action: New California Current Ocean Model webpage

A CenCOOS funded effort led by the University of California Santa Cruz resulted in modeled views of the sea surface temperature, salinity and height along the U.S. West Coast from near shore to approximately 1000 km offshore. The model views are updated regularly on the webpage, displaying data up to two days before the present. [http://www.cencoos.org/sections/models/UCSC\\_ROMS.shtml](http://www.cencoos.org/sections/models/UCSC_ROMS.shtml)

### Update from the 2011 Regional Build Out Plan Workshop

Representatives from all 11 Regions, NFRA, the U.S. IOOS program office and two IOOC co-chairs, Eric Lindstrom and Bob Houtman, attended the two-day workshop from 16-17 November hosted by NERACOOS at the Gulf of Maine Research Institute in Portland, Maine. The IOOC co-chairs provided valuable insight and the US IOOS program office offered context for the completion of a national report that synthesizes the 11 individual regional build out plans. The Regional participants were very successful in articulating a set of common products and services delivered to the American people along with the assets needed to deliver those products and services. Based on discussion and agreement at the workshop, the Regions will refine their summary level plans by 2 December. The Regional Build Out Plan Steering Committee will review an outline of the national report on beginning on 16 December with the first draft available for review on 20 January 2012. Review of the final draft is targeted for 29 February 2012, which coincides with the annual US IOOS review meeting in D.C. The final report will be available by 30 March 2012.

### NOAA Awards Grant to Advance Harmful Algal Bloom Warnings to Protect Public and Animal Health in Coastal California.

A new NOAA grant to total more than \$4M will investigate methods that could provide early warning of toxic algae outbreaks off southern and central California. The research will investigate harmful algal bloom "hot spots" as part of a partnership between researchers funded by NOAA's Ecology and Oceanography of Harmful Algal Blooms (ECOHAB) program and two U.S. Integrated Ocean Observing System partners—the Central and Northern California Ocean Observing System and the Southern

California Coastal Ocean Observing System. The teams will combine the detection and monitoring of the toxic blooms with ocean models that can forecast ocean conditions, potentially leading to bloom predictions, thus protecting public and animal health in the area.

[http://www.noaanews.noaa.gov/stories2011/20111110\\_santacruz.html](http://www.noaanews.noaa.gov/stories2011/20111110_santacruz.html)

## NATIONAL NEWS

### Digital Coast Webinar: Marshes on the Move (12/7/11)

The NOAA Coastal Services Center (CSC) will host “Marshes on the Move: Understanding and Using Model Results that Show Future Sea Level Rise Impacts on Coastal Wetlands” as part of the Digital Coast webinar series from 2:00-3:00pm EST on December 7th. This webinar will help participants understand key considerations and questions to ask when presented with models and maps estimating the future condition and location of coastal wetlands in response to rising sea level. Participants will gain a basic understanding of some key parameters and uncertainties associated with these models; interact with technical specialists regarding real world implications of model results; and learn how modeling results can be incorporated into management initiatives. To register, visit:

<http://www.csc.noaa.gov/digitalcoast/webinar/index.html>.

### Digital Coast Update: Social Vulnerability Data

The [Social Vulnerability Index](#) (SOVI) measures the social vulnerability of U.S. counties to environmental hazards, shows how counties differ in their capacity to respond, and indicates where resources might be used most effectively to reduce vulnerability. Through a partnership with the University of South Carolina (USC) and funding from South Carolina Sea Grant and the NOAA Coastal Services Center, the SOVI method has been applied to Census 2000 block groups for all coastal states, providing a more detailed look at a community’s social vulnerability. All SOVI data and methods were developed by the USC Hazards and Vulnerability Research Institute. For more information, visit

<http://webra.cas.sc.edu/hvri/products/sovi.aspx> .

### RAE Launches Wetlands Carbon Blog

Restore America’s Estuaries (RAE) has launched a [Wetlands Carbon Blog](#) dedicated to exploring the role coastal wetlands play in sequestering greenhouse gases. The blog will also be a source for the latest news and research behind national and international “Blue Carbon” efforts. To learn more about RAE’s work, visit: <http://www.estuaries.org>.

## COMING EVENTS & MEETINGS

### December

Meeting “[State of the Gulf Summit](#)”, hosted by Harte Research Institute, 4-8 December 2011, Omni Galleria Hotel, Houston, TX.

<http://www.harterresearchinstitute.org/state-of-the-gulf-summit/>

Meeting: “[American Geophysical Union Fall Meeting 2011](#)”, 5-9 December 2011, San Francisco, CA.

<http://www.agu.org/fallmeeting>

Workshop: “[Workshop for “Smart Ocean/Smart Industries”](#) Program on Ocean and Climate Observations, 12-13 December 2011, Paris France.

[http://www.oceancouncil.org/site/smart\\_ocean.php](http://www.oceancouncil.org/site/smart_ocean.php)

### 2012

### January

Meeting: “[AMS 92<sup>nd</sup> Annual Meeting](#)”, 22-26 January 2012, Ernest N. Morial Convention Center, New Orleans, LA. This year’s theme is “Technology in Research and Operations – How We Got Here and Where We’re Going”.

<http://ametsoc.org/meet/annual/>

## February

Meeting: "[Social Science For Coastal Decision-Making](#)" 15-16 February 2012, Francis Marion Hotel, Charleston, SC.  
<http://www.csc.noaa.gov/socialcoastforum/>

Meeting: "[2012 Ocean Sciences Meeting](#)", 19-24 February 2012, Salt Lake City, Utah. Please contact Lynda West ([lyndaw@sgmeet.com](mailto:lyndaw@sgmeet.com), Tel: 254.776.3550) at the conference office if you have any questions.  
<http://www.sgmeet.com/osm2012>.

Meeting: "[World Ocean Summit 2012](#)" 22-24 February 2012, Capella, Singapore  
<http://www.economistconferences.asia/event/world-oceans-summit>

## March

Workshop: "[9<sup>th</sup> ONR/MTS Buoy Workshop](#)", 5-8 March 2011, Victoria's Marriott Inner Harbour, Victoria, British Columbia, Canada  
<http://www.whoi.edu/buoyworkshop/2012/index.html>

Meeting: "GCOOS Annual Parties Meeting and Board of Directors Meeting" 14-15 March 2012. Institute for Marine Mammal Studies, Gulfport, MS. More details will be posted soon.

Conference: "[Oceanology International](#)" 13-15 March 2012, London, England. Oceanology International is the global forum where industry, academia and government share knowledge and connect with the marine technology and ocean science community, improving their strategies for measuring, exploiting, protecting and operating in the world's oceans.  
<http://www.oceanologyinternational.com/>

## April

Meeting: "[2012 Defense Security + Sensing](#)" 23-27 April 2012, Baltimore Convention Center, Baltimore, MD. This meeting is sponsored by SPIE, the International Society for Optics and Photonics.  
<http://spie.org/x6765.xml>

## May

Meeting "[National Water Quality Monitoring Council's 8<sup>th</sup> National Monitoring Conference - Water: One Resource - Shared Effort - Common Future](#)" 30 April - 4 May 2012, Portland, OR.  
<http://acwi.gov/monitoring/conference/2012/index.html>

## June

Meeting: "[The Coastal Society's 23<sup>rd</sup> International Conference](#)", 3-6 June 2012, Hyatt Regency, Miami, FL.  
<http://thecoastalsociety.org/conference/tcs23/index.html>

## July

Meeting: "2012 ASLO Summer Meeting" 8-13 July 2012, Lake Biwa, Otsu, Japan.

Symposium: "[12<sup>th</sup> International Coral Reef Symposium](#)", 9-12 July 2012, Cairns, Australia.  
<http://www.icrs2012.com>

## September

Meeting: "GCOOS-RA Board of Directors Meeting" 26-27 September 2012, Corpus Christi, TX.

## October

Meeting: "[Restore America's Estuaries 6<sup>th</sup> National Conference on Coastal and Estuarine Habitat Restoration](#)" 20-24 October 2012, Tampa, FL.

\*DUE DATE FOR SUBMITTAL: 1 FEBRUARY 2012\*

<http://www.estuaries.org/conference/>

Meeting: "OCEANS '12 MTS/IEEE" 15-19 October 2012, Hampton Roads. VA.

<http://www.oceans12mtsieeehamptonroads.org/>

## EMPLOYMENT

### Gulf of Mexico Research Initiative

The Gulf of Mexico Research Initiative has a number of job opportunities, including the following advertised on the [Web site](http://www.gulfresearchinitiative.org), <http://www.gulfresearchinitiative.org>. Included are:

Graduate Student - Oceanography, Texas A&M University

Research Scientist/Research Professor - Oceanography & GERG, Texas A&M University

Post-Doctoral Research Associate - Oceanography, Texas A&M University

Post Doctoral Research Associate and Ph.D. Graduate Student - Near-field Modeling of Petroleum Fate and Transport, Texas A&M University

Research Associate Position in Wetland Biogeochemistry, LUMCON

Postdoctoral Research Opportunity in Wetland Biogeochemistry, LUMCON

Ph.D. Position, Microbial Ecology, Georgia Institute of Technology

Ph.D. Position, Biogeochemistry, Georgia Institute of Technology

GIS Analyst - Harte Research Institute, Texas A&M University, Corpus Christi

Systems Architect- Harte Research Institute, Texas A&M University, Corpus Christi

Postdoctoral Investigator - Marine Chemistry and Geochemistry Department, Woods Hole Oceanographic Institution

### Marine Spatial Analyst, Stennis Space Center, MS

CSS-Dynamac is seeking a person with academic training in marine biology, ecology, fisheries, and spatial or landscape ecology is being sought for a full-time contract position with the National Oceanic and Atmospheric Administration's (NOAA) National Centers for Coastal Ocean Science (NCCOS), Center for Coastal Monitoring and Assessment (CCMA), Biogeography Branch. The Branch conducts ecological studies that map, characterize, assess, and model the spatial distributions and movements of estuarine and marine organisms across habitats throughout the United States and Island Territories. For more information on this position please visit: <http://jobs-consolidatedsafety.icims.com/jobs/1349/job>

## FUNDING OPPORTUNITIES

### EPA Requests Proposals for Urban Waters Small Grants

The U.S. Environmental Protection Agency (EPA) expects to award between \$1.8 to \$3.8 million for projects across the country to help restore urban waters. The funding is part of EPA's Urban Waters program, which supports communities in their efforts to access, improve, and benefit from their urban waters and the surrounding land. Examples of projects eligible for funding include: education and training for water quality improvement or green infrastructure jobs; public education about ways to reduce water pollution; local water quality monitoring programs; engaging stakeholders to develop local watershed plans; and innovative projects that promote local water quality and community revitalization goals. Additional information about the Urban Waters Small Grants - including the Request for Proposals and registration links for upcoming webinars about this funding opportunity (to be held December 14th and January 5th) - is available online at: <http://www.epa.gov/urbanwaters/funding>. The deadline for submitting proposals is January 23, 2012. EPA expects to award the grants in Summer 2012.

### USFWS Florida Panhandle Coastal Program FY12 Request for Proposals

The U.S. Fish and Wildlife Service (USFWS) Florida Panhandle Coastal Program (FPCP) expects to make funds available for coastal conservation projects in FY12. Projects should address FPCP priorities, which include: restoring or enhancing degraded coastal wetlands and uplands, estuaries, and riparian corridors within northwest Florida; establishing living shorelines as a means for protecting eroding shorelines in the coastal areas of northwest Florida; forming partnerships with private groups and government agencies to strategically restore, enhance, conserve, and protect coastal habitat and resources; and implementing the [Strategic Habitat Conservation](#) framework. The majority of available funds will support projects in the following five watersheds: Perdido Bay, Pensacola Bay, Choctawhatchee Bay, St. Andrew - St. Joseph Bays,

and Apalachicola Bay. Relevant projects located in other northwest Florida watersheds may also be considered. Assistance may be requested by contacting Melody Ray-Culp, the FPCP Coordinator, at [Melody\\_Ray-Culp@fws.gov](mailto:Melody_Ray-Culp@fws.gov). Projects should be submitted by March 31, 2012, to be considered for financial assistance during FY12.

<http://www.fws.gov/southeast/SHC/>

### **NFWF Invites Applications for Five Star Restoration Grant Program**

The [National Fish and Wildlife Foundation](#) (NFWF), the [National Association of Counties](#), and the [Wildlife Habitat Council](#), in cooperation with the [U.S. Environmental Protection Agency](#), [Southern Company](#), and [FedEx](#), are accepting applications for the Five Star Restoration Grant Program. Five Star provides funding on a competitive basis to support community-based wetland, riparian, and coastal habitat restoration projects that build partnerships and foster local natural resource stewardship through education, outreach and training activities. To be eligible, projects must include on-the-ground wetland, riparian, in stream, and/ or coastal habitat restoration; integrate environmental education into the restoration project either through community outreach, participation, and/or integration with K-12 environmental curriculum; and result in measurable ecological, educational, and community benefits. The average grant award is expected to be between \$20,000 and \$25,000. A minimum 1:1 match of cash or in-kind/contributed goods and services to funds requested is expected. The deadline to apply is February 15, 2012. Visit the NFWF [website](#) for the complete Request for Proposals, application procedures, and information about upcoming webinars for applicants.

<http://www.nfwf.org/AM/Template.cfm?Section=GrantPrograms>



GCOOS is the Gulf of Mexico regional component of the U.S. Integrated Ocean Observing System (IOOS). Our mission is to provide timely, reliable, and accurate information on the open and coastal ocean waters of the Gulf of Mexico to ensure a healthy, clean, productive ocean and resilient coastal zone. Your input, guidance, support, and membership are important to the development of the data, products and services that you need.

Contact GCOOS Executive Director, Ann Jochens ([ajochens@tamu.edu](mailto:ajochens@tamu.edu)), to become a GCOOS member and for more information.

We welcome your feedback. If you have an item that you would like to share with others, please email that item to Laura Caldwell ([lcaldwell@geos.tamu.edu](mailto:lcaldwell@geos.tamu.edu)).