



SCCOOS News

The IOOS Regional Association Serving Southern California

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June 2015 Issue

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April and May 2015 Activities



April 6	A Visit with Russell Callendar, Acting Assistant Administrator, National Ocean Service
April 16	Climate Communications Workshop
April 21	SCCOOS Board Executive Committee Meeting
April 22	Earth Day Celebration at Camp Pendleton, a U.S. Marine Corps. Base
April 23	Bureau of Ocean Energy Management (BOEM) and National Weather Service, Oxnard Collaboration Meeting
April 28	Discovering Data and Informing Regional Ocean Health Priorities with the West Coast Ocean Data Portal Webinar
April 29	Southcoast Marine Protected Area Collaborative Regional Meeting
April 29	Cabrillo Aquarium, Long Beach Program Team Meeting
May 5 & 6	2014-2015 Pacific Anomalies Science and Technology Meeting
May 14	Southern California Area Committee Meeting
May 20	San Diego Marine Protected Area Collaborative Meeting
May 26-29	U.S. Integrated Ocean Observing Systems Data Mgmt & Communication Meeting
May 26-28	2015 Coastal Symposium



Pacific Anomalies Science and Technology Workshop — http://sccoos.org/projects/anomalies_workshop/

On May 5th and 6th a workshop was held at Scripps Institution of Oceanography that brought together the Pacific Ocean regional associations of IOOS, the IOOS program office, as well as federal, state, and regional (including Alaska, Canada, Washington, Oregon, California, Mexico, and Hawaii) subject matter experts and coastal managers to discuss prevailing atmospheric and oceanographic conditions that have been prevailing in the NE Pacific Ocean since October 2014.

Areas of the Northeast Pacific have been as much as 5°C/9°F warmer than average, earning the nickname ‘the blob’, and has been contributing to El Nino-like conditions. Throughout the entire US west coast, including Alaska, extreme conditions in physical and biogeochemical parameters are occurring, and appear to be impacting the biology and pelagic ecosystems—including fisheries. It is yet unclear as to whether all of the observed conditions are due to the same mechanism, and to what extent there are inter-connections between processes throughout the region.

During the first session of a two-part workshop, a cross-section of participants described in detail “what” is being observed, including the relative timing of the observations. From these multi-disciplinary observations, a series of research and development questions and issues related to these anomalies were generated. Bringing experts from multiple disciplines together to discuss this issue enabled a shared understanding of a wealth of long-term satellite and in situ time-series data that have been collected and assimilated in models. Investigators will continue working in sub-groups to bring these observations and results into published scientific papers. A sub-committee will be formed to specifically focus on data handling, providing a more comprehensive integration and analysis of these data at a Pacific-wide scale.

None of this would have been possible without the support of our sponsors and steering team. They brought together such a diverse range cross-disciplinary team of experts to better understand the many different facets of ecosystem impacts that we seem to be seeing as a result of unusually warm ocean conditions. This workshop was the first of two to try to suss out “what” is happening and in the fall a second workshop in Seattle will try to build and improve our understanding of how these significant oceanographic variations arose, their impact on our marine ecosystems, weather, and economic well-being, and ways in which we can potentially improve predictive capabilities.



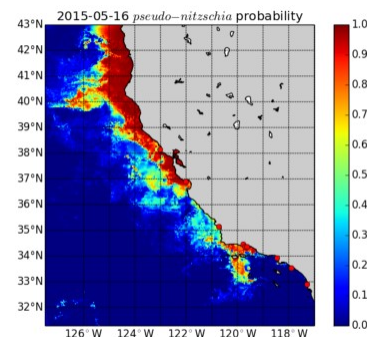
Pictured left to right: (1) The Pacific Northwest panel members address audience questions. (2) IOOS regional directors and that IOOS deputy director enjoy their reception. (3) Posters on display. (4) Representatives from Mexico and the Monterey Bay Aquarium Research Institute enjoy the reception.

California Harmful Algal Bloom (HAB) Monitoring Program Updates

May 7, 2015—information provided by Greg Doucette (NOAA), Greg Langlois (NOAA), Eric Bjorkstedt (NOAA Fisheries), Jason Smith (Moss Landing) and Holly Bowers (MBARI)

A large and spatially extensive bloom of *Pseudo-nitzschia* was along much of California. Oregon Harmful Algal Bloom Monitoring Program (ORHAB) also had a similar bloom off much of their coast, and they released an [update](#) that shows in more detail.

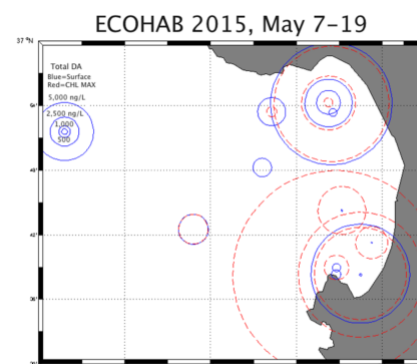
CeNCOOS (our Central and Northern California ocean observing counterpart), has a [HAB predictive model](#) (see picture right) that visualized the bloom (soon to be added to the SCCOOS [HABs data](#) too!) as well as the elevated Domoic Acid (DA—the toxin that causes amnesiac shellfish poisoning) probability in some Northern California locations.



May 28, 2015—Information provided by Raphael Kudela (UCSC)

A massive DA event continues in Central and Northern California. There is an ongoing research effort with a NOAA ECOHAB (Ecology and Oceanography of Harmful Algal Blooms) in Monterey, California and are running toxicity samples that show some of the highest levels of DA since 2000.

The model prediction can be found on the [CeNCOOS website](#) and an there is also a nice news story regarding this event from [NOAA](#).



Army Corps Review Board Approves Encinitas—Solana Beach Shoreline Protection Study



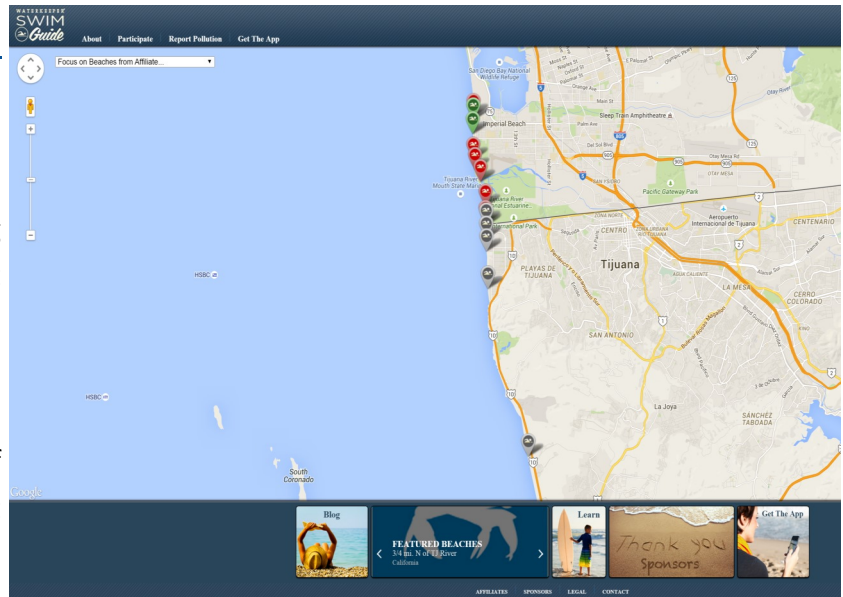
A crack near the base of a bluff in Encinitas, CA. Photo credit: Greg Fuderer

After a presentation regarding storm-induced damage along Encinitas-Solana Beach coastlines the U.S Army Corps of Engineers Civil Works Review Board approved a study for the Encinitas-Solana Beach Coastal Storm Damage Protection Project. The study investigates a variety of methods (managed retreat of the coastline, construction revetments, seawalls, and beach nourishments—to name a few) to reduce the effects of erosion along the coastline. Visit the [Seaside Courier](#) online publication for more details.

Learn about Tijuana Waterkeeper

[Proyecto Fronterizo de Educación Ambiental](#)

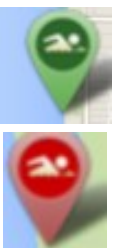
(Border Environmental Education Project) is the official Tijuana Waterkeeper since 2010. As such, they are committed to monitor the quality of the waterways. Their water quality monitoring program was recently launched in 2014 that monitors 5 sites (Playas Lighthouse, Border Field State Park, Canada Azteca, El Vigia, a sewage pump managed by CESPT and San Antonio del Mar and Playa Blanca) along 10 kilometers of Tijuana's coastline once a week. They collect contamination levels (using [enterococci](#) as an indicator), meteorological conditions, as well as physical and chemical parameters.



All sampling, data collection, analysis and other related activities are conducted according to the Baja Waterkeeper Monitoring Protocol. Some of the quality control methodologies they are using are: a control sample, calibration of equipment to verify the operation status, safety and hygiene during monitoring and laboratory process. Relative to the monitoring formats, they have a materials and equipment checklist, sampling chain of custody, sampling and laboratory log process and report results.

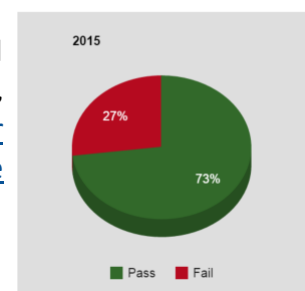
They communicate water quality results in real time, via an app identified as [Swim Guide Mexico](#) (property of Waterkeeper Alliance) so that the public may access information for the purpose recreational safety of these beaches (and other beaches sampled by Waterkeepers) from anywhere in the world. Swim Guide has been built and is powered by Waterkeepers for people to explore and enjoy so that our coastlines and swimming holes will be protected for generations to come.

This app has easy-to-use maps so you can quickly identify which beaches passed water quality tests (green) and which ones failed water quality tests (red). Also if you find a gray bubble, you can click on the beach you will find the most updated water quality information as well as a explanation of how often that particular beach passes or fails their water quality tests (see pic bottom right).



GRAPHS

Survey after survey reveals that beaches are the single most popular type of natural space in North American culture. Our [fondest outdoor experiences](#) involve water, swimming and going to the beach. The average person spends [10 days per year near the water](#). In the USA alone, people take a total of [2-billion trips to the beach](#) each year.




Announcements: College Summer Course and Ocean Acidification Presentation

Scripps Institution of Oceanography (SIO) graduate students are offering an engaging hands-on three week summer experience for eager high school students. The course, "Wind, Waves, and Currents—The Physics of the Ocean World", will meet on the SIO campus in San Diego and will take advantage of the local laboratory facilities, educational aquarium, and convenient ocean access.

<http://academicconnections.ucsd.edu/sandiego/oceanenvironment.cfm>

The course is part of UCSD's Academic Connections that provides an opportunity for high school students to get a jump start on the college experience. Students enroll in a class of their choosing and have the option to live on campus. As a residential student, the student has many opportunities to participate in activities including sports, arts and crafts, music, dances, talent shows and more.

<http://academicconnections.ucsd.edu/sandiego/index.cfm>



Physics of the Ocean World

A 3-week pre-college introduction to major physical ocean processes at Scripps Institution of Oceanography

July 12- August 1, 2015


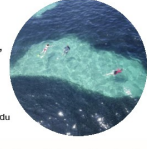
From tides to tsunamis, from seafloor to surf breaks, physics can help us understand our ocean world. Learn how scientists use physics to explain a wide variety of processes that shape our blue planet and the life it supports. Observe ocean processes first hand by conducting your own field experiments, developing basic data analysis skills, and learning to analyze and interpret your own data – critical skills for college bound science and engineering majors.

Field Trips:
Including the Birch Aquarium, Scripps tidepools, and Scripps Hydraulics Lab, for a behind the scenes look at research done every day by Scripps scientists.

Labs:
Surfzone physics, density currents, coriolis and the Great Pacific Garbage Patch, tidepool chemistry, and more!

Apply Online:
<http://academicconnections.ucsd.edu>

Contact Instructors:
Sean Crosby, Julia Fiedler, Bonnie Ludka (OceanEnvironment@gmail.com)

Mark your calendar for a [presentation](#) that Dr. Richard Feely will give at the Hammer Museum in Los Angeles on August 25th addressing the consequences of an acidifying ocean and whether there is anything we can do to make a difference.

ALL HAMMER PROGRAMS ARE FREE

Location: Billy Wilder Theater

Ticketing: Tickets are required and available at the Box Office one hour before the program. One ticket per person; first come, first served. Early arrival is recommended.

HAMMER PLUS Benefit: [Members](#) receive priority ticketing and can choose their seats, subject to availability.

Parking: Under the museum, \$3 flat rate after 6 p.m. (cash only)

All Hammer public programs are free and made possible by a major gift from the Dream Fund at UCLA.

Generous support is also provided by Susan Bay Nimoy and Leonard Nimoy, Good Works Foundation and Laura Donnelley, an anonymous donor, and all Hammer members.

The Hammer's digital presentation of its public programs is made possible by the Billy and Audrey L. Wilder Foundation.



A Highlight of Recent SCCOOS Visits

Dr. Russell Callender (see pic right), the acting Assistant Administrator Ocean Services and Coastal Zone Management for the National Ocean Service visited with SCCOOS while he was in California for the Hydrographic Services Review Panel meeting last April. Our main area of discussion was advancing coastal intelligence using the Port of Long Beach as an example of the importance of navigational products and services for our stakeholders to support safe shipping for the U.S. economy.



SCCOOS met with Bill Robberson and Anna-Marie Cook (see pic right), whom are a part of the Environmental Protection Agency's (EPA) On-Scene Coordinator group for Region 9 which covers California and Hawaii/Guam, American Samoa, Trust Territories and the Marianas. Currently Bill and Anna-Marie use the High Frequency Radar Surface Current Data to track and clean up marine debris in California waters, especially [plastics as they are considered toxic marine debris](#). The meeting on April 28th was centered on learning about their current plastic debris clean-up near the [French Frigate Islands](#) using surface currents and satellites for trajectory tracking. Check out the EPA's [storyboard](#) of some of the fascinating work they have done thus far. The primary goal of SCCOOS is to provide the scientific data and information needed to inform decision-making and better understand the changing conditions of the coastal ocean, and having the opportunity to aid the EPA is exactly what makes this all worthwhile. Thanks Bill and Anna-Marie for the opportunity to help!



On April 22nd SCCOOS was invited to celebrate [Earth Day at Camp Pendleton](#), a U.S. Marine Corps base located in Oceanside, Ca (see pic right). The environmental security division at Camp Pendleton provides the overall coordination of environmental compliance, which is no small task. Special thanks to Debbie Duckworth who put on a great event for such an important cause.



On April 29th SCCOOS participated in the first MPA (Marine Protected Area) Southern California Collaborative Implementation Forum (see pic right) to scope out what outreach/education, enforcement/compliance and research/monitoring approach to ocean resource management will be. SCCOOS participates quarterly in the [San Diego MPA collaborative](#) to stay current on the evolution of our MPA's.

