

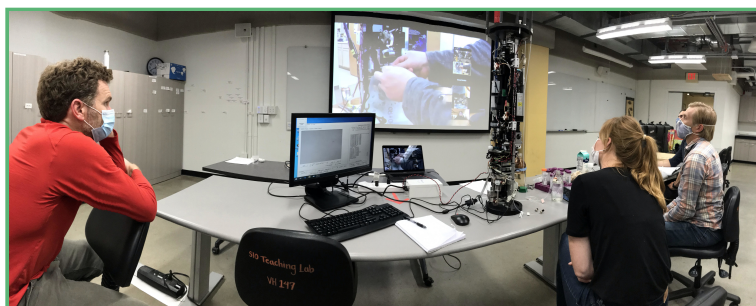


Jan-Mar 2021 Newsletter

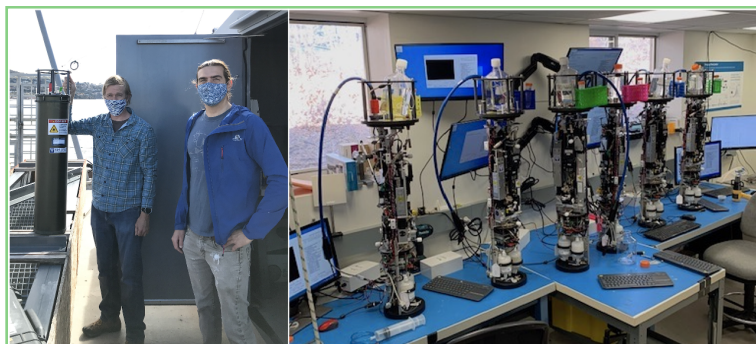
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CA Imaging FlowCytobot (IFCB) Network - SIO Training Workshop



Socially distanced in-person IFCB training workshop at Scripps Institution of Oceanography on 11-Feb 2021.

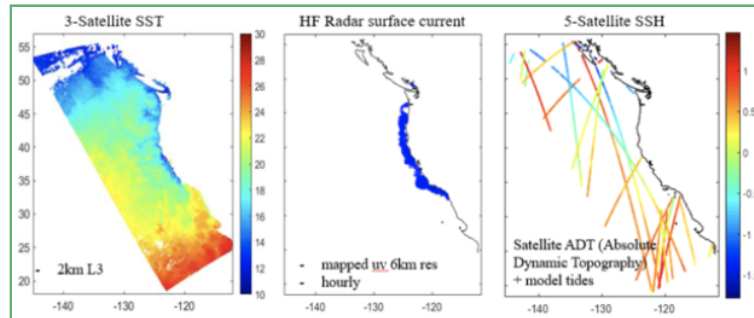


Left image: Installation of an IFCB at Scripps Pier. Right image: McLane Laboratories, Inc. building six new IFCBs as part of the California network.

As part of a statewide automated early-warning system for coastal harmful algal

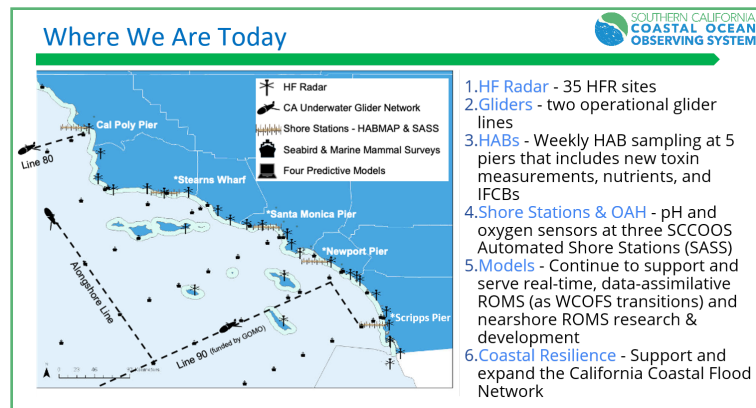
blooms (HABs), 11 Imaging FlowCytobot (IFCB) units will be deployed on California piers, offshore moorings, and research cruises, for automated, real-time HAB monitoring in coastal waters. Training began in February at Scripps Institution of Oceanography with essential personnel and with McLane Laboratories, Inc., the IFCB manufacturer, to prepare for the deployment of the CA network. The CA IFCB Network will be the largest of its kind, to date, and is part of the NOAA [NCCOS and IOOS Implementation Strategy for a National Harmful Algal Bloom Observing Network \(NHABON\)](#). The CA IFCB Network leverages funding from the Ocean Protection Council, IOOS, NOAA ECOHAB, and the Orange County Sanitation District.

West Coast Operational Forecast System (WCOFS) Now Operational



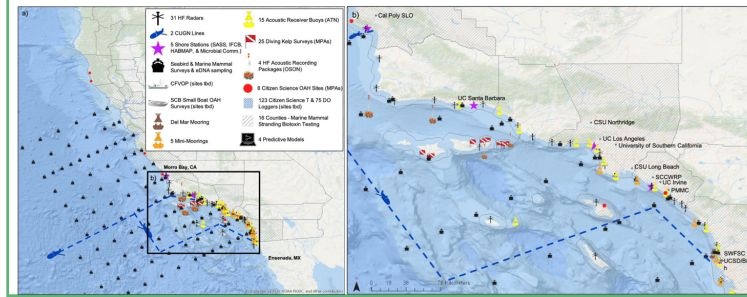
The West Coast Operational Forecasting System (WCOFS), an instance of the Regional Ocean Modeling System (ROMS), went fully operational in March. The goal of WCOFS is to provide a high-resolution ocean forecasting system for the West Coast. Forecast products include sea level, currents, temperature, and salinity, which are beneficial for maritime transport, navigation, fishing, and search and rescue. More information on WCOFS can be found on [NOAA Tides and Currents](#).

SCCOOS 2021 Board of Governors Meeting



Where we Are Today. SCCOOS supports 35 HF Radars, two glider lines, five shore stations as part of SCCOOS Automated Shore Stations (SASS) and the Harmful Algal Bloom Monitoring Alert Program (HABMAP), nine near-shore stations along the CalCOFI cruise tract, marine mammal and seabird visual surveys, the California Coastal Flood Network and four predictive models.

Where We Want to Be in Five Years



Where We Want to Be in Five Years. Map of SCCOOS FY21-26 proposed projects assets/technologies in the a) California Current Ecosystem and b) Southern California Bight. Note that seabird/mammals and eDNA observations occur at quarterly-sampled CalCOFI stations, and are thus paired with the CalCOFI station grid. Partner institutions not pictured: MBARI, Farallon Institute, NOAA/SWFSC, NOAA/ONMS, NOAA/NMFS, Ocean Data Network LLC, WHOI, and Reef Check Foundation.

The **SCCOOS Board of Governors** met virtually on January 22nd and 25th. The meeting objectives were to:

1. Review SCCOOS FY21-26 Proposal
2. Review IOOS Goals and IOOS Association Legislation Efforts
3. Describe SCCOOS Vision for the next five years
4. Identify potential funding opportunities for some of the projects
5. Provide guidance on how to develop SCCOOS FY21-26 Strategic Plan and Operational Plan

On day one, Dr. Clarissa Anderson provided an overview of the proposal development process, SCCOOS mission and vision statement, high-level goals, and priority projects (**Anderson presentation**). Carl Gouldman, IOOS Director, followed by providing an IOOS Program Office Update, which included IOOS FY21 Priorities, funding summaries, and a new Diversity and Inclusion STEM working group (**Gouldman presentation**). Josie Quintrell, IOOS Association Executive Director, discussed the success from the Fill the Gaps Congressional Campaign and the ICOOS reauthorization (**Quintrell presentation**). Dr. Libe Washburn, SCCOOS BOG Chairman, led the discussion for potential funding opportunities for Tier 2 projects. On day two, Dr. Florybeth La Valle provided an overview of engagement success and plans to foster the next generation of ocean observing and stakeholder workforce specialists through targeted collaborations advancing education, training, and research opportunities. SCCOOS supports diversity, equity, and inclusion initiatives (DEI), both within its research programs and in its engagement activities within our network, the community we serve, and the public (**La Valle presentation**). SCCOOS will contribute to supporting an IOOS Association specialist to increase DEI across the IOOS RA Network. The meeting wrapped up discussing plans to develop a new Strategic and Operational Plan and to evaluate SCCOOS governance members. The full meeting agenda is available [here](#).

CA HF Radar Network Update



SCCOOS HF radar site (NIC1) at Nicholas Canyon, Malibu, CA. Photo credit: Eduardo

The SCCOOS HF radar site (NIC1) at Nicholas Canyon is back online after corrosion and high winds toppled the mono-pole whip antenna recently. The mono-pole antenna is on the ground in the photo on the left. UCSB marine technician Eduardo Romero installed a new mono-pole antenna on the top of the mast assembly (right photo). The site was damaged in November 2018 when the Woolsey Fire swept through the area. During that fire, the utility pole and transformer that supplied power to the site were destroyed.

West Coast Flood Workshop

The **Coastal Solutions Workshop: Coastal Flood Modeling, Prediction and Observations for the U.S. West Coast** was held virtually on 31-Mar and 1-Apr. The workshop served as a forum for the research community working on coastal flood observations, modeling, and forecasting products to meet and improve integration and collaboration among each other to better serve coastal stakeholders. The workshop included a series of case studies for how products are evolving to meet a range of coastal stakeholder needs for addressing contemporary and future coastal hazards. Outcomes of the workshop included:

- A web-based compilation of West Coast case studies that feature co-designed and deployed coastal flood solutions with stakeholders.
- Workshop summary synthesizing the landscape of west coast capabilities and priorities for enhancing these through research and stakeholder application.
- A roadmap for engaging with stakeholders for enhanced input on user needs and how well engagement platforms meet their needs.
- A white paper to inform decision-makers and coastal programs on ways to foster further integration and advancement of capabilities and services to best meet stakeholder needs.

A complete list of the workshop agenda, goals, outcomes and submitted projects and case studies can be found [here](#).

Co-Sponsored and Organized by:



IOOS Association Spring Meeting and Congressional Update



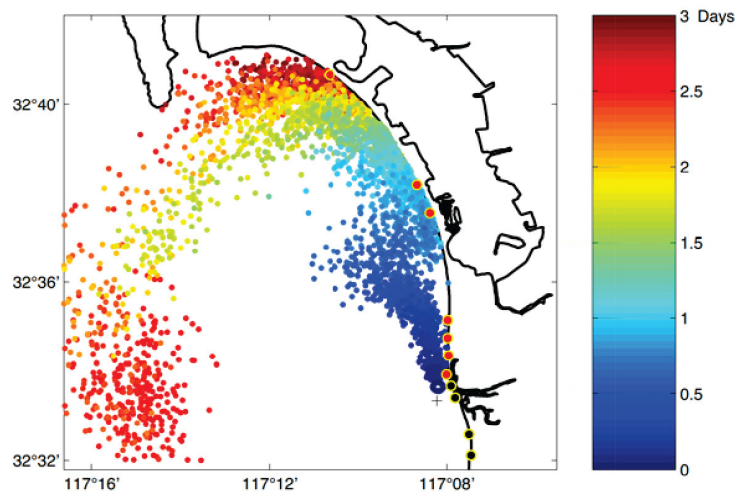
IOOS Association Virtual Spring 2021 Meeting. Zoom, zoom, zoom!

The IOOS regions gathered virtually for the IOOS Association Spring meeting over three days (March 2nd, 5th and 9th) and focused on highlights from each of the 11 regional association's FY21 funding proposals and also included breakout sessions discussing the IOOS role in Resiliency and on Elevating IOOS in NOAA. The goal of the breakouts was to begin to develop unifying messaging for these topics. The agenda included briefings from Congressional staff, NOS leadership, and a discussion on coastal climate signals and its impacts.

We also celebrated the reauthorization of the [Coordinated Ocean Observations and Research Act of 2020 \(S. 914, PL 116-271\)](#) which was signed into law on 31- Dec 2020. The bill passed both chambers of Congress unanimously, and each chamber passed it twice due to technical amendments - a strong signal of congressional support of the program. We want to thank our California coastal districts who helped make this happen!

Dr. Clarissa Anderson, SCCOOS Executive Director, and Dr. Libe Washburn, SCCOOS Board Chair, have met virtually with state legislators to ask for their continued support of the IOOS by signing the [FY 22 IOOS Appropriations Request Dear Colleague](#) letter led by Representatives Pingree (D-ME), Carbajal (D-CA), and Posey (R-FL) as well as the [Support Coastal Jobs in the Recovery Package](#) Dear Colleague letter led by Bonamici (D-OR) and Posey (R-FL) which asks for \$10 billion for coastal restoration and resilience projects.

Cross-Border Pollution: Discussing the Tijuana River Valley Crisis and Future Vision



Tijuana River Plume Tracker: In 2007, the International Boundary Water Commission (IBWC) sponsored a supplemental monitoring program as part of a federally mandated consent decree that aimed to identify and track plumes from the South Bay Ocean Outfall, characterize land-based sources with a focus on the Tijuana River, and identify the regional oceanographic conditions that lead to high concentrations of fecal indicator bacteria on South Bay beaches. The study detailed the frequency of pollution events and potential origin sources using novel robotic technology which was able to map the plumes of pollution. SCCOOS now maintains an operational Tijuana River Plume Tracker for the public to visualize the direction potential plume waters are moving relative to their discharge site. Scientists: Eric Terrill (SIO), Bruce Cornuelle (SIO)

On February 25, San Diego City Councilmember Vivian Moreno and Margaret Leinen, director of UC San Diego's Scripps Institution of Oceanography, hosted a virtual forum called "[Cross-Border Pollution: Discussing the Tijuana River Valley Crisis and Future Vision](#)." The cross-border San Diego South Bay-Tijuana region is home to state parks, Marine Protected Areas, the Tijuana River National Estuarine Research Reserve, Navy bases, the Port of San Diego, recreational beaches, and vibrant border communities. Yet for decades impaired U.S. water quality has resulted in downstream health risks and economic impacts. The webinar discussed plans to improve infrastructure and atmospheric modeling systems; provide observations and modeling that can lead to real-time notifications when a hazardous event is occurring; collecting critical data to link real-time observations with specific health risks; and

predictions of future health risks. Featured speakers included Dr. Clarissa Anderson, SCCOOS Executive Director, Dr. Falk Feddersen, SIO Professor and SCCOOS PI, and Dr. Kimberly Prather, Director of the Center for Aerosol Impacts on Chemistry of the Environment.

A more extensive overview of past and current research Scripps scientists are doing in the Tijuana River Valley can be viewed [here](#), and also in [Spanish here](#).

Recent Publications

- Danil et al. 2021. [Marine algal toxins and their vectors in southern California cetaceans](#). *Harmful Algae*.
- Ren and Rudnick. 2021. [Temperature and salinity extremes from 2014-2019 in the California Current System and its source waters](#). *Communications Earth and Environment*.
- Sydeman et al. 2021. [Seabirds on the CalCOFI/CCE-LTER Survey, Winter 2021 Data Report](#). Farallon Institute.
- Takeshita et al. 2021. [Accurate pH and O₂ Measurements from Spray Underwater Gliders](#). *Journal of Atmospheric and Oceanic Technology*.
- Wu et al. 2021. [Characteristics and Dynamics of Density Fronts over the Inner to Midshelf under Weak Wind Conditions](#). *Journal of Physical Oceanography*.
- Yu et al. 2021. [Predicting coastal algal blooms with environmental factors by machine learning methods](#). *Ecological Indicators*.

Funding Opportunities

- [NSF Convergence Accelerator](#) Phase I and II 2021 Cohort - [Track E Network Blue Economy](#)
 - Letters of Intent: May 5, 2021
 - Full Proposals: June 14, 2021
- The National Fish and Wildlife Foundation [National Coastal Resilience Fund 2021](#) Request for Proposal
 - Pre-proposal: April 7, 2021
 - Full Proposals: June 23, 2021
- OMAO UxS Operations Center announces the [2021 RFP for Uncrewed Systems](#) (UxS).
 - Preliminary request: April 23, 2021
 - Full Proposal: May 5, 2021
- \$230m for the 2021 [Port Infrastructure Development Program](#) (PIDP)

Job Opportunities

NOAA, Weather Program Office, Earth Prediction Innovation Center (EPIC) is looking to hire a [Program Manager](#). Application deadline is April 13, 2021.

- California Ocean Protection Council (OPC) is hiring up to five Student Assistants for its [Summer Internship Program](#). Application deadline is April 19, 2021.
- California Ocean Protection Council (OPC) is hiring a [Policy and Communications Program Manager](#). Application deadline is April 20, 2021.
- [Wildlife habitat, biodiversity, and satellite remote sensing](#): 1 Postdoc and 1 PhD position, UW-Madison, [SILVIS Lab](#). June 1st start date. Application [here](#).
- Gulf Coast Ocean Observing System (GCOOS) Executive Director. Application [here](#).

Upcoming Activities

- Apr 8: [Resilience for the Nation's Oceans, Coasts, and Great Lakes Briefing](#)
- Apr 13-16: [2nd NOAA General Modeling Meeting and Fair](#)
- Apr 20: NOAA West Watch Webinar - Quarterly Virtual Webinar. email Daniel McEvoy to be added to the distribution

list Daniel.McEvoy@dri.edu

- Apr 20-22: 2021 NOAA Financial Assistance Workshop - [Agenda](#)
- Apr 26-27: SHared Operational REsearch Logistics In the Nearshore Environment ([SHORELINE21](#)): Uniting field and lab research across disciplines to reduce hurricane impacts to the built and natural environments | Virtual
- Apr 28-29: ACT Coastal Hyperspectral Best Practices Workshop
- Apr 28-30: [International Conference on Ocean Energy](#)
- May 5: Los Angeles Region - CNRA [Nature-Based Solutions and 30 by 30 Virtual Regional Workshop](#)
- May 6: IOOS and OCM FY21 Funding for Regional Data Sharing Initiative
- May 11: San Diego Region - CNRA [Nature-Based Solutions and 30 by 30 Virtual Regional Workshop](#)
- May 18-21: [OceanVisions Summit](#)
- May 25-27: USHAB Student Symposium
- Jun 8-10: [CHOW](#) Theme: Diversity, Equity, Inclusion and Justice
- Jun 15-17: IOOS DMAC Meeting
- Jun 28-30: [New Global Ocean Biogeochemistry Array](#) - Building a Community of Biogeochemical Float Data Users
- Sep 20-23: [Oceans Conference 2021](#), San Diego, CA
- Nov 3-4: [Esri Ocean, Weather, and Climate GIS Forum](#), Redlands, CA



SOUTHERN CALIFORNIA
**COASTAL OCEAN
OBSERVING SYSTEM**