

January – March 2020

SOUTHERN CALIFORNIA COASTAL OCEAN OBSERVING SYSTEM: A Science-Based Decision Support System

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COVID-19 Operational Impacts

The SCCOOS program office is actively following the guidelines provided to us by UC San Diego by working remotely and moving all meetings online. We realize this global pandemic will likely impact SCCOOS operations. We are doing our best to keep the High Frequency Radar (HFR) operational, but some HFR sites will not be accessible should any technical issues arise. Bodega Marine Lab personnel will recover the Bodega glider and redeploy at a later date. The Spray glider on Line 80 is expected to be recovered at the end of April, and a new glider will be deployed when it is safe to do so. The SCCOOS and CeNCOOS [HABMAP program](#) has also suspended weekly water samples collected at the nine piers until further notice, although some sampling, particularly in support of the California Department of Public Health, has been deemed essential and will continue to protect human well-being during the crisis. We encourage you to take the precautionary steps listed by the [Centers for Disease Control and Prevention](#) to help slow the spread of the virus in California and the nation.

SCCOOS Board of Governors Meeting, Playa Del Rey, CA

Thank you, Mas Dijori, for hosting our annual [Board of Governors \(BOG\) Meeting on January 29th, 2020 at the Hyperion Water Reclamation Plant in Playa Del Rey, CA](#). Clarissa Anderson, SCCOOS Executive Director, kicked off the meeting with an overall update on SCCOOS activities, followed by an update from Henry Ruhl, CeNCOOS Director, on the new CeNCOOS Strategic Plan and future vision. BOG member and SCCWRP Director, Steve Weisberg, highlighted SCCOOS opportunities for future product development. Libe Washburn, BOG Chairman, led the overall discussion on SCCOOS strategy and vision for the next five years and our upcoming solicitation for Expressions of Interest (EOIs) from the community, keeping complementary efforts with CeNCOOS in mind. The full meeting agenda is [here](#).



Clarissa Anderson presenting at the Board of Governors Meeting on January 29th, 2020.

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Welcome Florybeth La Valle, SCCOOS Postdoctoral Scholar

Please join us in welcoming [Florybeth \(Flo\) La Valle](#) to the SCCOOS team! Flo joined the program as a postdoctoral researcher on Tuesday, February 4th. She will be working with SCCOOS, California Sea Grant, and CeNCOOS over the next two-years on data analysis to investigate the dynamics of habitat availability and disturbance in Marine Protected Areas (MPAs) in California.



SCCOOS Postdoc, Florybeth (Flo) La Valle.

Ocean Sciences Meeting 2020, San Diego, CA

Ocean Sciences 2020 was held 16-21 February at the San Diego Convention Center where over 20 SCCOOS Principal Investigators presented their [research](#). Clarissa Anderson, SCCOOS Executive Director, moderated the [U.S. Integrated Ocean Observing System: The Power of Partnership over 20 years and beyond](#) townhall. The panel addressed water quality and sea-level rise issues, coastal resilience, and harmful algal blooms specifically in San Diego County. The panel included SCCOOS PI's Mark Merrifield (Director CCCIA and Professor at SIO) and Sarah Giddings (Assistant Professor at SIO) as well as Erin Hickey, Communications Director, Office of State Senator Ben Hueso, 40th District and Jason Giffen, VP Planning, Environment, & Government Relations, Port of San Diego. Mark Gold, CA OPC Executive Director, wrapped up the town hall with insightful closing remarks on how the State of California is addressing sea-level rise, coastal resilience, and harmful algal blooms.

Clarissa Anderson also presented during the Consortium of Ocean Leadership townhall [Ocean Partnerships for Sustained Observing: Moving Beyond the Frameworks](#). Clarissa highlighted SCCOOS robust network of stakeholders in the region and how we work with our stakeholders to develop product and tools for science-based decision-making.

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SCCOOS Program Office also participated in several side workshops and meetings throughout the week, taking advantage of the fact that many of our regional, state and federal partners were in the area.

- 1) 16-February: OceanObs Research Coordinator Network meeting, which was dedicated to the synthesis of threads and recommendations emerging from the OceanObs'19 Conference.
- 2) 18-February: Clarissa Anderson, SCCOOS Executive Director, Libe Washburn, SCCOOS BOG Chairman, and Carl Goldman, IOOS Director, met with Mark Gold, CA Ocean Protection Council Executive Director to discuss opportunities to recapitalize the aging infrastructure of the critically important network of surface current mapping stations called high-frequency radars (HFRs).
- 3) 19-February: Clarissa Anderson provided RDML Gallaudet, the Assistant Secretary of Commerce for Oceans and Atmosphere and Deputy Administrator of NOAA and Alan Leonardi, Director of NOAA Office of Ocean Exploration and Research, an overview of SCCOOS sustained long-term, high-quality observations, reliable data, and stakeholder-driven products and tools that are integral to the State's economy, health, and safety.
- 4) 19-February: [West Coast Biology Observation Coordination Network meeting](#) and [Ocean Acidification and Hypoxia Regional workshop](#).



(Left to right) Eric Terrill, Clarissa Anderson and RDML Tim Gallaudet met on February 19th, 2020 at Scripps Institution of Oceanography.

SCCOOS Visits 10 House of Rep. Offices, Washington, D.C.

On Wednesday, March 5th, 2020 SCCOOS met with ten district offices in our region to highlight [SCCOOS latest activities and ocean observations](#), [SCCOOS and CeNCOOS joint efforts](#), the monthly [CA HAB Bulletin](#), and [IOOS funding gaps](#). Huge thank you to our partner programs that wrote us a letter of support! We could not sustain our observations without you. Here is a complete list of all [38 letters](#). We also sincerely thank the 13 California district offices that showed their support for SCCOOS,

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CeNCOOS and the IOOS program by signing the [Appropriations Dear Colleague Letters in the House](#), and a special thank you to Congressman Carbajal for co-leading the letter.



Left: (left to right) Ross Timmerman, Clarissa Anderson, Megan Hepner-Medina and Libe Washburn running between meetings with Representatives on March 5th, 2020 in our nation's Capital. Right: Fist bumps all around during the initial precautions of COVID-19.

IOOS Spring Meeting, Washington, D.C.

The annual [IOOS Spring Meeting](#) was held on March 4th, 2020 at the Consortium for Ocean Leadership (COL) in Washington, D.C. Guest speakers included Jon White from COL, Kris Dellapina from the White House Office of Science and Technology Policy and Sam Simmons from the Marine Mammal Center. The meeting focused on the future of ocean observing in the near term and on a decadal scale.

Preparing for the IOOS FFO to be released in April 2020

SCCOOS and CeNCOOS are working together to solicit Expressions of Interest for our next five-year proposals. We hope to invite people to submit an Expression of Interest at the end of April 2020 or early May 2020. Stay tuned!

Equipping Smart Coasts with Marine Quality IoT Sensors

Ocean acidification data are rarely communicated in real time to water quality or aquaculture managers. In the Agua Hedionda Lagoon in Carlsbad, CA, researchers from SCCOOS and Scripps Institution of Oceanography and industry representatives from the

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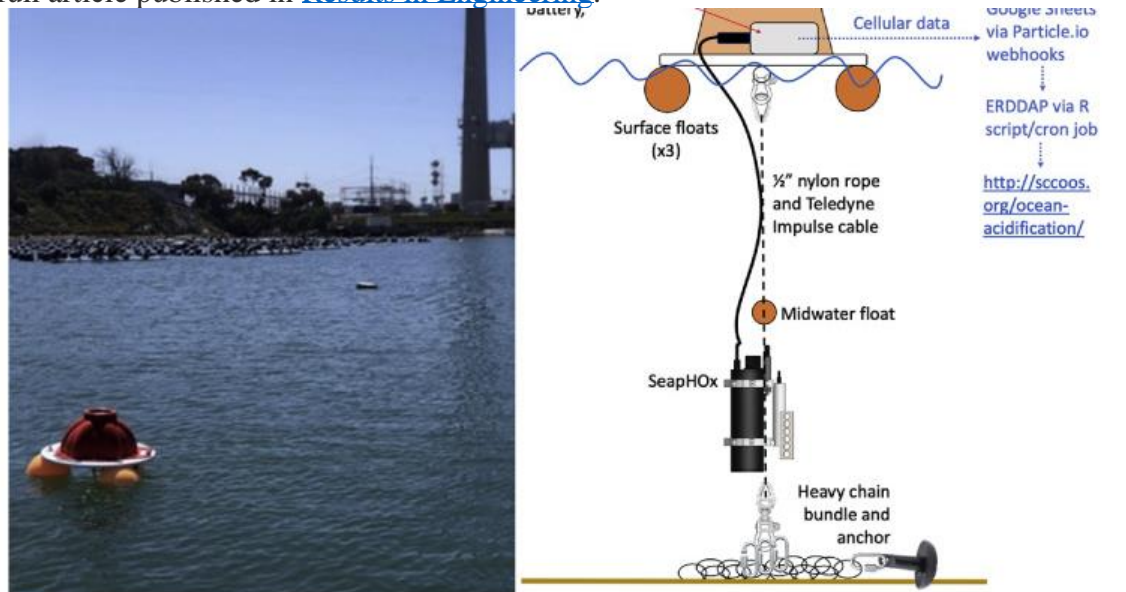
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Carlsbad Aquafarm have come together through a NOAA-facilitated project to alleviate this data shortage using a combination of cutting-edge research technology alongside off-the-shelf and easy-to-implement IoT communications packages. Here is the link to full article published in [Results in Engineering](#).



(Top Left) the closed surface buoy deployed in Agua Hedionda Lagoon, (Top Right) schematic depicting the positioning and functions of equipment during deployments as well as the data pipeline in blue, and (Bottom) screenshot of real-time data feed on <http://sccoos.org/ocean-acidification/>.

Upcoming Activities

20-21 April:
SCCOOS All-Hands Meeting

Contact Us:

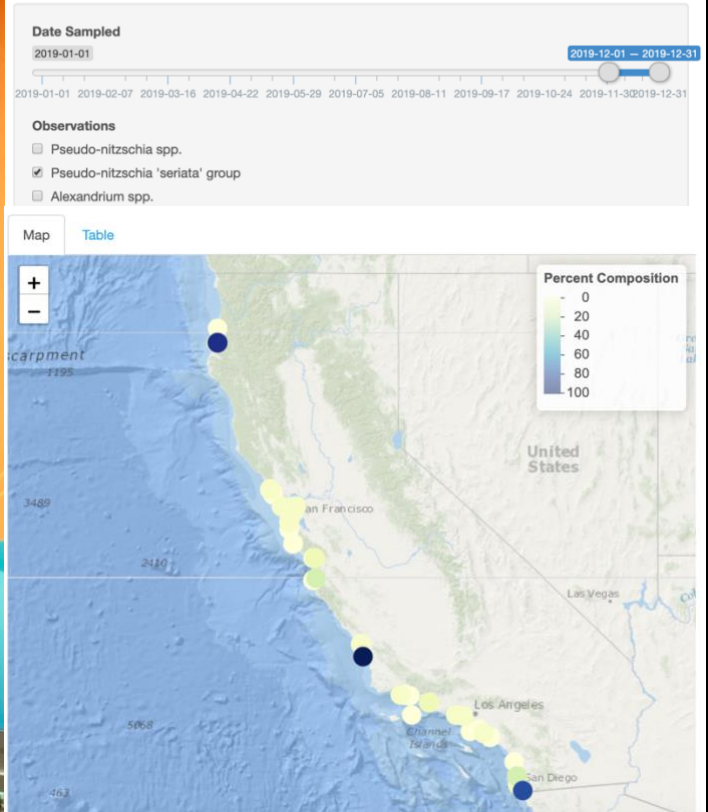
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RStudio Conference, San Francisco, CA

Megan Hepner-Medina honed her product development skills and learned new techniques to improve interactive maps and plots by attending the “Shiny Start to Finish Workshop” at the RStudio Conference in San Francisco, CA on 28-29 January. Following the conference, Megan designed an [interactive map of California Department of Public Health phytoplankton water samples](#) to include in the CA HAB Bulletin.



CDPH Phytoplankton Data



Left: Megan Hepner-Medina attending the RStudio conference. Right: Screenshot of interactive map of CDPH phytoplankton data built with the R Shiny package.

Publications

Bresnahan P., Wirth T., Martz T., Shipley K., Rowley V., Anderson C., and Grimm T. (2020). [Equipping smart coasts with marine water quality IoT sensors](#). *Results in Engineering*.

Zaba, K., Rudnick, D.L., Cornuelle, B., Gopalakrishnan, G., and Mazloff, M. (2020). [Volume and heat budgets in the coastal California Current System: Means, annual cycles and interannual anomalies of 2014-2016](#). *J. Phys. Oceanography*.

Stauffer, B.A., Sukhatme, G.S., and Caron, D.A. (2020). [Physical and Biogeochemical Factors Driving Spatially Heterogeneous Phytoplankton Blooms in Nearshore Waters of Santa Monica Bay, USA](#). *Estuaries and Coasts*.