



# SOUTHERN CALIFORNIA COASTAL OCEAN OBSERVING SYSTEM

## Winter 2023 Newsletter

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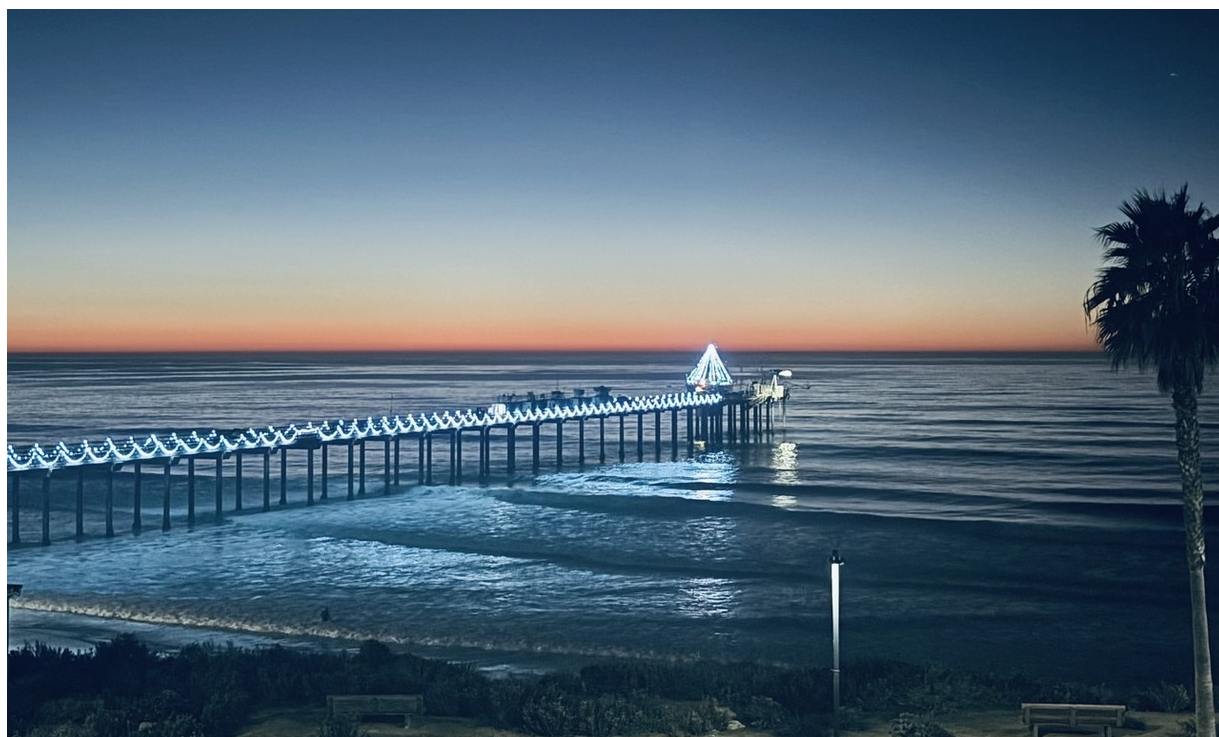
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Find regularly updated information about Jobs, Student Opportunities, Funding Opportunities, Events, and more on our [website](#), [X](#), [Facebook](#), and [LinkedIn](#).

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*Happy Holidays!*



### Highlights

# SCCOOS Hosts IOOS Fall Meeting



SCCOOS hosted the IOOS Fall meeting at Scripps Institution of Oceanography from November 28th - December 1st. Our meeting addressed topics such as inflation reduction working sessions for the regions, strategic communications planning, and sustainability planning. In addition, Southern California regional stakeholders and ocean science and technology practitioners were highlighted. Our weeks activities included tours of workshops and labs, tide pool tours, kayaking (yes a few of us capsized in the surfzone - it was quite the sight to see), and touring the SIO pier.

Many thanks to our speakers and tour guides who took time out of their schedule to share their expertise.

- [Chris Castillo](#), Director, Federal Government Relations at Scripps Institution of Oceanography
- [John Hansen](#), Executive Director, West Coast Ocean Alliance
- [Jenn Eckerle](#), Executive Director, California Ocean Protection Council
- [Jeff Crooks](#), Research Coordinator, Tijuana River National Estuarine Research Reserve
- [Mark Merrifield](#), Director, Center for Climate Change Impacts and Adaption
- [Duncan Mactavish](#), Business Development Lead - Research & Academia, SOFAR Ocean
- [James Behrens](#), Manager, Principal Development Engineer, CDIP
- [Nathan Wardwell](#), Managing Partner, JOA Surveys LLC
- [Dan Rudnick](#), Professor, SCCOOS Executive Committee Chair and Tour Guide Extraordinaire
- [Drew Lucas](#), Assc. Professor, Scripps Institution of Oceanography and Tour Guide Extraordinaire
- [Mitchell Tartt](#), Division Chief, NOAA Office of National Marine Sanctuaries
- [Rosa Laucci](#), Marine Program Manager, Tolowa Dee-ni' Nation
- [Noelle Bowlin](#), CalCOFI Program Lead, NOAA Southwest Fisheries Science Center
- [Chris Hein](#), Senior Project Lead, National Renewable Energy Laboratory
- [Mary Hunsicker](#), Research Ecologist, NOAA Northwest Fisheries Science Center
- [Melissa Carter](#), SCCOOS Automated Shore Station Program and Tour Guide Extraordinaire
- [Jules Jackson](#), Outreach, Ocean Conservation, and Indigenous Engagement, Coastal Defenders
- [Lisa Gilfillan](#), California Conservation Manager, WILDCOAST
- [George Watters](#), Director, NOAA SWFSC Ecosystem Science Division

## SoCal DDT Contamination Community Meeting Jan. 24th 4-6 pm



Please join us virtually to hear about the latest findings on deep-ocean DDT in Southern California: where is it? How is it affecting humans and wildlife?

Learn more and register here: [bit.ly/DDTupdate](https://bit.ly/DDTupdate)



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## CalCOFI is now a NASA PACE Validation Program

### *A.30 Plankton, Aerosol, Cloud, ocean Ecosystem (PACE) Mission Validation*

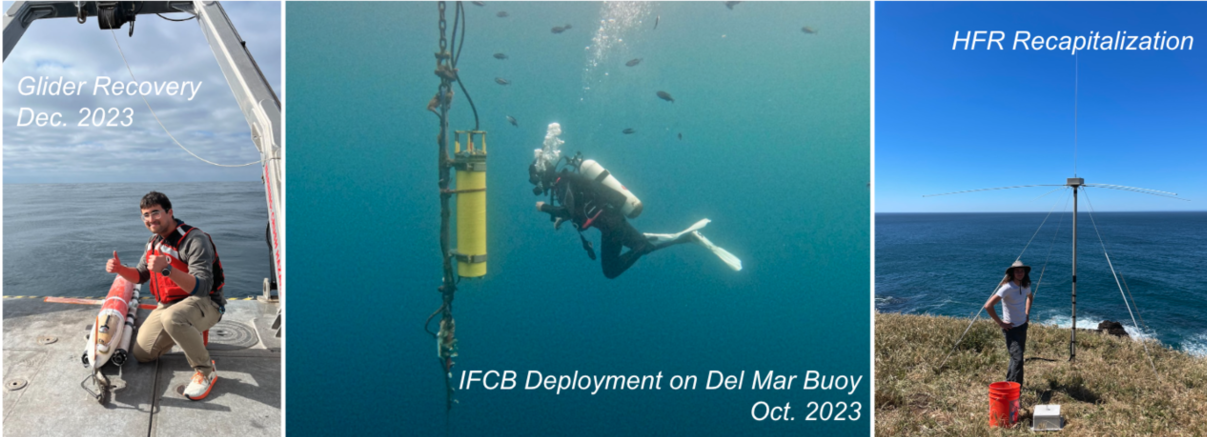


SCCOOS led a successful proposal with a team of SIO scientists to establish the world-renowned California Cooperative Oceanic Fisheries Investigations (CalCOFI) Program as a validation node for the PACE satellite mission. This includes measurements of ocean color, biogeochemistry, net primary productivity, and phytoplankton community metrics as well as eDNA sampling of ocean biodiversity on CalCOFI.

Project Objectives are to:

1. Collect a broad suite of biogeochemical and biological measurements on CalCOFI cruises for future use in developing, refining, and assessing advanced NASA data products.
2. Co-locate *in situ* hyper- and multi-spectral measurements with the required validation measurement from CalCOFI stations.
3. Validate the performance of *in situ* radiometry from the PACE observatory.

## In The Field



Left to right:

- Sequoya Daniels, Spray Glider Lab engineer recovers a glider deployed on [Line 90](#). It was about 100 miles offshore Point Loma, CA. Made for a long day at sea, but the ocean was teeming with life, and didn't disappoint!
- Dr. Kasia Kenitz and team deployed an Imaging FlowCytobot ([IFCB](#)) on the [Del Mar mooring](#) operated by the Ocean Time-Series [Group](#) at Scripps Institution of Oceanography.
- The Cal Poly San Luis Obispo team replaced 20-year-old HFR hardware with Bipartisan Infrastructure Law investments to IOOS.

## Where SCCOOS Has Been Spotted

SCCOOS has co-organized, participated in, and presented at several activities over the past few months. Meeting programs, notes, and presentations are linked below.

- **September 7:** Meeting with the City of Santa Barbara Coastal Monitoring Group - Clarissa Anderson, Megan Medina, and Libe Washburn attended
- **September 8:** CINMS Sanctuary Advisory Council [Meeting](#), Santa Barbara, CA - Clarissa Anderson was a panelist discussing the 2023 HAB; Megan Medina and Libe Washburn attended
- **September 9:** Torrey Pines State Natural reserve Docent [General Meeting](#), Torrey Pines, CA - Clarissa Anderson presented
- **September 13-15:** SCCWRP Report Cards + HABs/OAH [Workshop](#) - Clarissa Anderson attended
- **September 14:** Global Wave Conference [Kick-off](#), San Diego, CA - Danielle Muller attended and led the Scripps Pier Tour
- **September 13-15:** OAH and HAB Workshop, SCCWRP, Costa Mesa, CA - Clarissa Anderson attended
- **September 20:** Ocean Discovery Institute Science Leader - Student Connection [Experience](#), virtual - Danielle Muller presented to K-8 students from underserved regions of San Diego
- **September 24-27:** Eastern Pacific Ocean [Conference](#), Fallen Leaf Lake, South Tahoe, CA - Clarissa Anderson presented and served in role as EPOC President
- **September 26-28:** IOOS DMAC Meeting, Washington D.C. - Ian Brunjes attended
- **September 27:** San Diego Harbor Safety Committee [Meeting](#) - Danielle Muller attended
- **October 2-5:** U.N. Decade Deep Ocean Observing Strategy (DOOS) [Workshop](#), SIO, La Jolla, CA - Clarissa Anderson represented several UN Decade programs (OASIS, Marine Life, OBON)
- **October 7:** Ports of Long Beach/Los Angeles Harbor Safety Committee [Meeting](#) - Danielle Muller joined virtually

- **October 11:** San Diego MPA Collaborative Community [Forum](#), San Diego, CA - Danielle Muller attended
- **October 11:** San Diego Chapter of the American Cetacean Society [Meeting](#) - Clarissa Anderson presented; Megan Medina and Danielle Muller attended
- **October 14:** Walter Munk [Day](#), La Jolla, CA - SCCOOS hosted a booth led by Danielle Muller
- **October 16-17:** AGU Ocean Sciences Meeting (OSM) Planning Committee, Washington D.C. - Clarissa Anderson is a committee member
- **October 23-27:** IFCBWorks23, Woods Hole, MA - SCCOOS IFCB scientists and managers, Kasia Kenitz, Melissa Carter, Kayla Martin, and Stuart Halewood attended
- **November 2:** Sea Grant-NCCOS CA Aquaculture Siting and Development [Workshop](#), San Diego, CA - Clarissa Anderson on planning committee; Megan Medina and Danielle Muller attended
- **November 5-11:** International [Conference](#) on Harmful Algae, Hiroshima, Japan - Clarissa Anderson and Kasia Kenitz presented
- **November 7-9:** 2023 Sea Grant Extension Assembly [Meeting](#), San Diego, CA - Megan Medina attended
- **November 8:** Ocean Discovery Institute Science Leader - Student Connection [Experience](#), virtual - Danielle Muller presented to K-8 students from underserved regions of San Diego
- **November 13:** Tour for [Hōkūle'a](#) sailors, La Jolla, CA - Danielle Muller, Jim Behrens/CDIP, and Dan Rudnick/Spray Glider Lab hosted
- **November 14:** Marine Mammal Commission Annual [Meeting](#) - Clarissa Anderson [presented](#)
- **November 15:** CDFW San Diego Area Committee [Meeting](#), San Diego, CA - Danielle Muller presented
- **November 16:** BlueTech [Week](#), San Diego, CA - Danielle Muller attended
- **November 29-Dec 1:** IOOS Fall Meeting, SIO, La Jolla - SCCOOS hosted
- **December 4-5:** IOOS Advisory Committee Meeting, virtual - Clarissa Anderson attended and Dan Rudnick is a member
- **December 7:** NOAA Science Advisory Board Ecosystem Science & Mgmt [Working Group](#) - Clarissa Anderson presented on a panel on national HAB observing and forecasting needs
- **December 7:** SANDAG Shoreline Preservation [Working Group](#), San Diego, CA - Danielle Muller attended
- **December 11 & 12:** SCCOOS Executive Steering Committee Meeting, virtual
- **December 11-15:** [AGU](#) 2023, San Francisco, CA - Clarissa Anderson attended
- **December 12:** CDFW Tribal Committee [Meeting](#), San Diego, CA - Danielle Muller attended

## Job Announcements and Funding Opportunities



### ROSES-23 Amendment 71: A.67 Supporting Climate Resilient Communities

Proposals must engage communities in advancing climate-informed decisions that enhance their resilience to the impacts of climate change and involve organizations that assist in knowledge sharing between scientists and decision makers

- NOIs are requested by **February 23, 2024**
- Proposals are due by **May 3, 2024**
- A pre-proposal teleconference will take place at 1 pm Eastern Time on **March 1, 2024**

Questions concerning [A.67 Earth Action: Supporting Climate Resilient Communities](#) may be directed to Michelle Hawkins at [Michelle.Hawkins@nasa.gov](mailto:Michelle.Hawkins@nasa.gov).

## Funding Opportunities



### 2024 Aquaculture Initiative: Enhancing Production of Coastal, Marine, and Great Lakes Aquaculture Species

[Proposals](#) are sought that will support broad, non-proprietary research to address issues and/or barriers to aquaculture production; make that information available to aquaculture businesses; and preferably include participation and involvement of Sea Grant extension personnel and industry stakeholders. complete a partnership form by **January 3rd, 5:00**

PM PT.

Funds will support approximately 4-12 projects nationwide for up to three years in the following categories:

- Up to \$250,000 in federal funds can be requested by individual entities (e.g. a single individual, group, or institution) for research projects addressing the program priorities.
- Up to \$1,200,000 in federal funds can be requested for projects proposing collaborative, multi-partner efforts addressing the program priorities.



### Senate Bill 1 Sea Level Rise Adaptation Planning Grant Program Opens

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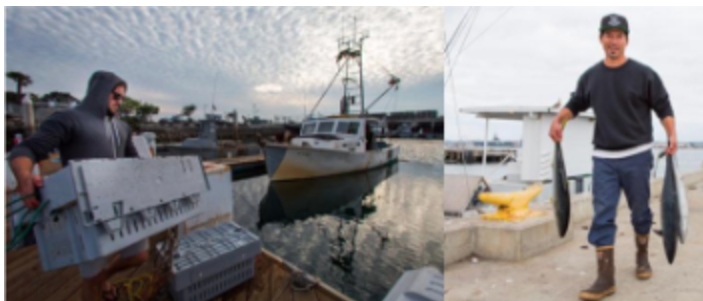
This grant program is a great opportunity for coastal communities to receive funding to improve their coastal resilience. The overall goal of the SB 1 Grant Program is to provide funding for local, regional, and tribal governments to develop sea level rise (SLR) adaptation plans

and projects to build resilience to SLR along the entire coast of California and San Francisco Bay. Track 1 proposals are accepted on a rolling, quarterly, non-competitive basis. Please see the full [SB 1 Grant Program Solicitation](#) for full details on this funding opportunity.

Important Dates:

- **Friday, December 15, 2023:** Solicitation available to applicants
- **Thursday, January 25, 2024, at 10:00 AM PT:** Informational Webinar ([register online](#))
- **Wednesday, February 7, 2024, at 2:00 PM PT:** SB 1 Office Hours with OPC Staff
- **Friday, March 22, 2024:** Submission deadline for the proposals to be considered for funding and brought to our June 2024 OPC Meeting

## Job Announcements



### California Commercial Fishing Apprenticeship Program

[Recruiting now](#) for January 2024 - About 130 hours of interactive workshops followed by 1,000 hours of on-the-job training over 6-12 months.

Learn more: Download the [flyer](#),

Commercial fishing apprenticeship [manual](#), or watch this [video](#)

Once you have a commercial fisherman sponsor, please fill out the [Apprentice Registration Form](#). The **deadline** to register your interest for workshops held in January 2024 is **December 31st, 2023**.



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### California Sea Grant is Hiring

California Sea Grant (CASG) is hiring a [Digital Science Communications Specialist](#) to develop and implement targeted communications and marketing strategies to highlight its programming in research, education and outreach. This position can be hybrid or primarily remote.

**Application deadline: 1/7/2024**

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## 2024 Scheduled Activities



**SoCal DDT Contamination Community Virtual Meeting Jan. 24th 4-6 pm**

Learn more and register here: [bit.ly/DDTupdate](https://bit.ly/DDTupdate)

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### Celebrating Ocean Observing in California May 14-16, 2024 | San Diego, CA

SCCOOS is will be teaming up with CeNCOOS and CalCOFI for a three-day meeting and anniversary celebration from May 14-16, 2024 in San Diego, CA. The California Ocean Observing Systems (SCCOOS & CeNCOOS) will be celebrating 20 years of ocean observing and 75 years of CalCOFI. Stay tuned in the coming months for registration and meeting information.

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- **January 19:** Ocean Science Trust [Panel](#), "Accelerating Knowledge & Innovation in California for Implementation of the White House Ocean-Climate Action Plan," Sacramento CA - C. Anderson panelist
- **January 22-26:** [POGO25](#), CICESE, Ensenada, MX
- **January 22:** Ocean Discovery Institute Science Leader - Student Connection [Experience](#) - D. Muller presenting
- **January 24:** DDT Community [Meeting](#), virtual - SCCOOS hosting
- **January 28-Feb 1:** [104th American Meteorological Society](#), Baltimore, MD
- **February 2:** SIO Marine Biology Seminar Lecture - C. Anderson presenting
- **February 5-9:** NASA PACE [Launch](#), Cape Canaveral, Florida - C. Anderson invited to attend
- **February 7-8:** RRT9 & State ACP [Meeting](#), Northern CA
- **February 12-15:** Social Coast [Forum](#) 2024: Social Science for Equitable Coastal Resilience, Charleston, NC

- **February 16-18:** UN Decade OASIS Workshop, New Orleans, LA - C. Anderson attending
- **February 18-24:** [Ocean Sciences Meeting 2024](#), New Orleans, LA - C. Anderson, M. Medina, I. Brunjes, and K. Kenitz attending
- **February 27:** Binational Coastal Resilience Workshop, Ensenada, Mexico
- **March 3-9:** [World Fisheries Congress](#), Seattle, WA - SCCOOS co-hosting session "Enhancing Coastal and Ocean Observing Networks for Ecosystem and Fisheries Monitoring and Prediction"
- **March 4-5:** PACE Validation Team Meeting, NASA Ames Research Center, Oakland, CA - C. Anderson attending as PVST PI
- **March 5-7:** Hydrographic Services Review Panel [Meeting](#), San Pedro, CA - C. Anderson presenting
- **March 7:** SANDAG Shoreline Preservation [Working Group](#), San Diego, CA - D. Muller attending
- **March 12-14:** IOOS Spring Meeting, Washington, D.C. - C. Anderson, L. Washburn, M. Medina, and I. Brunjes attending
- **March 19-21:** US Cross MBON Meeting, New Orleans, LA
- **March 26:** La Jolla Riford Library, La Jolla, CA - M. Medina presenting
- **April 2-4:** IOOS DMAC Meeting - Virtual - I. Brunjes attending
- **April 3-5:** US CLIVAR: Optimizing Ocean Observing Networks for Detecting the Coastal Climate Signal [Workshop](#), Boulder, CO - M. Medina and D. Rudnick attending
- **April 10-12:** 2024 Ocean Decade [Conference](#), Barcelona, Spain
- **April 11-12:** Mentoring Workshop, Long Beach, CA - C. Anderson attending
- **April 10-12:** Ecological Forecasting Initiative Meeting - C. Anderson panelist
- **April 15-20:** 2024 Mariner's Weather Hazards [Workshop](#), College Park, MD
- **May 14-16:** Celebrating Ocean Observing in California with SCCOOS, CeNCOOS, and CalCOFI, San Diego, CA
- **May 20-23:** Marine Technology Society Buoy Workshop, Sequim, WA
- **May 21-23:** IOOS DMAC Code Spring, Washington, D.C. - I. Brunjes attending

## Recent Publications

SCCOOS Principal Investigators are in **bold**.

- Dudek, K.L. & Neuer, S. (2023) Environmental exposure more than plastic composition shapes marine microplastic-associated bacterial communities in Pacific versus Caribbean field incubations. *Environmental Microbiology*, 25(12), 2807–2821 <https://doi.org/10.1111/1462-2920.16519> - **References SCCOOS**
- Dugenne, M., Corrales-Ugalde, M., Luo, J., Kiko, R., O'Brien, T., Irisson, J.-O., Lombard, F., Stemmann, L., Stock, C., **Anderson, C. R.**, Babin, M., Bhairy, N., Bonnet, S., Carlotti, F., Cornils, A., Crockford, E. T., Daniel, P., Desnos, C., Drago, L., Elineau, A., Fischer, A., Grandrémy, N., Grondin, P.-L., Guidi, L., Guieu, C., Hauss, H., Hayashi, K., Huggett, J. A., Jalabert, L., Karp-Boss, L., **Kenitz, K. M.**, **Kudela, R. M.**... & Vilain, M.: First release of the Pelagic Size Structure database: Global datasets of marine size spectra obtained from plankton imaging devices, *Earth Syst. Sci. Data Discuss.* [preprint], in review, 2023. <https://doi.org/10.5194/essd-2023-479>
- Houliez, E., Fischer, A. D., Bill, B. D., & Moore, S. K. (2023). Does prey availability influence the detection of Dinophysis spp. by the imaging FlowCytobot?. *Harmful Algae*, 130, 102544. <https://doi.org/10.1016/j.hal.2023.102544> - **References SCCOOS IFCB data**
- Maniscalco, M. A., **Brzezinski, M. A.**, Krause, J. W., & Thametrakoln, K. (2023). Decoupling silicon metabolism from carbon and nitrogen assimilation poises diatoms to exploit episodic nutrient pulses in a coastal upwelling system. *Frontiers in Marine Science*. doi: [10.3389/fmars.2023.1291294](https://doi.org/10.3389/fmars.2023.1291294)
- McCarthy, R. A., Sarkar, J., Merrifield, S., Bednar, R., Ung, D., Nager, A., ... & **Terrill, E.** (2023). Machine learning transmission loss simulations in complex undersea environments with range-

dependent bathymetry. *The Journal of the Acoustical Society of America*, 154(4\_supplement), A308-A308. <https://doi.org/10.1121/10.0023623>

- McGuire, C. M. (2023). Impacts of Urbanization on Phytoplankton Distribution in Southern California Coastal Regions and Other High Salinity Environments. UC Irvine. ProQuest ID: McGuire\_uci\_0030D\_18613. Merritt ID: ark:/13030/m5mf00mh. **References SCCOOS - Scripps Pier and Newport Pier HABMAP**
- Munsch, S. H., Walter, R. K., Sanderson, B. L., Reshitnyk, L., O'Leary, J. K., Kiffney, P. M., ... & Beaty, F. L. (2023). Decades of eelgrass meadow dynamics across the northeast Pacific support seascape-scale conservation. *ICES Journal of Marine Science*, fsad162. <https://doi.org/10.1093/icesjms/fsad162>
- Nosal, A. P., Cartamil, D. P., Anderson, J. M., Bellquist, L. F., Ben-Aderet, N. J., Blincow, K. M., ... & Hastings, P. A. (2023). Migration, aggregation, and philopatry of two nearshore elasmobranch species in the Southern California Bight. *Marine Ecology Progress Series*, 724, 111-125. <https://doi.org/10.3354/meps14460>
- Ollison, G. A., Hu, S. K., Hopper, J. V., Stewart, B. P., Beatty, J. L., & **Caron, D. A.** (2023). Physiology governing diatom vs. dinoflagellate bloom and decline in coastal Santa Monica Bay. *Frontiers in Microbiology*, 14. doi: [10.3389/fmicb.2023.1287326](https://doi.org/10.3389/fmicb.2023.1287326)
- ONR Report from May 22 sponsored research - Shroyer, E., and L. St. Laurent, eds. 2023. Microstructure Sensing from Autonomous Platforms. Report of the Office of Naval Research Sponsored Workshop, May 2022, Lake Arrowhead, California, 32 pp. - **Dan Rudnick participated**
- Ren, A. S., **Rudnick, D. L.**, & Twombly, A. (2023). Drift characteristics of Sea-Bird dissolved oxygen optode sensors. *Journal of Atmospheric and Oceanic Technology*, 40(12), 1457-1468. <https://doi.org/10.1175/JTECH-D-22-0103.1>
- Shi, H., Buil, M. P., Bograd, S. J., **Garcia-Reyes, M.**, Jacox, M. G., Black, B. A., **Sydeman W.J.**, ... & Rykaczewski, R. R. (2023). Future change of summer hypoxia in coastal California Current. *Frontiers in Marine Science*. doi: [10.3389/fmars.2023.1205536](https://doi.org/10.3389/fmars.2023.1205536).
- Smith, J., Eggleston, E., Howard, M. D., Ryan, S., Gichuki, J., Kennedy, K., ... & **Caron, D. A.** (2023). Historic and recent trends of cyanobacterial harmful algal blooms and environmental conditions in Clear Lake, California: A 70-year perspective. *Elementa Science of the Anthropocene*, 11(1), 00115. <https://doi.org/10.1525/elementa.2022.00115>
- Wolfe, W. H., **Martz, T. R.**, Dickson, A. G., Goericke, R., & Ohman, M. D. (2023). A 37-year record of ocean acidification in the Southern California current. *Communications Earth & Environment*, 4(1), 406. <https://doi.org/10.1038/s43247-023-01065-0>



Southern California Coastal Ocean Observing System  
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