



Annual Report 2022–2023

Marine Science Institute

UC SANTA BARBARA

Marine Science Institute UC **Santa Barbara**

Annual Report 2022-2023



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MISSION

Mission Statement

The Marine Science Institute at the University of California, Santa Barbara, is committed to fostering innovative and significant research, to promoting effective stewardship, and to sharing exciting discoveries of the world's oceans.



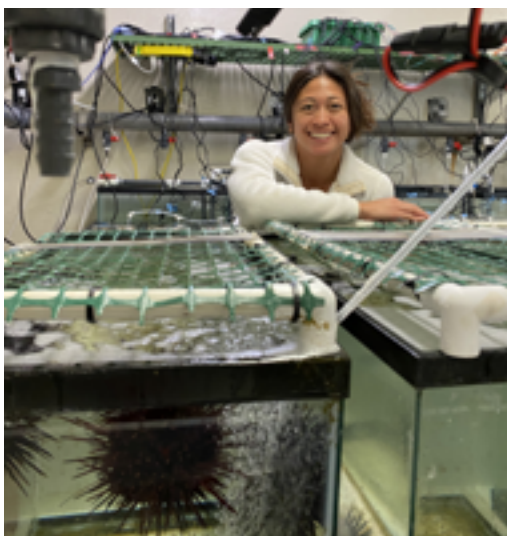
Working in an MSRB seawater workroom, Santana Sujeet, UCSB undergraduate, assists with an experiment on marine heatwaves.. Photo: Gretchen Hofmann

Setting up a BRUV (baited remote underwater video) for surf zone fish observations inside and outside of MPAs. Graduate students Jessica Madden and Inez Mangino have turned on the camera and are completing the setup for one of our surf-BRUVs at San Elijo State Beach. Photo: Jenny Dugan.



MSI Researcher Kyle Emery and National Park Service Director of Southern CA Research Learning Center Keith Lombardo conduct intertidal rockweed drone surveys on Santa Cruz Island.. Photo: Michael Ready

Staff scientists, David Huang and Carly Haack. Photo: Sarah Cowan



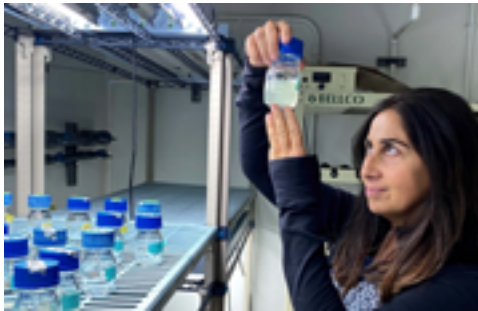
Erin de Leon Sanchez, UCSB Doctoral Candidate, checking her experiment on Red Sea urchins, the uni species (Funded by California Sea Grant Research Fellowship to Erin). Photo: Gretchen Hofmann

Research technician Josey Jaramillo checks on survival of an oak restoration experiment at our Santa Clara River study area. Photo: Tom Dudley



From the **Director**

The Marine Science Institute (MSI) was born as a campus response to the 1969 Santa Barbara oil spill, a local maritime accident that spawned the modern environmental movement. The modest beginning of MSI as a small research unit has grown today to have a global reach and stellar reputation for cutting-edge research in broad areas of marine science.



MSI News.

[Facing the Heat](#)

[Fantastic Bioplastic](#)

[Serendipity on the Shore](#)

[History of DDT Ocean Dumping off L.A. Coast Even Worse than Expected, EPA Finds](#)

[Heatwave Surges Across the Pacific](#)

[A Day in the Life of a Biological Oceanographer: Débora Iglesias-Rodriguez](#)

[Safe Harbor](#)

[Asphalt Volcano Communities](#)

[The Intriguing Lifestyle of Mixotrophs](#)

[Stripped to the Bone](#)

Overview

The Marine Science Institute (MSI) was born as a campus response to the 1969 Santa Barbara oil spill, a local maritime accident that spawned the modern environmental movement. The modest beginning of MSI as a small research unit has grown today to have a global reach and stellar reputation for cutting-edge research in broad areas of marine science. The growth and sustained success of MSI reflects the synergy created when world-class regular and research faculty are well supported by highly dedicated professionals in a culture that fosters cross-disciplinary collaboration. MSI brings together marine researchers from across campus and supports both multi-investigator collaborative projects and individual research efforts. The scientific membership at MSI consists of both ladder rank faculty and professional researchers. In 2022-2023 MSI membership included 52 ladder rank faculty and 58 professional researchers/project scientists over 510 additional participants distributed across postdoctoral scholars, specialists, graduate students, undergraduates, technical research staff, visiting scholars and support staff. In addition, MSI has a major role on campus in terms of communicating science to a broader audience at MSI's Research Experience and Education Facility (REEF).

Housed in the Marine Science Research Building (MSRB) on the UCSB campus, MSI support services and research laboratories, along with seawater workroom facilities that support experimental work on marine organisms. Support services include the MSI administrative staff that support pre- and post- award activities, the MSI analytical facility that provides expertise in the chemical analysis of environmental samples from the marine environment, the Ocean o' Graphics unit that provides web and graphics services, and the GRIT computing collaborative within that supports scientific computing in MSI. Research space is allocated to individual ladder rank faculty and professional researchers and to collaborative research groups. MSI professional researchers are also housed within departmental spaces, at Devereux and off-campus leased space. The REEF, the MSI educational and outreach facility, is located at Campus Point.

MSI staff have had another busy year. In 2022-2023 MSI submitted 143 proposals, and had 102 new awards. Overall, MSI administered and managed the activity of 274 projects that sum \$146M. Post award activities include accounting, personnel management, procurement and travel. Beyond pre- and post- award activities MSI staff are also responsible for MSRB management and maintenance, management and maintenance of

common use scientific equipment, laboratory safety compliance, seawater system maintenance, room scheduling, serving as the interface between the Channel Island Marine Sanctuary offices and campus facilities and management offices.

As another major research support resource, the MSRB is also one of the few research buildings at UCSB plumbed into the campus seawater system. Researchers have access to over 1,600 ft² of seawater workroom space distributed across six seawater laboratories. An additional three walk-in environmental chambers provide access to temperature-controlled conditions simulating environments from the tropics to the poles. Other common spaces provide access to common use scientific equipment including autoclaves, freeze dryers, centrifuges and refrigerator/freezer space. These common-use facilities serve the needs of individual research projects and collaborative efforts on an as needed basis.

The MSI Analytical Laboratory provides investigators with analytical services for environmental samples from the marine environment. The purpose of the facility is to provide investigators access to instrumentation and analyses that would be too costly or too inefficient for individual PIs to maintain. In normal years the laboratory also serves a strong educational function supporting research of graduate students and postdoctoral scholars, the laboratory staff assist undergraduates conducting honors research and independent study projects. The laboratory routinely employs undergraduates to assist in sample preparation and in routine analyses providing vital real-world work experience. Moreover, laboratory personnel guide investigators in the development of new analytical methods to catalyze new avenues of research and to support new extramural proposals.

MSI is led by the director who is advised by the business services officer and a deputy director. The MSI Advisory Committee, consisting of faculty and researchers from each of the participating campus departments and professional schools, serves an oversight and advisory role and reports on MSI needs and activities to the vice chancellor for research. Local governance is handled by the MSI Resources Committee that reviews requests for office and laboratory space with the MSRB and makes recommendations to the director. The MSI Computing Committee assesses the computer infrastructure necessary to support MSI research and makes policy and purchase recommendations to the director.

In terms of administration and leadership in this review period, Carolyn Sheehan served as the MSI MSO, bringing her extensive experience to bear on the challenges of operating during the long tail of the COVID pandemic and transition to the new FMM system anticipated on campus. Carolyn has been very successful in retaining MSI staff and in managing the complexities of a growing ORU. Professor Gretchen Hofmann continued as the Interim Director of MSI. Prof. Hofmann is a marine ecophysiologicalist who studies the impacts of climate change processes (e.g., marine heatwaves and ocean acidification) on marine organisms. She joins the MSI staff in their commitment to maintaining a strong research unit, and in supporting the marine science research community. Prof. Hofmann was re-appointed as Interim Director on July 1, 2023. In 2022–2023, the search for a permanent MSI Director was successful and the new Director, Dr. Rebecca Vega-Thurber, should be in place on July 1, 2024.



MSI Researcher Kyle Emery and National Park Service Director of Southern CA Research Learning Center Keith Lombardo conduct intertidal rockweed drone surveys on Santa Cruz Island.. Photo: Michael Ready



Deployment of the submersible Alvin in the Santa Barbara Channel during a summer 2023 expedition to study deep seafloor microbiological processes. Photo: David Valentine

Marine Science Graduate student Inez Mangino and MSI Researcher Kyle Emery conduct transect- and drone-based surveys of kelp wrack inputs to an SBC LTER study beach. Photo: Jennifer Dugan



SONGS mitigation monitoring team sampling at Tijuana Estuary, San Diego County. Photo: Kat Beheshti

The trash wheel “Wanda Diaz” skims the surface of the Juan Diaz River in Panama for plastic waste and other trash as a part of the Benioff Ocean Science Laboratory’s Clean Currents Coalition research program. Photo: Marea Verde Panama Foundation



Conducting a quantitative survey for intertidal invertebrates using cores along a transect in the swash zone of a sandy beach. Technician Jacob Bechtel and Investigator Jenny Dugan are collecting a series of 30 evenly spaced core samples that are placed in a fine mesh bag. Photo: Christiana Salles.

Nine UC graduate students and about two dozen collaborating Mexican scientists take a biodiversity inventory in Quebrada San Antonio creek in Rancho Encinalito in Baja California Sur. Photo: Tom Dudley

Executive Summary

MSI has had another successful year of scientific discovery with the institute PI's conducting nearly 300 research projects ranging from efforts to develop new policies for ocean management to working on industry-science collaborations. As noted above, the statistics for proposal submission and PI success are impressive: In 2022-2023 MSI PIs submitted 143 proposals, an ~10% increase from last year, and they received 102 new awards, also ~10% increase in success rate. This level of funding also was paired with a high success rate; specifically, an 71% success rate in FY23. The MSI Contracts and Grants unit managed 285 projects in FY23, totally over \$146M with \$25M being new funds.

Highlighted below is a subset of these successful projects, but obviously there are many others that represent the exceptional research being supported at UCSB's Marine Science Institute. Importantly, increasing numbers of PIs are focused on climate change-connected research in marine systems, a trend that will put UCSB in good position to compete for funds in the future. There is also significant development in innovation and solutions space science and we look forward to more work in this direction in the future.

- One new award very specific to MSI is from the NSF Major Research Instrumentation (MSI) program. Led by Drs. **Alyson Santoro**, **Bob Miller**, **Morgan Raven** and **David Valentine**, the new award will purchase new instrumentation to enhance the research activity of MSI researchers and faculty. At time of the report, the MSI Analytical Lab was conducting minor re-configuration of analytical lab to make space for the new equipment. The instruments should arrive in April 2024, with expected operation to begin in summer 2024.
- Other new major projects include an NSF Award to Alyson Santoro (EEMB) from the Convergence Accelerator Phase 2 funding. This project is designed to develop bioplastics engineered to degrade in the ocean; the project is called Nereid Biomaterials (<https://nereidbio.org/>) and is a major collaborative effort with a diverse group of collaborators.
- Professor **Douglas McCauley** has opened a laboratory for Ocean Sciences (BOSL). BOSL seeks to understand how science can both inform and solve problems affecting our oceans. BOSL continues on a major initiative to address global plastics, including activities at the UN to support societal change. BOSL continues as a major entity in MSI, moving conservation and solution science forward. Prof. **David Valentine** has also advanced ocean health with a new award (\$975K) sourced from a FY22 Congressionally directed spending request for a project entitled: Southern California DDT ocean dumpsite characterization, monitoring, and research pilot project.
- Also, a project that builds our understanding of systems impacted in the Anthropocene, **Anastasia Quintana** was funded by NSF to support her project "DISES: Understanding dynamic social-environmental feedbacks in temporary fisheries closures". **Deron Burkepile** also received a major award from the National Philanthropic Trust to employ integrative approaches of to study the health and biodiversity of coral reefs

- Most people familiar with MSI know that the institute is the intellectual home of two of the nation’s long-term ecological research programs: **The Santa Barbara Coastal (SBC) LTER** that focuses on the kelp forest ecosystem, and the **Moorea Coral Reef (MCR) LTER** that studies the coral ecosystems of French Polynesia. The MCR LTER was renewed for a new cycle of 5-years of funding in FY23. The SBC LTER will submit a renewal proposal, their 5th in March 2024. In general, LTERs are designed to test ecological theory on timescales not approachable in short-term studies and to evaluate how ecological communities respond to climate perturbations. Collectively, these two studies bring together over 100 investigators from UCSB and elsewhere in a highly interdisciplinary effort to advance our understanding of these ecosystems. The LTERs are a major part of MSI’s research mission.



5-YEAR PLAN

Looking to the future MSI has the following goals for the next 5 years. Foremost was the completion of the open search for a new permanent director as the current director’s service ends July 1, 2024. This is a vital position for campus that will influence the quality of marine science research at UCSB for the next decade.

A continuing goal at MSI is to capitalize on the untapped research potential of its investigators by creating a fund to catalyze new research endeavors that will provide seed money for turning new ideas into proposals. The goal is to fund collaborative groups to sponsor workshops, meetings with program managers and other activities that will position MSI researchers for success on new innovative projects. This is especially important for professional researchers who are not eligible for university research funds through the academic senate. MSI has reworked its budget to allow the new director this opportunity on a limited basis.

Over the past few years MSI’s has met its goal to broaden REEF programs

TerraCycle Foundation employees sort through plastic waste captured by trash traps in Bangkok’s canals as a part of the Benioff Ocean Science Laboratory’s Clean Currents Coalition research program Photo: TerraCycle Global Foundation

Benioff Ocean Science Laboratory researchers in the field in the Santa Barbara Channel. Photo: Courtesy of BOSL

to better serve the core mission of the university by increasing the number of UCSB undergraduates that the program serves. At present, the REEF is expected to experience shortfalls in funding, which largely comes from donor funds. This will likely occur in 2023-2024, and the MSI is working with development and campus to strengthen the financial future for the REEF. Given the fact that the REEF serves 4,000 undergraduates per year a solution based on contribution to UCSB's core educational mission is justified. We have partnered with six campus divisions ranging from Academic Affairs to Student Affairs and Administrative Services to engage undergraduates at multiple levels. These efforts were highly successful with nearly 4,000 undergraduates having benefited from our programs the year before the pandemic. This success compliments the record number of 18,000 public visitors to the REEF in the year before the pandemic. This is an impressive achievement when one considers that the entire operation is managed and run by a single staff member with the assistance from undergraduate student docents.

An unmet goal is financial support for professional researchers who rely on grants for 100% of their salaries. Professional researchers continue to account for over half of MSI's grant and research activity. MSI continues to work with OR to find ways of supporting this group. Beyond support for all researchers there is a subset of professional researchers that merit special attention. Professional researchers at MSI lead the largest of our collaborative group projects including the SBC LTER and the SONGS project. These group projects are often leveraged by other investigators that bring in significant research funding beyond the original project. Leading one of these projects demands considerable time and effort which is often not covered by the project budget. A system that rewards researchers for taking on these leadership roles will ensure that MSI can continue to organize the teams necessary to compete for, manage and renew these and other large programs.

Future continued growth in marine research at UCSB will require MSI to seek additional research space. In the last fiscal year, we have had additional space open for MSI researchers in the Devereaux building and this has advanced our ability to support research in our main building.

MSI's operating budget is sound and the current recharge units are operating independently without campus support. This has become challenging for the Analytical Lab as the competitors are supported by their campuses, making our rates uncompetitive. In addition, gaps in our ability to support the director of the REEF are anticipated in 2023-2024, and we would like to see a large-scale renovation of the seawater workrooms and tanks which have not been modernized since the opening of the building in 2004. Notably, there are new technologies and systems that would open up new, exciting areas of research, especially with regard to climate change impacts, something that would benefit MSI and the entire UCSB community.





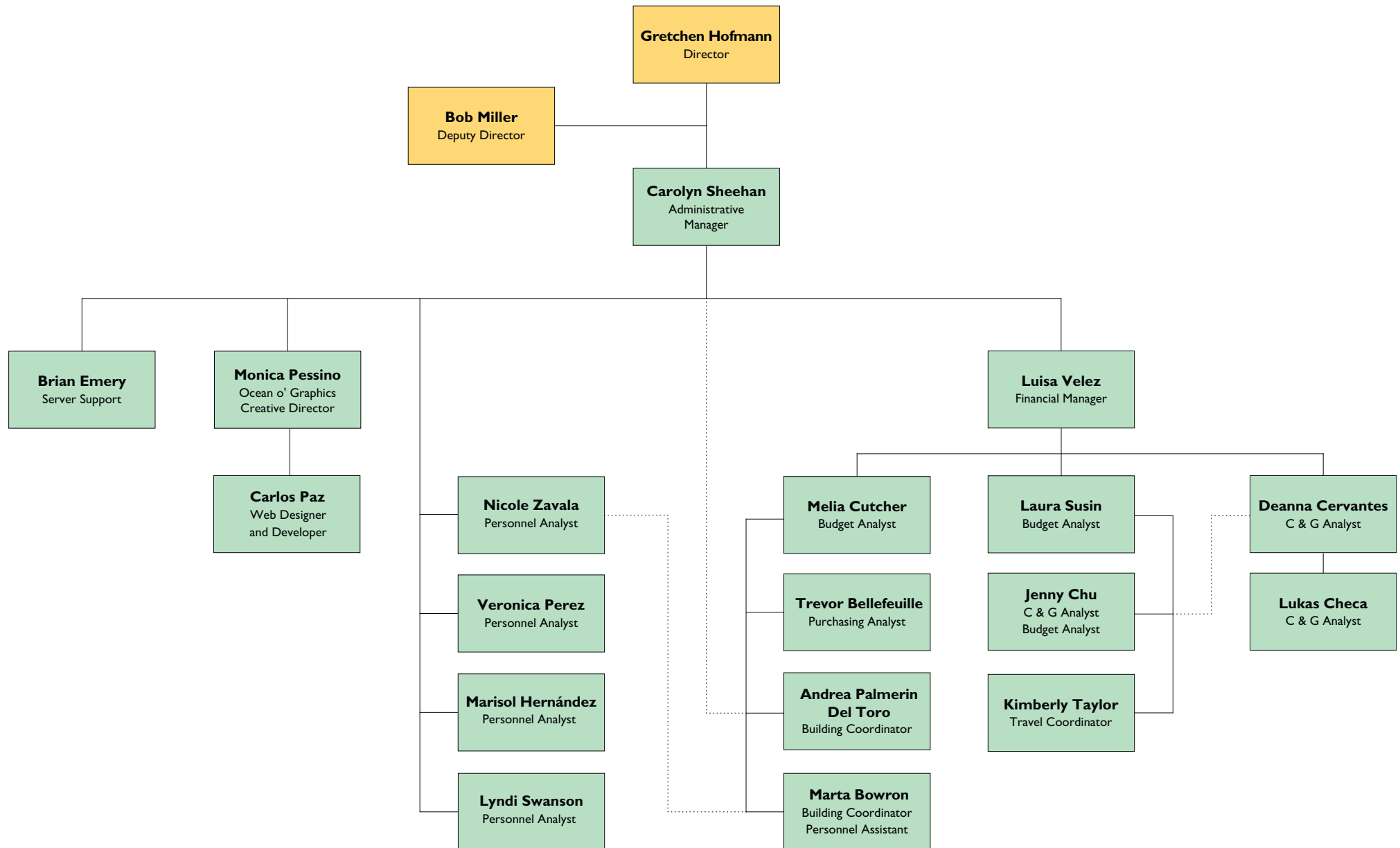
ORG CHART

Organizational **Chart**



Marine Science Institute Staff at MSI Holiday Party 2023. Left to right, back row: Carolyn Sheehan, Scott Simon, Melia Cutcher, Trevor Bellefeuille, LukasCheca; right middle row: Dr. Bob Miller (deputy director), Christie Yorke, Jenny Chu, Deanna Cervantes, Nicole Zavala, Andrea Palmerin Del Toro, Kelly Stanley, Lyndi Swanson; front: Ken Marchus, Dr. Gretchen Hofmann (director), Luisa Velez, Monica Pessino, Marta Bowron, Laura Susin, Marisol Hernandez, Veronica erez, and Carolina Ramirez.

MARINE SCIENCE INSTITUTE ORGANIZATIONAL CHART



Solid Line _____ direct work relation
Dotted Line indirect work relation





ADVISORY
COMMITTEE
STAFF

MSI Advisory Committee,
Administrative
and Technical Staff

Marine Science Institute Advisory Committee | 2021–2022

CHANCELLOR

HENRY T. YANG

EXECUTIVE VICE CHANCELLOR

DAVID MARSHALL

VICE CHANCELLOR FOR RESEARCH

JOSEPH INCANDELA

Interim Director

Gretchen Hofmann

Interim DEPUTY DIRECTOR

Bob Miller

Advisory Committee

Jenn Caselle, Committee Chair, MSI

Darcy Bradley, Bren

Andy Brooks, MSI

Anthony De Tomaso, MCDB

Chris Jerde, MSI

Holly Moeller, EEMB

Nick Nidzieko, Geography

Mark Page, MSI

Morgan Raven, Geology

William Smith, MCDB

Adrian Stier, EEMB

Ex-Officio Members

Gretchen Hofmann, Interim Director MSI

Charles Lester, Director, Ocean Coastal Policy Center

Bob Miller, Interim Deputy Director, MSI

Carolyn Sheehan, Manager, MSI

Russell Schmitt, Director, Coastal Research Center

Marine Science Institute Administrative and Technical Staff

Interim Director, Gretchen Hofmann

Interim Deputy Director, Bob Miller

Management Services Officer, Carolyn Sheehan

Financial Manager, Luisa Velez

Purchasing Manager, Melia Cutcher

Budget Manager, Laura Susin

Contracts & Grants Manager, Deanna Cervantes

Contracts & Grants, Lukas Cheka

Budget & Contracts & Grants Analyst, Jenny Chu

Development Officer, Matt Fratus

Education & Outreach, Scott Simon

Graphics Manager, Monica Pessino

Web Developer, Carlos Paz

IT & Server Support, Brian Emery

Personnel Manager, Nicole Zavala

Personnel Analyst III, Veronica Perez

Personnel/Payroll Analyst, Marisol Hernandez

Personnel/Payroll Analyst, Lyndi Swanson

Purchasing Analyst/Building Coordinator, Marta Bowron

Purchasing Analyst, Andrea Palmerin Del Toro

Travel Coordinator, Kimberly Taylor



Statistical Summary for the Marine Science Institute 2022–2023

	MSI
Personnel engaged in research (head count)	
Faculty	49
Professional Researchers (including Visiting)	42
Project Scientists	9
Specialists	39
Postdoctoral Scholars	32
Postgraduate Researchers	0
Graduate Students	98
Undergraduate Students	212
Technical & Research Staff	98
TOTAL	579

Participation from outside UCSB (head count)	
Academics (without Salary Academic Visitors)	85
Other (specify)	0
TOTAL	85

Unit Operational Staff (# of FTE)	
Administrative	14.5
Computing	0.5
Technical & Service (e.g. recharge personnel, lab manager)	5
Programmatic Staff	0
TOTAL	20

	MSI
Sponsored Research	
Number of Principal Investigators*	92
Proposals submitted (#)	144
Proposals submitted (\$ value)	\$50,584,475
Awards issued (#)	102
Awards issued (\$ value)	\$25,138,273
Extramural awards administered during year (#)**	210
Extramural awards administered during year (\$ value)***	\$113,687,120
Costshare funds managed during year (\$ value)**	\$1,307,344
Awarding agencies dealt with (#)****	118
Other Projects & Programs	
Seminars, symposia, workshops sponsored (#)	72
Other projects administered (#)****	75
Other projects administered (\$ value)*****	\$32,346,726
Intramural support administered (\$ value)**	\$1,106,562
Budget & Space	
Total base budget for the year	\$2,307,640
Total assigned square footage in ORU	45,203

* Number of PIs, Co-PIs and Proposed PIs (count each person only once.)

** If the award was open during the year, even if for only one month, please include in total.

*** Count each agency only once (include agencies to which proposals have been submitted).

**** Other projects—such as donation, presidential awards, fellowships, anything that isn't core budget, extramural, or intramural.





Marine Science Institute
Principal Investigators
2022–2023

Marine Science Institute Principal Investigators 2022–2023

Adam, Thomas	Assistant Researcher	Marine Science Institute
Amiri, Sarah	Undergraduate Student	Ecology, Evolution & Marine Biology
Arrington, Eleanor	Graduate Student	Earth Science
Bell, Thomas	Project Scientist	Earth Research Institute
Blanchette, Carol	Associate Researcher	Marine Science Institute
Bogan, Sam	Graduate Student Researcher	Ecology, Evolution & Marine Biology
Bradley, Darcy	Assistant Researcher	Marine Science Institute
Briggs, Cheryl	Professor	Ecology, Evolution & Marine Biology
Brooks, Andy	Project Scientist	Marine Science Institute
Brzezinski, Mark	Professor	Ecology, Evolution & Marine Biology
Burkepile, Deron	Professor	Ecology, Evolution & Marine Biology
Cabral, Reniel	Assistant Researcher	Marine Science Institute
Caldow, Chris	Research Associate	Marine Science Institute
Carleton, Tamma	Assistant Professor	Bren School of Envir. Sci. & Management
Carlson, Craig	Professor	Ecology, Evolution & Marine Biology
Caselle, Jennifer	Researcher	Marine Science Institute
Caves, Eleanor	Assistant Professor	Ecology, Evolution & Marine Biology
Closset, Ivia	Postdoctoral Researcher	Marine Science Institute
Costello, Christopher	Professor	Bren School of Envir. Sci. & Management
Culver, Carrie	Research Scientist	Marine Science Institute
D'Antonio, Carla	Professor	Environmental Studies
de Leon Sanchez, Erin	Graduate Student	Ecology, Evolution & Marine Biology
Divola, Claire	Graduate Student	Earth Science
Dudley, Tom	Researcher	Marine Science Institute
Dugan, Jenifer	Researcher	Marine Science Institute
Eliason Parsons, Erika	Assistant Professor	Ecology, Evolution & Marine Biology
Emery, Brian	Assistant Researcher	Marine Science Institute
Emery, Kyle	Graduate Student	Ecology, Evolution & Marine Biology
Eurich, Jacob	Postdoctoral Researcher	Marine Science Institute
Free, Christopher	Assistant Researcher	Marine Science Institute
Froehlich, Halley	Assistant Professor	Environmental Studies/EEMB
Gaines, Steven	Dean, Bren School, Professor	Bren School of Envir. Sci. & Management
Geyer, Roland	Professor	Bren School of Envir. Sci. & Management
Goss, Hayley	Graduate Student	Geography
Halpern, Benjamin	Professor	Bren School of Envir. Sci. & Management
Heilmayr, Robert	Assistant Professor	Bren School of Envir. Sci. & Management

Herbst, David	Associate Researcher	Marine Science Institute
Hodges, Scott	Professor	Ecology, Evolution & Marine Biology
Hofmann, Gretchen	Professor	Ecology, Evolution & Marine Biology
Holbrook, Sally	Professor of Biology	Ecology, Evolution & Marine Biology
Iglesias-Rodriguez, Maria	Professor	Ecology, Evolution & Marine Biology
Jack, Kelsey	Associate Professor	Bren School of Envir. Sci. & Management
Jerde, Chris	Assistant Researcher	Marine Science Institute
Junkins, Emily	Postdoctoral Researcher	Ecology, Evolution & Marine Biology ICBT
Kennett, James	Emeritus Research Professor	Earth Science
Kuris, Armand	Professor of Biology	Ecology, Evolution & Marine Biology
Lafferty, Kevin	Research Biologist	Marine Science Institute
Lambert, Adam	Associate Research Biologist	Marine Science Institute
Lenihan, Hunter	Professor	Bren School of Envir. Sci. & Management
Lester, Charles	Researcher	Marine Science Institute
Lisiecki, Lorraine	Professor	Earth Science
Love, Milton	Researcher Emeritus	Marine Science Institute
Love-Anderegg, Leander	Assistant Professor	Ecology, Evolution & Marine Biology
MacDonald, Andy	Assistant Professor	Bren School of Envir. Sci. & Management
MacIntyre, Sally	Professor	Ecology, Evolution & Marine Biology
Mazer, Susan	Professor	Ecology, Evolution & Marine Biology
McCauley, Douglas	Assistant Professor	Ecology, Evolution & Marine Biology
McLaughlin, John	Assistant Researcher	Marine Science Institute
Melack, John	Professor	Ecology, Evolution & Marine Biology
Meng, Kyle	Associate Professor	Bren School of Envir. Sci. & Management
Miller, Robert	Researcher	Marine Science Institute
Moeller, Holly	Assistant Professor	Ecology, Evolution & Marine Biology
Muller, Erik	Associate Researcher	Marine Science Institute
Nicholson, Craig	Researcher	Marine Science Institute
Nidziedo, Nicholas	Assistant Professor	Geography
Nisbet, Roger	Professor	Ecology, Evolution & Marine Biology
Oakley, Todd	Professor	Ecology, Evolution & Marine Biology
O'Brien, Margaret	Specialist	Marine Science Institute
Oliver, Ruth	Assistant Professor	Bren School of Envir. Sci. & Management
Page, Henry Mark	Researcher	Marine Science Institute

Pak, Dorothy	Academic Coordinator	Marine Science Institute
Plantinga, Andrew	Professor	Bren School of Envir. Sci. & Management
Quintana, Anastasia	Assistant Researcher	Bren School of Envir. Sci. & Management
Raven, Morgan	Assistant Professor	Geology
Reed, Daniel	Researcher	Marine Science Institute
Santoro, Alyson	Professor	Ecology, Evolution & Marine Biology
Schmitt, Russell	Professor	Ecology, Evolution & Marine Biology
Schroeter, Stephen	Researcher	Marine Science Institute
Siegel, David	Professor	Geography
Simon, Scott	REEF Manager	Marine Science Institute
Sokolow, Susanne	Research Associate	Marine Science Institute
Stier, Adrian	Associate Professor	Ecology, Evolution & Marine Biology
Valentine, David	Professor	Earth Sciences
Wagstaff, Martine	Postdoctoral Researcher	Marine Science Institute
Waite, J. Herbert	Professor	Molecular, Cellular & Devel. Biology
Walker, Ian	Professor	Geography
Washburn, Libe	Professor	Geography
Wilbanks, Elizabeth	Assistant Professor	Ecology, Evolution & Marine Biology
Wittmann, Marion	Executive Director	Natural Reserve System
Wynn-Grant, Rae	Assistant Researcher	Bren School of Envir. Sci. & Management
Young, Hillary	Professor	Ecology, Evolution & Marine Biology
Young, Oran	Emeritus Research Professor	Bren School of Envir. Sci. & Management



SONGS mitigation monitoring team with another successful survey dive at Wheeler North Reef. Photo: David Huang



POSTDOCS
GRADS AND
UNDERGRADS

Marine Science Institute
Postdoctoral Researchers,
Graduate and
Undergraduate Students

Marine Science Institute Postdoctoral Researchers, Graduate and Undergraduate Students 2022–2023

POSTDOCTORAL RESEARCHERS

Archibald, Kevin M	Albers, Justine B	Katrak-Adefowora, Roshni
Arrington, Eleanor Catherine	Arrington, Eleanor Catherine	Katz, Tatum Shaw
Brown, Alexandra L	Beckley, Billie A	Kauffman, Kayla
Closset, Ivia M	Blomqvist, Linus E	Kim, Lisa Hea Mee
Dowdy, Kelsey Lee	Bogan, Samuel Neill	Klope, Margaret M
Englander, Aaron Gabriel	Braman, Charles A	Kopecky, Kai Logan
Eurich, Jacob	Cook, Dana T	Kumaishi, Grace Alice
Ferguson, Caroline E	De Leon Sanchez, Erin	Lawson, Julia Margaret
Giraldo Ospina, Ana Maria	Deweese, Shane Landau	Leach, Terence S
Jordan Colzani, Felipe	Dornan, Natalie N	Lee, Brian
Kerr, Kelly L	Eisaguirre, Jacob Henry	Lewis, Risa Anne
Lang, Megan E	English, Chance J	Lopazanski, Cori J
Latka, Catharine	Esaian, Sevan	Love, Connor R
Marraffini, Michelle L	Fang, Yutian	Madden, Jessica Ryan
Meng, Measrainsey	Fass, Ryan Patrick	Maier, Jason Ari
Mizuta, Darien Danielle	Fitch, Robert Lloyd	Malagutti, Flavio A
Ospina, Anita Giraldo	Frazer, Seth	Malakhoff, Katrina D
Payandeh, Ali Reza	Gallagher, Jordan P	Maniscalco, Michael A
Pfab, Franz Ferdinand	Gamble, Devin Errol	Matsumura, Sara Misayo
Quintana, Anastasia	Garcia, Alberto Gabriel	McEldowney, Amber Alyssa
Speare, Kelly E	Gately, James A	Mcelroy, Mary Ellis
Spiecker, Barbara J	Goss, Hayley	McKim, Siena Audra
Stephens, Brandon M	Gosselin, Kelsey	Michaud, Kristen M
Temino Boes, Regina	Grimes, Nathaniel Gordon	Moscona-Remnitz, Benjamin
Titcomb, Georgia C	Hardesty Moore, Molly Ruth	Nadeem, Muhammad Fatiq
Varney, Rebecca	Hardison, Emily	Nordheim, Caitlin Lyall
Willis-Norton, Ellen M	He, Yifan	Parsons, John Keesling
Zhou, Yuxin	Heffentrager, Madison Lynn	Payne, Helen Elizabeth
	Hensley, Nicholai Marcus	Pettit, Andrew Tanner
	Hobart, Bethany Michelle	Ramirez Parada, Tadeo
	Honeycutt, Randi N	Rand, Devin Scott
	Johns, Jason Wells	Ray, William J

GRADUATE STUDENTS

Abajian, Alexander C

Regent, Nicholas Siu-Ming	Chen, Yifei	Grant, Sabrina Nicole
Rodriguez, Leeza-Marie	Choi, Dylan	Green, Rachel
Romine, Jeffrey Reed	Chupein, Sophia M	Hacker, Allison Kathleen
Rossi, Devon Michelle	Cohen, Madison	Hahn, Hope
Rozal, Samantha Allyson Ho	Colucci, Makenna Mary	Hampton, Madison Elizabeth
Sambado, Samantha Brianne	Cruz, Yalery	Harding, Jaden P
Sanchez, Erin de Leon	Cummings, Summer R	Harris, Lauren Nicole
Sclafani, Danielle	Cunningham, Jessica A	Hascall, Emily M
Snyder, Jordan Noelle	Dela Cruz, Katrina	Holroyd, Madeline A
Strauss, Charles Kent	Deshmukh, Anannya Abhay	Horstmeyer, William T
Tye, Cecily J	Dietzel, Michael Marie	Hsu, Tiffany
Velazquez, Lourdes Rosio	DiMundo, Francesca	Hu, Holly
Xu, Chengyuan	Dinh, Heather	Huang, Kaipeng

UNDERGRADUATE STUDENTS

Alvarado, Kayley Ann	Dinh, Yvonne Vi	Jaeger, Stuart J
Arellano, Maritza	Diskin, Fiona R	Jain, Alyssa
Azadpour, Elmera	Doheny, Brandon M	Jain, Alyssa Nazari
Baksh, Nuzha N	Dorji, Shey W	Jakob, Ethan
Banks, Molly Foster	Dornan, Natalie N	Jenniches, Chloe L
Beltran, Nelson V	Douglas, Zoe Ann	Jennings, Lauren C
Bernstein, Maya Katharina	Egg, Erika Elizabeth	Juengling Bean, Eva
Beshoff, Sophia D	Eriksen, Emerson Lyra	Kolhatkar, Rucha Shekhar
Boborci, Madigan	Feng, Zhixiao	Koo, Kathryn Long-Win
Boozarpour, Mina M	Fernandez, Ariana	Kracha, Christopher
Boyle, Sarah	Figueroa, Lesley	LaLonde, Jack T
Breck, Justin L	Foshay, Bergen Skye	Lamour, Timothy W
Brock, Bowen H	Foster, Joshua	Leiphardt, Callie Marie
Brown, Madeleine R	Garcia, Angelica	Leslie, Mika
Brunjes, Ian Frederick	Garoufalias, Nikko	Li, Stanton
Bungay, Sharlene Bansil	Garzelloni, Roman J	Li, Lena L
CapittiFenton, Lucy A	Gerigk, Matthew	Lim, Karina Danielle
Cartwright, Paloma Madline	Gillingham, Zoe	Limon, Benise
Charlet, Naomi	Girish, Radhika	Listorti, Mykala M
Chavez Hernandez, Celeste	Gomez, Ivana R	Liu, Hanwei
Chen, Samantha	Goodman, Adam	Loomis, Allen K
	Gordon, Marea	Lovell, Annie
	Grant, Sabrina	Luong, Vanessa

Lupien, Tao Y	Perez, Yanelyn T	Subgani, Alicia
Malhotra, Parker	Phillips, Ella Ann	Sun, Megan
Malhotra, Parker D	Pinhas, Vered	Suzuki, Kana E
Manalo, Zoe	Plouffe, Kyler A	Talesfore, Anna H
Martin, Alix	Prewitt, James Scott	Toomey, Mary Elizabeth
Martinez, Juana	Primavera, Skylar Delahanty	Trebesch Heberlein, Evan
Mau, Elizabeth Giuliana	Reamey, Maya H	Samuel
McEligot, Elizabeth Ann	Rhodes, Rachel Alicia	Valdez, Alexandra
McKernan, Bailey	Riley, Katherine	Valdez, Craig J
McNeill, Lyndsey Paige	Rivera, Kennedy	Valdivia, Alessandra
McVeigh, Halley	Rosenberg, Elizabeth J	Van Horn, Andie Renae
Melman, Leah J	Rosenfeld, Aya	Vega, Jessica R
Milanes, Cambria	Salmon, Abigail R	Vick, Kathleen
Miller, Jared T	Salyapongse, Zoe D	Villasenor Derbez, Juan Carlos
Moes, Lyla Inez	Samantha Foon	Viz, Mariano
Moreno, Luiza D	Sandoval, Joaquin Samuel	Wagner, Kiara G
Moyer, Noah R	Santos, Julia Beatriz Perez	Wagner, Noah N
Naum, Jakub Nickolas	Shah, Gabrielle F	Warren, Daphne
Ng, Jordan	Skube, Lauren	Winter, Matthew
Oda, Kai C	Smith, Conner M	Wisniewski, Jenna Claire
Padmos, Anneke	Sorrentino, Celest Nicole	Wloczynski, Marine
Parcell, Theresa	Spiegleman, Joanne D	Yang, Victoria
Park, Charin	Stead, Courtney K	Zhong, Alice
Parsa, Eva	Stoilova, Marina I	
Partlow, Emalia	Stone, Eliana	
Penn, Cameron	Strauss, Charles Kent	



PARTECIPAT

External Participation

Marine Science Institute External Participation 2022–2023

AFFILIATED RESEARCHERS	
Aleuy Young, Oscar	University of Calgary
Ambrose, Richard	UCLA
Ballerini, Evangeline	MAC
Baxter, Timothy	University of Oxford
Bayer, Barbara	University of Vienna
Best, Ben	Ecoquants
Boerder, Kristina	Dalhousie University
Bradley, Darcy	The Nature Conservancy
Brito, Isaac	Conservation International
Bursek, Julie	NOAA
Carpenter, Robert	CSUN
Cavenaugh, Kyle	UCLA
Cook, Samantha	NOAA
Costa, Bryan	NOAA
Culver,Carolynn	UCSD
Diaz, Sophia	CSLA
DeProspero, Nicolas	NOAA
Duncan, Elizabeth	NOAA
Edmunds, Peter	CSUN
Emery, Katherine	Santa Barbara Audubon Society
Fackler, Claire	NOAA
Ferguson, Jeffrey	NOAA
Fisher, Alexander	University of Washington
Flores, Jose	Santa Barbara Botanic Garden
Francis, Laura	NOAA
Freedman, Ryan	NOAA
Fry, Shauna	NOAA
Huckelbridge, Kate	California Coastal Commission
Ingulsrud, Laura	NOAA
Jacobs, Todd	NOAA
Jaramillo, Joselyne	Still Water Sciences
Johnson, Cyril	Cal Poly
Johnson, Gabrielle	NOAA
Jordan Colzan, Felipe	Pontificia Universidad Catolica de Chile
Kayal, Mohsen	French National Institute for Sustainable Development (IRD)

Klose, Kristie	US Forest Service
Kuehn, Michael	Bloom Biological, Inc.
Lafferty, Kevin	USGS
Lambert, Jonathan	Conservation.org
Lane, Keighley	NOAA
Lang, Megan	UC Berkeley
Larios, Eugenio	Universidad Estatal de Sonora
Latka, Catha	University of Bonne, Germany
Liu, Shuting	Kean University
Martinez, Carolina	Pontificia Universidad Catolica de Chile
Mayorga, Juan	National Geographic Society
Meng, Measrainsey	Invenia Labs, UK
Mobley, Chris	NOAA
Morten, Jessica	NOAA
Mueller, Benjamin	University of Amsterdam (UvA)
Murray, Michael	NOAA
Omand, Melissa	University of Rhode Island
Phillips, Zachary	University of Texas
Raimondi, Peter	UCSC
Rassweiler, Andrew	Florida State University
Schneider, Heather	Santa Barbara Botanic Garden
Schwemmer, Robert	NOAA
Selgrath, Jennifer	NOAA
Sweeney, Edward	NOAA
Tao, Yun	University of Georgia
Temino Boes, Regina	Universitat Politècnica de València (UPV)
Torchin, Mark	Smithsonian Tropical Research Institute
Trockel, Dale	Industry - CODAR
Trockel, Josh	Industry - CODAR
Van Deusen, Vanessa	NOAA
Weber, Paige	Univ of North Carolina
Weinstein, Sara	University of Utah
Young, Rebecca	NOAA





PROJECTS

Other Projects & Activities



The DIVERsity in Diving Program. Photo: Courtesy photo



Resilient Interdisciplinary Social-Ecological (RISE) Fellowship. Photo: Courtesy photo

Coastal Research Center

The Coastal Research Center is an organizational unit within the Marine Science Institute at UCSB. The central theme of the Center is to develop scientific knowledge to gain a more complete understanding of coastal and island ecosystems, which is necessary for sound management of the natural resources within coastal and island regions. The Center links academic scientists from a wide variety of disciplines, enhancing the ability to address marine environmental issues.

While CRC scientists work in marine environments throughout the world, much effort is focused on coastal reefs found in the Santa Barbara Channel region and the coral reefs surrounding the island of Moorea, French Polynesia. These two locations provide excellent model systems for the scientific exploration of a wide range of marine issues and scientists at UCSB have long valued these environments as natural laboratories for scientific study. Both areas are enjoyed by those seeking recreation, support important local fisheries and are faced with growing conflicts amongst different user groups as human population pressures increase, a trend that is common for many marine environments. The nearshore marine environments of California and the islands of French Polynesia are used increasingly as a disposal site for waste products. Renewed exploitation of oil and natural gas reserves has augmented the number of conflicting demands placed upon the Channel resources, while issues related to global climate change have increased concerns about the sustainability of coral reef ecosystems. Local issues related to the sustainability of commercial and sport fisheries in both regions mirror global concerns regarding management of exploited stocks. The cumulative effects of human activities on the natural resources of both of these regions are just beginning to be understood. It is imperative that we learn how to balance the multiple uses of nearshore ocean waters in an environmentally sound manner. Lessons learned by scientists in the Coastal Research Center have wide implications for understanding and resolving present and future problems, and will help local, regional and national regulators develop better management policies.

Development of sound management plans for areas such as the Santa Barbara Channel or the islands of French Polynesia is hampered by scientific uncertainty about the consequences of human activities. To understand and predict natural and anthropogenic disturbances, synthesis of new and existing knowledge of many scientific aspects of coastal marine systems - including biology, ecology, genetics, geology, chemistry and oceanography - will be necessary. Further, the development of new approaches and the use of

emerging technologies are needed to resolve fundamental questions, some of which have remained unanswered for many years. Only with these advances will it be possible to make reliable predictions about the consequences of various activities, to develop the ability to restore degraded habitats and conserve valuable resources, and to foster development of environmentally sound policies for use of coastal or island regions in general.

The Center has four major objectives:

- To act as a center for production and integration of basic scientific information to more fully understand coastal and island ecosystems and their natural and exploited populations.
- To evaluate and predict effects of human activities on the marine environment, and to develop measures to ameliorate lost or degraded natural resources.
- To train students in basic research on marine environmental issues that may be applicable to decision-makers.
- To facilitate and promote interdisciplinary research initiatives.

Ocean and Coastal Policy Center

The Future of the Coast is Now! The Ocean and Coastal Policy Center at UCSB (OCPC) is engaging questions that speak to a central challenge of our time: How can we live sustainably and equitably on our coasts in the face of unprecedented environmental change? OCPC brings coastal policy analysis, advising and education to government, NGOs, students and people working for our coasts. In 2022-2023, OCPC completed major work across three policy areas:

Climate Change, Adaptation, and Coastal Resilience.

OCPC completed a Year 2 milestone research report—**Planning for Sea Level Rise on California’s Coast**—as part of a 3-year effort funded by the State of California to address the state’s critical need to prepare for global sea level rise. The \$727,807 grant from the California **Ocean Protection Council** is supporting Center research to improve the capacity of coastal communities to identify and adapt to the future impacts of sea level rise, such as increased beach erosion and coastal flooding. The grant has funded multiple student researchers, including recent graduates of UCSB’s Bren School for Environmental Science and Management, Caitlin Manley and Sam Rozal. Caitlin went on to serve with a prestigious NOAA Sea Grant **Knauss Fellowship** while Sam continues to work on the project to complete a map-based **inventory** and assessment of sea level rise adaptation work on the California coast. A third Bren student, Ashley Cooper, has been focusing on the mixed-methods survey component of the project – a joint effort between OCPC and USC Sea Grant. Along with the recent report and survey, the inventory supports coastal managers and the public concerned with sea level rise and is a crucible for continued research and education about how society can adapt effectively along its coasts. The entire joint research team presented report findings and preliminary survey results at the **California Shore and Beach Preservation Association** meeting in Ventura.

Multi-Campus Research Project. OCPC also completed a pilot research collaboration with colleagues from UC Santa

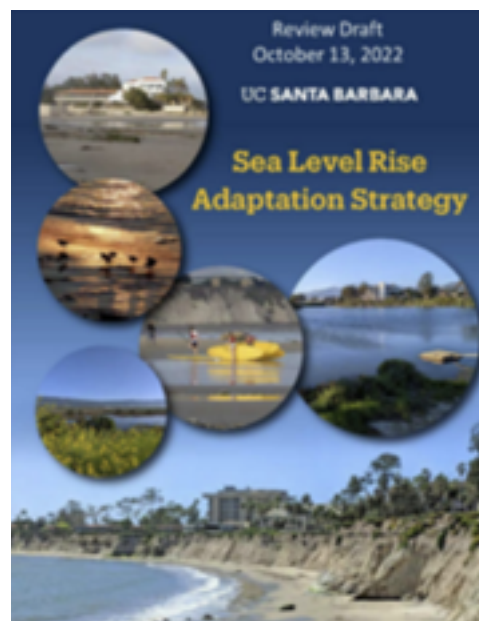


OCPC-USC Sea Grant Research Team: Sam Rozal, Karina Alvarez, Charles Lester, Phyllis Grifman, Ashley Cooper, and Juliette Finzi Hart. Not pictured: Abeerah Siddiqui.

Cruz and UC San Diego, funded by a [UC multicampus research award](#). The work explored how the University of California can help address the challenge of coastal adaptation, presented in a [StoryMap](#) and final report: [Coastal Adaptation Science Needs in California: a roadmap for researchers to advance climate adaptation](#).

UCSB Sea Level Rise Adaptation Strategy. In November of 2022 OCPC completed work on a draft [Sea Level Rise Adaptation Strategy](#) for the UCSB campus. The plan addresses the future of the campus shoreline as erosion and flooding increases due to climate change. It assesses the important beach and other natural coastal resources of the campus, as well as the significant facilities and infrastructure that will be at risk. The plan presents a vision for adaptation that protects the educational mission of the University while maintaining the natural beauty and function of UCSB’s incredible coastline. The plan should be submitted to the California Coastal Commission for review in the Spring of 2024.

OCPC continued other resilience work, including a project to contribute policy research and advising to the City of Santa Cruz [Resilient Coast](#) project, which is developing an “adaptation pathway” approach based on environmental and social monitoring, in order to trigger future community-based coastal adaptation along its shoreline.



Environmental Justice and Protection of the Public Trust. Environmental Justice continues to be a central focus of OCPC. The Center continued work with an interdisciplinary team from CSU Channel Islands and San Francisco State University to address public beach access, sea level rise and social equity in the Santa Barbara region. The project will provide recommendations to state and local beach managers for improving equitable beach access. The “[Beach Sustainability Assessment for Comprehensive Analysis and Management](#)” project is funded by the CSU [Council on Ocean Affairs, Science & Technology and California Sea Grant](#).

Dr. Lester also continued to speak about the future challenges of protecting public trust tidelands for all Californians as climate change unfolds. Based on the report [Protecting Public Trust Shoreline Resources in the Face of Sea Level Rise](#), Dr. Lester participated on a panel at the [2022 Yosemite Environmental Law Conference](#). He also participated on a panel about protecting the public trust in September, 2023 at the 7th Annual Environmental Leadership Conference in San Diego.

Global Coastal Conservation Exchange.

Work on the global front continued as well. Dr. Lester traveled to Santiago, Chile, working in collaboration with Professor Carolina Martínez, Director of the Observatorio de la Costa. Dr. Lester was invited to deliver the keynote address at an international conference in December 2022 centered on the release of a major publication, *Toward a Coastal Law In Chile: Bases For an Integrated Management of Coastal Areas*. The “geobook” lays out a scientific foundation for a new regulatory framework and governance structure for the coastal zone of Chile, and includes a chapter written by Dr. Lester titled: California’s coastal protection program—a model for integrated coastal management in Chile?



Coastal Management Panel, Ex-Congreso Nacional in Santiago, Chile.

Dr. Lester also travelled to Rio de Janeiro in July to participate in the annual **meetings** of the Society for the Advancement of Socio-Economics (SASE). He presented with other experts hailing from Brazil, France and California in a roundtable addressing “Beach Access, Seaside Economy, and Coastal Protection in a Warming World.” OCPC anticipates future collaborations with the research group over the next three years to continue exploration the tensions between public and private interests along beaches in different parts of the world.

Finally, OCPC launched participation in another exciting project to address sustainability on the island of Guam. OCPC is part of larger team addressing the need for more integrated land use planning and coastal management in this U.S. territory through a *Guåhan 2050 Sustainability Plan*. Guam has many challenges in common with other Pacific islands, including the stresses of climate change, loss of native ecology, and social and economic concerns related to import dependency and tourism from other countries, as well as the history of colonialism in the region that has had dramatic impacts on the original Chamoru people and culture of Guam.

Other Activities. Dr. Lester continued to share his work in other forums, including a **2023 Policy Summit** sponsored by the Smart Coast organization focused on community adaptation to sea level rise; and a **Local Government SLR Working Group Stakeholder Workshop** in Santa Barbara, focused on neighborhood scale adaptation planning. He also continued co-chairing the sea-level rise adaptation subcommittee of **Santa Barbara County’s Regional Climate Collaborative**, and serving on the **Science Advisory Committee** of the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) in

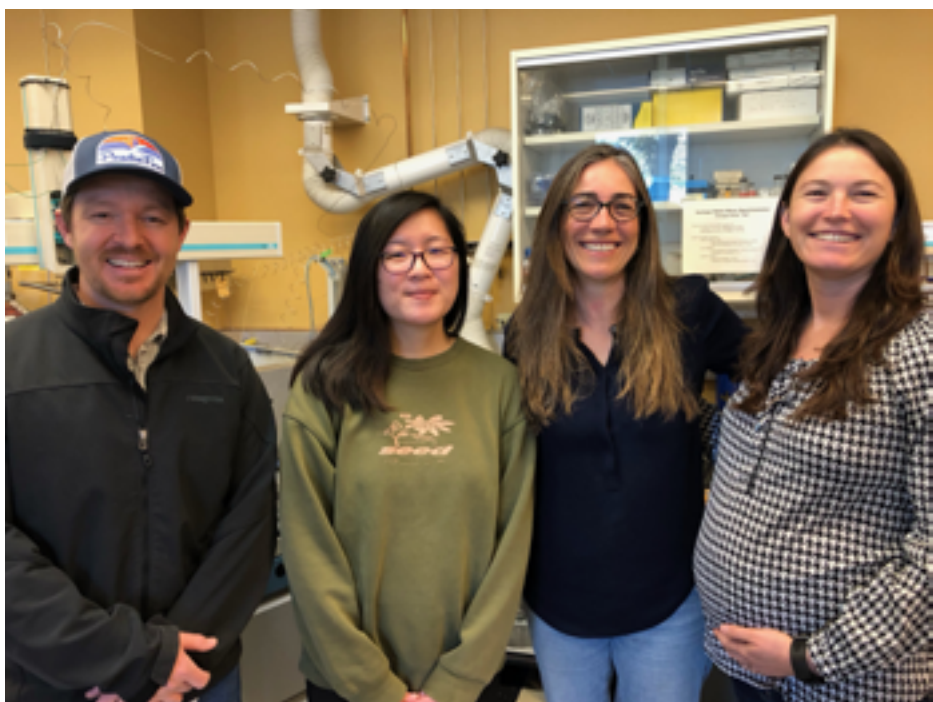
Santa Barbara and Ventura Counties.

MORE INFORMATION

It was a busy and productive year! For more information, including how to support OCPC's work more directly, please visit the [OCPC website](#) or contact: Dr. Charles Lester, Director, at charleslester@ucsb.edu or phone: 831-706-8280.

Analytical Laboratory

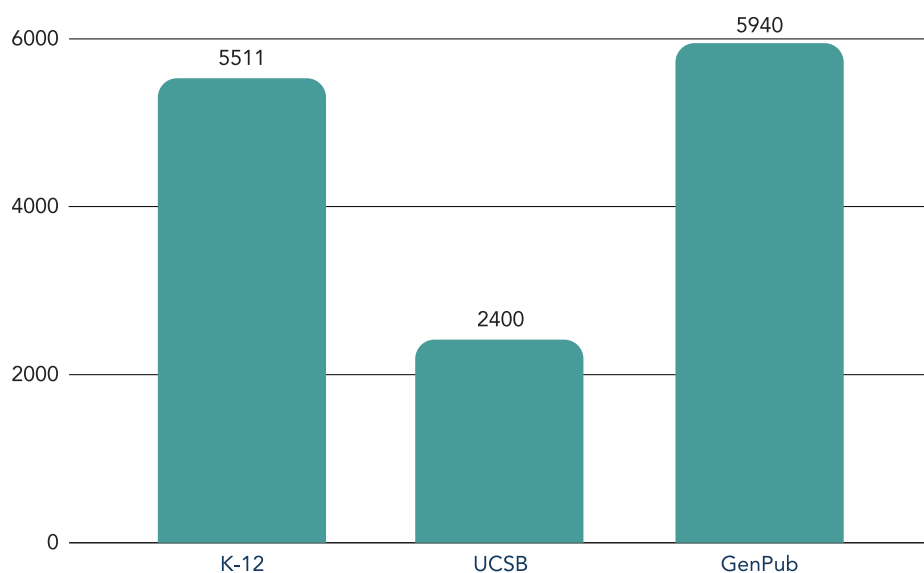
The MSI Analytical Lab is a professionally managed chemical analysis facility with the objectives of improving the quality and efficiency of marine-related research efforts, and of providing advanced capabilities for new and expanded research programs. Originally established in 1977 to serve the needs of UCSB marine researchers, the facility is now recognized campus wide as well as nationally as a resource for high-quality analytical services. The major capabilities of the lab include wt% elemental analysis of carbon, hydrogen and nitrogen (CHN) by combustion and automated determination of dissolved nutrients in natural waters using a 5-channel Flow Injection Analyzer. The lab also provides a stable isotope service and facility for UCSB researchers. The facility includes maintained instrumentation and training for the determination of stable isotopes of carbon and nitrogen in biological and geological materials using continuous-flow Isotope Ratio Mass Spectrometry. Most of the Lab's current instrumentation was obtained with extramural funding from grants acquired by the Lab manager in conjunction with interested faculty and researchers. The lab was just awarded a large instrumentation grant from NSF, which will bolster the lab's isotope capabilities, bring in new users and increase revenue. The Lab operation is solely supported through user fees. There are currently two full time staff members and three undergraduate lab assistants employed in the Analytical Laboratory. Operation has picked up substantially this past year, coming off the tail end of the Covid-19 pandemic. Please visit our website at msi.ucsb.edu/services/analytical-lab for more information.



Left to right: Ken Marchus, sdfaef, Dr. Alyson Santoro, Christie Yorke. Photo: Analytical Lab

MSI Education and Outreach

Throughout this year MSI Oceans-To-Classrooms (O2C) Education/Outreach Programs, and The REEF, have continued to evolve and we're excited to invite visitors back to The REEF for Open-Door and UCSB affiliate programs. While we have seen changes, and challenges, over the course of this year, in-person programming continues to increase. Our education and outreach efforts, through the REEF saw almost 14,000 K-12, college, and general public visitors in 2022-2023. We have continued capital work on the REEF, thanks to the generous support of Betty Wells, and have been able to respond to teachers and course needs through the continued design and development of in-person, and distance, teaching strategies and online resources. This year 60 different TriCounty (SLO/SB/Ventura) K-12 schools were served, as well as other communities from across California. Because of our online presence we continued to reach students across the country, including high school students in Milwaukee, WI. These students were subjects of one of our ARETs teachers, who we continue to support as part of the teacher professional development through our work with the SBC (Santa Barbara Coastal)-LTER and the NSF funded Authentic Research Experiences for Teachers (ARETs) in a cross-site project along with the Arctic (ARC) and Andrews Forest (AND) LTERs. Exposure continues to include live Zooms in the Research Experience & Education Facility (REEF), as well as UCSB outreach events through Orientation, Summer Start, and Visitor Center programs.



Graph of number of visitors by user group



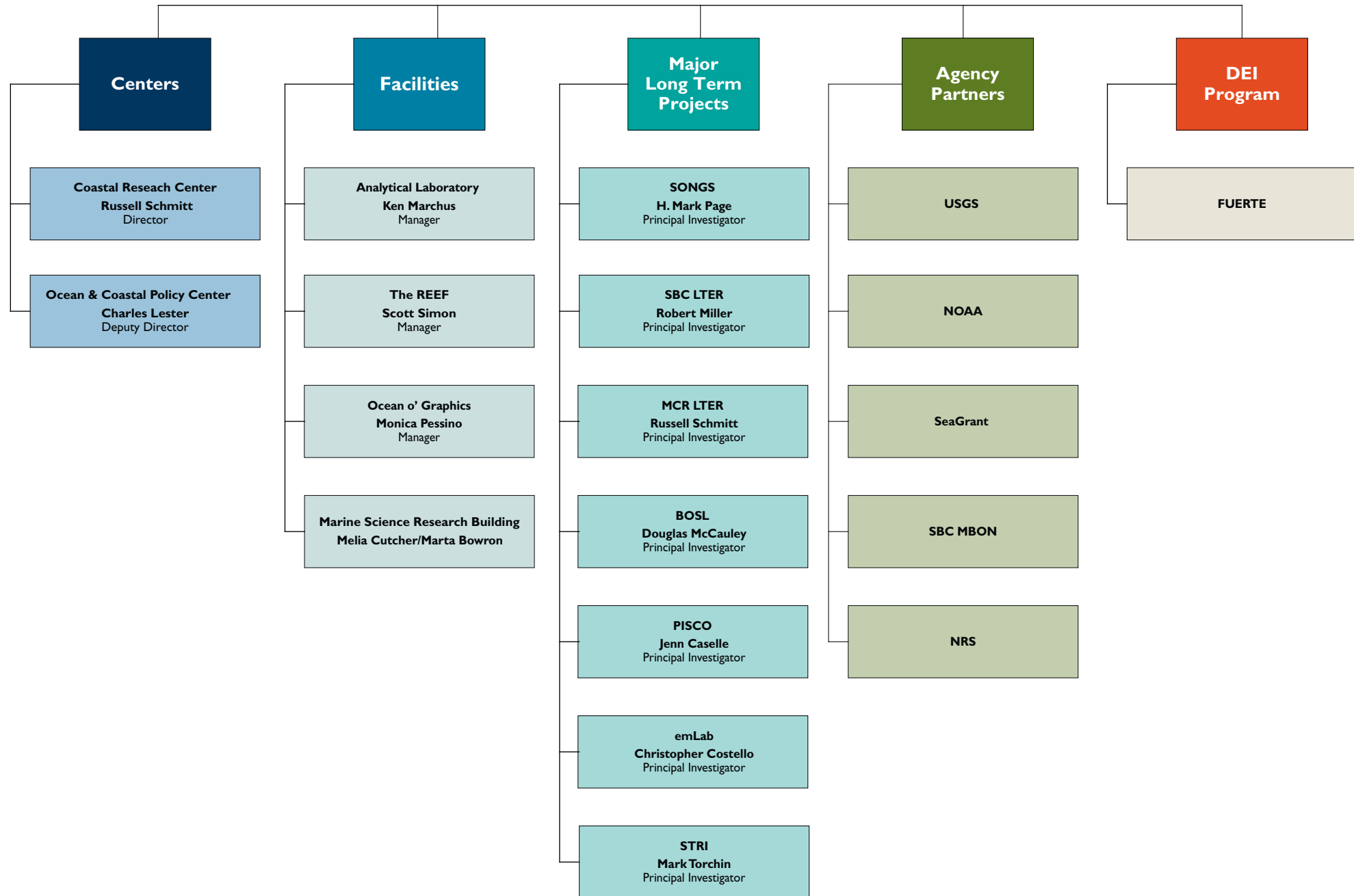
The REEFers. Top to bottom, left to right: Lauren Jennings, Josie Spiegelman, Madison Hampton, Madigan Boborci, Mykala Listorti, Parker Malhotra, Mehran Sajjad, Katie Vick, Chloe Jenniches, Jordan Ng, Fern CapittiFenton, Sophia Cabral, Fiona Diskin, Allen Loomis, Isabella Ramirez, Maya Bernstein, Hailey Pereyra, Lauren Pettijohn, Marine Wloczyiak



Anemone close-up.
Photo: Chris Honeyman

MARINE SCIENCE INSTITUTE

Other Projects and Activities 2022–2023



The REEF: The Research Experience and Education Facility

SONGS: Nuclear Generating Station

SBC LTER: Santa Barbara Coastal Term Ecological Research

MCR LTER: Moorea Coral Reef Long-term Ecological Research

BOSL: Benioff Ocean Science Laboratory

PISCO: Partnership for Interdisciplinary Studies of Coastal Oceans

emLab: Environmental Market Solutions Lab

STRI: Smithsonian Tropical Research Institute

USGS: United States Geological Survey

NOAA: National Oceanic and Atmospheric Administration

SBC MBON: Southern California Bight Marine Biodiversity Observation Network

NRS: Natural Reserve System

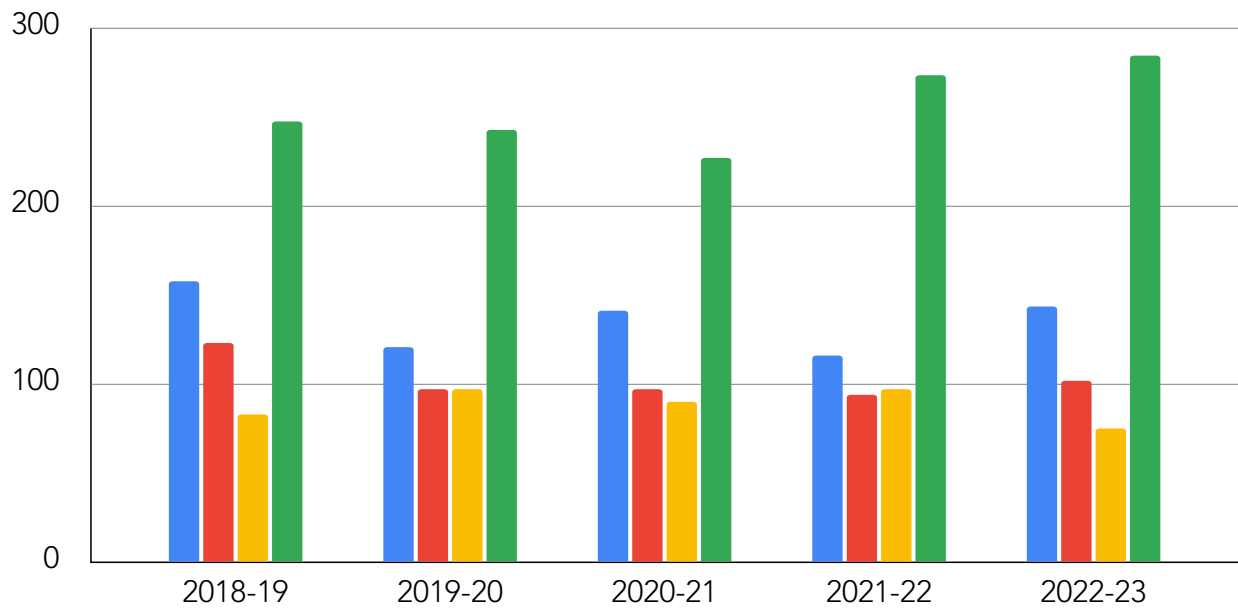
FUERTE: Field-based Undergraduate Engagement through Research, Teaching, and Education



PROPOSAL & AWARDS

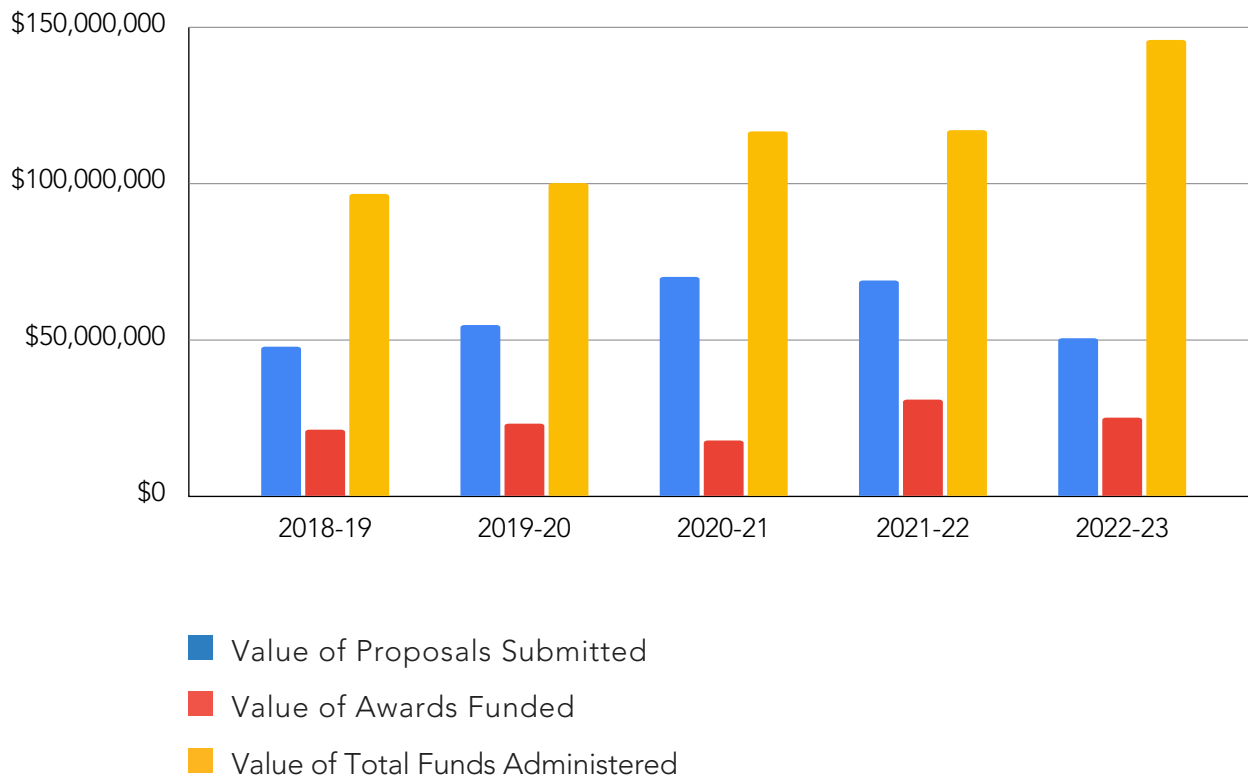
Proposal & Award
Administration

Proposal Submitted, Awards Issued and Total Projects Administered | 2018-2023



- Proposals Submitted
- Awards Issued
- Total Other Projects Administered
- Total Projects Administered

Value of Proposals Submitted, Value of Awards Funded and Total Funds Administered | 2018-2023



Happy Holidays





SPACE

Space

Marine Science Research Building | Bldg. No. 520 – 1st floor 06/2023

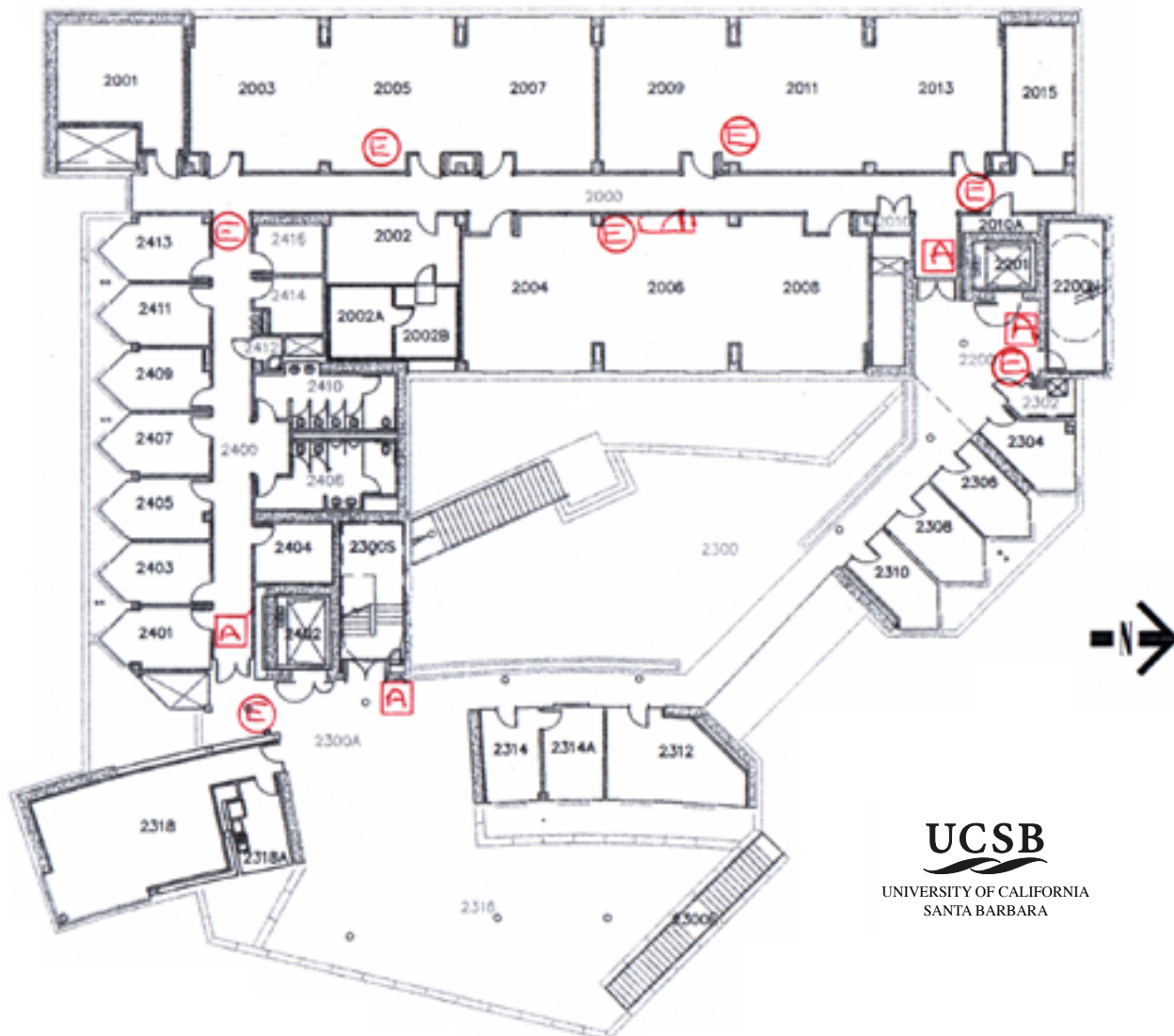


1001	Seawater workroom
1002	Common support laboratory
1003	Valentine laboratory
1004	Page/Dugan laboratory
1005	Valentine laboratory
1006	SONGS
1007	Siegel laboratory
1008	Valentine Laboratory
1009	Analytical laboratory

1010	Valentine Laboratory
1011	Analytical laboratory
1204	Graduate Students office
1206	Post Doc/Graduate Students office
1208	Graduate Students office
1302	Auditorium
1304	Sustainable Fisheries Group
1304a	Sustainable Fisheries Group

1304b	Sustainable Fisheries Group
1308	Copier room
1310	Carrie Culver
1312	MSI Researchers office
1314	MSI Researchers office
1409	Seawater workroom
1411	Seawater workroom
1413	Seawater workroom

Marine Science Research Building | Bldg. No. 520 – 2nd floor 06/2023



2001	Seawater workroom
2002	Common support laboratory
2002a	Environmental room
2002b	Environmental room
2003	Hofmann laboratory
2004	Miller laboratory
2005	Hofmann laboratory
2006	Miller laboratory/ SBC LTER/ MBON
2007	Hofmann laboratory
2008	Shared laboratory

2009	Burkepile laboratory
2011	Burkepile laboratory
2013	Burkepile laboratory
2015	SONGS project
2304	Burkepile Researchers office
2306	Erika Eliason
2308	Kevin Lafferty
2310	Bob Miller
2312	Benioff Ocean Science Laboratory (BOSL)
2314	Benioff Ocean Science Laboratory (BOSL)

2314a	Benioff Ocean Science Laboratory (BOSL)
2318	Conference room
2401	Mark Page
2403	Jenifer Dugan
2405	MSI Researchers office
2407	Mark Torchin
2409	Hofmann Researchers office
2410	Restrooms
2411	Hofmann Researchers office
2413	Hofmann Researchers office

Marine Science Research Building | Bldg. No. 520 – 3rd floor 06/2023



3001	Seawater workroom
3002	Common support laboratory
3003	Reed laboratory
3004	Holbrook laboratory
3005	Reed laboratory
3005a	Common support laboratory
3006	Schmitt laboratory
3008	Shared laboratory
3009	PISCO laboratory
3011	Caselle laboratory

3013	Washburn laboratory
3014	Storage
3015	MacIntyre laboratory
3304	Charles Lester
3306	SBC LTER Researchers office
3308	Dan Reed
3310	Andrew Brooks
3312	CRC Researchers Office
3312a	CRC Researchers Office
3314	Russell Schmitt

3316	Sally Holbrook
3322	Conference room
3401	MSI Researchers office
3403	Adam Lambert
3405	BON Researchers office
3407	BON Researchers office
3409	Chris Jerde
3411	Craig Nicholson

Marine Science Research Building | Bldg. No. 520 – 4th floor 06/2023



4002	Receiving
4003	Ocean o' Graphics – Carlos Paz
4003a	Ocean o' Graphics – Monica Pessino
4003b	NRS
4003c	NRS
4004a	File Room
4004c	Trevor Bellefeuille
4004d	MSI Student Assistants
4005a	Nicole Zavala
4005a	Marisol Hernandez
4005b	Veronica Perez
4005c	Lyndi Swanson
4006a	Melia Cutcher

4006a	Marta Bowron
4006b	Jenny Chu
4007	Mail room
4008	Break room
4009	MSI Researchers office
4009a	MSI Centers
4009b	MSI Researchers
4012	Server room
4013	MSI Researchers office
4304	Douglas McCauley
4306	Libe Washburn
4308	Sally MacIntyre
4310	Gretchen Hofmann
4312	Deron Burkepile
4314	Jenn Caselle

4316	Nick Nidzieko
4318	Conference Room
4322	Sustainable Fisheries Group
4322a	Michaela Clemence
4322b	MSI Researchers
4326b	MSI Director Suite
4326	MSI Director Suite
4326a	MSI Director
4401	Carolyn Sheehan
4403	Brian Emery/IT
4405	Luisa Velez
4407	Laura Susin
4409a	Lukas Checa
4409b	Deanna Cervantes
4409c	Kimberly Taylor

Marine Science Institute | Trailers

334-a	Scott Simon
334-b	REEF
334-c	REEF



Participants on the BASIN '23 research expedition departing the Research Ressel Atlantis to pick up members of the scientific party at Santa Barbara harbor. Photo: David Valentine

Marine Science Institute | Devereux West, 7955
06/2023



1001	Love data laboratory
1001a	Love laboratory
1001b	Milton Love office
1007	Kitchenette / break room

1007a	Restroom
1007b	Dorothy Pak office
1007c	Dorothy Pak laboratory
1007d	Closet

1007e	Storage
1007g	Utility room
1022	Lafferty Storage
1004	Lambert Researcher space

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Page 58: Katie Davis Koehn

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