



CALIFORNIA  
**OCEAN  
SCIENCE  
TRUST**

---

# 2023 Annual Report

Created by the California Legislature in 2000, California Ocean Science Trust bridges the gap between cutting-edge science and sound ocean management

# Table of Contents

Letter from the Executive Director

Our Commitment to Diversity, Equity, and Inclusion

Legislative Science Services

Providing Science Advice to State Agencies

Supporting an Inclusive Science Policy Workforce

Unlocking the Potential of Insurance

for Coastal Resilience

Building Disaster Resilience in California's Fisheries

Illuminating Policy Options for Marine Carbon Dioxide Removal (mCDR) Research

Supporting Responsible Offshore Wind Energy Development

Our Team

Partners

Funders and Donors

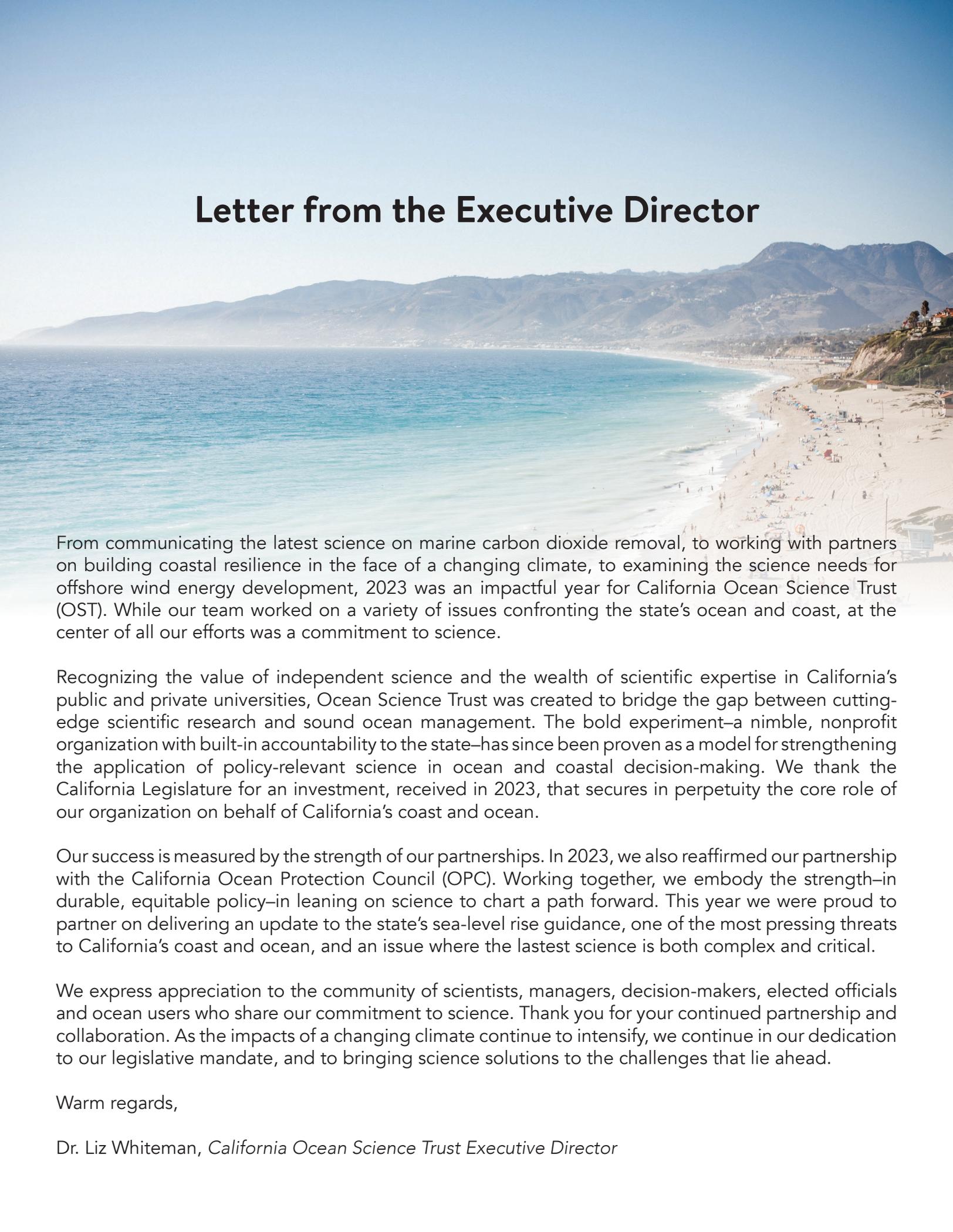
Financials

Board of Trustees

Support Our Work



# Letter from the Executive Director



From communicating the latest science on marine carbon dioxide removal, to working with partners on building coastal resilience in the face of a changing climate, to examining the science needs for offshore wind energy development, 2023 was an impactful year for California Ocean Science Trust (OST). While our team worked on a variety of issues confronting the state's ocean and coast, at the center of all our efforts was a commitment to science.

Recognizing the value of independent science and the wealth of scientific expertise in California's public and private universities, Ocean Science Trust was created to bridge the gap between cutting-edge scientific research and sound ocean management. The bold experiment—a nimble, nonprofit organization with built-in accountability to the state—has since been proven as a model for strengthening the application of policy-relevant science in ocean and coastal decision-making. We thank the California Legislature for an investment, received in 2023, that secures in perpetuity the core role of our organization on behalf of California's coast and ocean.

Our success is measured by the strength of our partnerships. In 2023, we also reaffirmed our partnership with the California Ocean Protection Council (OPC). Working together, we embody the strength—in durable, equitable policy—in leaning on science to chart a path forward. This year we were proud to partner on delivering an update to the state's sea-level rise guidance, one of the most pressing threats to California's coast and ocean, and an issue where the latest science is both complex and critical.

We express appreciation to the community of scientists, managers, decision-makers, elected officials and ocean users who share our commitment to science. Thank you for your continued partnership and collaboration. As the impacts of a changing climate continue to intensify, we continue in our dedication to our legislative mandate, and to bringing science solutions to the challenges that lie ahead.

Warm regards,

Dr. Liz Whiteman, *California Ocean Science Trust Executive Director*



## Our Commitment to Diversity, Equity, and Inclusion

Our work is premised on trust-based partnerships with state entities, academia, non-governmental organizations, California's communities, and more. We center, and invest in, diversity, equity and inclusion (DEI) in all our work.



## Learning Sessions and Workshops

In 2023, building on efforts in previous years, OST engaged external experts to lead our team in a series of DEI learning sessions and workshops. With this expert assistance, we examined our organizational activities from both an internal and external perspective, and learned about how to uphold DEI principles and goals in our programmatic work. The goal of these learning sessions and workshops was to foster a culture of equity and inclusion within our organization, and to embrace and honor the unique identities of all our staff, partners, and colleagues. We also worked to develop an organizational approach where we challenge systemic inequities in the science-policy sector by proactively building relationships that redistribute power to marginalized and historically excluded communities.

## Accountability

OST recognizes that the most legitimate science advice emerges from a community of scientists that reflects California's diversity and elevates equity and inclusion. We are committed to taking actions that promote DEI principles within our membership, our leadership, our work, and California's ocean science community. To begin to track progress towards OST's DEI goals and commitments, and to ensure accountability, we adopted a policy of seeking voluntary and anonymous demographic information in all the venues in which we bring science voices, expertise, and perspectives together to deliver advice and recommendations. We launched this effort with our staff and Board, the Legislative Science Services (LSS) program, and the California Ocean Protection Council's Science Advisory Team (OPC-SAT), and will continue to expand our implementation of this policy. This survey data will empower OST to analyze our progress and hold our organization accountable to its values.

# Legislative Science Services

## Bringing Science to Lawmakers

Building on two decades of success in providing science advice to California's government agencies, in 2021, OST launched its [Legislative Science Services \(LSS\)](#) program to bring science directly to California lawmakers, expanding the impact of our work. Today, OST has established a reputation as an objective broker of science information and advice supporting members, committees, and their staff. LSS provides both proactive information delivery on critically important issues and is responsive to emerging policy priorities. Key to our success in building a vibrant relationship between science and lawmaking is providing policy-relevant and solution-focused advice.

### DDT+ Pollution

We [hosted a legislative briefing in January 2023](#) regarding DDT+ pollution (i.e, DDT and associated compounds) in the Southern California Bight. Hosted in partnership with California Assemblymember Josh Lowenthal, this briefing brought together experts from California Sea Grant, the University of Southern California Sea Grant, the California Ocean Protection Council, together with scientific experts to discuss the findings in the report, "A Deep Ocean DDT+ Research Needs Assessment for the Southern California Bight."

## Whale Strikes and Entanglement

In response to interest from the Joint Committee on Fisheries and Aquaculture, OST engaged marine mammal ecologists and commercial shipping experts to better understand the science behind whale populations, their risk via ship strike, and data underpinning various policy responses. OST provided relevant science information to the authors and committee staff engaged with a relevant vessel speed reduction bill, and leveraged a long-running relationship with Assembly committee staff to provide a synopsis of the issue along with compiled studies/materials, leading to a thorough, science-based bill analysis now in the Legislative record.



## Offshore Wind Energy

Offshore wind energy was an active issue in 2023 in the California Legislature as bills for procurement (AB-1737, passed), streamlining permitting and fisheries mitigation (SB-286, passed), and science for environmental monitoring (AB-80, held) were considered, among others. We tracked these efforts closely, and OST's Executive Director raised the need to leverage the capacity of the science community in a May 2023 hearing on offshore wind energy for the Joint Committee on Fisheries and Aquaculture.

## Offshore Oil Platform Decommissioning

California Ocean Day took place in Sacramento in April 2023. We hosted a luncheon expert panel discussion in partnership with the California State University Council on Ocean Affairs, Science and Technology (CSU COAST). The discussion "Bridging science to policy on offshore oil platform decommissioning" featured Dr. Jeremy Claisse of Cal Poly Pomona and Jennifer Lucchesi of the California State Lands Commission. The event featured opening remarks from Assemblymember Gregg Hart, who represents the Santa Barbara region.



# Providing Science Advice to State Agencies

We bring science to bear to accelerate progress towards California's vision for a healthy, equitable, and productive ocean and coast. We continued our long-standing role of supporting evidence-informed decisions by the California Ocean Protection Council (OPC) as science advisor and convener of the OPC Science Advisory Team.

## Science Advisor Reauthorization and Renewal

In December 2023, OPC reauthorized and renewed OST's role as the Council's Science Advisor. This authorization allows us to continue and expand upon our longstanding partnership with OPC and the OPC Science Advisory Team (SAT) to embed best available science into the state's policy and management decisions. The SAT, OPC, and OST partnership has been proven as a model for strengthening the application of cutting-edge science to recommendations and solutions in state decision-making. In addition, the partnership has been critical for advancing priorities under the 2020-2025 OPC Strategic Plan, including providing science guidance to inform a statewide microplastics strategy, synthesizing the best available science on future sea-level rise, and establishing monitoring recommendations to understand and address ocean acidification. [Learn more on our website.](#)

# Coast and Ocean Report Card

We convened the OPC Science Advisory Team (OPC-SAT) to discuss how the best available science can be applied in developing a suite of indicators to measure the health of California's ocean and coast. The OPC-SAT provided recommendations on which indicators would most saliently inform a Coast and Ocean Report Card, which is slated for its initial release in 2025. These Report Card indicators will score the health of the state's ocean and coast and inform future investments in monitoring and data collection.



## Sea Level Rise Guidance

OST and OPC convened an interdisciplinary and multi-institutional Science Task Force to support in updating California's sea-level rise guidance with the latest scientific understanding on the issue. The Task Force synthesized the best available and the most recent advancements in sea-level rise science to update sea-level rise and flooding projections. Based on those updated projections, OPC developed policy and planning recommendations for how to prepare for sea-level rise in California. The updated science and policy recommendations on sea-level rise appear in the draft State of California Sea Level Rise Guidance: 2024 Science and Policy Update, which was released for public comment in January 2024.

## Science to Inform California's 30x30 Goals

OST partnered with OPC to convene a Technical Advisory Panel supporting a science-guided approach to achieving the state's 30x30 goals in coastal waters. The Panel includes leaders in marine ecology, fisheries, marine spatial planning, and environmental justice, and is tasked with developing scientific guidance to translate policy objectives for 30x30 Conserved Areas into clear and objective criteria. In addition, the Panel will provide recommendations on approaches to addressing data gaps related to 30x30, inform future research projects, and answer questions that arise throughout the 30x30 process.



# Supporting an Inclusive Science Policy Workforce

OST's founding legislation recognizes the importance of growing capacity at the science-policy interface and includes a mandate to support graduate education in management-relevant ocean sciences. To act on this part of our mission, we support, advocate for, and provide inclusive graduate education opportunities that strengthen the links between ocean science, educational institutions, and decision-making. In 2023, we hosted two interns and one fellow.

## Dr. Maya Weeks, 2023 California Sea Grant Fellow

While at OST, Maya worked on the Sea Level Rise Task Force to support convening the scientific experts and development of the draft sea level rise guidance. Additionally, she explored the potential for tribal knowledge and expertise to be incorporated into our boundary spanning work of delivering science advice to state policymakers. Prior to joining the OST team in 2023, Maya completed her Ph.D. in Geography at the University of California, Davis. Maya also served as editor for various environmental and creative projects. Her recent writing has been published in the San Francisco Chronicle and recent music has been released on Full Spectrum Records. Maya received her M.F.A. in Creative Writing from Mills College, and a B.A. in Language Studies from the University of California, Santa Cruz.



Photo courtesy Maya Weeks

## Gabby Yang

*Sustainable Oceans National Science Foundation Research  
Traineeship Summer 2023 Intern*

During her time at OST, Gabby worked on the NOAA Ocean Acidification Program project, leading the development of communications products for our state agency partners. Prior to joining the OST team in 2023, Gabby was a K-6 STEM instructor, CSU Council on Ocean Affairs, Science & Technology Northern California Marine Invertebrate Fisheries Management Intern, Ernest Prete Jr. fellow, Louis Stokes Alliances for Minority Participation fellow, Scholars Program in Research, Education, and Science fellow, and a peer mentor to various programs. Gabby is currently a Ph.D. student at the University of California, Davis and also holds a B.S. in Environmental Biology from California State Polytechnic University, Pomona.



## Brandon Quintana

*California State University Council on Ocean Affairs, Science &  
Technology Summer 2023 Intern*

While at OST, Brandon collaborated with the Ocean Protection Council to identify and develop indicators to analyze ocean and coastal health across changing climate stressors, various habitats, and shifting economies. He also worked to elevate understanding of marine carbon dioxide removal (mCDR) among California policy makers while combining knowledge to advance mCDR technology. Brandon is a National Geographic Explorer, California Sea Grant Graduate Research Fellow, and educator with Orange County Coastkeeper. He serves as Co-Chair of the Western Society of Naturalists Student Committee, Ecological Society of America Environmental Justice Section Co-Chair, and recently joined the California State Coastal Conservancy Explore the Coast Advisory Board. He earned his M.S. in Biological Science from California State University, Fullerton and received his B.S. in Environmental Studies from University of California, Santa Barbara.



# Unlocking the Potential of Insurance for Coastal Resilience

California's coastal communities face growing, climate-driven threats, including rising seas and frequent flooding, which impact both coastal ecosystems and the people who depend on them. The multi-trillion dollar insurance industry, which increasingly views these same coastal-climate impacts as unchecked risks, can also be a tool for mitigating these risks if activated through climate adaptation efforts.

OST signed a memorandum of agreement with the California Department of Insurance (CDI) to provide our science services and support on advancing climate resilient coasts and oceans. Together with other academic and nonprofit partners, OST is deploying science-based dialogues to bring the power and financial weight of the insurance industry to bear on building climate resilience for California. In 2023 we brought together decision-makers, coastal and ocean experts, and insurance industry leaders to design coastal climate resilience pilot projects that will equip California with ready-to-go climate insurance programs including nature-based solutions.



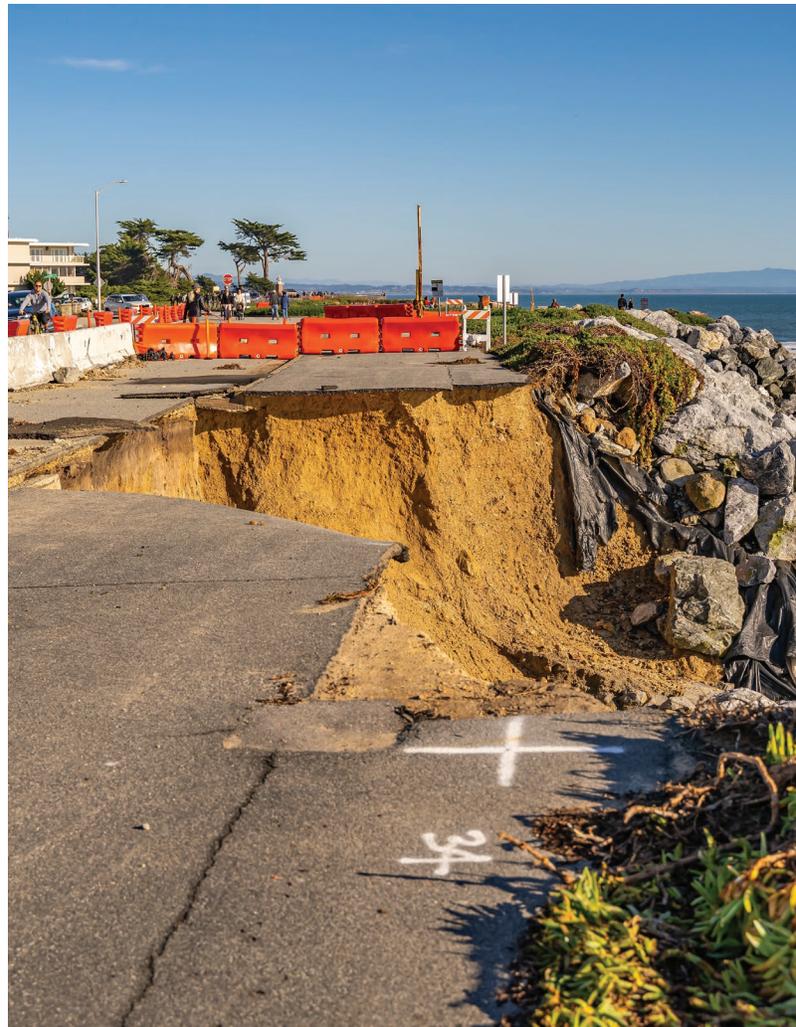
Photo courtesy Liz Whiteman

## Imperial Beach Workshop

We hosted a workshop titled “Unlocking Insurance to Leverage Nature, Finance, and Risk Science for Coastal Resilience” in February 2023 at the Tijuana River National Estuarine Visitor Center in Imperial Beach. The workshop was hosted in partnership with Resilient Cities Catalyst and the San Diego Regional Climate Collaborative. The purpose of the workshop was to bring together insurance experts with regional practitioners and researchers to explore and identify a suite of innovative coastal climate resilience pilot projects for implementation in the San Diego region. With opening remarks by CDI Commissioner Ricardo Lara, approximately 40 attendees convened at the workshop including Imperial Beach Mayor Paloma Aguirre, together with city, county, and port representatives.

## Santa Cruz Symposium

In March 2023, OST in partnership with CDI, the U.S. Army Corps of Engineers, and the UC Santa Cruz Center for Coastal Climate Resilience, hosted a symposium titled “Integrating Nature into Risk Science & Insurance: A Coastal Climate Resilience Symposium.” The event explored the growing risks from climate-forced natural disasters and sea-level rise, and examined the role both insurance and nature-based solutions can play in reducing risk. On the symposium’s first day, expert panels and working groups explored opportunities and recommendations for using these tools to build coastal resilience to climate change across the country. On day two, a smaller, working meeting of select attendees focused on resilience issues and opportunities specific to the California coast. New pilot project ideas emerged from the event and strategies for advancing market-based approaches and nature-based solutions were identified. [Read more about this symposium on our website.](#)



# Building Disaster Resilience in California's Fisheries

California's fisheries are grappling with the effects of climate change-induced impacts. The success of California's climate-ready fisheries management strategies are dependent on the extent to which managers and decision-makers can proactively mitigate, adapt, or respond. Our vision is to help California achieve its policy goal of making the state's fisheries, fishing communities, and fisheries management more climate-ready.

In 2023, one of our primary focus areas was California's red sea urchin fishery. Kelp forests along the Northern California coastline have declined by approximately 90% due to rapidly changing ocean conditions. As a result, coastal economies suffered, including the North Coast red sea urchin fishery, which was officially declared a fishery disaster in 2019.

In collaboration with UC Santa Cruz, the California Sea Urchin Commission, and the Greater Farallones Association, OST assessed the social and economic impacts and responses of fishery participants and communities to the fishery's closure. We worked collaboratively with the fishery participants and communities—including via a series of interviews—to identify and evaluate potential strategies to improve the fishery's resilience. These efforts led to a social and economic resilience workshop in Fort Bragg. OST will engage state and federal resource managers, partners, and fishery participants to ensure the project's findings and recommendations are practical and implementable by agencies to support the development of a more responsive and resilient framework for kelp loss and associated fishery impacts. [Read more about our red sea urchin workshop here.](#)





## Illuminating Policy Options for Marine Carbon Dioxide Removal (mCDR) Research

Interest and investment in marine carbon dioxide removal (mCDR) in California is rapidly expanding, prompting the need to consider broader risks, potential benefits, and associated costs. The private sector is focusing on seaweed farming and technology-driven mCDR solutions—such as alkalinity enhancement, artificial upwelling, and other geo-chemical approaches—highlighting the need for ethical guardrails for in-water testing and development. In 2023, OST responded to calls to “cut through the noise” and bring objective science to the table. We provided California lawmakers with the latest science on mCDR and further educated the ocean science community on this issue. Read more about staff experiences at the [California Seaweed Festival](#) and the [Western Society of Naturalists meeting](#) in the course of their seaweed and aquaculture work.

OST conducted educational tours for the California Legislature in 2023 to explore mCDR facilities. In the San Francisco Bay Area we led a tour of Ebb Carbon, which was hosted by State Senator Josh Becker and featured remarks from Assemblymember Diane Papan. The second tour was hosted by State Senator Steven Bradford at AltaSea at the Port of Los Angeles, where the companies Captura and Equatic operate mCDR pilot projects. [Read more about these tours on our website.](#)

In partnership with the California Current and Alaska Acidification Networks, we hosted a series of webinars to educate California’s policymakers, state regulatory agencies, and the broader ocean science community about mCDR approaches.

# Supporting Responsible Offshore Wind Energy Development

California's climate action plan calls for installment of offshore wind energy by 2030. State agencies are working rapidly to develop management for wind energy siting, environmental impacts, stakeholder engagement, and more. In 2023, OST engaged on this issue with the state legislature where we offered solution-focused advice about how to proceed in terms of marine wildlife protection, minimizing harm to ocean ecosystems, and how best to create venues for science-based discussions exploring potential impacts. We also worked with the California Marine Sanctuary Foundation to foster a multi-institution collaboration of scientific experts ready to develop scientific guidance on approaches to monitor the effects of offshore wind energy development on marine mammals, fisheries, and the overall ocean ecosystem.



# Our Team



**Kiya Bibby**  
Senior Science Officer



**Dominique Kone**  
Senior Science Officer



**David Lawlor**  
Director of Philanthropy



**Monica LeFlore**  
Science Officer



**Dr. Lauren Linsmayer**  
Senior Science Officer



**Anthony Rogers**  
Strategic Initiatives Director



**Emma Stone**  
Administrative & IT Coordinator



**Kevin Travis**  
Science Officer



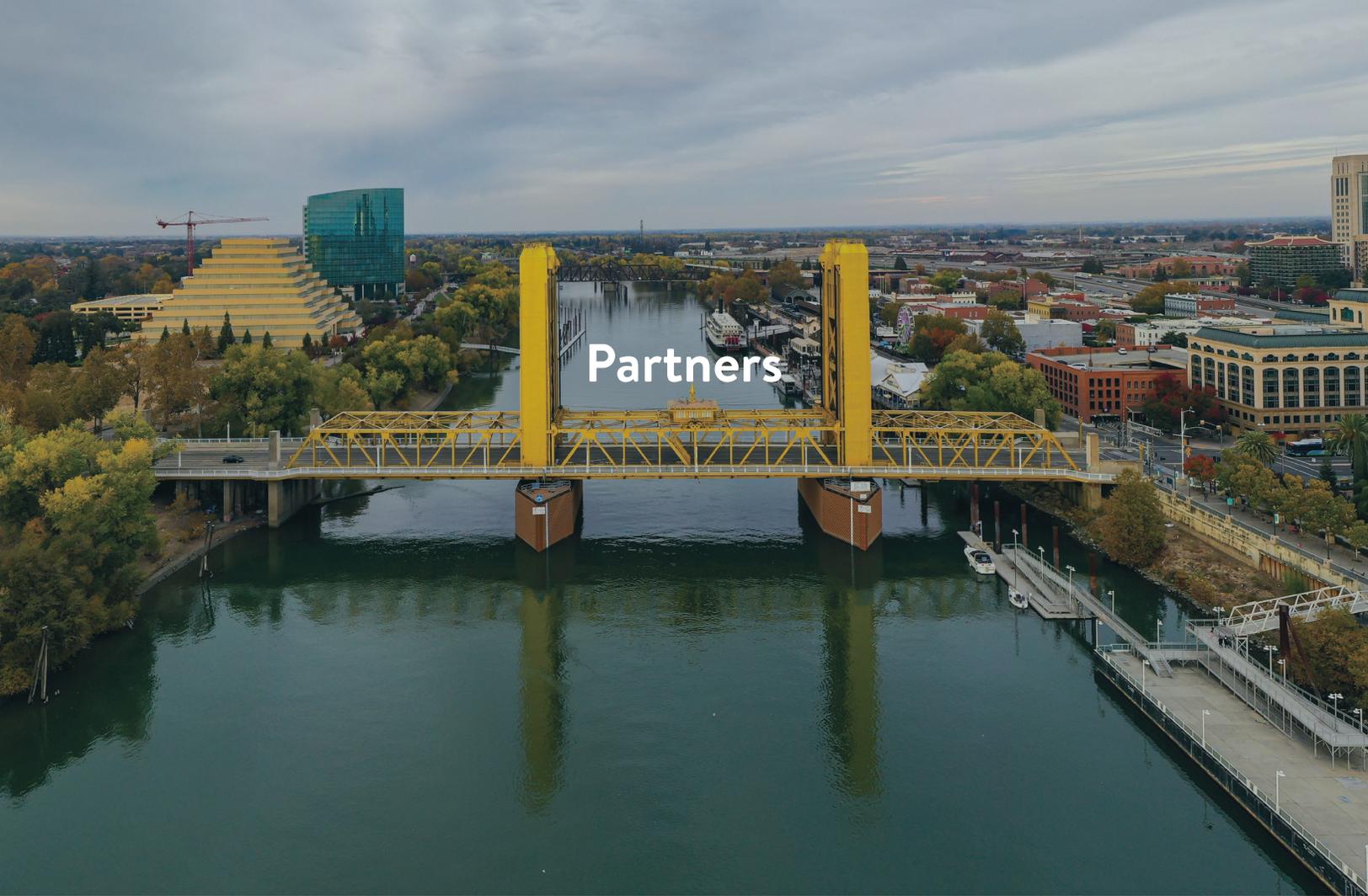
**Dr. Heidi Waite**  
Science Officer



**Dr. Elizabeth Whiteman**  
Executive Director



**Lori Zook**  
Director of Administration & Finance



# Partners

AltaSea at the Port of Los Angeles  
California Department of Fish and Wildlife  
California Department of Insurance  
California Fish and Game Commission  
California Ocean Protection Council  
California Sea Grant  
California Sea Urchin Commission  
California State Lands Commission  
Center for Coastal Climate Resilience, UC  
Santa Cruz  
Coastal and Marine Sciences Institute, UC  
Davis  
Coastal Science and Policy Program, UC  
Santa Cruz  
CSU Council on Ocean Affairs, Science, and  
Technology (COAST)  
Estuary and Ocean Science Center, San  
Francisco State University

Greater Farallones Association/Greater  
Farallones National Marine Sanctuary  
Institute of Marine Sciences, UC Santa Cruz  
NOAA Ocean Acidification Program  
North Coast Resource Partnership  
NMFS Northwest Fisheries Science Center  
(NWSC)  
Oregon State University  
Pacific State Marine Fisheries Commission  
Resilient Cities Catalyst  
San Diego Regional Climate Collaborative  
San Diego State University  
San Francisco Estuary Institute  
Southern California Coastal Water Research  
Program (SCCWRP)  
U.S. Army Corps of Engineers  
USC Sea Grant

# Funders and Donors

We are grateful to receive support from the State of California as well as a range of other public, philanthropic and private funders:

The Builders Initiative  
California Ocean Protection Council  
California State Lands Commission  
Carbon to Sea  
Change Happens Foundation  
Climateworks Foundation  
Colligan Family Trust  
Emmett Foundation  
Firedoll Foundation  
Grantham Foundation  
J.W. and H.M. Goodman Foundation  
The Lawrence Foundation  
Lenfest Ocean Program  
NOAA Ocean Acidification Program  
Otter Cove Foundation  
Pacific States Marine Fisheries Commission  
Park Foundation

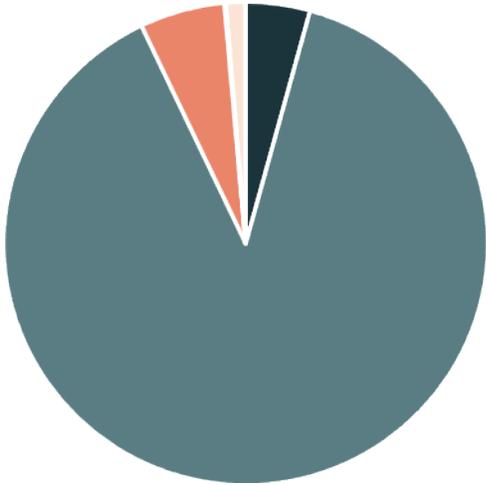
Paul M. Angell Family Foundation  
Pew Charitable Trust  
University of California, Davis  
University of California, Santa Cruz  
Dr. Mike Beck  
Alena Ebeling-Schuld  
Dr. Gary Griggs  
Fred Keeley  
David Lawlor  
Rick LeFlore  
Bruce Lymburn  
SciPinion  
Dr. Steve Murray  
Kenneth Unice  
Dr. Liz Whiteman  
Lori Zook



# Financials

## Revenues

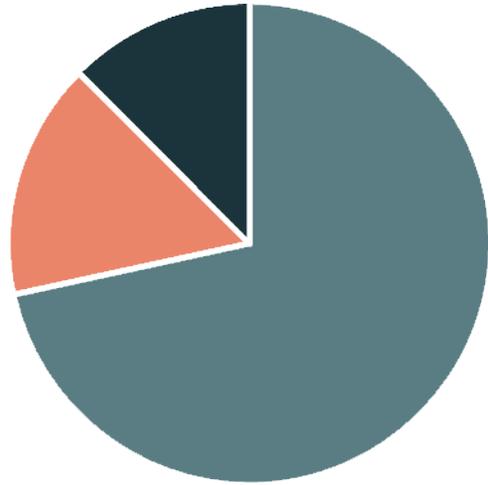
\$10,987,339



- Program Grants \$483,597
- CA State Appropriation \$10,000,000
- Contract Revenue \$641,144
- Individual Donations \$10,239
- Investment Income -\$148,239

## Expenses

\$1,469,615



- Program Services & Projects \$1,052,136
- General Administration \$234,153
- Fundraising \$183,326

Capital Reserve: \$10,597,450  
Includes \$10,000,000 CA State Appropriation

Financials cover the fiscal year October 1, 2022 - September 30, 2023  
Financials are audited on an annual basis; complete audited financial statements are available upon request.



# Board of Trustees

Nancy Sutley

Chair and General Public Representative

*Deputy Mayor of Energy and Sustainability, City of Los Angeles*

Dr. Phil Taylor

Treasurer and Ocean and Coastal Interests Group Representative

*Associate Dean Emeritus, University of Southern California*

Jonathan Bishop

California Environmental Protection Agency Representative

*Chief Deputy Director, State Water Resources Control Board*

Jenn Eckerle

California Natural Resources Agency Representative

*Executive Director, Ocean Protection Council*

Dr. Gary Griggs

University of California / California State University Representative

*Distinguished Professor, University of California Santa Cruz*

Dr. Alexis Jackson

Ocean and Coastal Interest Group Representative

*Associate Director, California Oceans Program, The Nature Conservancy*

Dr. Margaret Leinen

University of California / California State University Representative

*Director, Scripps Institute of Oceanography, University of California San Diego*

Dr. Karina Nielsen

Board of Trustees Liaison to the Ocean Protection Council Science Advisory Team

*Director, Oregon Sea Grant*

Michele Perrault

Department of Finance Representative

*Chief Deputy Director of Policy, California Department of Finance*

Margaret Spring

Public Representative

*Chief Conservation & Science Officer, Monterey Bay Aquarium*

# Support Our Work

You value science and the important role it plays in crafting smart, effective policy for California's ocean and coast.

But to access and understand cutting-edge marine science, our state's decision-makers need an honest, politically neutral knowledge-broker to guide the way. That's where California Ocean Science Trust makes its impact. Our knowledgeable team works with the scientific community to deliver sound, actionable science to California's executive branch, legislators, and state agencies.

We are the only nonprofit organization in California serving as formal science advisor to the state government on ocean and coastal issues. This unique role allows us to work with experts from across the University of California and California State University systems to bring the best available science to the policymaking table.

We know you share our passion for the state's ocean and coast—it's a big part of what makes California such a special place. From San Diego to Santa Barbara, from Morro Bay to Big Sur, from Monterey to the Golden Gate, from Point Reyes to Mendocino, and from Humboldt Bay to Crescent City, our team covers it all. If you think California's ocean and coast deserve policy informed by world-class science, please make a generous donation to support Ocean Science Trust.

California Ocean Science Trust is a 501(c)(3) nonprofit organization. Our tax identification number is 65-1261006. Your entire donation is tax-deductible as a charitable contribution as allowed by law. OST will never rent, sell, or trade your contact information.

To donate by check, please mail to:  
California Ocean Science Trust  
1017 L Street, #293  
Sacramento, CA 95814

Give online at [oceansciencetrust.org/donate](https://oceansciencetrust.org/donate)

To donate by phone, please contact David Lawlor at 541-207-4784 or [david.lawlor@oceansciencetrust.org](mailto:david.lawlor@oceansciencetrust.org)

