CALIFORNIA
OCEAN
SCIENCE
TRUST

2024 Annual Report

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

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Letter from the Executive Director

In 2000, when our founding legislation - California Ocean Resources Stewardship Act, CORSA - was passed, it was in recognition of the importance of trusted, objective science in the decisions shaping the future of California's coast and ocean. Our creation as a 501c3 nonprofit balances accountability to the state, and to academia, with the nimbleness to pool resources and engage on the most pressing issues facing our coast and ocean.

As we are all acutely aware, climate change is making its impacts felt on California's ocean and coast, and those impacts will only grow over time. If we are to meet the challenge presented by climate change, and ensure an equitable future for California's coastal communities, timely access to objective, trusted science advice and solutions is essential.

In 2024, with core support from the state in place, we updated our founding legislation (Senate Bill 1324) to ensure our ability to bring scientific analyses, syntheses and recommendations to the full range of departments and commissions within the California Natural Resources Agency and the California Environmental Protection Agency. We extend our appreciation and thanks to Senator Limón and the Legislature for their leadership in recognising the importance of timely access to relevant science.

From scientific advice on the potential to meet climate goals with new technologies such as marine carbon dioxide removal (mCDR), to recommendations on responsible advancement of ocean energy development that is mindful of wildlife impacts, to new research on sea level rise, and the adaptive capacity of coastal communities as ocean conditions change, we are privileged to bring science to bear on the issues that matter for California's coastal communities, elected officials, and natural environments.

The success of our work is measured by the strength of our partnerships. We extend our thanks to all our collaborators, shared in our report below, and including federal, state, tribal, science and private sector partners, whose expertise and perspectives are critical to our mission.

As we approach our organization's 25th anniversary, our mandate to strengthen the bridge between science and policy is as salient as ever, indeed even more so. We are committed to advancing this important work.

Warm regards,

Dr. Liz Whiteman

Executive Director, California Ocean Science Trust

Board of Trustees

Our ten member Board of Trustees is appointed by the Secretary of Natural Resources, CalEPA, and California Department of Finance, and brings together representatives from state government, California's universities, ocean stakeholders and the public, as described in our founding legislation.

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Distinguished Professor of Earth & Planetary Sciences, UCSC

University of California / California State University Representative

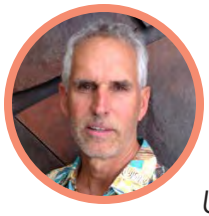
Dr. Alexis Jackson

Board of Trustees Vice-Chair

Public Policy Manager, Sustainability, Uber

General Public Representative

Dr. Phil Taylor



Board of Trustees Treasurer

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Partner, Solomon Minton Cardinal Doyle & Smith LLP

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Our Mission and Mandate

Our organizational theory of change is premised on the belief that science is a powerful tool in uncovering, building, and aligning policy pathways towards solutions. We balance being responsive to state needs and requests with opportunities to proactively bring cutting-edge science solutions to policy challenges.

We bring our legislative mandate (see Box) to life in four core roles: (1) bringing resources to solutions oriented ocean science; (2) encouraging graduate education and workforce development at the nexus of science and policy; (3) bringing science to lawmakers, and; (4) providing science advice to policymakers, including serving as Science Advisor to California's Ocean Protection Council.

OST Purposes (PRC Sec. 36990):

(b) The purposes of the trust shall be all of the following:

(1) To seek funds for California ocean resource science projects, emphasizing the development of new funding sources.

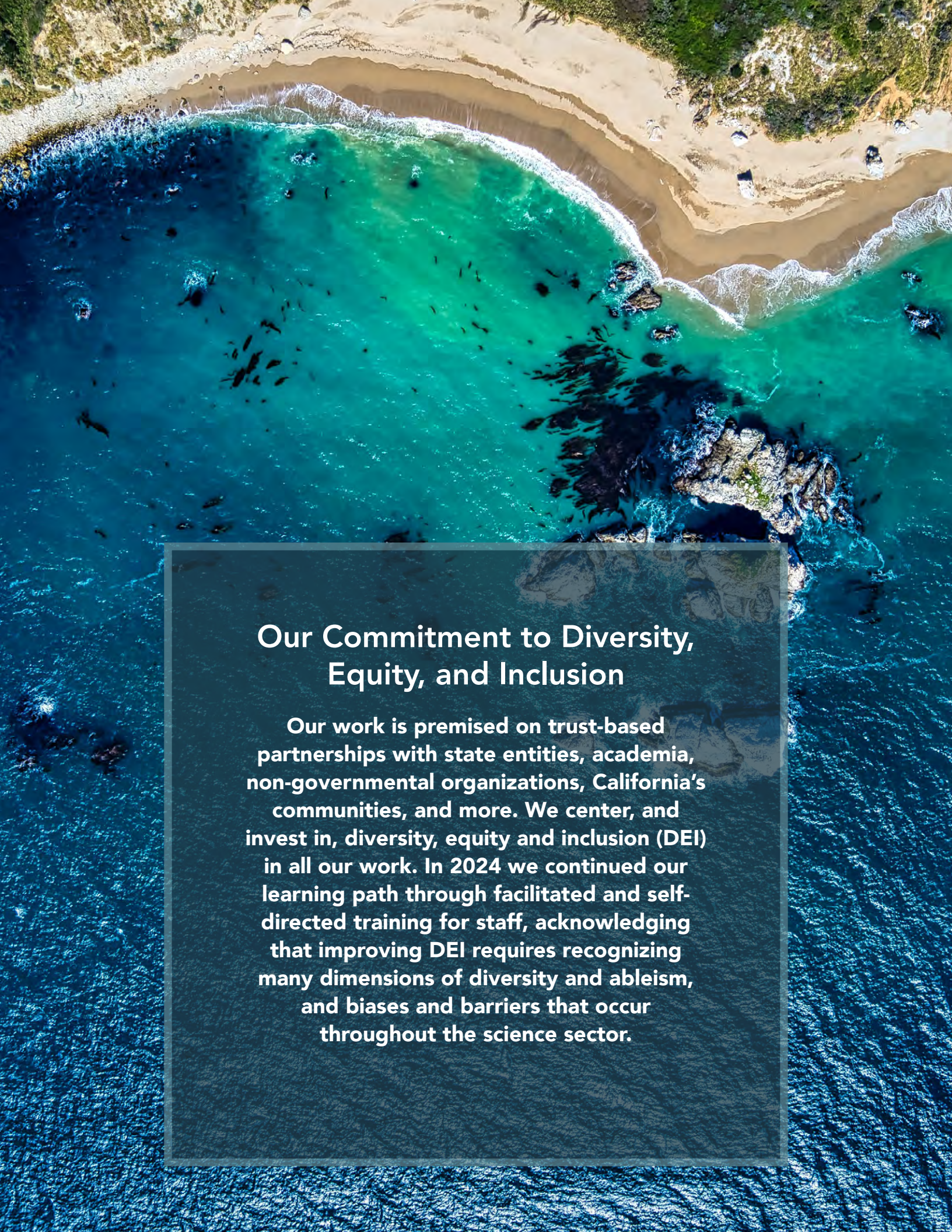
(2) To fund California ocean resource science projects that help fulfill the missions of the state's ocean resource management agencies.

(3) To encourage coordinated, multiagency, multi-institution approaches to ocean resource science to deliver actionable science solutions that accelerate equitable climate change adaptation.

(4) To encourage graduate education programs, training, and workforce development opportunities in management-oriented ocean resource science in public and private universities and colleges in California.

(5) To encourage new technologies that reduce the cost, increase the amount, or improve the quality of ocean resource management information.

(6) To promote more effective coordination of California ocean resource science useful to management agencies.



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. In 2024 we continued our learning path through facilitated and self-directed training for staff, acknowledging that improving DEI requires recognizing many dimensions of diversity and ableism, and biases and barriers that occur throughout the science sector.

2024 Highlights

Addressing misinformation: Offshore Wind Science Factsheets

OST compiled existing research (as of June 2024) into seven fact sheets with high-level science messages. Today they serve as a resource for legislators, agencies, local government, and other policymakers as they field questions from the public.

New MOU signed with Oregon Ocean Science Trust

We are thrilled to have signed an MOU with Oregon Ocean Science Trust describing our shared interests in strengthening the bridge between ocean science and policy. This MOU sets the stage for a collaborative strategy for prioritizing west coast ocean science needs and bringing the science and funding community together around a shared vision for aligned research, infrastructure, technology and workforce investments.

OREGON OCEAN SCIENCE TRUST

Investing in Science Communication Fellowship

In partnership with the Center for Coastal Resilience, UC Santa Cruz we jointly funded a Coastal Climate Resilience Science-Policy Communication Fellow through the UC Santa Cruz Science Communications Masters Program. Read more about how their work filled knowledge gaps and broke down silos around climate resilience, adaptation, and insurance.

UC SANTA CRUZ | Center for Coastal Climate Resilience

Bringing Science to Lawmakers

California Ocean Bill Tracker launched

Launched in summer 2024, this new service provides scientists, researchers, and the broader ocean community with a reliable and independent platform to stay engaged on current legislation that has a clear nexus and need for sound ocean and coastal science. We are thrilled by the reception to this service, with researchers throughout the state taking up the information in classes, curriculum development, webinars, and their own engagement in policy venues. Access the bill tracker and sign up for quarterly Policy Roundups here.

Report Release: Science to Inform Action on Whale Strike Reduction

Released in September in response to legislative interests in reducing lethal vessel strikes on whales, the peer-reviewed report Whale Vulnerability to Ship Strikes Along the California Coast provides a science-informed synthesis of whale mortality due to ship strikes and action pathways identified with input from policy experts and researchers. Read the report here.

Ask an Expert Science Briefings for the California Legislature

Accelerating Knowledge & Innovation in California for Implementation of the White House Ocean-Climate Action Plan

Presented in partnership with Assemblymember Dawn Addis

Moderator: Dr. Heather Tallis, Executive Fellow, UCSC Center for Coastal Climate Resilience

Panelists: Dr. Clarissa Anderson (SCCOOS / Scripps), Kaitlyn Kalua (Ocean Protection Council), Dr. Laurie Richmond (Cal Poly Humboldt / CA Sea Grant)

Accelerating Recovery of California's Kelp Forests

Sponsored by Assemblymember Diane Papan, and presented in partnership with Ocean Protection Council, Department of Fish and Wildlife, and California Sea Grant

Panelists: Dr. Jenn Caselle (University of California, Santa Barbara), Dr. Kristen Elsmore (California Department of Fish and Wildlife), Michael Esgro (California Ocean Protection Council), Rosa Laucci (Tolowa Dee-ni' Nation), Tristin Anoush McHugh (The Nature Conservancy), Dr. Shauna Oh (California Sea Grant)

Understanding Ocean Noise in California

Sponsored by the Office of President pro Tempore Emeritus Toni G. Atkins, and presented in partnership with Scripps Institute for Oceanography, UC San Diego

Moderator: Dr. John Hildebrand

Panelists: Dr. Simone Baumann-Pickering (Scripps Institution of Oceanography), Dr. Lindsey Peavey Reeves (NOAA Office of National Marine Sanctuaries), Dr. John Ryan (Monterey Bay Aquarium Research Institute), Dr. Vanessa ZoBell (Scripps Institution of Oceanography)

Intern Spotlight: Roxanne-Alexa Garibay

"I led coordination for a legislative briefing to provide high-level overview of relevant California based ocean noise topics and research. With guidance from my OST supervisor, I prepared talking points, outreach material, led meetings, researched ocean noise, and wrote a 2 page handout for the legislative audience. Overall, my internship with OST strengthened my commitment to enter the nexus of policy and ocean science space. The lessons and connections learned in this internship will be valuable in the next step of my career."

Touring aquaculture facilities with Legislators

Bringing science, industry, and policy communities together to showcase seaweed aquaculture research and operations across the state. These tours provided an opportunity for policymakers to interact with researchers and aquaculturists to discuss the science, policy, and investment needed to better understand the multi-benefits of responsible seaweed aquaculture and explore the role of this growing industry for California's climate, restoration, and blue economy goals. Read more on our website.

Moss Landing Marine Labs (MLML) - Monterey Bay Seaweeds

Co-sponsored by State Senator John Laird and Assemblymember Dawn Addis.

Speakers: Dr. Luke Gardner (MLML/CA Sea Grant), Dr. Ross Clark (MLML/Monterey Bay Seaweeds), Dr. Maya DeVries (San Jose State University), Dr. Scott Hamilton (MLML).

Humboldt Bay - CalPoly Humboldt, Sunken Seaweed, Hog Island Oyster Company

Co-sponsored by State Senator Mike McGuire and Assemblymember Jim Wood.

Speakers: Dr. Rafael Cuevas Uribe (Cal Poly Humboldt), Torre Polizzi (Sunken Seaweed), Gary Fleener (Hog Island Oyster Co.), Chris Mikkelsen (Humboldt Bay Harbor District), Nate Schlachter (Blue Evolution), Delaney Schroeder-Echavarria (Rou Dalagurr Food Sovereignty Lab & Traditional Ecological Knowledges Institute)

CASE STUDY: Science Diplomacy on Marine Carbon Dioxide Removal (mCDR)

According to the Intergovernmental Panel on Climate Change, in order to limit global warming to 1.5°C, emissions reductions alone will not suffice, and large-scale carbon dioxide removal (CDR) will be necessary. A growing body of practitioners is looking to the ocean's role in CDR; however, most proposals are still in either lab-based stages or small-scale field testing. As interest from private and public investors grows, there is an increasing need to improve our scientific understanding of the potential environmental, ecological, and societal implications of each proposed strategy at scale, and to communicate these developments to policymakers to support informed decision-making. Ocean Science Trust is responding to calls to "cut through the noise" and bring objective science to the table.

Providing science advice to the US House Committee on Science, Space, and Technology

OST tapped into our growing expert network to provide feedback on a draft bill to advance RD&D of mCDR.

Convening an Initial Interagency mCDR Discussion

OST supported the Ocean Protection Council to convene an initial discussion among state partners on marine carbon dioxide removal. With mCDR research, development, and demonstration accelerating, as well as in-state projects and proposed legislation, this interagency meeting provided a timely opportunity to share updates, ask questions, and ensure early state coordination on this emerging climate mitigation strategy. The interagency meeting produced a list of priority questions from state agencies that will inform early efforts by OST to increase science capacity on mCDR in the state.

Communicating trusted scientific information

OST developed a 'Frequently Asked Questions' (FAQ) resource on marine carbon dioxide removal to communicate information gaps and misperceptions on the knowns, unknowns, challenges, and opportunities of mCDR as a climate mitigation strategy.

Conversations on Ocean Carbon: US West Coast and Alaska Perspectives

OST is partnering with the California Current Acidification Network (C-CAN) and the Alaska Ocean Acidification Network (AOAN) on a series of informational webinars on marine carbon dioxide removal (mCDR).

FEBRUARY 2024: A look at ARPA-E programs to support measurement, reporting, and verification (MRV) of mCDR.

Speakers: Dr. Simon Freeman and Dan Rogers, ARPA-E.

MC and Moderator: Dr. Lauren Linsmayer, OST.

APRIL 2024: Assessing effectiveness of marine carbon removal: Measurement, reporting, and verification of ocean alkalinity enhancement

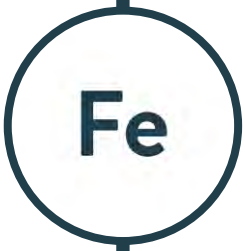
Speakers: Dr. Richard Feely, Pacific Marine Environmental Laboratory/NOAA, Dr. Yui Takeshita, Monterey Bay Aquarium Research Institute, and Dr. Matthew Long, [C]Worthy.

MC: Dr. Alex Harper, Central and Northern California Ocean Observing System. Moderator: Darcy Dugan, AOAN.

MAY 2024: Can kelp help? Exploring macroalgae cultivation as a potential carbon dioxide removal and climate mitigation strategy

Speakers: Dr. David Siegel, UC Santa Barbara, Dr. Kristen Davis, UC Irvine, and Dr. Rod Fujita, Ocean Innovations.

MC: Darcy Dugan, AOAN. Moderator: Dr. Lauren Linsmayer, OST.



SEPTEMBER 2024: A Closer Look at Ocean Iron Fertilization

Speakers: Dr. Sarah R. Smith, Moss Landing Marine Laboratories, Dr. Paul McElhany, NOAA Northwest Fisheries Science Center, and Dr. Chinmayee Subban, Pacific Northwest National Laboratory & University of Washington.

MC: Darcy Dugan, AOAN. Moderator: Kevin Travis, OST.

Alaska Ocean Acidification Network

C-CAN California Current Acidification Network

Providing Science Advice to State Agencies

Ocean Protection Council Science Advisor

In a long-standing partnership we serve as science advisor to the cabinet-level California Ocean Protection Council. Through this partnership we bring science and policy together to tackle pressing issues facing California's coast and ocean, and support meaningful progress towards OPC's Strategic Plan to Protect California's Coast and Ocean 2020-2025.

CALIFORNIA
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COUNCIL

JUNE 2024: Sea Level Rise Science & Policy Update

The State of California Sea Level Rise Guidance: 2024 Science and Policy Update, developed and adopted by the Ocean Protection Council (OPC) in partnership with the California Ocean Science Trust and an interdisciplinary Sea Level Rise Science Task Force, is a key resource as California coastal and shoreline communities confront the growing challenges of sea level rise. This guidance updates and replaces the previous 2018 Guidance to incorporate the latest scientific research and offer a comprehensive framework for resilience planning. With projections showing that sea levels could rise nearly a foot by 2050 and potentially up to twelve feet by 2150, the document underscores the urgency of proactive planning and measures to prepare for a changing coastline. It provides updated scenarios and policy recommendations tailored to California's unique coastline, ensuring that communities, planners, and decision-makers have the best available science to protect both people and ecosystems.

The 2024 Guidance is a forward-looking integration of the latest national projections and California-specific science to address the compounded risks of coastal storms, high tides, and groundwater rise. By offering updated scenarios and a precautionary approach, the guidance supports local governments and stakeholders in making informed decisions about adapting to the accelerating impacts of sea level rise. It also highlights the importance of equitable adaptation strategies to protect vulnerable communities. This comprehensive document is essential for safeguarding California's coast and ensuring that its residents and natural systems can thrive amid rising seas.

JUNE 2024: Decision-Making Framework for 30×30 in Coastal Waters

OPC worked in close partnership with the California Ocean Science Trust and the 30×30 Technical Advisory Panel, to develop a draft decision-making framework for evaluating and designating 30×30 Conservation Areas in California's coastal waters. This framework translates policy objectives for 30×30 Conservation Areas – protecting biodiversity, expanding access to nature, and building climate resilience – into objective, transparent, science-based criteria.

ONGOING: California Coast and Ocean Report Card

The first ever California Coast and Ocean Report Card will use a scientific, indicator-based approach to grade the health of California's coast and ocean. As called for in the 2020-2025 Strategic Plan (Objective 3.6),the Report Card is intended to serve as a tool to inform the public and decision-makers about the status of the ocean and to highlight areas where the state can focus solutions. The process of developing the Report Card will identify data gaps to inform future monitoring investments. The Report Card is being developed through a partnership between OPC, Ocean Science Trust, and the West Coast Ocean Alliance.

CASE STUDY: Science to Support Climate Resilient Fisheries

OCTOBER 2024: New understanding of shellfish aquaculture community adaptive capacity to ocean acidification

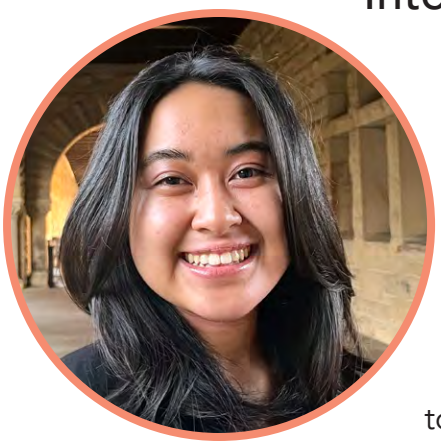
Collaborators: Dr. Tessa Hill (UC Davis), Dr. Ana Spalding (Oregon State University), Dr. Kristy Kroeker (UC Santa Cruz), and Dr. Arielle Levine (San Diego State University)

OST hosted a multi-sectoral workshop as the final step in a multi-year research initiative that looked at shellfish grower adaptation, ocean acidification (OA), and ecological thresholds.

Communicating science

Responding to a gap in accessible information on the aquaculture research landscape for decision-makers, we engaged a science communication specialist to create an interactive StoryMap ("Growing Seaweed in the Golden State") on seaweed aquaculture in California.

Intern Spotlight: Lia Escober



I came into this internship having a general interest in coastal policy, but did not fully know what it meant to work in this specific field. After completing this internship, I have realized that this is definitely a field that I would like to work in and potentially go to graduate school for, specifically around marine policy or environmental management. One of my supervisors asked me what I was looking to get out of this internship, and I said that I wanted to learn how to have the important conversations with the right people to create meaningful change. Now, I believe that I can contribute to this effort.

CASE STUDY: 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.

MARCH 2024: Insurance Symposium for Wigi (Humboldt Bay)

In collaboration with the North Coast Resource Partnership and the California Department of Insurance, OST convened local practitioners alongside insurance and scientific experts gathered to discuss potential insurance and finance strategies to improve resilience to sea level rise and flooding in Wigi, or Humboldt Bay. The event helped break down silos between adaptation and insurance and conversations led to partnerships discussions on pilot projects in the North Coast region.

SEPTEMBER 2024: Talking Nature and Insurance at New York Climate Week

OST partnered with the California Department of Insurance and nonprofit Innsure to bring together funders, insurance experts, state government, and federal government over dinner to explore opportunities to incentivize community-up approaches to insurability planning to bolster economic resilience in a climate future. OST also co-hosted a workshop with the Center for Coastal Climate Resilience at UC Santa Cruz to discuss and learn about innovative policy and finance tools to accelerate NBS. This session, with opening remarks by Assemblymember Damon Connolly, brought together legislative members, private sector professionals, scientists, and practitioners to generate ideas for advancing NBS via innovative policy and finance tools.

Our Team

Kiya Bibby
Associate Director, Science-Policy Engagement

Dr. Jill Harris
Senior Science Fellow; California Ocean & Coast Report Card

David Lawlor
Philanthropy Director

Former

Monica LeFLore
Science Officer

Dr. Brie Lindsey
Deputy Director

Dr. Lauren Linsmayer
Senior Science Officer

Anthony Rogers
Strategic Initiatives Director

Former

Emma Stone
Administrative & IT Coordinator

Kevin Travis
Senior Science Officer

Dr. Heidi Waite
Science Officer

Dr. Liz Whiteman
Executive Director

Lori Zook
Finance & Administration Director

Partners

Alaska Ocean Acidification Network
California Current Acidification Network (C-CAN)
California Department of Fish and Wildlife
California Department of Insurance
California Fish and Game Commission
California Ocean Protection Council
California Polytechnic University Humboldt
California Sea Grant
California Sea Urchin Commission
California State Assembly
California State Senate
Center for Coastal Climate Resilience, UC Santa Cruz
Center for Sea Level Rise Solutions
Coastal and Marine Sciences Institute, UC Davis
CSU Council on Ocean Affairs, Science, and Technology (COAST)
Environmental Defense Fund
Greater Farallones Association/Greater Farallones National Marine Sanctuary
Hog Island Oyster Co.
Humboldt Bay Harbor and Recreation and Conservation District
InnSure
Moss Landing Marine Laboratories
North Coast Resource Partnership
Oregon Ocean Science Trust
Oregon State University
Ocean Carbon & Biogeochemistry Program
San Diego Regional Climate Collaborative
San Diego State University
Southern California Coastal Water Research Program (SCCWRP)
Sunken Seaweed
West Coast Ocean Alliance

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:

Builders Initiative

California Ocean Protection Council

Change Happens Foundation

Climateworks Foundation

Earth Gives

Emmett Foundation

Firedoll Foundation

Grantham Foundation for the Protection of the Environment

J.W. and H.M. Goodman Family Foundation

Lenfest Ocean Program

NOAA Ocean Acidification Program

Pacific States Marine Fisheries Commission

Park Foundation

Paul M. Angell Family Foundation

University of California, Davis

Walton Family Foundation

Windward Fund - Carbon to Sea

Alena Ebeling-Schuld

David Lawlor

Rick LeFlore

Steve Murray

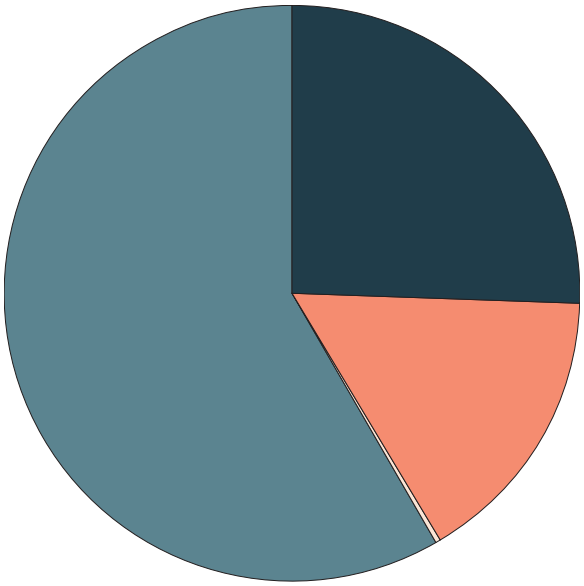
Kara Voss

Elizabeth Whiteman

Financials

Revenues

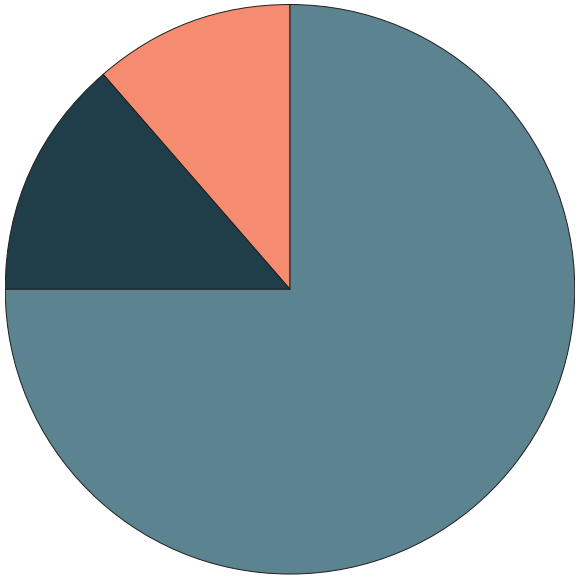
$3,971,030



Investment Income	$2,281,401
Program Grants	$1,070,291
Contract Revenue	$616,311
Individual Donations	$3,027

Expenses

$1,928,820



Program Services & Projects	$1,451,111
General Administration	$259,979
Fundraising	$217,730

Net assets without donor restrictions: $12,935,024

Audited financials for the fiscal year ending September 30, 2024 are available on request

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.

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.

Give online at oceansciencetrust.org/donate

To donate by check, please mail to:

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Sacramento, CA 95814