



### Executive Director's Report - April 24, 2018

*The Executive Director's Report provides an update on OPC outcomes and accomplishments since the previous OPC meeting. This report covers February 2018 – April 2018<sup>1</sup>.*

#### Funding

All funding opportunities are designed to address the priority issue areas identified in OPC's Strategic Plan.

#### **Water Quality, Supply and Infrastructure Improvement Act of 2014 (Proposition 1):**

At its November 2017 meeting, OPC approved updated Grant Guidelines for its Proposition 1 Grant Program. OPC staff released the Grant Solicitation and Application Instructions on December 18, 2017, and the application period closed on February 23, 2018. OPC received 28 proposals requesting over \$29 million in funding – OPC currently has a maximum of \$11.1 million available to support projects in this second round of funding. Proposal submittals represent good geographic distribution throughout the state and 17 of the 28 proposals address two or more of the four priority issue areas identified in the grant guidelines. These four priority issue areas are: protection of marine managed areas, including the state marine protected area (MPA) network and Areas of Special Biological Significance (ASBSs); addressing coastal and ocean water quality impacts; fisheries; and climate change including sea-level rise.

To help OPC staff with proposal evaluation and prioritization, we have assembled a Review Committee consisting of representatives from NOAA's Office of Coastal Management, USC Sea Grant, and partner state agencies including Department of Fish and Wildlife, State Lands Commission, Coastal Commission, State Water Resources Control Board, CalRecycle, and the California Natural Resources Agency. In late March, OPC staff organized an orientation meeting for the Review Committee, assigned proposals, and initiated the review process. Final proposal rankings are expected in mid-May, followed by site visits in May and June. Proposals will be brought to the OPC for consideration and possible approval at the July and October 2018 Council meetings.

#### **Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84):**

At its August 2017 meeting, OPC authorized a disbursement of \$7 million to the two Sea Grant programs in California to fund and administer a competitive grant process for scientific research projects to support OPC priorities. The application period for preliminary proposals closed on March 15, 2018 and 240 pre-proposals were submitted. The total amount of funding requested was just over \$53 million.

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<sup>1</sup>The present ED report contains descriptions of OPC grants or contracts that have closed since the last OPC meeting. Each grant or contract is described under the header of the OPC strategic plan issue the work is intended to address.

Review committees will meet to review the pre-proposals in May and June and selected applicants will be invited to submit full proposals in mid to late June.

### Staffing

On April 16th, we welcomed Tova Handelman to our staff as an Environmental Scientist in our MPA program. Tova will lead OPC's Once-Through Cooling Interim Mitigation Program while providing support for our other MPA program priorities. Over the past year, Tova has been a California Sea Grant Fellow in OPC's MPA program and comes to us with additional experience working on MPA management for Heal the Bay in Santa Monica. Tova has a Master's Degree in Environmental Science and Management from the Bren School at UC Santa Barbara, and a Bachelor's Degree in Environmental Policy from UC Irvine.

### Strategic Plan Issue Area 1: Science-Based Decision-making

Science-based decision-making is integrated into all priority program areas; see below for more details.

### Strategic Plan Issue Area 2: Climate Change

#### ***Cross-cutting climate change efforts:***

##### **Global Climate Action Summit**

The Global Climate Action Summit will take place from September 12-14 in San Francisco. The Summit will showcase climate action around the world, along with bold new commitments, to give world leaders the confidence they can go even further by 2020, starting from when they meet at the United Nations COP24 in November. Leaders from state and local governments, business, and citizens from across the globe will share what they have achieved to date and commit to doing more. Ocean Protection Council staff has been working closely with the advisory committee for the Global Climate Action Summit to integrate global ocean and coastal action ambition into this global climate dialogue. We have secured a breakout session at the main event as well as an affiliated oceans event, and are exploring ways with the planning committee about how to integrate the oceans and related commitments, statements of achievement and action into other elements of the Summit program. You can learn more about the Global Climate Action Summit here: <https://globalclimateactionsummit.org/>

##### **Updated OPC Climate Webpage**

The OPC Climate Change webpage has recently been updated by OPC climate staff. You can access the site here: <http://www.opc.ca.gov/opc-climate-change-program/>. Please let OPC staff know if you have suggestions, edits, or questions.

##### **Fourth California Climate Change Assessment:**

Currently underway, the California Fourth Climate Change Assessment (4<sup>th</sup> Assessment) is the first inter-agency effort to implement a substantial portion of California's Climate Change Research Plan. The research projects of the 4<sup>th</sup> Assessment were made possible through two funding sources, one managed by the California Energy Commission (CEC) and another by the California Natural Resources Agency. In

addition to the research projects, with the support of the Ocean Science Trust and the OPC-Science Advisory Team, OPC is leading the topical assessment focused on ocean and coasts that will be paired with the other regional assessments of the 4<sup>th</sup> Assessment. The ocean and coastal assessment will support, bolster, and synthesize funded research projects most relevant to climate change impacts to the ocean and coast. More details can be found here:

<http://www.oceansciencetrust.org/projects/assessing-climate-impacts-on-californias-coast/>.

In addition, OPC staff is also leading the ocean and coastal component of the statewide summary of the 4<sup>th</sup> Assessment. The 4<sup>th</sup> Assessment – reflecting all these different components – will be released in late Summer/early Fall of this year.

### ***Ocean Acidification:***

#### **International Alliance to Combat Ocean Acidification**

On February 13-14, OPC Climate Policy Advisor, Jenn Phillips, provided keynote remarks at the 11th annual New Zealand Ocean Acidification Workshop at the University of Waikato in Hamilton, New Zealand. The workshop attracted researchers and policymakers from New Zealand, Australia, France and the United States. Jenn spoke about California's role as a founding member of the International Alliance to Combat Ocean Acidification (OA Alliance), and California's leadership on addressing the impacts of climate change on our oceans. The policy session was followed by a discussion on the New Zealand Government's recent decision to join the OA Alliance. As a reminder, government members of the OA Alliance are encouraged to create an OA Action Plan that describes their own unique contribution to advancing some or all the goals of the OA Alliance as written in the Call to Action. OA Action Plans will help governments create actionable responses to threats in their regions and will help affiliate members best leverage their expertise and resources on this issue.

The International Alliance to Combat Ocean Acidification celebrated many accomplishments last year:

- New Zealand, California, Oregon, and British Columbia have begun to initiate the development of OA Action Plans.
- Washington developed an update to their OA Action Plan.
- Chile, Ocean Conservancy, the U.S. States of California, Oregon, Washington and Province of British Columbia hosted 10 national governments at the first in-person meeting of OA Alliance in conjunction with the 2017 Our Ocean Conference.
- Fiji co-hosted an OA Alliance side event at COP23 and invited the OA Alliance to join the Ocean Pathway Partnership, a coalition working to integrate oceans into the United Nations Framework Convention on Climate Change (UNFCCC) process by 2019.

The OA Alliance looks forward to a productive year, which will include the unveiling of OA Action Plans as they are developed and continued support of our partners in elevating ocean acidification and ocean issues within international climate agreements, frameworks and the UNFCCC process.

### **Process to develop California's Ocean Acidification Action Plan**

OPC, with support from OST, is developing and releasing California's Ocean Acidification Action Plan as part of California's commitment to the International Alliance to Combat Ocean Acidification. The initial stages of this process are already underway with our scoping interviews having started in March. This process includes informal interviews with entities across CA and key members of the OA Alliance community. In addition to scoping interviews, we are compiling key resources and drawing on existing efforts (such as the OA Alliance's OA Action Plan Toolkit, other ocean acidification action plans and California's current ocean and climate policy landscape) in order to develop a robust and geographically relevant Action Plan. More information about this process can be found here:

<http://www.opc.ca.gov/oa-action-plan/>

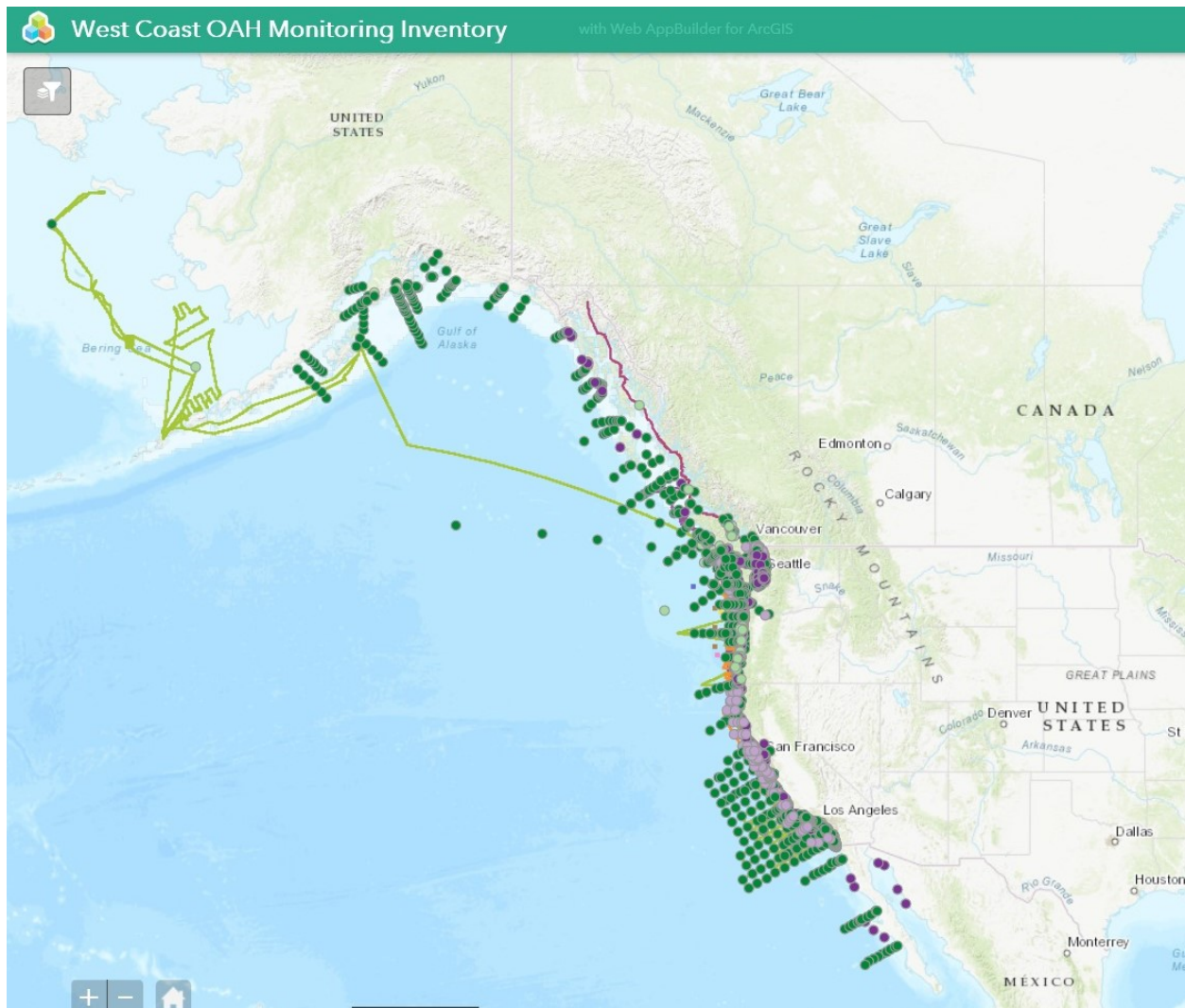
### **Assembly Hearing on Aquatic Vegetation as an Ocean Acidification Management Tool in California**

On February 6, co-chairs from the OPC-SAT working group on aquatic vegetation and ocean acidification presented findings from their recent report entitled "Emerging understanding of seagrass and kelp as an ocean acidification management tool in California" in an informational hearing of the Select Committee on Coastal Protection and Access to Natural Resources, chaired by Assemblymember Mark Stone. The co-chairs, Dr. Karina Nielsen and Dr. Jay Stachowicz, summarized the current understanding and knowledge gaps on how aquatic vegetation may favorably alter water chemistry, as well as highlighted several next steps in implementing meaningful management strategies. Secretary John Laird and Deborah Halberstadt joined the co-chairs in framing the conversation and presented commitments that the State of California has made to reduce the negative impacts of ocean acidification. Mary Small, Chief Deputy Executive Officer of the State Coastal Conservancy, also spoke on the State's aquatic restoration efforts to round out a panel on the State perspective. Presentations of on-ground research and projects were also highlighted by Tessa Hill (University of California, Davis), Sarah Newkirk (The Nature Conservancy) and Kerry Nickols (California State University, Northridge). For more information on the working group and to access the report, please visit: <http://www.oceansciencetrust.org/projects/sav/>

### **Federal/State Ocean Acidification and Hypoxia (OAH) Monitoring Task Force**

In 2016, the *Joint OAH Monitoring Task Force* of the Pacific Coast Collaborative (PCC) and federal Interagency Working Group on Ocean Acidification (IWG-OA), embarked on an undertaking to inventory the OAH monitoring infrastructure on the West Coast from California through Alaska. The intention was to compile a comprehensive list of OAH-relevant field monitoring efforts documenting chemical, physical, and biological trends all along the coast, to ultimately inform the design of a West Coast Integrated OAH Monitoring network and the subsequent strategic investments required to build it.

The Task Force assembled information and responses from the monitoring and research community into an inventory, which now contains records from over 125 participants describing over 200 projects along the West Coast. While data collection for the inventory is complete, the Joint OAH Monitoring Task Force is reviewing the information that was collected with participants before it is distributed more widely. A final inventory product is on track for public release by Summer 2018, but a draft map of the inventory can be viewed below.



In the fall or winter of 2018, we will convene managers and decision-makers to identify information needs, while jointly conferring with monitoring experts, to conduct a gaps assessment and prioritize those gaps to inform future research and monitoring investment. The ultimate goal is to rigorously document trends in key climate and ocean acidification metrics, and to empower managers to implement adaptation and mitigation strategies.

### ***Sea-level Rise:***

At the March 2018 meeting, OPC adopted the 2018 update to the State of California Sea-Level Rise Guidance. OPC staff is now developing its strategy for implementation of the Guidance, which will be discussed at this April OPC meeting (see [Agenda Item 7](#)), and is starting to coordinate with state agencies. OPC staff has also been working with the Governor's Office of Planning and Research's Integrated Climate Adaptation and Resiliency Program on their beta testing of the Adaptation Clearinghouse [website](#) to ensure that it will include relevant sea-level rise adaptation tools and resources.



### Strategic Plan Issue Area 3: Sustainable Fisheries and Marine Ecosystems

#### ***Sustainable Fisheries:***

##### **California Dungeness Crab Fishing Gear Working Group**

The Working Group continues to support thriving whale populations and a profitable Dungeness crab fishery along the West Coast. The Working Group is currently piloting a draft Risk Assessment and Mitigation Program (RAMP) during the 2017-2018 Dungeness crab fishing season in California. All aspects of the draft RAMP are voluntary during this pilot phase, and the program is designed to be flexible and responsive to considering new information, technologies, and approaches to reducing the risk of whale entanglements. The Working Group reconvened on March 14, 2018 to continue to evaluate the relative risk of whale entanglements as part of the 2017-18 RAMP Pilot based on four priority factors – season delay, forage/ocean conditions, whale concentrations and rate of entanglements. The Working Group has an in-person meeting on April 23-24, 2018. For more information on the RAMP Pilot, please visit this [webpage](#). The Working Group will continue to support and be involved in collaborative research projects designed to inform the RAMP and share information about their progress, including the RAMP and associated pilot, with commercial/recreational fishermen, decision-makers, and the broader public. For more information, visit the Working Group's [webpage](#).

##### **Scientific Peer Review Processes for Pacific Herring and Red Abalone Fishery Management Plans**

OPC funded the [Ocean Science Trust](#) to develop guidance and recommendations for the California Department of Fish and Wildlife (CDFW) regarding a suite of scientific peer review options for California's existing and future fishery management needs, focused on review of science supporting fishery management plans (FMPs). This [report](#) was finalized in June 2017 and provided for consideration by CDFW to help inform the State's process to amend the Marine Life Management Act (MLMA) Master Plan. As part of this aforementioned grant, OPC has funded OST to facilitate the scientific peer review processes for the Pacific herring and red abalone FMPs, utilizing the guidance and recommendations from the June 2017 report. OPC and OST are currently closely collaborating with the CDFW and the California Fish and Game Commission to advance the peer review processes.

##### **Harmful Algal Bloom Workshop Co-Hosted by Ocean Protection Council & Ocean Science Trust**

On March 22-23, 2018, Ocean Protection Council and Ocean Science Trust co-hosted a workshop in coordination with the Interagency Harmful Algal Bloom Task Force (which consists of representatives from the Department of Fish and Wildlife, the Fish and Game Commission, the Department of Public Health, and the Office of Environmental Health Hazard Assessment and Ocean Protection Council) focused on harmful algal blooms. Specifically, the workshop focused on domoic acid monitoring for seafood safety, with a consideration for other potential Harmful Algal Bloom toxins that may pose challenges in California. Workshop participants included agency experts from the West Coast (Washington, Oregon, California and the National Oceanic and Atmospheric Association), academic leaders, fishing industry representatives, NGOs, and other partners. This workshop began implementation of OPC-Science Advisory Team Working Group and Interagency Harmful Algal Bloom Task Force recommendations one and five from the October 2016 scientific guidance document: [Framing the Scientific Opportunities on Harmful Algal Blooms and California Fisheries](#). This workshop also built from the [Frequently Asked Questions: Harmful Algal Blooms and California Fisheries](#)

document, which was finalized in August 2016. A workshop summary is being prepared by OPC and OST and will be shared publicly soon.

**Marine Protected Areas (MPAs):** The Ocean Protection Council Science Advisory Team (OPC-SAT) has convened a Working Group to create scientific guidance on the Once-Through Cooling Interim Mitigation Program. A summary of the Working Group members, along with their scope of work and timeline can be seen in Attachment 1 below. The results from this Working Group - along with grant guidelines for the Once-Through Cooling Interim Mitigation Program that will be informed by the scientific findings - will be brought to the Council for consideration and approval at the July OPC meeting. Prior to the July meeting, the grant guidelines will be available for public comment for at least 30 days to ensure ample opportunity for stakeholders to review and provide feedback.

California has launched a new open data platform (<https://data.cnra.ca.gov/>) to ensure the long term curation and availability of all state-funded data related to the monitoring and evaluation of California's MPA Network. The system is built on the "opengov" platform, which allows for powerful keyword searches, preview capabilities, and easy connection with other existing data repositories. The system is currently being populated and is on track to contain all state-funded raw data, technical reports, workshop proceedings, grey literature, and other supporting information by the end of 2018.

The California Department of Fish and Wildlife and the Oregon Department of Fish and Wildlife, both lead managing agencies for their state's MPAs, along with OPC staff, will meet for the second time on April 25 - 26 as part of a series of summit meetings to discuss MPA performance evaluation. This meeting will focus on assessing available analytical approaches to evaluate MPA performance as well as creating report formats to effectively share results to decision makers. Both Oregon and California will be reporting out on the performance of their MPAs in 2023 and 2022, respectively, and this collaboration seeks to leverage resource and advance the knowledge of MPA performance evaluation.

#### Strategic Plan Issue Area 4: Coastal and Ocean Impacts from Land-Based Sources

##### **Marine Pollution Program:**

##### **California Ocean Litter Strategy**

In 2016, OPC and the National Oceanic and Atmospheric Administration Marine Debris Program (NOAA Marine Debris Program) initiated a partnership with California Sea Grant to develop the *2018 California Ocean Litter Prevention Strategy: Addressing Marine Debris from Source to Sea* (Strategy). The Strategy is intended to be a roadmap for action over the next six years and was developed with stakeholder input solicited through workshops and multiple opportunities for public comment. The Strategy is now being brought before the Council as [Agenda Item 6](#).

##### **Scientific Trash Monitoring**

In April 2017, OPC approved funding for a project to research and develop scientific and standardized trash monitoring methods to effectively implement the Trash Amendments. The project team held the first meeting of the Technical Advisory Committee in late January 2018, and field testing of monitoring methodologies is expected to begin this summer.

## **6<sup>th</sup> International Marine Debris Conference**

In March 2018, OPC staff presented on the California Ocean Litter Strategy Update Process at the 6<sup>th</sup> International Marine Debris Conference, and discussed the similarities and differences between California's process and collaborative efforts to address ocean litter underway in other states. OPC staff also co-chaired a session on monitoring methodologies to assess trash in coastal environments. Overall, the session demonstrated the need for standardized and rapid or efficient methods to scientifically assess marine debris. Several experts presenting in the session touched on different ways to work towards rapid assessments, including using citizen science and mobile applications, or unmanned aerial system technology with machine learning. Both the presentation and the session were well-received by the national and international community.

## **Strategic Plan Issue Area 5: Existing and Emerging Ocean Uses**

### **Marine Renewable Energy**

At the request of Governor Brown in May 2016, the Director of the federal Bureau Ocean Energy Management (BOEM) established a BOEM California Task Force to facilitate education, coordination and consultation on leasing and permitting for, as well as the monitoring and evaluation of, renewable energy projects on the California outer continental shelf. OPC staff assisted the Governor's office and BOEM staff in organizing the kick-off meeting for the Task Force which was held in Sacramento in October 2016. During 2017, OPC staff assisted BOEM and the California Energy Commission (CEC) with outreach efforts on the Central Coast. The target for this outreach was local elected officials, fishermen, scientists, tribes, environmental groups, and the maritime industry. In addition, OPC staff assisted the CEC in locating relevant data sets for the offshore wind planning process that is being conducted at the request of the Task Force. A second Task Force meeting will be announced after this planning process has been completed, most likely sometime during the summer of this year.

In February, the Redwood Coast Energy Authority, a Community Choice Aggregation, announced that it had assembled a consortium for the purposes of developing a small-scale commercial wind farm off the Humboldt County coast. As a result of this announcement, the CEC, BOEM, and the OPC recently began outreach on the North Coast.

### **Outer Continental Shelf Oil and Gas Development**

At the request of the Governor's office, OPC coordinated the State's response to the Bureau of Ocean Energy Management (BOEM) "Notice of Availability of the 2019–2024 Draft Proposed Outer Continental Shelf Oil and Gas Leasing Program (DPP) and Notice of Intent to Prepare a Programmatic Environmental Impact Statement" issued in the federal register on January 8<sup>th</sup>. The DPP proposes six BOEM lease sales on the California OCS starting in 2020, and the January 8<sup>th</sup> federal register notice initiates a formal scoping process for a programmatic EIS for the DPP. On behalf of the Governor, OPC submitted the State's comments to the federal register on March 9<sup>th</sup>. The Governor's submission included letters from the California Natural Resources Agency, Ocean Protection Council, State Lands Commission, Coastal Commission, Department of Conservation, Fish and Game Commission, State Parks, State Coastal Conservancy, and the Air Resources Board. BOEM is expected to release 2019–2024 Proposed



Outer Continental Shelf Oil and Gas Leasing Program by the end of the year. A 90-day comment period will commence upon the release of the program.

### **Coastal Sediment Management Workgroup**

The OPC/CNRA-led Coastal Sediment Management Workgroup continues to meet on a bimonthly basis to complete and begin implementing a California Sediment Master Plan. [Agenda Item 4b](#) builds on this work and requests authorization for funding a study that will predict the effects of climate change on natural sediment transport to the coast. At the request of the U.S. Army Corps of Engineers, OPC staff recently participated in a national state-federal review panel for regional sediment pilot projects. The program was the result of the 2016 amendments to the Water Resources Development Act. Projects must be innovative and address regional sediment management issues including but not limited to, coastal erosion, wetlands restoration, shoreline restoration.

# Scientific Guidance for Once-Through Cooling Mitigation Program

*A Working Group of the Ocean Protection Council Science Advisory Team*

A diverse group of globally recognized experts on nearshore ecosystems, marine populations connectivity, larvae mobility, and power plant intake has been assembled to provide scientific advice in interpreting the state's once-through cooling (OTC) policy. This Ocean Protection Council Science Advisory Team (SAT) Working Group is made up of current members of the SAT and other experts that were recruited to ensure that relevant disciplines were included. Working Group members are:

- **Richard Ambrose, Co-Chair**  
*OPC-SAT, UC Los Angeles*
- **Peter Raimondi, Co-Chair**  
*UC Santa Cruz*
- **Adrian Stier**  
*UC Santa Barbara*
- **Christopher Edwards**  
*UC Santa Cruz*
- **Jennifer Caselle**  
*UC Santa Barbara*
- **Kerry Nickols**  
*CSU Northridge*
- **Mark Carr**  
*OPC-SAT, UC Santa Cruz*
- **Nathalie Reynolds**  
*University of San Diego*
- **Sean Anderson**  
*CSU Channel Islands*

## The Challenge

The OTC Policy directs the state to use fees to support **“mitigation projects directed toward increases in marine life associated with the state’s Marine Protected Areas in the geographic region of the facility”**. The Working Group will submit consensus recommendations on the definition of the spatial extent of OTC impacts and evaluate which common open coast mitigation strategies are supported by scientific evidence to likely achieve the goal of increasing marine life. The Ocean Protection Council, which is designated to administer the mitigation program, has asked the Ocean Science Trust to convene and administer the Working Group to address the following scientific questions:

1. *The Policy states that mitigation funds must be spent on projects that are within the “geographic region of the facility” but does not define that geographic range. The group will work to define what “geographic region” means, specific to the different types and locations of intakes of the ten power plants that are part of the program. This will include a thorough review of the existing source water calculations of each facility.*
2. *The Policy also states that mitigation funding should be spent on projects that lead to “increases in marine life associated with the state’s Marine Protected Areas.” The Working Group will evaluate the likelihood that common open coast mitigation strategies or methods will lead to increases in marine life associated with the state’s MPA network based on currently available scientific evidence.*

