



Staff Recommendation
May 23, 2019

**Consideration of Authorization to Disburse Funds to Ocean Science Trust to Administer
OPC Science Advisory Team Working Groups Focused on MPA Science Needs**

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RECOMMENDED ACTION:

Authorization to disburse up to \$500,000 to the Ocean Science Trust (OST) to administer two Ocean Protection Council-Science Advisory Team (OPC SAT) working groups focused on science needs for California's network of marine protected areas (MPAs):

3.d.1: Develop 2022 MPA Management Review scientific guidance; and

3.d.2: Conduct an MPAs and climate resilience science synthesis and identify data needs

Funding for these projects would come from two sources, one for each of the working groups to be convened. Staff recommends that up to \$250,000 be disbursed from Proposition 84 (Prop 84) to OST for Item 5.d.1, the OPC SAT working group to develop 2022 MPA Management Review scientific guidance, and \$250,000 from the Environmental License Plate Funds (ELPF) to OST for Item 5.d.2, the OPC SAT working group to identify MPAs and climate resilience science synthesis and data needs.

LOCATION: Statewide

STRATEGIC PLAN OBJECTIVE(S): Science-based decision-making; Climate Change; Sustainable fisheries and marine ecosystems.

FINDINGS AND RESOLUTION:

Staff recommends that the Ocean Protection Council (OPC) adopt the following findings:

"Based on the accompanying staff report OPC hereby finds that:

- 1) The proposed projects are consistent with the purposes of Division 26.5 of the Public Resources Code, the Ocean Protection Act;
- 2) The proposed projects are consistent with OPC's Proposition 84 and Environmental License Plate Funds grant program funding guidelines (Interim Standards and Protocols, August 2013); and
- 3) The proposed project is not a 'legal project' that triggers the California Environmental Quality Act (CEQA) pursuant to Public Resources Code section 21068 and Title 14 of the California Code of Regulations, section 15378. If it were determined to be a 'legal product' under CEQA, the proposed project is categorically exempt from review under the California Environmental Quality Act ("CEQA") pursuant to 14 Cal. Code of Regulations Section 15306 because the project involves only data collection, research and resource evaluation activities that will not result in a serious or major disturbance to an environmental resource.

Staff further recommends that OPC adopt the following resolution pursuant to Sections 35500 *et seq.* of the Public Resources Code:

"OPC hereby approves the disbursement of up to \$500,000 to the Ocean Science Trust to implement the OPC Science Advisory Team Working Groups focused on MPA Science Needs.

This authorization is subject to the condition that prior to disbursement of funds, the Ocean Science Trust shall submit for the review and approval of the Executive Director of the OPC detailed work plans, schedules, staff requirements, budgets, and the names of any contractors intended to be used to complete the projects, as well as discrete deliverables that can be produced in intervals to ensure the projects are on target for successful completion. All projects will be developed under a shared understanding of process, management and delivery."

Item 3.d.1. 2022 MPA Management Review Scientific Guidance

Background:

Acknowledging the importance of California's marine resources to the state's economy and ecological systems, the California Legislature passed the Marine Life Protection Act (MLPA, Chapter 10.5 of the California Fish and Game Code, §2850-2863) in 1999. This

legislation required the state to design and implement a network of MPAs to meet the following six goals:

1. Protect the natural diversity and abundance of marine life, and the structure, function and integrity of marine ecosystems.
2. Help sustain, conserve and protect marine life populations, including those of economic value, and rebuild those that are depleted.
3. Improve recreational, educational and study opportunities provided by marine ecosystems that are subject to minimal human disturbance, and to manage these uses in a manner consistent with protecting biodiversity.
4. Protect marine natural heritage, including protection of representative and unique marine life habitats in CA waters for their intrinsic values.
5. Ensure California's MPAs have clearly defined objectives, effective management measures and adequate enforcement and are based on sound scientific guidelines.
6. Ensure the State's MPAs are designed and managed, to the extent possible, as a network.

To meet these goals, California has established a globally significant MPA network that consists of 124 individual MPAs and spans the state's entire 1,100-mile coastline. California's science-based and stakeholder-driven network was implemented in a stepwise fashion across four geographic regions (Central Coast, North Central Coast, South Coast, and North Coast) from 2004-2012.

Monitoring efforts have been ongoing since the implementation of MPAs in each region. The first phase of MPA monitoring was intended to establish an ecological and socioeconomic baseline at or near the time of MPA implementation, against which future changes can be measured. To date, OPC has invested \$16 million in baseline MPA monitoring; this phase of monitoring concluded in 2018. To guide long-term MPA monitoring into the future, the California Department of Fish and Wildlife (CDFW) has created an MPA Monitoring Action Plan¹ that lays out priority metrics, habitats, sites, and species to focus on for long-term monitoring. The Action Plan was adopted by the California Fish and Game Commission (FGC) and OPC in the fall of 2018. At its July 2018 meeting, OPC approved disbursement of \$9.5 million to initiate a competitive process to solicit and fund long-term monitoring projects consistent with the Action Plan.² At the May 23 Council meeting, OPC will consider approving funding for individual long-term MPA monitoring projects ([Item 3a](#)).

¹ <https://www.wildlife.ca.gov/Conservation/Marine/MPAs/Management/monitoring/action-plan>

² http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180725/Item4a_MPA_MonitoringProgramPhase2_FINAL.pdf

MPA baseline data, long-term monitoring data, and derived analytical products will inform the first decadal management review of the MPA network, which is currently scheduled for the fall of 2022. This management review, mandated by the 2016 Master Plan for MPAs³, will focus on the efficacy of the state’s MPA network at meeting the broad goals of the MLPA. California Fish and Game Commission (FGC) is the regulatory authority for MPAs and will conduct the 2022 Management Review. California Department of Fish and Wildlife (CDFW) is the MPA network’s managing agency and will be responsible for providing evidence to FGC demonstrating how the MPA network is meeting the goals of the MLPA. OPC is the state policy lead for MPAs and will contribute to the review primarily by providing scientific support and coordinating an effective statewide communications strategy to engage California’s ocean communities in the 2022 Management Review. All three agencies will be involved in developing the scale of the management review and ensuring that it is appropriately scoped. To that end, there is a clear need for scientific guidance to identify key metrics and performance objectives, building off the framework of the Action Plan, to inform the 2022 management review.

Project Summary:

This project would create a working group of the OPC SAT to develop a scientific framework for the 2022 management review of California’s MPA network. OST will convene and manage the working group in close collaboration with OPC, CDFW, and FGC. The working group will develop a scientific guidance report with recommendations and guidelines for use by the state in developing the scope and scale of the 2022 management review.

In conjunction with convening the scientific working group, OST will convene a policy advisory committee, including representatives from relevant state agencies, to ensure alignment between scientific analysis and state management needs. OST will also coordinate discussions between the principal investigators of the long-term monitoring projects (under consideration for Council approval in Item 3a) and the scientific working group, as these efforts will be running concurrently and are inextricably linked. Finally, OST will coordinate the efforts of this group and the MPA climate resiliency scientific working group (also under consideration for Council approval at the May 23 meeting and discussed in detail below). The MPA climate resiliency working group will consider the capacity of the California MPA Network to provide ecological and social resilience to climate change. Its findings will be important to consider in the 2022 management review.

³ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=133535&inline>

Deliverables:

This OPC SAT Working Group will produce a report to inform the first decadal management review of California’s MPA network. The report will provide a clear, science-based framework for assessment and evaluation of California’s MPA network. It will also take into account the relatively young age of the MPA network and the unique challenges of assessing MPA performance in temperate marine ecosystems. Building on the foundation of the Action Plan, the working group will provide scientific definitions of selected terms in the MLPA and will recommend appropriate scientific approaches for integrating baseline and long-term monitoring data (as well as other available data sources) into network-wide analyses to address the goals of the MLPA.

The report will include, but not be limited to:

- A list of quantitative, tractable scientific questions that can reasonably be assessed in the management review;
- Scientific definitions of terms in the MLPA identified by OPC, CDFW, and FGC as necessary for the 2022 review;
- Methods for integrating baseline MPA monitoring, long-term MPA monitoring, and other available data streams into informative analytical products;
- Appropriate approaches for answering network-wide evaluation questions;
- Identification of significant gaps in our understanding of MPA performance in California, and recommendations for funding prioritizations to fill these gaps; and
- Additional supplemental materials where appropriate and useful.

Working Group membership:

OPC, OST, the OPC SAT, FGC, and CDFW will solicit nominations for membership and chairmanship of the working group. Final group membership will be determined in consultation with the OPC SAT Executive Committee, per OPC SAT working procedures. Members will have diverse expertise that represents the following fields: marine ecology, ecological modeling, marine protected area science, ecosystem-based management, fisheries, climate change, physical and chemical oceanography, and/or socioeconomics.

Project Timeline:

June 2019 - June 2020

3.d.2. MPAs and Climate Resilience Science Synthesis and Data Needs

Background:

As acknowledged above, California is a world leader in developing and managing a science-based and stakeholder-driven network of MPAs established to conserve marine life and habitats. In recent years, the effects of climate change on marine ecosystems have come more sharply into focus and there is growing scientific interest in understanding the role that MPAs may play in building ecosystem resilience and providing societal benefits in the face of climate change. Assessing California's MPA network holistically through the lens of climate impacts and adaptation may illuminate additional benefits beyond those considered at the time of designation of the MPA network. However, this is an emerging field of study and there is a clear need for scientific guidance to inform this effort.

Previous global scale studies have identified general characteristics of MPAs that can enhance their ability to promote resistance and resilience in the face of climate change. This project will help to advance these studies in California waters and may complement the required 2022 decadal review of California's MPA network performance.

Project Summary:

OST will convene an OPC SAT working group to develop a roadmap for exploring the role of California's MPA network in imparting climate resistance and resilience. Specifically, the working group will develop a scientific guidance document that identifies existing science and data gaps and makes recommendations on the best approach to assess and monitor the ability of California's MPA network to provide ecosystem resistance and resilience against climate-driven impacts.

Drawing on OPC SAT expertise and activities, this working group will:

- Define ecological and societal resistance and resilience to climate change for California's MPA network;
- Develop a scientific guidance document that lays out recommended steps to successfully evaluate and monitor the contribution of California MPA network to climate change resilience;
- As part of the above, specify the scientific data, analyses and metrics that are critical to understanding and monitoring this role of the MPA network;

- Identify science already conducted and/or being conducted that contributes to the above criteria;
- Create a list of scientific gaps or data recommended to be addressed before a full exploration could be conducted; and
- Consider management actions that could be taken to enhance the network's ability to confer climate resilience.

Project deliverables:

In consultation with OPC and CDFW, the working group will develop a scientific guidance document that will contain actionable recommendations to inform how California's MPA network could be assessed and used as a tool to provide ecological and societal resistance and resilience to climate change. The guidance and recommendations provided will include, but will not be limited to:

- A list of quantifiable, tractable scientific questions and associated methods that could reasonably be used to assess the performance of California's MPA network in the context of climate change;
- A list of current and ongoing scientific projects and data that address, or could address, the use of California's MPA network as a tool for resilience;
- A description of the current scientific understanding of the MPA network's function through a climate change lens; and
- A gap analysis to identify research and monitoring needs to better address how MPAs may perform in the face of climate change and recommendations for funding prioritizations to fill these gaps.

Working Group Membership:

The OPC, OST, and OPC SAT will solicit nominations to identify potential SAT members to (co)chair and additional members (between 5-10 total) of the working group. Final Working Group membership will be determined in consultation with the OPC SAT Executive Committee per its working procedures. Members should have expertise in, and cumulatively represent, the following fields: marine protected area science, marine ecology, ecological modeling, social science, oceanography, and climate science.

Project Timeline:

June 2019 - March 2020

ABOUT THE GRANTEE:

California Ocean Science Trust is a nonprofit public-benefit corporation under section 501(c)(3) of the Internal Revenue Code and was established pursuant to the California Ocean Resources Stewardship Act of 2000 to encourage coordinated, multi-agency, multi-institution approaches to translating ocean science to management and policy applications. OST bridges the gap between cutting edge scientific research and sound ocean management, accelerating progress towards a healthy and productive ocean future for California. As a nonprofit partner to OPC, OST’s strength lies in nimble response to state priorities: leveraging resources and creating partnerships to foster innovative yet pragmatic approaches to difficult problems.

PROJECT FINANCING:

Staff recommends that the Ocean Protection Council authorize encumbrance of up to \$500,000 to the Ocean Science Trust to administer two OPC-SAT working groups focused on science needs for California’s network of MPAs.

Recommended OPC-SAT Working Groups focused on MPA Science Needs	Recommended OPC Funding
<i>From Proposition 84 (Prop 84) Funds</i>	
Item 3.d.1. 2022 MPA Management Review Scientific Guidance	\$250,000
<i>From Environmental License Plate (ELPF) Funds</i>	
Item 3.d.2. MPAs and Climate Resilience Science Synthesis and Data Needs	\$250,000
TOTAL OPC Funding	\$500,000

The anticipated source of funds for Item 3.d.1 will be from the Ocean Protection Council’s appropriation of the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84). Proposition 84 authorizes the use of funds for purposes consistent with Section 35650 of the Public Resources Code, establishing the California Ocean Protection Trust Fund (Pub. Res. Code § 75060(g)). Under Section 35650(b), Ocean Protection Trust Fund monies may be expended for projects authorized by the OPC that are identified as appropriate Trust Fund purposes, as

specified. The project is consistent with the Trust Fund purposes as discussed in the following section.

The anticipated source of funds for Item 3.d.2 will be from the Ocean Protection Council's Fiscal Year 2018/2019 appropriation of California Environmental License Plate Funds (ELPF). Using these funds to support this project is consistent with the California Ocean Protection Act, Section 35650(b), as well as OPC's Strategic Plan and Grant Program Funding Guidelines as discussed in more detail in the following section.

CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT

The proposed project is consistent with the Ocean Protection Act, Division 26.5 of the Public Resources Code, because it is consistent with trust-fund allowable projects, defined in Public Resources Code Section 35650(b)(2) as projects which:

- Improve management, conservation, and protection of coastal waters and ocean ecosystems
- Provide funding for adaptive management, planning coordination, monitoring, research, and other necessary activities to minimize the adverse impacts of climate change on California's ocean ecosystem

CONSISTENCY WITH THE OPC'S STRATEGIC PLAN:

This project implements the following Strategic Plan Focal Areas: Science-based decision-making; Climate Change; Sustainable fisheries and marine ecosystems.

CONSISTENCY WITH PROPOSITION 84 (The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006; Public Resources Code §75060(g)) for Item 3.d.1.

This project is consistent with the purposes outlined in Proposition 84, specifically it supports the development of scientific data needed to adaptively manage the state's marine resources and reserves. This project convenes an OPC-SAT working group to support OPC in developing key questions and metrics for the California MPA network's 2022 management review. This information will help managers assess the network's efficacy in meeting the goals set out by the Marine Life Protection Act.

CONSISTENCY WITH THE OPC'S GRANT PROGRAM FUNDING GUIDELINES:

The proposed project is consistent with the OPC's Grant Program Funding Guidelines for Proposition 84 and Environmental License Plate Funds, in the following respects:

Required Criteria

1. Directly relate to the ocean, coast, associated estuaries, or coastal-draining watersheds: *Both projects directly relate to the ocean, coast, associated estuaries and/or coastal draining watersheds and the recommendations created by the OPC-SAT working groups will improve understanding of ocean and coastal resources and may lead to improved resources management.*
2. Greater-than-local interest: *These projects are statewide in nature as they support the management of California's statewide network of MPAs.*

Additional Criteria

1. Improvements to management approaches or techniques: *The guidance developed for the 2022 Management Review will synthesize baseline and monitoring data from the last ten years for a seminal report on the efficacy of the California MPA network in meeting the goals of MLPA. In addition, climate change impacts, and potential MPA resilience and resistance to them, were not integrated into the original MPA network plans and their inclusion is essential to effective adaptive management.*
2. Timeliness or Urgency: *There is a clear need for guidelines to be developed to inform the 2022 Management Review. Developing them now, through the proposed OPC-SAT working group, is essential to move that review forward. The impacts of climate change - including marine heat waves, ocean acidification, deoxygenation, and sea level rise – are affecting our marine resources with increasing frequency. California's network of MPAs are a key marine resource managed by the state and it is important to understand its potential for resilience and resistance in the face of these impacts.*
3. Coordination: *OPC works closely with CDFW and FGC to manage California's MPA network. It will share the lessons learned from OPC-SAT working groups on MPA science needs and continue to coordinate next steps with them using the guidance developed.*

COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA):

The proposed project is not a 'legal project' that triggers the California Environmental Quality Act (CEQA) pursuant to Public Resources Code section 21068 and Title 14 of the California Code of Regulations, section 15378. If it were determined to be a 'legal product' under CEQA, the proposed project is categorically exempt from review under the California Environmental Quality Act ("CEQA") pursuant to 14 Cal. Code of Regulations Section 15306 because the project involves only data collection, research and resource evaluation activities that will not result in a serious or major disturbance to an environmental resource. Staff will file a Notice of Exemption upon approval by the OPC.