



## Call for Preliminary Proposals

**California Ocean Protection Council**

**California Sea Grant Program**

**University of Southern California Sea Grant Program**



The [California Ocean Protection Council](#) (OPC) was established to improve the management and protection of ocean and coastal resources and ecosystems. One of the many ways the OPC achieves this purpose is by supporting innovative research that directly informs and improves the stewardship of ocean and coastal resources. In partnership with the state's two Sea Grant Programs, the [California Sea Grant Program](#) (CASG) and the [University of Southern California Sea Grant Program](#) (USCSG), the OPC is initiating a Proposition 84 competitive grant program to implement scientific research projects that directly support the OPC's priorities. A total of \$6,000,000 is available to be awarded as grants to support research within the focus areas and priority research topics identified below.

This announcement invites the submission of brief, preliminary proposals (hereafter, pre-proposals) from Principal Investigators (PI) at eligible organizations who wish to pursue research relating to the priority research topic areas identified below. Pre-proposals must be submitted to qualify to submit a full proposal, subsequently. Pre-proposals, which are intended to be brief and succinct statements of intent, will be reviewed by a panel of scientific and management experts in order for the OPC and Sea Grant programs to determine which submitted research ideas will be invited to submit full proposals.

To be considered for future funding under this call, pre-proposals must be submitted to one of the two Sea Grant programs (depending on the topic of the research) **no later than 5:00 pm Pacific Time on 15 March 2018**. Regardless of which program a pre-proposal is submitted to, proposers must use eSeaGrant, an electronic proposal submission and management system, to submit the pre-proposal. Pre-proposals cannot be submitted via email, or in hard copy. If your institution has unusual issues prohibiting access to eSeaGrant, please contact the Sea Grant program for assistance or to arrange for an alternative submission method. Tardiness in attempting submission via eSeagrant is not an acceptable excuse for avoiding use of this system.

It is expected that the lead PI will submit the pre-proposal. As described below, institutional endorsements (signatures) are not a requirement for submitting pre-proposals. However, PIs should check with their host institution regarding the degree of internal review required for pre-proposals. A single PI may submit more than one pre-proposal; however, in order to submit more than one full proposal, a given PI must demonstrate capacity to lead more than one major project at the same time.

## **Eligible Organizations and Geographic Areas for Research**

Eligible applicants for this competitive grant program include public agencies, nonprofit corporations, or private entities subject to [Public Resources Code Section 35650](#), as stated in [OPC's Proposition 84 Grant Funding Procedures](#). **Projects must benefit the state of California.** If you have questions about your institution's eligibility to apply to this call, please contact Holly Wyer ([holly.wyer@resources.ca.gov](mailto:holly.wyer@resources.ca.gov); 916-653-0538) or Chris Potter ([chris.potter@resources.ca.gov](mailto:chris.potter@resources.ca.gov); 916-654-0536). OPC is the final arbiter of decisions regarding eligibility.

## **Focus Areas and Priority Research Topic Areas**

OPC has identified six broad focus areas that include all the priority research topic areas identified in this call. They are:

1. Ocean acidification and hypoxia, and other changes in ocean conditions from a changing climate
2. Sustainable fisheries and aquaculture
3. Sea-level rise adaptation and coastal resilience
4. Coastal sediment management
5. Marine pollution
6. Marine renewable energy

Applicants must submit a pre-proposal to one of the Sea Grant programs (instructions and guidance provided below), depending on the focus area and priority research topic(s) that the proposed research addresses. If the proposed research addresses more than one of the focus areas, then pick one as primary, and identify the overlap in the pre-proposal document and on its cover page.

### **Additional Guiding Documents:**

- [OPC's mission](#)
- [OPC's Strategic Plan](#)
- [California Ocean Protection Act \(COPA\)](#)
- [Prop 84 Funding Procedures](#)
- [Draft Ocean Litter Strategy\\*](#)
- [Marine Life Management Act \(MLMA\)](#)
- [Draft MLMA Master Plan for Fisheries\\*](#)
- [Marine Life Protection Act \(MLPA\)](#)
- [Harmful Algal Blooms & California Fisheries](#)
- [Readying California Fisheries for Climate Change](#)
- [Resolution of the OPC on Ocean Renewable Energy](#)
- [Safeguarding California Plan: 2017 Update – California's Climate Adaptation Strategy](#)
- [West Coast Ocean Acidification and Hypoxia Science Panel](#)

- [Emerging Understanding of Seagrass and Macroalgae as an Ocean Acidification Management Tool in California](#)
- [State of California Sea-level Rise Guidance Document](#)\*\*
- [California Coastal Sediment Master Plan](#)
- [13 Coastal Regional Sediment Management Plans](#)

\*Both the Draft MLMA Master Plan for Fisheries and the Draft Ocean Litter Strategy are in the process of being updated and are under review. Please visit the respective webpages for more information.

\*\* The State of California Sea-level Rise Guidance Document is in the process of being updated and is under review. Please visit the webpage for more information.

### **Priority Topic Areas Administered by the California Sea Grant Program:**

**Submit your pre-proposal to the CASG program if your research conforms to any of the following:**

- 1) *Ocean Acidification, Hypoxia and Other Changes in Ocean Conditions from a Changing Climate*

Proposals focused on ocean acidification, hypoxia, and other changes in ocean conditions will further California's and the Ocean Protection Council's leadership in this field. In particular, research and projects that focus on the effect of ocean chemistry on critical fisheries and ecosystems, and on the adaptive capacity of organisms and ecosystems to changing ocean conditions, will support smart and swift management decisions in the face of change. Projects and research should build on the state's previous investments, if possible, and be scalable from the local, statewide, regional, national, and international levels so that we continue to translate emerging science into action across all levels of government and policy.

Priority topic areas within ocean acidification and hypoxia & changing ocean conditions include:

- Understanding the effects of changing ocean conditions and ocean acidification on key fisheries and ecosystems to evaluate tolerance to future changes and ability to adapt.
- Evaluating response of fisheries to a changing climate and changing ocean conditions, including ocean acidification, ocean warming, harmful algal blooms, changing currents, changes in salinity, and the interactions between these environmental changes.
- Assessing socioeconomic and ecological vulnerability of fisheries and coastal communities to ocean acidification and other changing ocean conditions from a changing climate.
- Promoting co-located biological and chemical monitoring to appropriately assess impacts and fill critical information gaps.
- Advancing swift management actions through testing of local and regional approaches to mitigate or lessen changes in ocean chemistry and the effects of those changes and variability in ocean conditions.

## 2) *Sustainable Fisheries and Aquaculture*

Proposals focused on sustainable fisheries and aquaculture will promote healthy marine ecosystems and sustainable marine fisheries and aquaculture in order to protect California's living coastal and ocean resources, and the communities and economic activities that rely upon them. Projects and research in this area may include, but are not limited to: projects that incorporate an ecosystem-based approach to fishery management; projects that consider the impacts of a changing climate on California fisheries; projects that advance scientific understanding of the impacts of, and opportunities for, aquaculture in state marine waters; and projects that prioritize collaboration with fishery participants and fishing communities to develop strategies to increase environmental and economic sustainability. Projects and research in this area will enhance the State's ability to support innovative, science-based approaches to inform more efficient, effective and streamlined fisheries and aquaculture management.

Priority topic areas within sustainable fisheries and aquaculture include:

- Advancing innovative science-based approaches and tools that inform fisheries management in alignment with the Marine Life Management Act (MLMA).
- Supporting improved efficiency of fisheries data collection, synthesis, and management, and increasing accessibility of fisheries data to support more adaptive decision making.
- Fostering collaborative research and development among fishermen, managers, and other partners to enhance the economic and ecological sustainability of California fisheries.
- Supporting sustainable fisheries livelihoods through advancing the adaptation of shoreside infrastructure to climate impacts and supporting working harbors, and pilot projects that support sustainable, healthy seafood.
- Advancing scientific understanding of the impacts of, and opportunities for, aquaculture in state marine waters, particularly with respect to minimizing potential impacts on marine species and habitats.

**Priority Topic Areas Administered by the USC Sea Grant Program:**

**Submit your pre-proposal to the USCSG program if your research conforms to any of the following:**

## 3) *Sea-level Rise Adaptation and Coastal Resilience*

Proposals focused on sea-level rise adaptation and coastal resilience should assess how the short- and long-term risks from climate change, such as sea-level rise and other changes to our coastlines, will affect populations, ecosystems, and infrastructure. Because of the value of California's coastal areas and our dependence on the coast and ocean for recreation, food, and critical infrastructure, it is important to quantify how climate change will impact our ocean and coasts and how we can best anticipate, and plan and prepare for these climate-related changes.

Proposals should explore how natural infrastructure and other adaptation measures ameliorate the climate risks related to coastal erosion, sea-level rise, coastal flooding, and storm surge.

Priority topic areas within sea-level rise adaptation & coastal resilience include:

- Assessing vulnerability of communities, ecosystems, infrastructure, cultural resources, and historic sites to sea-level rise.
- Supporting communities and developing strategies to plan, prepare for, and adapt to the impacts of storm events and sea-level rise to increase the resilience of coastal communities, infrastructure, development, and other resources and to reduce hazards.
- Developing decision-support tools and implementing adaptation measures to help communities with unequal burdens from climate risks or insufficient resources to respond to these risks.
- Implementing adaptation measures to ameliorate risks and impacts related to coastal erosion, sea-level rise, coastal flooding and storm surge while providing protection such as nature-based infrastructure and innovative shoreline design and planning.

#### 4) *Coastal Sediment Management*

Proposals focused on coastal sediment management should address sediment as an integral component of the coastal ecosystem, representing a public good that must be managed to provide for quality of life, natural resource protection, and economic sustainability. Projects and research in this area may include, but are not limited to: studies on the potential ecological and economic impacts of coastal sediment management projects (e.g. beach nourishment, wetlands restoration, beneficial reuse of sand, managed retreat); research on effective methods to reduce or eliminate harmful effects of coastal sediment management projects; studies that develop indicators that can improve monitoring methods for beach restoration and other projects using sediment; projects that support implementation of the state's [13 Coastal Regional Sediment Management Plans](#); and research projects that will increase the understanding of coastal processes affecting the California coast and natural sediment supply available to the coast.

Priority topic areas within coastal sediment management include:

- Increasing the understanding of coastal processes affecting the California coast and sediment supply available to the coast.
- Assessing the potential ecological and economic impacts of coastal sediment management projects; e.g. beach nourishment, wetlands restoration, beneficial reuse of sand, managed retreat.
- Identifying and assessing the effectiveness of methods to reduce or eliminate harmful effects of coastal sediment management projects.
- Developing indicators that can inform development and monitoring plans for beach restoration projects.
- Implementing the [California Sediment Master Plan](#).
- Implementing the state's 13 Coastal Regional Sediment Management Plans.

## 5) *Marine Pollution*

Proposals focused on marine pollution should improve the State's understanding of the sources, loading, and impacts of marine pollutants. Proposals under this program may include, but are not limited to, addressing the following themes: cross-cutting pollution issues, the implications of marine pollution for human health; and projects that advance the State's ability to effectively and cost-efficiently monitor for and assess the impacts of emerging marine pollution problems.

Priority topic areas within marine pollution include:

- Improving our understanding of the effectiveness of actions taken to improve water quality through systematic assessments of coastal and marine receiving waters in the State. Pollutants to consider may include, but are not limited to, stormwater pollution, unregulated pollutants (contaminants of emerging concern), microplastics, nutrients, and toxics.
- Improving our understanding of how climate change may impact existing or emerging marine pollution issues, such as bacterial pathogens and metals, and how to adaptively manage pollution issues as ocean conditions change.
- Improving our understanding of local and regional hotspots of anthropogenic nutrient inputs, and their impacts as drivers of multiple water quality problems, including the types of sources that drive nutrient inputs (runoff, stormwater, or wastewater), and how anthropogenic inputs are impacting coastal and offshore (including deep ocean) biogeochemical processes.
- Advancing assessments of emerging water quality issues that impact human and ecosystem health, including implementing the recommendations of [\*Framing the Scientific Opportunities on Harmful Algal Blooms and California Fisheries\*](#).
- Using innovative approaches to advance our understanding of how to best protect water quality.

## 6) *Marine Renewable Energy*

Proposals focused on marine renewable energy issues should improve the State's understanding of the potential impacts and feasibility of deploying nascent technologies offshore California that would harvest offshore wind, wave, tidal, and ocean thermal energy for both small-scale and commercial energy production. Projects and research in this area may include, but are not limited to: research on the potential ecological impacts of deploying any marine renewable technology offshore California and strategies to eliminate or reduce them; studies to develop indicators that will inform marine renewable energy project development and operation monitoring plans; and project and studies that assess the technological, economic, or environmental feasibility of deploying wind, wave and tidal energy devices in California.

Priority topic areas within marine renewable energy include:

- Assessing the potential ecological and economic impacts of wind, wave and tidal energy development offshore California at a specific location/region or statewide.
- Identifying and assessing the effectiveness of methods to reduce or eliminate harmful effects of marine renewable energy projects.
- Developing indicators that can inform project development and monitoring plans for a commercial scale or pilot scale project.
- Assessing the technological, economic, and environmental feasibility of deploying wind, wave and tidal energy devices in California at either a pilot or commercial scale.
- Assessing the potential for reusing outer continental oil and gas facilities to support renewable energy development offshore California.

### **Term and Level of Research Support**

Eligible proposing institutions are welcome to propose research lasting ***up to 3- years in duration, and requesting a total budget from \$80,000 to \$250,000 (sum of total direct costs plus 25% indirect costs)***. Shorter duration research projects and/or those requesting above the minimum allowable funds but less than the maximum allowable funds are welcomed.

### **Timetable for Pre-Proposals and Proposals**

The following timetable lists firm, and approximate, event dates that will lead to the establishment of research awards under this call:

10 January 2018 – Request for pre-proposals published

20 February 2018 – Informational webinar hosted by OPC, CASG, USCSG

**15 March 2018, 5:00 pm Pacific Time** – pre-proposals due (**firm deadline**)

March – May 2018 – pre-proposal review

1 June 2018 (approximate) – proposers notified of recommendation

10 June 2018 (approximate) - proposal submission instructions provided

**1 August 2018, 5:00 pm Pacific time** – proposals due (**firm deadline**)

August-October 2018 – proposal review

October-November 2018 (approximate, dependent on date of OPC meeting) – proposals for funding recommended to OPC

1 December 2018 – awards begin

### **Criteria for Pre-Proposal Evaluation**

To be funded, research must be consistent with the [mission](#) of the California Ocean Protection Council, be consistent with this request for proposals, and address at least one of the priority topic areas called out in this RFP.

Evaluation of pre-proposals and subsequent proposals will be based on the following criteria.

### **Project Rationale and Relevance**

The degree to which the proposed project addresses an important issue, scientific problem, information gap, or opportunity in the health, development, use or management of marine or coastal resources and ecosystems, as stated in the list of priority topic areas.

### **Research/Scientific Merit**

The degree to which the proposed project will advance the state of the science or discipline through use of state-of-the-art robust methods.

### **Innovativeness**

The degree to which new approaches to solving problems and exploiting opportunities in resource management or development will be employed in the proposed project

### **User Relationships**

The degree to which the users or potential users of the proposed project's results have been brought into the planning of the proposed project, will be brought into the execution of the proposed project, or will be kept apprised of progress and results.

### **Qualifications of Investigators**

The degree to which investigators are qualified by education, training and/or experience to execute the proposed project. Evidence of any record of achievement with previous funding.

### **Contents of a Pre-proposal**

Pre-proposal requirements and size limits are as follows:

**1) Cover Page** – Provides basic summary information regarding the project, and identifies which broad focus area(s) the project addresses. Proposers should download and use a fillable Excel spreadsheet ([downloadable here](#)) to enter this information, and upload this document as a PDF in eSeaGrant. Budget requests are here considered only to be good-faith estimates – itemized budgets are not required in a pre-proposal. Pre-proposals do not require signatures or institutional endorsements.

**2) Main Project Narrative** (maximum 3 pages of text in 12-point font, not including figures, tables and references) – the main project narrative must lead with a brief project summary or abstract. Thereafter the format is flexible, but we recommend you list project goals or objectives, provide a brief background justifying the project, briefly describe methods, and state the likely value of project outcomes (to science, state management and policy entities, specific communities, regulators, or the general public). We encourage the use of headers to delimit appropriate sections of the narrative.

**3) (Optional) Tables, Figures and References** – the main project narrative may refer to tables or figures, and may cite references. These items (with legends) should be placed immediately



after the 3-page main project narrative. Do not embed tables and figures in the 3-page Main Project Narrative. You may also append the CVs (3 pages max) of additional personnel that are not listed as the PI or as Co-PIs (Investigators). CVs of the PI and co-PIs will need to be uploaded into eSeaGrant when creating the pre-proposal. There are no page/size limits to tables, figures and the list of references, and references can be reported in any format.

### **Procedures for Submitting a Pre-proposal**

Whether submitting to the CASG or USCSG all pre-proposals must be submitted using eSeaGrant:

**California Sea Grant:** <https://eseagrant2.ucsd.edu>

**University of Southern California Sea Grant:** <http://usc.eseagrant.ecsion.com/>

Instructions on how to submit via eSeaGrant can be found here:

**California Sea Grant:**

<https://caseagrant.ucsd.edu/eSG-OPC84>

**USC Sea Grant:**

[http://dornsifelive.usc.edu/assets/sites/291/docs/OPC\\_84/eSG\\_Instructions\\_1.4.18.docx](http://dornsifelive.usc.edu/assets/sites/291/docs/OPC_84/eSG_Instructions_1.4.18.docx)

### **Pre-proposal and Proposal Review Process**

Proposals will undergo a structured review process led by the two Sea Grant programs and OPC. Review panels will be convened to review both the pre-proposals and the full proposal submissions. Review panels will be specific to the focus areas identified above (e.g. a review panel will be convened for Sustainable Fisheries and Aquaculture, and a separate review panel will be convened for Marine Renewable Energy, etc.). Review panels will include subject matter experts, scientists, and agency representatives. At its discretion, the OPC may request additional review by likely user groups of the research findings or suggest coordination of complementary proposals. Projects recommended for funding through this review process will be presented at an OPC meeting for final approval of grant awards.