



OCEAN PROTECTION COUNCIL

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Staff Recommendation

January 24, 2023

Item 7a

Action Item:

Consideration and Approval of Disbursement of Funds for Competitive Call for Microplastics Research Program

Kaitlyn Kalua, J.D., Water Quality Program Manager

Recommended Action: Authorization to disburse up to \$1,328,710 to California Sea Grant (CASG) to jointly fund and administer statewide microplastics research projects that directly support OPC and CASG Strategic Plans and priorities by increasing understanding and informing management of environmental microplastic contamination. CASG will contribute \$375,000 to this competitive call for a total of \$1,703,710. Individual projects recommended for approval will be brought to the August 2023 Council Meeting.

Location: Statewide

Strategic Plan Goals and Objectives: Goal 3: Enhance Coastal and Marine Biodiversity; Objective 3.4: Improve Coastal and Ocean Water

Equity and Environmental Justice Considerations:

Integration of equity and environmental justice principles in the research design and/or project outcomes, including but not limited to mentorship to students, with the goal of increasing retention in science, technology, engineering, and mathematics (STEM) and launching careers in coastal science; supporting research programs within or building research relationships with Minority Serving Institutions (MSIs); community engagement and partnerships with local community-based organizations, tribes, and/or impacted communities; and/or project outcomes that inform and improve management of microplastic contamination that disproportionately impacts severely disadvantaged communities (SDAC) or disadvantaged communities (DAC).

Exhibits:

Exhibit A: Letters of Support

Findings and Resolution:

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

“Based on the accompanying staff report and attached exhibit(s), OPC hereby finds that:

1. The proposed projects are consistent with the purposes of Division 26.5 of the Public Resources Code, the California Ocean Protection Act;
2. The proposed projects are consistent with the Budget Act of 2022 which included a \$50 million General Fund appropriation for grants or expenditures for resilience projects that conserve, protect, and restore marine wildlife and healthy ocean and coastal ecosystems; and
3. The proposed projects are not ‘legal projects’ that trigger the California Environmental Quality Act (CEQA) pursuant to Public Resources Code section, section 15378.”

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 \$1,328,710 to California Sea Grant, subject to the condition that projects selected through this review process will be presented to the Council for final concurrence on the grant awards. Up to \$253,710 of this total will support California Sea Grant’s administration of this competed research and selected projects.

This authorization is subject to the condition that prior to disbursement of funds, California Sea Grant 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.”

Executive Summary:

Staff recommends the OPC approve the disbursement of up \$1,328,710 to California Sea Grant (CASG) to jointly fund and administer statewide microplastics research projects that directly support OPC and CASG Strategic Plans and priorities by increasing understanding and informing management of environmental microplastic contamination.

OPC has a long-standing leadership role and commitment to protecting ocean health through addressing ocean litter and plastic pollution. This includes the adoption of a Council resolution entitled “[Reducing and Preventing Ocean Debris](#)” in 2007, subsequent publication of an [Implementation Strategy](#) in 2008, and updated 2018 [California Ocean Litter Prevention Strategy: Addressing Marine Debris from Source to Sea](#) (California Ocean Litter Strategy). On February 23, 2022, the Council approved the advance the research priorities of the [Statewide Microplastics Strategy](#), required to be developed by OPC in collaboration with specified state agencies by Public Resources Code section 35635 (added by Senate Bill No. 1263, Reg. Session 2017-2018).

This disbursement of funds will result in a research solicitation to address the microplastic knowledge gaps identified by the OPC Science Advisory Team (OPC SAT) interdisciplinary microplastics working group, convened by the California Ocean Science Trust (OST) in the report “[Assessing the Risk of Microplastic Pollution in California](#)” and advances the research priorities of the [Statewide Microplastics Strategy](#) to better understand the sources and pathways of microplastics to the environment, identify solutions to prevent microplastic pollution, and support the development of risk assessments for microplastics in California marine habitats. The anticipated research solicitation will further advance the priorities of the California Ocean Litter Strategy to increase understanding of the scale and impact of microplastics and microfibers on the marine environment and develop solutions.

Using General Funds appropriated to OPC by the Budget Act of 2022 for grants or expenditures for resilience projects that conserve, protect, and restore marine wildlife and healthy ocean and coastal ecosystems, this project seeks to initiate a competitive grant solicitation to be administered by California Sea Grant, that increases understanding and informs management of environmental microplastic contamination.

Project Summary:

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Microplastic particles (1 nm to 5 mm in size) are pervasive and persistent in our communities and environment with estimates of plastic entering the global ocean anticipated to increase exponentially each year. Microplastic exposures can cause adverse effects on marine life, including tissue inflammation, impaired growth, developmental anomalies, reproductive difficulties, and mortality. Meanwhile, communities burdened by social and environmental injustice may have disproportionate exposure to microplastics through inhalation and drinking water due to proximity to plastic manufacturing facilities, dense highways, among other causes of plastic particle emissions.

California Sea Grant and OPC have an existing partnership to address marine debris and plastic pollution through the 2018-2024 California Ocean Litter Prevention Strategy. Public Resources Code section 35635 (added by Senate Bill No. 1263, Reg. Session 2017-2018) further required OPC to develop the Statewide Microplastics Strategy (adopted by OPC on February 23, 2022), a comprehensive, prioritized, research plan to better understand the sources and pathways of microplastics to the environment, identify solutions to prevent microplastic pollution, and support the development of risk assessments for microplastics in California marine habitats.

California Sea Grant and OPC will solicit proposals for two research calls to advance microplastics understanding and management in California, consistent with the priorities outlined in the California Ocean Litter Strategy and Statewide Microplastics Strategy. These requests for proposals will seek to increase understanding and management of environmental microplastic contamination by informing improved management of specific microplastic sources, refining and improving understanding of microplastic thresholds in the environment, and

informing the use of structural low impact development (LID)¹ stormwater best management practices (BMPs) to intervene and prevent microplastics from reaching California aquatic environments.

Through the National Sea Grant Infrastructure Investment and Jobs Act (IIJA) Marine Debris Challenge Competition, OPC submitted a federal funding proposal of \$1,500,000 in partnership with California Sea Grant to expand the scope of this research solicitation and pilot structural LID approaches in urban watersheds. Staff anticipates learning the outcome of this funding competition in Spring 2023. Potential applicants shall be notified if the funding amount and research scope is expanded due to available IIJA funds prior to the full proposal deadline.

Proposals will undergo a structured and competitive review process led by California Sea Grant. An outside technical panel of scientific experts in the field will be assembled as part of the competitive review. OPC staff will be involved in all stages of the review process, including the technical review and final decision-making. This solicitation is largely focused on the nexus between water quality and microplastics, therefore OPC and California Sea Grant will consult with the California State Water Resources Control Board (SWRCB) throughout the solicitation process. At a minimum, both OPC and SWRCB scientists will serve and/or consult on proposal review as appropriate.

At its discretion, OPC may request additional review by likely user groups of the research findings or suggest coordination of complementary proposals. Projects selected through this review process will be brought back to the Council for final consideration of grant awards at the August 2023 OPC meeting. California Sea Grant will provide all post-award grant administration, including reporting and financial accounting on the grants selected for funding.

Following Council concurrence of the grant awards, the anticipated start date of selected projects is approximately October 1, 2023. The duration of a project

¹ The term low impact development (LID) refers to systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality and associated aquatic habitat. LID employs principles such as preserving and recreating natural landscape features and minimizing impervious pavement (e.g. concrete) and can positively impact air and water quality.

request is anticipated to be two years, although requests for a one-year award will also be considered.

Equity and Environmental Justice Considerations:

OPC values diversity and equity at all levels of its workforce, in community engagement, and funded research. California Sea Grant is committed to increasing the diversity of the workforce it funds and the communities it serves.

California Sea Grant and OPC will encourage all applicants to integrate diversity and inclusion in their scientific project and/or research design. This may include, but not be limited to, an evaluation of how well the proposed activity broadens the participation of underrepresented groups and how these groups benefit from the outcomes of the proposed activity. Guided research experiences and mentorship to students, with the goal of increasing retention in science, technology, engineering, and mathematics (STEM) and launching careers in coastal science, and supporting research programs within or building research relationships with Minority Serving Institutions (MSIs) are highly encouraged.

Partnerships with local community-based organizations, tribes, and impacted communities will be encouraged, consistent with [OPC's Equity Plan](#): Goal 1.4: “Ensure OPC projects and actions are informed by community needs by incorporating community engagement into every OPC project and funding opportunity, as appropriate” and Goal 4.2: “Collaborate with California Native American tribes, environmental justice communities, and community partners such as: community-based organizations, colleges and universities, research organizations, including community science groups, and local stakeholders, to include Traditional Ecological Knowledges, tribal expertise, local knowledge, social science, historical context, and lived experiences into ocean and coastal science, and research.”

Additionally, microplastic and trash-derived microplastic contamination may disproportionality impact severely disadvantaged communities or disadvantaged

communities located in close proximity to industrial or plastic production facilities,² highways, or land uses with high trash generation rates. One intended outcome of the research solicitation is to inform the design, location, and use of low impact development in urban watersheds with high trash generation rates that are co-located in severely disadvantaged community or disadvantaged communities by evaluating microplastics removal efficacy and additional factors that impact the performance of low impact development/green infrastructure strategies.

About the Grantee:

The National Sea Grant College Program network consists of 34 university-based programs funded primarily by the National Oceanic and Atmospheric Administration (NOAA) and dedicated to providing integrated research, communication, education, extension and legal programs to coastal communities to inform the responsible use and management of ocean and coastal resources.

The California Sea Grant Program is the largest of the 34 Sea Grant programs and works along the entire state's coastline and coastal watersheds. It is administered by the Scripps Institution of Oceanography at the University of California, San Diego. California Sea Grant is a unique partnership that leverages resources across stakeholder groups. Sea Grant has an established, highly respected process for evaluating, prioritizing, and administering research grants related to coastal and ocean resources, and has a proven track record of supporting state research efforts. California Sea Grant is experienced at managing large contracts and grants, is familiar with the state's scientific community, and has successfully managed many other solicitation and award efforts on behalf of OPC (see [Kelp Recovery Research Program](#); [Ocean Acidification and Hypoxia Competitive Call](#)).

The planned solicitations will meet California Sea Grant's 2024-2027 Strategic Plan goals related to building and maintaining 1) Healthy Coastal Ecosystems, 2) Sustainable Fisheries and Aquaculture, and 3) Resilient Coastal Communities and Economies.

² As of December 2022, In California, 306 facilities are located in California that fall under the North American Industry Classification (NAICS) Code "326 – Plastics and Rubber Products Manufacturing." (USEPA, [Pollution Prevention \(P2\) Environmental Justice \(EJ\) Facility Mapping Tool](#)).

Project Timeline:

- January 2023: Grant awarded
- January/February 2023: Release RFP
- February/March 2023: Solicitation Webinars
- March 2023: Letters of Intent due
- April 2023: Full Proposals due
- August 2023: Selected projects brought to August Council Meeting for project concurrence and consideration of funding
- October 2023: Selected projects start date

Project Financing:

Staff recommends that the Ocean Protection Council (OPC) authorize the disbursement of up to \$1,328,710 to California Sea Grant (CASG) to jointly fund and administer statewide microplastics research projects that directly support OPC’s Strategic Plan and priorities. Up to \$253,710 of this total will support California Sea Grant’s administration of this competed research and selected projects.

California Ocean Protection Council	\$1,328,710
California Sea Grant	\$375,000
TOTAL	\$1,703,710

The proposed source of funds for this disbursement is the Budget Act of 2022, which included a \$50 million General Fund appropriation to OPC for grants or expenditures for resilience projects that conserve, protect, and restore marine wildlife and healthy ocean and coastal ecosystems. The proposed disbursement and anticipated projects are an appropriate use of this General Fund appropriation because the projects will each provide information to increase the State’s understanding and inform management of microplastic contamination that impact marine wildlife and ocean and coastal ecosystems.

Consistency with California Ocean Protection Act:

The proposed projects are 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:

- Eliminate or reduce threats to coastal and ocean ecosystems, habitats, and species.
- Improve coastal water quality.
- Allow for increased public access to, and enjoyment of, ocean and coastal resources, consistent with sustainable, long-term protection and conservation of those resources.
- Improve management, conservation, and protection of coastal waters and ocean ecosystems.
- Provide monitoring and scientific data to improve state efforts to protect and conserve ocean resources.
- Protect, conserve, and restore coastal waters and ocean ecosystems.

Compliance with the California Environmental Quality Act (CEQA):

The proposed projects are not 'legal projects' 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 project' under CEQA, the proposed projects are categorically exempt from review under CEQA pursuant to 14 Cal. Code of Regulations Section 15306 because the projects involve information collection, consisting of 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 OPC.

If individual projects are selected that trigger CEQA, OPC must determine whether the project is in compliance with CEQA prior to the issuance of funding awards.