



**Informational Item**  
September 14, 2021

**Development of Microplastics Strategy to  
Address Coastal and Ocean Water Quality**

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This informational item provides an update to the Council on the development of a Microplastics Strategy to address the impacts of microplastics on California's coast and ocean.

**BACKGROUND:**

In 2018, in recognition of the pervasiveness of microplastics in the environment and potential significant impacts on ocean health in California, the Legislature passed Senate Bill 1263 (Portantino), which requires the Ocean Protection Council (OPC), in close coordination with the State Water Resources Control Board, the Office of Environmental Health Hazard Assessment, and others, to adopt a Statewide Microplastics Strategy (Strategy). The goal of this Strategy is to increase understanding of the scale and risks of microplastics on coastal and ocean ecosystems and to identify proposed solutions to address harmful impacts. OPC is required to submit this Strategy to the Legislature by December 31, 2021, with subsequent reporting on Strategy implementation and additional recommended policy changes and research needs by December 31, 2025.

The Legislation requires that the Strategy include: 1) a description of the sources, pathways, and impacts of microplastics on coastal and marine ecosystems; 2) a risk assessment framework based on the best available science on exposure of microplastics to organisms; 3) standardized methods for sampling, detecting, characterizing, and monitoring microplastics; 4) a prioritized research plan and; 5) policy recommendations and management actions.

**PROGRESS TO DATE:**

*Risk Assessment Framework.*

In December 2020, OPC funded the California Ocean Science Trust to convene and facilitate an OPC SAT Working Group (Working Group) to develop a risk assessment framework based on the best available information on exposure of microplastics to organisms. The Working Group was made up of an interdisciplinary group of scientific experts and included: Eunha Hoh, San Diego State University; Susanne Brander, Oregon State University; Kenneth Unice, Cardno Chemrisk; Anna-Marie Cook, U.S. Environmental Protection Agency (retired); Rusty Holleman, University of California, Davis; Chelsea

Rochman, University of Toronto; Julie Thayer, Farallon Institute. The report, entitled “Microplastic Pollution in California: A Precautionary Framework and Scientific Guidance to Assess and Address Risk to the Marine Environment<sup>1</sup>,” was released in Spring 2021 and included the following recommendations:

- California officials should assess and manage microplastic pollution risk in a precautionary manner that is protective of the marine environment and to focus on concentration of microplastics in the aquatic environment while the scientific community learns more about toxicity impacts of plastics and associated pollutants.
- Reducing the sources of microplastics may be the most effective and precautionary measure.
- Identifying the top sources of micro- and macro-plastic emissions into the marine environment in California is crucial for assessing risk and stopping the flow of microplastics now and into the future.
- As science on microplastics evolves, the state should revisit the risk assessment framework in five years.

The report also identified knowledge gaps (and associated research questions) that should be prioritized for near-term investment, including: 1) developing an inventory of the top sources of macro- and micro- plastic loading that investigates the contribution of agricultural sources relative to urban and industrial runoff, as well as wastewater; 2) establishing a baseline, followed by an ongoing monitoring program, to observe trends in environmental microplastic pollution; and 3) improving methodology for source identification of microplastics.

#### *Draft Strategy Development.*

In summer 2021, OPC staff including former Water Quality Program Manager, Holly Wyer, and summer interns Molly Glickman and Mairin Culwell finalized an initial rough draft of the Strategy, which included the components required in SB 1263 and integrated the scientific guidance provided in the Working Group’s report. The draft also included a set of policy and management recommendations focused on source reduction to prevent microplastic release and treatment to address microplastics once they are in the environment. This draft was presented at the August 4, 2021 meeting of the state’s Plastic Pollution Steering Committee, which includes program staff from OPC, the State Water Resources Control Board, California Coastal Commission, State Lands Commission, California Department of Public Health, CalRecycle, Caltrans, and the Office of Environmental Health Hazard Assessment. Feedback was solicited during the meeting and additional written comments were provided to OPC staff at the end of August.

#### **NEXT STEPS:**

OPC staff is working to integrate feedback from the Plastic Pollution Steering Committee and anticipates releasing an updated draft for public comment by October 2021. Due to

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<sup>1</sup> <https://www.oceansciencetrust.org/projects/microplastics-risk-assessment/>

the departure of OPC's staff lead on this project, the original timeline to send the final strategy to the Legislature could be delayed. However, we expect to have a final draft version for Council and public review by the end of 2021, with Council consideration and possible approval of the draft strategy at its February 2022 meeting. Concurrently, the final draft will be forwarded to the Governor's Office for their review and comment.

OPC expects to hire a new Water Quality Program Manager this fall to lead finalization of the Strategy.