



# B A S M A A

Alameda Countywide  
Clean Water Program

Contra Costa  
Clean Water Program

Fairfield-Suisun  
Urban Runoff  
Management Program

Marin County  
Stormwater Pollution  
Prevention Program

Napa Countywide  
Stormwater Pollution  
Prevention Program

San Mateo Countywide  
Water Pollution  
Prevention Program

Santa Clara Valley  
Urban Runoff Pollution  
Prevention Program

Sonoma County  
Water Agency

Vallejo Flood &  
Wastewater District

June 8, 2020

Wade Crowfoot  
Secretary for Natural Resources  
Ocean Protection Council Chair

Subject Support for SFEI Microplastic Proposal: Sources and Pathways for  
Microplastics in Urban Stormwater Proposal

Mr. Crowfoot,

On behalf of the Bay Area Stormwater Management Agencies Association (BASMAA), I am writing to express our support for the San Francisco Estuary Institute's (SFEI) proposal to develop a conceptual model of sources and pathways of microplastics in urban stormwater. SFEI has demonstrated their ability to conduct rigorous scientific investigations and analysis and translate scientific findings to inform management decisions. They have led significant progress in our understanding of microplastics, which is a scientific field that is rapidly improving its methods and approaches.

BASMAA is a 501(c)(3) non-profit organization comprised of the municipal stormwater programs in the San Francisco Bay Area representing 100 agencies, including 85 cities and towns, 8 counties, and 7 special districts. BASMAA focuses on regional challenges and opportunities to improve the quality of stormwater flowing to our local creeks, the Delta, San Francisco Bay, and the Pacific Ocean. BASMAA works closely with SFEI through the Regional Monitoring Program for San Francisco Bay. Together, we develop scientific strategies and conduct stormwater monitoring and modeling, including developing conceptual models, which we have determined are an important part of managing pollutants in stormwater.

This proposal will build upon the microplastic research. The results will identify and prioritize data gaps in our understanding of microplastic sources and pathways and inform monitoring studies needed to inform our management questions. Additionally, we would be pleased to provide additional support to the project by reviewing the draft report and providing input from our members who have significant experience with managing contaminants in urban stormwater.

We encourage your full support of this timely proposal.

Sincerely,

Geoff Brosseau, BASMAA Executive Director

Bay Area

Stormwater Management

Agencies Association

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June 8, 2020

Wade Crowfoot  
Secretary for Natural Resources  
Ocean Protection Council Chair  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

**RE: Support for SFEI Microplastic Proposal: Sources and Pathways for Microplastics in Urban Stormwater Proposal**

Dear Secretary Crowfoot:

On behalf of the Steering Committee of the Regional Monitoring Program for Water Quality in San Francisco Bay (SF Bay RMP), I offer our strong support for the San Francisco Estuary Institute (SFEI) proposal to compile available information about the sources and pathways of microplastics in urban stormwater for the state. This project is critical to inform management actions to address microplastic pollution by gathering available information that links true sources to microplastic pollution. SFEI's recent investigations of microplastics in the San Francisco Bay region highlight that microplastic loads from the urban stormwater pathways are significantly higher than wastewater loads. However, our current understanding of the sources and pathways of microplastics to urban stormwater are not well understood.

The SF Bay RMP is a partnership between the San Francisco Bay Regional Water Board, the regulated community, and SFEI to provide the scientific foundation to manage San Francisco Bay water quality and regulatory decisions. We monitor status and trends in water quality, sediment quality, and bioaccumulation of legacy and emerging contaminants in biota. We also fund special study projects that address emerging management issues, trial new monitoring methods, or provide data interpretation. These special studies provide an opportunity to adapt to changing management priorities and advances in scientific understanding. Urban stormwater is a key matrix of study for the SF Bay RMP.

This proposal will build upon the microplastic studies that SFEI has conducted in collaboration with the SF Bay RMP. The results will identify and prioritize data gaps in our understanding of microplastic sources and pathways and inform monitoring studies needed to inform our management questions. In addition, we would be pleased to provide support to the project by reviewing the draft report and providing input and feedback from our stakeholders who have a wide breadth of experience and expertise in managing San Francisco Bay water quality.

We encourage your full funding of this timely proposal.

Sincerely,

Thomas Mumley  
Steering Committee Chair



June 15, 2020

Wade Crowfoot  
Secretary for Natural Resources  
Ocean Protection Council Chair  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

***RE: Support for SFEI Microplastic Proposal: Identification of sources and pathways for microplastics in stormwater (Item 9a)***

Dear Secretary Crowfoot and Members of the Council:

On behalf of Clean Water Action and our tens of thousands of California members, we are writing to express strong support for the proposed project to “synthesize and integrate the current understanding of microplastics sources and pathways to urban stormwater, specifically from single-use food serviceware, cigarettes, and textile fibers” (Item 9a of the June 19, 2020 Ocean Protection Council meeting).

Since our founding during the campaign to pass the landmark Clean Water Act in 1972, Clean Water Action has worked to win strong health and environmental protections by bringing issue expertise, solution-oriented thinking and people power to the table.

Clean Water Action is actively working to minimize the use of single-use plastic products through campaigns and our innovative ReThink Disposable program, which assists businesses, governments, and the public in choosing sustainable alternatives. Our efforts support the state’s Ocean Litter Prevention Strategy, crafted by the Ocean Protection Council (OPC). The proposed project on microplastics in stormwater would provide essential data and information to inform our efforts on single-use food serviceware, which often ends up as litter in the environment, where it can break down into micro-sized particles. By improving our understanding of the sources and pathways of microplastic pollution, we can align our efforts with the state strategy under development to address microplastic pollution.

This proposed project would be implemented by the San Francisco Estuary Institute (SFEI), a highly qualified independent research institute that Clean Water Action trusts to generate important findings with real-world relevance. This proposal would build upon the novel microplastic research

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that SFEI has conducted in the Bay Area, and which brought to light the importance of stormwater as a major source of microplastics to aquatic environments like San Francisco Bay. SFEI has established expertise in the study of microplastics, and is well suited to assist OPC in developing science-informed strategies.

We encourage support of this worthy proposal. Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in cursive script that reads "Andria Ventura".

Andria Ventura  
Toxics Program

A handwritten signature in cursive script that reads "Grace Lee".

Grace Lee  
Waste Prevention Program



June 16, 2020

Wade Crowfoot, Secretary for Natural Resources  
Chair, California Ocean Protection Council  
California Natural Resources Agency  
1416 Ninth Street, Suite 1311  
Sacramento, CA 95814

Sent via: [COPCpublic@resources.ca.gov](mailto:COPCpublic@resources.ca.gov).

**RE: Item 9 – Consideration of Authorization to Disperse Funds to Address Microplastics in Coastal and Marine Ecosystems**

Dear Secretary Crowfoot and members of the Ocean Protection Council:

The California Coastkeeper Alliance (CCKA) represents local California Waterkeeper organizations working to protect water quality throughout the state and along California's coast for the benefit of California communities and ecosystems. On behalf of local California Waterkeepers, we write in support of the Ocean Protection Council (OPC)'s proposed disbursement of funds for two projects ("Identification of sources and pathways for microplastics in stormwater" and "Efficacy of microplastic removal from various wastewater treatment methods") to address microplastics in coastal and marine ecosystems.

Microplastics are increasingly found in ocean fish and wildlife, causing starvation and reproductive consequences, with unknown impacts to the communities who depend on the ocean for sustenance. Microplastics also pose a significant threat to water quality and drinking water supplies. Microplastics in drinking water first gained attention in 2017 with the release of a global report<sup>1</sup> that found that 83 percent of water samples worldwide contain microplastics, and a concerning 94 percent of samples taken in the United States contain microplastics. Since the release of these findings, other peer-reviewed studies have consistently shown the presence of microplastics in bottled water, freshwater, wells, and treatment plant water.

Though data is limited, microplastics are now ubiquitous in the environment and have been detected in a broad range of marine water, wastewater, fresh water and drinking water. In the Bay Area alone, seven trillion tiny pieces of plastic – equivalent to about a million pieces each for every man, woman, and child in the Bay Area – flow into San Francisco Bay annually. The tiny particles make their way into the ocean, into the stomachs of marine animals, and ultimately become part of the food and water people consume. Despite the profound impacts of microplastics, the issue has a relatively low profile, with few solutions currently on the table.

Critically, a recent study by the San Francisco Estuary Institute (SFEI)<sup>2</sup> found that stormwater is the primary source of microplastics in California's coastal waters, with microplastics 300 times more likely to come from storm drains than any other sources. Synthetic clothing and textiles also release plastic microfibers with every wash that cannot be filtered out by traditional wastewater facilities. In the Bay Area, researchers have determined that billions of microplastics also flow through the region's 40 wastewater treatment facilities annually.

<sup>1</sup> Mary Kosuth, Elizabeth V. Wattenberg, Sherri A., SYNTHETIC POLYMER CONTAMINATION IN GLOBAL DRINKING WATER. FINAL REPORT: May 16, 2017.

<sup>2</sup> Sutton, R.; Lin, D.; Sedlak, M.; Box, C.; Gilbreath, A.; Holleman, R.; Miller, L.; Wong, A.; Munno, K.; Zhu, X.; et al UNDERSTANDING MICROPLASTIC LEVELS, PATHWAYS, AND TRANSPORT IN THE SAN FRANCISCO REGION. SFEI Contribution No. 950. San Francisco Estuary Institute. 2019.

The two studies proposed by the OPC are critical to meet Objective 3.4.4. of the OPC's Strategic Plan and to ultimately inform a statewide microplastics strategy and establish a program of implementation that manages and prevents microplastic pollution from entering California's waterways. Funding SFEI to conduct a follow-up study to identify the sources and pathways of microplastics in stormwater will advance our understanding of this prevalent source of microplastic pollution, and ultimately identify solutions to this flow of micro-pollution into our bays, estuaries, and streams.

It is important to note that the State Water Board's Trash Amendments - intended to prevent plastic pollution from reaching our waterways - are primarily focused on plastic pollution larger than 5mm. However, the state should be aware that the Trash Amendments' definition of "full capture devices" includes low impact development (LID) stormwater capture BMPs (ex: bioswales). This is important because LID BMPs – used as full capture devices to comply with the Trash Amendments – provides the additional benefit of capturing plastic particles less than 5mm. We urge the OPC, either in this study or a future study, to analyze the efficacy of LID stormwater capture BMPs as a strategy to prevent microplastics from entering our waterways. The study should analyze both the effectiveness of LID BMPs to control microplastics, but also the *potential* unintended consequences of diverting stormwater laden with microplastics into LID. Unintended consequences could include potential reduction of a LID's infiltration rate and/or the potential human health impacts from tainting drinking water.

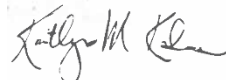
We also support studying the efficacy of microplastic removal using a variety of wastewater treatment methods is critical to remove microplastics from wastewater effluent, and ultimately support statewide efforts to increase water recycling. Here, it is critical to understand the different efficacy rates of removal from secondary, tertiary, and potable reuse treatment standards. It is also important to understand whether microplastics, once removed during the treatment process, are truly disposed of properly or whether they ultimately are discharged into a waterway through the brine disposal process. Any wastewater and/or water recycling treatment that filters microplastics but ultimately discharges them into a waterway through brine disposal should not be considered microplastic removal.

Together, these two studies will improve our understanding of the sources and pathways of microplastics into the environment and identify much-needed solutions to prevent microplastic pollution. We applaud the OPC for investing in these projects to inform a statewide microplastic strategy and to both identify and implement solutions that will provide tangible benefits to water quality and our health.

Sincerely,



Sean Bothwell  
Executive Director  
California Coastkeeper Alliance



Kaitlyn Kalua  
Policy Analyst  
California Coastkeeper Alliance