

Internship Opportunity with the California Marine Sanctuary Foundation

The greater Monterey Bay region's waters and food webs are contaminated by ubiquitous microplastics (MPs) and macro-plastics that break apart into MPs. MPs have been detected in sanctuary waters from the surface to 1000 m depth, in the sediment, and in organisms including krill, fish, seabirds, and whales. Our project aims to establish the greater Monterey Bay region as a model for studying MPs in large aquatic ecosystems, by quantifying the flux of MPs into and out of MBNMS using a mass balance framework, including flows between the biota, ocean, rivers, and beaches. The project is supported by a grant and is titled: ***"From watershed to whales: Tracking the source and transport of microplastics in the greater Monterey Bay region to inform risk assessments"***

This intern will sample and analyze water from the four major rivers that enter the Monterey Bay National Marine Sanctuary: the Pajaro, San Lorenzo, Carmel and Salinas Rivers. Monitoring will include collecting water samples for microplastic analysis as well as collecting, documenting, and analyzing macro-plastic samples. Microplastics will be analyzed by the intern and members of the project team. Macro-plastics will be categorized by product and use, to assess whether the origin is agricultural, industrial or urban.

The intern will have the following responsibilities:

- engage in river and beach monitoring to collect microplastic and macro-plastic samples
- pre-process and analyze microplastics through a microscope
- assist in extracting microplastics from samples to send to a lab for further analysis
- categorize microplastic samples and sustain a data base that includes all sampling events
- be accurate and complete in entering data into a spreadsheet
- analyze macro-plastic data and develop graphics and reports
- assist with other aspects of the project as needed and based on personal interests

Required Skills: willingness to sample in the rain and ability to carry equipment, data management in excel, well organized and good at communications, must have a car and driver's license, ability to see through the microscope.

What you will learn and gain from this Project? You will be part of a team working on a project that is central to the Monterey Bay National Marine Sanctuary's management plan, to understand the source and transport of MPs into the Monterey Bay National Marine Sanctuary. You will share responsibilities for the river monitoring aspect of the project with an MBNMS scientist, who will be your mentor. You will develop project management, data management and analytical skills. If desired, you will have the opportunity to author a scientific journal article.

Paid Internship: 200-400 hours + mileage

Internship Period: December 1, 2023 – Sept 30, 2024

CONTACT: PAM KRONE

pam.krone@noaa.gov

831-224-6627