

## Measuring Microplastics: Building Best Practices for Sampling, Extraction and Analysis

Hosted by: HORIBA, Southern California Coastal Water Research Project Authority, and the University of Toronto  
In coordination with State of California Water Resources Control Board and the California Ocean Protection Council

Held at the Southern California Coastal Water Research Project Authority  
3535 Harbor Blvd  
Costa Mesa, CA 92626, USA

April 4, 2019

- 8:00 Coffee and networking
- 8:30 Welcome and introductions
  - Welcome from the meeting organizers
  - Motivation and goals for the meeting
  - Description of meeting agenda
- 8:50 Ocean Protection Council Perspective
  - Deborah Halberstadt, Executive Director
- 9:10 State Water Resources Control Board Perspective
  - Darrin Polhemus, Deputy Director for Drinking Water
- 9:30 Microplastic Overview and Aspects Related to Human Health for Consideration
  - Bob Andrews (Drinking Water Research Group, University of Toronto)
  - Chelsea Rochman (Ecology and Evolutionary Biology, University of Toronto)
- 10:00 Break
- 10:20 Methods: State of the Science
  - a. Methods for sampling microplastics - Paul Helm (Ontario Ministry of Environment, Parks and Conservation)
  - b. Extracting microplastics from different environmental matrixes - Amy Lusher (Norwegian Institute for Water Research)
  - c. Techniques for identifying and quantifying microplastics prior to, or in lieu of, spectroscopy - Keenan Munno (University of Toronto)
  - d. FTIR in microplastic research: Towards a harmonized and standardized analysis – Sebastian Primpke (Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research)
  - e. Microplastics quest using pyrolysis GC-MS - Ashok Deshpande (NOAA)
- 12:00 Lunch on site (\$10)
- 1:00 Methods: State of the Science (continued)
  - f. Raman Spectroscopy in correlative microscopy / spectroscopy workflows – Silke Christiansen (Helmholtz Zentrum Berlin für Materialien und Energie & Max Planck Institute for the Science of Light)

- g. Microplastics in drinking water: Development and Automation of Raman Microspectroscopy - Marco Pittroff (TZW Technologiezentrum Wasser)
- h. QA/QC for microplastics sampling, analysis and reporting – Chelsea Rochman (University of Toronto)
- i. Planned European method evaluation study - Amy Lusher (Norwegian Institute for Water Research)

2:20 Break

2:40 Example microplastics data collection programs in California

- j. Microplastics in San Francisco Bay – Carolyn Box (5 Gyres)
- k. Microplastics in wastewater effluent - Steve Carr (Los Angeles County Sanitation Districts)
- l. USEPA Region 9 progress toward standardizing microplastic measurement methods - Anna-Marie Cook (US EPA)

3:40 Group discussion with stakeholders about their needs:

- What is your most urgent need at this moment?
- What would you like to see in a best practices report?
- What types of methods would you like to see developed?
- What are some of the key concerns that should be taken into consideration when developing/choosing best methods and practices?

4:40 Wrap-up

Next steps towards methods standardization

5:00 Adjourn