

Assembly Environmental Safety & Toxic Materials Committee

Informational Hearing

Microplastics in our water and environment: understanding a growing pollution source

SPEAKER BIOGRAPHIES

Dr. Scott Coffin, State Water Resources Control Board

Dr. Scott Coffin serves as a Research Scientist at the California State Water Resources Control Board, where he performs research and develops drinking water regulations for microplastics and other contaminants. Scott completed his Ph.D. in Environmental Toxicology at the University of California, Riverside. His graduate work focused on endocrine-disrupting chemicals and eco-toxicological effects of plastic. Scott's expertise are in analytical chemistry, bioanalytical screening, ecotoxicology, bioaccumulation modeling, and human health risk assessments.

Dr. Rebecca Sutton, San Francisco Estuary Institute

Dr. Rebecca Sutton is a Senior Scientist with the San Francisco Estuary Institute and the Regional Monitoring Program for Water Quality in San Francisco Bay. She leads a team of scientists investigating microplastics and other contaminants of emerging concern in the San Francisco Bay and other regions of California. Dr. Sutton received her B.S. in Environmental Resource Science from the University of California, Davis and her Ph.D. in Environmental Chemistry from the University of California, Berkeley. She has been appointed to California's Green Ribbon Science Panel to aid in the implementation of the state's Safer Consumer Products Regulations.

Dr. Violet Renick, Orange County Sanitation District

Violet Renick is a Senior Scientist in the analytical chemistry laboratory at the Orange County Sanitation District (OC San) in California, where she manages special studies on microplastics and other contaminants of emerging concern. She has been an active participant since 2018 in the development and evaluation of standard measurement methods for microplastics in California, and is currently focused on the development of reliable methods to characterize microplastics in wastewater. Prior to working for OC San, Violet managed the aquatic toxicity testing laboratory for the City of San Diego's Ocean Monitoring Program. Violet received her Ph.D. from San Diego State University and the University of California, Davis in 2014 where she focused on the behavioral and physiological effects of pesticides on estuarine fishes, and her BSc in Biology from McGill University in Montreal, Canada.

Dr. Janice Brahney, Utah State University

Dr. Janice Brahney is an Assistant Professor at Utah State University. Previously she was a postdoctoral research fellow at the University of British Columbia and a visiting professor at Okanagan College. She received her doctorate from the University of Colorado, Boulder, in Environmental Biogeochemistry. Her doctorate research focused on the cause and consequence of atmospheric dust transport. She holds an MSc degree in Earth Science and a BSc degree in Environmental Science, both from Simon Fraser University, Burnaby, Canada. Her research includes three primary themes, 1) the atmosphere as a vector for material transport, 2) climate change effects in mountain environments, and 3) the cause, effect, and mitigation of water quality impairment. Dr. Brahney is currently an associate editor for Freshwater Science.

Dr. Chelsea Rochman, University of Toronto

Dr. Rochman is currently on the faculty in the Department of Ecology and Evolutionary Biology at University of Toronto, and is a scientific advisor to the Ocean Conservancy and a National Geographic Explorer. Rochman has been researching plastic pollution, and in particular microplastics, for more than one decade. She has served as an expert witness in both the United States and Canada, chaired the GESAMP working group on microplastics, and currently serves as the Canadian delegate to the UNE working group on plastic pollution.

Previously, she was a David H. Smith Postdoctoral Fellow at the Aquatic Health Program at the University of California, Davis. She received her Ph.D. in a joint program with San Diego State University and the University of California, Davis in Ecology.

Dr. Stephanie Wright, Imperial College London

Dr. Stephanie Wright is a Lecturer at the Medical Research Council (MRC) Centre for Environment and Health, School of Public Health. She has over 9 years' research experience in the field of microplastics, specifically in exposure and biological impacts, which began with a Ph.D. at the University of Exeter. She then joined the Environmental Research Group, King's College London, on an early career research fellowship in microplastics and human health, with an emphasis on airborne plastic pollution.

She now holds a UKRI Rutherford Fellowship and leads the Microplastics team, whose interdisciplinary research addresses microplastic detection, characterisation and quantification in the atmospheric environment; optimisation of techniques for the detection of microplastics in biological matrices; and, toxicological assessment of microplastics using in vitro models of the human airway. She has been on national television and radio as a guest expert; participated in a European Commission microplastics working group; and, contributed towards policy change.

Dr. Elizabeth Fassman-Beck, Southern California Coastal Water Research Project (SCCWRP)

Dr. Elizabeth Fassman-Beck is a SCCWRP Principal Engineer whose primary responsibility is to implement SCWWRP's Stormwater BMPs (best management practices) research theme. Her research in urban stormwater management quantifies the hydrologic and water quality performance of BMPs, with an emphasis on green infrastructure (GI)/Low Impact Development technologies such as living (green) roofs, bioretention systems (rain gardens and planters), permeable pavements, swales, and floating treatment wetlands. Research outcomes have led to numerous publications in highly respected journals, a co-authored technical book, *Living Roofs in Integrated Urban Water Systems*, and design specifications for regulatory agencies in New Zealand and North Carolina.

Prior to joining SCWWRP, her 15-year research career included academic positions at the Stevens Institute of Technology (Hoboken, NJ) and the University of Auckland (New Zealand). At Stevens, she constructed a "Living Laboratory" across the campus, including 47 field experimental GI systems, and was named the 2018 Educator of the Year from the American Society of Civil Engineers (ASCE)-NJ Section. In Auckland, she supervised or co-supervised five Ph.D.s to completion, and worked closely with the local regulatory agency to support stormwater design and policy with scientific evidence.

She received her Ph.D. and M.S. in civil engineering from the University of Virginia and her B.S. in civil and environmental engineering from Duke University. She joined SCCWRP in 2019.

Dr. Kara Lavender Law, Sea Education Association

Dr. Kara Lavender Law is a Research Professor of Oceanography at Sea Education Association (SEA; Woods Hole, MA) whose research since 2007 has focused on plastic debris in the ocean. Trained as a physical oceanographer, Dr. Law has more than 12 months of sea time on oceanographic and sailing research vessels, including in the eastern North Pacific and western North Atlantic Oceans where plastic debris accumulates in regions dubbed, "garbage patches." Dr. Law's current research interests focus on the sources of plastic to the marine environment, understanding how ocean physics determines the distribution of plastic and other marine debris, and the degradation and ultimate fate of different plastic materials in the ocean. She serves on the U.S. National Academies Committee on U.S. Contributions to Global Ocean Plastic Waste, is vice-chair of the Scientific Committee on Oceanic Research (SCOR) Working Group FLOTSAM (Floating Litter and its Oceanic Transport Analysis and Modelling), and served as the co-principal investigator of the Marine Debris Working Group at the National Center for Ecological Analysis and Synthesis (NCEAS). Dr. Law holds a Ph.D. in physical oceanography from Scripps Institution of Oceanography/UCSD and a B.S. in mathematics from Duke University.

Dr. Alexis Jackson, The Nature Conservancy

Dr. Alexis Jackson serves as a Fisheries Project Director for the Oceans Program of the California Chapter of The Nature Conservancy. At TNC, Alexis leads a team focused on reducing the global bycatch of swordfish fisheries through demonstrating the ability of low bycatch gears to support economically viable fisheries in California and in other major swordfish producing countries along the eastern Pacific Ocean. She also serves as an ocean policy lead, working closely with state agencies, Commissions, and the California Legislature to ensure the adoption of policies that reduce plastic pollution and advance climate-readiness in state fisheries management.

Prior to joining TNC, Alexis worked for NOAA Fisheries and Pew Charitable Trusts where she gained extensive experience in state, federal, and international fisheries policy and negotiations related to sustainable management of highly migratory species (e.g. sharks, tuna, swordfish). Her past research has primarily focused on application of conservation genetics data to inform fishery management strategies and regulatory processes for commercially important fish and invertebrate species. Alexis holds a B.S. in Ecology and Evolutionary Biology from Yale University and an M.A. and Ph.D. in Ecology and Evolutionary Biology from University of California Santa Cruz.

Dr. Kate O'Neill, University of California, Berkeley

Dr. O'Neill is a Professor in the Department of Environmental Science, Policy and Management at the University of California, Berkeley. She holds a Ph.D. in Political Science from Columbia University, and was a post-doctoral fellow at Harvard University's Kennedy School of Government. She has written three books, *Waste Trading Among Rich Nations: Building a New Theory of Environmental Regulation* (MIT Press, 2000), *The Environment and International Relations* (Cambridge University Press 2009, 2nd edition 2017), and *Waste* (Polity Press 2019).

Dr. O'Neill teaches global environmental politics at graduate and undergraduate levels (large lecture and small seminar formats) as well as other courses. Between 2014 and 2020, she was a Resident Faculty member at the University of California, Berkeley, living in a residential complex of 1200 first-year students, and working with two live-learn communities, the Global Environment Theme House and Unity House.