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Riverine Microplastics Transport Dynamics

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KIT, Bldg.10.81, Room 305

or online:

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Abstract

Globally, rivers have been found to contain high concentrations of microplastics and are also the major conveyors of microplastic pollution to the ocean. This has engendered an increased focus on microplastic sources, transport, and fate in riverine systems. But how should we design microplastic monitoring plans for rivers if our goal is to quantify concentration, character, and flux? Here I present the results of microplastics monitoring campaigns conducted on several riverine systems draining coastal watersheds in Southern California and discuss lessons learned as well as future directions to support flux-based monitoring of microplastics. Key topics include consideration of microplastic distribution across the water column, sampler performance, concentration and character dependency on discharge, hydrologic regime, and time, and by extension – effective discharge.



Biography



Dr. Andrew Gray is an Associate Professor of Watershed Hydrology in the Department of Environmental Sciences at the University of California, Riverside. He completed his doctoral work in Hydrologic Sciences at the University of California, Davis where he focused on fluvial sediment dynamics in small mountainous rivers. Dr. Gray's research focuses on the processes controlling water and sediment transfer, with particular interest in wildfire impacts on sediment dynamics, coastal sedimentology, sediment source investigation, and microplastics pollution.

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