

Title: A Vision for More Effective Use of Biological Data in Water Resource Management

SWAMP's investments in bioassessment infrastructure have given water resource managers a growing suite of tools they can use to reliably quantify the ecological condition of streams and rivers. However, because biological communities respond to natural and anthropogenic disturbances at multiple spatial scales, managers also need tools that will help them interpret patterns in data from individual sites in the context of drivers that occur at larger spatial scales (e.g., habitat and flow alteration, land use patterns, weather and climate patterns).

To meet this need, SWAMP's Bioassessment Program has been developing two new types of technical tools: 1) response models that set management targets for stressors (e.g., nutrients, hydromodification, physical habitat alteration) that will protect biological integrity and 2) landscape and spatial network models that provide context and encourage practitioners to look beyond reaches and consider patterns in condition occurring across larger regions. This context will help water resource agencies apply the Water Boards' biointegrity and biostimulatory policies more effectively and ultimately lead to more effective conservation and restoration decisions.

Presenter: Peter Ode, California Department of Fish and Wildlife

Peter Ode, laboratory program supervisor with the California Department of Fish and Wildlife's Office of Spill Prevention and Response, received a Ph.D. in Entomology from Cornell University, specializing in stream insect ecology. Pete has been a scientist at the DFW Aquatic Bioassessment Laboratory since he came to California in 1995. Since 2005, he has also served as the lead scientist for the State Water Resources Control Board's SWAMP Bioassessment Program. He was also a co-lead of the state's technical team charged with developing the scientific foundation for California's statewide biological water quality standards (bio-objectives). Pete's primary research interests focus on developing and enhancing the technical foundation for using ecological indicators as the primary measures of stream health in California's various water resource agencies.

Presenter: Raphael Mazor, Southern California Coastal Water Research Project

Raphael Mazor received a doctorate in Environmental Science, Policy, and Management from the University of California at Berkeley, and has worked at SCCWRP since 2006. He is a recognized leader in the field of bioassessment, organizing international conferences on the subject for the Society for Freshwater Science, and serving as a founding officer of their California chapter. As the coordinator of the southern California stream survey of the Stormwater Monitoring Coalition, he oversees the sampling efforts of several stormwater and regulatory agencies in one of the nation's most comprehensive stream assessment programs. He is a recognized leader in the assessment of intermittent rivers, having organized several international workshops and authored a forthcoming book chapter on the topic.