The State of California's Effort to Develop a Standardized Bioassessment Effort and Biocriteria Development

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Biographical Sketch of Author

Jim is a Staff Environmental Scientist for the California Department of Fish and Game (DFG) based at the Water Pollution Control Laboratory. Jim received his B.S. degree in Fisheries and M.S. degree in Watershed Management from Humboldt State University in Arcata, California. His duties include investigating biological effects of toxic spills, designing water quality monitoring projects for DFG and various government agencies and supporting DFG's regional water quality biologists. Jim established DFG's Aquatic Bioassessment Laboratory in 1993 and since then has lead the development of ecological assessment techniques in California and participates on several U.S. EPA workgroups to integrate biological assessment into water quality regulation.

Abstract

California's water quality agency is divided into nine autonomous regions called Regional Water Quality Control Boards and one state-wide entity called the State Water Resources Control Board. Each board has staff engineers and environmental specialists that report to politically chosen board members that make the final decision on water quality regulation. Although California has an environmentally sound record on water quality regulation, it is very difficult to make changes with established programs or implement new programs, including biocriteria development. In 1993, the California Department of Fish and Game developed a rapid bioassessment procedure based on those used to monitor the effects of their fish hatcheries on the biological condition of receiving waters. Although, DFG is not a water quality regulatory agency, it does have its own anti-pollution code (DFG Code 5650) that allows it to prosecute violators. With the aid of the U.S. Environmental Protection Agency and the State and Regional Boards, DFG's California Stream Bioassessment Procedure (CSBP) has become the state standardized procedure for assessing biological integrity of the state's wadeable streams and rives. Today the CSBP is widely used for point-source, non-point source and ambient monitoring of aquatic resources. Additionally, it is effectively used in enforcement of DFG Code 5650 and natural resource damage assessments. Although, California water regulation does not include biocriteria, considerable effort has been initiated in the state, including establishing the CSBP as standardized sampling protocol, determining regional IBIs and building a substantial database of bioassessment data from more than 2500 sites state-wide.