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The Regional Monitoring Program: Ten Years of Science in Support of Managing Water Quality in San Francisco Bay

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Biographical Sketches of Authors

Jay Davis has worked on contaminant issues in the San Francisco Estuary since 1986. Dr. Davis is manager of the Regional Monitoring Program for the San Francisco Estuary. His particular interests are in modeling the long term fate of organic contaminants in the Bay and accumulation of persistent contaminants in aquatic food webs of the Bay-Delta watershed.

Karen Taberski has worked on programs to monitor and assess water quality in California since 1980. Ms. Taberski has been the monitoring and assessment coordinator for the San Francisco Bay Regional Water Quality Control Board (Regional Board), the agency that regulates water quality in the region, for the past 14 years. In that capacity she worked on developing the Regional Monitoring Program (RMP) to answer regulatory and management questions and continues to be the lead technical coordinator between the Regional Board and the RMP.

Kevin Buchan has been with Western States Petroleum Association for 7 years representing the interests of the 5 Bay Area refineries to the local, state, and regional regulatory agencies. He chairs the Steering Committee to the RMP, who along with its other members, are responsible for providing oversight and direction to the $3 million annual budget program. He has a B.S. in Chemical Engineering from U.C. Davis.

David Tucker has worked on environmental contaminant issues in San Francisco Bay since 1988 in his capacity as Laboratory Manager for the City of San Jose's Environmental Laboratory. He presently chairs the technical committees for the Regional Monitoring Program and the Clean Estuary Partnership, both multi-agency scientific initiatives supporting monitoring and research efforts in the Bay, and has been a member of the National Water Quality Monitoring Council since 2000.

A. Russell Flegal has participated in the Regional Monitoring Program since its inception. He is Professor and Chair of the Department of Environmental Toxicology at UCSC. The principal focus of his research group is the biogeochemical cycles of inorganic contaminants in aquatic systems, most notably San Francisco Bay.

Andrew Gunther was the original manager of the Regional Monitoring Program (1993-1996), and is presently the Program Coordinator for the Clean Estuary Partnership, a collaborative effort to conduct science in the support of TMDLs. Dr. Gunther served as the Assistant Chief Scientist for the *Exxon Valdez* Oil Spill Restoration Program, and is working on recovery planning for threatened salmonids in California.

Sarah Lowe received her M.S. in Environmental Management from the University of San Francisco in 1998, and has worked on the Regional Monitoring Program for Trace Substances (RMP) since 1994. Her Master's research focused on developing benthic community assessments for several benthic communities in the San Francisco Estuary. Ms. Lowe became the Associate RMP Manager in November of 2001, overseeing the Status and Trends

Program, data management, QA/QC, and contract and financial management as well as participating in RMP Pilot and Special Studies.

Michael Connor is the Executive Director of the San Francisco Estuary Institute, a non-profit environmental science institute funded through grants, contracts, and discharge fees. Its mission is to foster development of the scientific understanding necessary to enhance and protect the San Francisco Estuary, through monitoring, research, and communication. He has led environmental programs for organizations in the private (Program Manager, Battelle Ocean Sciences), public (Director of Environmental Quality, Massachusetts Water Resources Authority), and non-profit (Vice President, New England Aquarium) sectors. He has over 50 scientific, technical, and popular publications.

Abstract
The Regional Monitoring Program for Trace Substances in the San Francisco Estuary (RMP) is an innovative model for providing the scientific foundation needed for managing water quality in a treasured aquatic ecosystem. Initiated in 1993, the RMP has matured into a multifaceted, sophisticated, and efficient program that has demonstrated the capacity for considerable adaptation in response to changing management priorities and advances in scientific understanding. The RMP is also a key source of information that helps define regulatory priorities. Through collective planning and management, the RMP has established a climate of cooperation and a commitment to participation among a wide range of stakeholders, including regulators, dischargers, industry representatives, community activists, and scientists. A sophisticated and well-supported QA/QC program has contributed to the development of an authoritative and reliable body of knowledge that is allowing the community to consider data-rich, science-based TMDLs and other water quality attainment strategies for the Estuary. Over the course of its development, the RMP has demonstrated some of the ingredients that are necessary to sustain a long-term water quality monitoring program that meets management needs: stable funding, collaboration, clear objectives, sound science, adaptation, and communication. Benefits of the Program and areas for improvement from the perspectives of regulators, the regulated community, and scientists are described.