

Proposal to Develop a California Estuaries Portal Initially Focused on the San Francisco Bay-Delta Estuary

The Problem

The San Francisco Bay-Delta is the state's largest and most important estuary. Many state, federal and local agencies, regulated dischargers, and water bond grant recipients spend millions of dollars each year monitoring, assessing and reporting on the condition of the San Francisco Bay-Delta estuary ecosystem. While some coordination efforts currently exist—including the Interagency Ecological Program (IEP, since 1970), the San Francisco Bay Regional Monitoring Program (Bay RMP, since 1993) and an emerging Delta RMP—there is currently no overall structure to coordinate all of these activities nor a universally agreed upon way to integrate the data and information gained from these activities into a coherent ecosystem health assessment. At present, the specific mandates of each agency/organization result in inconsistent monitoring objectives and methods to collect, assess, and manage the data, making it difficult to integrate data from different studies and sources. What is more, there is no single user-friendly place to access the data.

The Monitoring Council's Solution

To directly address such problems, California Senate Bill 1070 mandated that the California Environmental Protection Agency and the California Natural Resources Agency enter into a Memorandum of Understanding to establish the California Water Quality Monitoring Council. The Monitoring Council has developed recommendations, accepted by the two Agency Secretaries, that include a bold new vision. The best way to coordinate, integrate and enhance California's water quality and related ecosystem monitoring, assessment and reporting efforts is first to provide a platform for intuitive, streamlined access to water quality and ecosystem health information that directly addresses users' questions. Theme-specific workgroups, under the overarching guidance of the Monitoring Council, evaluate existing monitoring, assessment and reporting efforts and work to enhance those efforts so as to improve the delivery of water quality and ecosystem health information to the user, in the form of theme-based internet portals. To date, a number of theme-specific workgroups and portals have been created. Their efforts clearly demonstrate that the Monitoring Council's vision is, in deed, correct.

Needs Identified

The need for a workgroup and a portal focused on delivering answers to users' questions about the San Francisco Bay-Delta Estuary has already been identified.

- The Water Boards' *Strategic Workplan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary* identified the need for a comprehensive water quality monitoring program for the Delta, with the short-term goal of compiling existing data sets and regularly assessing and reporting, and a long-term goal of comprehensively coordinating water quality monitoring in the Delta to ensure most efficient use of resources and regular assessment and reporting. The Delta RMP is forming to address this need. At the Delta RMP kick-off meeting, stakeholders identified several needs for data compilation, analysis and reporting:
 - Agreed upon assessment questions that drive the assessment and reporting process and ultimately design of the RMP
 - A scientifically credible process, in which stakeholders can participate, to ensure that data are appropriately assessed, interpreted, and reported
 - Ensure that data are accessible
 - Ensure that when data from multiple sources are integrated, it is appropriate to do so
 - An appropriate level of QA/QC that will ensure that data are of a quality needed to answer the assessment questions

- A recent contaminant synthesis report, *Evaluation of Chemical, Toxicological, and Histopathologic Data to determine their role in the Pelagic Organism Decline* (Johnson et al, 2010) commissioned by the Central Valley Regional Water Board and recently published by UC Davis, stated, “[u]ntil such time as a single monitoring program is put into place that frames sample collection for multiple ecological and taxonomic parameters in a biologically meaningful way, future discussions of contaminant-related issues will end in disappointment.” The report recommended that “[t]he long term monitoring program should have ongoing data interpretation and analysis as a co-equal goal along with sampling and analysis” and that “[d]ata from all water quality data generators in the Delta should be submitted to the State’s Regional Data Center in SWAMP-comparable format.”
- The IEP Coordinators and Lead Scientist recently raised several needs to the IEP Directors regarding the future of the program. The team identified three overarching science activities in need of immediate improvement:
 - Data management and accessibility
 - Analysis, synthesis, assessment, and communication
 - Modeling

Options for program adaptation were divided into four categories:

- Broadening the geographic scope of the program to include water bodies upstream and downstream of the Delta
- Broadening the scope to include shallow water and riparian habitats
- Incorporating additional mandates, plans and initiatives, including coordination with the Water Board’s Bay-Delta Strategic Workplan and the Monitoring Council
- Additional science activities, including ecological status and trends monitoring, monitoring tool development, reporting and communication, and improving science interaction and cooperation

A California Estuaries Portal and Workgroup

Greater efficiency and effectiveness can be achieved through integration of existing programs and coordination efforts. The Monitoring Council has already identified the need for a California Estuaries portal, and an underlying workgroup, devoted to the health of California estuarine ecosystems. The California Estuary Monitoring Workgroup would initially focus its efforts on our largest and most important estuary, the San Francisco Bay-Delta. Such a workgroup, sponsored by the Monitoring Council, would be tasked with identifying key questions to assess the ecological health of the San Francisco Estuary, the data and methods available and needed to address the questions, and the methods to access, display, and work with the data and information through a new California Estuaries Portal, linked from the *My Water Quality* website (www.CaWaterQuality.net). The workgroup would also identify redundancies, data gaps and inefficiencies in the current monitoring activities and develop solutions for improvements. Finally, this workgroup would interact with other Monitoring Council workgroups to gain access to additional data, information and tools, so as to permit even more comprehensive assessments of water quality and ecosystem health in California. The many benefits to all players of the new California Estuary Monitoring Workgroup include:

- Identifying monitoring and related activities already underway that address the needs of each member
- Integrating data on biology, contaminants, and flow and making it available for multiple purposes
- Identifying issues related to QA/QC and data comparability
- Identifying and refining assessment questions to address the needs of agency decision makers, legislators, agency staff, scientists, and the public

- Ensuring a transparent process through workgroup structure and function
- Partnering with other Monitoring Council workgroups, such as the California Wetlands Monitoring Workgroup and the Healthy Streams Partnership, to gain access to additional data types

Workgroup Membership

Organizations currently coordinated through the Interagency Ecological Program:

- California Department of Water Resources (Division of Environmental Services)
- California Department of Fish and Game (Bay-Delta Region)
- California State Water Resources Control Board (Water Rights)
- U.S. Geological Survey (California Water Science Center)
- U.S. Bureau of Reclamation (Central Valley Operations Office and Delta Division)
- U.S. Fish and Wildlife Service (Stockton Fish & Wildlife Service Office)
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers

Other Programs and Organizations:

- San Francisco Bay Regional Monitoring Program
 - San Francisco Bay Regional Water Quality Control Board
 - San Francisco Estuary Institute
- Delta Regional Monitoring Program
 - Central Valley Regional Water Quality Control Board
- Delta Stewardship Council - Delta Science Program
- California Department of Water Resources
 - Municipal Water Quality Investigations
 - Central District Surface Water Monitoring
- California Department of Fish and Game
 - Biogeographic Information and Observation System
- Delta Protection Commission
- Delta Conservancy
- San Francisco Bay Conservation and Development Commission
- State and Federal Water Contractors Agency – SFWC Science Program