DELTA RMP: DEVELOPING A DELTA REGIONAL MONITORING PROGRAM FOR CONTAMINANTS

Presented by: Thomas Jabusch* and Meghan Sullivan** *thomasj@sfei.org **MSullivan@waterboards.ca.gov

> http://www.waterboards.ca.gov/centralvalley/water_issues/delta_water_quality/comprehensive_monitoring_program/index.shtml

Vision

The Delta RMP will improve coordination of monitoring and assessment in and around the Delta. It will make monitoring more useful and cost-effective to all participants by creating efficiencies and addressing important management questions concerning water supply and the ecosystem, such as status and trends in contaminant concentrations.

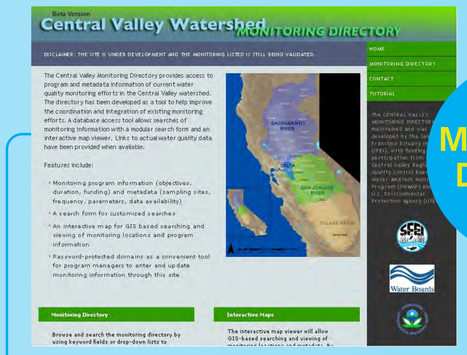
Goal

To implement an integrated monitoring framework that will address the need for comprehensive regional assessment, while meeting the following objectives:

- use the pilot phase (Phase I) as a proof of concept that sets the stage for a long-term program
- compile, synthesize, and report data regularly
- answer important questions that require a comprehensive, regional view

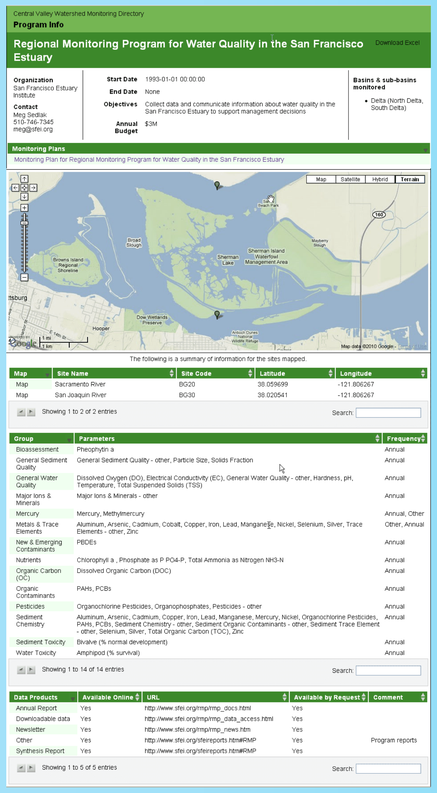
Stakeholders

Milestones



Monitoring Directory

The purpose of the monitoring directory is to promote and facilitate improved coordination of water quality monitoring across the Central Valley Delta watershed.

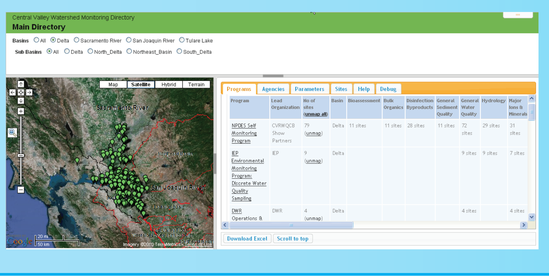


Program Information Pages

- Each program or project has its own page, providing information on monitoring objectives, contacts, sites, parameters, and data availability
- Program managers get password access to update their own monitoring information

Monitoring Mapping Viewer

A navigable map showing monitoring locations in the Central Valley Delta Watershed reported to the Monitoring Directory. Displays monitoring sites and information selectively by program, sampling location, or parameter.



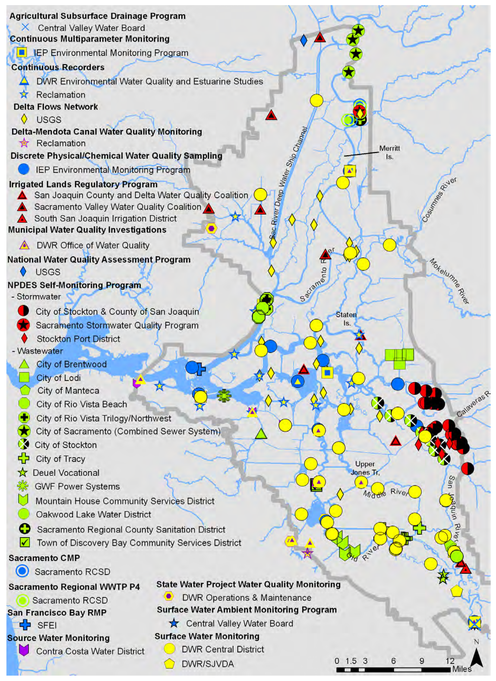
Summary of Existing Water Quality Monitoring Programs in the Delta

Program	Approach (No of sites)	Scale	Area	Bioassessment	Bulk organics	Disinfection Byproducts	DOC/TOC	Flow	General Water Quality	Major ions	Mercury	Metals & Trace Elements	New & Emerging Contaminants	Nutrients	Organic Contaminants	Pesticides	Pathogens	Sediment Chemistry	Sediment Toxicity	Tissue Chemistry	Water Toxicity
Agricultural Subsurface Drainage	Integrator (1)	Regional	SJR						✓			✓									
Continuous Multiparameter Monitoring (IEP EMP)	Delta network (9)	Delta	Delta	✓				✓	✓	✓											
Continuous Recorders	Delta network (16)	Delta	Delta					✓	✓												
Delta Flows Network	Delta network (30)	Delta	Delta	✓				✓	✓												
Delta-Mendota Canal WQ Monitoring	Water conveyance (1)	Delta	Delta					✓	✓			✓									
Discrete Physical/Chemical Monitoring (IEP EMP)	Delta network (12)	Delta	Delta	✓				✓	✓	✓				✓							
Surface Water Monitoring (DWR)	Delta network (49)	Delta	Delta					✓	✓												
Municipal Water Quality Investigations	Delta network (9)	Delta	Delta				✓		✓	✓				✓							
Irrigated Lands Regulatory Program	Source (10)	Targeted	North, Central and South Delta				✓	✓	✓	✓		✓		✓		✓	✓	✓			✓
NAWQA	Integrator (2)	National	Sac R, SJR, Yolo Bypass				✓	✓	✓	✓			✓	✓			✓				
NPDES Self-Monitoring Program – Stormwater	Source (29)	Regional	Stockton urban,		✓		✓		✓	✓	✓	✓		✓	✓	✓	✓		✓		✓
NPDES Self-Monitoring Program – Wastewater	Source (54)	Local	Marsh Creek, Old R, Sac R, SJR,		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓
Sacramento CMP	Source (2)	Regional	Sac R				✓		✓	✓	✓		✓	✓	✓	✓					
Sacramento Regional WWTP P4	Source (3)	Local	Sac R				✓		✓	✓	✓		✓	✓		✓					
San Francisco Bay RMP	Integrator (2)	Regional	Delta outflow	✓				✓	✓	✓	✓	✓	✓			✓	✓	✓	✓		
Source Water Monitoring (CCWD)	Supply (4)	Regional	West, Central & South Delta	✓			✓		✓	✓		✓		✓		✓					
State Water Project WQ Monitoring	Supply (3)	State	SWP				✓		✓	✓	✓		✓	✓		✓					
SWAMP	Integrator (2)	Regional, state	Sac R, SJR				✓		✓						✓		✓	✓		✓	

Delta water quality monitoring approaches and parameters

Aquatic Science Center has prepared a draft report summarizing the existing monitoring in the Delta. The monitoring directory was used as a tool to identify, compile, and inventory information on existing monitoring. The report features summary tables and maps. Examples are the summary table (above) and overview map displayed (right).

Water Quality Monitoring in the Delta



Overview of Delta Monitoring Sites by Program

Stakeholder Working Groups

Proposed Strategy

Monitoring Objectives
Agree on questions to answer immediately and develop a long-term objectives framework.

Data Integration
Determine suitable approaches for data integration and interoperability to enable a more comprehensive view of cross-cutting challenges faced in the Delta, such as the Pelagic Organism Decline (POD).

Framework Alternatives

Governance
Recommend governance options that fit with the program vision and goals.

Funding
Identify appropriate funding models for the Delta RMP.

Coordination with Other Programs
Identify specific opportunities for sampling coordination and logistic partnerships and work towards a coordinated monitoring strategy.

Delta RMP Planning Team

AQUATIC SCIENCE CENTER

Water Boards

State Water Resources Control Board

Dr. Brock Bernstein

Central Valley Regional Water Quality Control Board

POD Synthesis Analysis: Lessons Learned

Michael Johnson et al prepared a report to compile and review available data to determine if there are sufficient data to characterize the extent and role of contaminants in the POD. During the analysis, the author concluded that for most data there is/are:

- Poor documentation
- Analytical issues and QA/QC problems
- Shortcomings with the current monitoring approach
- Existing monitoring design limitations
- Inaccessible data

Draft Program Plan

The RMP Planning Team has prepared a draft program plan to guide development and implementation of the RMP in the coming years. The plan details the necessary elements and the proposed strategy moving forward. It is currently available for comment.

The Scoop

- Stakeholder participants are nearly unanimous in calling out the benefits of a more regionally coordinated approach to monitoring and assessment.
- Strawman proposals for key topics are available on the Delta RMP website for comment.
- Technical workgroups and additional stakeholder meetings are planned to develop reasonable solutions to identified data management issues and discuss governance options and monitoring questions.
- A communication product providing an overview of RMP activities will be developed, with stakeholder input for a broad audience. This product is slated for distribution later this year.
- Regional Water Board staff plan to continue the exchange of ideas with stakeholders through various methods. If you are interested in getting involved or have any questions, please contact Meghan Sullivan at (916) 464-4858.