DELTA RMP: Developing a Delta Regional Monitoring Program for Contaminants

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

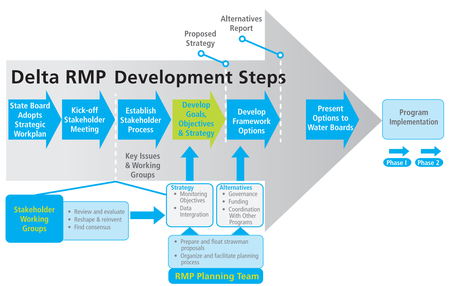
Vision

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.

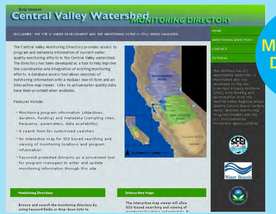
Goal

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

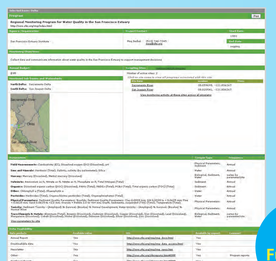


Milestones



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.



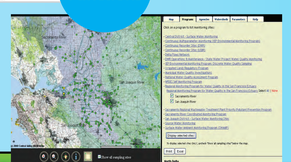
Key Functions

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

Delta water quality monitoring approaches and parameters

Program	Approach (No of sites)	Scale	Area	Bioassessment	Bulk organics	Contaminants/ Pesticides	Flow	General Water Quality	Mass loads	Mercury	Nutrients/ Trace Elements	Other & Emerging Contaminants	Sediments	Organic Contaminants	Pathogens	Pesticides	Sediment Chemistry	Sediment Toxicity	Tissue Chemistry	Water Toxicity
Agricultural Subsurface Drainage	Integrator (1)	Regional	Lyt								✓									
Continuous Multiparameter Monitoring (DIP DWR)	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 (DIP DWR)	Delta network (12)	Delta	Delta	✓			✓	✓	✓			✓								
Surface Water Monitoring (DWR)	Delta network (48)	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, up. San Joaquin R			✓	✓	✓	✓		✓				✓					
NPDES Self-Monitoring Program – Stormwater	Source (29)	Regional	Stockton Urban Affiliate	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓				✓
NPDES Self-Monitoring Program – Wastewater	Source (54)	Local	Mid & Low Sac R, Lyt	✓		✓	✓	✓	✓		✓		✓	✓	✓	✓				✓
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			✓		✓	✓	✓	✓		✓	✓		✓				
USGS	Integrator (2)	Regional, state	Sac R, Lyt			✓		✓							✓	✓	✓	✓		✓

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.

Regional Monitoring Famework

Essential Elements

No. 1 Program scope
Priority beneficial uses and the geographic and temporal scale of assessments.

No. 2 Monitoring objectives
Shared monitoring objectives will address important management questions.

No. 3 Indicators
Parameters and benchmarks will depend on the objectives.

No. 4 Monitoring design
Ensures that data collection efforts address the identified monitoring objectives.

No. 5 Quality assurance/ quality control
The project strives for compatibility with SWAMP.

No. 6 Information management
The goal is to make relevant data and information available to all stakeholders.

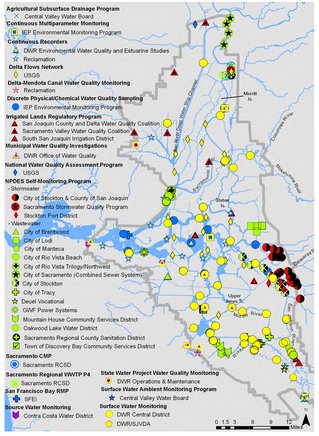
No. 7 Data analysis and assessment
Processes for compiling, assessing, and regular reporting of results.

No. 8 Reporting
Products and distribution frequency.

No. 9 Program review.
Peer review processes.

No.10 General Support and infrastructure
Funding and organizational structure.

Water Quality Monitoring in the Delta


Agricultural Subsurface Drainage Program
Central Valley Water Board
Continuous Multiparameter Monitoring
IEP Environmental Monitoring Program
Continuous Recorders
DWR Environmental Water Quality and Estuarine Studies
Reclamation
Delta Flows Network
USGS
Delta-Mendota Canal Water Quality Monitoring
Reclamation
Discrete Physical/Chemical Water Quality Sampling
IEP Environmental Monitoring Program
Irrigated Lands Regulatory Program
San Joaquin County and Delta Water Quality Coalition
Sacramento Valley Water Quality Coalition
South San Joaquin Irrigation District
Municipal Water Quality Investigations
DWR Office of Water Quality
National Water Quality Assessment Program
USGS
NPDES Self-Monitoring Program
- Stormwater
City of Stockton & County of San Joaquin
Sacramento Stormwater Quality Program
Stockton Port District
- Wastewater
City of Brentwood
City of Lodi
City of Manteca
City of Rio Vista Beach
City of Rio Vista Trilogy/Northwest
City of Sacramento (Combined Sewer System)
City of Stockton
City of Tracy
Deuel Vocational
GWF Power Systems
Mountain House Community Services District
Oakwood Lake Water District
Sacramento Regional County Sanitation District
Town of Discovery Bay Community Services District
Sacramento CMP
Sacramento RCSD
Sacramento Regional WWTP P4
Sacramento RCSD
San Francisco Bay RMP
SFEI
Source Water Monitoring
Contra Costa Water District
State Water Project Water Quality Monitoring
DWR Operations & Maintenance
Surface Water Ambient Monitoring Program
Central Valley Water Board
Surface Water Monitoring
DWR Central District
DWR/SJVDA
Merritt Is.
Stated Is.
Upper Sacramento River
Upper San Joaquin River
Mokelumne River
Cosumnes River
Sacramento River
Sacramento Deep Water Ship Channel
Stockton Deep Water Ship Channel
Old River
Middle River
Grant Line Canal
Clifton Court Forebay
Delta Cross Channel