



## **Appendix 5 - MWQI 5 Year Strategic Plan**

**Municipal Water Quality Investigations  
Program 2011-2012 Workplan  
4/27/11  
Final**

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## **Appendix 5-MWQI 5 Year Strategic Plan**

During 2006-07, the five-year strategic plan for the MWQI Program was updated and approved and adopted by the MWQI Technical Advisory Committee. This strategic plan will serve as the basis for the MWQI Program for completing development of program work plans for 2008-2009, and subsequent years. The plan that was approved is reproduced below.

### **MWQI Mission Statement**

The mission of the MWQI Program is to collect and disseminate timely information to enable drinking water supplies taken from the Sacramento-San Joaquin Delta to be economically treated to produce safe and palatable drinking water. Information produced through this program will be used for:

1. Identifying and evaluating sources of drinking water contaminants.
2. Assisting MWQI Program participants in achieving their water quality objectives, meeting regulatory requirements, and planning for the future.
3. Supporting Delta and SWP water supply operations and assessing the water quality consequences of these operations.
4. Augmenting, in a cost-effective manner, the efforts of State and federal agencies mandated to monitor, protect, and improve drinking water.
5. Assessing impacts of actions by the California Bay Delta Authority and other entities on Delta and SWP drinking water quality.
6. Participating in public regulatory and funding processes to disseminate drinking water quality information and to assist in efforts to protect and improve drinking water sources.

### **Objectives for The Five-Year Plan**

#### **Organizational Structure, Coordination and Funding**

- Develop an organizational structure that ensures staffing requirements for the MWQI Program are met on a timely basis through the retention of highly qualified personnel that have the expertise to meet MWQI Program objectives.
- Develop and implement the Real Time Data and Forecasting-Comprehensive Program (RTDF-CP) which will encompass tasks identified by the State Water Contractors, MWQI staff, other DWR units, outside agencies as high priority and achievable through cooperative effort.
- Work with the State Water Contractors to identify tasks that can most efficiently be performed through cooperative agreement, and participate in cooperative implementation of such tasks. These tasks will be described in detail and planned for on an annual basis in the RTDF-CP strategic plan.
- Work with the State Water Contractors to identify funding needs that will enable the MWQI Program to be adequately implemented, and to participate in acquiring, allocating, and accounting for, funds to accomplish needed work both directly, and through cooperative agreement.

- Coordinate MWQI Program activities with those of other DWR units under the RTDF-CP to enhance productivity, minimize duplication and overlap, and ensure effective coordination and communication among these units to enable joint implementation of water quality assessment and forecasting activities affecting the Delta and SWP as a whole.

### **Development and REfinement of a SWP “Early Warning System” for Water Quality Concerns**

- In conjunction with the Division of Operations and Maintenance and as one of the primary objectives of the RTDF-CP, develop and refine a “SWP Water Quality Early Warning” system that will alert MWQI Program participants of likely drinking water quality problems in a timely manner to enable preventative or corrective actions to be taken to avoid consumer impacts.
- Develop efficient communications among DWR units and MWQI Program participants to ensure early warning information is transmitted, received, and acted upon as appropriate.
- Tasks identified under the “Water Quality Monitoring”, “Information Management and Dissemination”, “Water Quality Forecasting”, “Scientific Support” and “Emergency Response” program elements support the development of this early warning system.

### **Water Quality Monitoring and Emerging concerns**

- Monitor water quality parameters relevant to drinking water at key locations in the Sacramento-San Joaquin Delta through periodic collection of discrete samples and their analysis by field and laboratory instruments, according to accepted methods.
- Maintain existing *in-situ* multi-parameter water quality monitoring stations on the Sacramento River at Hood, H.O. Banks Delta Pumping Plant Headworks, and San Joaquin River near Vernalis.
- As part of RTDF-CP work cooperatively with the State Water Contractors, other DWR units, and other agencies, to identify additional key locations in the Delta, its tributaries, and the State Water Project where additional *in-situ* water quality assessment equipment is needed. Work cooperatively with others to acquire needed permits, plan for and perform construction, acquire monitoring and communications equipment, bring new stations into operation, and assure the quality of data produced.
- Perform water quality assessments and evaluations to identify drinking water quality consequences of physical or operational changes in the Delta, its watersheds, and the State Water Project.
- With participation of the State Water Contractors, other MWQI Program participants, and DWR modelers, produce annual re-evaluations of the discrete and *in-situ* monitoring programs to identify and recommend needed changes to eliminate critical data gaps, provide valid data for the DSM2 model, improve program efficiency and minimize monitoring costs.
- Ensure timely and appropriate quality assurance/quality control of water quality and related information produced by the MWQI program. Take timely and effective action to identify and correct QA/QC problems. Include equipment/instrument maintenance and calibration as part of the annual QA/QC process.
- As part of the RTDF-CP work with other DWR units towards standardization of QA/QC procedures, especially for new stations.

- Continue to explore new and improved technologies for acquiring real time water quality data. Utilize new technology where possible to minimize monitoring costs and data gaps and to move towards standardization of monitoring methodology.
- Plan for emerging constituents of concern such as “Taste and Odor” issues that have been increasing with time. Respond to these emerging concerns in a timely manner as part of the RTDF-CP.
- As part of the RTDF-CP develop a comprehensive program of monitoring, early warning, and management for algal growths in the Delta and SWP having the potential for causing taste and odor in treated drinking water taken through the SWP. Governance of this program will be through a steering committee composed of DWR staff from relevant organizational units, and State Water Contractor representatives of affected agencies.

### **Information Management and Dissemination**

- Provide timely analysis, interpretation, and dissemination of monitoring information to MWQI program participants and other identified stakeholders on key constituents of concern. Analyze and present monitoring results to program participants and in public proceedings.
- Continue to develop and refine capability for MWQI Program participants to rapidly acquire real time and other drinking water quality data and supporting information through the internet in user-friendly formats.
- Produce annual data and/or interpretative reports documenting program findings, as shall be determined by the MWQI Committee.
- Continue production of weekly water quality reports, with continuing improvements, as may be directed by the MWQI Committee.
- Provide technical assistance to MWQI Program participants in acquiring needed water quality data and supporting information.
- Research and develop new and innovative means of communicating MWQI Program work products to program participants and other interested parties.
- Encourage and promote actions by regulatory agencies necessary to ensure a high-quality and reliable water supply by disseminating information derived from the MWQI Program.
- Advocate drinking water quality protection by tracking new projects in the Central Valley, including operational planning activities, by alerting MWQI Program participants to projects having the potential to affect the quality of drinking water supplies taken through the Delta, reviewing and commenting on environmental documents, and participating in public hearings and workshops.
- Maintain awareness of findings from international, national, and regional research activities that have a bearing on the ability to meet future drinking water regulations, factor these findings into analyses of Delta water quality conditions and facilities options as appropriate, and communicate these findings to MWQI Program participants.

### **Water Quality Forecasting**

- Complete development of, and implement, extension of the DSM2 Delta model to include the State Water Project.
- Produce timely water quality forecasts for SWP Contractors. MWQI Program staff will support DWR modeling efforts by providing water quality expertise needed to improve Delta models,

coordinating closely with modelers to collect data to support model development, and to improve the ability to interpret and apply model outputs.

- Pending full implementation of the extended DSM2 model, evaluate other existing models for the potential of providing interim water quality forecasts to SWP Contractors.

### **Scientific Support Studies**

- In cooperation with MWQI Program participants and as part of the RTDF-CP, identify the need for, and implement, detailed studies to examine specific phenomena that affect, or may in the future affect, Delta drinking water quality. These studies may be generally classified as follows:
  - Detailed evaluations of problem areas or conditions identified as a result of monitoring activities.
  - Evaluations of drinking water quality consequences of proposed physical or operational modifications in the Delta and its tributaries, its inflows, internal flow patterns, or outflows.
  - Prediction of the drinking water quality consequences of population growth patterns.
  - Detailed evaluations of natural processes that have the potential to affect the quality of Delta drinking water sources.
  - Detailed evaluations of point and non-point pollutant discharges to the Delta (including tributaries to the Delta).

Studies will be selected for implementation based on their significance to the quality of drinking water supplies taken through the Delta, and likelihood of being able to apply the information to attain higher quality of Delta drinking water sources. Outside expertise will be enlisted where necessary and feasible to conduct or collaborate on scientific studies.

### **Emergency Response**

- Identify, to the extent possible, ahead of time specific concerns regarding these events and what constituents would need to be assessed.
- Develop scenarios for different emergency events using models to determine which areas in the Delta pose most significant DWQ issues
- Develop emergency response plans ahead of time (follow SIMS template), identifying funding and staffing needs, all participating groups and their roles
- Work with other DWR units (i.e. Div of Flood Management) to develop emergency response plans
- Encourage DWR Executive to treat these events similar to flood events
- Perform water quality assessments and evaluations in response to emergency situations, such as Delta levee breaks, supplying timely water quality information to emergency decision makers and public health authorities.
- During emergency circumstances, work cooperatively with emergency managers and rapidly communicate results of emergency water quality assessments the MWQI Program may be tasked to perform.