

Brainstorming Draft:

Goal for the Framework Document

1. To provide a real-time salinity management program (RTMP) roadmap for Stakeholders
2. Identify and satisfy the minimum Water Board requirements for a RTMP program
 - 2.1. What needs to be accomplished to initiate salinity management within the basin to meet water quality objectives at Vernalis
 - 2.2. What does it mean to participate?
 - 2.3. What do stakeholders need to present?
 - 2.4. Reporting Requirements
3. Present an overall program that includes requirements for all participants in the real-time program

Objectives

1. Identify a logical framework for a phased RTMP
2. Provide sufficient detail to obtain Central Valley Regional Water Quality Control Board approval for the waiver for Waste Discharge Requirements
3. Provide a timeline to guide the actions of the organizations participating in the RTMP
4. Be reflective of stakeholder inputs
5. Limit reliance on New Melones for dilution flows; water available for other beneficial uses

Background

The Basin Plan for the Sacramento River and San Joaquin River Basins was amended in 2004 with a Total Maximum Daily Load (TMDL) for the control of salt and boron discharges into the lower San Joaquin River (Resolution No. R5-2004-0108). A provision was included in this amendment to allow the stakeholders to obtain a waiver from salt load limits and Waste Discharge Requirements if a Water Board approved real time management program is in place before the onset of Waste Discharge Requirements.

Reclamation entered into a Management Agency Agreement (MAA) with the Water Board in 2008. In this agreement Reclamation agreed to initiate a real time management program through actions to establish a monitoring network and forecast model. These actions have been completed for a pilot

project in Grassland Water district. Reclamation scientists will be able to utilize lessons learned from the Grassland pilot to provide technical support and guidance to other entities participating in the real-time management program.

1. The Memorandum of Understanding (MOU) between the Central Valley Regional Water Quality Control Board and the Central Valley Salinity Coalition
2. Display/discussion of river assimilative capacity in the past 5 years using CDEC data
3. Other examples of Real-time systems of a suitable scale for reference (e.g. National Water Quality Monitoring Council examples: Willamette River, Newfoundland and Labrador)
4. Benefits of the program

Stakeholder Involvement

The real time system will require participation from entities throughout the basin. Information from the monitoring system must be managed in a way that is transparent and available to all dischargers within the basin. A governing body of stakeholders can determine how the real-time information is used for compliance purposes.

1. Real time stakeholder charter and governing document creation
2. Operations and maintenance activities
3. Required actions for East Side stakeholders (flow requirements, assimilative capacity requirements, etc.)
4. Participation vs. non-participation and how to maintain equity between dischargers within the watershed

Approach

Implementation of the real time management program will occur in several phases. The purpose of the phased implementation approach is to allow for adaptive management and the application of the appropriate monitoring tools in the appropriate places. The implementation process must withstand changes (e.g. a change to flow standards in the San Joaquin River) over time while adhering to the river pollutant concentration standards listed in the appropriate regulations. The early phases are intended to identify a monitoring and management system for the San Joaquin River and large tributaries within each sub basin. The most important monitoring stations, San Joaquin River tributaries and sources of salinity should be identified (among participating parties) in the early phases. Later phases incorporate greater detail for other sources of salinity, adjustments to improve accuracy, improvement of the operations and

maintenance protocols and actions resulting from data quality analysis. Real-time salinity management must rely on a network of continuously operating flow and water quality monitoring stations. Electrical conductivity, flow, and temperature are the water quality parameters of concern.

Phase I - Develop and Implement a Basin Wide Forecasting tool: stations, parameters, data management, baseline monitoring, etc. (WARMF model); Identify Pilot Projects (e.g. Grassland WD)

Phase II - Evaluate resulting data; Develop operation and/or management concepts (including funding); inclusion watershed by watershed; obtain physical infrastructure to support RTMP (e.g. monitoring stations, databases)

Phase III - Begin implementation of management plan and initiate management strategies to move toward full RTMP implementation

Phase IV - Fully operational; Adaptive Management

RTMP Implementation

1. Basin-Wide requirements
 - 1.1. Assimilative capacity model
 - 1.2. Outreach and Participation
2. Participation vs. non-participation and equitable distribution of responsibility