

DRAFT
July 28, 1999

**Implementation Plan for Stage 1 Actions,
Lower San Joaquin River and South Delta Region**

The CALFED Bay-Delta Program is a cooperative, interagency effort of 15 state and federal agencies with management or regulatory responsibilities for the Bay-Delta system. The mission of the Program is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. Accordingly, CALFED has recommended a bundle of actions for the lower San Joaquin River and south Delta region to address long-standing concerns with respect to water quality, fisheries, wildlife habitat, and water supply availability. The draft list of proposed actions has been circulated for review and comment by interested agencies and stakeholders. The proposed actions are under various levels of development, from preliminary concept to actions ready for implementation. A great deal of ongoing coordination between involved agencies and stakeholders will be required to formulate and execute a well-balanced suite of actions. To assure coordination among actions, an interagency implementation agreement may be necessary.

Stage 1 actions have been grouped into bundles for the purpose of achieving regional and programmatic balance, for development of environmental documentation, for establishing Program assurances, for facilitating financing, permitting, and implementation. Within each of the seven bundles, actions are further grouped into projects for project management purposes. Table 1 shows one such set of projects for the Lower San Joaquin River and South Delta Region Bundle. The proposed projects reflect consideration of project purposes; creating manageable project teams; developing environmental documentation and feasibility studies; providing for monitoring, assessment, research, and adaptive management; permitting; financing; and implementation. Each of the proposed groups is described in more detail in the following paragraphs.

Water quality actions were selected to address problems that require immediate work to correct. Each of the actions require a degree of specificity prior to implementation. Therefore CALFED has developed Work Groups composed of agencies and stakeholders who have an interest in the implementation of water quality actions. The purpose of the Work Groups is to specify the scope of the actions, prepare an implementation plan for funding the projects, and begin the process of implementing the action. The Work Groups are asked to identify existing projects and studies which relate to the proposed CALFED action to ensure proper coordination and avoid duplication; identify approaches and projects to achieve reduction in pollutant loads which are feasible and cost effective; identify costs and a schedule for implementation, identify lead

implementing agencies, which can include State, federal, local government and other cooperating agencies; identify monitoring associated with projects; and identify necessary environmental documentation and permits for the projects.

CALFED envisions an ongoing assessment involving experts, regulatory agencies, and the public to ensure that the best possible understanding is applied to CALFED investment decisions. CALFED's implementation success depends primarily on incentives, cooperation and participation of those affected by implementation actions and has taken the position that a regulatory approach will be considered as a last resort. CALFED supports a high level of coordination with all interested stakeholders to achieve a balanced approach towards attainment of CALFED goals and objectives.

Table 1. Proposed Bundling of Early Actions for Project Management Purposes

Note: The project-level, site-specific environmental documentation and feasibility evaluations must be broken down into manageable, coherent project packages in order to move forward efficiently. The individual projects need to be coordinated to various degrees to assure overall adherence to CALFED goals, and linked appropriately to provide agencies and stakeholders with sufficient assurance that actions are properly prioritized, yet reasonably balanced.

EIR/EIS: South Delta Improvements Program (1996 Public Draft by DWR and USBR)

SWP CCFB New Screened Intake
Permanent Barriers at HOR, ORT, and MR
Dredging
Extend and Screen Ag Intakes
Permit interim 8500 cfs and ultimately 10,300 cfs, with option for full use of Joint Point of Diversion
Barrier Operations
Monitoring
Mitigation
Settlement Agreement

EA/IS: Tracy Test Fish Facility (500 cfs) (Underway by USBR and Interagency Groups)

Construct test facility to develop best available technology approach to Delta fish screening, salvage, and return

EIR/EIS: Ecosystem and Flood Plain Restoration Associated with the South Delta Improvements Program

Aquatic and terrestrial habitat restoration actions
Flood plain restoration and management actions
Selected levee and channel modification actions
Agricultural and wetland diversion screening

EIR/EIS: Stockton Dissolved Oxygen Solution Alternatives

Municipal wastewater storage and treatment options
Non-point source reduction measures

EIR/EIS: Improved Source Water Quality for Rock Slough Intake, CCWD

Veale Tract Discharge Relocation or treatment
RD 800 discharge relocation or treatment

EIR/EIS: Agricultural Drainage Management in the San Joaquin Basin

On-farm drainage management measures

Irrigation improvement measures
Release of accumulated salts during high flows

**Technical Study: Assessment of sources and Magnitudes of Loadings of
Constituents of Concern for Drinking Water**

Identify sources, relative magnitudes, and potential measures for reducing loadings

**Feasibility Study: Recirculation as Tool for Meeting Lower San Joaquin River Flow
and Water Quality Objectives**

Recirculation of SWP, CVP Exports

EIR/EIS: Vernalis Adaptive Management Plan (Completed)

Secure/provide flows to meet VAMP, ESA, and WQCB Objectives

**IS: Temporary Barriers Program(Completed by DWR and Corps. May need to be
renewed)**

Extend existing temporary barriers program as necessary while permanent facilities are
evaluated and implemented

**EIR: Joint Point of Diversion for CVP, SWP (Public Draft EIR on WQCP
circulated by SWRCB)**

(Sharing of existing export capacities)

EIR/EIS: CVP/SWP Consolidation of Diversions

Forebay Intertie and Consolidated Screening
Aqueduct Intertie for Operational Flexibility

Stockton Dissolved Oxygen Solution Alternatives

Project Purpose

Improve San Joaquin River dissolved oxygen conditions such that the lower San Joaquin River dissolved oxygen is at all times greater than or equal to the 5 mg/l threshold.

Project Description

Evaluate and implement appropriate source control and water treatment actions for the lower San Joaquin River drainage, especially the Stockton area, as described in the CALFED Water Quality Program. These actions are likely to include a range of actions to reduce pollutant loads from non-point sources as well as municipal wastewater storage and treatment options and non-point source reduction measures. The specific actions will be determined based on detailed evaluations of pollutant sources, their relative contributions, pollutant control options, and other factors.

Implementing Agencies

A multi-agency task force effort is currently underway to design and conduct the preliminary studies of the causes of low DO in the lower San Joaquin River basin. It is likely that the City of Stockton would serve as the lead agency for preparation of an EIR/EIS. Lead state and federal agencies would be the Regional Water Quality Control Board, Central Valley Region, and the U.S. Environmental Protection Agency. The Corps would also potentially be a lead federal agency, given its role in supporting navigation for the Port of Stockton and its historic role in Delta dredging and channel maintenance activities.

Required Resources

Special studies and modeling costs will amount to about \$1 million per year for FY 2000 and 2001. There are opportunities for cost sharing with local, state and private entities. Ongoing monitoring should be incorporated to match special study efforts. Ongoing monitoring will serve as indicators of success.

Coordination

Water quality actions in the lower San Joaquin River and south Delta region would be coordinated through a Water Quality Work Group. It would define the scope of the actions, review background information, assess technical and financial feasibility, identify implementing agency, produce implementation plans, and oversee the various projects with an adaptive management process. Each action could deal with a few levels of activities that need to be completed prior to funding the action

Schedule

Local and State efforts have begun. Because of limited funding, the local effort is limited in scope and duration. Corrective actions as proposed through the stakeholder process should begin as soon as actions and funds are identified.

Improved Source Water Quality for Rock Slough Intake, CCWD

Purpose

Improve source water quality for the Rock Slough intake to the Contra Costa Canal in order to incrementally improve water quality for the Contra Costa Water District service area, particularly with respect to drinking water quality. The goal is to minimize impacts of surrounding agricultural land on the drinking water intake.

Project Description

Evaluate and, if demonstrated to be feasible, relocate and/or treat agricultural drainage discharge to reduce impacts on urban water quality (i.e. Veale Tract drainage relocation or treatment, RD 800 drainage relocation or treatment, and others). This includes feasibility studies and environmental impact evaluations.

The Rock Slough intake to the Contra Costa Canal is located in the west central Delta in the vicinity of Knightsen in eastern Contra Costa County. The land surrounding Rock Slough is primarily agricultural. The few residences scattered in the vicinity of the intake are ancillary to agricultural operations. Water levels in Rock Slough are subject to tidal variations, and a typical daily variation is about 3.5 feet. Peaks in Rock Slough salinity are typically caused by seawater intrusion from the San Francisco Bay during periods of low Delta outflow (typically, summer and fall), or by agricultural drainage discharges from the Delta and San Joaquin River during leaching and heavy storms (typically during winters of normal and wet years).

A number of agricultural drains discharge into Rock Slough and Contra Costa Canal. Veale Tract, an area of approximately 1,100 acres, is the largest single land area draining to Rock Slough. Drainage from Veale Tract has been suspected to be the major cause of salinity increases at the District's intake during wet winters. For example, chloride at Pumping Plant No.1 was over 100 mg/L in February and March of 1996 when the chloride level at the junction of Old River and Rock Slough was under 50 mg/L. Agricultural drainage during wet winters can lead to significant increases in the concentrations of dissolved solids, total organic carbon (TOC) and, possibly, pathogens in CCWD's drinking water supply from Rock Slough and at other urban drinking water intakes in the Delta.

Detailed monitoring is already being carried out by the Department of Water Resources (DWR), the Bureau of Reclamation (Bureau), and CCWD at several locations along Rock Slough and Contra Costa Canal. Sampled parameters include EC, chlorides, metals, pesticides, pathogens, and other constituents as part of the D1485 compliance monitoring and the Municipal Water Quality Investigation Program. However, a lack of simultaneous measurements along the length of the two channels does not allow the source(s) of degradation to be identified conclusively

Implementing Agencies

Project Management: Richard Denton

The lead agency for this planning process would be Contra Costa Water District. Lead state and federal agencies would be the Department of Water Resources, and the U.S. Environmental Protection Agency.

Required Resources

Mobilization costs, staff costs, and laboratory costs to perform sampling and generate a conclusive summary of existing conditions and feasibility of treatment of relocation to alternative locations will cost approximately \$1.0 million, which is to be expended in FY 2000. Environmental Documentation costs are expected to add about 20% to these cost figures. Relocation costs may be on the order of \$ 4.0 million.

Current monitoring should be compared to the additional monitoring needed for the project. Project managers should determine the need for ongoing monitoring in the area, in addition to current monitoring, to provide the necessary information to make appropriate operational changes.

Coordination

The CALFED Water Quality Program should oversee the scope of the project. DWR should oversee evaluation of existing conditions and alternative impacts. The US Bureau of Reclamation should be the federal contract authority if necessary.

CALFED staff would be involved in program development and the results of the study.

Schedule

To pinpoint and quantify the sources of salt and other contaminants into Rock Slough and the Canal, simultaneous measurements along a number of locations (up to twelve) between CCWD Pumping Plant No. 1 and the junction with Old River are planned for the late fall/winter of 1999/2000.

Sampling alternative drain locations will be done at various times throughout the characterization process.

Agricultural Drainage Management in the San Joaquin Basin

Purpose

To reduce pollutant loads and contaminants from non-point and point sources in the San Joaquin River Basin and reduce the impacts on public and environmental health through water quality and water management actions.

Project Description

Implement regional, including but not limited to on-farm, environmentally safe drainage management measures and technical programs such as evaporation ponds, drainage treatment and re-use facilities, measures to lower shallow groundwater levels, and other measures and continue to implement existing such programs and measures. These include pilot programs to improve integrated on-farm management of selenium. Provide low interest loans and grants to support implementation.

Implement regional and demonstration projects and cost effective irrigation improvement projects such as drip irrigation, subsurface irrigation, and recycling systems which will reduce discharge and movement of saline water from farms and continue to implement existing such projects. Provide low interest loans and grants to support implementation.

Evaluate, and if demonstrated to be feasible, implement release of accumulated salts during high flow periods. If proven feasible, implement construction of regional and on-farm drainage retention facilities for storage between release opportunities. Provide grants and low interest loans for implementation.

Implementing Agencies

Proposed lead federal agency would be USBR. Proposed lead State agency would be DWR. Local water districts would participate as lead local agencies or as cooperating agencies, depending on locations and actions.

Required Resources

Current projections indicate the need for about \$0.5 million per year for FY 2000 and FY 2001.

Monitoring associated with this project should be coordinated with monitoring of related State and Federal agency projects. Monitoring should be designed to indicate relative impacts of project implementation.

Coordination

Schedule

Assessment of Sources and Magnitudes of Loadings of Constituents of Concern for Drinking Water

Project Purpose

Identify sources of constituents of concern for drinking water to evaluate potential for correction.

Project Description

Determine sources of drinking water constituents of concern and evaluate potential for reduction. The current list of constituents includes total organic carbon (and dissolved organic carbon) natural organic matter, microbial pathogens, nutrients, total dissolved solids, salinity, turbidity, and bromide. Other constituents may be added as a part of adaptive management.

Implementing Agencies

The Department of Water Resources has monitoring and research staff to conduct or contract for studies and other pilot scale projects. In addition, the DWR Bryte Chemical Laboratory or its contract laboratories can perform chemical analysis and quality control. USGS also has scientists for studies and appropriate contract offices. DHS is the primacy agency who have staff to enforce the drinking water regulations in California and the Regional Water Quality Control Board has staff which regulate point and non-point discharges.

Required Resources

Monitoring studies would begin in some critical areas at a cost of about \$0.5 million for the first year (FY 2000). As different issues are studied in greater depth, the budget should be increased to \$1 million per year for a several years (FY 2001 and following).

Monitoring should be designed to coordinate with special studies (some category III funded) that are also proposed.

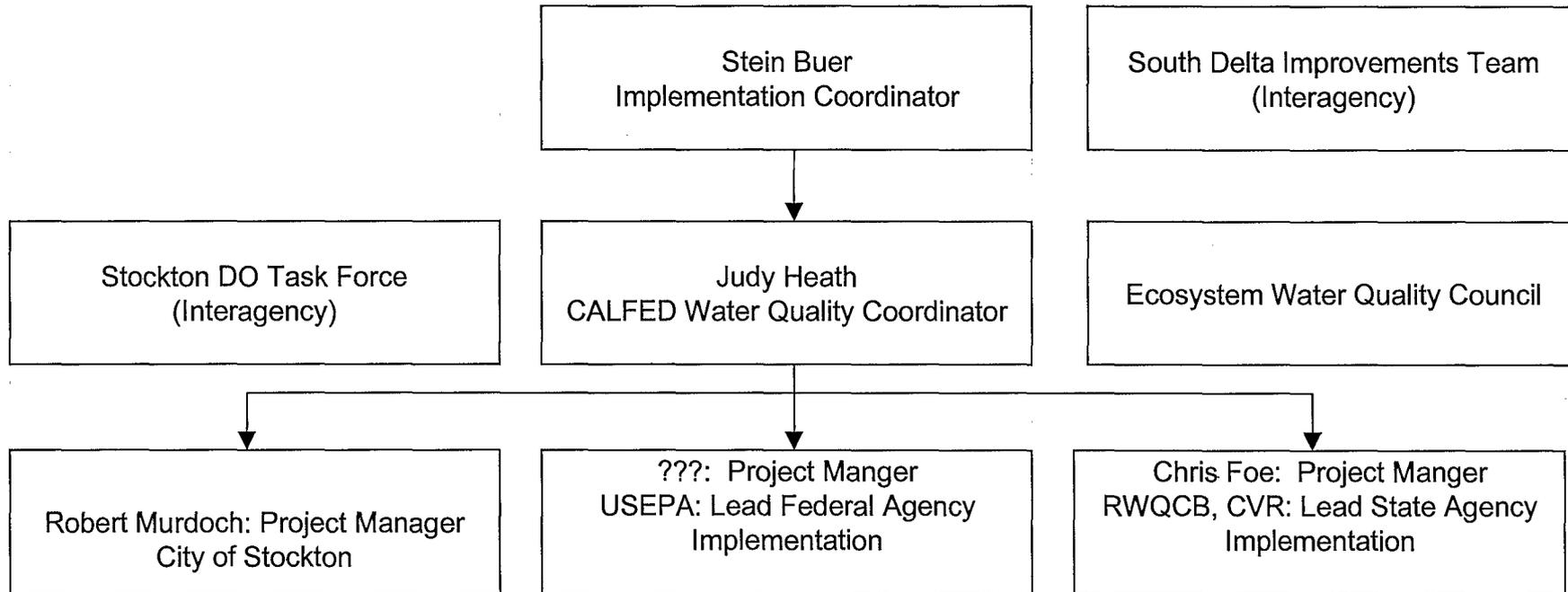
Coordination

Water quality actions in the lower San Joaquin River and south Delta regions would be coordinated through the CALFED Delta Drinking Water Quality Council (DDWQC). The DDWQC will oversee implementation of CALFED drinking water actions. A technical task group will be formed to define the scope of actions, review background information, assess technical and financial feasibility, produce implementation plans, and make recommendations to CMARP and the DDWQC on adaptive management. CMARP will oversee the monitoring and research components through coordination with the DDWQC.

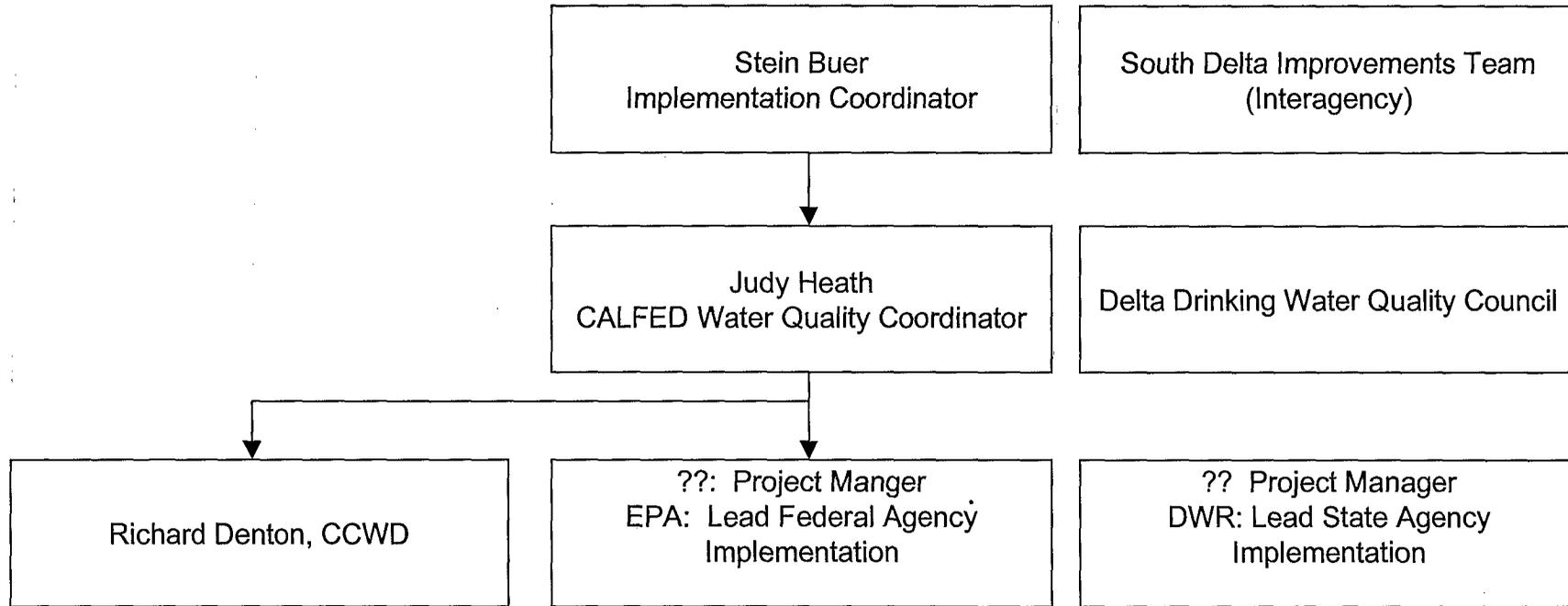
Schedule

Assessment structure should be designed by mid to late 1999 and studies based on priority structure could begin by January 2000.

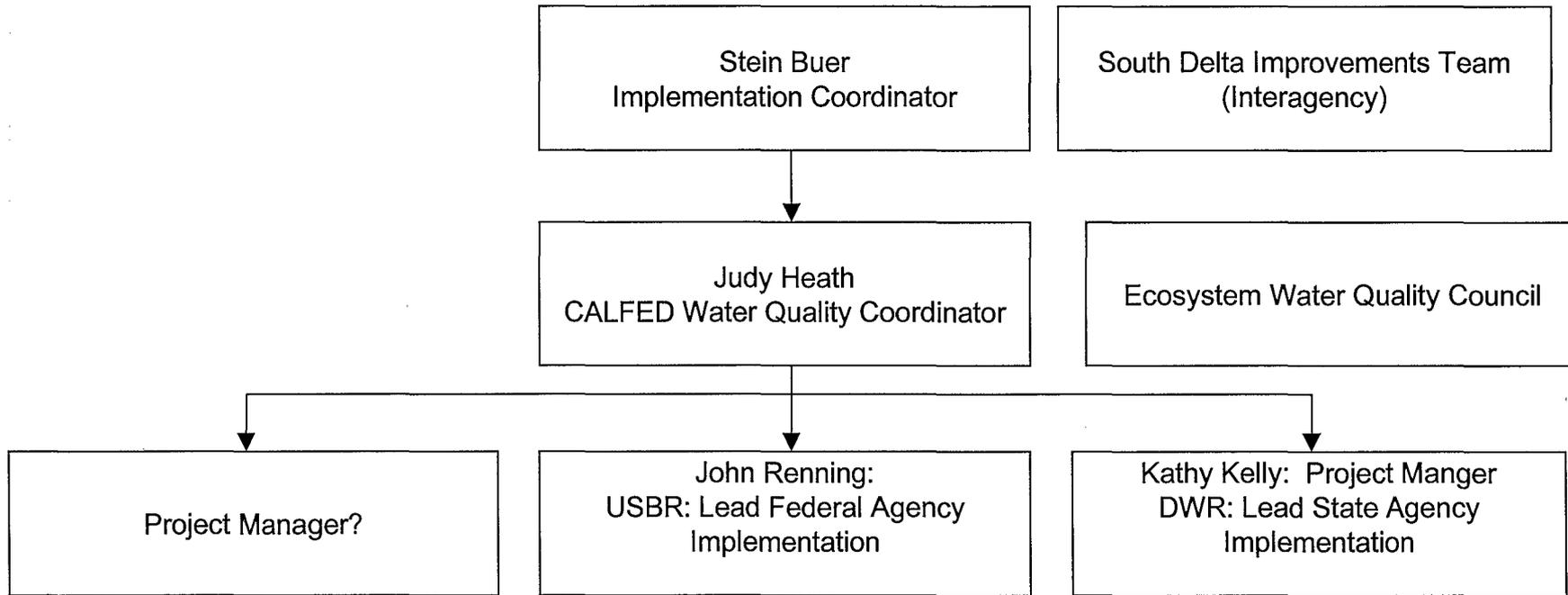
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Technical Study: Assessment of Sources and Magnitudes of Loadings of Constituents of Concern for Drinking Water

