

* * **Work Plan** * *

**Building a Public-Private Partnership to Improve San Joaquin Water Quality
Monitoring and Assessment (7/17/06)**

The San Francisco Estuary Institute (SFEI) and the U.S. EPA Region 9 in collaboration with others are initiating an effort for the San Joaquin River Region to improve water quality monitoring and assessment. The project will strive to enhance existing monitoring programs and activities underway in the San Joaquin region through increased cooperation and collaboration (e.g., shared monitoring objectives, protocols, methodologies, and data, etc.). The project will produce:

- A web-based information clearinghouse that will feature an interactive directory of current monitoring efforts in the San Joaquin River Region that can be self-populated with new information as new efforts emerge.
- Assessment fact sheets to highlight data analysis, information sharing and potential monitoring and data gaps.
- A proposed San Joaquin Water Quality Regional Monitoring and Assessment Strategy based on shared monitoring and assessment objectives that reflect the key management priorities for the region. Monitoring and assessment objectives will be linked to the important beneficial uses of the San Joaquin River Region. Associated with these objectives a number of issues will be addressed involving design, data collection and reporting, assessment, quality and availability of information, etc. The strategy will be congruent with, but not necessarily limited to, the SWAMP¹ monitoring framework and CMARP². The Strategy will include:
 - Identification of key monitoring gaps, research needs and options for addressing these gaps.
 - Recommendations on ways to leverage current monitoring and assessment efforts. Emphasis will be placed on improving coordination, use of existing programs and resources, and building an effective public-private partnership.
 - Identification of potential policy and legislative constraints as well as long-term funding opportunities

Anticipated outcomes from this project include the following:

- A proposed system for improved monitoring and assessment of water quality in the San Joaquin River Region.
- Initiation of a public-private partnership to produce comprehensive water quality information needed for effective environmental management.

¹ The State Water Assessment and Monitoring Program (SWAMP) is a statewide monitoring effort designed to assess the conditions of surface waters throughout the state of California. The program is administered by the State Water Board. Responsibility for implementation of monitoring activities resides in part with the nine Regional Water Quality Control Boards that have jurisdiction over their specific geographical areas of the state. Monitoring is conducted in SWAMP through the Department of Fish and Game and U.S. Geological Survey master contracts and local Regional Boards monitoring contracts.

² The Comprehensive Monitoring, Assessment and Research Program (CMARP) was initiated in 1997 as a means to assess the success of CALFED Program efforts for the Bay-Delta/Central Valley hydrological system, and meet information needs of other agencies. The CALFED agencies, with the assistance of the Bay Delta Authority Science Program, are currently working to implement CMARP.

The geographic scope for this project is the San Joaquin River Hydrologic Region (*The California Water Plan Update* Bulletin 160-98) which is bordered on the east by the crest of the Sierra Nevada and on the west by the coastal mountains of the Diablo Range. It extends from the Delta and the Cosumnes River watershed to the San Joaquin River watershed near Fresno. All or portions of counties within the study area include Alameda, Alpine, Amador, Calaveras, Contra Costa, El Dorado, Fresno, Madera, Mariposa, Merced, Sacramento, San Benito, San Joaquin, Stanislaus, and Tuolumne.

EPA is providing financial assistance (\$231,967) for this project to SFEI under a cooperative agreement and will be substantially involved. EPA is responsible for assuring the participation and coordinating the involvement of key partner agencies such as the Central Valley Regional Water Quality Control Board. EPA will also have substantial technical interaction with the recipient throughout the performance of the project. For example, EPA will review and approve project phases, review and approve provisions within proposed sub-grants and contracts, collaborate with the recipient on the scope of work and mode of operation of the project, closely monitor the recipient's performance, approve any proposed changes to the work plan and/or budget, approve qualifications of key personnel, and review and comment on draft deliverables including meeting materials, fact sheets, web site design and reports.

This project will benefit from products being produced by related projects (e.g., San Joaquin Indicators System, CMARP, CALFED performance measures³). In particular, these related projects will help inventory existing monitoring activities, identify management and monitoring objectives, and potential monitoring designs, establish CMARP website, convene an agency workgroup, and develop a potential assessment tool (see Table 1). This San Joaquin water quality monitoring project will feed into larger related efforts for the entire Central Valley region (CMARP), but will have independent value for monitoring and assessment in the San Joaquin River region, consistent with SWAMP.

The project includes the following tasks that are described below in more detail:

- Task 1. Create a Web-Based Information Clearinghouse
- Task 2. Prepare Assessment Fact Sheets
- Task 3. Outreach and Stakeholder Participation
- Task 4. Prepare San Joaquin Region Water Quality Monitoring and Assessment Strategy
- Task 5. Project Management

³ The California Bay-Delta Authority is currently coordinating an effort with the CALFED agencies to define performance measures for each of the four CALFED program elements (water quality, ecosystem restoration, water supply reliability and levee integrity). The CALFED agencies include Department of Water Resources, Department of Fish and Game, State Water Resources Control Board, Department of Food and Agriculture, Department of Health Services, Bureau of Reclamation, Fish and Wildlife Service, Geological Survey, US Environmental Protection Agency and others. The mission of the CALFED Bay-Delta Program is to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta System.

Task 1. Create a Web-Based Information Clearinghouse

Purpose: Establish a website that: 1) features an online-directory of current monitoring to foster coordination and integration; 2) provides an easy mechanism to stay informed regarding project status and related activities; and 3) could help facilitate future data access (e.g., a portal to available water quality databases)

Approach: The website will serve as an information clearinghouse to provide immediate benefits through facilitating access to information concerning current San Joaquin monitoring activities, as well as to provide information on the water quality monitoring partnership project. The website will feature:

- An online directory of monitoring activities in the San Joaquin to facilitate monitoring coordination and integration. The directory will provide a one-stop location to identify relevant monitoring, and will also help to highlight gaps and overlaps in current activities that could benefit from improved coordination. The system will feature a map with sampling points that could be pulled up by site, sub-watershed and/or agency or program. Generalized information on constituents sampled, frequency, name of study/program, and anticipated study period would also be available--but most important, would be contact information and/or a link where the user could go for additional information and/or data. As a directory, this system will tell you who is doing what where and for how long, rather than be a data base with sampling results. The site will be designed to facilitate ease of maintenance (e.g., information can easily be updated), so that it continues to be useful, and will have a mechanism for new groups/efforts to be recorded and the information easily updated (e.g., self-populating).
- Project status information including work plans, fact sheets, meeting summaries, contact information, etc.

The website will be brought online and improved, updated, and expanded as needed. It will be developed in conjunction with the development of an online information gateway for the CMARP process. In addition to the featured online directory and the project status information, consideration will be given to expanding the website as appropriate (e.g., to serve as portal or node for access of existing databases). Depending on the institutional framework and data management needs that are identified through this project, the website could be extended into an information management system after the model of SFEI's Regional Water Quality Program for Water Quality (RMP).

Deliverables:

- 1.1 Website design description (1 month from start of project)
- 1.2 Initial website on-line featuring monitoring directory and project information (6 months from start of project)
- 1.3 Updates and enhancements (as needed)

Task 2. Prepare Assessment Fact Sheets

Purpose: Present findings based on existing data in a user-friendly format to regulators, the regulated community, and the general public to: 1) provide useful information on status and trends in water quality relative to beneficial uses; 2) help identify and communicate data gaps and monitoring needs; and 3) serve as a prototype assessment report to communicate regional monitoring and assessment.

Approach: Develop 4 to 8 fact sheets that will showcase summaries of water quality issues (e.g. salinity and boron, nutrients, selenium, pesticides) and related monitoring and assessment activities in the San Joaquin River region. The drafts will be reviewed by a steering/advisory group (see Task 3). The Great Valley Center (GVC) will publish and distribute the fact sheets by mail and on the project website. The data analysis necessary to complete the assessment fact sheets will be used along with related information to identify potential gaps and overlaps in current water quality monitoring. A gaps and overlaps analysis will be prepared to highlight opportunities for improvement through improved coordination. This information as well as feedback on the fact sheets will be incorporated into the monitoring and assessment strategy. The fact sheets will be designed as modules that can be transformed into a broadly accessible and reader-friendly “State of the San Joaquin River” assessment report, available as printed material or on the website.

Deliverables:

- 2.1 Outline suggesting potential topics and schedule for 4-8 fact sheets (2 months from project start)
- 2.2 Four to eight draft and final facts sheets (3 to 16 months from project start)
- 2.3 Tech memo: Gaps and overlaps (6 months from project start)

Task 3. Outreach and Stakeholder Participation

Purpose: Conduct outreach and a participatory process to: 1) ensure that current San Joaquin monitoring and assessment activities are identified; 2) foster participation of stakeholders in the development of a monitoring and assessment strategy; and 3) identify opportunities for collaboration for maintaining a system for water quality monitoring and assessment;

Approach: A product-oriented participatory process will be utilized to help prepare products and encourage partnerships for enhancing water quality monitoring and assessment. It will be a stepwise process that first involves the key agencies most directly responsible for water quality monitoring and then expands to other stakeholders. The process will identify and build on existing water quality monitoring and assessment underway in the San Joaquin region. It will try to utilize existing forums as much as possible. The process will include interviews, participation at meetings, meetings with stakeholders, public workshops, project fact sheets and the possible formation of a

steering/advisory group. The outreach and participation activities will be closely coordinated with the Great Valley Center.

- Interviews: An initial step will be to conduct interviews (~15) with key water quality monitoring stakeholders to identify objectives, needs, interests, concerns and potential involvement. Interview results will be assembled for consideration by the project team to guide website content, fact sheet preparation and strategy development.
- Steering/advisory group: Depending on needs and opportunities, a steering/advisory group for the project may be formed to provide advice and direction. Formation and involvement of a group, and its role and composition will be done in collaboration with the EPA project manager and CVRWQCB liaison. Such a group would review draft documents and help plan project activities, and be conducted in a manner to make the best use of participant's time. If a steering/advisory group is not formed, alternative mechanisms will be utilized to ensure input of key stakeholders.
- Presentations and meetings: To share project information and to scope possibilities for collaboration and coordination, presentations will be made at various San Joaquin water quality related meetings (e.g., San Joaquin River Management Program, San Joaquin Water Quality Management Group, Regional Water Management Plan). Meeting will also be arranged with representative stakeholder groups (irrigation districts, POTWs, major industries etc.).
- Workshops. Plan and hold two workshops to facilitate information exchange and broaden support for improved monitoring and assessment. Workshop materials (including agenda, announcements and technical documents) will be prepared and distributed. Results will be summarized and distributed to participants and other target groups. Follow-up interviews may be conducted with participants, as needed. Content, format of workshop and participants will be determined in consultation with key monitoring agencies and interested parties. Potential workshop topics include management priorities and monitoring objectives, monitoring gaps/overlaps and implementation (e.g., institutional needs, funding, policy issues and related constraints)
- Prepare project update fact sheets that describe project activities and related progress. The fact sheets will be distributed on the website, electronically and at meetings.

Deliverables:

- 3.1 Identify the groups requiring/conducting monitoring and their areas of overlap (One month after contract start)
- 3.2 Interview materials including list of key contacts for interviews (Two months after project start), standard interview questions (2 months after project start)
- 3.3 Conduct interviews (beginning 3 months after project start) and interview summaries (1 week after each interview)
- 3.4 Establish mechanism to get focused stakeholder advice such as through a steering committee/advisory group starting with an initial group of responsible water quality monitoring agencies (2 months after project start)
- 3.5 Draft and final project update fact sheets (~ 4-6 fact sheets)

- 3.6 Summary report of interview results. (1 months after last interview)
- 3.7 Workshop 1 materials and proceedings: water quality priorities and information needs (7 to 10 months after project start)
- 3.8 Workshop 2 materials and proceedings: partnership-building for monitoring program implementation (12 to 15 months after project start)

Task 4. Prepare Proposed San Joaquin Water Quality Monitoring and Assessment Strategy

Purpose: Prepare a strategy document which: 1) is based on shared monitoring and assessment objectives which reflect the key management priorities for the region; 2) addresses issues involving data collection and reporting, assessment, quality and availability of information, etc.; 3) emphasizes improving coordination, use of existing programs and resources, and building an effective partnership for ongoing coordination.

Approach: The proposed strategy will describe key elements for implementation of a comprehensive long-term water quality monitoring and assessment program. The strategy will describe priority management concerns, monitoring objectives, SWAMP-compatible sampling design, data collection, data management, infrastructure, assessment and implementation, and provisions for initial funding mechanisms and collaborative arrangements between data producers, regulators, and the regulated community. Options will be identified for program implementation including institutional, organizational and funding issues. The strategy will utilize and expand on existing efforts to identify water quality priorities, monitoring objectives and assessment questions of resource managers and stakeholders in the San Joaquin Valley.

The strategy will be incrementally prepared through a series of technical memos. The tech memos, which will receive extensive review and comment through the process described in Task 3, will later be transformed into chapters of the Strategy. The final product will be a document describing the proposed San Joaquin Water Quality Monitoring and Assessment Strategy.

A draft Strategy will be prepared and submitted to a three-step review process.

Step 1: review by steering committee/advisory team.

Step 2: review by decision-makers from state and federal agencies, including the Central Valley Regional Water Quality Control Board.

Step 3: external reviewers will be identified for a scientific review of the final report. Additional reviews will be requested from adjunct groups such as the CMARP, SWAMP Roundtable and the Interagency Ecological Program (IEP). The reviews will be followed by revisions and planning of additional activities to address identified gaps.

Deliverables:

- 4.1 Tech memo 1: Monitoring objectives, along with opportunities for coordination and policy constraints (10 months after contract start)
- 4.2 Draft Monitoring and Assessment Strategy Outline (11 months after contract start)

- 4.3 Tech memo 2: Monitoring design (12 months after contract start)
- 4.4 Tech memo 3: Information and research needs (13 months after contract start)
- 4.5 Tech memo 4: Quality Assurance and data management (16 months after contract start)
- 4.6 Draft Monitoring and Assessment Strategy (19 months after contract start)
- 4.7 Tech memo 5: Implementation Strategy (includes options for funding, institutional arrangements and policy recommendations) (20 months after contract start)
- 4.8 Review by steering committee/advisory group (20 months after contract start)
- 4.9 Review by agency upper-level management (21 months after contract start)
- 4.10 External scientific review (22 months after contract start)
- 4.11 Coordinate and adopt revisions (23 months after contract start)
- 4.12 Proposed Monitoring and Assessment Strategy (24 months after contract start)

Task 5. Project Management

Purpose: Oversee project to ensure that it is conducted on time and within budget to complete identified outputs and achieve desired outcomes. Also ensure that necessary adjustments to planned activities are made based on information gained throughout project.

Approach: SFEI will conduct: 1) contract administration including invoicing and reporting; 2) coordination with subcontractors including GVC, and Brock Bernstein by email, telephone, or in-person meetings as needed; 3) coordination with related SFEI projects for SJ Indicators system and CMARP. SFEI will prepare monthly progress reports (~1- 2 pages) that include project status, current and upcoming activities, problems encountered, assistance requested and budget status. Also attached to the reports will be an updated table tracking products/tasks of the three related projects being undertaken by SFEI – San Joaquin Indicators, CMARP and this strategy development project (see Table 1). We will have monthly meetings with EPA to discuss progress, next steps and agree on necessary adjustments to the planned activities.

Deliverables:

- 5.1 Monthly progress reports.
- 5.2 Monthly meetings with EPA that include SFEI and EPA project managers and management

Project Team

SFEI

Mike Connor: project management oversight and strategic guidance, reviews of project outputs and deliverables; strategic partnership development including participation and presentation at San Joaquin water quality related meetings, stakeholder interviews; coordination and co-facilitation of workshops, meeting facilitation.

Rainer Hoenicke: reviews of project outputs and deliverables.

Mike May: oversight of IT work related to website development

Thomas Jabusch: project management, oversight, and coordination; preparation of strategy and interim products; preparation of assessment fact sheets; meeting coordination and co facilitation; participation and presentation at San Joaquin water quality related meetings; coordination of website development; stakeholder interviews; coordination of advisory group formation and review process; coordination of database development; coordination of workshop preparation.

Bruce Thompson: reviews of project outputs and deliverables

Great Valley Center

Holly King: Coordination of Great Valley Center's project activities related to outreach and public participation; reviews of project outputs and deliverables; meeting co-facilitation and coordination

Carol Whiteside: project management oversight and coordination of Great Valley Center's project activities; reviews of project outputs and deliverables.

Brock Bernstein

Facilitation of workshops and possible advisory group; reviews of project outputs and deliverables; preparation and reviews of meetings and related materials such as meeting agendas and minutes.

UC Merced

Robin McIntyre: Coordination of UC Merced services related to meeting hosting and support (facilities, catering, AV services, and personnel).

Budget Summary by Task

Task	SFEI Labor Hours	Category	GVC	Bernstein	UC Merced	Expenses	TASK TOTAL
Task 1	250 20 15 50 60	IT Analyst IT Manager Scientist Designer Student intern Subcontracts	\$1,000				
Task 2	20 260 50 240 60	Senior Scientist Scientist Designer Analyst Student intern Subcontracts	\$2,500			\$5,000 Printing	\$22,232
Task 3	55 275	Senior Scientist Scientist Subcontracts	\$11,500	17,550	\$4,000 (inc. facilities, catering, and student assistance)	\$11,011 Travel (incl. Bernstein travel and stakeholder stipends) \$500 Workshop Supplies	\$43,375
Task 4	40 650	Senior Scientist Scientist Subcontracts	\$1,300			\$4,000 Reviewers	\$94,309
Task 5	300 50	Scientist Contract Administrator Subcontracts	\$2,000			\$110 Travel	\$49,683
							\$22,333
TOTAL			\$18,300	\$17,550	\$4,000	\$20,121	
GRAND TOTAL:		\$231,956					