Quarterly Programmatic Report

Component Project Title: **Calibration of Upstream Water Quality Model**
Component Project PI: Paul H. Hutton
PI Affiliation: California Department of Water Resources
Address: Office of State Water Project Planning
Room 215-20A, 1416 9th Street
Sacramento, CA. 95814
Phone: 916-653-5601
Email: hutton@water.ca.gov

Program Manager Barbara Marcotte, CALFED Phone 916-651-6476
Project Manager Dr. G. Fred Lee Phone 530-753-9630
CALFED Project # 01-N61-?? (CALFED has not assigned a project number)
Quarter Ending September 30, 2001

Deliverables

	Name of Deliverable	Due Date	% of Work Complete	Date Deliverable Complete
Task 1	Develop Stand-alone Model for the Upper San Joaquin River	August 31, 01	100	August 31, 01
Task 2	Train and Assist Contractor to use the Model	Sep 01- June 02	0 *	

*A contractor has not been identified yet.

Information on Tasks 3 and 4 has not bee provided.

Narrative

A stand-alone version of the model for upper San Joaquin River has been developed and tested. Further activity in this project will be on hold until a modeling contractor has been identified.

The projected expenses for each of the next three months in the following quarter are as follows:

Month 1 $ 2,000 Month 2 $ 2,000 Month 3 $ 2,000 Total for quarter $ 6,000

This assumes that a contractor will be selected in the near future.

Fiscal Quarterly Report

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CALFED Project: 01-N61- ?? (Contract has not yet been issued)
Quarter Ending September 30, 2001

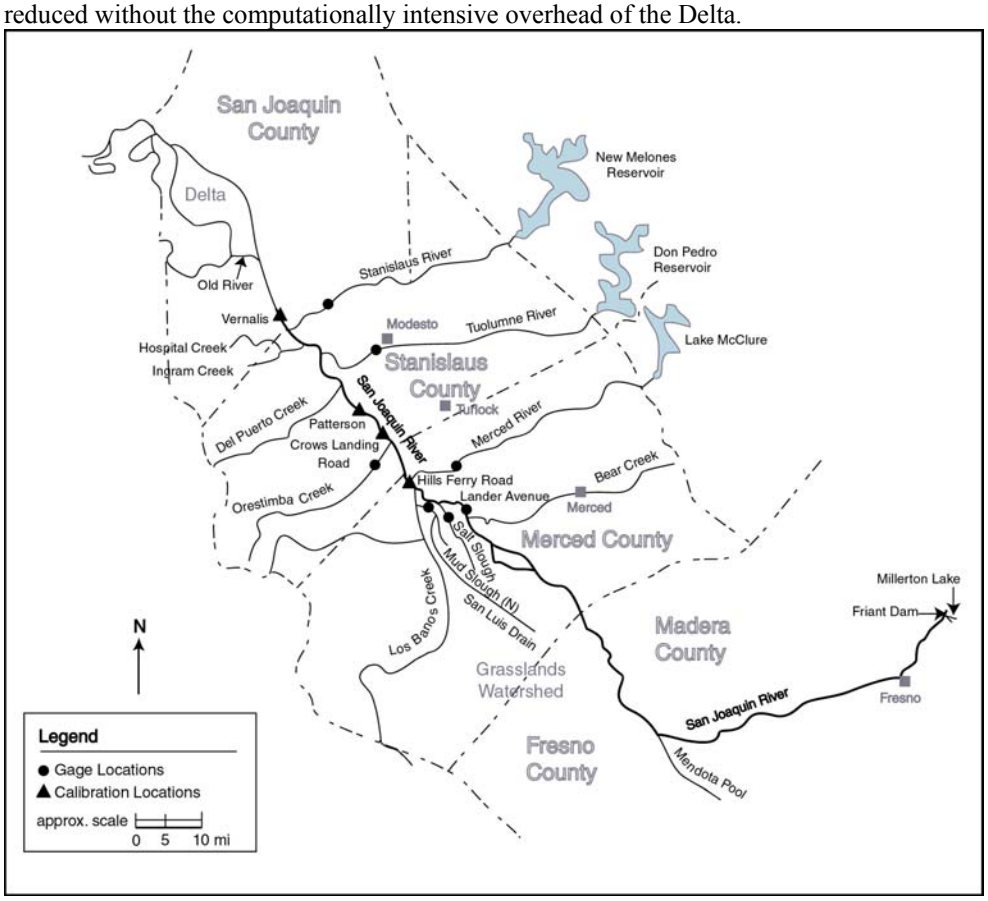
Total Estimated Cost: $60,000
CALFED Funding: $60,000
Other Funding $0

	Quarterly Budget			Annual Budget		
	Budget	Accrued	Variance	Budget	Accrued	Balance
Task 1: Develop a stand-alone model (100% complete)	11,880	11,880	0	11,880	11,880	0
Task 2: Train and assist modeling contractor (0% complete)	0	0	0	28,520	0	28,520
Task 3: Conduct real-time DO simulations (0% complete)	0	0	0	14,260	0	14,260
Task 4: Develop on-line documentation (0% complete)	0	0	0	5,340	0	5,340
Total Project	11,880	11,880	0	60,000	11,880	48,120

Calibration of Upstream Water Quality Model

Task1. Develop a Stand-Alone Version of the DSM2 Model for the Upper San-Joaquin River

The San Joaquin River Simulation Model (SJRSM) is an isolated model of the San Joaquin River extension of the Delta Simulation Model 2 (DSM2) (See Delta Modeling Section's Annual Report, August 2001). The SJRSM utilizes the numerical engine of DSM2 to simulate the portion the San Joaquin River (SJR) system from Vernalis upstream to the SJR confluence with Bear Creek near Stevinson. This isolated model allows for broader and more stream-lined applications by parties interested in conducting modeling studies of the San Joaquin River System without interest in the Delta system. SJRSM requires less data pre-processing due to the reduction in the number of boundary conditions and model run time is greatly reduced without the computationally intensive overhead of the Delta.



The necessary boundary conditions (flow, salinity) for the SJRSM model are:

- SJR near Stevinson.
- Eastside tributaries: Stanislaus, Tuolumne, and Merced Rivers.
- Westside streams: Hospital/Ingram, Del Puerto, and Orestimba Creeks.
- Mud and Salt Sloughs
- Eastside and Westside agriculture activities.
- Modesto Waste Water Treatment Plant activity.
- Natural groundwater accretions/depletions.

These boundary conditions are described in detail in the DWR Annual Report, August 2001.

The full scale Delta model including the upper San Joaquin was calibrated for the period of May 1997 through September 1999 for flow and salinity. The [Paul Hutton] upper San Joaquin portion of the model has not been calibrated for temperature and DO. This will be done by the modeling contractor. The methodology and results of the calibration effort are summarized in the Delta Modeling Section's Annual

Report, August 2001. The SJR stand-alone model, SJRSM, was also used to simulate the calibration period. In general, the calibration results from SJRSM were consistent with those from the full scale model. Predicted stage at Vernalis was not an exact match between the two models but was within hundredths to tenths of a foot agreement throughout the simulated period. Higher discrepancies usually occurred during flood periods.

As a verification, a long-term simulation was also conducted for the period of October 1985 through September 1995. The long-term simulation was used to verify the assumptions made to develop the boundary condition during calibration. The results of the verification were in agreement with the calibration results. The verification results will be documented further in the next Delta Modeling Section's Annual Report.

This task is considered 100% complete.

Task 2 Train and Assist Contractor in the Use of the Stand-Alone Model.

This and the follow-up tasks are on hold, since a modeling contractor has not been selected yet. This task was expected to start on September 1, 2001. As a result, delays are expected for the final completion of this project.