



# State Water Resources Control Board

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## Executive Office

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**Alan C. Lloyd, Ph.D.**  
*Secretary for  
Environmental  
Protection*

**Arnold Schwarzenegger**  
*Governor*

March 23, 2005

Alan R. Candlish  
Regional Planning Officer  
U.S. Bureau of Reclamation  
2800 Cottage Way  
Sacramento, CA 95825

Dear Mr. Candlish:

### DELTA MENDOTA CANAL RECIRCULATION STUDY

This letter responds to your letter dated August 6, 2004, submitting the Final Delta Mendota Canal Recirculation Study (Recirculation Study). The U.S. Bureau of Reclamation (USBR) prepared the Recirculation Study in compliance with Condition 2 (at page 153 and 154) of State Water Resources Control Board (State Water Board) Decision 1641 (D-1641) and the Plan of Action (POA) conditionally approved on March 21, 2001. Condition 2 of D-1641 requires USBR to prepare a POA for a recirculation analysis alternative to evaluate the feasibility and impacts of recirculating water from the Delta Mendota Canal through the Newman Wasteway to determine the feasibility of use of recirculation as a method for meeting and/or augmenting San Joaquin River water quality objectives. D-1641 requires the recirculation study to examine the following issues: the potential impacts on Delta native fish and on imprinting of Chinook salmon and steelhead in the San Joaquin basin; effects of increased exports on in-Delta hydrodynamics and fish entrainment at the State Water Project and Central Valley Project export facilities; effects of salt and contaminant loading in the San Joaquin basin; impacts on water deliveries to contractors; the capacity of the physical facilities to implement recirculation, including a description of any structural changes that would be needed to implement recirculation, a cost estimate, a determination of the potential amount of conserved water that would be used compared with other alternatives to meet San Joaquin and Delta objectives; and the potential for improvements in water quality in the San Joaquin River.

In December of 2000, USBR submitted a proposed POA to examine the feasibility of using recirculation to meet the San Joaquin River fish and wildlife flow (February through April 14 and May 16 through June) and pulse flow (April 15 through May 15) objectives. The December 2000 POA does not address using recirculation to meet the San Joaquin River salinity objectives or the dissolved oxygen objective. The POA describes eight tasks to be completed, including: (1) developing alternatives, (2) modeling alternatives, (3) evaluating impacts of the alternatives on fisheries, wetlands and mobilization of contaminants, (4) sampling and analyzing sediments, (5) reviewing legal constraints and other considerations that may affect recirculation, (6) analyzing the economic impacts of recirculation, (7) conducting public meetings, and (8) preparing a report of the study conclusions. The POA states that the first three tasks would be completed first and the remaining tasks would be completed if the modeling and environmental review from the first three tasks indicates that the potential benefits of recirculation outweigh the impacts.

***California Environmental Protection Agency***

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The State Water Board conditionally approved the first phase of the recirculation analyses and the timeline for completion of tasks in March of 2001. The timeline stated that the first three tasks would be completed by March of 2002 and the remaining tasks by March of 2003. The Recirculation Study submitted in August of 2004 addresses portions of Tasks 1 and 2 by modeling the potential effects of recirculation on salinity and contract supplies. The study does not examine other water quality constituents or power generation effects of recirculation (or any of the other issues included in the POA and D-1641).

The assumptions of the Recirculation Study serve to illustrate the worst-case scenario for water supplies and salinity impacts. The modeling does not incorporate operational flexibility associated with Joint Points of Diversion, use of the San Joaquin River Agreement (SJRA) to meet a portion of the April/May pulse flows (as implemented by Vernalis Adaptive Management Plan (VAMP)), export/inflow flexing, and other tools that may mitigate for or avoid the modeled salinity and water supply effects described in the Recirculation Study. The study also does not look at the effects of recirculation outside of the time period when it is used (e.g. water not released pursuant to the SJRA would likely be released at other times of year for summer power production or pre-flood control releases providing benefits at those times which are not reflected in the study results). In addition, the modeling assumes that recirculation would only be used to meet fish and wildlife flow objectives outside of the pulse flow period when adequate water supplies are not available from New Melones to meet the objectives. This assumption dictates that recirculation would rarely be used to meet these objectives. However, given that USBR has not consistently met the February through June flow objectives for the past three years, it is probable that if recirculation is found to be feasible, it may be used fairly frequently to meet these objectives. Given the potential operational changes described above that could be used to mitigate for potential salinity and water supply impacts associated with recirculation, it appears that recirculation may be feasible. Since contaminant and fisheries impacts may effectively make recirculation environmentally infeasible, studies of these issues should be completed before making a final determination of whether additional investigations are warranted.

In your letter accompanying the Recirculation Study, you state that questions regarding the effects of recirculation on fisheries, wetlands discharges, contaminants, economic issues and other legal issues will be addressed by studies currently underway by the interagency San Joaquin River Water Quality Management Group (SJRWQMG). As a result, you request that USBR be allowed to review the studies of the SJRWQMG before proceeding with any additional recirculation analyses.

Because the SJRWQMG members are not required by the State Water Board or any other agency to complete the recirculation analyses, I cannot defer requiring completion of the recirculation studies pending completion of the SJRWQMG's voluntary investigations that may not examine all of the elements required in D-1641. While I do encourage USBR to work with the SJRWQMG or any other party investigating the feasibility of recirculation, USBR is required to comply with its permit condition. Consequently, within 30 days from the date of this letter,

USBR shall submit a revised POA to complete the remaining required analyses, including analyses to determine the feasibility of using recirculation to meet or augment San Joaquin River water quality objectives (including salinity and dissolved oxygen). USBR should begin the analyses by investigating potential contaminant and fisheries impacts of recirculation. If analyses of water quality and fisheries impacts indicate that there may be potential significant impacts to the environment, USBR should consult with the State Water Board to determine if the remaining analyses are necessary. The analyses should allow for a quantifiable comparison of potential benefits and impacts relative to various recirculation flows. In addition, to the extent possible, the analyses should incorporate full use of Joint Points of Diversion, Export/Inflow flexing, and use of the SJRA flows for the VAMP. As indicated in the approved POA, prior to final submission of study results, the study should be reviewed by the CALFED Science program and the fisheries agencies (Department of Fish and Game, U.S. Fish and Wildlife Service, and the National Marine Fisheries Service), with any questions or comments of those agencies addressed in the final study.

Regarding funding for future recirculation studies, while the State Water Board understands USBR's budgetary constraints, completion of the recirculation studies is a condition of USBR's water right permits and as such must be completed to the satisfaction of the State Water Board in the allowable time frame to avoid violation of the condition. Given USBR's difficulty in meeting San Joaquin River flow objectives for the past several years, I believe that it is important to determine whether recirculation is a viable alternative for meeting these and other objectives.

If you have any questions concerning this letter, please contact Diane Riddle, the Environmental Scientist assigned to this matter, at (916) 341-5297.

Sincerely,

ORIGINAL SIGNED BY

Celeste Cantú  
Executive Director

cc: Sharon McHale  
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cc: (Continuation page.)

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