

San Joaquin River Management Program Advisory Council Meeting

Thursday, December 16, 2004

Stanislaus County Agricultural Center
Room G in Harvest Hall Building
3800 Cornucopia Way
Modesto, California

DRAFT AGENDA

- 9:00 a.m. Welcome and Introductions – Tim Ramirez, Chair
- 9:15 a.m. State's Plans Regarding San Joaquin River Restoration – Paula Landis, DWR and William Loudermilk, DFG
- 10:00 a.m. Overview of Restore Hetch Hetchy Effort – Spreck Rosekrans, Environmental Defense
- 10:45 a.m. Re-Assembling Hetch Hetchy: Water Supply Implications of Removing O'Shaughnessy Dam – Jay Lund and Sarah Null, UC Davis
- 11:45 a.m. Other Business
- 12:00 p.m. Adjourn

SAN JOAQUIN RIVER MANAGEMENT PROGRAM ADVISORY COUNCIL

DRAFT MEETING HIGHLIGHTS

December 16, 2004
Stanislaus County Agricultural Center
Modesto, California

Welcome and Introductions

The San Joaquin River Management Program Advisory Council met at the Stanislaus County Agricultural Center in Modesto, California. There were no comments on the draft minutes of the September 15, 2004 meeting. Draft minutes from the most recent meeting and pertinent documents are posted on the SJRMP website at: http://www.sjrmp.ca.gov/members/ad_council/index.cfm. Tim Ramirez opened the meeting with announcements and introductions of all meeting attendees.

State's Plans Regarding San Joaquin River Restoration

Paula Landis, DWR and Bill Loudermilk, DFG discussed the San Joaquin River Restoration planning, NRDC/Friant lawsuit update, and current activity surrounding Judge Karlton's decision. The Restoration Strategies Report is in the review process, but when published will not be a complete evaluation. The report may have a disclaimer; Landis suggested the report as a possible guideline for restoration solutions. Loudermilk added that this situation is an opportunity to continue planning and adding to the Restoration Strategies Report. The participants discussed the current studies and projects that relate to the Report and it was agreed that a full solution will require the current work plus more intensive studies to complete what is needed for a Restoration Strategy.

The limited number of coordinating and funding participants involved in the original process was discussed. Principals include DWR, BOR, NOAA, DFG, and USFWS. Other agencies have expressed a desire to be involved in the process. Future planning efforts will have problematic branching effects to multiple agencies and will therefore need to integrate the views of additional interests, stakeholders and other SJR groups into the process. There is a need to develop a planning organizational structure defining the process and identifying the cooperative groups.

Potential project stoppers, gaps in the study and project constraints will need to be identified as well as the economic and restoration benefits. There was a concern about the level of technical expertise available to the Strategies study, and that DFG should have been involved earlier in the process. Another concern was that the timeline or schedule of this process is more politically driven instead of allowing the science or the study itself to drive the process. The issue of

multiple impacts as a result of restoration efforts underlined the need to make the process more open and transparent for all interested in restoration. Future restoration work will be driven by available government funding. Currently a total of \$20 million is available for restoration projects; \$10 million from Reclamation and another \$10 million.

The San Joaquin River restoration planning process is more difficult than anyone has expected; with many issues that will not be easily solved. The inclusion of additional agencies, organizations and stakeholders to contribute to this process is well understood and may be realized after the completion of the Strategies study. A detailed review Strategies study is tentatively scheduled to occur in about 3 months.

Overview of Restore Hetch Hetchy Effort

Spreck Rosekrans, Environmental Defense, gave an overview of the restoration of the Hetch Hetchy Valley. The Valley is recognized for its beauty and public enjoyment possibilities because of its proximity to Yosemite Valley, and the national attention the area receives for its recreational and natural resources. The Hetch Hetchy Reservoir provides drinking water to the City of San Francisco. The restoration of the valley would include the removal of the O'Shaughnessy Dam, the development of a reliable replacement water supply for San Francisco, and the cooperation of many agencies. With the City of San Francisco growing, there is an increased water supply demand on the aging Hetch Hetchy water system. San Francisco's current water demand is 300,000 acre-feet per year. It will cost the City billions of dollars to renovate and repair the leaking system and retrofit to current seismic safety standards. This could be an ideal time to consider retiring the Hetch Hetchy water supply system and finding a more reliable source since the San Francisco Public Utilities Commission is currently working on water supply improvements and alternatives.

Rosekrans discussed potential water supply and power alternatives. One alternative is to build a new intertie between the Tuolumne River and San Francisco's aqueduct at or below Don Pedro Reservoir. This alternative would most likely call for an agreement with MID and TID to divert water directly from Don Pedro to SFPUC. Hetch Hetchy Reservoir holds only 360,000 acre-feet, or less than 25% of San Francisco Public Utilities Commission's total storage. Don Pedro Reservoir, one of California's largest reservoirs, is located just downstream of Hetch Hetchy and can store just over 2 million acre-feet. TID, MID, and SFPUC all store water in Don Pedro. However, senior water right holders MID and TID are entitled to the Tuolumne River base flows, while junior water right holder SFPUC is entitled to water only during periods of high flow. SFPUC has the right to store up to 740,000 acre-feet and currently uses Don Pedro Reservoir as a water banking facility; the actual diversion point is upstream at Hetch Hetchy. The removal of the Hetch Hetchy reservoir and the construction of an intertie at Don Pedro would allow SFPUC to access all of its

water storage in the Tuolumne system; i.e. Don Pedro, Cherry, and Eleanor reservoirs.

A transfer of water was also suggested with banking sites in the Turlock area; creating a credit system for water. A second possible diversion from Cherry Reservoir could be made, but this would cause a hang up during drought seasons. Other options include tying into the Delta-Mendota Canal and the South Bay Aqueduct with other SFPUC facilities, but these solutions are assumed to be less reliable and would require more treatment than the Hetch Hetchy supply. All the alternatives have issues in drought years and will require much planning and banking to continue to service the water supply needs of San Francisco during time of drought. Whatever alternative is selected, SFPUC will need to increase its treatment facility capacities.

In addition to water supply implications, removal of the Dam would decrease the production of hydropower provided by San Francisco by 20-40%. San Francisco operates three hydroelectric plants—Kirkwood, Moccasin and Holm powerhouses—on the Tuolumne River. The three plants provided 0.6 percent of California's electricity supply and represented 5.5 percent of statewide hydropower production. Several options are available to replace the lost energy, including increased investments in energy efficiency, expansion of dynamic pricing programs, and the development of new renewable or natural-gas-fired power plants. New facilities can be built or old ones optimized for more hydropower from those plants.

The cost of restoration depends on how the system will be deconstructed, where the new water supply will come from and how it is accomplished. The range depends on the new supply needs: additional pumping, transfers, filtration, energy costs, and new facilities. The replacement costs for water and power supplies of the Hetch Hetchy system would take an estimated \$.5-1.5 billion, which does not include the restoration of the Valley or the removal of the dam. The source of restoration funding is uncertain at this time, but is assumed to be spread out through California. The cost also might be picked up by the environmental community.

The restoration process of Hetch Hetchy will take much effort to reach the goal of replacing its natural beauty. More issues need to be addressed for a full map of the potential consequences and affected parties. Additional concerns include flood control, current endangered species populations, and sediment contamination. There are also the uncertain benefits of returned instream flows downstream.

For a digital version of the Environmental Defense Report visit their website at <http://www.environmentaldefense.org/hetchhetchy/>.

Re-Assembling Hetch Hetchy: Water Supply Implications of Removing O'Shaughnessy Dam

Jay Lund and Sarah Null, UC Davis, discussed Null's thesis of the effects of restoring Hetch Hetchy Valley and removing O'Shaughnessy Dam. Some of the issues discussed in the thesis include the questions of what would happen to the water supply if the Dam were removed, how the hydropower generated in the system is affected, and water quality effects on the system. The Hetch Hetchy Reservoir supplies 25% of San Francisco's water supply, 14% of storage on the Tuolumne River. The reservoir provides some of the cleanest water in California. It is one of the few water systems that have filtration avoidance status, requiring minimal water treatment. Chlorine is added as a disinfectant.

The CALVIN Economic Optimization Model was used to evaluate California's complicated and intertwined water systems. This model ignores political and legal issues and focuses on water supply and economics for simplicity. For this case, CALVIN has been used to evaluate water supply alternatives to the O'Shaughnessy Dam. Several scenarios were modeled; in scenarios without the Dam, total water storage in the Hetch Hetchy system declines. With the addition of an intertie from Don Pedro Reservoir to the Hetch Hetchy Aqueduct, even in drought years this storage decline will not affect urban water users and environmental flow requirements are kept intact. The model anticipates water transfers from agricultural deliveries to urban users but the effect will be only a slight decrease in deliveries to agricultural users.

Removing O'Shaughnessy Dam carries substantial financial costs; including lost hydropower revenue, capital costs for additional treatment facilities, increased treatment costs, and dam removal costs. Additional costs would also reach the agricultural community in the form of lost water supply. The increased cost of agricultural water supply as compared to the urban water supply was left out of consideration. Only the increased cost from the loss in hydropower was estimated and calculated at \$12 million a year.

A digital copy of Null's thesis can be found online at cee.engr.ucdavis.edu/faculty/lund/students/SarahNullThesis.pdf.

The Next Advisory Council Meeting: is scheduled on Thursday, March 10 at 9:00 am at the Stanislaus County Agricultural Center.

**ATTENDEES AT
SAN JOAQUIN RIVER MANAGEMENT
PROGRAM ADVISORY COUNCIL MEETING
December 16, 2004**

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