

SAN JOAQUIN RIVER MANAGEMENT PROGRAM ADVISORY COUNCIL

DRAFT MEETING HIGHLIGHTS

Wednesday, November 15, 2006
Stanislaus County Agricultural Center
Modesto, California

Welcome and Introductions

The San Joaquin River Management Program (SJRMP) Advisory Council met at the Stanislaus County Agricultural Center in Modesto, California. Ernie Taylor, Department of Water Resources (DWR), opened the meeting with announcements and introductions.

Dissolved Oxygen Demonstration Project

Bob Pedlar, DWR, presented the details of the San Joaquin River (SJR) Deep Water Ship Channel Dissolved Oxygen (DO) Demonstration Aeration Project (Project). The Project is located in the Stockton Deep Water Ship Channel (SDWSC) on the SJR near Rough and Ready Island. This site was chosen based on the State Water Resources Control Board (SWRCB) list of impaired water bodies for DO. DWR is currently the lead for the Calfed funded project. The station will be operational for a two year demonstration study beginning the spring of 2007. The project objective is to achieve a minimum 5mg/L DO in the SDWSC as recommended by the SWRCB. The next step of the Project is to review the operations and report on the technology and effectiveness.

The Project site is at the end of the Port of Stockton Wharf, at a 600' wide and 33' deep dredged section of the channel. This location is tidally influenced and has velocities as low as a quarter foot per second with a two to three foot per second tide. Raw SJR water is drawn in from a fish screened intake located under the Wharf. The raw water is then sent to the aeration equipment where liquid oxygen is injected into the stream which then proceeds down a u-tube well. The 205 feet deep u-tube well provides enough detention time so that ideally the oxygen will achieve 100% of saturation within the well, but realistically a DO concentration of 62 mg/L at 90% of saturation may be achievable. The oxygenated water will then enter the SJR at the discharge diffuser; a 200 feet long 6 inch diameter French drain located 15 feet below the water level.

The diffuser is located at the edge of the Wharf because of a permit restriction prohibiting the project from interfering with ship traffic. This location will affect the water quality at the Rough and Ready historic sampling station. The station will need to be moved to an area that will not be affected by the Project, so that

historic data comparison of this station will be accurate. An alternative location is currently being evaluated. Four new stations will be installed to monitor the effects of the Project on DO levels in the channel. The new stations will be located at existing Coast Guard Naval buoys and will measure DO, pH, temperature, and oxygen reduction. These stations will be located 15 feet below mean low tide level.

Project concerns from other agencies have been addressed or are currently under investigation. National Marine Fisheries Service (NMFS) is concerned with the addition of oxygen to the channel and the production of free radicals and how this would affect the DNA of fish. Studies of 5-day exposure from free radicals of oxygen on migrating salmon have shown that there may be some impact. DWR has decided to do their own fish study to look at the effect of caged fish and allow NMFS to render an opinion after the study is released. The Department of Fish and Game (DFG) has also required that the fish screens on the intake be cleaned with an air burst to reduce algae buildup.

The current schedule is to complete the installation and construction by January 2007, prepare permits and conduct the system evaluation testing from January through May 2007, and start up the system sometime in the summer or fall of 2007. It is expected that Proposition 13 funding for this project will be exhausted mid to close of 2009, so DWR is looking for an entity to take over long-term ownership and continue to operate and develop the project.

Update Stanislaus River Weir Study

Steve Cramer and Jesse Anderson, Cramer Fish Sciences, discussed the current activities at the Alaskan weir located on the Stanislaus River upstream of Modesto and downstream of Goodwin Dam. The weir has been installed every fall since 2003. The objectives of the study are to estimate the fall run sizes of Chinook salmon and steelhead trout through direct counts, determine environmental affects on run timing, and compare run size and attributes to the traditional carcass surveys. The study is mostly funded by the Anadromous Fish Restoration Program. The weir is installed in early September and daily counts are done through May. Snorkel surveys are done daily from Sept. 15 through Dec. 15, and then preformed once a week until the end of May. The fall 2006 salmon run on the Stanislaus River is currently being evaluated.

The weir is designed for a low flow installation of 400 cubic feet per second. The panels are made of gray PVC and are anchored to the channel bottom using rebar that is staked into the river bed. The weir is removed but the anchor rebar stays in the stream year round. The releases from Goodwin Dam are usually controlled during the installation of the weir, but this year flows were elevated to 1200 – 1500 cfs due to increased flood releases. Nevertheless, the weir was installed with the addition of some minor improvements. The equipment used for the fish identification includes a caged fish trap, camera, and an infrared scanner

that outputs an infrared image to a computer onsite. The underwater camera is located in the fish trap and has been upgraded to a color camera with lighting and the camera angle has been improved. Fish are visually and physically inspected by staff in the trap under an agreement with DFG. In addition to Chinook salmon, Steelhead, ad-clipped Chinook, and other species of fish are counted and reported. Data from visual observations and scales collected from live fish are given to DFG to determine the age and sex. In addition, carcasses are recovered and given to DFG for scale and otolith analyses.

The current draft results for the fish passage between 2003 and 2005 were discussed. Pulse flows released from Goodwin Dam in October were shown to increase fish passage in most years. Though the volume of flows and the timing varies from year to year, the passage pattern is fairly consistent over time. The timing and duration of the response of fish passage is being examined by using intervention models. The relationship between migration and dissolved oxygen or temperature is as yet unclear. To accurately conclude what triggers Salmonid migration requires many more years and perhaps spatially explicit data to test. This is the last year of the demonstration project, but Tri-DAM may continue the study. A completion report will be submitted and a feasibility report to transfer the technology will be completed. More information and past reports are located online at <http://www.stanislausriver.com/>.

Grant and Proposition Update

Amanda Peisch, DWR, gave an update on the current funding for Proposition 50 under the Integrated Regional Water Management Program (IRWM) for the Step 2 implementation funding. There was one applicant that received a draft funding recommendation that would potentially affect the San Joaquin River. The applicant is the San Luis and Delta Mendota Water Authority for \$25 million to complete projects identified in the Westside Drainage Plan.

Propositions 84 and 1E passed in November. Both Propositions have funding available for San Joaquin River restoration, levees, IRWM, flood control, flood mapping, and other related projects. Peisch mentioned that the specifics for the funding from Prop 84 and 1E will be public once the Governor signs the budget. DWR is planning for funding to be available for mid 2007 (at the earliest) and will be conducting some scoping and implementing workshops in early 2007.

Next Meeting: Wednesday, February 14 from 9:00 am to 11:30 am at the Stanislaus County Ag Center in Modesto in the main conference room H and I.

**ATTENDEES AT
SAN JOAQUIN RIVER MANAGEMENT PROGRAM
ADVISORY COUNCIL MEETING
November 15, 2006**

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