

Memorandum

Date: December 28, 2006

To: Management Agencies

From: Project Agencies
Department of Water Resources

Subject: **Environmental Water Account Fish Actions for Water Year 2006
(October 1, 2005 through September 30, 2006)**

Overview

Water year 2006 was one of the wetter years on record. Due to the wetter hydrology, inflows to the Sacramento-San Joaquin Delta were relatively high during the winter and spring months as compared with other recent water years. These high flows likely reduced the direct effect of project exports on entrainment of fish species of concern at the pumping facilities. Consequently, the Management Agencies requested fewer protective fish actions relative to some other recent water years until assets were needed to implement the Vernalis Adaptive Management Plan (VAMP) experiment in the spring months. Total EWA expenditures for fish actions in WY 2005-2006 were 149.2 TAF.

Fish Action #1, April 29 to May 2, 2006 (Pre-VAMP)

Description of Action

With abundant water in the system in early April, the VAMP technical committees recommended a later start date (typically, VAMP begins on April 15) anticipating San Joaquin fall run smolts would be emigrating later in the year due to the high flow conditions and cooler in-stream temperatures. On April 25, 2006, the Water Operations Management Team (WOMT) agreed to use Environmental Water

Account (EWA) assets to maintain a combined export level at no more than 20% (approximately 6,000 cfs) of the current San Joaquin River at Vernalis flow (approximately 30,000 cfs) prior to beginning VAMP on May 3.

Cost of Action

The Department of Water Resources (DWR) has determined that this action used 3.4 TAF of EWA water based on reduction of SWP exports against baseline export rates in the range of 4,045 to 5,699 cfs. During the period when this action took place, the primary factor affecting the baseline export rates was the variable Project demands.

Fish Action #2, May 3 to June 2, 2006 (VAMP)

Description of Action

The VAMP experiment was conducted between May 3 and June 2 in 2006, constituting the seventh year in a 12-year experiment. High spring flows in the San Joaquin River prevented the installation of the head of Old River Barrier (HORB). Therefore, the experimental design was modified to measure survival through the south Delta with two flow/export rate combinations without a HORB. The VAMP carried out the two separate salmon survival experiments requiring the use of EWA assets; one conducted at combined exports of 1500 cfs during May 3 to 17 and the other conducted at combined exports of 6000 cfs during May 18 to June 2. During the entire period of VAMP, San Joaquin River flows were about 25,000 cfs.

Cost of Action

The DWR has determined that this action used 55.6 TAF of EWA water based on reduction of SWP exports against baseline export rates in the range of 0 to 6,168 cfs. During the period when this action took place, the primary factor affecting the baseline export rates was the variable Project demands.

Fish Action #3, June 3 to 24, 2006 (Post-VAMP)

Description of Action

On May 30, the WOMT decided that following the VAMP period exports would be allowed to increase to a rate to meet current demands. On June 3 the Projects began exporting at a rate of approximately 8,000 cfs combined. A sharp increase in juvenile San Joaquin River fall-run Chinook salvage on June 5 prompted the Management Agency biologists to request a reduction in exports, to minimize entrainment. The WOMT subsequently used EWA assets to reduce export pumping levels on June 6 to 6,000 cfs (combined) until salvage numbers declined. The export curtailment at the SWP lasted until June 24 when decreased juvenile salmon salvage, coupled with high Delta water temperatures, indicated that the fry/smolt emigration from the San Joaquin was nearing conclusion.

Cost of Action

The DWR has determined that this action used 90.6 TAF of EWA water based on reduction of SWP exports against baseline export rates in the range of 3,488 to 6680 cfs. During the period when this action took place, the primary factor affecting the baseline export rates was the variable Project demands.

For All the Above Three Fish Actions

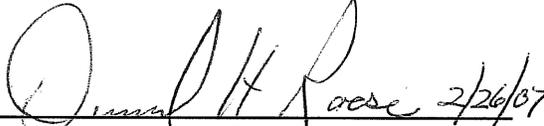
Method of Accounting for Costs

DWR will provide to the Management Agencies an accounting of the actual water, energy, storage, and conveyance costs or credits associated with the use of EWA assets in a future reconciliation of all EWA costs and credits. The water cost analysis will include a comparison between the actual operation (with the fish action) and a base operation (based on planned reservoir releases and exports).

Disagreements regarding the analysis are to be discussed with the B2 Interagency Team and EWA Team. If necessary, disputes will be elevated to the WOMT for final resolution.

B2/EWA Assets

The WOMT Agencies have concluded that the actions described above were EWA actions and EWA assets were applied as reimbursement for these export reductions. In water year 2006, no EWA assets were applied toward any CVP export reductions. These fish actions were not intended to impact the baseline delivery capability of the SWP and the CVP. Therefore, the Project Agencies made operations and water allocation decisions based upon the base operations plan, absent the fish actions.



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SWP Operations Control
Division of Operations & Maintenance



Ronald Milligan Date 5/14/07
Office Operations Manager
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Management Agency Authorization provided by:

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Bruce Oppenheim for ↑

Initial PH Date 3/13/07
Initial DEW Date 3/13/07
Initial MF Date 3/13/07

cc: (See attached list.)

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