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MEMORANDUM

To: Stein Buer, CALFED  
From: Spreck Rosekrans, Environmental Defense Fund  
Peter Vorster, The Bay Institute  
Date: June 3, 1997  
Subject: CALFED Operations Studies

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We request that CALFED incorporate in its long-term planning studies using DWRSIM both the following operating criteria for California's existing and proposed water projects as well as the following levels of projected demand. As noted in our memorandum dated April 9, 1997 (also signed by United Anglers, The Sierra Club, The Natural Resources Defense Council, The Pacific Coast Federation of Fisherman's Associations and The Save San Francisco Bay Association), the CALFED operations studies which are publicly available at present illustrate the water supply benefits of both structural and non-structural alternatives at the expense of the environment. We wish to evaluate studies which significantly increase the existing level of protection for Central Valley wetlands, streams and the San Francisco Bay/Delta estuary and to understand how effectively the water delivery system can operate with this additional protection. In addition we want to understand more fully what effect increased demand has on the ability to offer protection for the ecosystem.

We do not consider the following criteria to constitute an "environmental alternative". Analysis of these criteria would help us to understand the relationship between water supply development and ecosystem protection. Assuming that CALFED is able to conduct modeling runs which incorporate these components, we will work with CALFED to aggregate the criteria described below into a matrix of studies which would provide useful information to stakeholders without overwhelming the DWRSIM modeling staff. We are continuing to develop and refine operational criteria which we hope can be incorporated into a preferred alternative.

Meeting environmental flow improvements should not be contingent upon new storage and conveyance configurations. In those CALFED alternatives without significant new storage and conveyance configurations, we assume that reoperation and supplemental water acquisitions will be used to implement environmental flow improvements. In those CALFED alternatives which do include significant new storage and conveyance, a range of flows derived from reoperation and acquisitions should be modeled to help determine optimal size of new storage and conveyance.

**I. Operations-Existing System**

**A. X2 Level of Protection**

**i. Baseline Conditions**

In addition to those modeling improvements in export/inflow ratios contained in the AFRP, modeling studies should evaluate the effect of ramping export levels during the months of January and July. In January, allowable exports would ramp linearly from 65% percent of Delta inflow at the beginning of the month to either 35% or 45%, depending on the February standard, at the end of the month. Similarly, in July allowable exports would increase from 35% at the beginning of the month to 65% at the end. DWRSIM is, of course, a monthly model, but approximations can be made to estimate the effect of these ramping actions.

The modeling studies should also evaluate an extended fall-winter ramping period, in which ramping down would begin November 1. Maximum export/inflow ratios would range from 65% to 55% in November, 55% to 45% in December and 45% to 35% in January.

### **C. AFRP Actions**

The extent of project re-operation authorized by the CVPIA to accomplish the Act's fishery objectives is unclear while the Department of the Interior develops guidelines for use of 3406(b)(2) water. Nonetheless, the lack of definitive guidelines is not an excuse to ignore the mandates of the CVPIA. Indeed, CALFED has already incorporated some upstream flow criteria.

Under one approach, the studies could assume a limited level of cooperation by the State Water Project for these Delta Actions. DWRSIM would initially project flows for these periods without reducing exports beyond the level specified by the 1995 WQCP. CVP releases, Oroville releases and SWP exports should not change from this projection. CVP exports should then be reduced until either the desired export/inflow ratio is met or CVP exports are reduced to zero. In such an operation, and absent other accommodations, the SWP would never be asked to reduce their own exports, but it will be asked to refrain from exporting additional water.

Under an alternative approach, the studies could assume full cooperation and participation by the SWP in implementing CVPIA Delta Actions. Resulting export reductions would be considered part of the State's obligation to meet the 1995 WQCP's narrative objective for doubling of Chinook Salmon.

### **D. ERPP Program**

Model the flow targets in ERPP Programmatic Actions, Appendix A, in the DWRSIM studies. In some cases, the ecosystem team will need to quantify the flows required for their recommended actions, such as defining what is the first "significant" pulse of the winter which should be passed through the Delta.

The floodplain restoration and other land-use changes anticipated in several Actions will affect the accretion/depletion values used within DWRSIM. Ecosystem changes that don't lend themselves to DWRSIM quantitative analysis should be evaluated qualitatively for their hydrological impact.

### **E. Trinity River Flows**