

- Provisions should be made to allow the EWA to grow, if necessary and feasible, during the first stage of CALFED (7-10 years). Possible mechanisms to allow growth include:
 - Securing additional option-purchase and/or storage contracts (and necessary funding)
 - Flexible management of existing criteria as knowledge increases and trust builds.
- Provisions should be made to integrate environmental credits earned by the water users for actions such as:
 - Screens, predation control or other actions that reduce mortality compared with current conditions.
 - Mortality reduction associated with purchased harvest reduction.

1. Is the Fish Protection Adequate?

- Clearly, a 450 TAF initial EWA will provide substantial additional environmental enhancements depending on the type of year. Our studies suggest that at a minimum, all of the AFRP measures can be accomplished in a given year with this account, and in most years, substantially more protection is achievable at the discretion of the environmental manager. The most difficult years to achieve protections beyond the AFRP are prolonged drought years – the same types of years that water users are experiencing shortages. In the drier years, additional EWA water can be achieved by flexing the E/I ratio (or other criteria) at the discretion of the environmental manager to add further protections at other times.
- The approximate operating cost for such an EWA is __million to ___ million per year (includes JPOD wheeling, storage options, and purchase options). Capital costs, such as for Banks expansion, are not included here.

1. Is Water Supply Adequate?

- Our studies indicate that by increasing the flexibility of the Banks pumping plant to 8,500 cfs on Day 1, and permitting unlimited Joint Point of Diversion along with securing a 450 TAF EWA to accomplish AFRP plus additional discretionary environmental enhancements (to the degree EWA water is available) will allow water users to benefit by about 120 TAF/year on average (very little in drought years).

□ The additional flexibility afforded by a 10,300 cfs Banks pumping plant along with 200 TAF in-Delta storage and 400 TAF Madera Ranch groundwater project in year 4 would allow modest increases in both water user benefits and flexibility to achieve further environmental actions.

□ The addition of new CALFED storage at the end of stage 1 will offer further opportunities to increase supplies for the environment and water users.

□ It should be noted that the remaining flexibility of the CVP and SWP would be retained to the limit to implement the EWA and additional environmental actions in stage one. This is a particular issue with the SWP, which via JPOD, would assist both the federal users and the environment through greater cycling of Oroville and use of SWP wheeling capacity. These benefits need to be equitably accounted for.

□ Agreements need to be reached regarding apportionment of water supply benefits and costs among water users and environmental resources.

1. What Actions are required for Water Quality improvement?

□ This is a key issue for in-Delta users and export urban users, and it must be addressed. To the extent possible, operation of the EWA needs to be self-mitigating. An example would be proposed cross-channel closures in the fall/early winter. These closures need to be contingent on the real-time salinity gradient in the western/central Delta. An example of this is the criteria established for the 1997 ring-run protection plan. When salinity rose to a certain level at key stations, a cross-channel opening was triggered until such time as the salinities improved. This type of criteria can be refined to account for oysters and fish monitoring to optimize fish protection while not degrading water quality. Although politically sensitive, a small amount (1000 – 2000 cfs out of 20,000 to 30,000 cfs) of X2 flexing in the spring (determined by the environmental manager) could be used to augment outflow in the fall to mitigate the VA-induced operations.

□ The shift in exports from the spring to the fall is a definite water quality concern, and needs to be taken into account by the environmental manager as well as the project operators. Again, sufficient environmental assets must be in place to assure a “no-harm” operation.

□ Water Quality implications of the EWA operation should be weighed in light of the full CALFED package. To the degree that the water quality common program actions (i.e. source control, discharge relocations) improve conditions, this should be accounted for. Water exchanges to improve water quality also fall in this category. The 2000 cfs Hood test facility would go a long way toward mitigating EWA operations on water quality.