Water Management Strategy/
Integrated Storage Investigation Status Report
November 5, 1999

Comprehensive Planning

Economic Evaluation of Water Management Alternatives (EEWMA)

The EEWMA Screening Analysis and Scenario Development Final Report was completed in October and presented at an October 26, 1999 EEWMA workshop. This report (available in hard copy or accessible through the CALFED web site) provides information about the mix of supply enhancement and demand reduction measures that would be selected under a least-cost planning approach. The analysis was conducted on a regional basis, under various sets of assumptions grouped in preference sets. The October Final Report includes refinements of earlier analysis based upon comments received from a variety of stakeholders (Natural Resources Defense Council, Save San Francisco Bay Association, Central Valley Water Project Association, NCWA, SWC, CUWA, MWDSC, UC Davis, NHI, KCWA, and San Diego County Water Authority). The screening analysis shows that no water management option type (conservation, surface storage, conjunctive use, water recycling, etc.) should be excluded from further consideration for economic reasons. The screening results are currently being refined through a series of next steps that include operations studies, integration of environmental water needs, analysis of effects of water quality, and cost allocation strategies. Preliminary results of these next steps will be discussed at workshop on November 30, 1999.

Riverine Processes Study

A core work team of CALFED staff and outside experts has met regularly to identify a range of flows in the Sacramento River that will restore a functioning riparian ecosystem in the reach of the river between Red Bluff and Chico Landing. Following an initial workshop, tasks were assigned to the core team members. Based upon information developed through these efforts, a Draft Sacramento River Geomorphology White Paper is near completion. The paper identifies flow requirements necessary to restore and maintain stream meanders and riparian habitat in the Sacramento River between Red Bluff and Hamilton City. An expert panel is being convened to review the draft recommendations. The final White Paper will be completed in late November.

Drinking Water Quality Operations Workgroup

A workgroup has been formed to explore the ability of water exchanges, conveyance changes, and storage development and operations to achieve progress towards drinking water quality objectives. This workgroup, including representatives from EPA, DWR, CCWD, MWDSC, SCVWA, CUWA, SWC, SLDMWA, and U.C. Davis, has been meeting to consider, refine, and analyze operational concepts for water quality improvement, with a special focus on new storage facilities under the Integrated Storage Investigation. A study recently completed by the workgroup suggests that new storage

facilities and operations could play important roles in Delta drinking water quality enhancement. Workgroup findings are being incorporated into a comprehensive evaluation that considers other water management objectives such as water supply reliability and operational flexibility. This workgroup will also provide technical support to the Delta Drinking Water Council.

Operational Flexibility Studies

A preliminary study is underway to determine the extent to which Delta conveyance improvements, demand reduction measures, and new storage facilities might allow for increased flexibility in SWP/CVP project operations. Based on review of previous Environmental Water Account gaming exercises, annual patterns of export reductions that are most likely to benefit fisheries were identified. Using a simulation of existing or projected SWP/CVP operations as a base, new facilities or demand reductions are applied to the simulation and improvements to water supply reliability are noted. Next, export restrictions are applied using the identified annual export reduction patterns. The magnitude of total annual export reduction is adjusted until water supply reliability is reduced to match the selected base case. This exercise will provide information on the level of potential benefits to fisheries that various water management tools might provide. This information will be applied during the upcoming the upcoming comprehensive evaluation of alternative water management strategies.

WMS Refinement Process

All of the efforts described above will provide information about how various water management tools could be used to achieve CALFED Program objectives. In addition, CALFED has implemented a number of activities to help refine a water management strategy that describes how these tools should be combined and implemented.

- ***Water Management Development Team.*** To address the near-term implementation of the WMS, CALFED has established a Water Management Development Team. This team, consisting of CALFED agency and stakeholder representatives, is evaluating the performance of a number of water management tools that might be implemented in Stage 1. The team will advise CALFED policy makers on the value of these water management tools, and how the benefits of these tools might be shared to meet the multiple objectives of the Program.

- ***WMS Evaluation Framework.*** To help address long-term implementation of the WMS, CALFED is developing a WMS Evaluation Framework. Through a series of facilitated workshops and interviews with stakeholders and agency representatives, CALFED will attempt to better define specific WMS objectives. The Evaluation Framework will also include performance measures to help gage progress towards the identified objectives. A series of three workshops along with individual interviews are being scheduled for November and December 1999 to aid in this effort.

- ***WMS Comprehensive Evaluation.*** To help illustrate the relative effectiveness of alternative water management strategies in light of the identified objectives and performance measures, CALFED is conducting a comprehensive evaluation of

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alternative water management strategies. The alternative strategies will reflect emphasis on a variety of water management tools. The comprehensive evaluation will include hydrologic and economic analyses and assessment of environmental and social impacts to evaluate performance measures under the alternative strategies. To help illustrate the evaluation process and provide preliminary findings, a limited number of alternative strategies will be defined and evaluated by mid-December 1999. If warranted, additional evaluations will be completed in early 2000.

Hydroelectric Facilities Re-operation Investigation

CALFED has completed the technical work scoped for a preliminary evaluation of the potential benefits of re-operation of hydroelectric facilities. This work includes an analysis of the re-operation of PG&E facilities in the Feather River basin considering three primary objectives: 1) local water supply reliability, 2) system-wide water supply reliability, and 3) changes in timing of flows for environmental enhancement. A workshop was held on October 21, 1999 to brief interested parties on this initial effort and solicit input regarding further refinement. A report to document this effort is currently being drafted and will be released after consideration of comments received at the scheduled workshop.

Groundwater Investigations

CALFED and DWR have developed a workplan to help identify the proper role of conjunctive use in a comprehensive Water Management Strategy and pursue feasibility evaluations of conjunctive use and groundwater banking opportunities. Under this plan, groundwater opportunities would be evaluated cooperatively with local stakeholders, using a basin-by-basin approach. CALFED's principles for implementation of conjunctive use, including local control of projects and meeting current and future in-basin needs as a first priority, would apply to projects considered in this evaluation. DWR staff have held informal discussions with elected officials and water agency representatives in Glenn, Colusa, Tehama, and Butte Counties as well as the Central and West Basins and Coachella Valley regarding possible cooperative efforts to explore the conjunctive use opportunities in these basins. CALFED's Conjunctive Use Advisory Team, consisting of interested stakeholders and agency experts, will help guide development of this workplan.

Concurrently, CALFED is exploring opportunities to provide technical and financial support for locally sponsored conjunctive use pilot projects. In a November 5, 1999 meeting, the Conjunctive Use Advisory Team will work towards finalizing a Grant Application for assistance in implementing conjunctive use projects that incorporate . If source funding is secured, the RFP will be issued this fall.

North of Delta Offstream Storage Study

DWR is continuing work on its North of Delta Offstream Storage Study. Work anticipated during State fiscal year 1999-2000 will focus on environmental issues associated with construction of alternative offstream reservoirs, including 1) botanical, general vegetation, and sensitive plant species surveys, 2) wetlands delineations, 3) wildlife special status species inventories, and 4) avian, fish, amphibian, and reptile surveys. Some additional engineering and economic studies are also planned, with special emphasis on refining storage and conveyance configurations to help focus environmental studies. The next meeting of the Technical Advisory Group is scheduled for October 19, 1999. A progress report documenting findings of the investigation to date is being prepared and will be released to the public by February 2000.

On Stream Storage Investigations

Reclamation recently completed an appraisal assessment of the potential for enlarging Shasta Dam and Reservoir. Three enlargement options were evaluated that involved a structural raise of the crest height of Shasta Dam by 6.5, 102.5, and 202.5 feet. Reclamation concluded that the 6.5 foot raise has the least unit cost, minimizes both environmental and socioeconomic impacts, and would be the most viable project for further analysis in a feasibility-level investigation. Three well attended public informational meetings were held during June 1999 with local elected officials, resort owners and operators, and other stakeholders. Reclamation is committed to continuing a dialogue with local stakeholders as future studies unfold. Aerial photography was completed in August, however, anticipated topographic work was not completed due to high water levels in the reservoir. Additional land surveying will be completed early in the year 2000. Reclamation will initiate a program to collect environmental baseline data from habitat surveys in the year 2000. Work continues on detailed scoping and work plans for an anticipated feasibility investigation focusing on the 6.5 foot dam raise.