

JUL 01 1998

01523

DENNIS M. DIEMER
GENERAL MANAGER

June 30, 1998

Mr. Lester Snow, Executive Director
Attention: Rick Breitenbach
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, California 95814

Dear Mr. Snow:

The East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the CALFED Draft Programmatic Environmental Impact Statement/ Environmental Impact Report (Draft PEIS/R). This letter presents EBMUD's policy perspectives and specific technical comments on the CALFED Bay-Delta Program. Additionally, as a participant in the Ag/Urban process and a member of the California Urban Water Association (CUWA), the Water Reuse Association of California, and the Bay Area Regional Water Recycling Program (BARWRP), EBMUD will also be contributing to comments submitted through these other stakeholder forums.

EBMUD commends CALFED on its accomplishments to date. EBMUD has been an active participant in assisting CALFED to engender broad stakeholder consensus as it develops a comprehensive program to resolve the Bay-Delta issues. EBMUD will continue to support the significant effort that CALFED is undertaking to develop and implement a complex program that addresses the needs of the environment and water users throughout the state. We are committed to working with CALFED and other stakeholders to cooperatively develop a balanced, community-inclusive program that improves conditions in the Bay-Delta.

EBMUD supports the June 15th announcement by Governor Wilson and Interior Secretary Babbitt to develop a staged implementation process for a CALFED preferred alternative that will provide early (7-10 years) demonstrated improvements for all resource areas (ecosystem health, levee stability, water quality and water supply reliability). EBMUD believes that the decision of CALFED to strive to fulfill its Delta environmental restoration and water supply reliability goals through a "phased" decision-making process is appropriate and represents an approach, if implemented with strong stakeholder involvement, that will be successful in achieving the CALFED goals.



EBMUD's Stake in CALFED

While EBMUD does not divert water directly from the Delta, we have a stake in several CALFED programs that affect the implementation of our Integrated Resources Plan, and our investments in protecting the natural resources in the Bay-Delta watershed. Our Mokelumne Aqueducts cross the Delta to deliver high quality Sierra water to our 1.2 million customers in 20 cities and 15 unincorporated communities in Alameda and Contra Costa counties. Because EBMUD serves water from the Mokelumne River, an eastside tributary to the Delta, we have an interest in improving fishery conditions in the Delta, which serves as a migratory corridor for Mokelumne River fall-run chinook salmon and steelhead. EBMUD also understands that without an acceptable level of stability for the Bay-Delta – both physically and institutionally – it will be difficult to maintain reliable high quality drinking water supplies to our customers and to protect environmental resources, especially in times of drought. As a Central Valley Project contractor committed to utilizing its American River water contract supply in the near term, EBMUD understands the importance of an acceptable Bay Delta solution.

EBMUD's Integrated Resources Planning

During the 1976-77 and 1986-92 droughts, the reliability of EBMUD's water supply was impacted and the inevitability of future water shortages was made very clear. Today, the Mokelumne River cannot supply even 75% of EBMUD customer demand during a drought, even with 25% mandatory rationing and aggressive water conservation and recycling programs. Other demands on the Mokelumne River have also increased. In Amador, Calaveras and San Joaquin Counties, those with water rights senior to EBMUD's also face growing needs for water. EBMUD's responsibilities to protect the Mokelumne River environment also affect the amount of water available to the East Bay. Virtually all of EBMUD's increased water needs projected over the next 20 years are a result of increased flows for senior water right holders and for resource protection in the Mokelumne River and Bay-Delta system. The needs of new customers within EBMUD's ultimate service boundaries are targeted to be almost entirely offset in normal years by water conservation and recycling projects.

In addition to the need for increased water supply reliability, EBMUD must maintain a high-quality water source to meet customer expectations and regulatory demand. With a high-quality source, EBMUD is able to meet and exceed increasingly stringent drinking water standards set by EPA and the California Department of Health Services without significant added treatment. This is critically important since California drinking water quality law sets a tougher standard than federal law. Every water utility in California agrees that the highest quality water source reasonably available provides the safest end product for consumers.

EBMUD has taken CALFED's integrated planning approach one step further by recognizing the inter-relationships of the issues affecting the Bay-Delta system. EBMUD has implemented a program that balances the resource needs of restoring ecological health with improved water management in our service area. In October 1993, EBMUD adopted a long-range water supply management program. In implementing the following six elements of this comprehensive integrated resources plan, EBMUD has developed valuable partnerships with regional interests, regulatory agencies and community groups:

Water Supply Improvements – Continuing negotiations with Sacramento and San Joaquin Counties, other water users, the USBR, and environmental interests to utilize EBMUD's American River contract entitlement and conveyance facilities as part of an effort to meet minimum water supply. Other alternatives under continuing evaluation for water supply benefits to EBMUD customers include raising EBMUD's existing Pardee Dam and the development of groundwater storage in our local service area.

Lower Mokelumne River Management – Entering into agreements with CDF&G and USFWS to sustain and enhance fishery resources on the Mokelumne River and Bay-Delta. The Joint Settlement Agreement (JSA) between EBMUD and the Resource Agencies was executed in March 1998 and has been submitted to the Federal Energy Regulatory Commission (FERC).

Water Reclamation – Partnering with the Bay Area Regional Water Recycling Program and developing joint projects with neighboring wastewater agencies (Dublin-San Ramon Services District, Central Contra Costa Sanitary District, and West County Wastewater District) and local industries (Chevron, Unocal) to improve water use efficiency through recycling and reuse.

Water Conservation – Implementing performance-based water conservation programs to encourage the most efficient and cost-effective use of EBMUD's water resources.

System Integrity – Funding Delta levee maintenance and upgrade projects in partnership with local reclamation districts to improve the security of EBMUD's Mokelumne Aqueducts at several river crossings in the Delta.

Drinking Water Quality Protection – Joining with the U.S. EPA and community organizations in the *Partnership for Safe Water* program to improve monitoring and improve treatment efficiency in order to control the presence of protozoa such as *Cryptosporidium* in drinking water.

EBMUD's Contributions to CALFED

Each of the six elements of EBMUD's comprehensive integrated water supply program contributes to the CALFED solution. Implementation of EBMUD's fishery management plan for the lower Mokelumne River has yielded a consistent increase in the number of fall-run chinook salmon spawners, which contribute to CALFED's Ecosystem Restoration Program goals. Through increased instream flows, EBMUD also provides additional Delta inflow at no cost to the State Water Project or Central Valley Project export interests. These flows have been acknowledged through the Mokelumne River Memorandum of Understanding (MOU) to represent EBMUD's reasonable contribution to Delta water needs. Reduction in customer demand through its existing and proposed water conservation and reclamation programs will continue to reduce EBMUD's demand for water. Additionally, EBMUD's 25% mandatory customer rationing policy during drought further reduces EBMUD's water supply needs and thus overall demand on the CALFED Bay-Delta solution. The American River project would augment EBMUD's supply to further the above objectives. This project also provides significant potential for collateral benefits to other CALFED stakeholders and potential development of conjunctive use storage that would provide overall net benefits to CALFED's objectives.

EBMUD's American River Project can be viewed as a demonstration project for CALFED because it reflects the same objectives and solution principles that CALFED has used in designing and implementing its planning process. EBMUD's success in implementing the American River project will demonstrate the feasibility and viability of complex institutional and assurance mechanisms that are required to meet multi-party regional water supply needs while protecting natural resources.

The implementation of the American River Project and EBMUD's Water Supply Management Program helps resolve several CALFED water resource management issues. Specifically, EBMUD's integrated resource program:

- ▶ Creates opportunities to satisfy the regional water supply needs of several communities in the CALFED solution and problem areas through a convergence of interests;
- ▶ Offers significant potential to develop conjunctive use storage through wet year banking, transfers and exchanges;
- ▶ Avoids shifting significant negative impacts within the Bay-Delta to other regions or resources of California, a key CALFED criterion;

Mr. Lester Snow
June 30, 1998
Page 5

- ▶ Integrates partnership opportunities with water user and environmental interests to protect the aquatic resources in the Mokelumne River and assist in meeting CALFED's Ecosystem Restoration Program Plan goals for the Mokelumne River;
- ▶ Expands aggressive water conservation and recycling programs to reduce water demands in the Bay-Delta system -- 34 MGD from conservation and 14.2 MGD from reclamation, projected within EBMUD's service area through 2020;
- ▶ Incorporates up to 25% mandatory customer rationing during droughts to further reduce EBMUD's water supply needs and contributes to CALFED's water use efficiency program;
- ▶ Reduces acid mine drainage into the Bay-Delta watershed through EBMUD's partnership with the Corps of Engineers, US Environmental Protection Agency, and local interest to implement the Penn Mine remediation project on the Mokelumne River;
- ▶ Strengthens and maintains Delta levees through a \$42.8 million seismic upgrade for the Mokelumne Aqueducts and \$5.0 million for partnerships with local Reclamation Districts in the Delta.

EBMUD's Comments on the CALFED PEIS/R

EBMUD's specific comments on the CALFED Draft PEIS/R are summarized below and are further expanded upon and described in Attachments A and B of this letter.

1. CALFED needs to revise its analysis to specifically address impacts on eastside tributary fisheries and examine potential mitigation alternatives for any chosen program elements. EBMUD is very concerned about potential impacts on the Mokelumne River fisheries from CALFED actions including:
 - ▶ Joint Point of Diversion and South Delta Improvements, and
 - ▶ CALFED Alternative 2 channel modifications and facilities
2. EBMUD's use of its American River contract supply should be incorporated into the No Action Alternative;
3. Mokelumne River fishery flows in the Existing Conditions case need to be revised to reflect actual operational requirements during the baseline period;

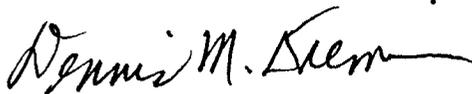
Mr. Lester Snow
June 30, 1998
Page 6

4. Model simulations of Mokelumne River operations need to be revised to accurately reflect actual operational requirements and constraints on the Mokelumne River;
5. CALFED should continue its examination of groundwater banking as a part of a CALFED solution;
6. CALFED must ensure that any actions affecting the levees in the Delta will not have any adverse unmitigated impacts upon EBMUD's Mokelumne Aqueducts or the levees that protect them;
7. EBMUD supports CALFED's development of an aggressive water use efficiency program with realistic quantitative savings goals. CALFED's conservation program should focus on a more results-oriented approach in addition to activity-based programs;
8. In order to achieve the savings identified by CALFED in its No Action Alternative for water reclamation, CALFED will need to assist local agencies in implementing and financing local reclamation projects;
9. CALFED should continue to explore the possibility of a new environmental entity that would be responsible for implementing portions of the CALFED program;
10. CALFED should continue development of a viable regulated transfer and exchange market. CALFED must work closely with stakeholders in developing such a market that minimizes potential adverse impacts to the affected parties;
11. Any alternative program identified by CALFED must address the needs of urban water suppliers to provide the highest quality water reasonably achievable; and
12. CALFED needs to assist stakeholders in reaching agreement on the specific issues related to cost allocation in a broadly-acceptable financing strategy.

Mr. Lester Snow
June 30, 1998
Page 7

EBMUD appreciates the opportunity to participate and provide input to CALFED in the development of a draft preferred alternative. We look forward to assisting CALFED develop viable programs that address all the interests in the Bay-Delta watershed. Please contact Randy Kanouse at (916) 443-6948 if we can be of assistance.

Very truly yours,



Dennis M. Diemer
General Manager

Attachments

DMD:LLT:NMS

W:\A.ena\EBMUD CALFED PEIS Comment Letter ReDraft

cc: EBMUD Board of Directors
Roger Patterson, USBR
CUWA

ATTACHMENT A

SPECIFIC ISSUE COMMENTS

1. Need to Specifically Address Impacts on Eastside Tributary Fisheries

EBMUD is extremely concerned that, with minor exceptions, the CALFED PEIS/R largely ignores the environmental impacts of the alternatives on Eastside tributaries and fall-run chinook salmon. The only reference to Eastside tributary streams is where the PEIS/R stated that the screened diversion at Hood would result in straying of adult salmon into the Mokelumne River which could affect the genetic integrity of the Mokelumne River populations (page 7.1-34). The column on listed or proposed species does not include fall-run chinook salmon. As you are well aware, NMFS has proposed listing Central Valley fall-run chinook as threatened. In order to keep them from being listed, the CALFED PEIS/R needs to present an alternative that clearly shows there is not a significant impact on this species.

CALFED must specifically address the impacts on the anadromous fishery resources of the Eastside tributaries (this would include fall-run chinook from the Mokelumne, Cosumnes, and Calaveras Rivers and winter-run from the Calaveras River) in the evaluation of alternative programs and individual program components. Because of the location of the Eastside tributaries relative to the major features of the CALFED alternatives, the effects of diversions on these populations cannot be represented by the effects on San Joaquin salmon stocks.

In order to address the needs of the Eastside tributary salmon stocks, CALFED Alternatives 1 and 2 need to examine potential mitigation alternatives for inclusion in each alternative. District consultants radio tracking juvenile salmon in the south fork Mokelumne River observed strong currents through Little Potato Slough just south of Terminous. These strong currents would sweep Mokelumne origin salmon towards the south Delta where they would be more susceptible to loss. EBMUD believes that it is important for CALFED to investigate opportunities for mitigation of the expected impacts on Mokelumne River fisheries and is willing to assist CALFED in this examination.

▶ *Joint Point of Diversion and South Delta Improvements*

EBMUD urges CALFED to analyze the impacts on fall-run chinook salmon adults, juveniles, and yearlings migrating to and from the Mokelumne River associated with the operations of the proposed Joint Point of Diversion and the South Delta Improvements structural changes. CALFED's Final Draft PEIS/EIR needs to present an assessment of the potential impacts or offer an adaptive management strategy to monitor and assess the impacts over time. In order to develop a scientifically sound analysis, EBMUD encourages USFWS to develop a separate salmon smolt survival model or index for fall-run chinook salmon on the Mokelumne River.

EBMUD has invested substantial resources developing and implementing a successful fisheries management plan for building chinook salmon stocks on the Mokelumne River. EBMUD's ecosystem plan for the Lower Mokelumne River provides the habitat necessary for long-term sustainability of the natural run of fall-run chinook salmon and relies on the production of both salmon smolts and yearlings from the Mokelumne River Fish Hatchery to accomplish the goal of building and maintaining a sustainable Mokelumne River population abundance.

The yearling salmon migrate downstream from the Mokelumne River and into the Delta during the late fall and winter. Fall is also the season when the returning adult salmon migrate through the Delta and into the Mokelumne River. EBMUD's understanding of the projected operation of Joint Point is that it will be used to balance water supply needs south of the Delta by providing the ability to flexibly operate the system more effectively during the periods of the year when the susceptibility of most aquatic species to adverse diversion-related effects is reduced, primarily during the fall. The trade-off is that while providing improved conditions for a broad range of species within the Delta, this effort to balance resource protection with export water supply needs may adversely impact fishery population abundance in tributaries to the Delta.

EBMUD's concern is that the state and federal project operational changes associated with increased pumping capacity for south of Delta exports (associated with South Delta Improvements) and the shifting of the pumping window into the fall to make up for earlier export constraints (associated with Joint Point), have the potential to adversely impact the survival of Mokelumne River yearling salmon and to increase straying of and/or delay of returning adult salmon. High volume flows of Sacramento River water through the Delta, via the Delta Cross Channel or any new through Delta conveyance channel, during the fall months can influence or obscure olfactory and hydrologic cues utilized during upstream migration. Flows from the Mokelumne River during the fall would likely be dwarfed by the magnitude of flow through the Delta towards the export pumps. This can contribute to low adult attraction to the Mokelumne River and impede the ability of Mokelumne River stock to effectively locate the Mokelumne River and to do so in a timely manner. Increased project pumping will alter flow patterns within the Delta thereby causing redirection, delay, and lower survival of yearlings migrating from the Mokelumne River, primarily through increased predation. The effects of adult salmon straying away from the Mokelumne River, combined with the impacts of increased pumping on outmigrating juveniles or yearlings, can be a significant impediment to achieving fishery management goals established for improving salmon population abundance on the Mokelumne River.

EBMUD understands that the Delta is a complex system and that trade-offs may be a necessary consequence of a multi-species ecosystem protection plan. However, the impacts of increased Delta exports on Mokelumne River salmon populations must be considered and the resulting trade-off recognized by the Resource Agencies. The extent of the impact should be identified and monitored and the resulting trade-off should be specifically identified as a known consequence of giving preference to management strategies intended to improve other resource conditions within the Delta.

▶ ***CALFED Alternative 2 (Through-Delta)***

Three of the components included in Alternative 2 raise significant concerns with regard to the potential adverse impact on the Mokelumne River anadromous fisheries. CALFED's Final Draft PEIS/EIR needs to fully assess or disclose the potential impacts on Mokelumne River fisheries for each of the alternatives and options. EBMUD is very concerned that the operation of the screened intake at Hood, the isolated canal from Hood to the Mokelumne and Cosumnes rivers, and the enlargement of the south fork of the Mokelumne River (from the confluence of the south and north forks on the Mokelumne River to Terminus on the southfork) will negatively impact all life stages of the fall-run chinook salmon that currently utilize that corridor for migration into the Cosumnes and Mokelumne Rivers.

Changes in interior Delta hydrology associated with operation of the SWP/CVP diversions, in combination with the diversion at Hood, will likely increase the potential for indirect mortality of Mokelumne River chinook. These effects include attraction towards the SWP/CVP pumps, delays in outmigration and immigration, increased residence time in the Central and South Delta, and increase in susceptibility to predation. The isolated canal from Hood to the Mokelumne may also serve as an area of predator accumulation.

The use of the lower South Fork Mokelumne River as a conveyance channel for water diverted from the Sacramento River at Hood may adversely affect the survival of juvenile chinook salmon and steelhead emigrating from the lower Mokelumne River. Expansion of habitat within this area of the Delta may also increase areas for predatory fish that prey on juvenile salmon. In addition, EBMUD is concerned about the potential impact associated with conveyance of a large amount of Sacramento River water into the south fork of the Mokelumne River on adult fish migration and/or straying by adult fish returning to the Mokelumne River.

2. Need to Include EBMUD's Use of American River Contract Supply in the No Action Alternative

EBMUD continues to believe that the development of the CALFED No Action Alternative is flawed because it fails to include full delivery of its American River entitlement to EBMUD as provided under its existing contract with the U. S. Bureau of Reclamation (USBR), consistent with the decision in *Environmental Defense Fund, Inc., et al v. EBMUD (Superior Court Alameda County, 1990 No. 425955)*. In his ruling, Judge Hodge confirmed the District's right to take delivery of 150,000 acre-feet from the Folsom South Canal subject to instream flow requirements in the American River which must be met as a condition of diversion. EBMUD's Folsom South Canal Connection Project is scheduled for completion in the year 2001. Given its schedule for completion of this project and the fact that EBMUD has an existing contract with the USBR and has paid more than \$8 million to date to preserve its entitlement pursuant to the contract, it is appropriate for our demands to be included in the CALFED PEIS/R No Action

Alternative. EBMUD is committed to using its American River water contract supply in the near term.

3. Need to Accurately Reflect Mokelumne Fishery Flows in Existing Conditions

The flows used under "existing conditions" must be those which existed during the baseline period. Accordingly, the appropriate instream flow for use in CALFED's Existing Condition analysis must be the flows included in the 1961 Agreement between California Department of Fish and Game and EBMUD. This agreement was incorporated by reference into EBMUD's 1981 FERC license. The 1961 Agreement was, and continues to be, the only mandated standard for which EBMUD is responsible. No other flows are required of EBMUD at this time. EBMUD voluntarily began releasing flows identified in its Lower Mokelumne River Management Plan (LMRMP) in 1993. In FERC proceeding 2916-004 on the lower Mokelumne River, a Joint Settlement Agreement has been reached which contains proposed new requirements for EBMUD releases to the lower Mokelumne River which are consistent with EBMUD's LMRMP. The Joint Settlement Agreement was executed in March 1998 and has been submitted to FERC for action. While it is EBMUD's expectation that those settlement flows will ultimately be approved by FERC, FERC has not yet taken final action on those flows. In 1996, EBMUD voluntarily increased the Mokelumne River instream flows in accordance with the Joint Settlement Agreement reached with the Resource Agencies. Thus, it is inaccurate for the Draft PEIS/R to assert those proposed flows are in effect as the current release requirements. Clearly, use of anything other than the 1961 Agreement flows for modeling "existing condition" would result in a flawed analysis.

EBMUD has raised this issue a number of times throughout the development of the CALFED EIS/R. In its Draft Operation Modeling Plan of August 21, 1997, CALFED noted that, for the 1995 Existing Conditions study, the affected environment assumptions and modeling assumptions used for instream flow requirements on the Mokelumne River should be revised to reflect the minimum fishery flow requirements as they existed prior to the Mokelumne Partnership Agreement. This would mean the modeling assumptions would be based on the 1961 Agreement. Our analysis of the input data for the 1995 Existing Condition study shows that in fact, this change has not been performed. In conversations with CALFED staff, it was explained that while it continues to be CALFED's policy position that the Existing Condition case should reflect the 1961 Agreement for the Mokelumne River, CALFED has abandoned its plans to revise the modeling input data to reflect those requirements and that policy position. One of the justifications given by CALFED staff for this position is that the resulting differences in the numerical values predicted by the modeling studies would be generally small. EBMUD disagrees with this justification for allowing invalid data to be utilized in the Existing Condition case and believes that this error will invalidate any resulting impact analyses that utilize this information.

4. Need to Accurately Model Mokelumne Operations

EBMUD is concerned that the hydrology and operations of the Mokelumne River are not directly simulated by the CALFED modeling studies. The CALFED studies combine the Mokelumne River flows with those of the Calaveras and Cosumnes Rivers to form the Eastside Tributaries modeling input. This makes it impossible for EBMUD to identify the assumptions used in the CALFED studies with respect to the District's operations of the Mokelumne River. EBMUD has provided data to CALFED which offers an accurate and verified simulation of Mokelumne River flows into the Delta. We urge CALFED to replace the input data used in its modeling studies with that provided by EBMUD.

With the exception of the 10-day flow events on the various streams tributary to the San Francisco-San Joaquin Bay-Delta, the ERPP contains few actions or programs with enough specificity to be evaluated using simulation modeling studies. Specifically, it is our understanding that the minimum instream flow targets proposed in the ERPP for the Mokelumne River have not been accurately modeled by CALFED. Given the lack of specificity with the ERPP actions, EBMUD is concerned about the accuracy of the identification and quantification of impacts resulting from the implementation of the ERPP on the EBMUD Mokelumne River operations. EBMUD supports the goals of the ERPP, however, we are greatly concerned that without adequate information about the impacts associated with implementation of the ERPP actions that there can not be a credible decision making process. In order to make a sound resource management decision, the costs, benefits, and impacts of all actions must be clearly understood and evaluated.

5. Importance of Local Partnerships in Groundwater Management

EBMUD encourages CALFED to continue to examine the potential for groundwater banking projects to generate water supply benefits for local water users, dry year yield for others, and to increase environmental flows for fishery requirements. Specifically, EBMUD supports continued examination of groundwater banking projects located in southern Sacramento County and in areas east of the Delta including the Mokelumne, Calaveras, Stanislaus, and Farmington basins. Groundwater projects in these areas must be developed in partnership with local interests, however, State, federal or regional partnerships are possible, provided that local protections are assured.

6. Meeting Corps of Engineer Standards in Levee Upgrades

EBMUD's WSMP, which was adopted by the Board of Directors in October 1993, includes an aggressive program to secure from seismic risk our Mokelumne Aqueducts which cross the Delta. The EBMUD Board of Directors approved a project-specific mitigated negative declaration for the project in May 1996. Construction of the seismic upgrades will be completed between now and mid-1999. The three Mokelumne Aqueducts are the primary conveyance for delivering water to EBMUD's 1.2 million customers. The seismic risks to the drinking water supplies of these 1.2 million

customers are sufficiently urgent that our aqueduct security program must be implemented now.

EBMUD expects that implementation of any future projects (by CALFED or others) affecting those levees over which our aqueducts traverse would completely mitigate any adverse impacts upon those levees and EBMUD's aqueducts. Implementation of any project must also ensure that there are no increases in the seismic or flooding risks to our facilities and drinking water supplies or new costs to our customers. Substantial costs are implicated if new or improved channel crossings are required to protect the Aqueducts.

EBMUD is actively working with local reclamation districts through the Department of Water Resources to improve the levees in these districts. EBMUD is helping to evaluate the integrity of levees that protect islands or tracts where the Mokelumne Aqueducts are located. The preliminary results of this evaluation indicate that almost all of the 50 miles of levees necessary to protect the Mokelumne Aqueducts do not meet Public Law 84-99 Corps of Engineers standards. Any CALFED levee mitigation or system integrity program should meet Corps standards to lessen risks to the Mokelumne Aqueducts and other facilities.

7. Rational Basis for Water Conservation Goals

EBMUD generally supports the approach taken by CALFED in the Urban Water Conservation chapter of the Water Use Efficiency component in the EIS/R. We agree that urban conservation in the CALFED program should be based on the "Memorandum of Understanding Regarding Urban Water Conservation in California" (MOU), as revised and amended through 1997. This MOU is based, in part, on the principle that a given BMP should be implemented if it is cost-effective and technically feasible. EBMUD has also undertaken a number of water conservation activities in addition to those required by the MOU, and the District's program is recognized nationally as a model of progressive, performance-based practices.

However, there are several basic assumptions that are cause for concern. First, the No Action Alternative (NAA) assumes complete implementation of the BMPs statewide. There is no apparent provision for a less than 100% coverage resulting from cost-effectiveness exemptions or agency noncompliance. Further, the question of which agencies will be compelled to comply with the MOU has not been settled. Many stakeholders believe that only agencies that have a direct hydrologic tie to the Bay-Delta should be subject to these requirements.

Most of the Water Conservation chapter of the draft EIS/R is taken up with quantitative projections of statewide savings that CALFED anticipates under the NAA and CALFED program. However, no explanation is given for how these numbers were generated, and they seem to be based in large part on the professional judgment of staff. Despite the disclaimers that we have heard from CALFED that these projections will not be used as targets, we remain concerned about their possible future use as performance criteria. In fact, EBMUD favors a more results-oriented approach to conservation, and our own

integrated resources plan has specified savings goals. Any such targets must be very carefully developed and justified on the basis of rigorous analysis. We recommend that CALFED not include such quantitative goals in the final EIS/R, even if they are intended for informational use only.

The EIS/R also seems to follow the lead of DWR's draft Bulletin 160-98 by undervaluing water savings in inland areas. This is based on the assumption that virtually all inland water use is non-consumptive because of return flows. In addition to the losses that occur from transpiration and evaporation (which should be measured separately), significant impacts such as entrainment, water quality degradation, reduced flows and disrupted flow-timing result from these diversions. It is puzzling that significant impacts such as these would not be included in this chapter, given that CALFED's mission is to develop a fully integrated plan for the Bay-Delta.

Closely related to this analytic flaw is the devaluing of agricultural water conservation. Agriculture consumes almost 80% of the developed water in the state, but again, CALFED seems to have adopted the assumptions contained in the draft Bulletin 160-98. Huge benefits could be gained from even modest requirements or standards imposed upon agricultural users. Stronger incentives for irrigation efficiency could yield dramatic results from decreased water use and evaporation. However, while urban agencies have agreed to major water conservation and reclamation investments and other commitments, CALFED has accepted more modest progress in the agricultural sector by accepting the unambitious provisions of AB 3616 as the cornerstone of agricultural conservation.

8. Need for Realistic Projected Demand Savings from Water Recycling

Our principal concern with this chapter is that the projections for both the NAA and the CALFED program alternative may be overly optimistic. In particular, the assumption that recycling will increase from 500,000 AF to 1.4 MAF in the NAA is presented with confidence that we do not necessarily share. We believe that CALFED will have to be actively involved in promoting and financially supporting water recycling to arrive even at the NAA projection.

9. Importance of New Entity in Implementing the ERPP

EBMUD is working closely with CUWA on this issue. We are supportive of CUWA's efforts to explore the possibility of a new environmental entity responsible for implementing portions of the CALFED program.

10. Importance of a Regulated Water Transfers and Exchanges Market

EBMUD believes that voluntary water transfers and exchanges are an increasingly important component of water management in California for many water agencies. We recognize that the development of regulations with clear standards and criteria by both state and Federal agencies is essential in order to have a successful water transfer market that operates without harming the natural environment or causing undue third party

impacts. As part of the development of an expanded water transfer market, CALFED must affirmatively protect the water rights of both the transferring agency and other downstream entities as well as address the concerns of the areas of origin. Additionally, in evaluating the ability of transfers to meet future water supplies needs for large urban areas, CALFED must recognize the complexity of implementing a water transfer agreement and operational, fishery protection and water quality constraints of an agency.

In addition to transfers, EBMUD encourages CALFED to support water exchanges as another means of water management in California. While transfers generally involve the sale of water with no expectation that any water will be returned to the seller at a later date, water exchanges involve "water trading" whereby two or more parties exchange their respective water supplies for their mutual benefits by improving either timing or location of deliveries. Exchanges can include banking of water for later withdrawal, "loans" of water with future repayment or simultaneous (same year) changes in delivery locations. Processes to facilitate water exchanges should be part of the CALFED package.

11. Maintaining High Quality Drinking Water

Public water agencies have a unique public trust responsibility to provide the highest quality of water reasonably achievable. This approach to public health protection is one that is balanced by combining source selection to enhance water quality, effective treatment technology, and source protection to preserve water quality.

California drinking water quality laws and regulations set a tougher standard than federal law. The trend over the past decade has been for every utility to strive to serve the highest possible quality of water. Any alternative program identified by CALFED must address the needs of urban water suppliers to provide the highest quality of water reasonably achievable and to meet increasingly stringent drinking water standards set by the EPA and California Department of Health Services.

The Water Quality Program Actions identified in CALFED's Water Quality Program Plan were established using a process that involved substantial input and review by technical experts representing various stakeholder groups (the Water Quality Technical Group "WQTG"). The twenty-five Actions identified by the WQTG in the draft PEIS/R almost exclusively (with the exception of the one Action addressing toxicity of unknown origin) focus on and were developed for implementation in the Delta and its tributaries. EBMUD commends CALFED for this process to develop Water Quality Actions for the Delta and its tributaries. Before any similar actions are implemented for the San Francisco Bay waters, however, their applicability must be thoroughly evaluated using the same process for developing the original Actions.

Biological measures that include toxicity tests, Toxicity Identification Evaluations and ecological indices provide more direct quantification and prediction of environmental impairment than do chemical concentrations. For Water Quality Actions aimed at reducing impairment of environmental beneficial uses, biological measures should be

given preference over chemical measures as “Indicators of Success”, “Performance Measures” and “Monitoring”.

12. Financing Strategy

EBMUD finds the overall concepts discussed in the “Financing” section of the “Implementation Strategy” Technical Appendix of CALFED’s draft Programmatic EIS/EIR to be generally acceptable. The current lack of detail, however, makes it difficult to assess potential impacts and to make specific and meaningful suggestions for improvement. Therefore, our comments below identify principles that EBMUD believes CALFED should specifically address in the Final EIR/S. EBMUD encourages CALFED to continue to explore diligently and reach agreement on certain issues that are key to developing a broadly-acceptable financing strategy, including:

- **Baseline issue:** the financial baseline and ecosystem baseline issues are inextricably intertwined. It is unlikely that a realistic financing strategy can be developed until an ecosystem baseline is established and the stakeholders know what will be considered mitigation and what will be viewed as enhancement. As part of the evaluation of the baseline issue, CALFED should also continue to examine the issues associated with a long-term crediting policy.
- **Benefits-based allocation principle:** CALFED needs to continue to refine its approach in having the beneficiaries of the CALFED Solution pay for those benefits, rather than the punitive approach of seeking payment from those who, over time historically, caused problems in the Bay-Delta system. The concept of benefits should be sufficiently broad to identify different levels of benefit that users will enjoy. To determine the value of benefits resulting from mitigation and/or enhancement paid for, the following detail should be provided:
 1. What is mitigation?
 2. What is enhancement?
 3. Who pays for what?
 4. What benefit(s) is (are) there for payment?
- **Bay-Delta watershed users fee:** CALFED rightly identifies that substantive questions remain around the issue of a possible Bay-Delta watershed user fee. The BDAC Finance Work Group has discussed the proposed Bay-Delta watershed user fee and a list of potential parameters that such a fee might take into consideration. The potential parameters identified to date include: geographic coverage, type of water; type of use, place of use, time of use (season, year type, etc.), and discharge or return flow (place, quantity, quality of return flow). Provision of specific detail concerning a possible Bay-Delta watershed user fee is critically important in order for an entity to make a fair and rational assessment of such a fee.

EBMUD is the only specific agency referenced on page 18 of the “User Benefits” section of the *Implementation Strategy Technical Appendix*: “This fee would include upper

watershed users including San Francisco, East Bay MUD, Sacramento Valley and San Joaquin Valley, as well as in-Delta diverters.” CALFED should make geographic references to beneficiaries of the Bay-Delta program instead of identifying specific water users which would be subject to some sort of watershed fee, or, alternatively, list them all without exception.

ATTACHMENT B

DOCUMENT-SPECIFIC COMMENTS

No Action Alternative

No Action Alternative Volume, p. 15, Instream Flow Requirements: The appropriate assumptions for instream flows are critical. The PEIS/R states that these assumptions are under development. These assumptions must be made available for public review and comment at the earliest possible time to ensure that any analysis performed receives public acceptance. This is particularly necessary for the American River, which has a substantial number of water entitlements which are not currently fully developed.

No Action Alternative Volume, Appendix B, p. B-42: The correct name for this project is the Supplemental Water Supply Project (EBMUD). The comment period for EBMUD's Draft PEIS/R closed on March 19, 1998 and EBMUD expects to publish a final EIS/R this summer for certification.

Ecosystem Restoration Program Plan (ERPP)

EBMUD believes that shallow water rearing habitat in the Delta is going to be a critical issue, given one of the major components of the ERP is to provide a winter pulse flow event. Because of the magnitude of this pulse flow event, we believe that salmon fry will be flushed out of upstream tributary rearing areas and forced to rear in downstream habitat within the Delta. Given the channelized nature of the existing Delta, shallow water rearing habitat created under other programs and the ERP will have a major benefit on the survival of juvenile salmon. These juvenile salmon can be expected to utilize shallow water rearing habitat located along major migratory pathways. The CALFED program needs to insure that this type of habitat is strategically located along major migratory pathways such as the widening and shallowing of the north fork of the Mokelumne River and the widening of Cache Slough from the Sacramento River to the southern end of Prospect Island.

Volume II of the Ecosystem Restoration Program Plan (ERPP) states the ERPP is not designed as mitigation for projects to improve water supply reliability because the program is co-equal to the other CalFed programs for water supply reliability, water quality, and levee system integrity. If this statement is true, the CALFED ERPP will take away the vast majority of the habitat restoration options that are available to mitigate for project operations or conveyance alternatives. The ERPP would, therefore, make it almost impossible to mitigate for future projects since most of the feasible restoration projects will have already been considered as part of the ERPP. Since the ERPP is establishing a new environmental baseline, it will also be difficult, if not impossible, to gauge the performance of any new mitigation project in terms of its specific benefits or impacts to the Bay-Delta ecosystem.

CALFED has stated that the ERPP will be an important component in the recovery measures for listed species under the state and Federal ESAs. However, instead of being just a component of the recovery measures, the restoration actions identified in the ERPP appear to be sufficient to satisfy all of the requirements for the recovery plans for any of the listed or candidate species.

Important references are still missing in the ERPP. For example, the ERPP does not reference the substantial fisheries investigations that have been conducted on the lower American River under the jurisdiction of Judge Hodge in the EDF v. EBMUD litigation. The latest information on the abundance of native species such as Sacramento splittail (candidate species) is also missing.

The ERPP is inconsistent in the treatment of restoring natural ecosystem conditions. For example, most targets in the ERPP are related to some natural process except for instream flows below Central Valley dams. The ERPP recommends instream flows that exceed natural unimpaired flows in many cases. This is due to the lack of hydrologic modeling by CALFED. Moreover, the ERPP does not justify the instream flows that have been recommended. Throughout the ERPP, the flow targets include pulse flows, provided that inflows to upstream storage reservoirs are sufficient. No justification is provided to substantiate any need for a pulse flow event. The criteria to determine if inflows are sufficient (see p. 301) must be clearly stated for each river system, and the benefits and impacts associated with these pulse flows must be identified.

The ERPP has targets to develop harvest management strategies that will fully utilize the restored and existing habitat to achieve natural spawning salmon and steelhead run sizes to achieve cohort replacement rates greater than or equal to one. In addition, the ERPP suggests the development of harvest management plans for American River chinook and steelhead in order to meet target escapement and production goals. The National Marine Fisheries Service in its proposal for restoring Essential Fish Habitat uses the number of carcasses to sustain riverine ecosystems as the target instead of cohort replacement rates. NMFS is undertaking this approach in order to manage resources on an ecosystem level instead of on a species-specific level as implied by the ERPP targets. Cohort replacement rates should be utilized by the Federal and state resource agencies and the methodology used must be consistent. Carcass surveys have been found to grossly underestimate escapement.

The ERPP Volume 2 contains language on the speculated threat of hatchery reared fish "contaminating" wild stocks of chinook salmon and steelhead. This statement is not supported by the available scientific literature. In fact, there is little information upon which to evaluate the genetic impacts of Central Valley salmon programs on naturally spawning populations. An alternative hypothesis is noted on page 345 of Volume 1 of the ERPP:

"...the great genetic similarity among all Central Valley chinook populations makes it difficult to detect genetic impacts from hatchery releases. An alternative hypothesis that cannot be disproved with present data is that Central Valley

hatchery stocks have diverged little from their wild ancestors, in which case the near term genetic impacts of hatchery programs might be minimal.”

Given the scientific uncertainty over the genetic effects (in any) of hatchery fish on naturally-spawning chinook salmon, CALFED must refrain from using language that is derogatory of hatchery programs or hatchery fish in general.

The ERPP includes focused habitat restoration actions on introduced and native species. Only native species should have focused actions. Special attention needs to be focused upon actions to rebuild populations of spring- and fall-run chinook salmon to prevent them from being listed. In the March 9, 1998 Federal Register Notice (50 CFR Parts 222, 226, and 227), NMFS proposed threatened status for Central Valley fall-run chinook salmon and endangered status for Central Valley spring-run chinook salmon. In reference to the CALFED Bay Delta program, NMFS says:

“The degree to which these conservation efforts provide reliable, measurable and predictable reductions in the identified factors for decline, may provide NMFS with direct and substantial information pertinent to making final listing determinations for Central Valley chinook stocks.”

Because of the current NMFS listing proposal, it is imperative that the ERPP refocus the attention now aimed at restoring habitat for introduced species to restoring habitat for fall-run chinook salmon or other native species.

Volume 1 of the ERPP states that targets must be based upon realistic expectations. The language states:

“Targets are to be set based upon realistic expectations, must be balanced against other resource needs and must be reasonable, affordable, cost effective, and practicably achievable.”

Many of the targets in the ERPP fail to meet these basic criteria and must be revised. Some examples are provided in the specific comments to follow.

Vol. 1, p. 27: It is stated that a general target for streams with major impoundments is to provide a spring flow event. The programmatic action calls for passing a portion of the natural inflow through reservoirs in order to provide for a spring (March - May) event. The ERPP recommends providing these spring pulse flows even if summer storage releases have to be decreased. Because of the pending listing of Central Valley fall-run chinook salmon, the highest priority must be to preserve over-summer reservoir carryover storage and adequate cold hypolimnetic release water volumes to provide suitable river conditions for fall-run chinook salmon upstream migration and for oversummering anadromous juvenile rearing and development. In addition, spring pulse flows may create substantial impacts through premature outmigration and elevated losses due to predation. In addition, the reservoirs in question have significant public trust values that cannot be impacted. These impacts have not been addressed in the draft EIS/R.

Vol. 1, p. 47: It is stated that the growth of young salmon and steelhead is generally optimal in the 50 to 60° F. range. This temperature range is too low for optimal salmon and steelhead rearing in Central Valley streams. A more suitable temperature range would be from 54 to 61° F.

Vol. 1, p. 53: The last paragraph suggests that tradeoffs between carryover storage and increased releases for temperature control can be best made by an adaptive management team. Even under an adaptive management program, no decisions should be made without: 1) extensive temperature modeling using readily available tools such as SNTMP (Stream Network Temperature Model) and WQRRS (Water Quality for River Reservoir Systems); 2) verifying this modeling work on a river-to-river basis considering basin hydrologic variations; 3) all upstream impoundment operations must be known and alternative release depths for sluicing and/or power generation must be available along with routine reservoir profiles in order to adaptively make these decisions, and 4) the adaptive management team must be made up of in-house experts from the agency responsible for the respective reservoir(s) (i.e., the responsible agency makes the decisions as it is ultimately responsible for meeting all resource utilization objectives).

Vol. 1, p. 149: The section on resource description of chinook salmon needs to be updated and should reference the NMFS proposal to list Central Valley spring- and fall-run chinook salmon. The draft states: "The NMFS is reviewing the status of the other Central Valley chinook salmon runs (other than winter run) and is considering the potential needs for additional listings under the ESA." This statement is now out-of-date. Given the importance of the CALFED ERPP to the final listing decision, the ERPP must clearly include the elements for a chinook salmon recovery plan that will preclude the need for listing Central Valley spring- and fall-run chinook salmon.

Vol. 1, p. 152: In the integration with other restoration programs discussion, the NMFS Essential Fish Habitat program must be added to the list of restoration programs, and the potential impacts of this program for covered species and their habitats needs to be described in the document.

Vol. 1, p. 341: It is stated that adult steelhead harvest should be directed to steelhead produced in the Coleman National Fish Hatchery, Feather River Hatchery, Nimbus Hatchery, and Mokelumne Hatchery. This vision of steelhead harvest must consider the fact that both the Coleman and Feather River Hatchery steelhead are part of the Central Valley ESU, whereas, the Nimbus and Mokelumne hatcheries' steelhead were not included. While none of the Central Valley hatchery steelhead populations has been listed by NMFS, more information is needed before a statement on the harvest policy on Central Valley steelhead can be made.

Vol. 2, p. 17: The fifth paragraph states that the Delta's Sacramento splittail population declined during the drought. This statement needs to be updated with the latest Sacramento splittail trends of abundance.

Vol. 2, p. 18: The first paragraph states that artificial rearing or supplementation of striped bass may be necessary to sustain the population under the present conditions. While that need may be true, striped bass are an introduced species to the Bay-Delta and have been documented to be significant predators on native fish species. Therefore, augmented production of striped bass must not be included in the ERPP.

Vol. 2, p. 39: Under the discussion of Central Valley Streamflows, a statement is made that implies that streamflows will maintain the entrapment zone and natural salinity gradient and will support striped bass spawning habitat. This target is vague and too broad in its potential application. Where is the entrapment zone to be located and can it be maintained by streamflow given that Volume 1 of the ERPP states that targets are to be set based upon "realistic expectations and balanced against other resource needs?" The location of the entrapment zone varied under historic natural Delta hydraulic conditions and attempting to maintain it in one location is unnecessary. In addition, the natural ebb and flood of the tides would make this virtually impossible.

Vol. 2, p. 39: In the discussion of Programmatic Action 1A, March outflows are prescribed for a number of Central Valley streams including the American River. The timing of these flows must be reviewed because of the downriver displacement of juvenile fall-run chinook salmon fry from upstream rearing areas and elevated predation impacts. In addition, the additional March outflows could very well substantially reduce or eliminate the cold hypolimnetic volume in Folsom necessary to provide adequate cold water for the lower American River in the summer and fall.

Vol. 2, p. 41: The rationale presented on this page for supplementing flows in late April and early May is to assist juvenile chinook salmon moving through the Delta and the Bay. Water for the pulse flows would be purchased from willing sellers on a number of tributaries including the Mokelumne River. There is no evidence documenting that pulse flows will accomplish this objective, or that the objective is necessary or beneficial. Factually, pulses would create different impacts than current conditions and these must be carefully assessed on a river-by-river basis. In addition, all water rights holders on the Mokelumne River have definitively stated that such flows are currently not available.

Vol. 2, p. 302: Under the discussion of Programmatic Action 3C for the American River, the third paragraph states that late non-flood control releases during the winter and early spring will be maintained at a level sufficient to attract adult steelhead and American shad during their spawning runs. Flow targets for the American River must not be based on providing attraction flows for the introduced American shad. The water that would be used for these attraction flows must be retained in Folsom and utilized to benefit native species such as fall-run chinook salmon.

Vol. 2, p. 305: Target 1A calls for maintaining a water temperature in the lower American River at or below 60° F beginning as early in October as possible. The target is assigned three diamonds, but should be assigned only one diamond based upon the experimental nature of the programmatic actions listed on page 306.

Vol. 2, p. 311: In the discussion of Artificial Propagation of Fish, there is a target to minimize the threats of hatchery fish contaminating wild stocks of chinook salmon and steelhead on the lower American River, yet under "rationale" on the same page a statement is made that irreversible contamination of the genetic integrity of wild stocks has already occurred. This is conjecture stated as fact and the target should be eliminated.

Vol. 2, p. 311: Programmatic Action 3B calls for a program to coded-wire tag a representative proportion of chinook salmon reared at the Nimbus Hatchery. The program should also call for tagging a portion of the natural in-river fish production.

Vol. 2, p. 312: The target calls for the reduction of herbicides and pesticides on agricultural lands that have the greatest risk to fish and wildlife populations, yet the target is assigned only one diamond. If these pesticide and herbicide applications pose the greatest risks, then the target should be assigned three diamonds.

Vol. 2, p. 313: This page lists the major programs that have been developed to restore chinook salmon populations in the Central Valley. The National Marine Fisheries Service program on Essential Fish Habitat must be added to this list.

Vol. 2, p. 314: Programmatic Action 2A calls for a feasibility analysis of re-introducing steelhead into the American River above Folsom Dam. A paragraph should be added to identify the potential risks from this program since re-introducing steelhead above the dam would create the opportunity for them to interbreed with hatchery rainbow trout that have been used to stock the recreational fisheries in the basin for decades. This re-introduction could also foster an epidemic response in the reservoir above the Nimbus Hatchery, which must be avoided.

Vol. 2, p. 353: Target 4 identifies spring pulse flows for the Mokelumne River. There are no conditional provisions for providing this action such as having sufficient inflows or available reservoir carryover storage and having an adequate cold hypolimnetic volume. Similar provisions were identified in other Central Valley river systems where pulse flows were identified as a programmatic action. In addition, there is no evidence that such a pulse flow would be beneficial or effective and there is evidence to suggest it will create impacts. The evaluation of these impacts must be included in the ERPP or the target should be eliminated.

Vol. 2, p. 352: Programmatic action 2B conflicts with Programmatic Action 1D. Action 2B is to maintain or enhance summer or fall base flows on the Mokelumne River by the development or purchase of new water supplies. Action 1D calls for managing the Pardee and Camanche Reservoirs through October to maintain a coldwater hypolimnetic pool volume of 28,000 acre-feet in Camanche when Pardee Reservoir's total volume exceeds 100,000 acre-feet. Again, there are no conditional provisions for providing this action, there is not an assessment of the impacts associated with augmenting summer or fall instream flows and there is not currently a willing seller within the water-right community.

Vol. 2, p. 364: Target 1 for the Harvest of Fish and Wildlife calls for developing harvest management strategies in order to fully utilize existing and restored habitat. This target needs to be linked with the chinook salmon target for a cohort replacement rate of greater or equal to one (see bottom of page 366).

