NMFS COMMENTS ON
February 16, 1998 Draft
CALFED PHASE II INTERIM REPORT
Prepared by Gary Stern - February 25, 1998

Page vi, Executive Summary: I don't agree that Alternative 2 is the second best performer for fisheries protection. The IDT did not select a second choice.

Page 10, Some Bay-Delta Statistics-Box: Although the title states "Bay-Delta" statistics, I found only one reference to the Bay under "Fish". I suggest this box be titled "Delta Statistics".

Page 12, Interrelationships * Fisheries and Diversions, 2nd sentence: Could add "reduced survival associated with reduced Delta outflows" to the list of diversion impacts.

Page 16, top full paragraph: The discussion of potential impacts from transfers should include export pumping in the Delta: "Increased flows from water transfers may benefit riverine fisheries, but export of this transferred water in the Delta can adversely affect fish in the Delta".

Page 17, Delta Conveyance Modifications, top paragraph: I am not sure that all three decrease the detrimental effects on the ecosystem. Alternative 2 in particular has some serious down sides by diminishing flows in the lower Sacramento River below the point of diversion and presents problems with passing upstream migrant fish at the Sacramento River fish screen.

Page 18, Ecosystem Restoration, 2nd paragraph, 2nd sentence: Minimizing mortality and other adverse effects to fish from Delta pumping will always be an important component of maintaining sustainable fisheries in the Central Valley. This statement could be interpreted as: if fish populations improve through ERP actions, it will be OK to resume higher levels of impact in the Delta from export pumping. This is not the proper message. Fish populations need to be healthy and resilient to withstand adverse conditions that will occur during times of drought, El Nino ocean events, and other natural perturbations. Even well-designed fisheries protection plans will occasionally result in episodes of higher levels of impact. It is inappropriate to present the potential for future relaxation of protective fisheries measures at the Delta pumping plants as a selling point for the ERP.

Page 44, Ecosystem Restoration Program, 4th bullet: see comments above for page 18.

Page 44, Ecosystem Restoration Program, Facts and Figures box, 3rd bullet: This item is more an issue than a fact. Suggest rewording: "ERP alone may not provide for the recovery of listed species; recovery rates of listed species will also be influenced by the selected water storage and conveyance alternative."

Page 47, Potential benefits of water use efficiency program: Suggest additional bullet: "Could make water available for environmental purposes".

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Page 68 and 69, Considerations on Screening: Additional considerations on screening include:

* All life stages of salmon and steelhead that occur in the lower Sacramento River, lower San Joaquin River and Delta can be successfully screened with current state-of-the-art positive barrier fish screen technology. Survival rates at existing state-of-the-art screens for salmon and steelhead, including facilities in the Central Valley, approach 100 percent.

* All fish screen facilities at a tidally-influenced location will require fish collection (salvage) and hauling (trucking) to an off-site, downstream location. Within the 3 CALFED alternatives under consideration, the only non-tidally influenced fish screen facility is the Hood diversion site in alternatives 2 and 3.

Page 69, Considerations on Relocating Intakes and Multiple Intakes, Bullet 2: Bullet 2 regarding the intake on the Sacramento River should be stated more clearly for the lay person. Suggest: "The Sacramento River would provide sufficient bypass flows at the Hood diversion point to keep screened fish moving downstream in the river and eliminate the need for a fish salvage and trucking operation; fish salvage and trucking operations pose an additional source of stress that can result in injury, predation, or mortality."

Page 69, Considerations on Relocating Intakes and Multiple Intakes, Bullet 3: Bullet 3 regarding the intake on the Sacramento River should indicate that operational modifications can minimize the losses of the most vulnerable life stages of some fish species that typically appear in distinct and predictable seasonal patterns on the lower Sacramento River (i.e. striped bass eggs and larvae).

Page 70, Avoidance of Disrupted Delta Flow Patterns, 2nd sentence: Some biologists believe that net flow changes have adversely affected general aquatic productivity in the Delta as well as fish species.

Page 74, Operating Criteria, 4th paragraph, 3rd sentence: The CALFED agencies suggested a relaxation in Delta outflow requirements might be feasible under alternatives 2 and 3 if the primary purpose of X2 is "anti-entrainment" for fish species. Many biologists with CALFED agencies expressed their belief that X2 may function in part as an anti-entrainment measure, but it was developed and serves as a measure to protect general estuarine health and productivity. The CALFED schedule did not allow for a full evaluation of this issue prior to the release of the draft environmental documents. Workshops to address this issue are scheduled for the near future. If there is consensus among the biologists and other technical staff that X2 serves a broader purpose than anti-entrainment of fish, the CALFED agencies may set aside this outflow relaxation alternative.

Page 77, Operating Criteria, top paragraph: I believe that modeling results indicated some reverse flow conditions remained even under the more protective E-I ratios. This should be presented in the discussion of the "more protective E-I ratios".

Page 82, Operating Criteria, sensitivity analysis: See comments above for page 74.

Page 88, Fish Protection and Flow Control Barriers, 2nd sentence: Suggest this sentence be modified as follows: "Whether these barriers will prove necessary depends on how much and when export pumping is continued in the south Delta".

Page 88, Operating Criteria, last bullet: The IDT initially proposed a minimum flow requirement for the Sacramento River at Rio Vista for additional months in the year, but this criteria was not modeled. It should be noted in this report that the IDT believed a minimum flow requirement for Rio Vista is likely to be necessary, but additional information and modeling analysis are needed to set an appropriate value.

Page 89, Operating Criteria, sensitivity analysis: See comments above for page 74.

Page 101, Diversion Effects on Fisheries, Alternative 2: A disadvantage of Alternative 2 is reduced flows in the lower Sacramento River below the point of diversion.

Page 101, Diversion Effects on Fisheries, Alternative 3, 1st sentence: The new fish screens at Hood will not affect the numbers of fish moved into the Central Delta under Alternative 3 unless the Delta Cross channel gates are re-operated.

Page 101, Diversion Effects on Fisheries, Alternative 3: A disadvantage of Alternative 3 is reduced flows in the lower Sacramento River below the point of diversion.

Page 102, Diversion Effects on Fisheries, 2nd paragraph: I believe there are more than minimal differences between the 3 CALFED alternatives for Sacramento River salmon. Under current reverse flow conditions, salmon smolts diverted into the Central Delta survive at a rate only 1/3 to ½ of those remaining in the Sacramento River. However, under Alternative 3 net downstream flow patterns will be restored throughout most of the Delta and survival rates for salmon in the Delta are likely to improve. San Joaquin salmon smolts are likely to benefit significantly from the restoration of net downstream flows in Alternative 3.

Page 102, Diversion Effects on Fisheries, 3rd paragraph: As stated earlier in this section, the fisheries diversion benefits of Alternative 2 would be offset by the risk imposed on upstream fish passage at the Hood fish screen.

Page 104, Delta Flow Circulation, Alternative 2: Won't exports from the south Delta cause some reverse flows to continue under Alternative 2?

Page 116, last paragraph, 1st sentence: Indicates final PEIR/EIS to be issued in Fall 1998? (see comments for pages 122 and 125)

Page 118, Diversion Effects on Fisheries, mid page-2nd bullet: For Alternative 2, fish using the Delta as a spawning and nursery area will not be exposed to the Hood diversion, but will be exposed to the south Delta diversion.

Page 118, Diversion Effects on Fisheries, last full paragraph: The new risk for Sacramento River salmon at the Hood fish screens is minimal, because current state-of-the-art positive barrier fish screens are very effective and survival typically approaches 100 percent.

Pages 118 and 119, Figures: The figures are too small to read.

Page 121, top paragraph, 2nd sentence: See comments for page 102, Diversion Effects on Fisheries, 2nd paragraph.

Page 121, top paragraph, last sentence: I strongly disagree with this statement. State-of-the-art fish screens function very effectively for juvenile salmonids and flows in the Sacramento River below Hood can be addressed through Rio Vista minimum flow requirements. These disadvantages in Alternatives 2 and 3 are minor when compared with the problems (conflicts) that would be expected in Alternative 1. However, Alternative 2 does have the additional disadvantage associated with upstream fish passage at the fish screen facility at Hood.

Page 122, top paragraph, 1st sentence: Indicates final PEIR/EIS to be issued in November 1998? (see comments for pages 116 and 125)

Page 122, 1st bullet under remaining issues: Salmon smolts may also need a flow requirement below Hood.

Page 125, 4th paragraph: Indicates the final PEIR/EIS to be issued at the end of 1998? (see comments for pages 116 and 122)