

Memorandum

To : Mr. Steve Yaeger
Deputy Director
CALFED Bay-Delta Program

Date : June 6, 1997

From : Department of Fish and Game

Subject : Phase II Alternatives Descriptions and Alternatives Appendices

The Department of Fish and Game has reviewed the subject documents and offers the following comments to assist the CALFED Bay-Delta Program in its efforts to define a reasonable range of alternatives to be carried forward for analysis in the Programmatic EIR/EIS. Our comments are provided separately below for each of the documents.

Alternatives Descriptions

General Comments

Following are key points regarding this document:

- We found it difficult at times being able to tell what the common programs really are or what they are composed of. This is particularly true of the Levee System Integrity Program.
- A clearer link needs to be made between subsidence reversal and the ERPP.
- The alternatives to screening in the south Delta are described vaguely as ranging from upgrading existing screens at their current site or new screens at the intake to Clifton Court Forebay. These represent such dramatically different alternatives that additional emphasis is needed to describe the significance of these two approaches in the alternative descriptions.
- The Department believes that there is a desirable alternative configuration for a Dual Delta Conveyance that has benefits and impacts that, we believe, cannot be adequately characterized with the currently described alternatives and ranges of isolated conveyance. Below we offer a description of that alternative and recommend that it be considered as an additional alternative.
- The discussion of Geographic Scope on page 4 of the Common Program does not make it clear that the program will consider only problems linked to the Delta and Suisun Bay. That definition was carefully worked out among stakeholders and

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BDAC. Without it there does not seem to be any justification for not incorporating every problem in the Central Valley into the program. The program may be opening itself up to such an expansion of scope unless the geographic description is modified to be consistent with the original Geographic Scope.

- Add language to protect upper Sacramento River (receiving water) standards for water quality such as temperature and turbidity from the adverse effects of discharging water stored in off stream reservoirs. A water exchange program with Tehama Colusa Canal would accomplish this protection.
- The summary of the ERPP should be upgraded so that it provides a clearer link between species, plant communities, and ecological processes and functions. The summary should provide a clear scientific argument why CALFED will be successful while others have not have been very successful.
- The summary of the ERPP should be more explicit in how it describes plants and plant communities.
- The watershed section should explain the processes and their contribution to restoring the Delta.
- Issues that need to be resolved and included in the alternative descriptions include how the use of environmental water relates to the various alternatives, how the fact that we are now talking about using a fixed amount of storage to generate flows or other operational constraints to complement other standards affects the strategy for use, and how the CALFED environmental water relates to the CVPIA water.
- The descriptions should clarify in what manner alternatives with supplemental water supplies, either from storage or willing sellers, additional water will be allocated: each acre-ft of water for ecosystem restoration will be matched by an acre-ft for agricultural use and an acre-ft for municipal use. Looked at simplistically, assuming that all environmental water will flow to the ocean as delta outflow and all M&I water will be exported, the export:inflow ratio for this water will be worse than presently occurs in any month under the Accord (67% vs. a maximum of 65%).
- The descriptions of environmental water should clarify that those supplies will not be subject to export after flows have "served its purpose" in upstream area.
- The criterion for diversion to off stream storage needs to be more specific and an

additional criterion(a) may be needed below Chico Landing. It appears that the former will occur, but the latter may not. Our concern about criteria below Chico Landing arises from the expected use of floodways and set-back levees as part of the creation of "150,000 acres" of new habitat. High flows will be needed in these areas to "preserve the river's natural fluvial geomorphology process." It may be that the flow necessary above Chico Landing before diversion to off stream storage may be adequate to protect organisms and habitat below there.

- There is a disturbing statement in the general description of alternatives 2 and 3 that it "would allow full physical pumping capacity." Does this mean there would be no limits on exports as presently exist under the Accord?
- The likelihood that alternatives will obtain supplemental water from "willing sellers" only in order to provide much in the way of environmental restoration through increased stream flows should be disclosed.

Alternatives Review

A review of the alternatives is attached as an addendum to this comment memorandum.

Recommended Alternative Configuration

Since the Department remains concerned that a full range of alternatives are not being carried forward for analysis, we recommend the following:

- A 10,000 cfs isolated facility and a separate screened intake at Hood
- Divide the screen facility into a multiple bay system with three bays
- A turnout of between 2,000 to 3,000 cfs into the Mokelumne River near New Hope Tract from the isolated facility to be used as specified in the attached operating criteria.
- Keep the Cross Channel Gates closed except, perhaps, during the peak periods of recreational boating.
- A facility that allows the intake of water at lower export rates (e.g. 2,000 cfs) from Italian Slough through a screened facility to the State Water Project export facilities.

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- Customize the "South Delta Improvements" to provide for a Middle River Barrier for agricultural supplies, eliminate the remaining agricultural barriers, and delete the dredging and intake relocation/enlargement. Provide overland supplies to other south Delta farmers from the isolated facility.
- North-of-Delta storage and south-of-Delta storage of 1.0 to 1.5 MAF.
- 200 TAF of in-Delta storage located in the south Delta
- Include the groundwater storage and upstream San Joaquin storage as described in Alternative 3G
- Discontinue use of the intake into the forebay but retain the facility in the event of a catastrophic failure of the federal facility.
- Include intertie with the CVP and SWP.
- Limit the CVP pumping capacity to existing levels
- Upgrade fish screens and fish salvage facility at the CVP intake.
- The isolated facility alternatives should be assessed assuming a range of water quality criteria e.g. the existing water quality criteria remain in place; the inflow/export criteria in August through October are increased by 10 % for water diverted through an isolated facility and inflow/export criteria in the Feb through June period reduced by 25 % to 50 % for water diverted from Delta channels.
- Likewise outflow and X2 could be assessed using existing standards and other scenarios such as a relaxation in the September through November period with improvements of 10 to 20 % during other months.
- Include a Head of Old River Barrier with fully functioning radial gates.

Alternatives Appendices

Appendix A- Ecosystem Restoration Targets- Delta and Bay ecological zones:

Specific Comments:

Delta

Page 1-3 Stream flow: The document should describe whether the totality of potential flow needs been reviewed and agreement reached that the needs listed have the highest priority. The appendix should indicate whether the summary section of the main report which references 300,000 to 500,000 acre feet annually of "increased critical-period flows" is consistent with the amounts listed here. The document should also distinguish between using certain amounts of storage available for ecosystem purposes to meet these flows as contrasted with the traditional concept of establishing minimum standards. The minimum flows on these pages seem consistent with minimum standards rather than storage. The approach should be internal consistent within these document.

Page 2 Target 3, Action 1: The specific operational criterion which would accomplish the stated purpose of "limiting water diversions from the Delta for up to 10 days" should be described.

Page 3 Target 5: The correct definition of QWEST should be used. The species targeted with this condition should be briefly described.

Page 3 and 4 Delta Channel Hydraulics: The targets and actions appear to remain deficient in restoring downstream flow and other needed hydrodynamic conditions. The feasibility of actions 3 and 4 should be described and Action 5 should be clarified, particularly since, as it's worded now, it may conflict with the target.

Page 3 and 4 Delta Channel Hydraulics: We strongly recommend that the targets for this process be modified to include the following:

Target 1: Modify internal Delta hydrodynamics in all months so that flows, as measured in selected Delta sloughs and rivers at fixed indicator sites are within ten percent of the Delta hydrodynamic conditions that existed under a mid-1960s level of water supply development.

Target 2: Modify internal Delta hydrodynamics in the months of April through June so that flows, as measured in selected Delta sloughs and rivers are within ten percent of the Delta hydrodynamic conditions that existed under an early-1950s level of water supply development and export.

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Page 4: The water temperature target on page 4 is not correct and should be corrected.

Page 6 Food Web: Further clarification should be provided regarding whether the actions proposed are likely to accomplish the target.

Page 7 Target 2: The action programs should be more specific.

Page 7 Predators: The feasibility of this action should be made clear.

Page 8 Screening diversions: We need to make sure that fish facility folks comment on this section.

Page 10 Target 2: The feasibility of such a sediment management program should be discussed.

Page 11 and Page 15: There seems to be a major disconnect between this section and the levees section. The latter calls for flooding 30 to 60,000 acres for subsidence control. The document should describe whether these are consistent with each other. Also, some fundamental changes are needed so the reader can understand the interrelationship of targets for perennial and emergent wetlands

Bay

Page 1: The inflow targets here and for the Delta are in terms of Delta outflow. That seems like a pretty substantial deviation from the X2 approach in the Accord. Do we even know how the two relate? e. g. Are these outflows really an improvement over the X2 criteria in the Accord? Is there any possibility that we are asking for less than the Accord?

Page 2: Unscreened Diversions: Reference to "managed agricultural lands" in this ecological zone should be changed to managed wetlands.

Page 5: In the action regarding vernal pools strike the words "the size of".

Page 4-6: The document should disclose that some of the tidal wetland may be restored on lands currently being managed as seasonal managed marsh but that other targets and actions will offset losses of seasonal managed marsh.

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Appendix B- Water Quality Program

General Comment:

Overall this program seems like a reasonably comprehensive proposal. Note its format seems quite different than that of the Ecosystem Plan. Most of its specific strength comes from Performance Measures rather than from Objectives and Targets. Many of the Performance Measures are specific, but others are too general. e. g. Those that simply say something like "reduce some pollutant effect" need to be quantified.

Specific Comments:

Page 4 Turbidity: This section is written from the perspective of a drinking water supply objective. There is some reason to believe that one of the things that has gone wrong environmentally is that the Delta has become too clear from an aquatic ecosystem perspective. Thus this section may be in conflict with ecosystem restoration objectives. That issue needs to be recognized and addressed.

Page 5: At least upon quick reading the action related to oxygen, copper, and mercury seems to overlap with earlier sections on the same substances.

Page 6: Salinity in South Delta: The document should provide some documentation whether or not the stated methods actually reduce salinity loads entering the South Delta as stated in performance measures. I. e. some could decrease concentrations but not loads.

Page 9 Water Management: Again, the issues of dilution of salinity and whether this is an appropriate measure to reduce loads needs to be clarified.

Appendix C

Specific Comment:

Page 9 New Water: The appendix should clarify that the use of new water for environmental beneficial uses does not require "carrying out appropriate water management measures or implementing cost-effective efficiency measures."

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Appendix D

Levee Program

Our overall reaction is that this isn't a program yet, only a list of actions proposed for inclusion in a program. Mostly there isn't enough detail to be sure what is being proposed and evaluate it. On the positive side are the frequent references to coordination with the Ecosystem Program. Even here though there seems to be a glaring omission in that there is no linkage recognized between the subsidence control program and the ecosystem program.

This concludes our comments. Thank you for providing us the opportunity to comment on these documents. Should you or your staff have any questions about our input please contact me or Mr. Frank Wernette at CALNET 8-423-7800.

Frank Wernette for

Pete Chadwick
DFG/CALFED Liaison

Attachments

bc: Mr. Frank Wernette, BDD
Mr. Jim White, ESD
Mr. Don Stevens, BDD
Mr. Kevan Urquhart, BDD
Mr. Dan Odenweiler, IFD
Mr. Harry Rectenwald, R1
Mr. Ed Littrell, R2
Mr. Bill Loudermilk, R4
Mr. Alan Baracco, IFD