

## DEPARTMENT OF FISH AND GAME

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September 10, 1997

Mr. Rick Woodard  
CALFED Bay-Delta Program  
1416 Ninth Street, Room 1148  
Sacramento, California 95814

Dear Mr. Woodward:

The Department of Fish and Game's Northern California - North Coast Region (Region 1) office in Redding, California, has reviewed the "CALFED Water Quality Program Component Report Draft August 1997". The document is on an extremely fast review track and it covers an enormous number of water quality issues. Due to time constraints and staffing limitations, these review comments by the Department are not necessarily complete. While the Department supports the CALFED processes and goals, we must make it clear that we cannot support items suggested in the CALFED document that are contrary to previously adopted positions absent any new information demonstrating a need to change through prescribed formal processes. Such is the case with suggestions in the document relating to the objectives for metals contained in the basin plan for the Central Valley Regional Water Quality Control Board in the Sacramento River salmon and steelhead spawning areas. Nonetheless, as requested in your CALFED workshop for this document, we submitted some comments on readily identifiable issues by August 15, 1997. The following are additional detailed comments on issues we have identified to date.

Page E-3, Paragraph 2. The Department of Fish and Game is listed twice in this list and should only be listed once. The Department of Water Resources is not listed but should be as the State's major purveyor of municipal and industrial water.

Pages following Page E-7 labeled Figure E-3 and E-4: Some waters are incorrectly designated as having metal problems. The mines or metal problems designated in the eastern half of Shasta Lake should be designated in the southwestern region of the lake in the vicinity of West Squaw and Backbone tributaries. The map indicates there is a selenium concern on Cow Creek; however, there is no supporting evidence for this concern either in the document or the Department's files.

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Page E-8, Paragraph 2. This section is labeled Performance Targets and only mentions copper and mercury with no supporting documentation or discussion on:

- 1 How such targets are derived and by whom.
2. What chemical form is referred to for each metal which is important biologically.
3. How do "Performance Targets" differ from "Performance Measures" in Section 7?
4. What is the relationship between performance targets and background levels?

For the record, the Department did not participate in the derivation of the "Performance Target" for copper and we do not concur with the "Performance Target" or "Performance Measure" stated in this document. The Department's recommended Performance Target is attainment of the basin plan for the Central Valley Regional Water Quality Control Board consistent with the Porter-Cologne Water Quality Act. Department representatives have previously recommended attainment of the basin plan in past Technical Team meetings. Any discussion of a copper loading is premature until the US Geological Survey completes their extensive studies on the fate and transport of copper in the Sacramento River.

Page E-6, Paragraph 3, Sentence 3. As a follow up to our August 15 comment objecting to the example of copper toxicity and salmon we understand it would be helpful to receive a substitute example. Using salmon as an example species, it could be explained that there are no viable populations of juvenile salmon in many small salmon bearing streams during the hot summer months when peak uses of some agricultural chemicals occur. Thus, with respect to those agricultural chemicals that do not persist in the environment, there is no risk to juvenile salmon during the mid-summer chemical application period; however, other species that prefer warm water may be at risk since these populations are present at this time.

Page 1-3, Paragraph 2. Same comment as that for page E-3, Paragraph 2.

Page 3-2, Paragraph 2, Sentence 3. It may be helpful to put the emission rate of metals from the Iron Mountain Mine in perspective with the industrial sources mentioned in the following sentence. The US Environmental Protection Agency (EPA) has published such a comparison that concludes emission of metals from Iron Mountain

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are greater than the combined municipal and industrial discharges in the San Francisco Bay. Please call Mr. Rick Sugarick of EPA for the exact language of the comparison and a copy of the reference. His telephone number is (415) 744-6222.

Page 3-6, Paragraph 1. This discussion should include one or two sentences that mention how wastes can be discharged to surface water that have high biological oxygen demand causing a reduction in dissolved oxygen.

Page 4-1, Paragraph 2, list on "Sources of water quality parameters of concern". This list should contain elevated temperature and oxygen depleting substances because they are parameters of concern in Section 3. Elevated temperature and oxygen depleting substances should be included under the municipal industrial category and the agricultural category. In addition, the other source of elevated temperature is the heat that is collected and stored in the top layers of reservoirs that can be discharged.

Page following 5-2 titled Figure 5-1: Same as comment for Figures E-3 and E-4. In addition, there is a major error with the bold line code used on this map to indicate river reach impacted by metals. First the bold line code is unreadable for the river and, second, the bold line is on Mill and Deer creeks where there are no documented impacts from metals.

Page E-8, Paragraph 4, references a Table E-2 that is not in the document.

Page 4-2, Paragraph 1, Sentence 1. Correct "operating" to "operations".

Page 4-2, Paragraph 1, Sentence 2. Substitute the following sentence to correctly depict the nature of the reaction: "Water and oxygen now travel through the fractured and partially collapsed workings where they come in contact with the remnants of the sulfide ore deposit forming sulfuric acid."

Page 4-2, Paragraph 2, Sentence 2. Substitute the following sentence: "The anadromous fish that spawn in the upper Sacramento River include winter-run chinook, spring-run chinook, fall-run chinook, late-fall-run chinook, steelhead, green sturgeon, white sturgeon, striped bass, American shad and lamprey."

Page 4-2, Paragraph 2, Sentence 3: Both the spring-run chinook and the winter-run chinook hold over in the upper river for an extended period prior to spawning. The juvenile steelhead hold over in the upper river for years prior to emigrating to the ocean.

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Page 4-2, Paragraph 2, Last Sentence. The sentence should include spring-run chinook, winter-run juveniles and steelhead fry that are present in the river in the wet season. The wet season better describes the period of uncontrolled release from Spring Creek Debris Dam than the winter period. Historically, uncontrolled releases have occurred in the late fall and spring as well as the winter. In addition, there have been discharges of contaminated sediments that originated from the Iron Mountain Mine discharge during the summer.

Page 4-4, Paragraph 5. The designation of background loads throughout this section is confusing. "Background" usually refers to constituents that have natural origins. In this case it is used to separate out the incremental wasteloads to the stream. We recommend that the background term be replaced with "upstream loads" or "upstream wasteloads" or perhaps the wasteload allocation concept.

Page 6-4, Paragraph 1, Sentence 2. The reference to background levels of metals should be substituted with the term "metal levels". It is not possible to determine what portion of the reported metal concentrations are background and which are from upstream pollution; especially in the Sacramento River in the vicinity of Redding where most of the metal concentrations are known to increase downstream of the Iron Mountain Mine discharges.

Page 7-1 and 7-4, Paragraph 5. Revise performance target pursuant to previous comment.

Page 8-2, last paragraph, last sentence "...the Sacramento River Toxic Parameter Control Program..." should be the Toxic Pollutant Control Program.

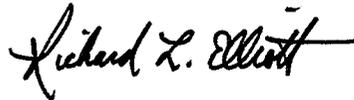
Appendix C, Supplemental Information Pertaining to Parameter Loading Tables. The sections relating to cadmium loading notes and copper loading notes are unclear. For example, C-1 third sentence from the bottom regarding the report entitled "Inactive mine drainage in the Sacramento Valley" states: "Data in this report suggests that mine drainage represents about 50 percent of the total cadmium load from inactive mines." These sections are both confusing to the reader and should be rewritten. The numbers on the pages are also incorrect in that they skip from C-2 to C-7.

There are several typographical errors throughout the document which should be corrected prior to finalization.

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Thank you for the opportunity to comment on the subject document. If you have any questions regarding these comments, please contact Environmental Specialist Jane Vorpapel at (916) 225-2124.

Sincerely,



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Regional Manager

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