-DRAFT-

November 7, 1997 - Draft for technical team review - prepared by Elaine Archibald (CUWA) and Lynda Smith (MWDSC)

Mr. Rick Woodard
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

Subject: **Ag/Urban Policy Group Comments on the Draft Water Quality Program Component Report**

Dear Rick:

The Ag/Urban Policy Group has reviewed the Draft Water Quality Program Component Report. We understand that CALFED does not intend to revise and reissue the Water Quality Component Report but that information from this report will be incorporated into the draft reports on existing conditions and impact analysis. We offer the following comments on the Water Quality Component Report so that they can be considered in the development of future CALFED reports.

Executive Summary

Page ES-1 and 1-1 - There is a statement that the objective to provide good water quality for all beneficial uses will be achieved through development and implementation of the CALFED Water Quality Program. Although full implementation of the action strategies will likely result in improved water quality conditions in most of the Delta, we believe that water quality conditions in the Delta and in export water supplies will be influenced more by the preferred storage and conveyance alternative than by implementation of the action strategies. Future documents need to recognize the important linkage between the CALFED Water Quality Common Program and the preferred storage and conveyance alternative in achieving CALFED's water quality targets. In addition, CALFED should seek to maximize opportunities for water quality improvements, where appropriate, in its other programs such as the Ecosystem Restoration Program.

Page E-3 and 1-3 - In the paragraph describing stakeholder groups, the list of participating agencies is incorrect. **(We need to state how it is incorrect.)**

Page E-4 and 2-3 - In future documents we recommend that the impacts of high salinity levels on municipal water supplies be described as follows:

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"A major problem during periods of low Delta outflow is tidal mixing of salt into the Delta channels. Seawater intrusion is a major concern with regard to municipal drinking water supplies because of the presence in sea water of bromide, which contributes to the formation of carcinogenic disinfection by-products (DBPs). Salts are also present in freshwater inflows to the Delta due to municipal and agricultural discharges. The most heavily concentrated source of agricultural discharges to the Delta is the San Joaquin River. High salt levels in municipal water supplies can result in the following impacts: 1) reduced opportunities for water recycling and groundwater replenishment programs which are dependent on good source water quality to meet local resource program salinity objectives; 2) economic impacts on industrial and residential water users due to corrosion of appliances, plumbing and industrial facilities; and 3) aesthetic impacts (i.e., taste problems) for drinking water consumers."

Page E-4 - Pathogens should be included in the discussion of key drinking water contaminants of concern.

Figure E-1 and Figure 2-1 - From this figure, one could draw the conclusion that the Barker Slough Pumping Plant is outside of the area in which bromide and organic carbon are problematic. In fact, the organic carbon concentrations at the Barker Slough Pumping Plant routinely exceed the organic carbon concentrations found at the other Delta pumping plants.

Page E-7 - Under the section on "Identifying Sources of Problems", it should be noted that agricultural tail water or return flows also may contribute organic carbon.

Page E-7 - The following statement in the report is inaccurate and should be revised in future documents:

"The strategies are recommended actions that will result in improvements to source water quality by reducing source loadings of parameters (e.g. mine drainage, agricultural drainage, urban and industrial runoff, and municipal and industrial wastewater treatment facilities); upgrading water treatment plants; or changing water management practices." This statement implies that improvements to source water quality will result from upgrading water treatment plants. Water treatment plants will only be upgraded if source water quality conditions are not improved.

Figure E-4 and 4-1 - This figure is a useful tool for representing the approximate location and distribution of point source discharges and sources of municipal stormwater runoff to the Delta and its tributaries. However, the symbols for agricultural drains focus on

specific agricultural drains and sloughs that discharge to the Delta and its tributaries, rather than on broad areas with similar agricultural land-use patterns. Although water bodies like Mud and Salt sloughs and the Colusa Basin Drain may be dominated by agricultural discharges and may essentially function as point source discharges to the San Joaquin and Sacramento rivers, the manner in which agricultural drains are represented in figure E-4 does not represent the actual nonpoint source nature of agricultural sources of pollutants. In addition, the agricultural drain symbols draw attention to specific agricultural regions in the mapped area included in the figure and ignore many other areas that may have nonpoint sources of agricultural pollutants. Agricultural sources of parameters of concern would be more accurately represented by shading portions of the map that are predominately agricultural land-use.

Page E-8 - Table E-2 is missing from the report.

Section 1: Introduction

General Comment - We suggest that CALFED add a glossary of acronyms in future reports.

Section 2 - Background

Page 2-2 - In the second paragraph, the last three sentences should be written as follows in future documents: "San Joaquin River flows are often very low in late summer and fall and have relatively poor water quality. In contrast, the Sacramento River, the largest tributary to the Delta, has relatively good water quality because of the large amount of dilution provided by runoff from the watershed and releases from storage reservoirs. Water quality characteristics of Delta inflows are intimately tied to land use in the upstream watersheds."

Page 2-2 - For consistency, it is suggested that CALFED use the total organic carbon (TOC) parameter (as opposed to DOC) when discussing organic carbon impacts on drinking water supplies. TOC is listed as a parameter of concern to the drinking water beneficial use in CALFED Water Quality Program documents. The TOC level in water is generally considered a good indication of the amount of trihalomethanes and other disinfection by-products that are likely to form upon treatment and disinfection. Also, under EPA's proposed Disinfectant/Disinfection By-product (D/DBP) rule, drinking water treatment requirements are based on source water TOC levels.

Page 2-2 - The report is correct in stating that synthetic organic chemicals are found in fish tissues at levels that exceed standards for human consumption. These chemicals

are also found in concentrations that may impair reproduction of the fish.

Page 2-2 - The discussion of mining does not contain any information on the beneficial use(s) that is (are) being impaired.

Section 3 - Parameters of Concern

General Comments - According to the titles of the report sections, Section 3 is to describe the parameters of concern and Section 4 is to present the sources and loadings of the parameters of concern. We suggest that CALFED limit the information included in Section 3 to a description of the water quality parameters of concern, the sources of the parameters in general, and the beneficial uses that are impacted by the parameters and how, including references where appropriate. All discussion of specific sources of water quality parameters and loading estimates should be handled in Section 4. We recognize that this report will not be revised but we are making this recommendation for CALFED's use in future documents.

This chapter contains many statements that should be referenced with supporting data or reports. For example, on page 3-5 the following statement is made with no supporting reference:

"Organic materials enter the water from the following sources in the Delta in decreasing order of amounts:

natural materials, vegetation, and organics soils;
agriculture, as vegetative organics in drainage;
urban runoff;
municipal and industrial wastewater discharges;
pesticides and herbicides."

We are not aware of any studies that have adequately quantified the sources of organic materials to the Delta. In fact, the sources of organic material likely vary at each of the drinking water intakes in the Delta.

Table 3-1 - The second column heading should be "Drinking Water" rather than "Urban".

Page 3-2 - Some of the statements regarding the beneficial use impacts of the parameters of concern are very general and do not provide much information to the reader (e.g., "Mercury is of concern from an environmental and human health perspective."). It is suggested that CALFED include more detailed information regarding the adverse

impacts of metals, mercury and selenium on aquatic wildlife, the environment and human health, and include references.

Page 3-3 - The first and second paragraphs under Organics/Pesticides are inconsistent as to whether or not pesticides have been detected in sediment and fish tissues in the Delta at levels that are a concern to human health or aquatic wildlife. It is suggested that the following sentence be added to the first paragraph: "Pesticide loading from agricultural and urban sources is a concern throughout the Delta and its tributaries due to potential toxic effects of the pesticides on aquatic organisms (including algae, invertebrates and fish), particularly sensitive life stages of aquatic organisms.

Page 3-3 - The statement in the second paragraph that "pesticides are rarely detected in Delta water samples" is inaccurate. Based on daily sampling by the U.S. Geological Survey at Vernalis, some pesticides were detected more than 50 percent of the time.

Page 3-3 - CALFED needs to add a description of the adverse impacts of ammonia on aquatic wildlife and the environment and a description of unknown toxicity to this section of the report.

Page 3-4 - In the section regarding disinfection by-products in treated drinking water, it is suggested that CALFED include a brief discussion on EPA's proposed D/DBP Rule, including the general requirements in the rule and the schedule. Anticipated future drinking water regulations are the driving force behind the need for improved source water quality for drinking water supplies. A description of this proposed rule is contained in the California Urban Water Agency (CUWA) Bay-Delta Drinking Water Quality Criteria report submitted to CALFED in December, 1996.

Page 3-5 - In the second paragraph, the second sentence should be revised as follows in future documents:

"As with organic carbon, bromide reacts with drinking water disinfectants to form DBPs, including brominated THMs and other brominated DBPs, which are also a human health concern."

Page 3-5 - In the last paragraph, the forth and fifth sentences should be removed and placed in the paragraph on page 3-4 which discusses DBPs in drinking water.

Page 3-5 - The sentences at the end of the last paragraph, starting with the word "Minimizing...", should be revised to read as follows: "Minimizing TOC concentrations in source waters is a major water quality goal for drinking water suppliers, in order to

meet future drinking water regulations for DBPs. In EPA's proposed Disinfectant/Disinfection By-product (D/DBP) Rule (Stage 1 and Stage 2 of the D/DBP Rule are scheduled to be finalized in November 1998 and May 2002, respectively) maximum contaminant levels (MCLs) for THMs will be lowered, and treatment requirements will be based on source water TOC levels. The proposed rule will require utilities to undertake studies to control organic carbon in their source water and to achieve a certain percent TOC removal at the treatment plant based on the source water TOC concentration, in cases where source water TOC levels exceed 2 mg/l. The proposed D/DBP Rule treats TOC as a source water quality parameter that must be controlled."

Page 3-6 - The following revisions are suggested for future CALFED documents:

At the end of the first paragraph under Nutrients add the following:

"Nutrients are a critical reservoir management issue. Nutrient levels are a determining factor governing the growth of taste-and-odor producing algae in drinking water storage reservoirs, and high nutrient levels can lead to aesthetic impacts on drinking water supplies."

In the Pathogens section, it is suggested that CALFED include a brief description of EPA's proposed Enhanced Surface Water Treatment Rule, including the anticipated schedule for the rule and the proposed pathogen removal/inactivation requirements which are based on pathogen density in source water.

In the first sentence of the Pathogens section, add "and pathogenic" after the word "coliform".

The second paragraph in the Pathogens section should be revised to read as follows:

"Principal waterborne bacterial agents that cause human intestinal disease are summarized in Table 3.2. Rather than attempt to analyze each of these pathogenic bacteria, water utilities routinely monitor for total and fecal coliform bacteria, an indicator organism. With few but notable exceptions, these organisms, which originate in the intestinal tract of warm-blooded animals and other sources, are not pathogenic. Although monitoring coliforms as indicators of fecal pollution and potential presence of pathogens has limitations, they are still the most widely used indicators of bacterial water quality. Coliforms are the traditional indicator of fecal contamination and are easier to assay than the pathogenic organisms. Nonetheless, there are numerous reports where pathogens have been isolated and coliforms were not detected. "

Page 3-7 - In the first paragraph, the last sentence should be removed and replaced with the following in future documents:

"The enteroviruses (polio, coxsackie A, coxsackie B, and echoviruses), adenoviruses and reoviruses can be detected by conventional laboratory cell culture techniques. Hepatitis A virus and rotavirus require specialized cell culture techniques. Methods for detection of the other enteric viruses are not really available."

Table 3.2: Delete *Leptospira* sp. and *Francisella tularensis* from the table. **(Why?)**

Table 3.3: Delete Hepatitis B Virus from the table, since it is not an enteric virus. Add "Hepatitis E Virus" to the table and list "viral hepatitis type E" as the common disease syndrome. Add "Astroviruses" and "Coliciviruses" **(check with Mic Stewart on spelling)** to the end of the table and include gastroenteritis as their common disease syndrome.

Page 3-8 - At the end of the paragraph on parasites add the following sentence: "Of more recent concern are emerging enteric protozoa such as Cyclospora and _____ **,(check with Mic Stewart on spelling)** although their role in waterborne disease has not been well ascertained."

Page 3-9 - Add a paragraph regarding existing pathogen detection methods and their limitations.

Page 3-9 and 3-10 - In future documents, the first sentence in the salinity section should be revised to read as follows:

"Salinity is of concern to municipal water suppliers because (1) bromide, a component of saline water, contributes to the formation of DBPs (bromate and brominated THMs); (2) low salinity water supplies are needed to assure the feasibility of local wastewater reclamation and conjunctive use projects; (3) low salinity water supplies are needed to minimize the economic impacts on industrial and residential water users from the corrosion of infrastructure and appliances; and (4) low salinity water supplies are needed to improve the aesthetics of drinking water."

Since salinity is included in Table 3.1 as a parameter of concern for the environment, it is suggested that CALFED include a description of the impact of salinity on the environment in this section.

Page 3-13 - The USGS is currently carrying out comprehensive monitoring studies in the San Joaquin River Basin and the Sacramento River Basin as part of the National Water Quality Assessment (NAWQA) Program. The NAWQA studies are a valuable source of recent water quality information, and we suggest that CALFED contact the USGS and include available relevant USGS water quality data in the CALFED Water Quality Affected Environment Report.

Appendix B: The water quality data summary tables at the beginning of Appendix B would be much more useful if the data tables included information regarding the extent and frequency of monitoring (i.e., was the monitoring done on a daily, weekly, monthly or annual basis, on a seasonal basis, or one time only as part of a short term study?). The compiled water quality data for each parameter in the middle of Appendix B do not take into account the frequency of monitoring, the time of year or the conditions under which monitoring was done at each location. Without this type of information it is very difficult to interpret the monitoring results, and the mean values that are calculated and provided in the tables are also not useful. Knowledge of the extent and frequency of monitoring data is critical in order to understand the observed levels of water quality parameters, especially for those parameters that are only observed and/or monitored seasonally or only during peak runoff events.

Page 3-10 - The listing of sources of salt to the Delta needs to include upstream municipal and industrial wastewater discharges.

Table 3-4 - The target values for a number of water quality parameters of concern are considerably less protective of drinking water supplies than those recommended by the urban drinking water subgroup of the CALFED Parameter Assessment Team. The target levels found in Table 3-4 are also inconsistent with indicators of success contained in Section 7. For example:

1. The PAT recommended no increase in nitrate levels and a decrease in phosphorus levels, whereas Table 3-4 sets a limit of 10 mg/L at drinking water intakes and does not mention phosphorus. Water quality impacts of nutrients are driven by reservoir management issues as opposed to human health effects; as a result, use of the MCL for nitrate (as N) of 10 mg/L as a target range is <u>not</u> appropriate.
2. The PAT recommended a pathogen target level of <1oocyst/100L, whereas Table 3-4 states there is "no MCL standard."
3. The PAT recommended a 10 year average of <220 mg/L and a monthly average of 440 mg/L for total dissolved solids, whereas Table 3-4 contains a target of 500 mg/L for drinking water intakes.

4 The PAT recommended a monthly median of 50 NTU for turbidity. The turbidity level of 0.5 to 1.0 NTU contained in Table 3-4 is a treatment technology requirement for treated drinking water supplies, and use of this value is not necessary for raw water supplies.

Section 4 - Sources and Loadings of Parameters

General Comments - In the section on estimated loadings of parameters of concern, CALFED may be attempting to do too much. Developing load estimates for pollutants discharged into large watersheds is a huge task and one that water quality control agencies have been struggling with for years as part of regulatory requirements to develop total maximum daily loads (TMDLs) for pollutants in impaired water bodies. CALFED's approach briefly outlined on pages 4-3 and 4-4 for developing "fairly complete load estimates" is a serious concern. The decision to try to develop load estimates utilizing limited data and fairly gross assumptions, and then use the load estimates to determine the relative importance of different sources of pollutants and the potential effectiveness of CALFED water quality actions could potentially lead to inappropriate decisions regarding water quality actions. In those cases where load estimates have been loosely put together using gross assumptions, we are concerned that the actual unknown parameter loading situation is being grossly misrepresented. It is very important that the CALFED Water Quality documents recognize those instances where water quality data are available and appropriate to use for developing load estimates, and differentiate them from those instances where sufficient data are not available and additional monitoring and assessment studies are warranted. We recommend that CALFED focus on utilizing available water quality data for parameters of concern and the best professional judgment of CALFED staff to make decisions regarding the relative importance of pollutant sources, the potential effectiveness of CALFED water quality actions, and the design of future monitoring programs, such as the Comprehensive, Monitoring, Assessment and Research Program.

We are also concerned with the use of the bar charts to present the parameter loading estimates. The bar charts highlight the parameter loads from sources with available data, and tend to minimize other sources of parameter loads where there are not sufficient data. Several of the parameter loading charts in Section 4 present a parameter loading picture which is biased toward the sources with sufficient monitoring data and minimizes the potential role of other sources with no apparent loading data. These include the charts prepared for bromide, mercury, nitrate, selenium and TOC. As an alternative, we recommend that CALFED either use pie charts to present loading data or simply present available data in loading tables as in Section 4. In those cases where CALFED has information regarding the total load of a parameter discharged to a

particular subwatershed area, pie charts could be used to show the relative contributions of different basins and of different sources in a basin to the total load. The use of a pie chart would clearly illustrate the portion of the total load attributable to known sources and that portion attributable to unknown sources. In those cases where the total load for a particular parameter is not known, we recommend that the available data be presented in loading tables as in section 4 which clearly show the holes in the existing database.

Page 4-1 - The listing of sources of water quality parameters of concern in the Delta and its tributaries should also include timber harvesting, road construction, dairies and confined animal facilities, and boat discharges. The "agricultural tail water or return flows" source should also include TOC.

Page 4-1 - Under the heading "Sources of Parameters" there is a discussion of mine drainage but there is no discussion of the other sources of parameters. Either the mine drainage discussion is out of place or the information on other sources of contaminants was inadvertently deleted from the report.

Page 4-2 - Loading of Parameters - This section should contain a discussion of each of the parameters, the sources, the loading calculations, the opinion of CALFED staff on the adequacy of the data used to estimate loads, and the opinion of CALFED staff on additional data needed to adequately characterize the loads. Although Section 3 of this report describes a number of on-going monitoring programs, it appears that the data used in the loading calculations were limited to a few sources. The Central Valley Regional Water Quality Control Board report on loading in 1985 is cited throughout the supporting appendix describing the loading calculations. Data from more recent and more extensive monitoring programs would provide a much better analysis of loads. For example, data should be used from the Sacramento Coordinated Monitoring Program, the urban runoff monitoring programs of major Central Valley cities, and wastewater effluent monitoring programs.

Page 4-4 - Background Loads - The report acknowledges the difficulties associated with not determining the background loads, particularly for trace elements, but then loads are presented with no footnote or explanation that acknowledges the problem.

Tables 4-1 through 4-10 - The columns in these tables should be consistent and should match the order in which data are presented in the corresponding figures. For example, all tables and figures should be ordered from upstream to downstream. A map showing the boundaries of the subwatersheds would be useful to readers of this report.

Table 4-1 - Bromide Loadings - Seawater is the major source of bromide to the Delta but the loading of bromide from seawater is not calculated. This table and corresponding figure imply that the San Joaquin Basin is the major source of bromide. In reality, much of the bromide loading from the San Joaquin Basin is due to recirculation of bromide in export water that is used in the San Joaquin Basin and then discharged back into the San Joaquin River. In Appendix C the formula for calculating annual loads is presented as follows:

average daily load x seconds per year = annual load

The correct formula is:

average daily load x days per year = annual load

Since the loading estimates presented in the main body of the report appear to be within an order of magnitude of the amount expected based on other sources, the formula was incorrectly typed in the report.

Table 4-2 - Cadmium Loading - The inconsistency between the basin emission loading calculation and the total loads from the individual sources is several orders of magnitude. The report should contain a discussion of why this occurs or point out that this difference casts doubt on the loading calculations. The municipal and industrial loads and the urban runoff loads for cadmium and other trace metals is based on data from 1985. Why did you select these data when there has been extensive testing of urban runoff for metals since about 1990 and there has been fairly extensive testing of metals in wastewater from the Sacramento Regional Wastewater Treatment Plant and possibly other wastewater treatment plants in recent years?

Table 4-6 - Selenium Loading - Loads of selenium from agricultural drainage in the San Joaquin Valley are not presented. The Grasslands Bypass Project has extensive information on concentrations and loads of selenium to the San Joaquin River. The data presented in the figure entitled "Selenium in the San Joaquin River Tributaries" for Salt/Mud Sloughs is outdated as a result of the Grasslands Bypass Project.

Table 4-8 - Total Dissolved Solids Loadings - Appendix C refers to the Study of Drinking Water Quality in Delta Tributaries prepared by CUWA as the source of the loadings for agricultural drainage and M&I wastewater. The numbers presented in Table 4-8 could not be derived by reviewing the loading analysis presented in the CUWA report. In addition, the footnote notations in this table do not correspond to the correct footnotes in Appendix C.

Table 4-9 - Total Organic Carbon Loading - Appendix C refers to the CUWA report and says that agricultural drainage for the Sacramento Valley was calculated based on the loadings from Mud and Salt sloughs. This is totally inappropriate because Mud and Salt sloughs are in the San Joaquin Basin, not the Sacramento Basin. The CUWA report presents loadings for the Sacramento Basin based on Colusa Basin Drain and Sacramento Slough. These two agricultural drains represent about 80% of the total agricultural drainage to the Sacramento River. Using the appropriate data from the CUWA report, the correct estimate of TOC loading from the lower Sacramento Basin would be around 15 to 18 million lbs/year; not the 7.7 million lbs/year presented in the report. Similar miscalculations of organic carbon loading are made for the other sources in the watersheds. Appendix C, footnote b (page C-16) also states that the CUWA report (Figure 4-1) shows that 4.75% of the organic carbon load in the Sacramento River is from agriculture. This is incorrect. The figure shows that the contribution from Colusa Basin Drain and Sacramento Slough ranges from 8 to 15%, depending upon the type of year and season. Appendix C, footnote d (page C-17) states that the CUWA report shows that 61.5% of the organic carbon load in the San Joaquin watershed is from agriculture. The CUWA report actually shows that about 43% of the load is from Mud and Salt sloughs. This same footnote refers to a monitoring program conducted by the Department of Pesticide Regulation between 1991 and 1993, although no data are presented. The DPR study did not include organic carbon monitoring.

Section 5 - Water Quality Problem Areas

The discussion of water quality problem areas is extremely cursory and weak. There are many references available from the State and Regional Boards and other sources that contain detailed descriptions of the many water quality problems in the Central Valley and the Delta. A fairly comprehensive reference is the Sanitary Survey of the State Water Project prepared for the State Water Contractors. Although the 303(d) list is a good starting point, there are many water quality problems that are not identified from that list (e.g. pathogens, organic carbon).

Page 5-1 - The heading refers to Agricultural Drinking Water Targets. "Drinking" needs to be eliminated from this heading.

Page 5-2 - The upper and lower Sacramento Basin are defined differently in this section than in the previous section. For example, in Section 4 Upper Sacramento Basin was defined as upstream of the dams whereas in Section 5 it is defined as Shasta Dam to Red Bluff. There should be consistency between the sections to avoid confusion.

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Page 5-2 - The text attributing water quality problems to various sources differs greatly from the material presented in Appendix D. In the text, many of the water quality problems are attributed to urban runoff, whereas in Appendix D mercury is attributed to mines and most pesticide problems are attributed to agriculture.

Section 6 - Existing Programs

Page 6-1 - The text refers to a document possibly being available in spring 1997. The status of this document should be updated.

Page 6-2: In the first paragraph under the Urban Runoff heading, the correct Clean Water Act citation is "(33 U.S.C. Section 1342 (p))".

Page 6-3: In the first paragraph the following statement is made: "It is unlikely that programs that emphasize source controls and elimination of illicit connections will substantially reduce existing urban runoff pollutant loads." Is this statement true or a matter of opinion? If the statement has some factual basis, we suggest that CALFED provide appropriate references. If the statement is a matter of opinion we suggest that it be deleted.

The Central Valley Regional Water Quality Control Board is responsible for preparation and adoption of the Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan), and the periodic review and revision of the Basin Plan. The Basin Plan consists of the designation of beneficial uses for all water bodies covered under the Basin Plan, water quality objectives to protect those uses, and a program of implementation needed for achieving the water quality objectives. Municipal and industrial point source discharges to surface waters are generally controlled through National Pollutant Discharge Elimination System (NPDES) permits. Although the NPDES program was established under the federal Clean Water Act, the NPDES permits are prepared and enforced by the Regional Board, according to California's authority under the Clean Water Act.

Page 6-3 - CALFED needs to provide a brief description of the Coast Guard's program to regulate and control wastewater discharges from boats. The Coast Guard is mentioned, but no details are provided on page 6-3.

Page 6-3 - The Central Valley Regional Water Quality Control Board has not established an Inland Surface Waters Plan, as stated in the text. The State Water Resources Control Board is responsible for developing and implementing the Inland Surface Waters Plan.

Page 6-3 - The text refers to a list of municipalities interviewed about their discharges. No list is provided in the document.

Page 6-4 - The section on pathogens should discuss *Cryptosporidium* and *Giardia* and mention that municipal dischargers are not currently required to monitor for these pathogens.

Page 6-5: The following two programs should be included in the list of agricultural drainage programs:

Dormant Spray Water Quality Program: California Department of Pesticide Regulation; contact person at DPR is Marshall Lee. The purpose of the Dormant Spray Water Quality Program is to prevent aquatic toxicity from organophosphate pesticide residues (e.g., diazinon and chlorpyrifos) in the Sacramento and San Joaquin rivers. Initially, DPR is focusing on promoting voluntary efforts by growers to reduce the movement of these pesticides to surface waters to prevent aquatic toxicity. The program includes monitoring by DPR to evaluate the effectiveness of the program.

Environmental Quality Incentives Program: Natural Resource Conservation Service, USDA. The Environmental Quality Incentives Program (EQIP), authorized under the 1996 Farm Bill, is a voluntary program which provides incentive payments and cost sharing, technical assistance and educational assistance to farmers and ranchers for the implementation of structural and land management practices that address natural resource problems, including areas where agricultural improvements will help meet water quality objectives. In California, the resources of the Bay-Delta and many counties in the Bay-Delta watershed have been identified as priority areas for EQIP funding. The types of conservation practices that are funded through this program include manure management systems, pest management and erosion control.

Another program that needs to be briefly discussed in Section 6 is the Central Valley RWQCB's effort to develop a San Joaquin River Basin Plan amendment addressing salinity and boron. The purpose of the Basin Plan amendment process is to define and quantify the extent of the problem and establish a program to improve salinity and boron water quality in the Lower San Joaquin River at Vernalis and upstream reaches.

Page 6-5 - The Grasslands Bypass Project should be included in the list of on-going programs.

Page 6-5 and 6-6 - The reference to the "Rice Herbicide Program" should be changed to reflect the correct name for that program - the Rice Pesticide Program. The program was

implemented by the Department of Pesticide Regulation in 1983 to control discharges of two rice herbicides, molinate and thiobencarb. In 1990, the program was expanded to include three rice insecticides, carbofuran, methyl parathion, and malathion. In 1991, the plan established performance goals for all five pesticides, under amendments to the Central Valley Regional Water Quality Control Board's Basin Plan. Regional Board staff are currently in the process of amending the pesticide section of the Basin Plan to include defining numeric water quality objectives for the rice pesticides addressed in this program.

There are several references to the "Supplemental Information Section", however, it is not provided in the report.

Section 7 - Action Strategies

General Comment - We are pleased to see that many of the comments of the Ag/Urban Policy Group were incorporated into this document; however, areas where Ag/Urban comments on action strategies were not incorporated into the document are:

5 Mine drainage
6 Reduce toxic effects of copper, zinc and cadmium loadings from urban runoff
7 Reduce toxic effects of nutrient loadings and oxygen depletion through source control of urban runoff
8 Reduce toxic impacts of copper and mercury loadings from wastewater discharges to Suisun Bay and Carquinez Straight
9 Reduce selenium loadings to Delta through control of industrial discharges to Suisun Bay and Carquinez Straight
10 Reduce salinity impacts through source control and treatment of agricultural surface and subsurface drainage in San Joaquin basin; specifically comments on evaporation ponds and reduced salinity loads as a performance measure.
11 Reduce salinity for agricultural source water through improved outflow patterns and water circulation in the Delta

We would like to discuss these suggested action strategies with you because we believe they will strengthen the CALFED Water Quality Common Program.

Page 7-2 - Agricultural drainage actions for the Delta should also include methods to reduce the loading of TOC from the Delta islands.

Page 7-3 - For the Sacramento and San Joaquin basins, pathogens should be included as a parameter to be addressed through agricultural drainage actions, since there are

dairies and rangelands in both basins, which can be sources of pathogens.

Page 7-4 - The copper loading numbers given in the first performance measure under mine drainage do not agree with the copper loading estimates given in Table 4-3.

Page 7-11 - For the action addressing sediment loading, add the word "turbidity" after the word "subsequent".

Appendix C

Many of the comments on Appendix C are presented in the comments on Section 4 of the report. The copy of Appendix C reviewed by the NBA Contractors was missing pages C-3 to C-6, C-11 to C-13, C-18 to C-33, and C-35 to C-38.

We appreciate the opportunity to provide comments to CALFED on the Draft Component Report and hope that our comments will be useful during preparation of subsequent Water Quality Program reports.

Sincerely,

Byron Buck
California Urban Water Agencies

Dan Nelson
San Luis Delta Mendota Water Authority