

DRAFT
Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Executive Summary	<p>The agency is concerned that a natural process (the breakdown of naturally occurring organic materials in the Delta) is being characterized as pollution and laid at the doorstep of agricultural operations in the Delta. It is our belief that at least an equivalent amount of organic carbon would be generated by the natural decomposition of decaying plant materials and peat soils. In fact, such decomposition of organic materials form the very basis of the food chain upon which the ecosystem is dependent. We ask that you modify the report as follows:</p> <p>Page E-4, last paragraph: Of particular concern to drinking water <u>is organic carbon generated by decomposition of the peat soils and plant biomass which occur in the Delta. Much of this organic carbon is currently collected and discharged to the Delta channels by agricultural drainage, although historically the same land mass drained naturally into the sloughs and channels of the Delta.</u></p>	Thomas M. Zuckerman, Central Delta Water Agency	8/13/97	<p><i>Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:</i></p> <p>Rick's Response - undated: Thank you for your comments on the Component Report. I agree we need to be careful how organic carbon inputs to the Delta are portrayed. I also agree with your contention that evidence is lacking to prove organic carbon contributions from Delta islands under agricultural production are greater than might be the case under "natural" conditions. Therefore, there is inadequate scientific support for blaming Delta agricultural interests for causing pollution that exceeds historical conditions. On the other hand, discharges from islands do affect Delta water quality adversely with respect to drinking water supply. From this perspective, organic carbon is a pollutant. In my view, water quality degradation from whatever source is undesirable; and, I think this would be true of discharges from Delta islands whether resulting from agricultural practices or natural conditions. Therefore, I believe it should be CALFED's interest to support measures to reduce problems from this source where feasible, without an intention to single out individuals as causes of the problem. We do not intend to finalize the Draft Component Report, as this is only a working document provided for the use of the WQTG. We intend to incorporate your comments into the Water Quality Technical Appendix to the CALFED Programmatic EIR/EIS where this material will formally appear. Specifically, the changes you recommend to page E-4, last paragraph and page 3-5 first paragraph, seventh sentence, will be adopted. Your comments on Section 2, page 2-2 and page 3-5 last paragraph make reference to average DOC levels found in drinking water supplies in the U.S. We are aware of one or more nationwide surveys. However, it is not clear whether this reference is to one of these surveys or from another source. We would appreciate your providing us with specific support for the statements you recommend.</p> <p>October 27, 1997: References not provided by 10/27/97, so comment was not included in 10/31/97 version of Affected Environment document.</p>

DRAFT
Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Background Section 2	<p>The agency is concerned with organic carbon being characterized as pollution caused by agricultural operations in the Delta. It is our belief that at least an equivalent amount of organic carbon would be generated by the natural decomposition of decaying plant materials and peat soils. We ask that you modify the report as follows:</p> <p>Page 2-2, the second bulleted sentence should be modified to read: Delta exports have elevated concentrations of dissolved organic carbon (DOC) <u>which are comparable to average DOC concentrations found in raw water sources within the Western United States. DOC, when chlorine is used as a disinfectant, is a disinfection by-product (DBP) precursor, and as seawater intrusion occurs in the Western Delta, as a result of low Delta outflow, which is influenced by Delta exports, the potential for formation...</u></p>	Thomas M. Zuckerman, Central Delta Water Agency	8/13/97	<p><i>Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:</i></p> <p>Rick's Response - undated: Thank you for your comments on the Component Report. I agree we need to be careful how organic carbon inputs to the Delta are portrayed. I also agree with your contention that evidence is lacking to prove organic carbon contributions from Delta islands under agricultural production are greater than might be the case under "natural" conditions. Therefore, there is inadequate scientific support for blaming Delta agricultural interests for causing pollution that exceeds historical conditions. On the other hand, discharges from islands do affect Delta water quality adversely with respect to drinking water supply. From this perspective, organic carbon is a pollutant. In my view, water quality degradation from whatever source is undesirable; and, I think this would be true of discharges from Delta islands whether resulting from agricultural practices or natural conditions. Therefore, I believe it should be CALFED's interest to support measures to reduce problems from this source where feasible, without an intention to single out individuals as causes of the problem. We do not intend to finalize the Draft Component Report, as this is only a working document provided for the use of the WQTG. We intend to incorporate your comments into the Water Quality Technical Appendix to the CALFED Programmatic EIR/EIS where this material will formally appear. Specifically, the changes you recommend to page E-4, last paragraph and page 3-5 first paragraph, seventh sentence, will be adopted. Your comments on Section 2, page 2-2 and page 3-5 last paragraph make reference to average DOC levels found in drinking water supplies in the U.S. We are aware of one or more nationwide surveys. However, it is not clear whether this reference is to one of these surveys or from another source. We would appreciate your providing us with specific support for the statements you recommend.</p> <p>October 27, 1997: As of this date no references were provided. Unable to include comment in the October 31, 1997, version.</p>



D-044818
D-044818

DRAFT
Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

D-044819

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	<p>The agency is concerned with organic carbon being characterized as pollution caused by agricultural operations in the Delta. It is our belief that at least an equivalent amount of organic carbon would be generated by the natural decomposition of decaying plant materials and peat soils. We ask that you modify the report as follows:</p> <p>Page 3-5, first full paragraph, seventh sentence should be modified as follows: Sources of Br in Delta water are sea water intrusion, San Joaquin River inflow containing agricultural drainage <u>from lands irrigated with water containing bromides delivered by the export products from the Delta</u>, and possibly...</p>	Thomas M. Zuckerman, Central Delta Water Agency	8/13/97	<p><i>Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:</i></p> <p>Rick's Response - undated: Thank you for your comments on the Component Report. I agree we need to be careful how organic carbon inputs to the Delta are portrayed. I also agree with your contention that evidence is lacking to prove organic carbon contributions from Delta islands under agricultural production are greater than might be the case under "natural" conditions. Therefore, there is inadequate scientific support for blaming Delta agricultural interests for causing pollution that exceeds historical conditions. On the other hand, discharges from islands do affect Delta water quality adversely with respect to drinking water supply. From this perspective, organic carbon is a pollutant. In my view, water quality degradation from whatever source is undesirable; and, I think this would be true of discharges from Delta islands whether resulting from agricultural practices or natural conditions. Therefore, I believe it should be CALFED's interest to support measures to reduce problems from this source where feasible, without an intention to single out individuals as causes of the problem. We do not intend to finalize the Draft Component Report, as this is only a working document provided for the use of the WQTG. We intend to incorporate your comments into the Water Quality Technical Appendix to the CALFED Programmatic EIR/EIS where this material will formally appear. Specifically, the changes you recommend to page E-4, last paragraph and page 3-5 first paragraph, seventh sentence, will be adopted. Your comments on Section 2, page 2-2 and page 3-5 last paragraph make reference to average DOC levels found in drinking water supplies in the U.S. We are aware of one or more nationwide surveys. However, it is not clear whether this reference is to one of these surveys or from another source. We would appreciate your providing us with specific support for the statements you recommend.</p> <p>October 28, 1997: No references provided as of this date. Comments not incorporated into October 31, 1997, version of Affected Environment.</p>

D-044819

DRAFT
Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

D-044820

Topic	Comment	Person/ Organization	Date	Response
Parameters of Concern Section 3	<p>The agency is concerned with organic carbon being characterized as pollution caused by agricultural operations in the Delta. It is our belief that at least an equivalent amount of organic carbon would be generated by the natural decomposition of decaying plant materials and peat soils. We ask that you modify the report as follows:</p> <p>Page 3-5, last paragraph should be modified as follows: MWQI studies have documented that Delta exports contain <u>relatively high concentrations of DOC which are representative of average concentrations found in raw drinking water in the Western United States.decomposing peat soil and crop residues are the major sources of DOC in the Delta contribute on the average some 20 % of the DOC in the water which are exported from the Delta.Utilities must undertake studies efforts to control organic carbon in their source water if TOC exceeds 2 mg/l at the water intake or modify disinfection methods to reduce the formation of THM compounds during disinfection.</u></p>	Thomas M. Zuckerman, Central Delta Water Agency	8/13/97	<p><i>Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:</i></p> <p>Rick's Response - undated: Thank you for your comments on the Component Report. I agree we need to be careful how organic carbon inputs to the Delta are portrayed. I also agree with your contention that evidence is lacking to prove organic carbon contributions from Delta islands under agricultural production are greater than might be the case under "natural" conditions. Therefore, there is inadequate scientific support for blaming Delta agricultural interests for causing pollution that exceeds historical conditions. On the other hand, discharges from islands do affect Delta water quality adversely with respect to drinking water supply. From this perspective, organic carbon is a pollutant. In my view, water quality degradation from whatever source is undesirable; and, I think this would be true of discharges from Delta islands whether resulting from agricultural practices or natural conditions. Therefore, I believe it should be CALFED's interest to support measures to reduce problems from this source where feasible, without an intention to single out individuals as causes of the problem. We do not intend to finalize the Draft Component Report, as this is only a working document provided for the use of the WQTG. We intend to incorporate your comments into the Water Quality Technical Appendix to the CALFED Programmatic EIR/EIS where this material will formally appear. Specifically, the changes you recommend to page E-4, last paragraph and page 3-5 first paragraph, seventh sentence, will be adopted. Your comments on Section 2, page 2-2 and page 3-5 last paragraph make reference to average DOC levels found in drinking water supplies in the U.S. We are aware of one or more nationwide surveys. However, it is not clear whether this reference is to one of these surveys or from another source. We would appreciate your providing us with specific support for the statements you recommend.</p> <p>October 28, 1997: No references provided as of this date. Comments not incorporated into October 31, 1997, version of Affected Environment document.</p>

D-044820



DRAFT
Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Bromides	Dr. Orlob's analysis on San Joaquin River bromides concludes that bromides in the San Joaquin River drainage are predominantly (if not entirely) the result of the export of Delta water affected by sea water intrusion by the export pumps to San Joaquin Valley users. By implication, maintaining sufficient Delta outflow to limit sea water intrusion into the South Delta will, over time, solve the bromide problems for the export projects. The level of Delta outflow required to meet the western Delta water quality standards set forth in the current Bay Delta Plan is sufficient in most instances to limit bromide concentrations at the export pumps to acceptable levels.	Thomas M. Zuckerman, Central Delta Water Agency	9/25/97	<i>Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:</i> October 24, 1997: While essentially true, one point of consideration is future drinking water regulations. Research casts doubt on whether current levels of bromides will be limited by regulations.
Bromides	With regard to bromides in the Delta water supply, I assume you have seen the analysis on San Joaquin River bromides prepared by Dr. Orlob for the South Delta Water Agency. If not, I would be happy to send you a copy. Dr. Orlob concludes that bromides in the San Joaquin River drainage are predominantly (if not entirely) the result of the export of Delta water affected by sea water intrusion by the export pumps to San Joaquin Valley users. By implication, maintaining sufficient Delta outflow to limit sea water intrusion into the South Delta will, over time, solve the bromide problems for the export projects. I believe the level of Delta outflow required to meet the western Delta water quality standards set forth in the current Bay Delta Plan is sufficient in most instances to limit bromide concentrations at the export pumps to acceptable levels. I note from the information you provided me from the Progress Report on Delta Simulation Model Studies of CALFED Alternative 1A, 1C, 2B, 2D, 2E and 3E that there are opportunities to control bromide concentrations at Clifton Court and Tracy PP without redirecting the impacts of bromide and TDS increases to Delta diverters and without the use of isolated transfer facilities (Alternative 3E). Avoiding redirected impacts is, of course, a major solution principle of CALFED.	Thomas M. Zuckerman, Central Delta Water Agency	9/25/97	<i>Appears in 12/23/97 Resolution Plan for Water Quality Actions as:</i> 11/11/97: Follow-up response forwarded to Mr. Zuckerman indicating that we had not received references that were previously requested of him regarding his August 13, 1997 comment regarding average DOC levels found in drinking water supplies in the U.S. Mr. Zuckerman provided his response on September 25, 1997. 12/10/97: On December 3, 1997, a meeting was held between the drinking water industry, USEPA and CALFED to identify source water quality targets for bromide and TOC. As a result of the discussion, urban water agencies are going to further analyze different levels of a constituent and report their findings to CALFED.

DRAFT
Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Organic Carbon	I believe the terminology regarding organic carbon as a pollutant is inappropriate. Whereas organic carbon can become a constraint upon disinfection techniques (depending upon the process chosen), organic carbon is clearly a natural component in surface waters which have organic material in their watersheds. In the broad picture, organic carbon is a beneficial component of surface water supplies, serving as a basic component of primary productivity. It would be much more instructive and accurate to describe organic carbon as a "drinking water disinfectant constraint" rather than a "pollutant." The term "pollutant" has technical meaning in the clean water statutes which might dictate removal. In the case of organic carbon, this would engender more harm than good, especially given the opportunities for specific removal at reasonable cost by enhanced coagulation in the drinking water treatment process and/or by alternative disinfection techniques.	Thomas M. Zuckerman, Central Delta Water Agency	9/25/97	<i>Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:</i> October 24, 1997: Comment noted. Many of the parameters of concern are natural constituents.

D-044822

DRAFT
Comments from Stakeholders
Water Quality Program Component Report (August 6, 1997)

Topic	Comment	Person/ Organization	Date	Response
Organic Carbon	Enclosed is a copy of Table III-7 which appeared at page 22 of M. Kavanuagh Testimony submitted as Exhibit DW-13 in the recently concluded evidentiary hearings on the Delta Wetlands Project before the State Water Resources Control Board. Data sources are identified in the footnotes. With regard to your comments about organic carbon as a "pollutant," I continue to believe the terminology is inappropriate. Whereas organic carbon can become a constraint upon disinfection techniques (depending upon the process chosen), organic carbon is clearly a natural component of surface water supplies, serving as a basic component of primary productivity. I believe it would be much more instructive and accurate to describe organic carbon as a "drinking water disinfectant constraint" rather than as a "pollutant." The term "pollutant" has technical meaning in the clean water statutes which might dictate removal, which, in the case of organic carbon, would engender more harm than good, especially given the opportunities for specific removal at reasonable cost by enhanced coagulation in the drinking water treatment process and/or by alternative disinfection techniques.	Thomas M. Zuckerman, Central Delta Water Agency	9/25/97	12/10/97: Organic carbon, like copper, selenium and nutrients is considered a parameter of concern to water quality because it is impairing one or more beneficial uses. Parameters of concern like these are a natural component of surface water supplies, however, at high enough concentrations they may impair beneficial uses.
Organics/ Pesticides	References to organics/pesticides seem to be overrated. The report does not differentiate between products which are no longer registered or used (i.e., DDT, toxaphene, chlordane) and other pesticides currently registered. It lumps the older chlorinated hydrocarbons, which have significant different environment effects and degradate properties, with the currently registered products. The inference being that all these products behave the same.	Dennis Kelly, Novartis Crop Protection, Inc.	10/3/97	<i>Appears in 10/31/97 Resolution Plan for Water Quality Affected Environment Report as:</i> October 24, 1997: A differentiation between no longer registered, strongly lipophilic pesticides and those currently registered pesticides which have shorter half-lives and less benign environmental behavior will be incorporated. Comment incorporated October 27, 1997, into the October 31, 1997, version of the Affected Environment document.