

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1056	1	ch 6		GL, EPA	Comparison of Alternatives (both in Table 6.1-1 and in the text comparing the alternatives)) does not reflect that the various configurations under Alternative 3 are generally believed to provide significantly better water quality for those exporting water out of the South Delta. Where is the discussion on the impact of TOC and bromide levels on drinking water quality, and how this distinguishes between the alternatives? While this issue will be discussed in greater detail in the Phase II document, a condensed presentation of this issue should be incorporated into this main EIS/EIR document.	**	
842	5	ch 6	6.1.2-1	Holt, USBOR	The name "mass fate" is unclear to most readers and can be confused with mass of fish, pesticides, etc., as well as sediments.		
1501	9	? ch 6?	Water Quality	P. Wisheropp: Woodward- Clyde	This section reads differently than the previous section. Discussion is general and there is little mention of the modeling.		
188	574	6 -	Chapter 6 Physical Environ-ment	Annalena Bronson, DWR	Physical environment -should discuss impacts to flood management and to the Sacramento River Flood Control Project and the San Joaquin River Flood Control System. Impacts to levees and flood control are discussed in numerous places throughout the document. Maybe this is unavoidable in light of how you have chosen to organize the document, but it makes it very hard to quickly find the information that is important to DWR and the Reclamation Board and others who depend on the flood control system.		P
205	575	6-9	Hydrodynamics	Mike Ford, DWR	Hydrodynamic conditions are affected by tidal conditions, in addition to exports and San Joaquin inflows.	T	
203	576	6-9	Water Quality	Mike Ford, DWR	The text should include a discussion about agricultural drainage from the west side of the San Joaquin Valley and it effect on water quality in the south Delta. This is key to generally poor water quality at Vernalis. I could not find such a discussion.	T	

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239	577	6-27		George Barnes, DWR	<p>Beginning at the top of the page I suggest the following wording replacement to the first paragraph and modification to the 2nd paragraph.....</p> <p>DWRSIM is a planning simulation model which is used to simulate the Central Valley Project (CVP) and the State Water Project(SWP) system of reservoirs and conveyance facilities on a monthly time step using 73 years of historic hydrology which is updated to reflect present or future land use. The model is used to analyze the potential effects of proposed alternative new features such as additional reservoir storage or Delta export conveyance as well as any changes to criteria controlling project operations. In conducting these studies, expansion of the SWP and CVP facilities and/or water demands were often used as surrogates to analyze the potential effects various alternatives considered. Model results provide information on expected reservoir storages, river flows; Delta inflows, outflows an exports and water deliveries. In addition, spreadsheet models and other analytical tools were used for the alternatives analyses.</p> <p>The monthly flows calculated by DWRSIM for the Sacramento River and for the San Joaquin river are used as input to the Delta hydrodynamic/water quality model DWRDSM2.</p> <p>DWRDSM1 and more recently DWRDSM2 are used to simulate the channel flows, tidal effects, and water quality of the Bay-Delta estuary. DWRDSM2 uses a 60-second time step in simulating Delta hydrodynamics and a 15-minute time step in calculating water quality while simulation results are generally presented as daily values. The model was used.....(continue with remainder of 2nd paragraph).</p>		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
					>PAGE 6-33 Last Paragraph - I (George Barnes, DWR) do not agree with the stated "hypothesis" that a river flow of 60,000 cfs is necessary to scour sediments from the stream channel which is considered important to renewing spawning gravels. Sediment transport is a function of the velocity cubed. Releases from Shasta will generally be sediment deficient and therefore looking to pick up sediments until flow carrying relationships are satisfied. However, during any moderate stream flow rises up to the 60,000 cfs threshold proposed, sediment will be picked up in the tributaries (Cow, Cottonwood, Battle, Paynes and Deer Creeks etc.). Because flow in the main stem Sacramento may be slower, sediment from the tributaries may actually be deposited in these spawning beds. This would depend on the river location and other factors such as velocities on the outside of a river bend versus the inside. I was not able to attend the workshop and hear the views of other experts, but I feel if this requirement remains as a CALFED goal, the benefits of this proposal should be measured and documented before it is implemented as a requirement for permitting diversions to storage of a new reservoir.>		
240	578	6-41	Forth paragraph	George Barnes, DWR	DWRDSM2 was used in the last round of studies produced for CALFED staff. Should a global search be done to reflect this change?		
204	579	6-58		Mike Ford, DWR	The discussion of Alternative 3 omits any indication of water quality impacts to south Delta agriculture that would result from an isolated facility. It seems like this alternative would result in a degradation of their water quality and, if so, there should be some discussion of it.	T	
187	580	6-	Chapters 6-9:	K. Kelly, DWR	As a possible way of making this document less dry and more warm, consider beginning chapters 6-8 or 9 with an appropriate acknowledgment of concerns that have been voiced in public forums. For example, chapter 8.10 Environmental Justice: Petrie's concern for all the "little people" resulting from land use changes. (I am not recommending using his words.) Another example is Chapter 6.2 where acknowledging third party impacts could be done in the beginning followed by a statement of how the analyses have been done with this and other concerns in mind...		P
1300	581	6-1		J.Davis: Woodward-Clyde	Reference to Table 6.1-1 needs to explain the content of table better. Is it a comparison to No Action Alternative or Existing Condition?		

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1525	582	6-1 through 6-6		SWRCB	These pages discuss the water supply impacts of the alternatives. Other related effects, such as X2 location, are also discussed here. These effects are caused by the operating criteria used to model the alternative, not by the changed configuration. This fact is not discussed in the text, and the operating criteria that cause the differences in water supply impacts are not discussed.		
1299	583	6-1	Impacts box	P. Wisheropp: Woodward-Clyde	Use of non-CEQA terms such as "may", "generally"		
540	584	6-1	Left Column, Last Paragraph	DFG	Modify third to last sentence to read: "For the Bay-Delta region specifically, changes in flow conditions are also considered adverse and significant from the perspective of water supply and water quality if they have the potential of increasing reverse flows in the western Delta." Modify the second to the last sentence to read: "It is recognized that different significance thresholds and different measurements of changes in flows and changes in Bay-Delta hydraulic conditions may apply to other resources. Significant, adverse impacts may occur to those resources even when those impacts were not considered significant for surface water resources."		
539	585	6-1	Left Column, Paragraph 1	DFG	Add the following sentence to the end of the paragraph, "The information in this summary displays impacts relative to the No-Action Alternative but does not indicate the relative magnitude of beneficial or negative impacts needed to compare among the different with-project alternatives".		
1301	586	6-1	Para 2	P. Wisheropp: Woodward-Clyde	The significance thresholds are not defined. Saying "...reduced flows in dry periods,..." provides no measurable criteria.		
1303	587	6-1	Para 2	P. Wisheropp: Woodward-Clyde	Where are the impacts to channel flows measured? What river systems?		
1302	588	6-1	Para 2	P. Wisheropp: Woodward-Clyde	What is a dry period? 1928-1934? 1976-1977? Individual dry and critical years?		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
711	589	6-1 to 8-283	Chapters 6, 7, and 8	WAPA	The tables for summarizing environmental impacts by issues across alternatives are of limited value and misleading to the reader because: 1) there is no discussion in the PEIR/EIS on how the methodology used to assign the symbols in these tables; and 2) the terminology in the tables is not consistent with the accompanying text. The methodology for assigning the symbols should be added to Section 5.3. Concerning the contrasting terminology, perhaps the methodology could clarify this problem. An example of contrasting terminology is the use of " <i>significant adverse air effects</i> " used to summarize the environmental consequences of the alternatives in Table 3.1-1 and the box on page 6-139, the use of " <i>potentially significant direct, short-term, construction-related air quality impacts</i> " in the summary of Section 6.6, and the majority of the impacts in Table 6.6-1 which were assigned the level " <i>not significant</i> ". The inconsistency in terminology will lead a reader that relies on the tables for summarizing environmental impacts to come to a different conclusion from one that relies on Table 3.1-1 or the text.	1.	
1179	590	6-1	1st column, 2nd paragraph:	FWS	Paragraph discusses the use of DWRSIM and SWRSIM to model flow related changes under existing conditions and each alternative. The discussion does not indicate how the modeling dealt with averages, ranges, or extremes. These are important to discuss in regard to biological resources. If a channel is filled on monthly average to a depth of 1 meter but on certain days it is empty, fish will be profoundly affected. Indicate what the averaging interval was, the range of the average including the high-low extremes.		
1524	591	6-1	2 nd col	SWRCB	It is not clear why the no action alternative results in a reduction in water supply. The no action alternative, which is modeled at the 2020 demand level, should result in increased exports compared to existing conditions unless new regulatory constraints are assumed. Further explanation of the no action conditions and the existing conditions would be helpful. These conditions may be adequately defined in an appendix, but they should be described in the main document as well.		
1373	592	6-10	Figure 6.1.1-1	P. Wisheropp: Woodward-Clyde	Need more explanation about model results. The figure title says average tidal flow rates, but actually these are average flow rates that account for the tide and freshwater inflow.		
1271	593	6-100	4	Glenn Stanisewki NRCS	Only four general soil types are listed though 5 are mentioned		
1272	594	6-100	12	Glenn Stanisewki NRCS	Would prefer to use the terms soil rather than farmland		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1270	595	6-100	1-3	Glenn Stanisewski	Would like to see a statement like "soils vary as a result of differences in Climate, Parent Material, Biologic Activity, Topography and Time"		
1273	596	6-100	15	Glenn Stanisewski NRCS	Soils qualify as Prime Farmlands where drainage has been improved and irrigation is used.		
1274	597	6-100	20	Glenn Stanisewski NRCS	Re-vise statement to read "Most of the remaining soils of the Delta Region qualify as farmlands of Statewide Importance".		
1275	598	6-100	23	Glenn Stanisewski NRCS	Would like to add statement "These affects are brought about by the flood protection of levees and the lowering of water tables by pumps and drainage ditches in order to make production possible".		
1276	599	6-100	32	Glenn Stanisewski NRCS	revise statement to read "is largely attributed to biochemical oxidation of organic soil material as a result of long-term drainage and flood protection".		
1277	600	6-100	64	Glenn Stanisewski NRCS	revise statement to read "The wind erodibility of Delta soils are due to the organic matter contained in them". "Delta organic soils are susceptible to wind erosion".		
879	601	6-103		Holt, USBOR	Please refine the reference to the drainage area of the Sacramento River in para. 3. Do you mean it drains an area of 21,000 above the confluence of the Feather and Sacramento Rivers or do you mean that the drainage are between the Feather River and the Delta is 21,000 square miles? The subsequent reference to the flow of 19,000 cfs suggest you meant the former but said the latter. (Note page 7-63 says the region contains 26,960 square miles).		
1278	602	6-103	Paragraph 8	Glenn Stanisewski NRCS	Revise paragraph to read four major landform types : 1) Floodplain, 2) Basin Rim/Basin Floor, 3) Terraces and 4) Foothills and Mountains. Would like to replace the term "upland" with "foothill".		
1279	603	6-103	Paragraph 9	Glenn Stanisewski NRCS	"The upper watersheds of the Sacramento River Region area mainly drain foothill soils". "These soils are found on the hilly to mountainous terrain surrounding the Sacramento Valley and are formed in place through the decomposition and disintegration of the underlying parent material".		
1280	604	6-103	Paragraph 9	Glenn Stanisewski NRCS	Add "(> 40 inches)" to deep depth to bedrock, "(< 20 inches)" to shallow depth to bedrock and "(<12 inches)" to very shallow depth to bedrock.		
880	605	6-104		Holt, USBOR	Some soils depth are considerably greater in at least some alpine meadows. In Red Clover Creek, the stream had entrenched itself 15-20 feet prior to restoration.		

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1281	606	6-104	Paragraph 2	Glenn Stanisewski NRCS	"Deep soils occur in the high rainfall zones at higher elevations in the foothills and mountains surrounding the Sacramento River valley".		
1282	607	6-104	Paragraph 3	Glenn Stanisewski NRCS	Delete "upland", change calcic to calcareous, change noncalcic to noncalcareous. Add e.g. to (Lassen soils) and (Vallecitos soils).		
1285	608	6-107	Paragraph 10	Glenn Stanisewski NRCS	Delete the term "upland" where used. Add depths in parentheses to depth classes where used. Deep (> 40 inches), Moderately Deep (20 - 40 inches), Shallow (< 20 inches) and Very Shallow (< 12 inches)		
1283	609	6-107	Paragraph 8	Glenn Stanisewski NRCS	"The San Joaquin River Valley contains four major landform types: Floodplain, Basin Rim/Basin Floor, Terraces, and Foothills and Mountains". "Each with its own characteristic soils".		
1284	610	6-107	Paragraph 9	Glenn Stanisewski NRCS	Replace "upland" with "foothill".		
1259	611	6-109	Section 6.3.2.2, 1st line	Michelle Lynch, Woodward-Clyde	Change "Ipects" to "Impacts"		
206	612	6-11	Tab 6.1.1-1	DWR Modeling Support	This table should state that the results from the No Action Alternative are being used for Existing Conditions since the Existing Conditions were not simulated with the Delta model.	T	
829	613	6-11	Table 6.1.1-1	Slavin, USBOR	Average flow for San Joaquin River at Antioch (55,602) is not consistent with map information on previous page.		
1375	614	6-11	Table 6.1.1-1	P. Wisheropp: Woodward-Clyde	Too much info in table. Narrow the locations down to a reasonable number of important locations.		
1374	615	6-11	Table 6.1.1-1	P. Standish-Lee: Woodward-Clyde	Should state export rates. Is it zero at "high outflow?"		
1260	616	6-111	1st line	Michelle Lynch, Woodward-Clyde	Put "bullet" in front of item		
881	617	6-112	Paragraph 8	Roefs, USBOR	The modeling assumption of operational criteria to avoid salinity intrusion from the ocean should be made explicit in the operation study, and text.		

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1261	618	6-112	2nd para.	Michelle Lynch, Woodward-Clyde	It is not clear from reading this paragraph or the description of alternatives (Ch. 2), how the increased pumping and flows occur under this alternative. Clarification is needed to describe that the increased pumping would lead to increased flows because of upstream releases (if this is true).		
1265	619	6-114	"Bay Region" section	Michelle Lynch, Woodward-Clyde	Change subsection heading "Alternatives 1, 2, and 3" to "All Alternatives" and remove "Alternatives" from beginning of next paragraph, since both headings have the same meaning.		
1264	620	6-114	1st full para., last sentence	Michelle Lynch, Woodward-Clyde	Move to "Alternative 3" section with previous discussion of in-Delta storage impacts.		
1262	621	6-114	1st full para.	Michelle Lynch, Woodward-Clyde	In-Delta storage would occur under alternatives 3B, 3E, or 3I, not all alternatives. The discussion of impacts related to in-Delta storage should be moved to the "Alternative 3" section.		
1263	622	6-114	1st full para., line 9	Michelle Lynch, Woodward-Clyde	The sentence says that levees at the "site" may be susceptible....What site? Perhaps "site" should be changes to "Delta". Remove the word "also" from this sentence.		
1269	623	6-115	right col., 1 st para.	Dan Johnson NRCS most pronounced in <i>West Stanislaus County and the Sacramento Valley</i> .		
1286	624	6-115	Column 2, para 2	J. Lowrie NRCS	If water transfer program results in fallowing of ag lands within San Joaquin Valley there could be an increased potential for wind erosion on these fallowed fields. This potential adverse impact can be minimized by establishing vegetative cover on fallowed areas or by employing bedding or other tillage practices.		
272	625	6-116	Section 6.3.2.5	Sandino, DWR	Section on geology mitigation is helpful in listing possible mitigation measures. It would also helpful to identify the entity that may be responsible for implementing them where possible even if it is only done in general terms. For instance, the agency carrying our a levee project would be responsible for erosion control measures.	IA	
274	626	6-117	Potentially Significant Unavoidable Impacts	Chuck Vogelsang, DWR	This section is to the point in recognizing the unavoidable loss of soils and farmlands. It should include that the impact is for all alternatives except IA.	IA	
1266	627	6-117	2nd to last bullet	Michelle Lynch, Woodward-Clyde	This sentence is awkward. Perhaps using another format, such as a colon and numbers, would make this more readable.		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
712	628	6-118	Section 6.4	WAPA	The second bullet in the box should be changed to " <i>greater potential noise effects than No Action Alternative</i> ".	2.	
208	629	6-12		K. Kelly, DWR	Average simulated flow rates in Table 6.1.1-1 range from -3809 to 185000 for high flow. Text should explain what the negative signs mean and their significance and discuss the "Max seaward" and "max landward" columns.	P	
1376	630	6-12	General Comment	P. Wisheropp: Woodward-Clyde	The word "diverted" is used in the same context whether it is an export or if water flows into a certain Delta channel.		
830	631	6-12	Para. 7	Roefs, USBOR	Salinity differences between Clifton Court and Tracy Pumping Plant indicate that much of the flow is in Old River under drought conditions. Perhaps it would be helpful to identify which reach of Old River is being discussed.		
207	632	6-12	2 nd Paragraph	DWR Modeling Support	Showing the overall range of flows over the whole Delta is meaningless due to tidal movement of water in a complex system of large and small channels (the smallest flow in the Delta will always be very small and the largest flow will always be large regardless of the alternative).	T	
831	633	6-12/13	general	Holt, USBOR	The discussions of water flows in the Delta under varying conditions would be clearer if simple figures were used that depict, and label the places, and show the percentages of flow as broad arrows.		
1398	634	6-12-13	General Comment	P. Wisheropp: Woodward-Clyde	Can all of these numbers be shown on simple figures of the Delta?		
275	635	6-126	Potentially Significant Unavoidable Impacts	Chuck Vogelsang, DWR	Good language for finding no significant unavoidable noise impacts "identified at this programmatic level".	IA	
273	636	6-126	Section 6.4.2.7	Sandino, DWR	Mitigation discussion in noise section is helpful. Is it possible to conclude that all potentially significant impacts may be reduced to a level of non-significance?	IA	
276	637	6-128	Table 6.5-1	J. Turner, DWR	Need to add Navigation under the impact issues in the Delta Region. Need to add significant and not mitigable impacts under any alternatives which include the fish control structure, and the flow control structures at Old River near Tracy and Grant Line Canal.	IA	

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
277	638	6-129	Line 14	Spaar, DWR	Ecosystem Restoration - Potential restoration activities could result in short-term localized impacts of traffic routes during construction activities, such as river restoration activities planned for the San Joaquin River Region.	IA	
234	639	6-13		DWR O&M	The importance of drinking water quality is lost in the water resources section. There should be greater emphasis on the beneficial effects of reducing salts, bromide, and disinfection by-product precursors.	T	
1377	640	6-13	All	P. Standish-Lee: Woodward-Clyde	This water quality affected environment section is lacking discussion of ambient concentrations and distribution of constituents and parameters of concern in the system		
235	641	6-13 through 6-15	"Water Quality"	Steve Hayes, DWR	Dissolved oxygen issues should be mentioned, because, much like body temperature, dissolved oxygen is an indicator of the overall health of the System. In portions of the Delta, such as the eastern Stockton Ship Channel, dissolved oxygen levels routinely fall below 5.0 mg/L in the late summer and early fall due to low inflows, warm water temperatures, high BOD, etc.	T	
1380	642	6-13	Col 2; Para 8; Line 4	P. Standish-Lee: Woodward-Clyde	Add add'l sentence: "Bromides are a particular problem for municipal water supply"		
1378	643	6-13	Col 2	P. Standish-Lee: Woodward-Clyde	Add additional bullet: "Runoff from logging areas contains sediment, turbidity, nutrients, and some pesticides"		
1379	644	6-13	Para 3	P. Wisheropp: Woodward-Clyde	This is a water quality intro that belongs earlier in the text. The entire water quality section up to page 15 is out of place.		
1050	645	6-13	1st column, 1st bullet	GL, EPA	This text should be broken into two bullets (first one addressing mine drainage, second one addressing storm and urban runoff).		
1051	646	6-13	2nd column, 6th bullet	GL, EPA	These bullets identify significant water quality issues in the Delta. Need to add discussion on the impacts of seawater intrusion (specifically bromides) on drinking water beneficial uses. This could be added to the first bullet that discusses eastward movement of high-salinity water. The key issue is to bring forward the issue of bromides and its impact on drinking water quality (due to its role in the formation of unwanted disinfection byproducts).		

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278	647	6-133, 134	Various	V. Pacheco, DWR	It is my understanding that Union Pacific Railroad and Southern Pacific merged in 1996.	T	
280	648	6-134		White, DWR	Commercial shipping ports should be checked. El Segundo and Redondo Beach are not big commercial shipping ports. Redondo Beach has a marina, but not commercial shipping. Some of the others are questionable commercial shipping ports.	T	
279	649	6-134	Col 1, 5 th para	White, DWR	Interstate 15 runs NORTH and does not go to Arizona, and I-8 runs east from SAN DIEGO.	T	
281	650	6-134	6.5.5.2	J Turner, DWR	In the section on transportation, no mention is made of impacts to navigation, except to shipping routes. In the Interim South Delta Program DEIR/EIS, there are unavoidable, significant impacts to transportation due to the fish control structure and two of the flow control structures. The significance criteria for that analysis needs to be included here. It is: "Navigation impacts are considered significant if implementation of a proposed action would create a substantial hazard to navigation or substantially affect the ease of navigation."	IA	
1192	651	6-135	2nd column, 1st paragraph:	FWS	Paragraph lists transportation activities and resulting impacts that may occur due to the Program Alternatives. Include impacts of bridge construction and the relocation of roads on environmental resources. For example, relocation of a road into kit fox habitat might cause destruction of dens, oil and chemical spills, and mortality due to vehical strikes.		
282	652	6-135	Col2, 5 th para	White, DWR	The description of the "SWP and CVP Services Area Outside the Central Valley" fails to mention many other significant areas: Riverside, San Bernardino, eastern Kern, San Luis Obispo, and Santa Barbara counties.	T	
283	653	6-136	Insert after 3rd paragraph; repeat insert in column 2, after discussion of ship routes	J. Turner, DWR	Need to insert information about navigation impacts due the barriers mentioned in the previous comment. Text on pages 16-16 and 16-17 of the ISDP EIR/EIS discuss navigation impacts. Note: the Middle River flow control structure has a less than significant impact because boat use in this area is very infrequent. Also, the other three control structures will all be equipped with boat locks to allow boat passage. We can provide a copy of the relevant text.	IA	
882	654	6-137		Holt, USBOR	The impact of raising Shasta Dam could require relocation of the RR and the I-5 bridge. This potential impact should be stated.		

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284	655	6-138	Potentially Significant Unavoidable Impacts	Chuck Vogelsang, DWR	Table 6.5-1 should reflect these findings of significant unavoidable transportation impacts and blackened circles should be placed in appropriate categories.	IA	
710	656	6-139	Section 6.6	WAPA	Air Quality. The potential impacts of substituting thermal and/or fossil fuel electric generation to compensate for potential reductions in CVP and SWP hydroelectric generation does not appear to be addressed. We did not find any reference to this issue, which should be addressed in this section.		
236	657	6-14	6.1.1-2	DWR O&M	Under the column "Urban" the "Other" water quality parameter should be dropped or identified, since other is very ambiguous. Actually the table is of little value since "of concern" means different things. Nutrients for example are of concern for urban and environment for different reasons.	C	
883	658	6-141 6-151	In the WUE Program	Slavin, USBOR	Please acknowledge the impact on Air Quality during the development of recharge basins related to EWMP for optimizing conjunctive use of surface and groundwater.		
285	659	6-147	Sec 6.6.1.5	Stuart, DWR	San Francisco Bay Air Basin is outside the Central Valley, but not in this region.	T	
286	660	6-149, 150		V. Pacheco, DWR	The potential effects of MTBE from increased emissions on the Delta region and new reservoirs are not discussed.	T	
1041	661	6-15		CY, EPA	Under "water supply and water management" (within the Delta) provide information on "existing conditions" flows (inflow, outflow) as well as "no action." The conclusion that "no substantial effects [flows, velocities, stages] on the Delta are expected for the No Action Alternative" is inconsistent with Table 6.1-1. Better documentation will be needed.		
238	662	6-15	Second parag	J Turner, DWR	This discussion of the entrapment zone is outdated and should be replaced with current information on the X2 relationship as a measure of biological productivity in the Bay/Delta interface.	T	

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237	663	6-15	Section 6.1.1.1	R. Tom, DWR	<p>On page 6-15 in the fourth paragraph on the left hand side, a discussion is provided on loading information, and the limitations and assumptions used when developing the loading information. However, much of the annual loading information may be of little value, considering the spatial and temporal variations in concentrations for many pollutants (e.g., pesticides). For some pollutants, more meaningful comparisons may be made through mass load calculations limited to shorter time periods (e.g., seasons) and to specific geographic areas (e.g., agricultural areas, etc.).</p> <p>Finally, at the end of the same paragraph, the definition of average annual load does not seem accurate. The sentence currently states that the average annual load is the sum of the average daily loads for the year divided by the number of days per year. Based on this definition, the average annual load would be equal to the average of the "average daily load" for the year.</p>	T
1382	664	6-15	Col 1; Para 2; Line 6	P. Standish-Lee: Woodward-Clyde	Add "and adjacent habitats support" after "zone"	
1383	665	6-15	Col 1; Para 4; Line 6	P. Standish-Lee: Woodward-Clyde	Add "in source discharges or receiving waters" after "concentrations"	
1384	666	6-15	Col 1; Para 1; Lines 8 & 9	P. Standish-Lee: Woodward-Clyde	Add "and urban runoff" after "years". Add "drinking water supply" after "environmental"	
1381	667	6-15	Para 6	P. Wisheropp: Woodward-Clyde	This paragraph presents one more set of Delta inflow numbers. These are associated with No Action, even though the existing conditions are being discussed.	
1052	668	6-15	2nd column, 1st partial paragraph	GL, EPA	The last sentence stated that average annual load equals "the sum of average daily loads for the year divided by the number of days per year" is confusing to the reader as it doesn't intuitively make sense. This needs to be further clarified.	
287	669	6-152	Potentially Significant Unavoidable Impacts	Chuck Vogelsang, DWR	Table 6.6-1 should reflect these findings of significant unavoidable air quality impacts and blackened circles should be placed in appropriate categories.	IA

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832	670	6-16	general	Holt, USBOR	There should be a discussion of metals contamination sources in the Bay also include the old mercury mines in the South Bay (e.g. the New Almaden mining district) and modern sources such as the refineries in the Carquinez Straits which I understand release significant amounts of selenium. (They may also be sources of substantial amounts of vanadium if they process Santa Barbara crudes. The vanadium content of the crude oil in the Santa Ynez project, for example, is nearly at economically recoverable levels).		
1385	671	6-16	Para 10	P. Wisheropp: Woodward- Clyde	One more set of Delta outflow numbers. Page 16: <4 MAF to nearly 60 MAF. Page 15: <8 MAF to >68 MAF. Page 9: <7 MAF to >70 MAF.		
1053	672	6-16	1st column, 1st full paragraph	GL, EPA	The reader would be greatly helped by the addition of a map or figure that visually depicts the the locations of the various Bays. From the text, it isn't clear that San Pablo Bay lies west of Suisun Bay and that South Bay is the southern most portion of San Francisco Bay.		
1054	673	6-16	2nd column, 3rd full paragraph	GL, EPA	This paragraph on the South Bay needs: (1) to explain that South Bay is really just the southernmost portion of San Francisco Bay (versus a distinct bay such as San Pablo or Suisun); and (2) additional text to the effect that "Delta outflow has a strong influence on that amount of time water resides in the South Bay. During high flow periods water may circulate through the South Bay in two to three weeks; under low flow conditions, it may take more than three months for water in the South Bay to move northward into the Central Bay." (Citation - State of the Estuary Report, 6/92)		
1389	674	6-17	Col 1; Para 4; Line 11	P. Standish-Lee: Woodward- Clyde	Is this the discharge at Freeport?		
1386	675	6-17	Para 4	P. Wisheropp: Woodward- Clyde	Delete the statement about the area upstream of Freeport or provide more information.		
1387	676	6-17	Para 5	P. Wisheropp: Woodward- Clyde	Confusing paragraph. The second sentence appears to need the phrase "bypass the Sacramento area" instead of "to the Sacramento area". The paragraph needs to be rewritten because it is incorrect as is.		
833	677	6-17	Paragraph 5	Holt, USBOR	This paragraph is unclear and confusing, suggest a re-write.		
1388	678	6-17	Para 7	P. Wisheropp: Woodward- Clyde	Put the flow numbers in a table.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
834	679	6-17	Paragraph 8	Holt, USBOR	Note that it should be "Clair Engle Lake," not "Clare Engle Lake."		
1529	680	6-18		USDA-FS	Upper Watersheds. The PEIS should include more information on the role of upper watersheds. This information should be included in the Watershed Management Strategy Currently under preparation. Also other sections seem to imply (eg, Regional Economics, Urban Resources) that there will be no impact to upper watershed communities. If this is true, then that information should be documented and incorporated into the PEIS		
1390	681	6-18	Para 1	P. Wisheropp: Woodward-Clyde	Numbers conflict. "Historic Feather River allocations have been about 0.87 MAF for instream flows..." Two sentences later: "Historic Feather River allocations have been 0.23 MAF of instream flows..."		
1391	682	6-18	Para 1	P. Wisheropp: Woodward-Clyde	Need to explain with these types of numbers that instream flows and diversion amounts are not mutually exclusive. A city may divert water after that water has been used to meet an upstream instream flow.		
194	683	6-2, 7-2 and so on and 6-39, 6-55 and so on	Summary Tables, table 6.1-1, table 7.1-1 and so on, and S6.1.2.7, and so on, Potentially Significant Unavoidable Impacts sections	Chuck Vogelsang, DWR	I think the blackened circle representing "significant and not mitigable" impacts in the summary tables should reflect what is stated in the significant unavoidable impacts sections. CEQA requires that findings be made for projects that are approved but have significant environmental impacts that can't be mitigated. These unavoidable/unmitigable impacts should be clearly identified so that the appropriate findings can be made.	IA	
195	684	6-2, 7-2 and so on	table 6.1-1, table 7.1-1 and so on, Environmental Impact summary tables	Chuck Vogelsang, DWR	These tables provide summaries of impacts to the various resource types. Many of the Impact Issues have identical levels of impacts across the alternatives. I'm interested in the differences in the level of impact among the alternatives. Another table should be produced from these tables that delete Impact Issues rows where the level of impact are identical. This would provide the reader a good summary of the differences in the level of impact among the various alternatives. You could title these tables something like, "Summary of environmental impacts related to (resource category) that differ among alternatives". PS - I'm not suggesting you delete the existing summaries, showing that there is no impact across a resource category is also important.	IA	
193	685	6-2	Table 6.1-1	Stuart, DWR	Many of the tables throughout the volume do not use consistent names for the regions. This table calls a region "SWP and CVP Service Areas" where the text refers to the "SWP and CVP Service Areas Outside Central Valley". See Table 7.1-2. See Table 8.1.1-1	C	

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
189	686	6-2	Table 6.1-1	K. Kelly, DWR	Should explain what the double symbols mean.	P	
541	687	6-2	Table 6.1-1	DFG	Delta-Salinity/Bromide: The program has concluded that differences in bromide concentrations is one of the biggest differences among alternatives. Major changes are needed in the Delta and Service area sections in this table to reflect that. It isn't clear why Alternative 3A indicates that it has the potential for a greater adverse effect on water supply than Alternative 1A. This should be explained.		
819	688	6-2	Table 6.1-1	Gore, USBOR	Some discussion of channel geomorphics should be included in the "Riverine Hydraulics and Hydrodynamics" section.		
820	689	6-2	Table 6.1-1	Gore, USBOR	Many cells in the table designate the impact as "Significant and mitigable" and "Beneficial." Some better explanation of "Significant and mitigable" and "Beneficial" impacts needs to be provided.		
1046	690	6-2	Table 6.1-1	GL, EPA	Given that the modeling analyses for water quality focus on salinity, bromides and DOC levels, these parameters should be culled out separately in this summary table. Insert separate entries for salinity and bromide, and add one specifically for dissolved organic carbons. Conclusions in text on how alternatives differ in water quality impacts/benefits are not reflected in summary Table (e.g., salinity, bromides). (See comments 11-13 below.)	**	
1182	691	6-2	Table 6.1-1	FWS	The assumption that some significant impacts are "mitigable" needs additional support in both the Table and, especially, the narrative. How do we decide that a particular impact is (or is not) mitigable? What specific mitigation is proposed? How does incorporating this mitigation into the alternative affect its overall performance? Explain, for example, how the "significant and mitigable" effects of No Action on delta outflow would be mitigated.		
1181	692	6-2	Table 6.1-1	FWS	Presentations like this Table call into question the usefulness of the PEIS analysis. At this level of detail, there seem to be few meaningful differences among the alternatives. At the very least, the Table should highlight significant differences, and the narrative should include a discussion focused on these differences, to support the eventual selection of a program alternative.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1034	693	6-2	Table 6.1-1 and text	CY, EPA	The Table at first glance appears to summarize impacts of the Alternatives as a whole, whereas the information reported refers largely to modeling which reflects the variable components (storage/conveyance). On page 6-37 there is a separate discussion of ERPP benefits, for example. Be clearer up front whether, at this time, an impact summary is partial or reflects integration of all components of an alternative. To the extent possible, the EIS should provide an integrated benefits/impacts summary as well as analysis of benefits/impacts of components.		
1304	694	6-2	Table 6.1-1	P. Wisheropp: Woodward-Clyde	Need to describe locations for descriptors. All of the Impact Issues need to be defined. For ex., Delta Region, Surface Water Quality, Pollutant Loading (Construction): is this impacts in the Delta from upstream construction or Delta construction.		
1305	695	6-2	Table 6.1-1	P. Wisheropp: Woodward-Clyde	Is this table an average, wet, or dry condition?		
1504	696	6-2	Table 6.1-1	P. Wisher-opp: Woodward-Clyde	Why would "Not Significant" and "Beneficial" be linked? It seems to say that an action is neutral and beneficial at the same time.		
1503	697	6-2	Table 6.1-1	P. Wisher-opp: Woodward-Clyde	The linkage of "Significant and Mitigatable" with "Beneficial" is confusing. Does the mitigation create the benefit. If so, then why isn't the mitigation measure a CALFED action without having to cause the impact first.		
1505	698	6-2	Table 6.1-1	P. Wisher-opp: Woodward-Clyde	Use Correct terminology. "Riverine Hydraulics and Hydrodynamics" should be changed to Riverine Hydrology.		
1306	699	6-2	Table 6.1-1	P. Wisheropp: Woodward-Clyde	Re: Sac River Region, Riverine Hydraulics: Does "Increased High Flows" mean larger flood flows or an increased frequency of high flows. "Decreased Low Flows": is the magnitude of the low flow decreased, or the frequency of flow periods? Also, define low flow periods.		
1507	700	6-2	Table 6.1-1	P. Wisher-opp: Woodward-Clyde	Surface Water Supply and Management. Why is the criteria "Reduced Water Supply"? Is a beneficial impact one that enhances a reduced supply, i.e. increase the reduction?		
1506	701	6-2	Table 6.1-1	P. Wisher-opp: Woodward-Clyde	What happens at the reservoirs? What about non-project streams?		
1291	702	6-2	Table 6.1-1	Rebecca Challenger, NRCS	Table 6.1-1 helps to summarize the information but the information seems contradictory to the succeeding text, especially concerning the WQ impacts of Alt. 2A.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1307	703	6-2	Table 6.1-1	J.Davis: Woodward- Clyde	<p>Table is very hard to understand. It would appear that the No Action Alternative is compared to the Existing Condition in the first column and then the Alternatives are compared to the No Action Alternative. If this is the case the table offers no explanation for doing so.</p> <p>In a typical EIR/EIS the No Action Alternative and the "Action" Alternatives are compared to the existing condition. This doesn't work so well for the CALFED EIR/EIS because the facilities under consideration are so extensive that they would take at least 20 years to build - by which time the existing condition has changed quite dramatically as a result of population increase and economic development. For the CALFED EIR/EIS the more pertinent comparison is between the No Action Alternative and the "Action" Alternatives.</p> <p>For the sake of completeness, CEQA/NEPA compliance, and understandability by public I continue to think that the CALFED alternatives should be separately compared to the existing condition (1996) and to the condition that will prevail in 2020 if no action is taken (No Action Alternative) as we did in the Nov 7th version of WQTR:</p> <p>The choice of impact issues seems a bit arbitrary. Because construction impacts are short-term and generally not significant they could be eliminated from the table without much loss of content. Metals and pesticide loading reductions from the Water Quality Program are probably more significant environmentally than changes in turbidity. Turbidity makes disinfection less effective.</p>		
1039	704	6-2, 6-5	"	CY, EPA	Evaluation of Alternative 3A, paragraph 1, concludes that "Delta <u>inflow</u> would be reduced" due to a combination of lack of storage and increased exports. This statement is unclear. The text may refer to less flexibility to adjust flows into the Delta; it may refer to impacts on areas downstream of the IF, due to diversions through the IF. Clarification should be carried through to summary Table.		
1393	705	6-20	Table 6.1.1-3	P. Wisheropp: Woodward- Clyde	Too much info in one table.		
1055	706	6-21	Section 6.1.1.4 (SJ River)	GL, EPA	Text should be added to the introductory paragraph to capture the magnitude of diversions from the San Joaquin River and the impacts these diversions has on flow. The text, as currently written, implies that climate is the primary factor affecting flows in the River.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1394	707	6-21	Para 4	P. Wisheropp: Woodward-Clyde	Water Supply and Water Management is mentioning numbers that were previously mentioned in Hydrodynamics and hydraulics. Flow volumes should be mentioned only once.		
835	708	6-21	Para 5	Holt, USBOR	Paragraph 5 needs further detail and explanation of Shasta releases.		
209	709	6-22	Figure 6.1.1.3	K. Kelly, DWR	Would be hard to read even if it were facing the right direction.	P	
1395	710	6-22	Figure 6.1.1-3	P. Wisheropp: Woodward-Clyde	Enlarge figure. Identify the percentages as exceedance (if that is correct). These are simulated flows; there should be no significant figures to the right of the decimal point. The 95 percentile lists simulated flows to the ten-thousandths place.		
836	711	6-23	general	Holt, USBOR	The affects of fire suppression on water flows/water quality in the upper watersheds should be included.		
1396	712	6-23	General Comment	P. Wisheropp: Woodward-Clyde	General comment on entire section. It is difficult to discern between the level of headers used in all of these sections. What is a header or subheader.		
1397	713	6-23	Para 4	P. Wisheropp: Woodward-Clyde	Third sentence. Prior to the construction of New Melones Reservoir 25% of the water use was supplied from reservoir releases? Which reservoir? How was this accomplished?		
1180	714	6-2,3	Table 6.1-1	FWS	<p>This and the similar summary tables throughout the PEIS needs considerably more explanation. Apparently, the No Action column compares No Action to Existing Conditions? Then the various alternative columns compare the alternatives to No Action? Since the No Action alternative is not described in detail in the document, it is sometimes difficult to understand the source of the conclusions presented in the tables.</p> <p>Conclusions about the No Action alternative are even more difficult to understand. For example, the Table identifies "reduced water supply" as a "significant but mitigable" impact of No Action in all regions. Table 2.2.1-1, however, indicates significantly increased deliveries to project contractors compared to Existing Conditions.</p> <p>These tables would probably benefit from either deleting the No Action column or comparing both No Action and the alternatives to a consistent Existing Conditions. In either case, the PEIS should provide a more detailed discussion of No Action and the reasons for differences between the alternatives and No Action.</p>		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1466	715	6-24-25	Figure 6.1.1-4 Table 6.1.1-4	P. Wisheropp: Woodward- Clyde	Same comments as on the previous tables and figures (amount of material in the table, level of accuracy).		
210	716	6-25	Figure 6.1.1.4	K. Kelly, DWR	Would be hard to read even if it were facing the right direction.	P	
837	717	6-26	general	Holt, USBOR	Column one needs to be re-written to better explain the numerical examples.		
1399	718	6-26	General Comment	P. Wisheropp: Woodward- Clyde	Numbers that were previously mentioned are used again. Page 6-23 says that 5.5 MAF contributes to Delta flows from the San Joaquin River. Page 6-26 says there is 5.5 MAF of unimpaired flow with 3 MAF contributed to Delta flow. Also, this section lists 5.5 MAF of unimpaired flow, 3.5 MAF of diversions, leaving 3 MAF at Vernalis. The math suggests that $5.5 \text{ MAF} - 3.5 \text{ MAF} = 2 \text{ MAF}$		
1400	719	6-26	General Comment	P. Wisheropp: Woodward- Clyde	Numbers listed on page conflict with numbers on previous Pages		
1401	720	6-26	Para 10	P. Wisheropp: Woodward- Clyde	Acronyms DWRSIM and DWRDSM1 have been used before. Don't need to be in parens again. Overall, this section has moved between historic and simulated conditions. Choose one or the other. If simulations are to be discussed earlier, then introduce the models before the discussion.		
838	721	6-26	6.1.1.5	Fujitani, USBOR	Explain how the supplies from the Colorado basin or other Southern CA water supplies be affected by the CALFED actions.		
546	722	6-27	Right Column, Paragraph 3	DFG	The "significance criteria" described here of 5 to 15 percent are not relevant to evaluating effects on aquatic resources. The text should be clear that these criteria apply to surface water resources for the purpose of water supply and water quality.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
211	723	6-27 to 6-31	Section 6.1.2.3	Sandino, DWR	This section uses terms like 'negligible,' 'moderate adverse impact' and "potentially adverse impact." Although not incorrect, I think there use makes it difficult to determine the need for mitigation measures and writing findings. The use of the later two terms might require that such impacts be considered significant. I would consider identifying impacts as only "significant" or "less than significant." You may elect to add a third category (although I wouldn't use it) "potentially significant" (usually an initial study term) but such impacts should be treated as significant for mitigation purposes. I realize this advise results in mechanical prose, but it will help the reader focus on what truly cause significant impacts and will help in the finding stage. Later general comment: After reviewing more of the document, this comment applies to other sections as well (geology, etc.) In my opinion, all of the sections discussing impact significance should be checked for clarity of their conclusions.	IA	
1405	724	6-27	Col 1; Para 3	P. Standish-Lee: Woodward-Clyde	Reader will conclude from this paragraph that the modeling results for the Delta are invalid. A statement of how this will be resolved is needed. The treatment of storage in the modeling also needs to be addressed. We have a suite of modeling results with variable treatments of storage		
1402	725	6-27	Para 1	P. Wisheropp: Woodward-Clyde	CVP and SWP were previously acronymed. Acronym only once.		
1403	726	6-27	Col 2; Para 2; Line 9-10	P. Standish-Lee: Woodward-Clyde	Decreases to the high flows would not be considered beneficial in terms of restoring or emulating the natural hydrologic regime		
1409	727	6-27	Col 2; Para 4	J.Davis: Woodward-Clyde	Paragraph is vague and hard to understand. If I understand the point being made I suggest the following replacement language. "Under the No Action Alternative the range of annual withdrawals from the Delta would increase from 5.9 to 6.9 MAF to 7.1 to 7.6 MAF in order to meet projected demand for water in 2020. The increased withdrawals would have little effect on flows in Delta tributaries or channels. See language in Section 6.1.3.3 on page 6-40		
1404	728	6-27	Para 3	P. Wisheropp: Woodward-Clyde	Explain the model assumptions. While AFRP flow targets may not be part of the ERP, many targets are being implemented and should be part of the No-Action Alternative.		
1407	729	6-27	Para 5	P. Wisheropp: Woodward-Clyde	Why is a "noticeable reduction in low flows" only potentially significant? What is significant? Significance criteria (the title of Section 6.1.2.2) is intended to describe significance. Potentially significant (not defined in CEQA) is typically used to describe the gray area when the significance criteria is substantially (but not completely) met.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1406	730	6-27	Para 5	P. Wisheropp: Woodward-Clyde	What is a "noticeable reduction"? 5%, 10%? It states that reductions in low flows are an impact because of potential adverse effects on fish, water quality, or navigability. This section is about hydrodynamics and hydraulics and should describe impacts to this specific topic only. Impacts to fish should be discussed in the Fisheries section.		
1408	731	6-27	Para 6	P. Wisheropp: Woodward-Clyde	High flow impacts. What is a substantial increase in high flows. How is monthly modeling related to instantaneous discharge which controls flooding.		
1410	732	6-27	Para 7	P. Wisheropp: Woodward-Clyde	This doesn't clarify what is noticeable. Changes in flow conditions "greater than 5 or 15%.." which is the criterion, 5 or 15? Also, why are these thresholds important. What physically happens at a 5 % change. Because of the shape of the river and channels, very few people would "notice" a 5% change (especially in the Delta when an inflow of 10,000 cfs is competing against a tidal flux of 170,000 cfs).		
1411	733	6-27	Para 8	P. Wisheropp: Woodward-Clyde	Suggest replacing "In most cases, changes expected for the No Action Alternative on flows are similar..." with "In most cases, flows expected for the No Action Alternative are similar..."		
1412	734	6-27	Para 9	P. Wisheropp: Woodward-Clyde	Edit		
709	735	6-27	Sect. 6.1.2.2, second col., top of page, lines 5-6	WAPA	If one accepts the premise that the natural model is the optimal pattern, it is incorrect to say " <i>Increases in flow during low flows are considered to be beneficial</i> " in all cases. This is a site specific issue. Prior to construction of dams, many rivers and streams within the study area naturally experienced low flows during dry periods.		
839	736	6-27	Para. 1, line 1	Roefs	Recommend changing "plan" to simulate.		
241	737	6-27	2 nd Paragraph	DWR Modeling Support	The text here needs to mention that DWRDSM1 simulations used DWRSIM study 472B for all of the alternatives.	T	
242	738	6-27	4 th Paragraph	DWR Modeling Support	In the analysis, changing direction of flow from reverse to downstream flow or from downstream to reverse is also significant.	T	
547	739	6-28	Section 6.1.2.4, Paragraph 1	DFG	Insert the following words after the word "hydraulics" in the second line: "... from the perspective of water supply and water quality..."		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1413	740	6-28	Col 2; Para 1; Line 4	P. Standish-Lee; Woodward-Clyde	Move "and cause...year" to water quality impact section. Replace with "and induce additional intrusion of water from the Bay toward the export pumps"		
1414	741	6-28	Col 2; Para 3; Lines 4&5	P. Standish-Lee; Woodward-Clyde	North Delta inflows wouldn't increase unless storage releases were made. I think editor meant inflows to the Central Delta from the North Delta would increase. But in this case cross Delta flows would increase along with those in Old and Middle Rivers. Perhaps editor meant velocities would decrease due to channel widening		
840	742	6-28	Paragraph 8	Roefs	To balance this paragraph adverse impacts of Alternative 2 on the lower Sacramento River and Suisun Marsh should be discussed.		
243	743	6-29	Table 6.1.2.1	J Turner, DWR	The summary table is in error under alternative 1b. Impacts are incorrect because there is no new intake, and no use of full pumping capacity at Clifton Court Forebay. It does include barriers, so the effects of the barriers should be included in that column. Column 1b should read as follows: Flow velocity and stage = similar to 1c Mass fate (this is ok) Net delta outflow = No substantial effects Central Delta outflow = No substantial effects X2 position = No substantial effects Salinity = No substantial effects	T	
1037	744	6-2ff	Table 6.1-1	CY, EPA	The "impact issue" entries used in this table are less informative than approach used for Chapter 7 (impact mechanism as well as impact issue). The measures in this Table do not capture "flexibility" or "water supply reliability."		
1038	745	6-2ff	Table 6.1-1	CY, EPA	Surface water supply and management results should distinguish between critical dry period and long-term (average). The supporting analysis in text should explain the assumptions underlying regional allocations of supply changes, or provide explicit reference to a TA for this information.		
542	746	6-3	Table 6.1-1	DFG	An explanation of how the symbols in the legend are used is in order. For instance, the meaning of having a rating of 0/+ should be explained. Also, it should be made clear that the open circle, dark half circle and dark full circle are adverse impacts. The word "adverse" should, therefore, be added to the definition. These changes should be made for the other chapters and tables as well.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
244	747	6-30	Tab 6.1.2-1	DWR Modeling Support	Alternative 2B does increase the salinity in the spring months at Rock Slough, but this increase is very small when compared to the magnitude of the decrease in salinity at other times during the year. This analysis should make some mention of the magnitude of change in salinity, not just the frequency.	T	
212	748	6-30	Table 6.1.2.4	Sandino, DWR	I would use CEQA language here. Identify "no substantial impacts" as "no significant impacts." For impacts in which the significance levels are not identified, it would be helpful if they were so identified.	IA	
841	749	6-30	Table 6.1.2-1	Roefs	The Suisun Marsh impacts need to be discussed. Also, discussing the fate of "injected mass" may be obscure to some readers. The use of 3E as typical for all salinity impacts can be misleading, because it was the one alternative with a large, 15,000 cfs, isolated facility. The other alternatives mostly have smaller, 5,000 cfs, isolated facilities.		
1417	750	6-31	General Comment	P. Wisheropp: Woodward-Clyde	An inherent problem with discussing the alternatives becomes obvious here. Constant reference to subalternatives (3A, 3B, 3E, etc.) forces the reader to know all about each subalternative. This problem exists with all of the water resources sections. Furthermore, because the two greatest hydrologic effects (new storage and an isolated facility) exist in both alternatives 2 and 3, it is difficult to discuss the two alternatives separately.		
1415	751	6-31	General Comment	P. Wisheropp: Woodward-Clyde	The DWRSIM results drive the DWRDSM1 simulations. DWRSIM has some gross-level assumptions regarding the isolated facility. Need to comment on the linkage between the two models and if an isolated facility is correctly simulated.		
1416	752	6-31	General Comment	P. Wisheropp: Woodward-Clyde	Too much use of non-CEQA terms (e.g. "moderate adverse impact"). Its either a significant impact or not. Degrees of significance are meaningless.		
549	753	6-31	Left Column, Paragraph 3	DFG	The discussion of increased salinities seems out of place and perhaps should be moved to the chapter on water quality.		
548	754	6-31	Right Column, Paragraph 1	DFG	Do the operations studies support the conclusion about the unique reduction in spring outflow? If so why? Since the operations studies project the same increase in exports for all three alternatives, why would this statement be true, or an intrinsic effect as implied?		
213	755	6-31	Second column	Sandino, DWR	This column is difficult to follow and is an exemplary of other sections in the document. The section runs from 3A to 3B to 3E to 3I to 2E. I can follow it with work, but I wonder if the general public will? I would consider editing this type of writing in the DEIR.	P	

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
245	756	6-31	"Alternative 3"	Steve Hayes, DWR	The improved flow benefits of Alternative 3 (the Isolated Facility) could include the potential for improved east to west flow in the eastern Stockton Ship Channel if a release point is included in or near the Stockton area. Improved flow would help minimize the dissolved oxygen problems in this area (as described previously in Comment 8).	T	
1422	757	6-31	Col 1; Para 1; Line 4	P. Standish-Lee; Woodward-Clyde	Flows in North Delta would be reduced, not benefited. South Delta flows would be improved by elimination of reverse flows toward the pumps. Impacts of stage changes should be included.		
1423	758	6-31	Col 1; Para 1; Line 4	P. Standish-Lee; Woodward-Clyde	Need to explain significance of mass tracer simulations: Residence time? Biological productivity? Fish egg and larval transport?		
1424	759	6-31	Col 1; Para 1; Line 4	P. Standish-Lee; Woodward-Clyde	Move water quality impact statements to water quality section (p. 6-41; Insert "A"). Virtually any increase in salinity in South Delta and near Contra Costa diversions would be adverse		
1418	760	6-31	Para 1	P. Wisheropp; Woodward-Clyde	Third sentence-edit.		
1419	761	6-31	Para 2	P. Wisheropp; Woodward-Clyde	Rewrite paragraph. What mass released into the Delta?		
1420	762	6-31	Para 3	P. Wisheropp; Woodward-Clyde	This paragraph, and others, intermix "could" and "will" results. "Operation of an isolated facility could reduce..." and "The isolated facility also results in...". All of the results are based on modeling containing approximations. The results should be described in terms of: the simulations showed...		
843	763	6-31	Para. 1 Line 8	Roefs, USBOR	More discussion of exactly how the "California Aqueduct" limits export capacity might be warranted.		
844	764	6-31	Para. 3 Line 2	Roefs, USBOR	Recommend changing to 'southern Delta Regions and Suisun Marsh' to make clear the Marsh is impacted as well.		
845	765	6-31	Para. 3 Sent. 2	Fujitani, USBOR	The statement is made that operation of an isolated facility could reduce the Sacramento River flows downstream of the diversion and cause an increase in salinity at Emmaton throughout the year. This would only be true if Emmaton were never operated as the controlling water quality standard. Under this type of operation, an increase in Emmaton salinity would assume exceeding the salinity standard. If this is what CALFED hopes to accomplish we need to explain this.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1185	766	6-31	1st column, 3rd paragraph, 3rd sentence	FWS	Sentence states, "The isolated facility also results in substantially reduced cross-Delta fresh water flows and could cause an increase in salinity in the south Delta at many times of the year". The isolated facility could be configured to supply ag-users and south Delta export facilities with water directly from the canal without the need for Delta diversions. State that salinity increases in the south Delta might not effect users if deliveries are made from the new facility.		
247	767	6-31	3 rd Paragraph	V. Pacheco, DWR	The sentence: "The significance of the increase in salinity in the south Delta is not well established" seems inconsistent with the subsequent statement that "¼ salinity at Rock Slough are as much as 100 to 200 % relative to the No Action Alternative." In addition, see the last two sentences of Section 6.1.2.7 on page 6-39. Please see comments # 6, #12, and #14 for additional comments regarding analysis based on values for Rock Slough.	T	
246	768	6-31	3 rd Paragraph	DWR Modeling Support	An increase of 100% in TDS for Alt 3 is only for Alternatives 3A and 3B due to the Delta Cross Channel being closed while significant exports still occur in the south Delta. The statement as presented is too broad.	T	
1421	769	6-31	4	P. Wisheropp: Woodward-Clyde	25% of the time net Delta outflow is reduced in the spring. OK, but what does that mean? Why is it important? Spring is the period when water is available		
1430	770	6-32	Col 1; Para 1; Line 12	P. Standish-Lee: Woodward-Clyde	Move water quality impact statements starting "Effects of... to para end to water quality section (p. 6-42; Insert "B")		
1427	771	6-32	Col 1; Para 3	J.Davis: Woodward-Clyde	Heading is confusing. Suggest "All Action Alternatives". "All Alternatives" could include No Action Alternative.		
1428	772	6-32	Col 1; Para 3	J.Davis: Woodward-Clyde	The organization of impact sections dealing with the common program elements is a bit confusing. Also, the regional variations in impacts of the water use efficiency programs on flow are not reflected. I suggest eliminating the section entitled "All Regions" on Page 6-38 and adding brief write-ups under each region.		
1426	773	6-32	Para 3	P. Wisheropp: Woodward-Clyde	The ERP section says that the simulated Delta outflow is less than the ERP targets. However, I don't believe that the DWRSIM assumptions included the ERP targets. If this is correct then DWRSIM is ignorant of the targets and can not be expected to meet the targets. Such a comment, made in a post processing fashion, is deceptive because the results reflect impacts under a certain operations without acknowledging the benefits of changing the operation to accommodate ERP.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1425	774	6-32	Para 3	P. Wisheropp: Woodward- Clyde	Is "Ecosystem Restoration Program" subheader of "All Alternatives"?		
846	775	6-32	Paragraph 3	Fujitani, USBOR	Here and throughout the document, it is noted that additional flows may be needed to meet objectives of the ERP. It should be noted that additional release demands from Shasta Reservoir in the spring months will affect temperature operations for the winter-run salmon. A similar impact could occur in other reservoirs where water temperatures are a concern, especially temperatures late in the year.		
1429	776	6-32	Para 6	P. Wisheropp: Woodward- Clyde	The text dealing with Table 6.1.2-2 is confusing. It is difficult to determine the purpose of the assessment, in light of the comment above. The table does not improve the analysis.		
848	777	6-32	Table 6.1.2-2	Roefs, USBOR	Footnote 2 should be used in the table or removed.		
847	778	6-32	Para. 3 Line 15	Roefs, USBOR	It should be explained that no quantitative studies were conducted to verify availability of ERP flows.		
215	779	6-33	first column, last paragraph	Sandino, DWR	Although the conclusion that there is no affect on the Bay Region may be correct, it might be helpful to have a bit more analysis. It would be helpful to show how small is "small" when it comes to showing Delta outflow and X2 position.	C	
550	780	6-33	Left Column, Paragraph 3	DFG	Make it clear that these conclusions about the Bay Region and changes in X2 apply only to surface water resources and effects on water supply and water quality. The "small" changes noted are not likely to be considered insignificant from an aquatic resources perspective.		
1431	781	6-33	Para 2	P. Wisheropp: Woodward- Clyde	General comment. Identify the resource topic when making a significance comment. As written, this appears to be a general statement that CALFED alternatives are not expected to have an impact on the Bay region.		
214	782	6-33	Table 6.1.2-2	K. Kelly, DWR	There is no "(2)" to correspond to the footnote.	C	
1186	783	6-33	1st column, 3rd paragraph:	FWS	Sentence states, "Adverse impacts on the Bay Region ... are expected to be negligible ... 2) only small changes were predicted in the position of X2". Even small changes in X2 may have large effects due to tidal effects that move the entrapment zone into the zone of influence of the south Delta pumping plants. Delete #2 from this statement.		

	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	P
1042	784	6-33-34	p 33 col2, last paragr; P 34 col 1, first paragraph.	SH, EPA	Analysis has attempted to identify a high flow event adequate to move sediments in the Sacramento River and has concluded that (looking at maximum average stream flows) there would not be significant impacts on this flow function due to diversions to storage. Documentation in a TA supporting this analysis should be referenced.	
216	785	6-34	first column, last paragraph	Sandino, DWR	Similar to comment 23. Conclusions that impacts are negligible or to small should be explained. Is the point simply that San Joaquin Flow remains essentially the same under the alternatives and thus flood and navigational impacts are insignificant. I would state this more clearly if this is the case.	C
1432	786	6-34	Para 3	P. Wisheropp: Woodward-Clyde	Specify what reoperation of CVP and SWP facilities entails.	
1433	787	6-34	Para 7	P. Wisheropp: Woodward-Clyde	Need to explain the last sentence. How does an isolated facility render potential impacts from storage and reoperation negligible.	
1187	788	6-34	1st column, 2nd paragraph:	FWS	<p>This paragraph states that "the imposition of a 60,000 cfs flow threshold on storage diversions <i>could have a significant adverse impact on water supply.</i>" Compared to what? Impacts (adverse and beneficial) of alternatives are detected by comparison to No Action, not to other hypothetical alternatives. While No Action does not have the 60,000 cfs flow threshold, it also does not have the additional offstream storage the threshold would be applied to. As a result, even if storage could only be filled every three years, such an alternative would likely have a significant water supply <i>benefit</i> compared to No Action. Clarify this discussion here and wherever else it may occur.</p> <p>The second sentence of this paragraph states, "This is because flows of 60,000 cfs would occur relatively infrequently ...". Flows of 60,000 cfs could be made to occur with higher frequency through deliberate reservoir releases. State: "Reoperation of reservoirs to increase the frequency of 60,000 cfs flows would provide ecosystem benefits and allow the new storage facilities to be filled more frequently."</p>	
217	789	6-37	top of page	Sandino, DWR	Is the statement that stream flow will be routed "through" construction zones correct? Aren't flows routed around construction zones normally?	C
1043	790	6-37	ERPP, col 2 last paragr	CY, EPA	Place information on ERPP flow targets and flow results (currently in text) in a table.	
1434	791	6-37	Para 3	P. Wisheropp: Woodward-Clyde	This section separates the ERP flow targets from the river systems that must generate the water to meet the targets. Meeting these targets will require water that would reduce storage and streamflow in subsequent months.	

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
248	792	6-37	Line 18 <i>All Alternatives</i>	Spaar, DWR	This paragraph does not make sense in context of the whole section "Sacramento River and San Joaquin River Regions" (beginning on p. 6-33). Each alternative describes the impacts to the river regions except this section which states there are impacts to the Delta Region only. Possible wording change - "...would have impacts within <u>the Sacramento River and San Joaquin River Regions, and</u> the Delta Region for all alternatives."	T	
849	793	6-38	general	Holt, USBOR	<p>Page 6-38 and elsewhere - the conclusion that watershed management would not have significant impacts needs to be qualified.</p> <p>It may be important to acknowledge different perspectives on the role of clear cutting. For example, some believe that it would be best to thin stands and remove the under stories through manual and fire based methods. The suppression of fire for 50-90 years and the relatively recent reduction in harvests (logging) have combined to give us extremely fire-prone forests that are subject to devastating burns followed by heavy erosion. This is a non-trivial problem as illustrated by the reduction in storage capacity in black Butte reservoir in a single season shortly after the reservoir was built in the mid-60's. Storage capacity was reduced from 160,000 to 143,000 af in one winter. There is much controversy in this area that should be explained.</p> <p>Removal of logs and other debris may not be necessarily an act of restoration; on the contrary, addition of large woody debris can be desirable in some areas.</p>		
1435	794	6-38	General Comment	P. Wisheropp: Woodward-Clyde	All four common programs should be mentioned.		
250	795	6-38	Section 6.1.2.4	R. Tom, DWR	Similar to Section 2.2.3.6, it should also be mentioned under this section that implementation of CMARP would serve as a useful tool for CALFED to use when implementing projects and providing cost-effective approaches to individual watershed management activities.	T	
1436	796	6-38	Para 4	P. Wisheropp: Woodward-Clyde	Watershed practices will change the runoff patterns. Is this good or bad? Does this change the amount of water available to meet the ERP targets?		

	#	Page Number	Line, Figure, or Table No.	Commentor	Comment		P
249	797	6-38	Lines 13 & 20	Spaar, DWR	Statements appear contradictory - Statement (lines 11-14) indicates that the downstream impacts of watershed improvement projects would be less than significant, which appears to contradict a following statement (lines 18-20) that watershed projects could alter flow regimes (limited changes to large-scale alterations) in both the upper watersheds and downstream.	T	
251	798	6-38	1st Par.	P. Wendt, DPLA (DWR)	"Water Quality Program" - Although improved WQ may not directly affect hydraulics per se, actions of the WQ Program may reduce drainage or discharges to achieve that improvement in WQ. It seems reasonable to assume that these flow reductions could directly affect hydraulics and hydrodynamics. This same comment applies to the last paragraph discussion of the Water Quality Program on this page.	T	
252	799	6-38	2nd column, 2nd para.	Spaar, DWR	Under stream restoration projects, there is no mention of the efforts on the San Joaquin tributaries to isolate instream gravel mining pits or convert the pits to floodplain or riverine areas. These are fairly substantial projects involving miles of river restoration work. Flow velocities will increase through these areas with a conversion from pond-like to riverine environment. River and floodplain dynamics will be improved to better conform with present flow regimes. See your description p. 6-107.	T	
850	800	6-39		Holt, USBOR	It is unclear if the salinity build-ups referenced are in the water, the soils of irrigated lands, or both. Explicit mention of the two forms of impacts might be useful.		
551	801	6-39	Left Column, Paragraph 3	DFG	The brief comparison between the program elements and Existing Conditions is misleading in our opinion. With increased exports of 700,000 to 1,200,000 acre-feet from current conditions to conditions under the No-Action Alternative (page 6-40) it is inconceivable to us that increased exports from the Delta beyond that level for alternatives 1 and 2 would not result in significant adverse impacts on Delta hydrodynamics.		
552	802	6-39	Left Column, Paragraph 3	DFG	There is no evidence that salts will tend to build up in the south Delta with Alternative 3. Modify the second sentence to read: "Reduced cross-Delta flows will result in a reduction in the volume of lower salinity Sacramento River entering the south Delta. This will result in generally higher channel water salinities in the south Delta."		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
218	803	6-39	Sections 6.1.2.6 & 6.1.2.7 1st and 2nd column	Sandino, DWR	Discussion of mitigation strategies and potentially significant unavoidable impacts is incomplete. It is not clear what impacts are considered significant and what are the proposed mitigation measures. This section would probably generate negative comments from the public as written. Isn't ISDP an appropriate mitigation for south Delta salinity?	IA	
1437	804	6-39	Para 3	P. Wisheropp: Woodward-Clyde	Table 6.1-1 does not support the conclusion that forecasted hydraulic variables are similar for the No-Action Alternative as with the Existing Conditions.		
254	805	6-39 6-45	line 19	EC, DWR	There is an implicit agricultural demand reduction target in that the California Water Plan assumes a 73% average irrigation efficiency in California by 2020. Additional savings projected by CALFED are estimated by increasing target efficiencies to 80 and 85 percent.	T	
253	806	6-39	6.1.2.7 Potentially Significant Unavoidable Impacts	Chuck Vogelsang, DWR	<p>Identify significant unavoidable impacts. First paragraph seems to say that reduction of low flows in south Delta are unavoidable in Alternatives 1 and 2, and especially in Alternative 3, but in 3 they are mitigable. Paragraph 2 seems to say that there is an unavoidable salinity increase due to Alternative 3 in the south Delta and in the central Delta (although the central Delta problem is not as significant as the south Delta problem both could be significant unavoidable impacts). Perhaps a better presentation would be:</p> <p>"The potentially significant unavoidable impacts to Bay-Delta Hydrodynamics and Riverine Hydraulics are:</p> <ol style="list-style-type: none"> 1. Reductions in flow in Alternative ?, ?, and ?. 2. Increase in salinity in the south Delta for Alternative 3. <p>Factors that may moderate the classification of these impacts as unavoidable are 1) they are base on computer simulations which ..., 2) more detailed analyses in project specific documents may provide opportunities to avoid or mitigate these impacts."</p> <p>This type of presentation would permit identification of the worse case impacts, enable CALFED to make a finding that they may be significant unavoidable adverse impacts that can't be mitigated, allow future environmental documents to analyze the impact in detail and either find that they can be mitigated or can't be mitigated, in which case CALFED has already made such a finding and an argument about whether another alternative is better is avoided.</p>	IA	

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
196	807	6-4		DWR O&M	There is little evidence for the level or significance of impacts and how that level was developed or determined. There is only the assumption that it will occur.	I	A
543	808	6-4	Left Column, Paragraph 2	DFG	The text states that the No-Action Alternative result in changes that are less-than-significant. This conflicts with information shown in Table 6.1-1. That information indicates a significant but mitigable adverse impact. Furthermore, given that the adverse impact is significant with respect to Existing Conditions, adverse impacts of the alternatives that go beyond the No-Action Alternative are also, by definition, significant. A thorough review and editing of the text, table, and applicable model runs appears to be in order.		
544	809	6-4	Left Column, Paragraph 4	DFG	It isn't clear why no change in Delta inflow would imply that future demand for Delta exports would not be met. This should be clarified.		
1326	810	6-4	Col 1; Line 18	Peter Mangarella WCC	statement " During dry periods the salinity of Delta waters at the SWP and CVP pumps could increase by more than 10% to 20% compared to existing conditions" Qualitatively, no action alternative, because of increased 2020 demand is likely to result in more salinity intrusion, however modeling results do not support numbers. Specifically Table 9 in technical report shows that, at CCFB, an increase of about 8 % during wet years and a decrease of about 4% during dry years. Recommend omitting numbers and replace with: "Because of anticipated increase in demand at the export facilities in 2020, the no action alternative may result in further seawater intrusion, and increases in salinity"		
1312	811	6-4	Col 1; Para 3; Line 1	P. Standish-Lee: Woodward-Clyde	Replace "would have" with "will" (There is no doubt about this impact relative to Existing Conditions)		
1319	812	6-4	Col 2; Para 3; Line 6	P. Standish-Lee: Woodward-Clyde	Insert "export" after "improved"		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1310	813	6-4	Col 2; Para 2	J.Davis: Woodward-Clyde	Third sentence inaccurately summarizes from WQTR. Suggested replacement wording "Local effects of reservoir operations on water quality would depend on local geology, hydrology and water chemistry but include increases in concentrations of minerals, natural organic matter, metals and nutrients". It is important to retain mention of metals because of expressed stakeholder/agency concerns about mercury content of soils at some reservoir sites.		
1311	814	6-4	Col 2; Para 2	J.Davis: Woodward-Clyde	Last sentence. The point about the commonality of impacts of storage gets lost here. Suggest this sentence be omitted and the following sentence added to the narrative on Alternatives 2 and 3; 'Configurations of Alternative 2/Alternative 3 that include surface water storage would produce localized changes in water quality similar to those of described under Alternative 1.		
1320	815	6-4	Col 2; Para 4; Line 5	P. Standish-Lee: Woodward-Clyde	Reverse velocities may decrease but reverse flows should increase		
1309	816	6-4	Col 2; Para 2	J.Davis: Woodward-Clyde	Second sentence - not clear what off-stream means in this context. Almost all reservoirs are on some sort of stream although not on the mainstem of the Sac or S.J. rivers. Not sure what sentence is trying to say.		
1308	817	6-4	Para 4	P. Wisheropp: Woodward-Clyde	The statement that the hydraulic variables forecasted for the No Action Alternative (NAA) are similar to EC seems contrary to Table 6.1-1 which shows Delta and upstream hydraulics improving from EC to NAA.		
1314	818	6-4	Para 5	P. Wisheropp: Woodward-Clyde	What does this reduction in the quality of water mean relative to drinking water standards.		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1313	819	6-4	Para 5	P. Wisheropp: Woodward- Clyde	“During dry periods the salinity of Delta waters at the SWP and CVP pumps could increase by more than 10% to 20%...”. Salinity as TDS or Electroconductivity? What is a dry period? Increase in which months? 10-20% when the salinity is highest or lowest? How is this change relative to standards?		
1315	820	6-4	Para 6	P. Wisheropp: Woodward- Clyde	Wrong analysis. If Delta inflow is relatively the same from EC to NAA then water quality would not change unless the Delta consumption or export increased. If the “increased future demand for Delta exports” is not met and inflow is the same, then why does the quality go down?		
1316	821	6-4	Para 8	P. Wisheropp: Woodward- Clyde	More detail is needed regarding timing of additional releases, tradeoffs between diversion periods when water is diverted to storage and the release periods. Also discuss the flow tradeoff between the streams as water is diverted to or released from new storage.		
1317	822	6-4	Para 9	P. Wisheropp: Woodward- Clyde	Good summary paragraph regarding reservoir impacts but it doesn't conclude anything. Recommend that this be given its own header and applied to all alternatives. Also, conclusions should be developed. Construction impacts related to spills and erosion should be considered significant at the program level and mitigation proposed for these impacts.		
1318	823	6-4	Para 10	P. Wisheropp: Woodward- Clyde	This paragraph does not conclude anything. The last sentence says that decreases in Delta outflow would be partially offset by increases in upstream storage. How does holding more water upstream offset not releasing water through the Delta. Also, the issue of year type and timing of these changes is not mentioned.		
1322	824	6-4	Para 11	P. Wisheropp: Woodward- Clyde	Second sentence. How do in-Delta modifications and increased exports increase the Delta inflow? This statement mixes cause and effect. Additional water is released to the Delta (at least in the model) to accommodate increased export demands. The demands can be met because of south Delta improvements.		
1323	825	6-4	Para 11	P. Wisheropp: Woodward- Clyde	Third sentence. Even though Delta inflow substantially increases, export increases, and reverse flow decreases, the changes in hydraulic conditions are less than significant? This seems wrong.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P.
1324	826	6-4	Para 11	P. Wisheropp: Woodward-Clyde	Also, are the changes in hydraulic conditions less than significant or the impact to hydraulic conditions less than significant.		
1325	827	6-4	Para 11	P. Wisheropp: Woodward-Clyde	General. Use consistent terminology. Does an alternative "create beneficial impacts" or does the alternative have a beneficial impact. Decide on usage and make consistent throughout the document.		
1321	828	6-4	Para 11	P. Wisheropp: Woodward-Clyde	First sentence. "...would create beneficial impacts...", where? when? in what resource area? The sentence doesn't say enough.		
1183	829	6-4	N.A.A.	FWS	This section states that since delta inflow does not increase under No Action, "the increased future demand for Delta exports would not be met." This seems contrary to other assumptions in the PEIS--and to the analysis here, which shows reduced delta outflow (presumably due to increased exports), and identifies it as a "significant and mitigable" effect of No Action in Table 6.1-1 (see also the discussion in section 6.1.4.3).		
821	830	6-4	Para. 1, bullets 1 & 2	Roefs, USBOR	Suggest qualifying the statement "primary issues" to include others.		
822	831	6-4	2nd column, 2nd para.	Gore, USBOR	The statement is made "Reservoirs may also interfere with downstream movement of sediment and nutrients, resulting in their depletion in stream channels, below dams." Since all storage components are either off stream storage or enlargement of existing storage reservoirs, this is an existing condition, or a future without project condition. This should not be identified as an impact of the alternative.		
553	832	6-40	Left Column, Paragraph 3	DFG	In the second sentence a definition for "moderate" should be provided.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
255	833	6-40 and on	Section 6.1.3.4	R. Tom, DWR	In the section entitled Comparison of Program Alternatives to No Action Alternative , water quality impacts for the North Bay Aqueduct are not included in the discussions on water quality impacts. Descriptions of impacts for NBA should be included to be consistent with Table 3.1-1 which does include descriptions for water quality impacts for NBA.	T	
1440	834	6-40	Col 1; Para 3	J.Davis: Woodward-Clyde	The section entitled significance criteria was taken from the 7 Nov version of WQTR and is no longer appropriate. The useful work done on distinguishing negligible, minor and major impacts referred to has been edited out of the WQTR and so is inappropriate here.		
1443	835	6-40	Col 2; Line 13	Peter Mangarella, WCC	Statement "the salinity of water at CVP and SWP pumps would increase by 10% to 20% or more in dry periods. numerical values may be reasonable but not supported by modeling. Recommended language " Because of these factors, salinity at the CVP and SWP pumps will likely increase". (See previous comment for page 6-4, line 18)		
1441	836	6-40	Col 2; Para 2	J.Davis: Woodward-Clyde	Paragraph could use a rewrite. My suggestion; "Because the No Action Alternative would involve very little construction short-term adverse impacts on water quality would be minor and mitigable by conventional construction mitigation measures. Water quality in the Delta and some tributary streams would gradually deteriorate between now and 2020 under the No Action Alternative. The approximately 15% increase in water withdrawals from the Delta would cause water in the South Delta to become more saline in dry years. Pollutant loads in urban wastewater and runoff would increase by 60 percent by 2020 and would further contribute to the decline in water quality in the Delta and some of its tributaries."		
1442	837	6-40	Col 2; Para 2	J.Davis: Woodward-Clyde	Last sentence - there is no need to make a judgement of whether the impacts of the No Action Alternative are mitigable.		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1439	838	6-40	Para 4	P. Wisheropp: Woodward-Clyde	Why is intro here? It should be presented earlier in the text. This is the first real mention of CVPIA and that it will comply with CVPIA (in the last section, the it was stated that the CVPIA flow objectives were not included) in the modeling.		
1438	839	6-40	Para 4	P. Wisheropp: Woodward-Clyde	Why is intro here? It should be presented earlier in the text. This is the first real mention of CVPIA and that it will comply with CVPIA (in the last section, the it was stated that the CVPIA flow objectives were not included) in the modeling.		
851	840	6-40	Paragraph 6	Roefs, USBOR	Some discussion of the effect of levee failure on seawater intrusion might be warranted.		
852	841	6-40	6.1.3.3	Fujitani, USBOR	A clearer understanding of how under the No Action Alternative the total annual water withdrawals from the Delta would increase from the current 5.9 to 6.9 MAF to 7.1 to 7.6 MAF without changes in the operating criteria and standards.		
853	842	6-41	Paragraph	Roefs, USBOR	Since the models used to produce these results were calibrated to a different geometry, some discussion of the uncertainty of the reported salinity and bromide reductions is needed.		
854	843	6-41	Paragraph 12	Roefs, USBOR	The effect of 3E on Tracy Pumping Plant heavily depends on the operation rules adopted. It could have strong negative impacts on the North Bay Aqueduct and Suisun Marsh.		
554	844	6-41	Right Column, Paragraph 1	DFG	The text is misleading since Alternative 1 in some configurations does not result in beneficial impacts. A careful editing of this entire impact assessment is in order since in its current state it will be of limited value during the public review of this document and be of little use to decision makers attempting to document selection of a preferred alternative.		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1057	845	6-41	Section 6.1.3.4; Discussion of Alts 1 and 2	GL, EPA	The second column, first paragraph on page 6-41 references beneficial export water quality impacts "similar to those described under Alternative 1"; however, there is no discussion of these beneficial impacts under Alternative 1 (on this same page), nor in the chapter summary on page 6-4.		
1444	846	6-41	Col 1; Para 2; Line 5-6	P. Standish-Lee; Woodward-Clyde	Replace last sent with "Increases in salinity of approximately 10% or more are projected."		
1446	847	6-41	Col 1; Para 1; Line 4	P. Standish-Lee; Woodward Clyde	Add to end of para: "Alternative 1 would not improve source water quality protection in the Delta"		
1445	848	6-41	Col 2; Para 1; Line 1	P. Standish-Lee; Woodward Clyde	At beginning, insert following: "A range of water quality effects may occur under Alternative 2 depending on the sizes of storage components. Channel modifications in the north and east Delta provide a means to introduce more freshwater inflows from the Sacramento River into the central Delta. Although a decrease in water quality could occur in the north Delta (for example, at Emmaton) as freshwater flows are shifted to the central Delta, the net effect on water quality in the Delta is expected to be beneficial. Water quality is expected to be significantly improved at the southern export facilities in the Delta (Contra Costa Canal Intake and Clifton Court Forebay), at other locations in the central Delta (such as Prisoners Point and San Andreas Landing), and in the west Delta (such as Jersey Point and Antioch) For example, bromide concentrations are projected to decrease by 40% at the Contra Costa Canal and 25% at the project export pumps. On the other hand, TOC and DOC concentrations would not decrease. Short-term impacts, including increased sediment, nutrient, and possible toxic contaminant loadings, could occur during construction of the proposed Delta channel modifications.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1448	849	6-41	Col 2; Para 6; Line 7	P. Standish-Lee; Wood-ward Clyde	At end of para add: "and in the South Delta". Then Insert "A" from p.6-31.		
1447	850	6-41	Col 2; Para 6; Line 3	P. Standish-Lee; Wood-ward Clyde	After "water", insert "(about 6-fold for bromide)"		
1058	851	6-41	2nd column 1st para.	GL, EPA	This paragraph discusses in a cursory way the improved export water quality impacts of Alternative 2. However, the summary on page 6-5 provides a much more detailed discussion on the improvements to export water quality. This is backwards - the introduction at the beginning of the chapter should just summarize the environmental consequences detailed later in the chapter, not providing greater detail than the latter discussion of the analysis		
256	852	6-41	3 ^d Paragraph and other sections on salinity	V. Pacheco, DWR	The use of values for Old River at Rock Slough may be more appropriate than values for Contra Costa Canal Intake, given recent changes in operations at Contra Costa Canal Pumping Plant No.1 and implementation of the Los Vaqueros Intake at Old River.		T
1449	853	6-42	Col 1; Para 1; Line 1	P. Standish-Lee; Wood-ward Clyde	At beginning, add: "Salinities at Emmanon, on the Sacramento River, are projected to increase with Alternative 3."		
1454	854	6-42	Col 1; Para 3; Line 13	P. Standish-Lee; Wood-ward Clyde	The concept of carriage water should be explained here.		
1450	855	6-42	Col 1; Para 3;	P. Standish-Lee; Wood-ward Clyde	This para needs to include comparison to Alternative 2		
1452	856	6-42	Col 2; Para 4	J.Davis; Woodward-Clyde	This paragraph seems to be misplaced. The effects of in-Delta storage components of Alternatives 3B, 3E and 3I should be discussed under Alternative 3 rather than under the Ecosystem Restoration Program. The paragraph also dismisses the concern about elevated DOC in water stored on Delta Islands. The issue needs to be treated consistently from place to place in the EIR/EIS- elsewhere the issue is treated as a significant impact.		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1451	857	6-42	Col 2; Para 1; Line 1	P. Standish-Lee: Woodward-Clyde	At beginning add: "Dissolved oxygen concentrations could also be reduced in the Delta, particularly in the Stockton area." Then add Insert "B" from p.6-32		
1453	858	6-42	Col 2; Para 5	J.Davis: Woodward-Clyde	Suggest para be rewritten as follows: "Habitat restoration would involve large-scale construction operations affecting considerable areas of land and water. Much of the construction would be undertaken in dry conditions but at least some construction activities would occur directly within waterways. Construction directly within waterways would increase local water turbidity and depending on the source of material used for levee construction and other restoration activities could release nutrients, natural organic matter and toxicants into the water column."		
855	859	6-42	Paragraph 3	Holt, USBOR	Text needs to clarify which river segments is the flow expected to be reduced by 10-20%, and if it is just the delta and lower most reaches. The seasons this would occur should also be included. Also, in that paragraph, it is worth noting that the additional releases required for salinity control in the absence of a peripheral canal would have to be cold water releases in many cases, and cold water is a very precious commodity.		
1032	860	6-42	Table 6.1.3-1	BK, EPA	these tables appear to use an "order-of-magnitude" rule of thumb to identify potential significant impacts, until more site-specific assessments are done. If so consider so stating in 6.1.3.2, p.6-40		
1059	861	6-42	1st column 3rd para.	GL, EPA	The discussion in the paragraph is confusing. The conclusions drawn from the modeling results (described later in the paragraph) do not make sense without further information. Given that this is for the average reader, the concepts in this paragraph need much further elucidation.		
1188	862	6-42	2nd column; 5th paragraph, 2nd sentence:	FWS	Sentence states, "Construction activities in waterways could greatly increase local turbidity and, depending on the source of the material used for levee construction, could add nutrients to the water". The material used for levee construction also may contain toxics such as tributyltin and mercury. Revise to state: "..., could add nutrients and toxic substances to the water".		
1060	863	6-42	2nd column, 4th para.	GL, EPA	The third paragraph under ERP impacts discusses construction impacts from in-Delta storage and Clifton Forebay facilities. Why are these listed under Ecosystem Restoration Program impacts?		
856	864	6-44	Paragraph 10	Roefs, USBOR	Some discussion of the effect of levee failure on seawater intrusion might be warranted.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
555	865	6-44	Right Column, Paragraph 1	DFG	The mitigation measures proposed are not realistic because the placement of habitat will be driven by factors unrelated to the risk of increases in DOC. The "treatment" of peat soils referred to here is vague and benefits unsubstantiated. The document should propose mitigation measures that are likely to be implemented and will not result in further adverse impacts on fish and wildlife that would require mitigation.		
1458	866	6-44	Col 1; Para 5	J.Davis: Woodward- Clyde	Determinations of significance are scattered around the narrative and seem even more arbitrary than usual in an EIR/EIS. I suggest creation of a separate section at the end of the surface water section that gathers all the significant impacts together. In this specific case I suggest the paragraph should read: "Potentially significant adverse impacts of the Ecosystem Restoration Program include an increase in water salinity attributable to increased evaporation and a possible increase in DOC content. Although the effect of increased evaporation on salinity has not been modeled it is expected that overall salinity concentration in the Delta would not be affected by more than 5%."		
1455	867	6-44	Col 1; Para 3	J.Davis: Woodward- Clyde	A lot of effort and discussion revolved around the question of whether conversion of ag. land to wetlands would increase or decrease DOC emissions. Because the answer is not known Rick Woodward instructed us to prepare a write-up that indicates that DOC levels could go up or down. This para should be rewritten to reflect the uncertainty rather than coming down on one side or the other. It also seems to be inconsistent with conclusion reached in an earlier section. (See comment 19 above) Suggested rewrite: "It is not clear whether DOC emissions would be decreased or increased when agricultural lands are converted to wetland habitat. If DOC emissions are increased it could make Delta water more difficult to treat when used as drinking water source."		
1457	868	6-44	Col 2; Para 4	P. Standish-Lee: Woodward- Clyde	At end, add: "It would also reduce the risk of massive contamination caused by salinity intrusion, if levee failure occurred during a low outflow period."		
1459	869	6-44	Col 2; Para 6	J.Davis: Woodward- Clyde	The section under the heading "Water Use Efficiency Program" is a mixture of vague statements and mistaken or at least unjustified conclusions. A more targeted and thoughtful section was contained in the Nov 7th version of the WQTR. Suggest this be inserted into the EIR/EIS.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1456	870	6-44	Col 2; Para 2	J.Davis: Woodward- Clyde	The section under the heading "Water Quality Program" could better reflect the analysis described in the WQTR. Suggest following rewrite: "The Water Quality Program would result in a reduction in contaminant emissions from urban and agricultural runoff, municipal and industrial wastewater discharges and abandoned mines. Reduced contaminant emissions can be expected to benefit water quality in the vicinity of the waste discharges but are too small to have much effect on overall water quality in the Delta. Construction activities associated with the Water Quality Program would cause localized increases in water turbidity but the application of conventional mitigation measures would reduce them to insignificance."		
1061	871	6-44	1st full paragraph	GL, EPA	The last sentence in this paragraph talks about increases in salt concentrations in Delta channels and waterways (assuming no change in net salt emissions resulting from conversion of agricultural lands to habitat, but increased evaporation rates). As we commented on the 9/97 draft of the Water Quality Impact Analysis, we question the validity of the assumptions that lead to this conclusion. We are concerned that this general assumption obscures that agricultural drainage affects the timing of salinity loads and temporal variations in salinity concentrations which are likely of greater significance in terms of water quality impacts than are annual loadings. Therefore, these land conversions may in some instances actually <u>improve</u> local water quality conditions. (See EPA's previous comments on 9/97 draft of Water Quality Impacts Technical Report.)	**	
257	872	6-44	4 th paragraph	V. Pacheco, DWR	Another potential long-term adverse water quality impact of the Ecosystem Restoration Program may be the additional dissolved organic carbon. It may be very difficult to control flow containing increased DOC from drinking water diversions given extent of habitat restoration.	T	
1460	873	6-45	Col 2; Para 7; Line 3	P. Standish-Lee: Wood-ward Clyde	Delete or modify the 2 nd sentence. It does not appear to make sense		
1189	874	6-45	2nd column, 5th complete paragraph, 3rd sentence:	FWS	Sentence states, "DWRSIM modeling suggests that the X2 position would move eastward 1 to 4 kilometers". The significance of the effect of this movement relates to the San Joaquin side flows with their high selenium content and the south Delta pumping. Include an analysis of these effects prior to stating the magnitude of effects on Bay water quality.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1062	875	6-45	2nd Column	GL, EPA	<p>Discussion on impacts to SF Bay is inadequate. As an example, the second paragraph states that 1C will have a small beneficial impact on the Bay due to the storage component. While there may be additional, incidental outflows at certain times of year due to storage releases, the more significant impacts on SF Bay may come from reduction of high flow periods (because these will now be skimmed off for storage) and the consequent adverse impacts on circulation flows in the South Bay.</p> <p>Another example is the statement under Alternative 3 that the eastward movement of X2 location will not result in a significant impact on SF Bay (in the first paragraph under Alt. 3). This, again, appears to gloss over the potential impacts of reduced outflows (or lessening of high flow periods) on the Bay.</p>	**	
768	876	6-46	third to the last paragraph	Judy Heath, CALFED	Watershed coordination and integration activities are expected to occur which will include the Bay Region.		
1462	877	6-46	Col 1; Para 5; Line 6	P. Standish-Lee: Woodward Clyde	At end of para. Add: "DOC could produce ecological benefits by increasing the amount of energy available at the base of the food chain"		
1461	878	6-46	Col 2; Para 3	J.Davis: Woodward-Clyde	The first sentence of the narrative refers to an earlier discussion of construction impacts that doesn't exist. If the paragraph referred to in comment 24 is rewritten as suggested this problem is taken care of. Also the following text should be added to the end of the paragraph. "The Water Quality Program would also result in a reduction in contaminant emissions from urban and agricultural runoff and municipal and industrial wastewater discharges. Reduced contaminant emissions can be expected to benefit water quality in the vicinity of the waste discharges but are too small to have much effect on overall water quality in the Bay."		
556	879	6-46	Paragraph 2	DFG	The discussion under All Alternatives states that ERP actions have the potential to cause adverse impacts to water quality yet the remainder of the text discusses that restoration will take place on lands currently managed for agricultural use. The text should explain how development of wetlands (presumably with no use of herbicides and pesticides on lands which formerly had used these chemicals) will decrease water quality.		
258	880	6-46	1 st Paragraph	V. Pacheco, DWR	Pumping may require additional inflow needs which can be met from various sources. However, outflow must be maintained to ensure attainment of X2.	T	

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
259	881	6-48	"All Alternatives-Ecosystem Restoration Program, para. 2"	Steve Hayes, DWR	The habitat restoration program includes the restoration of riparian habitat on the Sacramento River. The increased organic material ultimately released into the Bay-Delta System as a result of this program could contribute to increased trihalomethanes within the system. The potential impact should be acknowledged.	T	
1465	882	6-48	Col 2; Paras 3,4,5,6 and 7	J.Davis: Woodward-Clyde	This level of narrative descriptive material is not provided anywhere else in this section. I suggest it be eliminated here. Adequate information is provided in Table 6.1.3.3. Suggest adding a last sentence to para 2. "Actions include riparian habitat restoration, augmentation and restoration of spawning gravels, restoration of some floodplains and channel meander areas and modification of dams to reduce the temperature of released water."		
1464	883	6-48	Col 2; Para 1; Line 3	P. Standish-Lee: Woodward Clyde	Change "No change in.." to "Instream". Change "...is expected...increase." To "...may be improved as a result of these releases."		
1463	884	6-48	Col 2; Paras Lines 3-7	P. Standish-Lee: Woodward Clyde	Paras don't belong here; they describe the program.		
1063	885	6-48	Alternative 3 discussion	GL, EPA	The analysis starting on the bottom of column one and carrying over to column two discusses only the impacts of Alternative 3A. What about the impacts of the other configurations of Alternative 3?		
857	886	6-49	Table 6.1.3-3	Fujitani, USBOR	If additional flows may be needed to meet ERP objectives, the impacts should be included on this table. Reservoir release temperatures may be an impact of additional releases or a revised pattern of reservoir release.		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
858	887	6-49	Table 6.1.3-3	Holt, USBOR	<p>Item 9 has already been completed. It should be included as a part of the existing environment.</p> <p>Item 4 could have a positive impact on water quality by keeping livestock out of the stream.</p> <p>It would be handy to identify the stream it impacts. A fish barrier to the Colusa Drain should be mentioned.</p> <p>Overall, it would be useful to note if the impacts are positive or negative.</p>		
1184	888	6-5 to 6-6	last sentence on page 6-5 ending on 6-6	FWS	<p>Sentence states, "The addition of various amounts of storage could enable water managers to use the stored water to offset the adverse impacts on salinity to some extent". This implies that new storage is necessary to offset upstream migration of salinity. State: "Reoperation of existing storage should be a first step in offsetting impacts on salinity".</p>		
545	889	6-5	Right Column, Paragraph 1	DFG.	<p>This paragraph contains two apparently misleading statements. It states that Alt 3 has the highest potential to reduce Delta outflow. The operations studies done to date project the same increase in exports with each of the three alternatives in combination with storage; furthermore, Alt 2 and Alt 3 have the same potential to divert water from the Sacramento River. Considering both of these facts why is the statement in the draft correct?</p> <p>Secondly, the next to last sentence states that flows in the Sacramento River would increase. At least below Hood; flows decrease significantly and this point needs to be discussed.</p>		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
198	890	6-5	"Alternative 3, para. 3, line 10-13"	Steve Hayes, DWR	The statement " Delta modeling simulations suggest that, under standard operating rules, reverse flows in the San Joaquin River would be eliminated" may not be practicable. Tidal elevations in the lower San Joaquin River may be sufficient to create intermittent reverse flow conditions past Stockton that cannot be overcome in the late summer and early fall of dry years when San Joaquin River flows are at their lowest. Suggest using the word "minimized".	T	
1328	891	6-5	Col 1	P. Standish-Lee: Woodward-Clyde	Discussion of hydrodynamics of Alternative 2 is missing		
1340	892	6-5	Col 1; Para 2; Line 8	P. Standish-Lee: Woodward-Clyde	Add "and Western" after north. (Note Emmaton is really in Western Delta)		
1331	893	6-5	Col 1; Para 2; Lines 14-15	P. Standish-Lee: Woodward-Clyde	Note letters from CCCWD: they consider themselves to be an in-Delta user, not an exporter. State should make a finding re. their legal standing in this regard.		
1330	894	6-5	Para 1	P. Wisheropp: Woodward-Clyde	First half of the paragraph seemed mixed-up. More freshwater is introduced to the central Delta which results in decreased quality in the North Delta, even though the freshwater has to travel through the north Delta. Isn't Emmaton considered to be in the west Delta?		
1338	895	6-5	Col 2; Para 1; Line 4	P. Standish-Lee: Woodward-Clyde	Add "and around" after "across" to make clear the difference from Alternative 2		
1329	896	6-5	Col 2; Para 1; Lines 13-15	P. Standish-Lee: Woodward-Clyde	Add "upstream from the Delta" after "Sacramento River"; Why would Sac R. flow changes be less than significant and those in SJR be negligible? Seems that significant flow changes are likely		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1327	897	6-5	Col 2; Para 3; Lines 9-19	P. Standish-Lee: Woodward-Clyde	Add "project induced" after "of" and "drawn" after "flows" to make clear that most of these flows are the result of project operations (storage releases to Sac. R. and exports from S. Delta)		
1332	898	6-5	Para 2	P. Wisheropp: Woodward-Clyde	Confusing. Don't make the reader refer back to a previous alternative to find the conclusion. State the conclusion and then state that it is the same as with another alternative.		
1334	899	6-5	Para 3	P. Wisheropp: Woodward-Clyde	How can exports increase without an increase in Delta inflow (especially during low-flow periods)? Increasing export without an increase in inflow implies a decrease in outflow, which can't be done in low flow periods without violating outflow standards.		
1336	900	6-5	Para 4	P. Wisheropp: Woodward-Clyde	What are these intake facilities that have an unknown location, capacity, diversion schedule? They appear to control the impacts, but how? These diversions have the potential for adverse impacts but offer water managers greater flexibility to reduce or prevent the impacts. More explanation is needed.		
1335	901	6-5	Para 4	P. Wisheropp: Woodward-Clyde	Is this upstream storage being discussed in the first sentence? As with a previous comment, explain the cause and effect. Upstream storage will alter the timing of releases to the Delta and therefore, Delta inflow. This will affect Delta hydrodynamics. Also, given the importance of Delta inflow on Delta hydrodynamics, how is it that the impacts now depend on the location of diversions.		
1337	902	6-5	Para 5	P. Wisheropp: Woodward-Clyde	"Reductions in net Delta outflow would probably occur...". This is a terminology issue. Reductions are described by measuring one condition against another, yet when discussing an occurrence, it is typically one condition. Therefore, reductions wouldn't occur more frequently, but rather a given level of outflow may occur less frequently than in another case.		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
190	903	6-5	Section 6.1, 1st column, last paragraph	Sandino, DWR	I question the statement that the greater number of intakes and capacity of intakes the greater the potential for adverse impacts. This is true perhaps if pumping capacity and downstream storage capacity match the intake capacity. A bit more explanation is needed here.	C	
1339	904	6-5	Para 7	P. Wisheropp: Woodward-Clyde	Export water quality would improve if exports come from an isolated facility. This point should be emphasized.		
823	905	6-5	Para. 5, line 14	Roefs, USBOR	Under all versions of Alternative 3, Sacramento River flows would decrease downstream of the isolated diversion facility. This impact must be addressed.		
1047	906	6-5	2nd column, 3rd paragraph	GL, EPA	First sentence states "(e)xpport quality would be the most improved under this alternative." Yet, the following text discusses how water quality would be degraded in the north and west Delta. Need to include supporting info on improved export water quality at south Delta facilities.		
199	907	6-5	4 th Paragraph	DWR Modeling Support	Discussion speculates on how Alternative 3 might change net Delta outflow. Why not summarize DWRSIM results which address this directly.	T	
197	908	6-5	5 th Paragraph	DWR Modeling Support	Text incorrectly states that in-Delta storage component would block off Delta channels. Any in-Delta storage would be connected to Clifton Court Forebay by siphons, leaving Delta channels intact.	T	
200	909	6-5	6 th Paragraph	DWR Modeling Support	Discussion of Alternative 3 and implications that it could significantly degrade salinity at Rock Slough needs to differentiate between Alternatives 3A, 3B, and 3E. Alternative 3A did degrade water quality at Rock Slough. Under this alternative, the isolated facility had a capacity of only 5,000 cfs and there was no in-Delta storage so substantial pumping still occurred in the south Delta. At the same time, the Delta Cross Channel was closed in all months except July and August. Thus the results for Alternative 3A are not indicative for other versions of Alternative 3 concerning Rock Slough TDS.	T	

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1467	910	6-50	Col 1; Para 1	J.Davis: Woodward- Clyde	The discussion of construction impacts in this section is more extensive than under the similar discussion in an earlier section on the Delta region. It is however just as applicable to the Delta. I suggest that the construction impacts be written up comprehensively in the first section (in this case the Delta region) and then referred to in each subsequent section. Subsequent sections would only discuss in detail differences from the Delta section. This would avoid repetition and inconsistency		
1468	911	6-50	Col 1; Para 3	J.Davis: Woodward- Clyde	The list of actions in Table 6.1.3.3 does not include removal of dams. I would expect that the dam modifications proposed in the table would not disturb old sediments.		
1469	912	6-50	Col 1; Para 6	J.Davis: Woodward- Clyde	Probably should add some reference to temperature changes resulting from dam modifications.		
770	913	6-51	last paragraph	Judy Heath, CALFED	The statement is incorrect. The impacts of the upper watershed activities to the Sacramento River Region would not be similar to those described for the Bay Region.		
1065	914	6-51	Last paragraph	GL, EPA	Last two paragraphs on this page discuss selenium and actions to reduce Se levels in agricultural subsurface drainage. This discussion is misplaced - it should be included in the San Joaquin River Region (on page 6-53), not in the Sacramento River Region. In addition, the impact of land retirement and improved irrigation practices (other methods for Se control) should also be analyzed.	**	
859	915	6-51	Paragraph 11	Roefs, USBOR	Because selenium in agricultural subsurface drainage has not been reported as a Sacramento Valley problem, at this time this is not a primary issue. However, we agree that any actions that could make it a problem should be avoided.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
261	916	6-51 and 6-52	Section 6.1.3.4	R. Tom, DWR	Under the heading Watershed Management Coordination for the Sacramento River Region, it states that "Impacts of upper watershed activities would be similar to those described for the Bay Region. Potentially significant mitigable short-term impacts could occur." Yet, under Watershed Management Coordination for the Bay Region on page 6-46, it states that "Watershed activities are not proposed in the Bay Region." This seems to imply that no watershed activities are proposed for the Sacramento River Region.	T	
769	917	6-51	sixth paragraph from top	Judy Heath, CALFED	Exclude "vigorous" from the first sentence. This sentence implies that the Water Quality Program is in an enforcement capacity, which it is not. The CALFED Water Quality Program will work within the confines of the existing regulatory system and provide incentives to enhance that process to the extent possible.		
1471	918	6-51	Col 1; Para 2	P. Standish-Lee: Woodward Clyde	At end of para, add: "Long term benefits should accrue compared to No Action."		
1470	919	6-51	Col 1; Para 1	P. Standish-Lee: Woodward Clyde	At end of para, add: "This is believed to trigger desirable behaviors in aquatic organisms. However, additional treatment is required to provide good drinking water quality."		
1472	920	6-51	Col 1 and 2	J.Davis: Woodward-Clyde	This section on water quality is more detailed than the ones in earlier sections on the Bay and Delta. It would be more logical to have the most detailed section under the first region discussed i.e. the Delta and then refer back to it in subsequent sections.		
1473	921	6-51	Col 1; Para 3	J.Davis: Woodward-Clyde	Reference to San Joaquin River not appropriate here.		
1474	922	6-51	Col 1; Para 4	J.Davis: Woodward-Clyde	Need to check this paragraph accurately reflects the new metals loads. (Peter M. to check)		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
260	923	6-51	Paragraph 3	Steve Hayes, DWR	Dissolved trace metal levels within the Bay-Delta System rarely exceed State Primary or Secondary Drinking Water Standards. This is due, in part, to the insolubility in water of many of the salts of trace metals under aerobic conditions. The current trace metal threat of discharges from mines distant from the System can be overstated if the surface discharge of the mine is aerated, anaerobic ground water from the mine does not enter the System, and flooding of the mine does not occur. The historical trace metal threat of past mining activities to the System should be acknowledged, however. Regulated point discharges to the System from nearby sources appear to be a more current threat.	T	
1064	924	6-51 and 6-52	Table 6.1.3-4	GL, EPA	Table and text address loadings of Cd, Cu and Zn in the Sacramento Valley. Given the concerns over mercury levels in this region, this parameter ought to be included in the table and text as well.		
1475	925	6-52	Table 6.1.3-4	Peter Mangarella, WCC	Estimates in table should be revised consistent with loads tables in Affected Environment Report. Specifically for cadmium mine: from 5.9 to 3.4. copper mine from 550 to 330. zinc mine from 5500 to 4500.		
264	926	6-53	ERP Section	Spaar, DWR	Impacts from proposed actions would be similar, but would also include impacts from the isolation of instream gravel mining pits or conversion of the pits to floodplain or riverine areas. Water temperatures are likely to decrease (improve for salmon) due to a conversion from pond-like to riverine environment (flow velocities will increase through these areas). See comment p. 6-38 and description p. 6-107.	T	
862	927	6-53	ERP	Fujitani, USBOR	If the need for additional water on the San Joaquin River revises the reservoir release patterns, water quality at Vernalis may be affected. This may need to be addressed in other locations throughout the document.		
860	928	6-53	In WUE Program	Slavin, USBOR	The statement that putting less water on will reduce the amount of leaching necessary to remove salts, should be better explained.		
861	929	6-53	Paragraph 13	Roefs, USBOR	It is not clear that all service areas will experience beneficial impacts.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
262	930	6-53	San Joaquin River Region Section	Spaar, DWR	There are no alternatives covered in this section. Does that mean there are no impacts to the San Joaquin River Region from any specific alternatives?	C	
1066	931	6-53	San Joaquin River Region	GL, EPA	There is no discussion of the alternatives in this section.	**	
263	932	6-53	Section 6.1.3.4	R. Tom, DWR	Under the heading Watershed Management Coordination for the San Joaquin River Region, it states that "Impacts of upper watershed activities would be similar to those described for the Sacramento River Region. Construction-related impacts may be significant, but would be mitigable." Sacto River Basin impacts are the same as Bay Region and therefore no watershed activities are proposed for the San Joaquin River Region.	C	
1267	933	6-53	right col., 5 th para.	Dan Johnson NRCS	Reduced application of export water will NOT decrease and may INCREASE the amount of salt in the soil profile due to reduced leaching of accumulating salts. This will be a problem if the irrigation supply (irrigation water quality) is not improved.		
1481	934	6-53	Col 1; Para 8	J.Davis: Woodward-Clyde	Need to check narrative matches new loads (Peter M to check)		
1480	935	6-53	Col 1; Para 7; Line 1	P. Standish-Lee: Woodward Clyde	After "...Program..." replace "...is not...may occur" with "...in the San Joaquin River Region should be similar to those expected in the Sacramento River Region."		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1479	936	6-53	Col 1; Para 7	J.Davis: Woodward- Clyde	Discussion under heading "Water Quality Impacts" focuses on mine remediation impacts without any discussion of other effects of program. Suggest replacing first paragraph under heading with the following "The Water Quality Program would result in a reduction in contaminant emissions from urban and agricultural runoff, municipal and industrial wastewater discharges and abandoned mines. Reduced contaminant emissions can be expected to benefit water quality in the vicinity of the waste discharges but are too small to have much effect on overall water quality in San Joaquin River. Construction activities associated with the Water Quality Program would cause localized increases in water turbidity but the application of conventional mitigation measures would reduce them to insignificance."		
1478	937	6-53	Col 1; Paras 3 and 4	J.Davis: Woodward- Clyde	The write up here does not reflect the analysis in the WQTR. The EIS/EIR writer has substituted narrative that reflects their own views. I don't agree with them. Suggest following language to replace paras 2 and 3. "It is difficult to generalize about the effects of the Water Use Efficiency Program on streams in the Sacramento Valley. Many agriculturalists in the valley obtain their water from irrigation canals and discharge tailwater to surface streams. If water is used more efficiently on farms then the volume of tailwater would decrease and the concentrations of some contaminants in it will increase. In cases where tailwater is a substantial portion of the summertime stream flow, water quality would deteriorate. In cases where agriculturalists both draw water from a stream and discharge it back to the stream, increased water use efficiency would have little effect or a minor beneficial effect on water quality. Municipal water use efficiency would also decrease the volume of municipal wastewater and increase the concentration of contaminants in it. In cases where municipal wastewater is a substantial portion of summertime stream flow, water quality would deteriorate".		
1476	938	6-53	Col 1; Para 1	P. Standish- Lee: Wood- ward Clyde	Replace "...described....Region." with "...should be beneficial overall because the Implementability of the programs would be improved."		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1483	939	6-53	Col 2; Para 6; Line 10	P. Standish-Lee: Woodward Clyde	After "...salinity...", replace "to" with "concentrations and loads entering..."		
1482	940	6-53	Col 2; Para 7	J.Davis: Woodward-Clyde	This section seems very weak considering the importance of export water quality. I think a bit more indepth discussion would be appropriate. Also, I don't think Alternative 1 would have much effect on export water quality from Delta.		
1477	941	6-53	Col 2; Para 4	J.Davis: Woodward-Clyde	I thought the Levee System Integrity Program only involved actions in the Delta. Should be no impact on water quality in San Joaquin River		
1067	942	6-53 and 6-54	S.J. Region - Table 6.1.3-5	GL, EPA	Text and Table should include selenium loadings in the San Joaquin, given the significance of this parameter in this region.		
1484	943	6-54	Table 6.1.3-5	Peter Mangarella, WCC	Column headed mercury should be changed to zinc to be consistent with numbers and previous table. ND designation should be changed to NE- No estimate made because of lack of adequate data.		
265	944	6-55	Potentially Significant Unavoidable Impacts	Chuck Vogelsang, DWR	This section and in the body of the chapter should state that unavoidable impacts to water quality could occur because of accidents or unforeseen problems occurring during the construction phase of facilities.	I	A
220	945	6-55	Section 6.1.3.5	Sandino, DWR	First sentence in this section is incomprehensible. Whole section needs rework.	C	
219	946	6-55	Section 6.1.3.7	Sandino, DWR	All of the significant impacts are avoidable statement perhaps should be modified. Is the DEIR trying to say that all impact are reduced to a level of non-significance? If so, I would state that instead. It is more accurate under CEQA.	I	A

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
221	947	6-55	Section 6.1.3.6	Sandino, DWR	Mitigation strategies does list mitigation measure and this is helpful. Other mitigation measures could be used as well including emergency response plans, stormwater pollution prevention plans, and inclusion in construction contracts of these plans. I recommend including a statement that agency responsible for implementing mitigation would probably be constructing agency.	I	A
1485	948	6-55	Col 1; Para 2	J.Davis: Woodward-Clyde	This paragraph is very hard to understand. As noted under comment 3, I think that for the sake of completeness, CEQA/NEPA compliance, and understandability by public, the CALFED alternatives should be separately compared to the existing condition (1996) and to the condition that will prevail in 2020 if no action is taken (No Action Alternative) as we did in the Nov 7th version of WQTR. This will enable the reader to clearly distinguish between environmental elements that will actually improve relative to the existing condition by 2020 as a result of the CALFED program and those that will improve relative to the No Action Alternative but deteriorate relative to the existing condition.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1044	949	6-55	6.1.4	CY, EPA	<p>The introductory paragraphs anticipate discussion of supply reliability relative to demands, by region. The subsequent text of this chapter does not provide this analysis, except in very general terms. For the DEIS, reconcile introduction (the subjects of this section and the measures used) with contents. Identify analyses pending.</p> <p>For the next (final) EIS review, this section will need substantial improvement and better integration with the economic analyses (urban and agricultural) provided in Chapter 8. Analysis promised in introduction should be provided (supply reliability taking into account deliveries, wue, transfers). When doing so, assumptions underlying demands used in the analysis and allocation scenarios should be made explicit. DEIS should list additional analyses needed to provide this information.</p> <p>Water supply reliability should be reported for critical dry and average periods.</p>	**	F**
557	950	6-56	Right Column, Paragraph 4	DFG	Reference is made to a Table 6.1.4 illustrating water supply changes in the Delta for all programmatic alternatives. Unfortunately the table on page 5-57 doesn't provide that data. A revised table should be provided or the text modified.		
222	951	6-56	Section 6.1.4.4	Sandino, DWR	This is key section. I think water exports benefits and Delta outflow changes should be emphasized here. Maybe a summary chart would help. I question the explanation of the significance criteria. It appears to be based on the model accuracy rather than on impacts to the environment. The time value of water, which the DEIR makes an important point of earlier, seems to have weight here. The DEIR assumes that all increase in exports and decrease in outflow have the same significance no matter the season.	I	A

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1486	952	6-56	Para 2	P. Wisheropp: Woodward-Clyde	Third mention of DWRSIM. Describe once at the start of Section 6.		
223	953	6-56	Table 6.1.4-1	K. Kelly, DWR	does not seem to illustrate changes in Delta inflows, outflows, and diversions	C	
1487	954	6-56	Para 9	P. Wisheropp: Woodward-Clyde	What impact is potentially significant? (last sentence). This section is about water deliveries. Yet deliveries change from EC to NAA, making a comparison of delivery incorrect. Perhaps a better estimate of impacts would be the unmet demand for EC and for NAA.		
1488	955	6-56	Para 12	P. Wisheropp: Woodward-Clyde	Impacts to Delta outflow are described as a water supply impact and yet Delta outflow was previously discussed in the hydrology section.		
1489	956	6-57	Table 6.1.4-1	P. Wisheropp: Woodward-Clyde	What is the point of this table? These are model results whose value lies in their comparative use with other model runs. Presented alone, these are meaningless numbers.		
558	957	6-58	Left Column, Paragraph 3	DFG	The last two sentences make very little sense to us and should be deleted.		
266	958	6-58	Section 6.1.4.4	R. Tom, DWR	In the last paragraph on the right hand side under the heading Water Quality, Including Watershed Management Coordination, the listed primary water quality constraints on use of water from the Delta for municipal, industrial, and agricultural purposes are salinity, bromide, and pathogens. Total organic carbon should be included in this list, particularly in light of the upcoming TOC removal requirements of the D/DBP Rule.	T	
1491	959	6-58	Para 2	P. Wisheropp: Woodward-Clyde	The section (6.1.4.4) seems redundant. Previous discussions have discussed the movement of water in the Delta. How is this discussion different?		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1492	960	6-58	Para 5	P. Wisheropp: Woodward-Clyde	"Inadequate storage is a constraint..". what inadequate storage?		
1493	961	6-58	Para 6	P. Wisheropp: Woodward-Clyde	This paragraph ("Likewise, the magnitude..") is confusing. Minimum Delta outflow has to be met and the model will meet it first (at the expense of exports). It isn't something that is achieved (especially after "export demand is met" and the hierarchy of the sentence suggests). This paragraph displays a large misunderstanding of how the models work and what the alternatives can accomplish.		
1494	962	6-58	Para 8	P. Wisheropp: Woodward-Clyde	If the ERP become flow standards, then won't they have to be met? If so, the statement that without new storage, the flow targets will be met less often is wrong. Without new storage, existing reservoirs will take a larger, and possibly fatal, hit in their carryover storage. New storage provides a new water supply to help meet standards, but the standards will be met.		
1495	963	6-58	Para 9	P. Wisheropp: Woodward-Clyde	The title of the section should match other sections.		
267	964	6-58	Line 1-4	Mike Cooney, DWR	I am confused about what is being said about the impact of Configuration 1C. Is the expected 5% reduction in Delta outflows considered potentially significant or is this just being compared to the No Action Alternative, which is potentially significant. Five percent seems like a small amount to be considered significant. Some rational should be presented in this section to support these assumptions and provide some guidelines for readers (i.e. you say slight is 1.5%, small is 4%, but 5-6% is significant?). These are all being compared to the No Action Alternative, however, while you recognize that some outflow reductions may result, no projected magnitude is given. This makes comparative analysis difficult if not impossible.	T	

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1490	965	6-58	2	P. Wisheropp: Woodward-Clyde	Last sentence. "less is needed to ..". Replace with "Less water is needed to..."		
863	966	6-59	In WUE Program	Slavin, USBOR	WUE level may indeed vary between alternatives. The statement that the WUE program has the potential to allow water managers to keep more water in storage could be used as an example.		
824	967	6-6	watershed mgmt	Holt, USBOR.	Watershed improvements are stated to be less than significant. However, the Plumas Corp., for example, estimates that 200,000 AF of storage could be regained by restoration of alpine meadows. This would provide cold water storage (groundwater temps equal mean annual air temperatures) which would be released slowly with particularly strong contributions to total flows in the recipient tributaries in drought years. Effects of forest management for fuel control if properly managed would also tend to increase yields to stream flow, based on small watershed experiments around the world over the past 90 years. While the effects probably would be lesser on larger tracts, the effects probably would still be significant if large tracts were properly managed with control burns and harvests to restore them to pre-European immigration conditions. These examples should be considered when addressing significance.		
1352	968	6-6	Col 1; Para 6	J.Davis: Woodward-Clyde	Last sentence is confusing and not very informative. Suggest it be replaced by following sentences. "The magnitude of the reductions in contaminant loadings and their beneficial effects on in-stream water quality are difficult to estimate because information on the effectiveness of program components is lacking. In general, the reductions in contaminant emissions are expected to be modest and in the range of 5 to 10%. Metals reductions produced by mine drainage improvements could be greater.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1348	969	6-6	Col 1; Para 4	J.Davis: Woodward-Clyde	The statement on the effects of ecological restoration program on flows does not acknowledge that conversion of ag. lands to wetlands increases evaporation and would reduce flow in some channels. I also suggest that the paragraph make some reference to the potential for DOC increases when ag. land is converted to wetlands. This is of great interest to municipal water suppliers and could be the most controversial impact of the ERP.		
1350	970	6-6	Col 1; Para 5	J.Davis: Woodward-Clyde	Suggest last sentence should read; "This is not expected to have a significant effect on stream flows in the Delta or tributary streams." Some agricultural source control measures could change the volume of diversions and wastewater discharges; e.g. tailwater recycling.		
1354	971	6-6	Col 1 & 2; Para 6 & 1; Last & 1 st Lines	P. Standish-Lee: Woodward-Clyde	Prediction of impact magnitude is possible based on assumptions utilized but only general predictions are appropriate at programmatic level. Suggest add "at this time" after "predicted" to qualify		
1342	972	6-6	Para 1	P. Wisheropp: Woodward-Clyde	The approach of using one sentence to state both adverse and beneficial impacts is difficult to follow. The sentence appears, at the outset, to contradict itself.		
1343	973	6-6	Para 1	P. Wisheropp: Woodward-Clyde	This paragraph misses the interaction between required Delta outflow, the isolated facility, and upstream storage. Sufficient modeling has been conducted to establish, at a program level, these interactions thereby eliminating the generalities of the last sentence.		
1349	974	6-6	Col 2; Para 4	P. Standish-Lee: Woodward-Clyde	Replace 3 "activities" with "management actions" to differentiate from current uses. Replace "since this would be one of the " with "consistent with their". Delete "of such activities"		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1341	975	6-6	Col 2; Para 2 (1st complete para)	J.Davis: Woodward-Clyde	This paragraph, and similar ones scattered around the summary, are confusing because they don't distinguish between water quality and quantity. Suggest rewriting this one as follows. "The CALFED water quality program would have no effect on the availability of water diverted for municipal supply and a minor beneficial effect on its quality".		
1353	976	6-6	Col 2; Para 7	J.Davis: Woodward-Clyde	See Comment 10. Suggest rewrite as follows; "The Levee System Integrity Program would not, under normal conditions, affect the availability or quality of municipal water supplies. It would however, reduce the risk of catastrophic failure of levees and consequently increase the reliability of water supplies.		
1346	977	6-6	Col 2; Para 3; Last line	P. Standish-Lee: Woodward-Clyde	Make "watershed" plural. Is "basin" new nomenclature? Suggest replace with "Central Valley"		
1344	978	6-6	Para 2	P. Wisheropp: Woodward-Clyde	Reword the paragraph. Maybe list it under the header of "Impacts of the Common Programs"		
1345	979	6-6	Para 3	P. Wisheropp: Woodward-Clyde	This text does not fully capture the alteration of hydrologic regimes because of the ERP. Water is available in the dry periods because it is shifted from wet periods and also derived from existing diversions, that will have to decrease.		
1347	980	6-6	Para 5	P. Wisheropp: Woodward-Clyde	One benefit of mine clean-up may be in the reduction in reservoir releases needed to dilute mine runoff during storm events. This is a quantifiable (in the case of Shasta releases for Iron Mountain Mine) amount of storage.		
1351	981	6-6	Para 7	P. Wisheropp: Woodward-Clyde	To the extent that watershed activities reduce the peakedness of storm hydrographs, there may be a water savings from reducing the flood releases from reservoirs during storm events.		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
559	982	6-61	Right Column; Paragraph 4	DFG	Comments made on page 6-39 also apply here..		
225	983	6-61	section 6.1.4.6	K. Kelly, DWR	"Potential mitigation strategies revolve around operating rules..." Please state what negative impacts are being mitigated. ie "Potential strategies to mitigate negative impacts to... involve..."	C	
268	984	6-61	Section 6.1.4.4	R. Tom, DWR	In the second paragraph on the right hand side under the heading All Alternatives for the San Joaquin River Region, it states that "Impacts of the Ecosystem Restoration Program, Water Quality Program, and the Water Use Efficiency Program would be similar to those described in the Sacramento River Region." Yet, there is no discussion on impacts of the Water Quality Program for the Sacramento River Region (pages 6-60 to 6-61). There is some discussion on watershed management coordination for the Sacramento River Region, but nothing on impacts of the Water Quality Program.	T	
224	985	6-61 to 6-62	Section 6.1.4.5 to 6.1.4.7	Sandino, DWR	These sections need more work. The conclusions about mitigation strategies and the conclusions about avoidability of impacts are cursory and would probably cause public comment. I recommend specifying exactly what are the revised storage rules, flow requirements, and demand targets. If they cannot be specified, are there some performance criteria that can be used?	I A	
864	986	6-61	Paragraph 3	Roefs, USBOR	The additional water stored by south of Delta facilities could go first to meet M&I demand which is largely outside the San Joaquin River Region.		
865	987	6-62	6.1.4.7	Fujitani, USBOR	There appears to be a conflict between this paragraph stating that none of the water supply impacts is expected to be unavoidable, while Table 6.1-1 indicates that there are many impacts which are significant but mitigable.		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
867	988	6-63		Holt, USBOR	The statement on groundwater resources needs to be modified or defended more clearly. Referring to the statements about Yolo County on page 6-81, would be helpful.		
866	989	6-63	Paragraph 1	Roefs, USBOR	It might be desirable to inform the reader that the groundwater discussion is purely qualitative.		
1496	990	6-63	Para 3	P. Wisheropp: Woodward-Clyde	Need to specify groundwater or surface water storage. Using the word "storage" by itself is confusing.		
226	991	6-63	s6.2	Dan Flory, DWR	In general, the material captures the qualitative potential for adverse impacts to, but not necessarily resulting from, groundwater for the three basic alternatives and for the common programs. In general these impacts are likely to be small and usually less than significant particularly if mitigation is provided. However, the document fails to adequately consider the impacts of the possible conjunctive use elements of the CALFED program. This is probably a problem inherent in adopting a programmatic approach to impact analysis. However, it is likely to simply deepen the distrust of the public for the process and the participants.	P	
1497	992	6-64	Table 6.2.1-1	P. Wisheropp: Woodward-Clyde	Same comments about Table 6.1.1-1. It should be stated that the NAA column is a comparison with EC and the other columns are comparisons with NAA. The presentation of impacts as both "significant and mitigable" and "beneficial"		
227	993	6-64, 6-81	Section 6.2, Section 6.2.2.3	Sandino, DWR	DEIR in groundwater summary (p. 6-81) states that Sacramento Valley will not probably not experience subsidence, but later in the text an opposite conclusion is reached (p. 6-81) The reason for this conclusion is not explained. I think the SWRCB Water Quality Plan Implementation DEIR should be examined for consistency. The SWRCB DEIR believes that Sacramento Valley folks will contract for water supply with the SWP and CVP if their water supply is reduced, which results in no groundwater impacts. I think we are inviting confusing if these two document are different without explanation.	C	

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
869	994	6-65 6-70		Holt, USBOR	In regard to the discussion on groundwater in the upper watersheds, the Plumas Corp claims that restoration of alpine meadows could yield as much as 200,000 of water storage. This could potentially provide 200,000 af of <u>cold</u> water storage to augment baseflow with particular significance in dry years. Since these degraded alpine meadows are upstream of streams and reservoirs supplying water to spring-run Chinook salmon streams, they are an item worthy of discussion.		
868	995	6-65, 6-87, 6-95 and 6-113	Under WUE	Slavin, USBOR	The argument presented in each of these discussions under WUE is that improved on farm efficiencies may adversely impact an area's groundwater conditions by reducing the amount of recharge. However, one of the Efficient Water Management Practices (EWMP) in the Agricultural Water Suppliers Council's process is to optimize conjunctive use of surface and groundwater which should take into account any negative impacts created by increased on-farm efficiencies.		
1498	996	6-65	Para 4	P. Wisheropp: Woodward- Clyde	Groundwater recharge along rivers is important but it won't mitigate the groundwater overdraft away from the rivers or in the deep aquifers. Also, setback levees will expose more area to floodflows, but these transitory events probably won't benefit groundwater as much as claimed.		
1190	997	6-65	2nd column, 4th paragraph:	FWS	Sentence states effects of groundwater substitution for water transfers. An additional effect is ground subsidence. Include subsidence in list of effects.		
228	998	6-65	s6.2.1	Dan Flory, DWR	The approach of discussing impacts only as they may generally occur over very large geographic areas tends to decrease their apparent significance. However, the public is aware that the local impacts may well be significant a fear (rightly?) that they will not be adequately evaluated prior to implementation. One approach to alleviating the above problem would be to describe and evaluate the impacts of a "typical" conjunctive use project in the Sacramento and San Joaquin Valleys without identifying a specific project location and further inflaming the opposition. As part of this it would be appropriate to discuss how the impacts of the proposed project would, as opposed to could, be mitigated. I'm not sure how to do this within the context of the EIR/S, perhaps it could be another technical appendix.	P	
229	999	6-66		K. Kelly, DWR	bottom of first column: Delete statement: "No summary could adequately ...".	C	
1499	1000	6-66	General Comment	P. Wisheropp: Woodward- Clyde	This section needs to be edited. "Groundwater from wells... are used...". Replace with "Groundwater wells ...are used..."		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1500	1001	6-67	Para 8	P. Wisheropp: Woodward-Clyde	The term "salt water" intrusion is used, but page 6-9 uses "saltwater" intrusion. The same term should be used.		
191	1002	6-7	section 6.1.1.1	K. Kelly, DWR	The intro paragraph should mention the tides. page 6-9 Explain why the three scenarios were chosen (high inflow, low inflow/high pumping, low inflow/low pumping). Readers will be curious about why no high inflow/pumping scenarios are included.	T	
1356	1003	6-7	Col 1; Para 1	J.Davis: Woodward-Clyde	<p>The two paragraphs under the heading "Water Use Efficiency Program" greatly oversimplify program effects as described in WQTR. They are also uninformative. I think that when we have numerical estimates we should use them - otherwise the analysis becomes extremely vague - even for a program level document. Suggested rewrite; "Under the No Action Alternative annual water withdrawals from the Delta would increase to 7.1 to 7.6 MAF by 2020 and South Delta water quality would deteriorate in dry years. The Water Use Efficiency Program would reduce the amount of water needed to sustain the expected level of population and economic activity in 2020 by 5 to 10 percent, corresponding with a Delta withdrawal level of about 6.6 MAF per year. However, it is difficult to predict whether such a reduction in Delta withdrawals would, in fact, occur. Municipal water users may choose, or be compelled by circumstances, to take as much water as possible from the Delta and reduce their use of other sources. Agriculturalists may choose to use the saved water themselves and switch to more water-intensive crops.</p> <p>If reductions in withdrawals in the Delta do occur then the Water Use Efficiency Program would have a beneficial effect on Delta water quality, particularly in dry years. The effects of the program on tributary streams are more complex. Many agriculturalists obtain their water from irrigation canals or wells and discharge tailwater to surface streams. If water is used more efficiently on farms then the volume of tailwater would decrease and the concentrations of some contaminants in it will increase. In cases where tailwater is a substantial portion of the summertime stream flow as it is in much of the San Joaquin Valley, water quality would deteriorate. Municipal water use efficiency would also decrease the volume of municipal wastewater and increase the concentration of contaminants in it. In cases where municipal wastewater is a substantial portion of summertime stream flow, water quality would deteriorate."</p>		
1355	1004	6-7	Para 1	P. Wisheropp: Woodward-Clyde	During low flow periods most conserved water would remain in the reservoirs and not necessarily show up in the rivers. This is because reservoir releases are typically directed to meet instream flow requirements and demands.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1357	1005	6-7	Para 3	P. Wisheropp: Woodward- Clyde	The existing capacity of conveyance facilities is a constraint on water transfers, and transfers won't be set up that violate that constraint. Therefore, it is not a potentially significant impact to engage in a transfer that is within the operating constraints of facilities.		
1358	1006	6-7	Para 4	P. Wisheropp: Woodward- Clyde	Negative and positive impacts in one sentence. The statement that "Reduced demands and accompanying reduction in storage releases..." misses the operation of a water transfer. Transfers that occur from upstream to downstream involve storage releases or avoiding a historic diversion, in either case allowing the water to flow downstream. Streamflow would increase. The third sentence is closer to fact, but contradicts the second sentence.		
1360	1007	6-7	Para 7	P. Wisheropp: Woodward- Clyde	Need Delta figure to explain place names that are mentioned		
1359	1008	6-7	Para 7	P. Wisheropp: Woodward- Clyde	State that Alt 1 is measured relative to NAA. The statement contradicts itself and Table 6.1-1. The impacts are either beneficial or less than significant, or there are no impacts. "Not considered to be significant" is not "CEQA-acceptable" since "considered to be" is not a measurable standard.		
1040	1009	6-7 - 6-9 (as an example)		CY, EPA	There is no clear distinction between subjects covered under "hydrodynamics and hydraulics" and "water supply and water management." One suggestion: Water supply and water management could report on supply/transfer capabilities, rather than repeat flows and operational discussions.		
870	1010	6-73	Paragraph 1	Holt, USBOR	Possible correction is needed in the use of "high" or "low" porosity of rock fractures.		
269	1011	6-79	Col 1, 5 th paragraph	Stuart, DWR	Only a small part of the Colorado River Region is served by the Mojave Water Agency, and the Coachella Valley WATER DISTRICT and Desert Water Agency do not serve the southern half of the region (IID does).	T	

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
230	1012	6-79	s6.2.2.2	Dan Flory, DWR	The proposed significance criteria are problematic particularly those relating to degradation of groundwater quality and land subsidence. The basic problem is how to tease the project specific impacts out of a background in which groundwater quality will be changing as a result of numerous other activities and conditions and subsidence is likely to be ongoing. This is not a trivial problem. CALFED could make a significant contribution by developing approaches and criteria to address this problem. Otherwise, this type of criteria will simply hobble efforts to develop conjunctive use projects. Simply throwing more monitoring at the problem is not a solution and in fact will probably aggravate the problem as the more one looks at the more change one is likely to detect.	P	
201	1013	6-8	"Water Quality"	Steve Hayes, DWR	The impacts on water quality of increasing population growth within the drainage basins of the major rivers to the Delta should be mentioned. Emphasis in this section is of historical impacts only (this comment is related to Comment No. 3 above).	T	
1367	1014	6-8	Col 1; Para 4; Line 9	P. Standish- Lee: Woodward- Clyde	Replace "During normal" with "On average" and delete "water years". We do not have a normal year designation, only above- and below-normal, etc.		
1363	1015	6-8	Col 1; Para 3; Line 1	P. Standish- Lee: Woodward- Clyde	Delete "Average"; Replace "is" with "averages" and insert "Net" before Delta. This distinguishes the freshwater outflow from the tidal outflow. Insert "freshwater in-" before flow in line 3 to distinguish from saltwater inflows to the Delta.		
1365	1016	6-8	Col 1; Para 2; Line 6	P. Standish- Lee: Woodward- Clyde	Insert "salt from" before "tidal"; tidal effects on flows and stage still extend upstream to Sacto even though' saltwater does not		
1362	1017	6-8	Col 2; Para 3; Lines 14-15	P. Standish- Lee: Woodward- Clyde	Replace "upstream....interface" with "location of the entrapment zone, an area of high biological productivity". X2 is still in the brackish water estuarine zone		
1364	1018	6-8	Col 2; Para 3; Line 3	P. Standish- Lee: Woodward- Clyde	Add "as well as tides" after "outflow". The location of mixing zone varies throughout day with diurnal tide cycle and throughout month with spring-neap tidal cycle. Tidal advection and dispersion of salts is greatest during spring tides.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1366	1019	6-8	Col 2; Para 2; Lines 3 & 4	P. Standish-Lee: Woodward-Clyde	Replace "prevent" with "reduce intrusion of", delete "from intruding", and change "affecting" to "protect". Saltwater intrusion into the Delta cannot be prevented (without a tide gate) only reduced.		
1361	1020	6-8	Para 3	P. Wisheropp: Woodward-Clyde	Isn't flow estimated at Chipps Is., i.e. not directly measured?		
825	1021	6-8 6-9	Para. 4, ln 10 Para. 2, ln 4	Roefs, USBOR	Figures for exports should be consistent . Also, "normal" is not a SWRCB classification, and should be defined or removed.		
1048	1022	6-8	1st paragraph	GL, EPA	This whole discussion on the lay of the land, creation of specific channels, etc. should be accompanied by a figure/map that helps the reader visually connect the pieces. This figure should show rivers and tributaries, channels and canals, sloughs, bypasses, aqueducts, CVP and SWP pumping plants, etc.		
1049	1023	6-8	2nd column, 2nd full paragraph	GL, EPA	The discussion starting with the third sentence discusses the X2 standard. This text needs to be expanded to elaborate on the importance of tracking salinity and the reasons for using X2 as the standard. Suggest inserting the following: "Data indicate that the abundance or survival of a number of important species at varying life stages and representing different trophic levels is related to the location of the X2 isohaline. Generally, for these organisms whose response to salinity has been analyzed, the farther downstream the 2 ppt isohaline, the higher their abundance or survival."	**	
560	1024	6-80	Delta Region Section	DFG	There is little evidence that subsidence in the Delta is linked to "ground water pumping" in the context ground water is used in this section. Delete the second and third sentences and delete the word "other" in the last sentence.		

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
231	1025	6-80	Section 6.2.2.3, Column 1	Sandino, DWR	Discussion of Delta subsidence implies that groundwater pumping is major component of subsidence issue. Instability of peat is the key factor in factor.	T	
270	1026	6-82	Last Paragraph	V. Pacheco, DWR	Although implementation of the CVPIA may result in export reductions for CVP, the effects on the SWP are being assessed. The appropriate level of SWP participation in implementing the fishery actions continues to be evaluated.	T	
871	1027	6-85		Holt, USBOR	On the discussion of groundwater supply reliability in col. 2, para. 5. Suggest you specify who gets increased reliability.		
872	1028	6-86	Paragraph 3	Holt, USBOR	It would be helpful to specify which area receives an increase in groundwater levels. Since the aquifers are full in the Sacramento Valley, the area likely to benefit will be seen as "down south" even if you mention Yolo County.		
873	1029	6-87		Holt, USBOR	Experience in Stony Creek (Glenn County Resource Conservation District) indicates that altered range management practices can lead to a return of native grasses, several fold increases in infiltration rates, and the appearance of perennial flows in formerly seasonal drainage. Suggest including the potential impact of such practices, encouraged by CalFed could be significant. (Contact Dennis Nay for data on these grazing programs).		
874	1030	6-88	Column 2 Paragraph 2	Holt, USBOR	To avoid an ambiguous paragraph, suggest stating "net exporter of ground water" in line 2, if this was the intent. In line 7, it seems the impacts will be less on water supply in the north than on the supply of water at historic prices. The shortage will be one of cheap water.		
826	1031	6-9	general	Holt, USBOR	Suggest expanding the definition of past mining to referring simply to gold mining in the 1800's or to all mining, including Iron Mountain Mine and related activities.		
827	1032	6-9	Second paragraph	Fujitani, USBOR	This paragraph indicated that saltwater intrusion is linked to the diversion and corresponding decrease in Delta outflow. It should be noted that consumptive use and diversions from the tributaries to the Delta have also contributed to the Delta.		
192	1033	6-9	Section 6.1.1.1	Sandino, DWR	Statement that export projects have caused western Delta to be salty is an oversimplification. Check with Mike Ford or Jim Snow, but salinity has historically been an issue in the Delta even before the projects. The projects have caused some salinity impacts, but on the other hand the released of stored water to satisfy water quality objectives has improved salinity at certain time beyond non-project levels.	C	

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1372	1034	6-9	Col 2; Para 5; Line 6	P. Standish-Lee: Woodward-Clyde	Insert "under average monthly conditions" after evaluated		
1371	1035	6-9	Col 2; Para 5; Line 2	P. Standish-Lee: Woodward-Clyde	Replace "the volume" with "tidal variations; the rate and distribution".		
1369	1036	6-9	Para 2	P. Wisheropp: Woodward-Clyde	There are many causes of saltwater intrusion into the Delta. The process is associated with several factors including exports. Saltwater traveled up to Sacramento long before exports began.		
1368	1037	6-9	Para 2	P. Wisheropp: Woodward-Clyde	The first sentence creates an incorrect impression because the number and nature of the CVP and SWP diversions has changed over the past 50 years. To claim a 10-fold increase in exports assumes that everything else is equal. The most recent diversion went into operation only 10 years ago.		
1370	1038	6-9	Para 7	P. Wisheropp: Woodward-Clyde	Info was presented before and is inconsistent with previous.		
828	1039	6-9	Para. 3, line 6	Roefs, USBOR	Suggest removing the word "strictly regulated" since certain discharges are not meeting permit conditions, and could be misleading to the reader.		
202	1040	6-9	3 rd Paragraph	V. Pacheco, DWR	Although industrial and sewage discharges are regulated they can also be difficult to control. In particular, cities without dual storm and sewage distribution systems may discharge untreated waste into the system.	T	
561	1041	6-91	Right Column, Last Paragraph	DFG	Delete this paragraph (continues on to next page).		
233	1042	6-91	Section 6.2.2.6	Sandino, DWR	Mitigation Strategies are incomplete. There are other methods currently be used to minimize groundwater basin. AB 3030 plans and conjunctive use programs are being used to mitigate impacts. I would discuss that local agencies have the jurisdiction to manage groundwater impacts.	IA	

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A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
232	1043	6-91	s6.2.2.6	Dan Flory, DWR	It is probably not a good strategy to suggest that groundwater extraction be regulated to prevent groundwater declines. This is an issue dear to the heart of many groundwater users who vehemently oppose pumping restrictions unless they are applied to someone else. It is not clear that the appropriate policy response for future water development is to lock present (historic?) groundwater levels in place or even to restrict allowable fluctuations to those that have occurred historically. In many cases, these fluctuations have been essentially zero. This would be like designing surface water reservoirs with 90 percent plus dead storage.		P
271	1044	6-92	Potentially Significant Unavoidable Impacts	Chuck Vogelsang, DWR	Concluding that there is no significant unavoidable impacts to groundwater depends on the enactment of a regulatory framework. Is this feasible?	IA	
1191	1045	6-92	2nd column, 3rd paragraph:	FWS	Paragraph lists mitigation strategies to reduce the adverse impacts of an in-Delta storage facility. Include the purchase of adjacent land tracts as habitat areas as an additional strategy.		
563	1046	6-93	inset	DFG	Some different approach for presenting this summary of impacts needs to be explored. The main problem is that some variations of alternatives 1, 2, and 3 do result in the impacts described, however, others do not. This should be clarified.		
562	1047	6-93	Left Column, Paragraph 1	DFG	Modify this paragraph to delete references to intensification of high selenium levels. We are not aware of any data which suggest that selenium is a concern any where in the legally defined Delta.		
875	1048	6-93	Section 6.3	Holt, USBOR	The mention of volcanism in this section on Geology would be useful, since three of the five streams with genetically pure spring run populations (Mill, Deer, and Battle Creeks) are fed by snowmelt from Mt. Lassen an historically active volcano. Volcanism could frustrate some plans for restoration.		
876	1049	6-93	Bullet 7	Roefs, USBOR	Under bullet impacts it should be stated that some alternatives applied salt load in the Delta and the San Joaquin regions would increase.		
564	1050	6-94	Table 6.3-1	DFG	We are unable to find a rationale for a no-effect designation for conversion of agricultural soils for the No-Action and IA alternatives. If none can be found the ratings should be changed.		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1268	1051	6-95	right col., 4 th para.	Dan Johnson NRCS	The decreased salinization will ONLY occur in areas with shallow, saline water tables. In other areas, soil salinity may increase if leaching becomes inadequate.		
877	1052	6-95	Paragraph 2	Roefs, USBOR	This paragraph should recognize that under some alternatives applied salt load in the Delta and the San Joaquin regions would increase.		
878	1053	6-99	6.3.1-3	CHoward, USBOR	Please correct the figure showing the coast range Sierra Nevada boundary zone as a concealed fault. The coast range and Great Valley (Central Valley) boundary is on the west side of the valley. The USGS shows a Great Valley blind trust near the boundary of coast range and Great Valley.		
41	1592	chapter 6		Steve Shaffer, CDFA	Ch 6 - The ERPP, WQP, Levees Program, Transfers element, could have adverse, but mitigable impacts on agricultural surface water supplies. The storage component could have beneficial effects on agricultural surface water supplies.		
1035	1596	Chapter 6 (or in intro Ch2)		CY, EPA	Briefly describe the functions of different types and locations of storage (surface upstream of Delta; groundwater; off-aqueduct; in Delta).		
1036	1597	Chapter 6		CY, EPA	It is clear that the modeling to support Chapter 6 is work-in-progress. Recent modeling outputs appear not to have been integrated into analysis for these resource categories. Suggest explaining up front in this Chapter (possibly also in earlier introductory chapter 2 or 5) what has been done to date and what additional work is anticipated. Explain how this situation has affected the level of detail and evaluations for specific resource categories. [For example, the Chapter alludes to DWRDSM and DWRSIM modeling (page 6-27) but does not identify specific modeling results which relate to impacts.]		
1298	1626	General Chapter 6		P. Wisheropp: Woodward-Clyde	Since the results of different models are now being discussed, there should be a way to distinguish between results derived from DWRSIM, DWRDSM, etc. Delta hydraulics and riverine hydraulics (and hydrology) should be treated separately		
1292	1664	Section 6		Rebecca Challenger, NRCS	Water quality improvements seem entirely related to dilution effects. What about the mine and urban impacts mentioned? Are there other plans or programs not mentioned in this document to mitigate these impacts?		

A #	#	Page Number	Line, Figure, or Table No.	Commentor	Comment	T	P
1297	1665	Section 6.1	General Comment	P. Wisheropp: Woodward-Clyde	Overall comment on Surface Water Resources. The section reads as if were written by several people. There is substantial, repetitive discussion and there is no clear break between the sections regarding the issues discussed. Also, the modeling results are often not understood or misused. Impacts are not called-out in a clear fashion. The impact should be stated and numbered, with the mitigation following. The mitigation for impacts is not clear and there is no mention of the significance after mitigation. It appears that the real description of impacts is pushed off to the site specific documents.		
1045	1666	Section 6.2		CY, EPA	Groundwater: Generally, this text is good-- example for other sections. For example, the historical period text provides good background on pre-development conditions, recharge and flow conditions, impacts of increased development; existing is recent conditions, highlighting areas of concern (quality, subsidence, etc.).		