

# William R. Johnston, P.E.

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## MEMORANDUM

**To:** G. Fred Lee, PhD.  
**From:** William R. Johnston, P.E.  
**Subject:** Comments on May 3, 2002 Draft Synthesis Report

Following are my comments on your May 3, 2002 draft of the Synthesis Report. You have produced a great summary of the work. My comments are intended to be constructive and to help obtain the views of the Peer Reviewers on the issues.

PAGE	LINE	COMMENT
Preface 1	9	You indicate the CVRWQCB "will adopt an implementation plan...". This may or may not happen. Please reword to say it may or it is speculated that the RWQCB may do so, but it should not be stated so definite.
Preface 1	26	Delete words "/or altered flow, as well as funding of an aeration system". The CVRWQCB has no authority to alter flow and the allocation of funding is of no importance to the Peer Reviewers.
iii	37	Spell out agricultural here and other places where "ag" is used.
viii	24	You say "irrigation districts that divert from the eastside rivers results in a substantial reduction in the flow of high-quality water which would dilute SJR BOD...". This infers that these districts are just taking the water out of the river to reduce the flow and that there would be no problem if they just let it flow on down the river. You know that this water is used for many beneficial purposes. I believe that if you reported the natural flows of the eastside rivers during the periods of concern, you would find that if the dams and reservoirs were not there to impound water in the spring and release it in the fall, there would be many August through October periods, particularly during dry years, when the flow in the SJR would be less than exists under the controlled conditions. I recommend you either insert such a comparison or delete the unsubstantiated statement about "substantial reductions in the flow of high-quality water" particularly during August through October. You should also add something about the benefit of having the reservoirs provide flows throughout the year. In addition, you should also indicate that the policy of the SWRCB is that the use of fresh water to dilute pollution is not a proper use of the States' water resources.
Xi,	1&2	I do not believe the studies can be used to "control the DO problem". Maybe the studies can be used to develop a solution to the DO problem.
Xi,xii,xiii		I strongly recommend this section " <b>Implications of Technical Studies for Managing the Low-DO Problem</b> " be deleted. These are the issues that we want the Peer Reviewers to discuss and there is no reason to give them our thoughts ahead of the time they formulate their view.

Comments on May 3, 2002 Draft Synthesis Report

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55		I recommend you specifically add wildlife refuges to your diagram as being a source of oxygen demand in the SJR-DWSC Watershed. Most people do not relate “duck farms” to wildlife refuges, particularly when duck farms are listed with dairies and feed lots.
66	35-39	See comment regarding page vii above. The discussion about large diversions from eastside streams on page 66 should be modified to reflect any changes made in response to the above recommendation.
67	Table 9	This table is misleading. In order to make a fair comparison of the actual impact of the projects on the DO problem, you cannot include the April-July period with the August-September period. Most of the diversions to storage occur during the peak April-July runoff period when the DO problem is minimal. During August and September the diversion to storage or reduction in unimpaired flow is insignificant, particularly in dry and below normal years. This is the period when your table shows the most impact. During dry and below normal years, much of the spring runoff is stored, but the fall flows are certainly not impacted 60 to 68 percent. You need to differentiate between the impact of total diversions and rate of flow during different months of the year. The discussion below the table needs to reflect these comments.
67	Table 9	It is not clear to what the columns of Table 9 under the heading of “Effect of CVP Runoff at Vernalis” refer. Is this the total impact of Friant Dam diversions and the CVP share of New Melones? If so, I question the value of “6,000” in reduction of runoff in dry years between April and September. If not it should be clarified. Certainly Friant Dam reduces the flow in the San Joaquin River more than 6,000 acre-feet every year, even if you add back the DMC input and you disregard New Melones.
68	33-35	Should you mention that the irrigation return flow contains a greater BOD load than the diverted water?
86	15	I recommend you delete the sentence regarding your observation about the changes in population of anadromous fish over the last 10 years. Whether or not there have been any changes is irrelevant.
91	31	I believe that the material in the section on “Allocation of Oxygen Demand Loads in Sub-Watersheds” through the first full paragraph on page 97 offers your answers to most of the questions that are being asked of the Peer Reviewers and should be deleted. It is important to determine the views of the Peer Reviewers without offering them an easy out.