

Date: Thu, 25 Apr 2002 13:33:25 -0700  
From: "Russ BROWN" <RBrown@jsanet.com>  
To: <Gfredlee@aol.com>, <kjwolf@dcn.davis.ca.us>  
Cc: <Bob.Murdoch@ci.stockton.ca.us>, "Doug BREWER" <DBrewer@jsanet.com>  
Subject: Comments on Synthesis

Hi Fred. Here are some quick comments on your synthesis.

Why don't you even have a section summarizing the City, the aeration, or the tidal mixing report. This leaves the impression that you came up with all these issues and data independently.

Comments on Synthesis Report  
Russ Brown  
April 25, 2002

Fred-

#### General Comments

You have done a great job making a story out of all this stuff.

Maybe it is helpful to emphasize things but I didn't like reading things twice or three times. Is there any way to delete the repeats? For example, within the Executive Summary, you mention factors influencing depletion (good list) but then repeat sources of oxygen demand following your Box model calculations. I would just move from list of factors to the box model calculations..

Since you have a synopsis section, maybe you don't need the executive summary?

I don't think you should emphasize areas that you think need attention. Rather, emphasize what we now know from the \$3 million studies.

#### Specific Comments

Your figures showing DO below WQO are very good. What happened to station 8 (light 28). Stations 1-4 are not relevant (too far downstream). So modify the figures to show stations 5 through 13, don't skip 8. Turner Cut is between stations 7 and 8. Station 8 really needs to be shown.

Page 20. Discussion about R&R surface DO compared to actual near surface DO and bottom DO. I would delete " and the early morning DO in the near surface waters would be less".. They should match because full mixing occurs each night. Same idea applies that the bottom DO and the R&R monitor minimum values should match because of full mixing at night.

Figure 11. Modify nitrification to begin with organic-N to NH<sub>3</sub>-N. Do not include "ammonification". This does not require oxygen. There is no inorganic SOD component for the DWSC because the sediments never become anaerobic. I would suggest taking out the inorganic equation from Figure 13 (and Cover sheet) as well. Sho organic-N with arrow to NH<sub>3</sub>, but do not show mineralization as requiring O<sub>2</sub>.

Figure 14. Bottom diagram refers to 2000 loading. This isn't the difference in geometry.

Page 31. Your description of cross-Delta flow is OK. But do not speculate that the SJR flow will cause low DO in Delta channels. It is such a small fraction of flows and channel velocities are so high, that DO depletion is not measured (reference to DWR stations 1-5 in SJR).

Page 32. Highlight the uncertainty about how can algae that produce DO also contribute a net BOD load to DWS?.

Box model calculations and Table 7. These are still difficult to follow. Only one travel time column is needed. I think you should introduce the more compete "Accountants" analogy. DO is like cash and BOD is like a debt. The Mossdale is near saturation so it has a DO load (good). Don't subtract the saturated DO load and give just DO deficit. Table 7 needs to have two column, one for cash (DO) and one for debt (BOD). Still the problem is that we cannot balance the 86,000 lb debt. Your last two entries double count. The DO deficit at Turner Cut is a debt leaving the DWSC. The DO deficit within the DWSC is double counting this. Leave it off, and you can only account for 45,000 lb. Where does the rest of the BOD (debt) go? This is a big problem.

Page 50. Because of tidal mixing, there are no slugs of dirty and clean water flowing down the DWSC. Everything is well mixed (i.e., a moving average of river flow and effluent). Look at the daily discharges. There are not big spikes after a weekend shutdown. There is simply a slightly higher weekday discharge.

The following sections should summarize what each individual report showed, not re-discuss the same issues that you have already presented. You don't even have a section for City data, aeration, and tidal mixing. Why not. You give a section for every other report, including Strawman and IEP data, that aren't CALFED grant reports. Stick to the purpose.

Delete the three places that you repeat your ideas about what the RWQCB might do with the City permit. This is not appropriate for your synthesis report. This is out of line with the scientific based TMDL fact-finding mission in which you are participating.

Again, I am suggesting that you should re-organize as (1) factors affecting DO, (2) review the studies findings, (3) integrate everything with your box model summary, and end. Do not keep repeating same ideas and issues, or add your personal priorities to things. Get rid of "critical" "significant" "important" and other such adjectives that introduce your personal views.

The reference should start with the primary reports prepared by TAC members. Can you eliminate some of the general "science" references?

Sorry that we can't review and talk about these ideas at a more leisurely pace.

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Date: Mon, 29 Apr 2002 09:27:42 -0700  
From: "Russ BROWN" <RBrown@jsanet.com>  
To: <Gfredlee@aol.com>  
Subject: Re: Draft SJR DO Questions and my Answers

Hi Fred

I sort of like your discussion of the peer review questions, except that your own answers to these issues may not be the only correct response. Can you interject some "minority opinions", to give the peer reviewers a chance to think about both sides when there is potential for different responses.

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Date: Tue, 30 Apr 2002 17:23:30 -0700  
From: "Russ BROWN" <RBrown@jsanet.com>  
To: <Gfredlee@aol.com>  
Subject: Re: Additions to the Synthesis Report

Hi Fred. Reasonable summary for downstream and vertical gradients.

Second to last paragraph: The vertical gradient ratio is about 1.0 for most dissolved constituents.