

**From:** Robert Pyke <bobpyke@attglobal.net>  
**Sent:** Monday, June 02, 2014 2:23 PM  
**To:** BDCP.comments@noaa.gov  
**Subject:** RE: comments on BDCP EIR/EIS  
**Attachments:** Addendum to Pyke Comments on BDCP PDEIR-EIS.pdf

I am attaching a short addendum to my previous comments.

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**From:** Robert Pyke [<mailto:bobpyke@attglobal.net>]  
**Sent:** Monday, May 26, 2014 3:12 PM  
**To:** 'BDCP.comments@noaa.gov'  
**Subject:** comments on BDCP EIR/EIS

Ryan,

My comments are attached. I assume that you will acknowledge receipt of these comments and that it is not necessary to send a paper copy.

Regards,

Robert Pyke

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## **Robert Pyke, Consulting Engineer**

May 31, 2014

### **Addendum to Comments on the BDCP Public Draft EIR/EIS Dated May 26, 2014**

In my comments dated May 26, 2014, it is stated on page six that “there is no expectation that the SWP and the CVP will deliver up to full contract amounts under any hydrological condition – the interpretation of the results buried in the EIR/EIS by the BDCP staff is that exports will be maintained at present levels, plus or minus 10 percent, except that exports may have to be reduced if species recovery goals are not met, a circumstance that appears to have a high probability of occurrence. In fact, even the projection of maintaining exports at something like present levels is a fiction. Figures 1 and 2, kindly provided by Richard Denton, show that in order to achieve this overall level of exports, it is necessary to resort to more pumping in drier months than is the case at present. It is not easy to trace the effects of this through the present effects analysis, but this might be one of the reasons that the effects analysis does not show sufficiently positive results to justify the granting of incidental take permits. If the operational rules were to be changed so that the effects analysis suggests more positive results for salmonids, the volume of exports would immediately be reduced. These figures also show that it is ludicrous for BDCP proponents to talk about taking a “little sip, big gulp approach”, that is to take more water at periods of high flows and little of no water at periods of low flows. The BDCP does not in fact include the necessary physical components to do that. It should also be noted that it is unclear whether the aqueducts can presently carry the combined maximum exports of 14,400 cfs shown in Figures 1 and 2 because of subsidence caused by excessive pumping of groundwater, so that it is doubly questionable whether the planned level of exports can actually be achieved.”

That language remains part of my comments but I failed to add two additional points regarding the estimates of water that would be delivered to the SWP and CVP Contractors on implementation of CM1 of the BDCP.

One is that the maximum export figure of 14,400 cfs appears to assume through-Delta exports under certain conditions that exceed the limitations of the current Corps of Engineers permit for taking water into the Clifton Court Forebay, which would require modification of the Corps of Engineers permit. I did not mention that in my initial

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comments because I know that at least Dr Meral was aware of this need, but on reflection I believe that both the arguments that the BDCP would make to the Corps in expectation of a change in the Corps permit must be fully spelled out in the EIR/EIS and that unless the Corps has already granted a new permit, the calculations of expected exports under various scenarios must be revised to reflect the limitations of the existing permit.

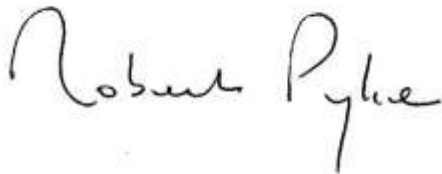
The second additional point is that the current BDCP preferred alternative for conveyance does not allow the extraction of much greater amounts of water in wet years to make up for, overall, taking less water in dry years. The BDCP modeling does take more water in wetter years simply because there is more water available and because the CALSIM II model meets artificially high water demands without realizing that in the second and subsequent years of a succession of wet winters, there will be no storage available south-of-the-Delta to store that water. This can be seen quite dramatically in the reduced exports in 1983 and 1998 that are shown in Figure 3 of my initial comments. These were two particularly wet years, but exports were noticeably down. Demand in those years will also be lower because the farmers' fields and urban landscapes are already soaked. Dr Greg Gartrell, formerly of the Contra Costa Water District has been quoted<sup>1</sup> as saying: "Unless they (the water contractors backing the BDCP) have storage, they are in big trouble. If you don't do something about having a place to put the water in wet years, you're fooling yourself with these studies." Gartrell refers to these high export figures in wet years as "computer water." "It looks good on paper, but when it comes to real life, you can't get it."

Taken together, these four points strongly suggest that the estimates of water that would be delivered to the SWP and CVP Contractors in this draft EIR/EIS are not only uncertain, but are almost certainly exaggerated. While this should be of great concern to the Contractors who are proposing to pay for the new conveyance facilities, its significance in terms of the draft EIR/EIS is that it is false and misleading on these points and confirms that the plan does not in fact satisfy the objectives, needs and purpose with respect to water supply that are stated in the EIR/EIS.

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<sup>1</sup> The California Spigot, March 14, 2013 <http://californiaspigot.blogspot.com/>

These four points must be addressed in a revised draft EIR/EIS that is then submitted for public review and comment.

A handwritten signature in black ink that reads "Robert Pyke". The signature is written in a cursive, flowing style.

Robert Pyke Ph.D., G.E.

*Dr Robert Pyke is an individual consultant on geotechnical, earthquake and water resources engineering. He was born and raised in Australia and received his bachelor's degree in Civil Engineering from the University of Sydney. He then worked for the Commonwealth Department of Works in Canberra on various water resource projects before attending graduate school at the University of California, Berkeley. At Berkeley he conducted original research for his Ph.D. under the guidance of the late Professor Harry Seed and formed a close relationship with Professor Seed with whom he subsequently worked on a number of consulting assignments. Since 1977 Dr Pyke has worked principally as an individual consultant on special problems in geotechnical, earthquake and water resource engineering. While at Cal he also studied for a minor in Environmental Planning with Professor Robert Twiss and he has had a life-long interest in solving engineering problems in a way that is consistent with broader community values. Dr Pyke served as an expert witness in litigations that followed the 1982 breach of the McDonald Island levee and the 1986 breach of the Yuba River levee, the latter becoming well-known as the Paterno Case. He is one of the principal authors of the 2011 Economic Sustainability Plan of the Delta Protection Commission. Details of his publications and resume and some of his writings can be found on <http://rpce.us>.*