Robert Pyke, Consulting Engineer

April 25, 2011

Mr. Phil Isenberg
Chair, Delta Stewardship Council
980 Ninth St. Suite 1500
Sacramento, California 95814

Re: Comments on the Third Staff Draft of the Delta Plan

Dear Chair Isenberg and Council Members,

In spite of some hints of forward movement at the conclusion of the Council meeting held at the Holiday Inn, I am disappointed that there is still no coherent plan that addresses all five elements of conveyance and storage, ecosystem restoration, water quality, flood management, and protecting and enhancing the Delta as a Place. In particular, there is not even a hint of a suggested policy on conveyance and storage, which is the key to the Delta Plan as a whole. Without a solution to the conveyance problem that by itself makes a significant contribution to eco-system restoration, there can be no Delta Plan as was envisioned by the Delta Vision Task Force and the 2009 legislation.

Your efforts to date appear to have largely focused on developing an additional regulatory framework, rather than on developing a Delta Plan – with an emphasis on words rather than maps and drawings – an emphasis on legal considerations rather than science and engineering considerations. To be sure, ultimately you are setting public policy, but that public policy has to be based on sound science and engineering and have some real content and a vision for the future.

As a results-oriented engineer I would have approached this whole exercise differently. As I noted in my comments on the second staff draft, the legislative requirement that the plan include "*quantified or otherwise measurable targets associated with achieving the objectives of the Delta Plan*" is still not addressed. Many possible measures are now listed but specific targets are not. Such targets, whether quantified or conceptual, are not something that can be added at a later date. If you do not have a clear idea of the current situation and the future goals, how can you construct a plan to move from one to the other?

1076 Carol Lane, Suite 136, Lafayette, CA 94549
Telephone 925.323.7338 E-mail bobpyke@attglobal.net

I know that the staff and consultants prepared a series of white papers to describe the current situation but they were largely cut and paste of previous reports and the many errors that appear in previous reports were simply repeated. What was needed, and is still needed, is a more succinct and focused quantified summary of the current situation. Then, you need a vision of what the Delta might be in the future and a plan on how to get there. And finally, since you have essentially no power to initiate any positive actions at this time, you need recommendations on the additional legislation and financing to get from the current situation to the future - a much improved situation in which the Delta is the leading worldwide example how to balance sustainable water management and a flourishing estuarine ecosystem with sustainable fishing and farming, so that students and tourists come here from the Netherlands to see how these things should be done!

The third of these three steps is perhaps optional. The 2009 legislation does not require you to do anything more than to develop a plan and determine whether the BDCP satisfies the legislated criteria for inclusion in that plan. You could develop the plan and then sit back and simply smack down any project that is not consistent with the plan and hope that other parties come up with projects that are consistent with the plan. But I think the legislature implied that you should have a more activist role, even if they did not provide you with any tools for that purpose.

In this context then, I am offering some further suggestions in three areas: (1) studies that would be helpful in quantifying the current situation and setting future goals; (2) the actual content of the Plan; and (3) possible recommendations for additional legislation.

1. Missing studies

There are at least four studies that are either missing or incomplete that would be helpful in quantifying the current situation and setting future goals. Two of these could be completed by the end of the year but the other two likely cannot, so that you will have to punt on related issues.

(1) A simple study to address the question previously posed by both Tom Zuckerman and by Chair Isenberg: How much water is surplus to the legitimate needs of upstream and Delta users that is available for export on a sustainable basis? A good start was made on addressing this question by Chris Enright at the request of Cliff Dahm. The necessary data for this is readily available and such a study could be completed within several months.

(2) An updated study of expected water surface elevations in the Delta for a range of flood events. Such a study should be part of the development of the Central Valley Flood Protection Plan which is due by 2012, but it will not be. This is frustrating but not critical because reasonable estimates of maximum water surface elevations can still be made.

(3) An updated study of the status of the Delta levees and the estimated cost of bringing them all up to the PL 84-99 standard or some higher standard - the numbers given in DRMS and other previous studies are questionable. Such a study is in fact being conducted in cooperation with DWR and the local reclamation districts by the University of the Pacific team that is working on the Delta Economic Sustainability Plan and results should be available within several months.

(4) A 3-D hydrodynamic and sediment transport study of the Delta to guide the Council on multiple issues including: developing an improved understanding of flood water surface elevations; studying the effects of various alternate export intake locations on maximum water surface elevations, water quality and biological impacts; aiding in the development of a policy on dredging; and studying the effects of additional ecosystem restoration measures. Such a study requires a longer-term effort but should be initiated as soon as possible.

2. The Missing Plan

I believe that the basic elements of a coherent Delta Plan can be found in my comments on the first staff draft dated February 21, 2011, and Tom Zuckerman's ten "Big Affordable Ideas" dated March 30, 2011. If you combine the ideas in these two documents, you will have a more complete and coherent Delta Plan than can be found in the third staff draft. The ideas in these two documents are general in nature, rather than specific with regard to location and other details, but that is really all that can be done pending the completion of detailed studies of the kind listed above. At this time they also generally lack the quantified or otherwise measurable targets that are required by the legislation, although I have suggested tentative minimums for environmental flows and sustainable water exports. I have also suggested that an updated DRMS-type study be used to monitor progress in reducing flood and earthquake risks to the Delta. That risk is both a function of capital improvements to make the levees more robust and use of improved methods to both monitor levees to warn of impending failures and to respond to impending failures. These measures should include Mr Zuckerman's idea of overbuilding critical levees in the Western Delta and elsewhere.

My own ideas are weakest on water quality. While my idealistic suggestion that anyone

who uses the water of the state should return them in no worse condition, is not entirely practical and is far outside the reach of the Council, I do believe that, independent of the State Water Resources Control Board, the Council could set its own targets for water quality at selected location throughout the Delta. Then, any project with significant water quality impacts within the Delta or the watershed that moves water quality towards meeting those goals would be applauded, and any project that moves water quality away from meeting those objectives would be deemed inconsistent with the Delta Plan. This also provides an example of one of the limited instances in which I believe the Council's authority extends outside the legal Delta and where, for better or worse, it is justified that there be one more layer of regulation on top of all the existing regulations.

Because of this, I believe that it is appropriate to include the watershed as a secondary planning area for the Delta Plan although I agree with SFWCA and others that W.C. 85304 means what it says, which is that "the Delta Plan shall promote statewide water conservation, water use efficiency, and sustainable use of water", rather than regulate those things, and that the areas outside the watershed that use water from the Delta should not be included as a secondary planning area. A Delta Plan that includes rules for a conveyance and storage solution that effectively guarantee minimum annual developed water out of the conveyance and storage solution, that is paid for by the beneficiaries, and that has greater capital and operating costs as the guaranteed minimum increases, will automatically promote all three of these good, green things. While I believe the Chairman has been less than correct in repeatedly suggesting that there is no win-win solution to the current problems, I am pleased to see that he has now modified that to no win-win solution at no cost to anyone. That is correct, and it is the cost of proving more reliable water supply that will drive water conservation, water use efficiency, and sustainable use of water in at least the areas of the state supplied through the Delta.

3. Some Possible Recommendations

In my remarks to you on February 24, I noted that mention of the need for a policy on dredging had been omitted from my written comments on the first staff draft and I suggested that while a chapter on governance is not needed in the Delta Plan, somewhere, perhaps not in the Plan itself but in a separate document, the Council does need to call for State and Federal legislation to broaden the powers of the Council so that you become the one-stop permitting agency for things like dredging. I was therefore pleased to see the comments from the Bay Conservation and Development Commission staff dated April 15, 2011, which say in part "the Bay Plan's dredging policies encourage the reuse of dredged material in wetland restoration projects, as appropriate, and

support efforts to fund the additional costs associated with transporting dredged material to project sites. We suggest that the Delta Plan encourage the coordination of use of dredged material in the Bay and the Delta as part of a regional sediment management strategy". That does not necessarily mean that there should be yet another agency created, but it does mean that the Council or any further Delta-specific entity that is created to facilitate dredging, levee construction and restoration of flooded islands in the Delta should closely coordinate with the BCDC on dredging policy and related issues.

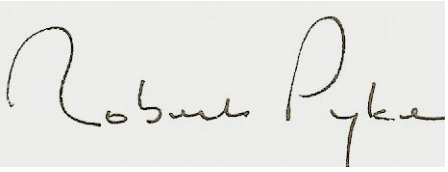
In my comments on the second staff draft I went on to say that I was not sure how practical it was to more generally broaden the powers of the Council over actions that take place strictly in the Delta such as dredging so that you become the one-stop permitting agency for things like dredging, levee construction, restoration of the flooded islands and other eco-system restoration activities, but I am further warming up to that idea. Regardless, I strongly support Mr Zuckerman's suggestion that responsibility for emergency-response planning and levee improvements be turned over to a Delta-region authority with an appropriate funding base. This would include taking over responsibility for the existing subventions and special projects funding that are administered by DWR. This idea is not inconsistent with the recommendation in the third staff draft for a Delta Flood Management Assessment District, although the reporting required under bullet two should be to the Council, not to DWR, and the suggestion that propositions 1E and 84 funding be used to develop and implement a levee improvement plan is questionable, if not downright illegal. Those funds were intended to be applied to actual levee improvements, not to endless paper studies, and diversion of these funds to other uses is improper.

Creation of this new district would of course require additional legislation but since the activities of this district and the existing reclamation districts, which it would fund, while no longer hamstrung by the bureaucracy of DWR, would still be hamstrung by having to deal with something like 19 regulatory agencies, I think that there is a persuasive argument to go the extra miles and seek state and federal legislation that gives the Council one-stop permitting authority for all dredging, levee construction, and eco-system restoration activities in the Delta. The ecosystem restoration activities would include but not be limited to restoration of flooded islands, other strategic dredging, construction of water-side eco-berms on existing levees and enhancement of mid-channel berms in the dredger cuts, possible conversion of some islands and tracts to managed wetlands or tidal marshes, possible consolidation of some islands or tracts into larger polders, and possible modest changes in channel geometry in order to add more complexity in flows and retention times. I understand that the legislature considered giving the Council these powers in the 2009 legislation but stopped short of doing that, but without such legislation little if anything will ever get done. In this

model, the actual improvements would be made by the new Delta Flood Management District and the existing reclamation districts, the Delta Conservancy and others, and whatever entity is charged with constructing new conveyance facilities, but the Council, in conjunction with the Delta Protection Commission, would serve as big brother ensuring that the co-equal goals, including the second sentence, were respected. Intelligent application of the Council's powers would of course involved extensive cooperation not only with the BCDC but also with the Department of Fish and Game, the State Water Resources Control Board, the federal fish and wildlife agencies, and the state and federal environmental administrations, but the buck would stop with the Council. It would be the responsibility of the Council not only to ensure that no harm is done relative to the co-equal goals, but to make sure that things actually get done to advance the co-equal goals. This model could serve as an example to the rest of the nation and the world of how to escape from suffocating bureaucracy and maintain a balance between sustainable environmental and economic aspirations.

In summary, I would suggest that the next draft of the Delta Plan needs less minutiae and more bold ideas. My comments on the first staff draft ran 29 pages, but a lot of that was commentary. I don't see why the plan itself should be more than about 20 pages.

Respectfully,



Robert Pyke, Ph.D., G.E.