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December 17, 1999

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Mr. Paul Horton
CALFED Bay-Delta Program
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Dear Paul:

I am sorry that these comments are late, but in light of what we are experiencing in the Delta now with regard to the water quality effects of closing the Delta Cross Channel, I hope that it is still timely for me to pass on these thoughts.

There is no doubt that introducing 4,000 cfs of Sacramento River water into the Central Delta over and above what naturally flows into the Central Delta through the Delta Cross Channel when it is open and the Georgiana Slough at all times will clearly improve water quality in the North, Central and South Delta. Even the West Delta will experience improved water quality provided that pumping rates at the export pumps do not become overly aggressive. The difficulty with introducing Sacramento River water through the Hood diversion is that it must necessarily flow down the Mokelumne River which will cause adverse effects on Mokelumne River and Sacramento River salmon and steelhead.

Even if the screening efficiency at Hood is one hundred percent and there is no predation loss, the same fish that are successful in passing the Hood diversion on their downstream trip to the sea will be subjected to an increase in the cross Delta flow ratio when they get to the Cross Channel and/or Georgiana Slough. Recall that the cross Delta flow split is inversely proportional to the total flow in the river. Simply stated, during lower flow periods at Walnut Grove, a greater percentage of the water moves cross Delta, given no change in the closure status at the Delta Cross Channel. What does this mean? It means that if you have taken 4,000 cfs out of the Sacramento River at Hood and introduced it into the Mokelumne River, even if there is zero mortality during that transaction, there will be increased entrainment of downstream migrants once they get to the Cross Channel or Georgiana Slough.

The solution to this dilemma is a hydraulic barrier in Georgiana Slough. A Georgiana Slough hydraulic barrier provides for the pumping of water from the Sacramento River, somewhat upstream of Isleton, across Andrus Island at its narrow point and into Georgiana Slough. As the rate of pumping increases, less and less water enters Georgiana Slough from its upstream connection to the Sacramento River and more and more water is discharged into the Mokelumne River at the south end of Tyler Island. It is a fairly simple matter to develop an increased flow out of Georgiana

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Slough and nearly stop the flow into Georgiana Slough at its upper end. The result is that fish do not realize that water is leaving the Sacramento River and entering the Central Delta except where it is diverted just upstream of Isleton and those diversions would be equipped with state-of-the-art fish screens.

The bottom line is that a Georgiana Slough hydraulic barrier would not only achieve the desired cross Delta flow for water quality purposes, it would do so without transporting fish and, thus, create a fishery benefit.

I am sorry these comments are late, but I believe they are most timely and hopefully can be considered accordingly.

Sincerely,

John L. Winther
President

JLW:kf

cc: Mr. Walter Bishop, Contra Costa Water District
Mr. John Herrick, South Delta Water Agency
Mr. Alex Hildebrand, South Delta Water Agency
Mr. Bruce Macler, California Environmental Protection Agency
Mr. Tim Quinn, Metropolitan Water District
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Mr. Tom Zuckerman, Central Delta Water Agency