

COSHOW ENVIRONMENTAL

13 August 2005

Mr. J. William Yeates
3400 Cottage Way, Suite K
Sacramento, CA 95825

Re: The Data in Master Response 1 Demonstrate that the Removal of the Amador Canal Would Have a Significant Impact on Hydrology

Dear Bill,

As you know, I previously reviewed and commented on the Amador Transmission Project Draft EIR, and am now reviewing and commenting on the Comments and Responses to Comments on Revised Section 4.1 of the Amador Transmission Project EIR. I would have preferred to have more time to complete my review. The Comments and Responses to Comments on Revised Section 4.1 of the Amador Transmission Project EIR contains new data and new data analyses, so much so that it appears to be an entirely new and unique EIR submittal. Nevertheless, with the time available, I have carefully reviewed Master Responses 1-4. Each Master Response revives old issues or raises new issues that cast doubt on the validity of the Respondent's determinations of non-significance. However, I will focus, at this point in time, only on Master Response 1. With respect to Master Response 1, the Respondent provides data that indicate, to any reasonable person, that the impacts due to the preferred alternative would be significant, but the Respondent mystifyingly concludes that the impacts due to the preferred alternative would, instead, be non-significant.

The key data in Master Response 1 are in Table MR 1-4 which summarizes the proportions of the stream flows in various tributary and mainstem streams due to Amador Canal (Canal) leakage. [FEIR 4-16 to 4-19] In the SF Jackson Creek sub-basin, the proportion of stream flows due to Canal leakage were estimated in two locations. Canal leakage was found to be responsible for as much as 52% of the annual stream flow and as much as 89% of the monthly stream flow during the dry season. In the MF Jackson Creek sub-basin, the proportion of stream flows due to Canal leakage were estimated in four locations. Canal leakage was found to be responsible for as much as 48% of the annual stream flow and as much as 100% of the monthly stream flow during the dry season. In the NF Jackson Creek sub-basin, the proportion of stream flows due to Canal leakage were estimated in two locations. Canal leakage was found to be responsible for no more than 1% of the annual stream flow and no more than 8% of the monthly stream flow during the dry season.

From these data, a reasonable person might conclude that the preferred alternative would have significant impacts to stream flows in the SF and MF Jackson Creek sub-basins, but no significant impacts to stream flows in the NF Jackson Creek sub-basin. However, the Respondent mystifyingly concludes that the preferred alternative would have no significant impacts to stream flows in any of the sub-basins. [FEIR 4-35 to 4-36] This determination of non-significance is an abuse of discretion because it relies upon inappropriate and inaccurately applied standards of significance.

The most inappropriate standard of significance is whether the preferred alternative will turn perennial streams (not explicitly defined by the Respondent) into intermittent streams (defined by the Respondent as having a monthly mean stream flow of less than 0.1 cfs). By this inappropriate standard of significance, impacts due to the preferred alternative would be non-

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significant as long as all monthly mean stream flows remained greater than or equal to 0.1 cfs. For example, one reach of the SF Jackson Creek has some natural stream flow during the dry season, so the impacts due to the preferred alternative would be non-significant, even though Canal leakage was found to be responsible for 52% of the annual stream flow and as much as 89% of the monthly stream flow during the dry months. Worse yet, by this inappropriate standard of significance, impacts due to the preferred alternative would be non-significant on all naturally-intermittent streams because these streams are already intermittent. For example, Cooper's Gulch is often dry during the dry season, so the impacts due to the preferred alternative would be non-significant, even though Canal leakage was found to be responsible for 44% of the annual stream flow and as much as 100% of the monthly stream flow during the dry months.

This inappropriate standard of significance is also applied inaccurately. Though not explicitly defined, the Respondent's definition of a perennial stream appears to be any stream that has a monthly mean stream flow of greater than or equal to 0.1 cfs. The commonly accepted definition of a perennial stream is a stream with continuous stream flow under normal circumstances. It is important to recognize that monthly mean stream flows are statistical averages calculated from many years of stream flow data. Some days are wet, and some years are wet, and these have the effect of inflating the monthly mean stream flows. Take, for example, Sutter Creek near Sutter Creek (USGS Gage 11327000). From 1961-1980, the monthly mean stream flow for August was 0.8 cfs, which far exceeds dry season stream flows on many tributary and mainstem streams under the preferred alternative condition. During that time, there were 242 days with stream flow and 378 days with no stream flow, and there were 9 months in which stream flow occurred on at least one day and 11 months in which no stream flow occurred at all. Thus, no stream flow was the predominant condition. This would not be considered a perennial stream by any commonly-accepted definition. Similarly, we would expect that no stream flow would be the predominant condition on many tributary and mainstem streams under the preferred alternative condition and that these tributary and mainstem streams would not be considered perennial streams by any commonly-accepted definition. However, by using an incorrect definition of perennial streams, the Respondent is able to make a determination of non-significance based upon the fact that the monthly mean stream flow is never less than the arbitrary threshold of 0.1 cfs.

I hope that this information is clear and concise. Please contact me as soon as possible if you would like clarification of my comments on Master Response 1, comments on Master Responses 2-4, or anything else regarding this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Mark Rains', with a long horizontal flourish extending to the right.

Mark Rains, Ph.D.

Assistant Professor of Hydrogeology, University of South Florida
Partner, Coshow Environmental