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March 28, 2013

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Subject: Comments on the Substitute Environmental Document in Support of Potential Changes to the Water Quality Control Plan for the San Francisco Bay- Sacramento/San Joaquin Delta Estuary: San Joaquin River Flows and Southern Delta Water Quality



Dear Ms. Townsend and Members of the Board:

Contra Costa Water District (CCWD) appreciates the opportunity to comment on the Substitute Environmental Document in Support of Potential Changes to the Water Quality Control Plan for the San Francisco Bay-Sacramento/San Joaquin Delta Estuary: San Joaquin River Flows and Southern Delta Water Quality (the SED). As we have stated in previously submitted comments, CCWD does not support any Board action that could result in the degradation of water quality in the Delta. Implementation of the preferred alternative in the SED, which includes relaxation of the south Delta salinity standards, could result in increases in south Delta salinity which in turn could significantly impact CCWD's operations and storage in Los Vaqueros Reservoir. Unfortunately, the technical analyses presented in the SED are not sufficient for CCWD or other water users to gauge what the impacts of the proposed alternatives will actually be.

There are significant shortcomings in the analyses presented in the SED that result in a failure to disclose the impacts of the proposed action. The impacts analysis and modeling are inadequate to capture the full range of impacts that would be expected from the alternatives presented. Based on the severity of the SED shortcomings, the potential impacts analyses of the proposed alternatives must be corrected, re-evaluated and the draft SED must be re-circulated for public comment. This will ensure that CEQA requirements are satisfied, that environmental impacts are fully analyzed and disclosed, and that the Board's decisions will be based on adequate information. Listed below are some of the key areas the SED fails to adequately address, followed by proposed remedies.

1 Problem: Incomplete Regulatory Setting in WSE Model

The SED does not incorporate all relevant existing regulations into the alternatives analysis and thus does not accurately capture the potential impacts associated with each alternative. The baseline model of the SED contains regulatory assumptions from 2009 that are no longer valid and some of the water rights issues on the tributaries may not be accurately captured. For example, the CALSIM baseline contains the Vernalis Adaptive Management Plan or VAMP flows but the agreement requiring those flows expired in 2011. Comparing the proposed alternatives to an incorrect baseline means that the potential impacts and conclusions drawn from such a comparison will be incorrect. A new CALSIM baseline should be developed that includes the most up-to-date water regulations and improved water rights accounting so that the potential impacts of the proposed alternatives can be properly evaluated.

The SED also does not consider the potential changes to state-wide operations necessary to comply with all D-1641 requirements that could result from implementing the alternatives. The SED states that “[t]he CALSIM case included the NFMS Reasonable and Prudent Alternative (RPA) required Stanislaus River flows and simulated some (but not all) of the Water Rights Decision 1641(D-1641) Vernalis objective flows to be released from New Melones Reservoir (p. F.1-15)”. The WSE model that was developed for the SED does not re-operate reservoirs on the Sacramento River or evaluate the likely changes in export operations. The modeling assumes that the regulation controlling operations at a given time in the CALSIM baseline (that does not include all of D-1641 requirements) will be the same in the alternatives. This is incorrect and will lead to incorrect conclusions. By failing to analyze the alternatives in a comprehensive regulatory setting, the potential water supply, water quality, hydropower and economic impacts of the alternatives cannot be determined from the SED; consequently the SED is inadequate and must be revised and re-circulated for public comment.

1.1 Solution: Create a New CALSIM Based Model of SED Alternatives

The Board should re-run the impacts analyses using the industry-standard CALSIM modeling platform to evaluate all of the proposed alternatives in the SED. The SED states “[t]he changes in exports and Delta outflow could be analyzed by ‘running’ the CALSIM model for LSJR Alternatives 2, 3, and 4. However, the CALSIM model does not currently include the option of using a specified fraction of the unimpaired flow as the required reservoir release flows, and cannot change Tuolumne or Merced diversions based on higher target release flows. Therefore, an approximate method for estimating the likely changes in south Delta pumping and Delta outflow is used (p.F.1-156)”. Potential changes in state-wide water operations associated with proposed alternatives do not need to be guessed at; those changes can be quantified using CALSIM as that is exactly what the model was designed to do.

In May 2011, CCWD asked the Board’s technical staff to include CALSIM modeling of the alternatives in the SED. The response was that the Board does not have the internal capabilities to perform such modeling, and the WSE model was deemed sufficient.

However, CALSIM modeling is standard practice, it is necessary to provide the minimal information to assess impacts, and there are many qualified CALSIM modelers who could be retained to make the required modifications and complete the work. Potential changes in compliance with D-1641, potential changes in compliance with the RPAs of the biological opinions, and potential impacts to other water users must be adequately analyzed and disclosed in the SED. Similarly, the 2009 CALSIM baseline must be updated, even though the SED notice of preparation was filed in 2009. CEQA does not prohibit the use of tools and information that become available subsequent to NOP filing; indeed, when strict adherence to such a rule results in irrelevant or wrong assumptions, CEQA requires adjustment to use the facts at hand. A new CALSIM baseline should be developed as part of this process that includes the most up-to-date water regulations and improved water rights accounting for the tributaries potentially impacted by the proposed alternatives.

Adopting the proposed modeling approach would improve the SED by addressing several important issues: The baseline will represent existing conditions rather than 2009 conditions, modeling all of the alternatives using the same platform will ensure that the impacts analysis makes appropriate comparisons, and the proposed alternatives will be evaluated in the context of comprehensive state-wide CVP/SWP operations. The output of the CALSIM alternatives modeling could then be post-processed with some of the spreadsheet tools developed for the SED to examine potential economic and power impacts.

2 Problem: Incomplete Water Quality Analysis

CCWD's operations are based on water quality in the Delta, and CCWD has requested that the SED evaluate the potential water quality impacts of the proposed alternatives at CCWD's intakes. CCWD provided scoping comments on May 20, 2011 specifically requesting time series of water quality at all CCWD intakes for each of the alternatives considered in the SED. The SED did not address CCWD's scoping comments and failed to analyze the potential water quality impacts at CCWD's intakes. Therefore, it is not possible for CCWD to estimate how the proposed alternatives could affect our operations and reservoir storage. By neglecting the potential water quality impacts throughout the Delta, the SED underestimates the geographical extent of potential water quality impacts. The incomplete regulatory setting of the WSE model combined with the incomplete spatial coverage of the water quality modeling means that the SED has failed to evaluate and disclose the potential water quality impacts of the proposed alternatives.

Furthermore, the SED did not quantify changes in water quality in the Delta and tributaries that could occur if the water users in the San Joaquin Basin utilize more groundwater to offset the loss of surface water supplies. The SED water quality modeling "*calculates the Vernalis EC effects by changing the tributary flows and assumes that all other sources of salinity remain the same as depicted in the baseline CALSIM results (p. 5-61)*". However, the groundwater chapter

of the SED “assumes that the water supply reductions predicted by the WSE in the three eastside tributaries, and thus the subbasins, would be replaced by groundwater pumping (9-21)”. The SED assumes that by implementing the preferred alternative water quality will improve February through June (relative to the baseline) in the tributaries and downstream because surface flows will increase; however, water quality in the tributaries and downstream will likely be worse during other times of the year because of increased groundwater usage. Groundwater is typically lower quality (i.e. higher salinity) than surface water, so the return flows from agricultural lands and municipal discharges will be saltier than they have been historically if a larger percentage of the Basin’s water supply comes from saltier groundwater. If the water supply portfolio of water users in the San Joaquin Basin is more heavily dependent on groundwater, water quality in the channels downstream will suffer as municipal and agricultural discharges become saltier. The SED should re-evaluate the potential water quality impacts associated with increased groundwater usage. When these improved water quality analyses are completed, the draft SED should be re-circulated for public comment.

2.1 Solution: Improve Agricultural Return Flow Information & Update an Existing Water Quality Model

All of the existing modeling tools available to examine water quality impacts of the proposed alternatives (DSM2, SED spreadsheet model, RMA, UnTrim) suffer from the lack of adequate representation of agricultural return flow quantities and qualities and the possible changes in water quality associated with increased groundwater use. The Board should work with the Regional Water Quality Control Boards, the Department of Water Resources, the Delta Watermaster, and local water agencies to improve information available so existing modeling tools can be improved. In the absence of improved estimates of agricultural return flow quantity and quality, the SED should use the CALSIM generated flows as input to DSM2 to generate water quality throughout the Delta and compare those values to the ones estimated by the SED spreadsheet and present a range of water quality impacts associated for each alternative.

3 Problem: Inadequate Examination of Re-directed Impacts at Times Outside of Implementation Window

A major weakness of the SED is not analyzing re-directed impacts of the proposed alternatives outside of the period of implementation. As noted above in the water quality section, changes in groundwater usage as a result of the proposed alternatives could impact water quality outside of the February through June window. The anticipated increase in salinity of the tributaries and inflow to the Delta would occur in the summer and continue through the early winter. Similarly, during the workshop held by the SWRCB on March 20, 2013, biologists from state and federal agencies expressed concern about in-stream temperatures during the late summer and fall that could negatively impact salmon. The SED must re-evaluate the potential impacts of the proposed alternatives in a comprehensive fashion so that the desired changes during the

implementation window are not countered or offset by negative impacts outside of that time period.

3.1 Solution: Adopt Suggested Modeling Approach & Analyze Potential Impacts Year-Round

If the Board adopted the suggested modeling approach outlined in Sections 1 and 2 of this letter, year-round impacts would be easy to quantify. Increased emphasis should be placed on presenting potential impacts throughout the year and increased attention should be paid to potential impacts during droughts or drought recovery periods. This will ensure the SED provides a robust picture of the potential impacts. When these studies are complete, the draft SED should be re-circulated for public comment.

4 Problem: Inadequate Examination of Potential Impacts to Municipal and Industrial Users

The SED pre-supposes that the proposed alternatives will only impact agricultural beneficial uses; it does not consider the potential impacts to municipal and industrial beneficial uses. CCWD has previously submitted comment letters requesting an analysis of impacts to municipal and industrial diverters in the Delta but the SED failed to address these comments. Furthermore, the draft SED does not contain an anti-degradation analysis. The Board staff indicated at the March 20, 2013 workshop that an anti-degradation analysis will be included in the final SED. The public should be given the opportunity to comment on the anti-degradation analysis and the preferred alternative should demonstrate that no degradation will result from implementation.

4.1 Solution: Adopt Suggested Modeling Approach & Analyze Potential Impacts to M&I

If the Board adopted the suggested modeling approach outlined in Sections 1 and 2 of this letter, the potential impacts to municipal and industrial users would be easier to quantify as the CALSIM and DSM2 models cover a broader geographic area and include a greater number of water users than the WSE model. The SED should continue to emphasize potential impacts to hydropower and agriculture but not at the expense of other water users or other beneficial uses. The anti-degradation analysis should be completed and included in the draft SED. When this analysis is complete the SED should be re-circulated for public comments.

5 Board Actions

The shortcomings of the SED must be resolved to ensure all of the potential impacts to stakeholders have been evaluated. Due to the technical and legal inadequacies of the SED,

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CCWD urges the Board to re-evaluate the impacts analyses incorporating input from stakeholders and re-circulate the draft SED for public comments. It is important to establish an appropriate set of tools for analyzing the full range of impacts in this process so that the current SED will be improved and so that the same inadequacies can be avoided in the future.

Sincerely,



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Assistant General Manager

GG/MM/ps