Antioch-301A Errata

The following two pages were mistakenly left out of Exhibit Antioch-301. The attached pages are p. 8-288 and 8-289 from the December 22, 2016 FEIR/EIS.

Results of the modeling approach which used relationships between EC and chloride (see Section 8.3.1.3, *Plan Area*) were consistent with the discussion above, and assessment of chloride using these data results in the same conclusions as are presented above for the mass-balance approach (Appendix 8G, Table Cl-8 and Table Cl-10).

Commensurate with the decrease in chloride concentrations exported to the San Joaquin Valley for agricultural irrigation, an improvement in lower San Joaquin River chloride would also be anticipated to occur because chloride loading from agricultural drainage would be reduced. While difficult to predict, the relative decrease in overall loading of chloride to the SWP/CVP Export Service Areas would likely alleviate or lessen any expected increase in chloride at Vernalis related to decreased annual average San Joaquin River flows (see discussion of Upstream of the Delta).

Maintenance of SWP and CVP facilities would not be expected to create new sources of chloride or contribute a substantial change in existing sources of chloride in the affected environment. Maintenance activities would not be expected to cause any substantial change in chloride such that any long-term water quality degradation would occur, thus, beneficial uses would not be adversely affected.

NEPA Effects: In summary, relative to the No Action Alternative, Alternative 1A would result in increased water quality degradation and frequency of exceedance of the 150 mg/L objective at Contra Costa Pumping Plant #1 and Antioch, the 250 mg/L municipal and industrial objective at interior and western Delta locations on a monthly average chloride basis, and could contribute measureable water quality degradation relative to the 303(d) impairment in Suisun Marsh. The predicted chloride increases constitute an adverse effect on water quality (see Mitigation Measure WQ-7 below; implementation of this measure along with a separate, other commitment relating to the potential increased chloride treatment costs would reduce these effects). Additionally, the predicted changes relative to the No Action Alternative indicate that implementation of CM1 and CM4 under Alternative 1A would contribute substantially to the adverse water quality effects (i.e., impacts are not wholly attributable to the effects of climate change/sea level rise).

***CEQA Conclusion*:** Key findings discussed in the effects assessment provided above are summarized here, and are then compared to the CEQA thresholds of significance (defined in Section 8.3.2, *Determination of Effects*) for the purpose of making the CEQA impact determination for this constituent. For additional details on the effects assessment findings that support this CEQA impact determination, see the effects assessment discussion that immediately precedes this conclusion.

Chloride is not a constituent of concern in the Sacramento River watershed upstream of the Delta, thus river flow rate and reservoir storage reductions that would occur under the Alternative 1A, relative to Existing Conditions, would not be expected to result in a substantial adverse change in chloride levels. Additionally, relative to Existing Conditions, the Alternative 1A would not result in reductions in river flow rates (i.e., less dilution) or increased chloride loading such that there would be any substantial increase in chloride concentrations upstream of the Delta in the San Joaquin River watershed.

Relative to Existing Conditions, Alternative 1A would result in substantially increased chloride concentrations in the Delta such that frequency of exceedances of the 150 mg/L Bay-Delta WQCP objective would approximately double. Moreover, the frequency of exceedance of the 250 mg/L Bay-Delta WQCP objective would increase at Antioch (by 8%) and at Mallard Slough (by 2%) which could result in significant impacts on the municipal and industrial water supply beneficial use at these locations (see Mitigation Measure WQ-7 below; implementation of this measure along with a

separate, other commitment relating to the potential increased chloride treatment costs would reduce these effects). Additionally, further long-term degradation would occur at Antioch, Mallard Slough, and Contra Costa Canal at Pumping Plant #1 locations when chloride concentrations would be near, or exceed, the objectives, thus increasing the risk of exceeding objectives. Relative to the Existing Conditions, the modeled increased chloride concentrations and degradation in the western Delta could further contribute, at measurable levels to the existing 303(d) listed impairment due to chloride in Suisun Marsh for the protection of fish and wildlife. However, based on sensitivity analyses conducted to date (see Appendix 8H, *Electrical Conductivity*, Attachment 1), it is expected that implementation of Mitigation Measure WQ-7d would reduce impacts on chloride in Suisun Marsh to a less-than-significant level.

Chloride concentrations would be reduced in water exported from the Delta to the CVP/SWP Export Service Areas, thus reflecting a potential improvement to chloride loading in the lower San Joaquin River.

Chloride is not a bioaccumulative constituent, thus any increased concentrations under Alternative 1A would not result in substantial chloride bioaccumulation impacts on aquatic life or humans. Alternative 1A maintenance would not result in any substantial changes in chloride concentration upstream of the Delta or in the SWP/CVP Export Service Areas. However, based on these findings, this impact would be significant due to increased chloride concentrations and degradation at western Delta locations and its impacts on municipal and industrial water supply and fish and wildlife beneficial uses.

Implementation of Mitigation Measure WQ-7 along with a separate, other commitment relating to the potential increased costs associated with chloride-related changes would reduce these effects. Although it is not known whether implementation of WQ-7 will be able to feasibly reduce water quality degradation in the western Delta, implementation of Mitigation Measure WQ-7 is recommended to attempt to reduce the effect that increased chloride concentrations may have on Delta beneficial uses. However, because the effectiveness of this mitigation measure to result in feasible measures for reducing these water quality effects is uncertain, this impact is considered to remain significant and unavoidable. As mentioned above, it is expected that implementation of Mitigation Measure WQ-7d would reduce impacts on chloride in Suisun Marsh to a less-than-significant level.

In addition to and to supplement Mitigation Measure WQ-7, the project proponents have incorporated into the BDCP, as set forth in EIR/EIS Appendix 3B, *Environmental Commitments*, a separate, other commitment to address the potential increased water treatment costs that could result from chloride concentration effects on municipal, industrial and agricultural water purveyor operations. Potential options for making use of this financial commitment include funding or providing other assistance towards acquiring alternative water supplies or towards modifying existing operations when chloride concentrations at a particular location reduce opportunities to operate existing water supply diversion facilities. Please refer to Appendix 3B, *Environmental Commitments*, for the full list of potential actions that could be taken pursuant to this commitment in order to reduce the water quality treatment costs associated with water quality effects relating to chloride, electrical conductivity, and bromide.