Attachment 1
Summary of the Basin Plan Amendment

The Central Valley Regional Water Quality Control Board has determined that Delta waterways are impaired due to elevated levels of mercury in fish. To address mercury in the Delta, Central Valley Water Board staff is proposing additions to three Chapters of the Basin Plan: Water Quality Objectives, Implementation, and Surveillance and Monitoring.

A mass balance for methylmercury in the Delta suggests that tributaries contribute more than 60% of Delta methylmercury inputs and that sediment flux from wetlands and open channels contributes about 30%. Other sources of methylmercury include municipal wastewater, urban runoff, and agricultural return flows. Sources of total mercury include tributary inflows, municipal wastewater, atmospheric deposition, and urban runoff. Tributary sources account for about 97% of the total mercury and about 99% of the total suspended solids (TSS) fluxing though the Delta, with more than 80% of the total mercury and TSS loading coming from the Sacramento Basin.

Staff is recommending Delta-specific water quality objectives in terms of concentrations of methylmercury in large, trophic level 3and 4 fish and in small, trophic level 2 and 3 fish. The five alternatives for water quality objectives that were considered and criteria for evaluation are described in the draft Basin Plan Amendment staff report. Derivation of the recommended objectives considers human and wildlife health and follows closely the method used by the USEPA to determine that agency's recommended numeric criterion for methylmercury.

Statistically significant relationships were found between methylmercury concentrations in unfiltered water and fish in the Delta. Staff used the relationships to describe the linkage between methylmercury in water and fish and to determine an aqueous methylmercury concentration "implementation goal" that corresponds to the proposed methylmercury fish tissue objective. By comparing the aqueous methylmercury goal with current concentrations, Staff identified the reductions in methylmercury levels needed to attain the goal and target. Percent reductions in methylmercury concentrations (and loads) required to meet the goal range from 0% for inputs to the Central Delta subregion to more than 70% for inputs to the Yolo Bypass and Marsh Creek subregions.

The proposed Basin Plan amendment presents an implementation plan for reducing aqueous methylmercury loads in the different subregions of the Delta. Essentially, a methylmercury TMDL must be developed for each Delta subregion because the extent of fish impairment, the methylmercury sources, and the percent reductions needed to meet the proposed implementation goal are different in each subregion. The implementation plan includes three components: (1) control methylmercury sources; (2) control total mercury sources; and (3) reduce the public's exposure to methylmercury from fish consumption. Implementation alternatives were evaluated in terms of source type, effort, time to affect change, feasibility, cost and achievement of water quality objectives.