

Supplemental Water Quality Information

How is CALFED assessing projected drinking water standards in modeling the performance of the three alternatives?

Salinity, bromide, organic carbon, and pathogen (disease causing organisms) concentrations are the water quality parameters of greatest concern to municipal and industrial users of Delta waters. Bromide is of particular importance because it cannot be effectively removed at reasonable cost and produces unwanted chemical byproducts over which there is health concern. CALFED has used available modeling tools to predict salinity consequences of implementing the CALFED alternatives. From this work, bromide concentrations are predicted for each alternative. Predicted bromide concentrations will be compared to a range of bromide concentrations (50 ug/L to 200 ug/L) that reflects a range of potential future drinking water standards. This range will be used to perform sensitivity analyses to understand the potential consequences to drinking water beneficial uses of implementing the three alternatives under different regulatory scenarios.

A modeling tool to predict total organic carbon concentrations resulting from implementing the alternatives is under evaluation. It is intended that this tool be used during the period between the release of the draft and publication of the final EIS/EIR to evaluate the drinking water implications of the alternatives under different drinking water regulatory scenarios.

Drinking water quality is an important characteristic that distinguishes the alternatives, and will be specifically addressed in the Phase II report.

Discussion of export water quality versus fisheries improvements

CALFED evaluations have indicated that Alternative 3 is most likely to effectively address fish entrainment problems and fishery problems associated with adverse flow conditions induced by South Delta pumping. Taken together, these factors are considered by fisheries experts to be very important for recovery of depleted fish species. Fish entrainment is an important characteristic that distinguishes the alternatives, and will be specifically addressed in the Phase II report.

Alternative 3 also ranks highest of the three alternatives with regard to the quality of export waters for agricultural, municipal, and industrial beneficial uses.

Alternative 3 would, however, reduce overall fresh water flows through Delta channels, and could conceivably worsen some water quality conditions, such as dissolved oxygen concentrations, in localized areas within smaller Delta channels. Such effects could be detrimental to some fish species resident in the interior Delta, and could require mitigation, such as maintenance of fresh water flows in Delta channels.

Additional detail of water quality predictions, broken down by year type and between users (SWP,CVP).

The following pages present summaries of salinity predictions based on the draft report, *Status Reports on Technical Studies for the Storage and Conveyance Refinement Process - Delta Model Simulation Model Studies of Alternatives 1A, 1C, 2B, 2D, 2E, and 3E. CALFED Bay-Delta Program. August 4, 1997.*

The stacked bars represent predicted overall average Total Dissolved Solids concentrations (a measure of salt content), along with the increase in salt that can be expected during dry and critical years.

Also, because bromide (one of the salts present in Delta water as a result of sea water intrusion) is important to drinking water purveyors because of its ability to react with drinking water disinfectant chemicals to form harmful chemical byproducts, included are estimates of chloride and bromide concentrations at drinking water intake locations. These graphs follow the stacked bar graphs mentioned above.