

DeltaSOS Model

Purpose: Evaluate Delta channel flows and operations for alternative Delta water quality and flow objectives, such as D-1485 or 1995 WQCP.

CALFED Potential: Could be used to explore Delta operations of new or modified facilities with alternative water quality objectives. Can provide iterative and interactive evaluation and display of potential Delta operations. Can be used to demonstrate and communicate differences between alternatives.

Approach: Spreadsheet calculations compare initial monthly Delta water budget with specified Delta water quality objectives (flow and export limits) to determine potential effects of objectives on Delta exports.

Inputs: Initial monthly Delta water balance (flows and exports) for 1922-1991; Delta water quality and operations objectives specified as month x year-type values for approximately 25 different operational controls.

Methods: Channel flows estimated with "flow-split" equations based on RMA hydrodynamic model results. Incremental changes in exports are calculated to satisfy specified gate, diversions, outflow, and export objectives.

Results: Monthly Delta channel flows, isolated and direct CVP/SWP exports, outflow, and in-Delta storage operations are calculated as incremental changes from initial values that are required to satisfy specified objectives. Time-series of monthly values with annual summaries; monthly and annual graphics.

Applications: Used to describe in-Delta storage operations for Delta Wetlands EIR/EIS prepared by SWRCB and Corps.

Documentation: Appendix A2 "Delta Standards and Operations Simulation Model" & Appendix A3 "DeltaSOS Simulations of Delta Wetlands Project Alternatives" in Delta Wetlands Project Draft EIR/EIS (September 1995).

Source: Free-access, Lotus 123 Spreadsheet Model, Jones & Stokes Associates, Russ T. Brown (916) 737-3000.