Model Name	Description of Model
Yolo Bypass Fry Growth Model	Yolo Bypass Fry Growth Model is used to estimate the differences in growth of Chinook salmon fry in the Yolo Bypass compared to the mainstem lower Sacramento River.
BDCP Bioenergetics Model	The BDCP Bioenergetics Model estimates the relative consumption of BDCP-covered fish species by striped bass based on water temperature, striped bass size, number of striped bass present, and the density and size of prey encountered.
Reclamation Temperature Model	The Reclamation Temperature Model uses CALSIM II flow and climatic model output to predict monthly mean vertical water temperature profiles and release temperatures in the Trinity, Whiskeytown, Shasta, Folsom, New Melones, and Tulloch Reservoirs. The reservoir component of the model simulates one-dimensional, vertical distribution of reservoir water temperature using monthly input data on initial storage and temperature conditions, inflow, outflow, evaporation, precipitation, radiation, and average air temperature. The reservoir is divided into horizontal layers of uniform thickness. Each layer is assumed to be isothermal. Volume of the cold-water pool would be able to be estimated at a gross level (in layers).
RMA Bay-Delta Model	The RMA Bay-Delta Model is a full-featured hydrodynamics/water quality modeling system of the full Bay-Delta estuary. The computational time step used for modeling the depth-averaged flow and EC transport in the Delta is 7.5 minutes, and output from each model is saved every 15 minutes.
Upper Sacramento River Water Quality Model (USRWQM)	USRWQM predicts the effects of operations on water temperature in the Sacramento River and Shasta and Keswick reservoirs. The model is a daily timestep and provides water temperatures for each day of the 82-year hydrologic period (1922 to 2003) used in CALSIM II. The USRWQM was developed using the HEC-5Q model to simulate mean daily (using 6-hour meteorology) reservoir and river temperatures at key locations on the Sacramento River. Daily timestep allows for more accurate simulation of real-time operation strategies and more biologically meaningful assessment of temperature effects. Monthly flows from CALSIM II for the 82-year period are used as input after being temporally downsized to daily average flows.
Mercury Bioaccumulation	The output from the DSM2 model (expressed as percent inflow from different sources) was used in combination with the available measured waterborne methylmercury concentrations for those sources to model concentrations of methylmercury at locations throughout the Delta. These modeled waterborne methylmercury concentrations were used with mathematical relationships of waterborne methylmercury to fish-tissue methylmercury to estimate bioaccumulation of methylmercury in fish. Two bioaccumulation models/relationships to convert between water and fish tissue concentrations of methylmercury were used: 1. Linear regression between DSM2 output of methylmercury concentrations in water (modeled) and bass tissue mercury concentrations (measured) using either annual average or quarterly water values. This model was developed specifically for this analysis and is described in detail in Appendix 8I. 2. The Central Valley Regional Water Quality Control Board (CVRWQCB) Total Maximum Daily Load (TMDL) model was based on the concentration averages of measured fish mercury and water concentrations of methylmercury over broad areas of the Delta. The CVRWQCB model was used in addition to the above described here as a separate predictive tool to link to DSM2 model output.