

Chapter	Reference
Environmental Analysis & Cumulative Effects	Chapter 11
Environmental Analysis & Cumulative Effects	Chapter 6
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Comment

NMFS appreciates the commitment to avoid any adverse impacts from Sites Reservoir to the Big Notch Project as stated in the EIR/EIS, "The Project would operate to avoid effects on the Big Notch's ability to achieve the same level of performance for salmonids in the Sacramento River as it would absent the Project." In addition to proposal for monitoring, NMFS would appreciate further discussions with Reclamation regarding the operational changes

The proposed monitoring of water quality impacts to Cold Bypass is sparse and there's a substantial amount of river miles between Wallace Wier to Lisbon Wier and downstream to the Cache Slough complex - with variable intervening habitat, land use, and hydrology. The mitigation measure (to reduce flows when the temperatures are too high and dissolved oxygen is too low) seems counterintuitive since it will potentially increase residence time and reduce reaeration. The monitoring strategy proposed may also not be effective if, for example, the cause of hypoxia are nitrogen and phosphorus loadings from the CBD into the bypass during the winter, but those don't drive eutrophication until the summer. Similarly, loadings of mercury may methylate under certain conditions, and, along with pesticides and herbicides, accumulate in fish tissues or sediments - so that they're not adequately detected in the proposed water column monitoring. Considering Sites Reservoirs potential to methylate, and then export mercury downstream, a more effective approach may be to develop a water quality model for the relevant area (metals, nutrients, etc.) for the receiving waters of interest (CBD and Yolo) and evaluate the potential for mercury methylation should be considered. The use of CALSIM monthly data (for metals, pesticides, salinity, HABs) lacks the temporal resolution to analyze acute water quality exceedances. The CE-QUAL-W2 model being used for temperature analysis in Sites could be further developed to analyze the other potential water quality impacts in reservoirs, namely metals, including mercury, salinity, and especially eutrophication and HABs.