

II.1.24 MASTER RESPONSE 24: DROUGHT CONDITIONS

II.1.24.1 MODELING OF DROUGHT CONDITIONS

The hydrologic modeling completed for this project includes hydrology represented by years spanning 1922 to 2003. This sequence of years provides a representative sampling of some of the most extreme conditions, both wet and dry, in the last 100 years, including the historical droughts of 1929 to 1934, 1976 to 1977, and 1987 to 1992. The model simulates the upstream operations of the SWP and the CVP with the goal of meeting all contractual and regulatory obligations under these hydrological conditions. Only after these obligations are met does the model calculate the export of water for the SWP and CVP. Even in the driest of years, when water supplies are limited, the model simulates meeting the regulatory and contractual obligations by drawing on storage in the upstream reservoirs, since this is within the discretion of the two projects, while maintaining a minimum level of export for health and safety.

In recent years, there have been conditions under which the regulatory and contractual obligations were reduced in response to extreme drought conditions and to buffer against future dry conditions. For example in 2014 and 2015 regulatory obligations were reduced through temporary urgency change petition (TUCP) to the State Water Resources Control Board (SWRCB) for relaxation of the Delta standards to help protect storage for instream fisheries and protect water supply in the event of continuing drought conditions. These were conditions that were brought to the SWRCB and coordinated with federal and state resource agencies. Together it was determined that relaxation of standards was appropriate for the conditions. In 2015 physical modifications were made by installing a temporary salinity rock barrier in the Delta to further protect valuable storage. This physical barrier reduced the amount of outflow needed to hold back salinity from intruding deep into the Delta. In addition to these actions, a number of the senior water right holders, voluntarily reduced demand to help reduce the burden on the overall water supply. The combination of all these actions helped minimize the potential significant reservoirs depletions, but these actions are not discretionary actions of the SWP or CVP.

The model does not assume that salinity barriers would be installed, that senior water right holders would reduce demand, or that TUCPs would occur, because that would be a real-time coordination with many agencies, and it would be speculative to predetermine the conditions under which TUCPs might be requested or the actions approved by the SWRCB, which could include limiting export levels, require meeting other standards, or curtailing diverters. Instead, the model simulates the discretionary actions that are available to the SWP and CVP to meet their obligations which generally include releases from reservoirs, allocation to contractors (within contractual limits), and export levels.

II.1.24.2 MINIMUM EXPORT RATE

The model assumes a minimum export rate that varies depending on the situation. The applicable situations reflect regulatory conditions and minimums for health and safety. The model assumes a minimum combined export limit no less than 1,500 cfs when regulatory restrictions like OMR or SJR IE