III.2. San Luis Rule Curve

MBK formulated their rule curve for San Luis Reservoir to achieve their purported operational strategy "to divert as much surplus as possible and to operate upstream CVP and SWP reservoirs to convey surplus stored water when possible." [SVWU 107 p. 44.] As explained below it is my opinion that the MBK's San Luis rule curve formulation inadequately addresses differences in operational flexibility between the No Action and CWF scenarios.

The San Luis rule curve is an operational target in CalSim II which provides a target storage level for each month and is dependent on the South-of-Delta allocation and upstream reservoir storage. The San Luis rule curve is a model operational target that is used to represent operator decisions to move water from upstream reservoirs to South-of-Delta storage. The model simulated San Luis rule curve could differ depending on the available export capacity during winter and spring months, and the need to protect upstream carryover storage in the fall months. In the absence of any other operating criteria controlling the upstream reservoir releases or Delta exports, different San Luis rule curves can result in differences in upstream reservoir releases and storage, and Delta exports. A San Luis rule curve that is set relatively high will encourage release of water from upstream reservoir storage and export of these releases to San Luis Reservoir. Conversely, a lower San Luis rule curve would not drive an upstream storage release for San Luis Reservoir, and would thus maintain upstream storage. The San Luis rule curve could, and should change, when the ability to capture surplus water or export of stored water has changed due to regulatory or infrastructure modifications, and thus provide an opportunity to better maintain the balance between upstream storage flexibility and export capability.

The CWF is a prime example where changes in water delivery infrastructure and operations calls for a corresponding change in the San Luis rule curve. A rule curve that adequately utilized available export capacity and maintained an acceptable level of