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Subject:	Flood - MAR Comments to White Paper - Discussion Draft, November 2017Flood MAR Comment
Date:	Thursday, December 7, 2017 12:58:08 PM

The document does a great job of realistically presenting the opportunities and the barriers/challenges to Flood-MAR. I look forward to seeing the Plan of Study (POS) and supporting work to realize the potential benefits.

General

1. Flood excess. A definition of "flood excess" is needed or at least the concept should be further qualified to include consideration of reservoir re-operations, revisions to prevailing rule curves and assessment of local water rights and historical operations. Each watershed will be unique.
2. Systems wide approach. The early Phase 3 systems reoperations work focused only on state and federal facilities. The state and federal facilities are also used to move water from other Section 7 and private reservoirs. Most all reservoirs are governed by the individual facility US Corps of Engineers Water Control Manuals, and each individual manual was supposed to be in context of Master Water Control Manuals for the Sacramento and San Joaquin Systems. The original manuals and Corps engineering guidelines direct that these manuals be updated. These manuals have not received substantive, systems wide updates since they were published. DWR should work with the Corps to take a system wide approach to identify all reasonable and feasible operational opportunities to integrate flood and water supply operations for all multi-benefit, multi-purpose facilities. Flood MAR opportunities cannot be realized with out a systems wide perspective. This work is needed to revise rule curves and operations manuals. This work might also require changes in federal regulations.
3. Forecast Based Operations. Forecast Based Operation are also watershed based analysis that are and then integrated into Sacramento and San Joaquin flood forecasting and systems operations. Watershed specific analysis and then systems wide integration is needed to fully evaluate Water Available for Recharge (WAFR) per SGMA, and to define excess flood flow for Flood-MAR. The local operators and those holding storage rights in the conservation pools must be engaged but should help to avoid addressing the hard questions. This work should be included in the proposed Plan of Study to be released in 2018.
4. Funding. DWR should consider funding local groups within a watershed that have water rights and operational responsibilities. DWR could provide the basic scoping requirements or standards, and let the local do the detailed analysis pursuant to DWR guidelines or funding requirements.
5. Flood risk reduction. The Sacramento and San Joaquin systems operate in total. Reduction in flood risk should be reviewed at a watershed and then systems wide scale to quantify any flood risk reduction benefits. How will flood risk reductions be measured? How doe the pending work relate to the Central Valley Flood Protection Program?

Specific Comments

1. Pg. 11, Flood Risk Reduction, Para 1. "Flood-MAR can <u>reduce</u> river flow and stage, during and before high-flow events, reducing downstream flood risk. The reduction of flow and stage also provides reservoir operators with additional flexibility to manage flood space and control flood releases, providing greater potential for flood-risk reduction benefits."
    a. Flow and stage may be <u>increased</u> pre-flood under Flood-MAR and FBO operations.
    b. Including graphics of the concept would aid understanding.
2. Pg. 13, Working Landscape Preservation and Stewardship. This section should discuss the relationship to General Plan requirements and land use planning. If not here, perhaps a

separate section on “Plan Integration” to discuss flood, water, and land use planning and the opportunity to integrate plans and policy. For example, preservation of recharge areas. It would be prudent to recognize local authority over land use; and local, federal and state authorities over flood plains.

3. Pg. 19. Para. 3. “The term high flows used in this report is considered synonymous with unappropriated flows. Flood peaks can be evaluated for as a potential water source for Flood-MAR strategies”.
    a. Are high flows the same as “excess flood flows”. How are unappropriated flows to be defined? How are either to be quantified?
4. References. The Master Water Control Manuals should be cited.

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