Topic: **Joint Authority Board and Reservoir Committee Meeting Agenda Item 3.3** **2021 February 19**

Subject: **Operations Analysis for RDEIR/SDEIS**

Requested Action:

Review and comment on operations analysis and results for the Revised Draft EIR/Supplemental Draft EIS.

Detailed Description/Background:

At the December Reservoir Committee and Authority Board meetings, staff provided an update on changes to and draft results of the Sites Reservoir CalSim II model that is being used as the basis for the Revised Draft EIR/Supplemental Draft EIS (RDEIR/SDEIS). Since December, the modeling team finalized the model and has run analysis for the three alternatives included in the RDEIR/SDEIS. The final output of the CalSim II model for the RDEIR/SDEIS is summarized in Table 1. The table also includes results from the Value Planning effort.

Compared to the draft results presented in December, the results are higher and more closely aligned to those included in the Value Planning Report. Long-term annual average releases range from 207 thousand acre-feet (TAF) to 260 TAF depending on the reservoir size and federal participation. Each alternative provides adequate deliveries to meet funded Proposition 1 benefits. Diversion criteria included in the analysis have not changed from those discussed in December.

Table 1. CalSim II Modeling Results – Project Releases by Year Type

	Alternative 1A	Alternative 1B	Alternative 2	Alternative 3	Value Planning (VP7)
Reservoir Size	1.5 MAF	1.5 MAF	1.3 MAF	1.5 MAF	1.5 MAF
Federal Cost-Share	0%	6.6%	0%	25%	0%
Releases by Year Type (TAF)					
Wet	87	86	86	85	85-115
Above Normal	98	154	83	292	255-285
Below Normal	197	224	190	296	245-275
Dry	409	427	398	429	355-385
Critically Dry	340	348	318	308	205-235
Long-Term Annual Average	215	232	207	260	213-243

The results also provide information on improvements to the overall California water system. For example, Table 2 outlines additional storage in several SWP and CVP facilities at the end of September. These increases are due to coordinated operations and, in the case of Alternative 1B and Alternative 3, Federal participation and Operational Flexibility. Increased storage in September allows DWR and Reclamation to better meet water temperature and flow objectives and improve salmonid spawning in the late summer/fall timeframe.

Also, it is important to recognize the significance of the range of values derived from similar sized reservoir alternatives (215-260 TAF). As modeled, the total amount of project releases is largely driven by the assumed demands of each participant, particularly north of the Delta. The higher value of Alternative 3 is due to higher releases in above normal and below normal water year types; the only difference between Alternative 1 and Alternative 1B is the participant mix. If the participation assumed in Alternative 1B could derive similar demands, the expected total amount of project releases could be similar to Alt 3. In past affordability discussions, the project has used an average overall unit cost to look at affordability for participants. As we move forward, the range of values shown above will be used in determining the average overall unit cost. Each participant is encouraged to evaluate its own demand pattern and allocated cost to arrive at its own affordability analysis.

The operations team is performing several other types of analysis in support of the RDEIR/SDEIS development to provide additional information on the following:

- Daily flows
- Temperature in Sites Reservoir, Colusa Basin Drain, Sacramento River, and the Delta
- X2 location
- Fish mortality and salmonid benefits
- Mercury and methylmercury in Sites water and fish tissue
- CVP and SWP power generation

The results of these analyses will be evaluated in the impacts assessment of the RDEIR/SDEIS and will be reviewed with the Reservoir Committee and Authority Board in the spring and summer of 2021.

Prior Action:

None.

Fiscal Impact/Funding Source:

None.

Staff Contact:

Ali Forsythe

Attachments: None