

# Reservoir Committee and Authority Board Meeting

Agenda Item 3.3: CalSim 3 Modeling Update

March 22, 2024



# Expected Outcomes

- If just moving to CalSim 3, then would expect very similar results to CalSim II
- However, we also changing the baseline
  - CalSim II modeling used the 2019/2020 ROC on LTO operations as baseline
  - Current CalSim 3 efforts using the expected 2023/2024 CVP/SWP Reconsultation Proposed Action as baseline
    - Some different operations, especially at Shasta Reservoir
    - May result in slightly different results
    - Also includes some VA assets, but have not coded those into the Sites Project CalSim 3 model

# Baseline Model

- Reclamation's LTO Proposed Action CalSim 3 model (presented to agencies Sep 2023)
  - No Voluntary Agreements
  - Differs from DWR's LTO Proposed Project CalSim 3 model and are working to code in portions of DWR's Proposed Project now (including some VA actions)
- Climate condition:
  - 2022±15 median hydrology
  - 15 cm of sea level rise
- Demand condition:
  - Projected land use based on recent historical
  - Projected urban demands based on 2040 estimated in 2020 UWMPs
- Existing facilities plus San Luis Raise

# Assumptions

Sites Modeling Diversion Criteria	Monthly vs Daily Constraint	Integrated into CalSim 3 (as of 2/20/24)?
Red Bluff diversion capacity (2,100 cfs)	Daily	Yes
Hamilton City diversion capacity (1,800 cfs & variable winter capacities)	Daily	Yes
GCID Main Canal maintenance (1 week in Jan, 1 week in Feb)	Daily & Monthly	Yes
Wilkins Slough Bypass (10,700 cfs Oct-Jun; 5,000 cfs all other times)	Daily & Monthly	Yes
No diversions when Delta is in Balanced conditions	Monthly	Yes
Fully Appropriated Streamflow (no diversion from Jun 15 to Aug 31)	Monthly	Yes
Bend Bridge Pulse Protection	Daily & Monthly	No
Sites Storage Capacity	Daily & Monthly	Yes

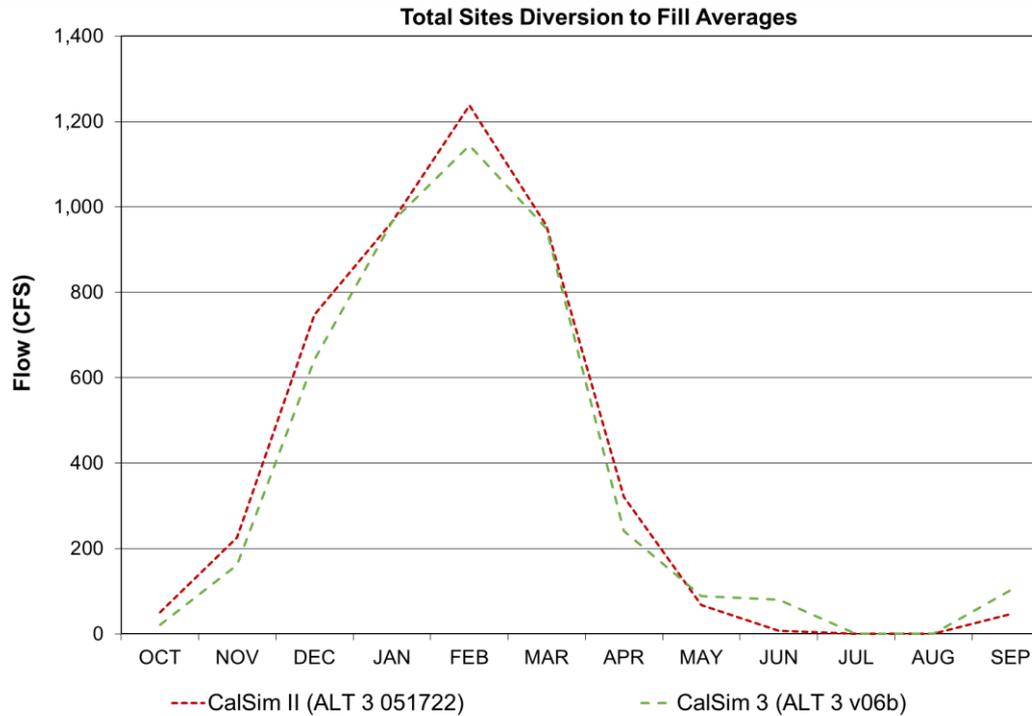
# Assumptions (cont.)

Sites Modeling Diversion Criteria	Monthly vs Daily Constraint	Integrated into CalSim 3 (as of 2/20/24)?
Limit diversions to not use first 3,000 cfs of Surplus Outflow (near Excess conditions)	Monthly	No
Red Bluff Bypass (3,250 cfs)	Daily & Monthly	Yes
Hamilton City Bypass (4,000 cfs)	Daily & Monthly	Yes
Shasta Spring Pulse	Monthly	Yes
TCC hydraulic limit (lowest level of pumping: 125 cfs)	Daily	No
GCC hydraulic limit (lowest level of pumping: 100 cfs)	Daily	No

\*Other constraints may be added to account for LTO regulatory conditions

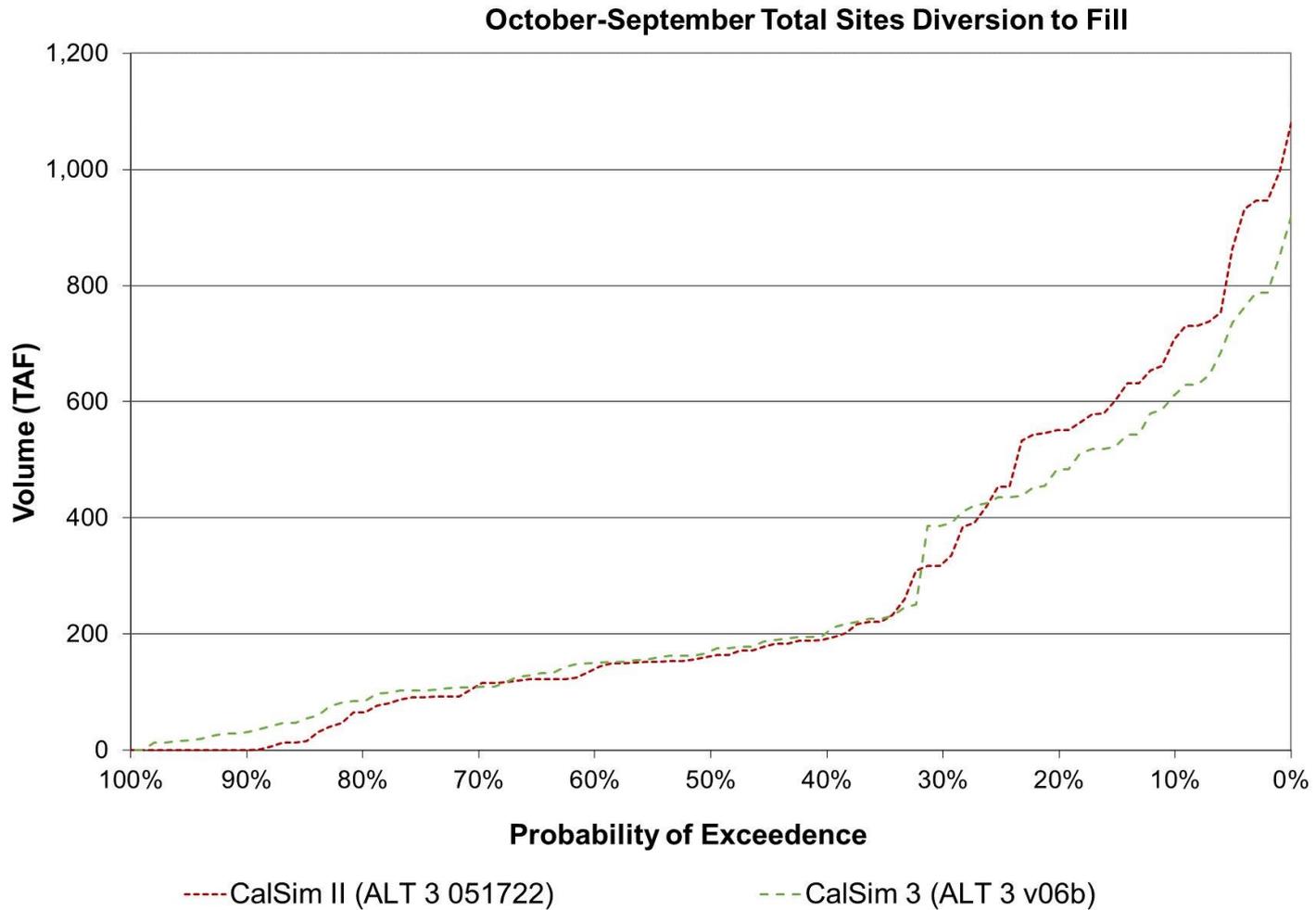
\*\*Testing of monthly vs daily methodologies in-progress. Approach is subject to change

# Preliminary Results



Scenario	Long-term Average Diversion (TAF)	Relative Change
CalSim II (ALT 3 051722)	277	-
CalSim 3 (ALT 3 v06b)	263	-14 (-5%)

# Preliminary Results



# Notes on Results and Next Steps

- Preliminary results will change and its too early to assess changes in Project unit (per AF) costs
- Model is only a representation of how Storage Partners may use their accounts
  - More aggressive results in a lower per unit cost
  - More conservative results in a high per unit cost
- Model development continues and has been difficult
  - Expanded team and have a number of resource experts working on this effort
  - Complete model with QA/QC results a few months away

Questions?