



Westlands Water District

MEMORANDUM

TO: SLDMWA BOARD OF DIRECTORS
FROM: TOM BOARDMAN, WATER RESOURCES ENGINEER
SUBJECT: NOVEMBER OPERATIONS UPDATE
DATE: NOVEMBER 1, 2019

Project Operations

- Jones pumped at minimum capacity during most of October in order to comply with the fall X2 standard required by the delta smelt BiOp. The remaining part of the fall X2 requirement is expected to allow exports to increase during November so long as the Projects ensure that delta outflow is at least 5,700 cfs. As such, Jones is scheduled to increase to 3 units (2700 cfs) on November 4. CVP operators are opposed to increasing upstream releases to support Jones pumping, so absent significant storms, Jones pumping may be forced to minimum levels by mid-November to meet the minimum outflow requirement.
- Banks pumping during October was slightly less than Jones due to the fall X2 requirement. Banks has a one-week outage scheduled for the first week of November, thus; Jones will be pumping the SWP's share of export during the outage. Banks pumping during the remainder of November will be constrained similar to Jones.
- Shasta storage is about 3.27 MAF and gradually declining to reach a target storage of 3.2 MAF by December 1 per flood control requirements. Releases will soon be reduced to 5,000 cfs and are not expected to increase over the next several months unless flood control releases are necessary.
- Folsom storage is at 598 TAF which is 145% of its 15-year average. The current release is at 2,700 cfs as storage is dropping to meet a flood control limit of about 500 TAF.
- CVP demands were about 220 TAF during October; about 50% more than the 15-year average. About 10-15% of the additional demand was due to CVP transfers to Cross Valley Canal contractors and water banking.

2019-20 San Luis Operations

The attached chart titled "Historical Northern CVP Storage" shows that the current upstream CVP storage is within the upper quartile of historical levels for October. Although shortages to refuges and water rights contractors triggered by deficiencies in Shasta inflow rather than by storage levels, wetter antecedent conditions in the northern state should help to ensure that the Shasta deficiency criteria does not result next year under 90% exceedance conditions. However, initial 2020 allocations to Ag and Urban contractor allocations may be reduced due to a lower CVP San Luis storage at the end of October because of the fall X2 standard. As shown on the attached chart titled "Historical CVP San Luis Storage", fall X2 reduced CVP San Luis storage by about 150 TAF. Consequently, CVP San Luis will fall

short of refilling by 200 TAF under dry conditions but may fill by March under average conditions as shown on the attached San Luis storage projection charts.

Revised BiOps for delta smelt and salmon have been posted and will go into effect when they are finalized early next year. The revised BiOps are expected to reduce the degree of uncertainty around export projections such that higher, earlier allocations will be possible. The following table contains projected allocations based on Reclamation’s most recent Project operations studies under the current BiOps compared to allocations under the revised BiOps.

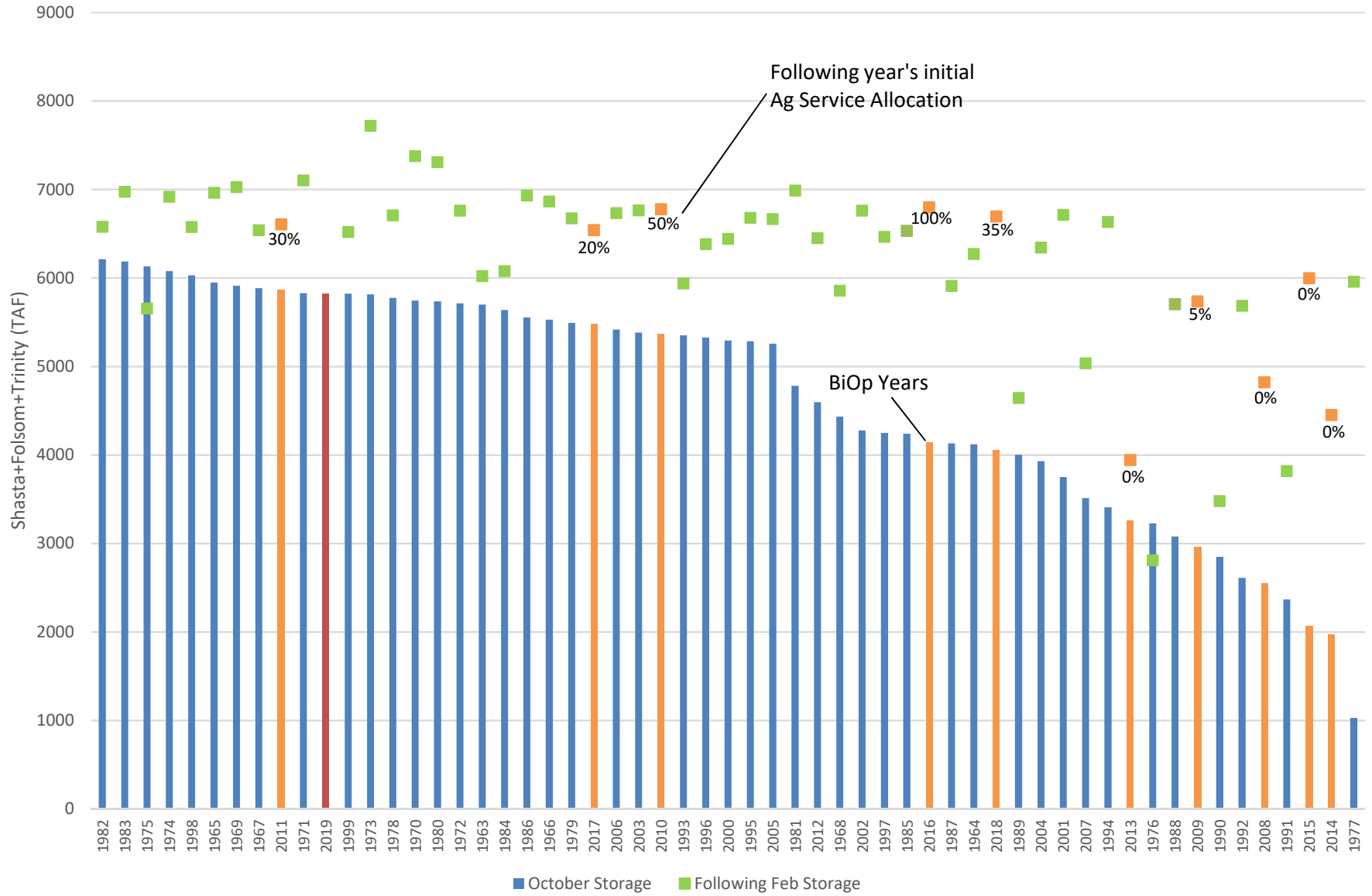
Hydrology	90% Exceedance		50% Exceedance	
	Existing BiOps	Revised BiOps	Existing BiOps	Revised BiOps
Water Rights/Refuges	100%	100%	100%	100%
Ag Service	20-25%	20-30%*	50-70%**	60-80%**
Urban	50%	50-55%	75-95%	100%

* Dry conditions may limit the benefit of the revised BiOps to less than 5%. The upper range of the projected allocation will depend on Reclamation’s assumed demand used to support the allocation.

** Benefits of the revised BiOps estimated 5-10% with remainder of allocation increase dependent on Reclamation’s assumed demand used to support the allocation.

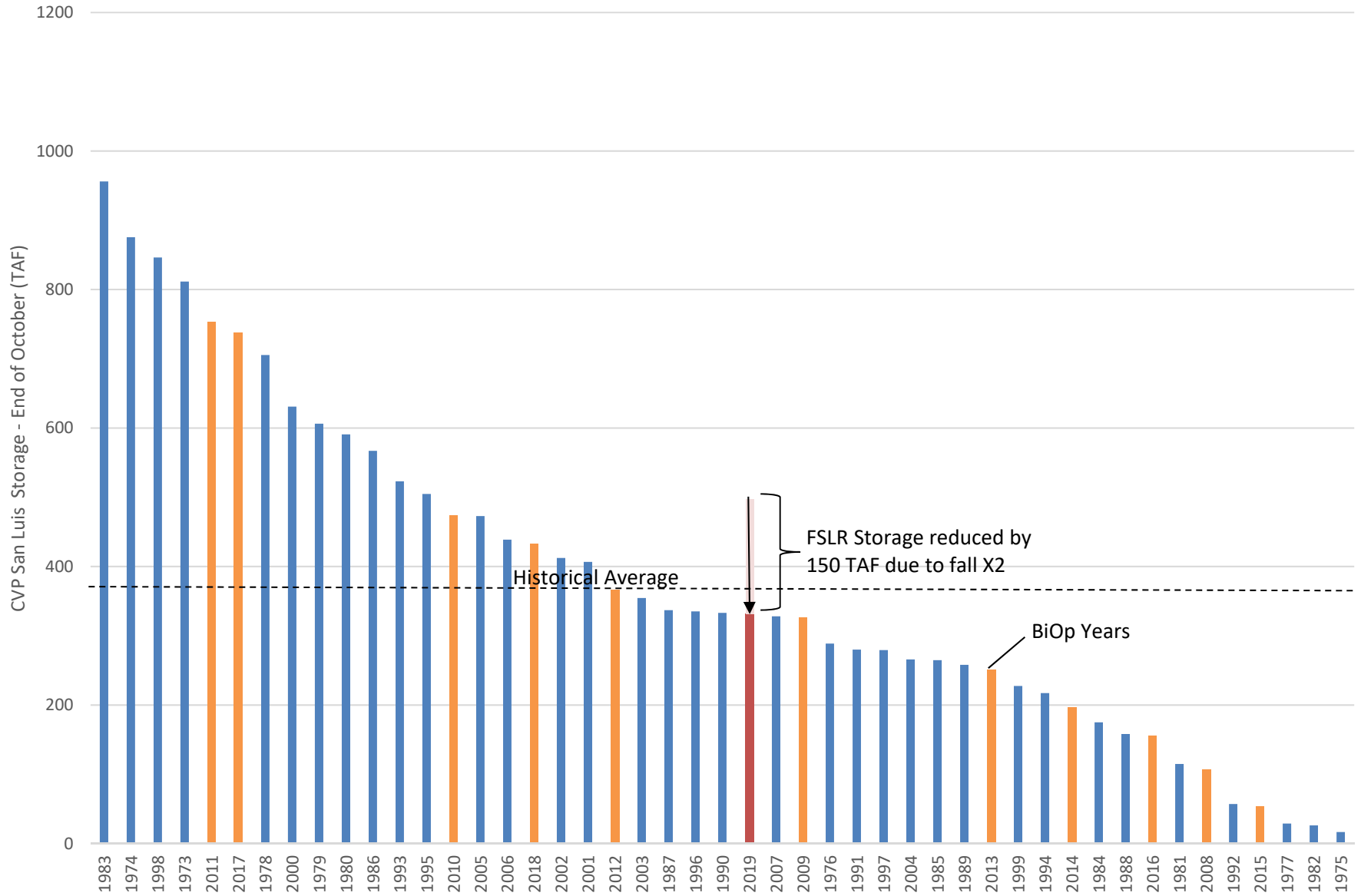
Historical Northern CVP Storage

October vs February



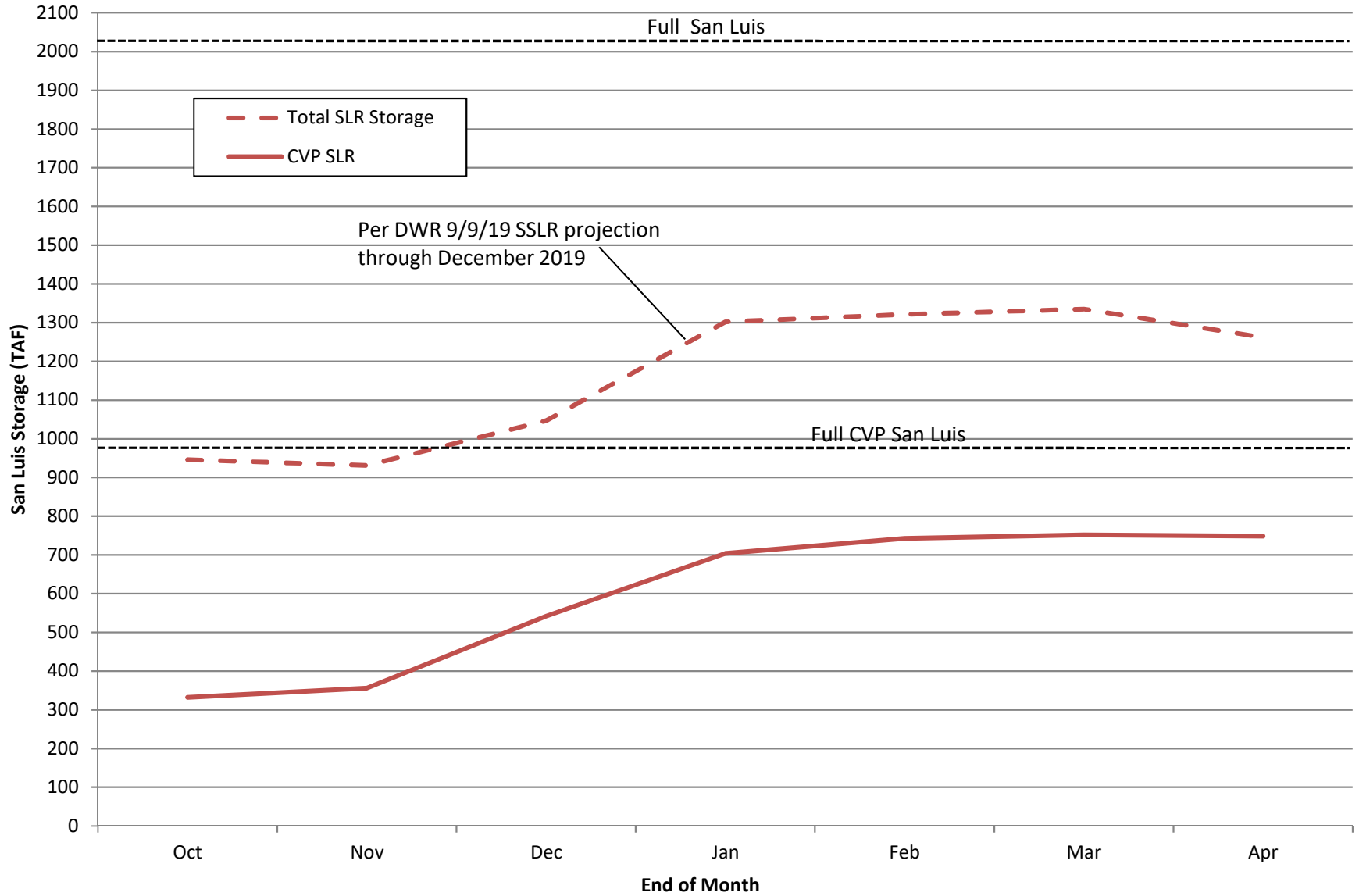
Historical CVP San Luis Storage

End of October



2019-2020 San Luis Storage Projection

90% Exceedance Hydrology



2019-2020 San Luis Storage Projection

50% Exceedance Hydrology

