

1982 Wet Year

Concern	Tools	System Status		Priority	
		Historic	1A Baseline WQCP	Action	Evaluation
Yearling salmon migrants Oct-Jan	• Increase inflow			B	Early salmon before hydrologic cue - could be hatchery release. Deer and Mill spring run escape = 2000. Concern begins in late Dec and extends for 4 weeks.
	• Reduce export				
	• Close DCC	Closed late Oct	Closed late Oct		
Winter run survival Dec-Mar	• Increase inflow			A	<ul style="list-style-type: none"> <li>• Winter run escapement 20000; but lower 3 years later- suggests poor spawning conditions in 82 - high concern for WR smolts mid-Feb to end of Mar - also poor Ocean conditions (El Nino)</li> </ul>
	• Reduce export				
	• Close DCC				
Delta Smelt Adults Jan-Mar	• Reduce export	5000 in Jan-Feb, 10000 Feb-Mar	10,000	A	<ul style="list-style-type: none"> <li>• Largest decline in FMWT index was 800 in fall of 81, fallen from 3000 in 80.</li> <li>• Adult take high late Jan through 2<sup>nd</sup> week in Mar</li> </ul>
Steelhead Feb-May	• Reduce export	10000	11000	B	<ul style="list-style-type: none"> <li>• Unk escapement</li> <li>• Apr density &gt;100/TAF</li> <li>• VAMP helps</li> </ul>
X2 Feb - June	• Increase inflow			OK	
	• Reduce export				
Salmon Fry Feb-Mar	• Reduce export	10000	11000	B	Other salmon present 15 Feb-Mar
DS Young Apr-Jul	• X2 placement			OK	
	• Reduce exports				
San Joaquin smolts Apr-Jun	• Reduce exports	10000 april	11000 allowed	A	SJ escapement = 25000 B for 60 day VAMP A for 30 day VAMP
	• Increase SJ flow	>20000	>20000		
	• Close HOR	Open	close		
Striped Bass Young	• X2 placement			C	STN Index 48.7 - highest take in July.
	• Increase Sac flow				
	• Reduce exports	3000>1500 export	6000-10000 export		
Splittail May-Jul				OK	

### 1982 Gaming

- Winter run escapement was good.
- Biggest decline in DS index occurred from 1980 to 1981.
- No fish problems in Fall.
- Using SL carryover at 400TAF.
- Upstream we were down at Shasta and Folsom.
- Historic problem at SL difficult to deal with. Limited exports because of the problem.
- Adjusted demands are possible from historic levels that were used in daily model. Switch to monthly demands rather daily historic demands.

### NEW GAME 1A

Revised inflows under guise of reoperation - No b(2) costs.

JPOD allows more exports

Deliveries are cut by 200 TAF all CVP.

Reservoirs are up in Jan and on Sept 30.

#### Actions:

- Jan-Feb export reduction of 350 but b(1) would cover (reoperation),
- VAMP would cost 350 TAF
- With plenty of b(2) water available after upstream and VAMP actions the EWA would take further actions with remaining b(2) water.
- 175 TAF for May VAMP extention at 5000 cfs
- Summer payback by CVP to SWP for earlier b(2) related costs.

### Old GAME 1A

Fall Oct-Jan

1. 5000 cfs through fall in baseline exports.
2. WQCP allows increased exports starting in late Nov with storm event.
3. Begin to catch up on 1981.
4. Historic exports were 4600 TAF while WQCP allowed more than 7 MAF.
5. **Action:** restrict exports to 5000 last week of Dec to reduce chinook salvage. Hit is 123 TAF in Dec. (note likely to reduce delivery allocations.)
6. Exports up to 12000 with high SJ flows.

Winter Feb-Mar

1. Pumping up to 13-14 kcfs in late Feb and early Mar under WQCP.
2. Winter run concerns in mid Feb through Mar will cover smelt adults.
3. Smelt target is to reduce salvage by 50%.
4. No upstream actions with flood.
5. **Action:** hold exports to 7500 cfs from second week in Feb through second week in Mar. Hit of 177 TAF.
6. By end of March we have created a hole in SL.

Spring Apr-Jun

1. **Action:** 3000 VAMP for base 30 days.
2. **Action:** 5000 cfs export limit in last half of May.

3. Total at end of May our b(2) account is 500 TAF.

4. **Action:** increase released in July to provide more exports to SL. Release from Oroville.

5. No water left so run out year and make up lost water.

6. **Concern:** september make up does not help San Luis low point - but that was not a problem since we almost filled. Concern about using lower allocations because of SL construction. So deliveries should have been higher and SL would not have filled to the extent it did.

7. **Concern:** upstream Shasta was OK at flood control limit.

8. No delivery impacts but reduced exports by 725 TAF.

### NEW 1B - 1982

7.5 MAF of exports + full 6.2 MAF of Deliveries. Includes 1 MAF of interruptable supplies.

Protections for fish degraded.

#### Actions:

- 7500 cfs export limitation for one week in Dec.
- 3000 cfs VAMP export limit
- 5000 cfs export limit last two weeks in May and first week in June.
- Delta Wetlands feeds exports in summer to bring San Luis up 200 TAF.

#### Notes:

- Low San Luis carryover - used DWRSIM level
- Higher winter flow allow San Luis to fill early and lower exports in March and April.
- IMAF more export with expanded Banks and Delta Wetlands in San Luis storage. No change in deliveries - all deliveries met.
- Could put 100's of TAF into the ground.
- Recharge groundwater at max