

Sample Year 2001 CALFED Water Management Scenario
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Draft

End of Stage 1 Scenario

Assets available at the beginning of Stage 1, but not at the end of Stage 1 have been struck out.

Assets only available after the beginning of Stage 1 are italicized.

Scenario Beta October 11, 1999 Draft
End of Stage 1 Scenario.

Asset/ Measure	Operational Constraints	EWA-b(2) / Projects Relationship
Kern Consortium Water Purchase	<= 90 kaf in wet years 100 kaf dry years (for first 2 years of drought).	Controlled by EWA
Vidler	49,000 af groundwater storage space; 6,000 water acquisition	Controlled by EWA
Semitropic	100 kaf groundwater storage space (sublease)	Controlled by EWA
Other Market Purchases of Water	Need to pull out specific opportunities as much as possible.	Projects/ EWA (requires more definition)
<i>Groundwater Storage: Southern Sacto County</i>	<i>300 kaf operable storage</i>	<i>EWA/Projects</i>
<i>Groundwater Storage: East San Joaquin Basin</i>	<i>3 maf operable storage</i>	<i>EWA/Projects</i>
<i>Groundwater Storage: Gravelly Ford</i>	<i>100 - 200 kaf operable storage</i>	<i>EWA/Projects</i>
<i>Groundwater Storage: Madera Ranch</i>	<i>300 - 400 kaf operable storage</i>	<i>EWA/Projects</i>

Asset/ Measure	Operational Constraints	EWA-b(2) / Projects Relationship
<i>Groundwater Storage: Drought Water Bank in Butte Basin</i>		<i>EWA/Projects</i>
<i>Groundwater Storage: Yolo County</i>		<i>EWA/Projects</i>
<i>Groundwater Storage: West Central Basin</i>		<i>EWA/Projects</i>
Source Shifting		
MWD	60 kaf (for period of 5–10 years only)	EWA has option to call
Delta Crop Shifting	During some or all years, shift some Delta land into winter crops or fallowing.	Projects get yield benefits. EWA may get Delta outflow benefits when Delta out of balance.
Feather River Reoperation	20-30 kaf per year yield.	SWP controls
Shasta Flashboards	50 kaf capacity	CVP controls
<i>Shasta Expansion</i>	<i>Raise by 6 feet: = ? kaf</i>	
<i>Webb Tract</i>	<i>120 kaf. Operated as per Delta Wetlands EIR</i>	<i>EWA/Projects share.</i>
<i>Bacon Island with intertie to export pumping plants</i>	<i>120 kaf. 4 kcfs screened intake from Delta channels. 2 kcfs intertie with CCFB, Tracy pumping plant (water can flow to either or both.</i>	<i>EWA/Projects share.</i>
<i>O'Neal Bypass</i>	<i>Allows DMC to bypass O'Neal Forebay.</i>	
<i>Bacon water quality operations</i>	<i>Trade state/federal exports for Bacon diversions during March TOC peak, then deliver water to meet DMC demands (i.e., no mixing in San Luis) through Bacon/Tracy intertie and O'Neal bypass during spring and summer. Requires that urban DMC demand be shifted onto CA Aqueduct.</i>	<i>Reduces California Aqueduct TOC.</i>

Asset/ Measure	Operational Constraints	EWA-b(2) / Projects Relationship
Regulatory flexibility		
<i>Bring Bacon ops under Project Permits.</i>	<i>Means total Project export pumping could reach 19 kcfs while Bacon is filling.</i>	<i>EWA/Projects share</i>
<i>Relax some Delta ag salinity stds.</i>	<i>No impact requires arrangements w/ affected Delta islands for crop shifts, actions to compensate for increased export salinity, EBMUD CCWD exchange.</i>	<i>Projects</i>
<i>Modifications to X2</i>	<i>E.g., Allow deviations from X2 standards, provided that appropriate average February – June X2 is maintained.</i>	<i>EWA</i>
E/I Variances	Use existing definition of E/I. Intrusions into this standard are allowed (either flex ratio itself or averaging period)	EWA controls
b(2) water	Operate in coordination with EWA. For purposes of analysis, game b(2) water use, but account separately. Needs discussion on how to simulate b(2), given differing legal positions.	EWA controls
Increase Banks Pumping Capacity	COE Banks limit raised from current levels to: 8.5 kcfs year round 6.6 + 1/3 SJR November – March 10.3 kcfs year round	Projects control September – February. EWA controls March – August (Summer control used for payback)

Asset/ Measure	Operational Constraints	EWA-b(2) / Projects Relationship
Efficiency Purchase from urban coastal areas	120 kaf/y yield from efficiency/ recycling 80 kaf south coast urban areas. 20 year agreement. 40 kaf Bay area urban areas. 20 year agreement	Urban/ EWA get dry/ wet year water. EWA gets most water. Some EBMUD water exchanged with CCWD for wq improvement (see below).
EBMUD/ CCWD Intertie	Construct intertie. Provide low salinity water from EBMUD (acquired through efficiency purchase - see above) to CCWD to compensate for any increases in salinity resulting from management changes.	
Access to unused Project pumping capacity	Includes JPOD and EWA access to Banks and Tracy	JPOD normally has priority above EWA. However, EWA may veto use of JPOD to deliver surplus water. CVP may not intrude into EWA share of Banks without permission of EWA.
Access to unused CVP/ SWP storage capacity	San Luis + upstream reservoirs + other reservoirs. Incorporates pumping to storage, reservoir reoperation to optimize storage space.	EWA water is first to spill as Project storage fills.
Access to unused non-project storage capacity	Castaic, Eastside	EWA water is first to spill as Project storage fills
Access to unused stored water	Loans of stored water between the Projects and EWA.	Limited to loans with probability of payback before need above 95%. Penalty for non payback \$1,000/af.
ERP Flows	Integrate upstream ERP flows with downstream actions associated with EWA	EWA controls
EWA Funding	Based upon estimate of need	
DMC/ CA Aq. Intertie	400 cfs capacity increases project flexibility	Projects control
Manage discharge from Delta islands	Reroute agricultural drains or hold water for discharge on outgoing tides or for high flow periods on San Joaquin	Projects control

Asset/ Measure	Operational Constraints	EWA-b(2) / Projects Relationship
Manage salinity and selenium inputs	Reroute agricultural drains or hold water for discharge on outgoing tides or for high flow periods on San Joaquin	Projects control
Clifton Court Screen	Screens all water entering CCFB	Projects receive greater share of assets, depending on success of facility in reducing mortality.
Delta Cross Channel Ops	Operate to improve export water quality	Projects benefit. Control = ?
Blending	Use available supplies to reduce diversion at some periods and blend with higher quality water to be used to improve water quality	Projects control
Acquire In-Delta Islands	Reduce application/run-off/seepage of pesticides	Shared control. Tie into eco restoration program.
Control Algal Growth in CCF	Needs definition	
Reservoir Reoperation	Coordinate/ optimize operation of reservoirs. Needs to be broken into specifics before a useful asset for discussion	
CVPLA: Shifting refuge supplies	Diversify sources of water for refuges. Borrow acquired refuge water for EWA; use refuges as small-scale storage projects; increase efficiency of conveyance.	CVP contractors benefit from shifting supply source and efficiency of conveyance. EWA may benefit from storage and borrowing.