

1. Project Details:
 - a. The Project is not designed to reduce water from other water users
 - i. None of the alternatives in the RDEIR/SDEIS would reduce M&I or agricultural water supply
 - b. Water supply in the 2017 DEIR/S ranged between 135 TAF and 218 TAF for the long term annual average; current alternatives are smaller, ranging between 119 TAF and 130 TAF, but still positive (Table 1)
2. Calsim Hydrologic Model:
 - a. The current reservoir sizes are smaller than those evaluated in the 2017 DEIR/S resulting in reduced release rates and reduced total volumes
 - b. The hydrologic model represents water supply deliveries to the same regions as previously analyzed in the 2017 DEIR/S and shows some relative reductions in areas (e.g., in the Sacramento Valley and Tulare/San Joaquin) due to smaller alternatives
 - c. Apportioning between regions has changed somewhat due to deliveries now based on project participation
 - d. The timing and spatial distribution of releases identified in the current hydrologic model are within the range of what was evaluated in 2017
3. SWAP Model for 2017 DEIR/S
 - a. Output from Calsim is allocated to SWAP districts
 - b. Inputs to SWAP in 2017 RDEIR/S were at the regional level for long term and dry/critically dry averages
 - c. Water deliveries to agriculture remain positive, although smaller as a result of storage participant changes between 2017 DEIR/S alternatives and current alternatives (Table 2)
4. M&I Models for 2017 DEIR/S
 - a. The regions outside of the Sacramento Valley represented by storage participants in the current alternatives are almost completely urban
 - b. Water deliveries to areas with M&I uses remain positive and have similar proportions of the total deliveries when compared to the 2017 DEIR/S results (Table 3)
 - c. Least Cost Planning Simulation Model (LCPSIM): an annual time-step urban water service system reliability management model; estimates least-cost water supply management strategy for SWP and CVP M&I supplies to the South Bay and the South Coast regions
 - d. Other Municipal Water Economics Model (OMWEM; predecessor to CWEST): spreadsheet model estimates economic benefits of changes in supplies based on estimated water supply and demand SWP and CVP M&I regions not included in LCPSIM
5. IMPLAN
 - a. Economic activity in the modeled area hasn't substantially changed since 2017
 - b. Any changes in economic activity associated with construction and operation of the alternatives would be positive
 - c. IMPLAN measures the change in the economy, and the project is not changing the basic relationships in the economy.
6. Approach: provide evidence that new hydrologic modeling would not substantively alter the previous positive economic results produced other models; document the unimportance of new economic model runs with results from the new Calsim output for Alts 1A and 1B, 2, and 3
 - a. Post processed current Calsim output to align with the previous output used for 2017 models and provided comparison between 2017 Calsim output in 2017 DEIR/S as input to other models and current Calsim output

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- i. Tables 2 and 3 indicate the benefits may not be as great under current alternatives as compared to 2017 alternatives, but nonetheless they are beneficial
 - ii. The distribution of results between north and south is different from 2017 vs. current alternatives as the 2017 DEIR/S was not informed by the participation of the storage participants.
- b. Reduced references to Alt A and Alt D in Chapter to focus more on the size of the reservoir and the water supply deliveries
- c. Include new appendix that shows comparisons of previous output and current output and previous 2017 economic appendices

Table 1 Regional Calsim Simulated Deliveries Comparison

	Sites Project Simulated Regional Deliveries							
	2017 EIR/S				2021 DEIR/S			
	Total - All Regions							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	164	135	165	218	131	128	119	130
Dry and Critically Dry Years	328	267	339	415	316	317	287	295
Wet Years	84	76	84	98	-2	-7	0	2
Above Normal Years	35	81	39	67	37	34	34	70
Below Normal Years	63	2	40	138	54	47	48	58
Dry Years	310	242	306	387	345	343	315	317
Critically Dry Years	355	306	388	457	274	278	245	262
	Sacramento Valley							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	22	11	20	96	30	29	29	31
Proportion of Total	13%	8%	12%	44%	23%	23%	24%	24%
Dry and Critically Dry Years	28	13	23	171	67	65	64	70
Proportion of Total	9%	5%	7%	41%	21%	21%	22%	24%
Wet Years	9	9	10	23	4	4	4	4
Above Normal Years	19	11	29	49	4	4	4	4
Below Normal Years	34	7	24	107	21	21	18	22
Dry Years	25	17	26	146	61	64	60	61
Critically Dry Years	33	8	18	209	75	67	70	83
	North Bay/South Bay							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	11	10	12	9	11	11	10	10
Proportion of Total	7%	7%	7%	4%	8%	8%	9%	8%
Dry and Critically Dry Years	21	18	23	17	25	24	23	22
Proportion of Total	6%	7%	7%	4%	8%	8%	8%	7%
Wet Years	6	5	5	6	0	0	0	-1
Above Normal Years	3	8	4	4	2	3	2	5
Below Normal Years	5	2	5	5	7	8	8	9
Dry Years	17	15	18	15	28	26	25	24
Critically Dry Years	27	22	30	21	22	22	19	19
	San Joaquin/Tulare Lake/Central Coast							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	56	35	51	41	7	11	6	28
Proportion of Total	34%	26%	31%	19%	5%	9%	5%	22%
Dry and Critically Dry Years	107	77	104	81	15	29	14	47
Proportion of Total	33%	29%	31%	20%	5%	9%	5%	16%
Wet Years	28	15	21	25	-5	-5	-3	3
Above Normal Years	18	38	25	15	25	24	24	49
Below Normal Years	27	-23	11	6	-4	-7	-6	17
Dry Years	115	71	104	87	27	46	26	64
Critically Dry Years	95	87	104	72	-3	5	-6	21
	South Coast - East/West Branch							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	76	80	83	71	83	76	74	60
Proportion of Total	46%	59%	50%	33%	64%	60%	62%	46%
Dry and Critically Dry Years	172	159	188	145	210	198	187	156
Proportion of Total	53%	60%	56%	35%	66%	63%	65%	53%
Wet Years	41	47	48	44	-1	-6	-1	-4
Above Normal Years	-5	25	-19	-1	5	3	5	13
Below Normal Years	-3	15	1	21	30	25	28	10
Dry Years	153	140	158	138	229	207	204	168
Critically Dry Years	201	189	235	155	181	184	161	139

Notes:

1. The 2017 EIR/S analyzed a 1.81 MAF reservoir with three intakes while the 2021 DEIR/S analyzed a 1.5 MAF reservoir with two intakes. Additionally the 2021 DEIR/S includes refined diversion criteria. As a result of this, overall deliveries are lower in the 2021 DEIR/S alternatives.
2. There is a significant decrease in Wet and Above Normal Year deliveries since there are many water year-type constraints on Authority deliveries in the 2021 DEIR/S alternatives.
3. Deliveries to the Sacramento Valley in 2017 EIR/S Alternative D are much higher than the other 2017 EIR/S alternatives due to a 320 TAF dedicated account for Sacramento Valley participants. The other 2017 EIR/S alternatives do not include this account.
4. The large decrease in San Joaquin/Tulare Lake/Central Coast deliveries from the 2017 EIR/S to the 2021 DEIR/S is due to the fact that there was a dedicated SWP Sites account and a large CVP Sites account in the 2017 EIR/S alternatives that delivered water throughout the CVP and SWP systems. In the 2021 DEIR/S, there is no SWP account and two alternatives have no CVP account, so Sites deliveries are based on participation levels. Participation levels in the San Joaquin and Tulare Lake regions are relatively small.

Table 2 SWAP Calsim Output Comparison

	Sites Project Simulated Regional Ag Deliveries							
	2017 EIR/S				2021 DEIR/S			
	Total - All Regions							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	69	37	61	130	37	41	35	58
Dry and Critically Dry Years	120	76	110	241	82	96	79	116
	Sacramento Valley							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	19	9	16	94	30	29	28	29
Proportion of Total	27%	23%	26%	72%	81%	70%	80%	50%
Dry and Critically Dry Years	25	11	19	169	66	64	64	66
Proportion of Total	20%	14%	17%	70%	80%	67%	80%	57%
	North Bay/South Bay							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	1	0	0	0	0	0	0	1
Proportion of Total	1%	0%	1%	0%	0%	1%	0%	1%
Dry and Critically Dry Years	2	0	1	1	0	1	0	1
Proportion of Total	1%	1%	1%	0%	0%	1%	0%	1%
	San Joaquin/Tulare Lake/Central Coast							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	49	28	44	36	7	12	6	28
Proportion of Total	71%	76%	72%	27%	18%	28%	18%	48%
Dry and Critically Dry Years	93	65	89	70	15	30	14	48
Proportion of Total	78%	85%	81%	29%	18%	31%	18%	41%
	South Coast - East/West Branch							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	0	0	0	0	0	0	0	0
Proportion of Total	1%	1%	1%	0%	1%	1%	1%	1%
Dry and Critically Dry Years	1	1	1	1	1	1	1	1
Proportion of Total	1%	1%	1%	0%	1%	1%	1%	1%

Notes:

1. The 2017 EIR/S analyzed a 1.81 MAF reservoir with three intakes while the 2021 DEIR/S analyzed a 1.5 MAF reservoir with two intakes. Additionally the 2021 DEIR/S includes refined diversion criteria. As a result of this, overall deliveries are lower in the 2021 DEIR/S alternatives.
2. Deliveries to the Sacramento Valley in 2017 EIR/S Alternative D are much higher than the other 2017 EIR/S alternatives due to a 320 TAF dedicated account for Sacramento Valley participants. The other 2017 EIR/S alternatives do not include this account.
3. The large decrease in San Joaquin/Tulare Lake/Central Coast deliveries from the 2017 EIR/S to the 2021 DEIR/S is due to the fact that there was a dedicated SWP Sites account and a large CVP Sites account in the 2017 EIR/S alternatives that delivered water throughout the CVP and SWP systems. In the 2021 DEIR/S, there is no SWP account and two alternatives have no CVP account, so Sites deliveries are based on participation levels. Participation levels in the San Joaquin and Tulare Lake regions are relatively small.

Table 3 M&I Calsim Output Comparisons

	Sites Project Simulated Regional M&I Deliveries							
	2017 EIR/S				2021 DEIR/S			
	Total - All Regions							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	95	97	104	88	94	86	84	71
Dry and Critically Dry Years	207	191	229	174	234	221	208	179
	Sacramento Valley							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	3	2	4	2	0	0	0	2
Proportion of Total	3%	2%	3%	2%	0%	0%	0%	3%
Dry and Critically Dry Years	3	3	4	2	0	1	0	4
Proportion of Total	2%	1%	2%	1%	0%	0%	0%	2%
	North Bay/South Bay							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	10	10	11	9	11	11	10	10
Proportion of Total	11%	10%	11%	10%	12%	12%	12%	13%
Dry and Critically Dry Years	19	17	22	16	25	23	22	20
Proportion of Total	9%	9%	10%	9%	11%	11%	11%	11%
	San Joaquin/Tulare Lake/Central Coast							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	6	6	7	6	0	0	0	0
Proportion of Total	7%	7%	7%	6%	0%	0%	0%	0%
Dry and Critically Dry Years	13	12	15	11	0	0	-1	-1
Proportion of Total	6%	7%	7%	7%	0%	0%	0%	0%
	South Coast - East/West Branch							
	Alt A	Alt B	Alt C	Alt D	Alt 1A	Alt 1B	Alt 2	Alt 3
Long-term Average	75	79	82	71	83	76	74	60
Proportion of Total	80%	82%	79%	81%	88%	88%	88%	84%
Dry and Critically Dry Years	171	159	188	144	209	197	186	155
Proportion of Total	83%	83%	82%	83%	89%	89%	89%	87%

Notes:

1. The 2017 EIR/S analyzed a 1.81 MAF reservoir with three intakes while the 2021 DEIR/S analyzed a 1.5 MAF reservoir with two intakes. Additionally the 2021 DEIR/S includes refined diversion criteria. As a result of this, overall deliveries are lower in the 2021 DEIR/S alternatives.
2. Deliveries to the Sacramento Valley in 2017 EIR/S Alternative D are much higher than the other 2017 EIR/S alternatives due to a 320 TAF dedicated account for Sacramento Valley participants. The other 2017 EIR/S alternatives do not include this account. **However those deliveries were all Ag, so this is not reflected when looking solely at M&I deliveries.**
3. The large decrease in San Joaquin/Tulare Lake/Central Coast deliveries from the 2017 EIR/S to the 2021 DEIR/S is due to the fact that there was a dedicated SWP Sites account and a large CVP Sites account in the 2017 EIR/S alternatives that delivered water throughout the CVP and SWP systems. In the 2021 DEIR/S, there is no SWP account and two alternatives have no CVP account, so Sites deliveries are based on participation levels. Participation levels in the San Joaquin and Tulare Lake regions are relatively small.