

United States Bureau of Reclamation - Mid Pacific Region, Central Valley Operations Office
Forecast of CVP Generation with Uncertainty Bounds Bracketing a Randomly Distributed Population
Based on USBR 50 Pct Forecast -B2, Dated 8/25/2017
Losses are Estimated per WAPA Contractual Provisions
Uncertainty Bounded Energy Generation (All values in GWh)

Month	Trinity	JF Carr	Spring Creek	Shasta	Keswick	Folsom	Nimbus	New Melones	Federal San Luis	O'Neill	At Plant Total	Total Losses	Total Energy at Tracy			
													Expected Proj Use	Exp Est Net CVP	Low Est Net CVP	High Est Net CVP
AUG	50	49	44	238	40	63	7	83	44	0	618	11	140	470	350	540
SEP	43	46	46	185	39	58	7	41	7	0	472	8	95	370	280	420
OCT	14	8	15	188	36	41	5	30	14	0	351	6	40	310	240	350
NOV	16	13	10	135	27	39	5	14	0	0	259	5	60	190	90	250
DEC	10	4	6	119	23	39	5	21	0	0	227	4	145	80	0	130
JAN	7	0	10	167	32	39	5	30	0	0	290	5	125	160	50	230
FEB	7	1	17	170	33	63	6	32	0	0	329	6	85	240	110	320
MAR	20	18	30	184	36	55	7	62	0	0	412	7	45	360	200	460
APR	12	1	8	150	27	69	9	80	12	0	368	6	35	330	180	410
MAY	96	61	62	111	27	84	10	94	44	1	590	10	65	520	340	620
JUN	90	57	51	193	39	66	8	78	38	0	620	11	135	470	350	550
JUL	58	45	41	246	47	79	9	52	49	0	626	11	160	460	330	530
Total	423	303	340	2086	406	695	83	617	208	1	5162	90	1130	3960	2520	4810

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Forecast of CVP Generation
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Expected Capacity Based on Estimated Gross Head (All values in MW)

Month	Trinity	JF Carr	Spring Creek	Shasta	Keswick	Folsom	Nimbus	New Melones	Federal San Luis	O'Neill	At Plant Total	Total Losses	Total Capacity at Tracy			
													Expected CVP	Schd. Out	Expected Proj Use	Expected Net CVP
AUG	65	147	182	710	18	197	10	383	161	0	1874	31	1845	60	195	1650
SEP	64	148	182	710	37	186	5	383	150	0	1866	31	1835	80	150	1685
OCT	63	150	182	551	33	119	7	383	145	0	1634	27	1605	115	60	1545
NOV	63	154	182	677	25	115	7	382	0	0	1605	28	1575	110	85	1490
DEC	63	77	182	679	11	111	4	382	0	0	1509	26	1485	170	130	1355
JAN	64	0	182	690	14	165	4	382	0	0	1500	26	1475	170	110	1365
FEB	64	0	182	568	50	165	5	382	0	0	1415	24	1390	290	95	1295
MAR	65	77	91	710	50	171	10	191	0	0	1364	24	1340	295	65	1275
APR	133	150	0	710	37	182	12	190	173	0	1588	27	1560	180	55	1505
MAY	133	147	91	710	37	198	13	382	144	1	1858	31	1825	90	90	1735
JUN	130	147	91	710	56	206	11	382	119	0	1853	31	1820	20	200	1620
JUL	128	147	182	710	66	198	13	380	92	0	1915	33	1880	0	230	1650

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Project Use Pumping

Expected Project Energy Use at Tracy Load Center (All values in GWh)

Month	Tracy	Federal Banks	Contra Costa	O'Neill	Federal	San Felipe	Dos Amigos	Other Uses	Total at Tracy		
					San Luis				Exp CVP PU	Expected On Peak	Expected Off Peak
AUG	65	0	2	2	0	4	27	38	140	80	60
SEP	59	0	2	4	0	3	12	14	95	50	40
OCT	24	0	3	0	0	2	5	5	40	20	15
NOV	27	0	3	5	14	2	5	5	60	25	35
DEC	56	0	3	13	60	2	5	8	145	45	100
JAN	49	0	2	11	48	1	6	9	125	45	85
FEB	32	0	2	6	25	1	8	9	85	35	50
MAR	20	0	2	4	3	1	8	5	45	25	20
APR	11	0	2	1	0	2	8	10	35	20	15
MAY	12	0	2	0	0	4	17	28	65	35	30
JUN	62	0	2	1	0	6	27	35	135	75	55
JUL	64	0	2	0	0	8	37	48	160	85	75
Total	482	0	28	46	150	36	163	216	1130	540	580

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Project Use Pumping

Expected Project Capacity Use at Tracy Load Center (All values in MW)

Month	Tracy		Federal Banks		Contra Costa		O'Neill		Federal San Luis		San Felipe		Dos Amigos		Other On/Off
	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off	
AUG	96	96	0	0	3	3	4	4	0	0	5	5	36	36	52
SEP	96	96	0	0	3	3	8	8	0	0	4	4	18	18	20
OCT	36	36	0	0	4	4	0	0	0	0	3	3	12	12	7
NOV	51	51	0	0	4	4	8	8	0	44	3	3	12	12	7
DEC	81	81	0	0	4	4	20	20	0	184	2	2	12	12	11
JAN	66	66	0	0	3	3	16	16	0	152	1	1	12	12	13
FEB	51	51	0	0	3	3	12	12	0	100	2	2	12	12	14
MAR	36	36	0	0	3	3	8	8	0	25	1	1	12	12	7
APR	18	18	0	0	3	3	4	4	0	0	2	2	12	12	14
MAY	18	18	0	0	3	3	0	0	0	0	6	6	24	24	38
JUN	96	96	0	0	2	2	4	4	0	0	8	8	42	42	48
JUL	96	96	0	0	2	2	0	0	0	0	11	11	54	54	65

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Energy Generation (All values in GWh)

Month	Trinity	JF Carr	Spring Creek	Shasta	Keswick	Folsom	Nimbus	New Melones	Federal San Luis	O'Neill	Total Losses	Total at Tracy		
												CVP	Proj Use	Net CVP
AUG	50	49	44	238	40	63	7	83	44	0	11	610	140	470
SEP	43	46	46	185	39	58	7	41	7	0	8	460	95	365
OCT	14	8	15	188	36	41	5	30	14	0	6	350	40	310
NOV	16	13	10	135	27	39	5	14	0	0	5	250	60	190
DEC	10	4	6	119	23	39	5	21	0	0	4	220	145	75
JAN	7	0	10	167	32	39	5	30	0	0	5	280	125	155
FEB	7	1	17	170	33	63	6	32	0	0	6	320	85	235
MAR	20	18	30	184	36	55	7	62	0	0	7	410	45	365
APR	12	1	8	150	27	69	9	80	12	0	6	360	35	325
MAY	96	61	62	111	27	84	10	94	44	1	10	580	65	515
JUN	90	57	51	193	39	66	8	78	38	0	11	610	135	475
JUL	58	45	41	246	47	79	9	52	49	0	11	620	160	460
Total	422	303	339	2087	405	696	84	617	208	1	90	5070	1130	3940

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Capacity Based on Estimated Gross Head (All values in MW)

Month	Trinity	JF Carr	Spring Creek	Shasta	Keswick	Folsom	Nimbus	New Melones	Federal San Luis	O'Neill	Tot. Cap. at Plant	Total Losses	Total Capacity at Tracy			
													CVP	Sch. Out	PU	Net CVP
AUG	65	147	182	710	18	197	10	383	161	0	1874	31	1845	60	195	1650
SEP	64	148	182	710	37	186	5	383	150	0	1866	31	1835	80	150	1685
OCT	63	150	182	551	33	119	7	383	145	0	1634	27	1605	115	60	1545
NOV	63	154	182	677	25	115	7	382	0	0	1605	28	1575	110	85	1490
DEC	63	77	182	679	11	111	4	382	0	0	1509	26	1485	170	130	1355
JAN	64	0	182	690	14	165	4	382	0	0	1500	26	1475	170	110	1365
FEB	64	0	182	568	50	165	5	382	0	0	1415	24	1390	290	95	1295
MAR	65	77	91	710	50	171	10	191	0	0	1364	24	1340	295	65	1275
APR	133	150	0	710	37	182	12	190	173	0	1588	27	1560	180	55	1505
MAY	133	147	91	710	37	198	13	382	144	1	1858	31	1825	90	90	1735
JUN	130	147	91	710	56	206	11	382	119	0	1853	31	1820	20	200	1620
JUL	128	147	182	710	66	198	13	380	92	0	1915	33	1880	0	230	1650

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Project Use Pumping

Project Energy Use at Tracy Load Center (All values in GWh)

Month	Tracy	Federal Banks	Contra Costa	O'Neill	Federal San Luis	San Felipe	Dos Amigos	Other Uses	Total at Tracy		
									CVP	On Peak	Off Peak
AUG	65	0	2	2	0	4	27	38	140	80	60
SEP	59	0	2	4	0	3	12	14	95	50	40
OCT	24	0	3	0	0	2	5	5	40	20	15
NOV	27	0	3	5	14	2	5	5	60	25	35
DEC	56	0	3	13	60	2	5	8	145	45	100
JAN	49	0	2	11	48	1	6	9	125	45	85
FEB	32	0	2	6	25	1	8	9	85	35	50
MAR	20	0	2	4	3	1	8	5	45	25	20
APR	11	0	2	1	0	2	8	10	35	20	15
MAY	12	0	2	0	0	4	17	28	65	35	30
JUN	62	0	2	1	0	6	27	35	135	75	55
JUL	64	0	2	0	0	8	37	48	160	85	75
Total	482	0	28	46	150	36	163	216	1130	540	580

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Project Use Pumping

Project Capacity Use at Tracy Load Center (All values in MW)

Month	Tracy		Federal Banks		Contra Costa		O'Neill		Federal San Luis		San Felipe		Dos Amigos		Other On/Off
	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off	
AUG	96	96	0	0	3	3	4	4	0	0	5	5	36	36	52
SEP	96	96	0	0	3	3	8	8	0	0	4	4	18	18	20
OCT	36	36	0	0	4	4	0	0	0	0	3	3	12	12	7
NOV	51	51	0	0	4	4	8	8	0	44	3	3	12	12	7
DEC	81	81	0	0	4	4	20	20	0	184	2	2	12	12	11
JAN	66	66	0	0	3	3	16	16	0	152	1	1	12	12	13
FEB	51	51	0	0	3	3	12	12	0	100	2	2	12	12	14
MAR	36	36	0	0	3	3	8	8	0	25	1	1	12	12	7
APR	18	18	0	0	3	3	4	4	0	0	2	2	12	12	14
MAY	18	18	0	0	3	3	0	0	0	0	6	6	24	24	38
JUN	96	96	0	0	2	2	4	4	0	0	8	8	42	42	48
JUL	96	96	0	0	2	2	0	0	0	0	11	11	54	54	65