

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 11/27/2017
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
NOV	18	16	10	137	27	31	4	28	0	0	271	5	105	160	110	190
DEC	10	4	6	121	23	48	6	24	0	0	242	4	120	120	50	160
JAN	7	0	10	169	32	46	6	24	0	0	294	5	65	220	110	290
FEB	7	1	17	172	33	62	6	32	2	0	332	6	35	290	160	370
MAR	20	18	30	186	36	55	7	62	0	0	414	7	55	350	190	450
APR	25	19	8	151	27	65	8	80	12	0	395	7	35	350	200	450
MAY	48	12	13	195	34	80	9	95	45	1	532	9	60	460	310	560
JUN	52	57	51	193	39	71	8	78	56	0	605	10	110	490	370	560
JUL	59	45	41	246	47	64	7	52	56	0	617	11	160	450	320	520
AUG	44	48	44	238	47	61	7	45	12	0	546	10	140	400	290	460
SEP	41	46	46	185	39	57	7	40	0	0	461	8	115	340	250	390
OCT	17	13	20	183	36	36	5	34	6	0	350	6	65	280	180	340
Total	348	279	296	2176	420	676	80	594	189	1	5059	88	1065	3910	2540	4740

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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
NOV	63	156	182	550	37	115	6	383	0	0	1492	26	1465	255	115	1350
DEC	63	77	182	691	11	114	4	382	0	0	1524	26	1500	185	110	1390
JAN	64	0	182	421	43	166	4	382	0	0	1262	22	1240	365	80	1160
FEB	64	0	182	568	50	165	5	382	192	0	1608	26	1580	340	65	1515
MAR	65	77	91	568	50	170	10	191	0	0	1222	22	1200	375	70	1130
APR	66	75	0	710	37	183	12	190	183	0	1456	24	1430	260	55	1375
MAY	67	147	0	710	46	200	13	382	154	1	1720	29	1690	190	85	1605
JUN	66	147	91	710	56	208	12	383	131	1	1804	30	1775	125	160	1615
JUL	129	147	182	710	66	202	10	380	111	0	1937	33	1905	0	225	1680
AUG	127	147	182	710	66	191	10	377	100	0	1909	33	1875	0	200	1675
SEP	124	148	182	567	56	180	5	374	0	0	1636	28	1605	95	160	1445
OCT	123	150	182	413	50	115	7	370	98	0	1507	25	1480	185	110	1370

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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 Luis	San Felipe	Dos Amigos	Other Uses	Total at Tracy		
									Exp CVP PU	Expected On Peak	Expected Off Peak
NOV	43	0	3	9	33	2	7	9	105	40	65
DEC	48	0	3	10	46	2	7	7	120	40	80
JAN	29	0	2	6	18	1	6	5	65	25	40
FEB	19	0	2	3	0	1	8	4	35	20	15
MAR	24	0	2	5	10	1	8	6	55	25	30
APR	11	0	2	1	0	2	8	10	35	20	15
MAY	12	0	2	0	0	4	17	28	60	35	25
JUN	48	0	2	0	0	5	27	29	110	65	45
JUL	64	0	2	0	0	7	37	48	160	85	75
AUG	64	0	2	6	0	7	21	38	140	80	60
SEP	62	0	2	7	12	5	10	17	115	55	60
OCT	38	0	3	2	0	4	10	9	65	40	25
Total	461	0	28	49	119	39	165	210	1065	530	535

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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	
NOV	66	66	0	0	4	4	16	16	0	119	2	2	12	12	12
DEC	66	66	0	0	4	4	16	16	0	152	2	2	12	12	9
JAN	51	51	0	0	3	3	8	8	0	74	1	1	12	12	7
FEB	36	36	0	0	3	3	8	8	0	0	1	1	12	12	6
MAR	36	36	0	0	3	3	8	8	0	48	1	1	12	12	9
APR	18	18	0	0	3	3	4	4	0	0	2	2	12	12	13
MAY	18	18	0	0	3	3	0	0	0	0	5	5	24	24	37
JUN	66	66	0	0	2	2	0	0	0	0	7	7	42	42	40
JUL	96	96	0	0	2	2	0	0	0	0	10	10	54	54	64
AUG	96	96	0	0	3	3	8	8	0	0	9	9	30	30	52
SEP	96	96	0	0	3	3	12	12	0	51	6	6	18	18	24
OCT	66	66	0	0	4	4	4	4	0	0	5	5	18	18	12

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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
NOV	18	16	10	137	27	31	4	28	0	0	5	270	105	165
DEC	10	4	6	121	23	48	6	24	0	0	4	240	120	120
JAN	7	0	10	169	32	46	6	24	0	0	5	290	65	225
FEB	7	1	17	172	33	62	6	32	2	0	6	330	35	295
MAR	20	18	30	186	36	55	7	62	0	0	7	410	55	355
APR	25	19	8	151	27	65	8	80	12	0	7	390	35	355
MAY	48	12	13	195	34	80	9	95	45	1	9	520	60	460
JUN	52	57	51	193	39	71	8	78	56	0	10	600	110	490
JUL	59	45	41	246	47	64	7	52	56	0	11	610	160	450
AUG	44	48	44	238	47	61	7	45	12	0	10	540	140	400
SEP	41	46	46	185	39	57	7	40	0	0	8	450	115	335
OCT	17	13	20	183	36	36	5	34	6	0	6	340	65	275
Total	347	280	295	2177	419	677	82	593	190	1	88	4990	1065	3925

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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
NOV	63	156	182	550	37	115	6	383	0	0	1492	26	1465	255	115	1350
DEC	63	77	182	691	11	114	4	382	0	0	1524	26	1500	185	110	1390
JAN	64	0	182	421	43	166	4	382	0	0	1262	22	1240	365	80	1160
FEB	64	0	182	568	50	165	5	382	192	0	1608	26	1580	340	65	1515
MAR	65	77	91	568	50	170	10	191	0	0	1222	22	1200	375	70	1130
APR	66	75	0	710	37	183	12	190	183	0	1456	24	1430	260	55	1375
MAY	67	147	0	710	46	200	13	382	154	1	1720	29	1690	190	85	1605
JUN	66	147	91	710	56	208	12	383	131	1	1804	30	1775	125	160	1615
JUL	129	147	182	710	66	202	10	380	111	0	1937	33	1905	0	225	1680
AUG	127	147	182	710	66	191	10	377	100	0	1909	33	1875	0	200	1675
SEP	124	148	182	567	56	180	5	374	0	0	1636	28	1605	95	160	1445
OCT	123	150	182	413	50	115	7	370	98	0	1507	25	1480	185	110	1370

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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
NOV	43	0	3	9	33	2	7	9	105	40	65
DEC	48	0	3	10	46	2	7	7	120	40	80
JAN	29	0	2	6	18	1	6	5	65	25	40
FEB	19	0	2	3	0	1	8	4	35	20	15
MAR	24	0	2	5	10	1	8	6	55	25	30
APR	11	0	2	1	0	2	8	10	35	20	15
MAY	12	0	2	0	0	4	17	28	60	35	25
JUN	48	0	2	0	0	5	27	29	110	65	45
JUL	64	0	2	0	0	7	37	48	160	85	75
AUG	64	0	2	6	0	7	21	38	140	80	60
SEP	62	0	2	7	12	5	10	17	115	55	60
OCT	38	0	3	2	0	4	10	9	65	40	25
Total	461	0	28	49	119	39	165	210	1065	530	535

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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	
NOV	66	66	0	0	4	4	16	16	0	119	2	2	12	12	12
DEC	66	66	0	0	4	4	16	16	0	152	2	2	12	12	9
JAN	51	51	0	0	3	3	8	8	0	74	1	1	12	12	7
FEB	36	36	0	0	3	3	8	8	0	0	1	1	12	12	6
MAR	36	36	0	0	3	3	8	8	0	48	1	1	12	12	9
APR	18	18	0	0	3	3	4	4	0	0	2	2	12	12	13
MAY	18	18	0	0	3	3	0	0	0	0	5	5	24	24	37
JUN	66	66	0	0	2	2	0	0	0	0	7	7	42	42	40
JUL	96	96	0	0	2	2	0	0	0	0	10	10	54	54	64
AUG	96	96	0	0	3	3	8	8	0	0	9	9	30	30	52
SEP	96	96	0	0	3	3	12	12	0	51	6	6	18	18	24
OCT	66	66	0	0	4	4	4	4	0	0	5	5	18	18	12