

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 5/22/2018
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
MAY	46	17	13	218	38	37	4	99	47	1	520	9	85	430	320	490
JUN	44	36	31	243	45	54	6	82	45	0	586	10	95	480	420	520
JUL	40	43	38	301	57	64	7	55	32	0	637	11	160	470	400	500
AUG	48	43	38	229	47	46	6	47	15	0	519	9	145	370	260	430
SEP	43	39	38	156	35	33	4	37	0	0	385	7	125	250	180	300
OCT	16	13	20	126	28	33	4	35	0	0	275	5	140	130	80	160
NOV	14	13	10	95	20	31	4	8	0	0	195	4	155	40	0	80
DEC	9	4	6	73	15	31	4	7	0	0	149	3	180	-30	0	0
JAN	6	0	10	72	15	32	4	8	0	0	147	3	190	-50	0	-10
FEB	6	1	17	124	25	60	7	12	0	0	252	5	105	140	40	200
MAR	19	18	30	159	32	57	7	61	0	0	383	7	65	310	160	400
APR	23	19	8	176	31	82	10	79	24	0	452	8	35	410	230	520
Total	314	246	259	1972	388	560	67	530	163	1	4500	81	1480	2950	2090	3590

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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
MAY	65	148	0	568	53	205	6	383	145	1	1573	26	1545	255	115	1430
JUN	64	147	182	710	65	206	9	382	121	0	1888	32	1855	55	145	1710
JUL	126	147	182	710	82	196	10	381	103	0	1938	33	1905	0	235	1670
AUG	124	147	182	677	66	185	8	377	99	0	1865	32	1835	0	225	1610
SEP	122	148	182	520	50	59	3	374	0	0	1458	25	1435	160	175	1260
OCT	120	150	182	382	37	58	6	372	0	0	1307	23	1285	260	150	1135
NOV	119	154	182	508	29	113	6	371	0	0	1482	26	1455	170	170	1285
DEC	120	154	182	516	21	112	3	372	0	0	1481	26	1455	150	190	1265
JAN	60	154	182	402	21	169	3	374	0	0	1366	24	1345	210	225	1120
FEB	61	154	182	565	38	171	5	376	0	0	1553	27	1525	175	110	1415
MAR	62	154	182	568	43	177	10	189	0	0	1385	24	1360	240	90	1270
APR	63	150	182	710	43	187	14	188	178	0	1715	29	1685	100	55	1630

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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
MAY	25	0	2	0	0	3	16	37	85	45	35
JUN	43	0	2	0	0	4	23	25	95	55	40
JUL	65	7	2	2	0	5	30	48	160	90	70
AUG	65	7	2	4	0	5	23	41	145	90	60
SEP	62	7	2	6	17	3	8	19	125	60	65
OCT	63	0	3	9	38	2	3	19	140	60	80
NOV	58	0	3	13	62	1	3	13	155	55	95
DEC	62	0	3	15	87	1	3	10	180	70	110
JAN	61	0	2	15	90	1	5	14	190	80	105
FEB	42	0	2	8	38	1	6	12	105	40	70
MAR	35	0	2	5	5	1	9	7	65	35	30
APR	11	0	2	0	0	2	11	11	35	20	15
Total	593	22	28	76	337	29	141	256	1480	700	775

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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	
MAY	36	36	0	0	3	3	0	0	0	0	4	4	24	24	50
JUN	66	66	0	0	2	2	0	0	0	0	6	6	36	36	35
JUL	96	96	20	0	2	2	4	4	0	0	7	7	42	42	65
AUG	96	96	20	0	3	3	8	8	0	0	7	7	36	36	55
SEP	96	96	20	0	3	3	12	12	0	69	4	4	12	12	26
OCT	96	96	0	0	4	4	16	16	0	135	3	3	6	6	25
NOV	96	96	0	0	4	4	20	20	22	177	2	2	6	6	18
DEC	96	96	0	0	4	4	20	20	50	200	2	2	6	6	14
JAN	96	96	0	0	3	3	20	20	72	193	1	1	12	12	19
FEB	66	66	0	0	3	3	12	12	0	143	1	1	12	12	18
MAR	51	51	0	0	3	3	8	8	0	24	2	2	18	18	10
APR	18	18	0	0	3	3	0	0	0	0	3	3	18	18	15

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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
MAY	46	17	13	218	38	37	4	99	47	1	9	510	85	425
JUN	44	36	31	243	45	54	6	82	45	0	10	580	95	485
JUL	40	43	38	301	57	64	7	55	32	0	11	630	160	470
AUG	48	43	38	229	47	46	6	47	15	0	9	510	145	365
SEP	43	39	38	156	35	33	4	37	0	0	7	380	125	255
OCT	16	13	20	126	28	33	4	35	0	0	5	270	140	130
NOV	14	13	10	95	20	31	4	8	0	0	3	190	155	35
DEC	9	4	6	73	15	31	4	7	0	0	3	150	180	-30
JAN	6	0	10	72	15	32	4	8	0	0	3	140	190	-50
FEB	6	1	17	124	25	60	7	12	0	0	5	250	105	145
MAR	19	18	30	159	32	57	7	61	0	0	7	380	65	315
APR	23	19	8	176	31	82	10	79	24	0	8	440	35	405
Total	313	246	259	1971	388	559	69	529	163	1	78	4430	1480	2950

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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
MAY	65	148	0	568	53	205	6	383	145	1	1573	26	1545	255	115	1430
JUN	64	147	182	710	65	206	9	382	121	0	1888	32	1855	55	145	1710
JUL	126	147	182	710	82	196	10	381	103	0	1938	33	1905	0	235	1670
AUG	124	147	182	677	66	185	8	377	99	0	1865	32	1835	0	225	1610
SEP	122	148	182	520	50	59	3	374	0	0	1458	25	1435	160	175	1260
OCT	120	150	182	382	37	58	6	372	0	0	1307	23	1285	260	150	1135
NOV	119	154	182	508	29	113	6	371	0	0	1482	26	1455	170	170	1285
DEC	120	154	182	516	21	112	3	372	0	0	1481	26	1455	150	190	1265
JAN	60	154	182	402	21	169	3	374	0	0	1366	24	1345	210	225	1120
FEB	61	154	182	565	38	171	5	376	0	0	1553	27	1525	175	110	1415
MAR	62	154	182	568	43	177	10	189	0	0	1385	24	1360	240	90	1270
APR	63	150	182	710	43	187	14	188	178	0	1715	29	1685	100	55	1630

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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
MAY	25	0	2	0	0	3	16	37	85	45	35
JUN	43	0	2	0	0	4	23	25	95	55	40
JUL	65	7	2	2	0	5	30	48	160	90	70
AUG	65	7	2	4	0	5	23	41	145	90	60
SEP	62	7	2	6	17	3	8	19	125	60	65
OCT	63	0	3	9	38	2	3	19	140	60	80
NOV	58	0	3	13	62	1	3	13	155	55	95
DEC	62	0	3	15	87	1	3	10	180	70	110
JAN	61	0	2	15	90	1	5	14	190	80	105
FEB	42	0	2	8	38	1	6	12	105	40	70
MAR	35	0	2	5	5	1	9	7	65	35	30
APR	11	0	2	0	0	2	11	11	35	20	15
Total	593	22	28	76	337	29	141	256	1480	700	775

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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	
MAY	36	36	0	0	3	3	0	0	0	0	4	4	24	24	50
JUN	66	66	0	0	2	2	0	0	0	0	6	6	36	36	35
JUL	96	96	20	0	2	2	4	4	0	0	7	7	42	42	65
AUG	96	96	20	0	3	3	8	8	0	0	7	7	36	36	55
SEP	96	96	20	0	3	3	12	12	0	69	4	4	12	12	26
OCT	96	96	0	0	4	4	16	16	0	135	3	3	6	6	25
NOV	96	96	0	0	4	4	20	20	22	177	2	2	6	6	18
DEC	96	96	0	0	4	4	20	20	50	200	2	2	6	6	14
JAN	96	96	0	0	3	3	20	20	72	193	1	1	12	12	19
FEB	66	66	0	0	3	3	12	12	0	143	1	1	12	12	18
MAR	51	51	0	0	3	3	8	8	0	24	2	2	18	18	10
APR	18	18	0	0	3	3	0	0	0	0	3	3	18	18	15