

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 11/21/2016
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	14	17	10	109	22	18	3	6	0	0	199	4	120	80	40	100
DEC	5	0	12	111	23	18	3	5	0	0	177	3	135	40	0	70
JAN	5	0	12	126	25	19	3	5	0	0	195	4	120	70	0	120
FEB	7	3	20	76	17	43	6	8	0	0	180	3	65	110	40	150
MAR	6	1	14	147	27	57	7	15	0	0	274	5	70	200	90	260
APR	20	16	5	180	31	82	10	39	22	0	405	7	30	370	210	460
MAY	51	2	3	203	34	89	11	49	39	4	485	8	50	430	280	510
JUN	50	27	26	252	45	71	8	47	26	0	552	10	90	450	340	520
JUL	42	34	31	277	51	72	8	45	13	0	573	10	135	430	320	500
AUG	35	35	31	218	42	53	6	39	2	0	461	8	130	320	230	380
SEP	33	31	31	193	39	41	5	32	0	0	405	7	120	280	200	330
OCT	18	21	15	135	27	25	3	19	0	0	263	5	110	150	70	190
Total	286	187	210	2027	383	588	73	309	102	4	4169	74	1175	2930	1820	3590

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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
NOV	53	75	91	391	32	100	2	179	0	0	923	16	905	395	130	775
DEC	54	150	91	394	32	102	2	183	0	0	1008	18	990	315	125	865
JAN	55	154	182	538	34	160	2	189	0	0	1314	23	1290	185	105	1185
FEB	56	154	182	566	26	169	4	198	0	0	1355	24	1330	185	85	1245
MAR	58	154	182	568	37	177	10	104	0	0	1292	23	1270	270	85	1185
APR	60	150	182	568	43	187	14	109	137	1	1451	25	1425	130	50	1375
MAY	61	147	182	568	46	201	14	233	114	5	1572	27	1545	185	75	1470
JUN	60	147	182	568	65	207	12	246	80	0	1568	27	1540	80	130	1410
JUL	117	147	182	710	72	199	12	242	43	0	1725	30	1695	0	195	1500
AUG	57	147	182	710	59	188	9	232	0	0	1584	28	1555	30	180	1375
SEP	55	148	182	686	37	182	7	223	0	0	1520	27	1495	70	175	1320
OCT	53	149	182	669	12	119	2	219	0	0	1405	25	1380	105	125	1255

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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	54	0	3	12	38	2	3	10	120	45	75
DEC	55	0	3	13	51	2	3	7	135	45	85
JAN	46	0	2	11	46	1	4	9	120	40	80
FEB	31	0	2	5	15	1	5	7	65	30	35
MAR	34	0	2	5	14	1	5	8	70	30	35
APR	11	0	2	0	0	2	7	9	30	15	15
MAY	12	0	2	0	0	4	10	22	50	30	20
JUN	44	0	2	0	0	5	16	24	90	50	40
JUL	65	0	2	2	0	7	20	41	135	75	65
AUG	67	0	2	4	0	6	13	36	130	75	55
SEP	65	6	2	6	13	5	6	18	120	65	60
OCT	57	0	3	8	21	3	3	15	110	50	60
Total	541	6	28	65	198	39	94	207	1175	550	625

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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	81	81	0	0	4	4	20	20	0	125	3	3	6	6	14
DEC	81	81	0	0	4	4	20	20	0	160	2	2	6	6	10
JAN	66	66	0	0	3	3	16	16	0	133	1	1	6	6	12
FEB	51	51	0	0	3	3	8	8	0	66	1	1	12	12	11
MAR	51	51	0	0	3	3	8	8	0	47	2	2	12	12	11
APR	18	18	0	0	3	3	0	0	0	0	3	3	12	12	12
MAY	18	18	0	0	3	3	0	0	0	0	5	5	18	18	30
JUN	66	66	0	0	2	2	0	0	0	0	7	7	24	24	33
JUL	96	96	0	0	2	2	4	4	0	0	9	9	30	30	55
AUG	96	96	0	0	3	3	8	8	0	0	9	9	18	18	48
SEP	96	96	20	0	3	3	12	12	0	42	6	6	12	12	26
OCT	81	81	0	0	4	4	12	12	0	82	4	4	6	6	20

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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	14	17	10	109	22	18	3	6	0	0	4	200	120	80
DEC	5	0	12	111	23	18	3	5	0	0	3	170	135	35
JAN	5	0	12	126	25	19	3	5	0	0	4	190	120	70
FEB	7	3	20	76	17	43	6	8	0	0	3	170	65	105
MAR	6	1	14	147	27	57	7	15	0	0	5	270	70	200
APR	20	16	5	180	31	82	10	39	22	0	7	400	30	370
MAY	51	2	3	203	34	89	11	49	39	4	8	480	50	430
JUN	50	27	26	252	45	71	8	47	26	0	10	540	90	450
JUL	42	34	31	277	51	72	8	45	13	0	10	560	135	425
AUG	35	35	31	218	42	53	6	39	2	0	8	450	130	320
SEP	33	31	31	193	39	41	5	32	0	0	7	400	120	280
OCT	18	21	15	135	27	25	3	19	0	0	5	260	110	150
Total	286	186	208	2025	385	588	73	310	103	4	74	4090	1175	2915

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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	53	75	91	391	32	100	2	179	0	0	923	16	905	395	130	775
DEC	54	150	91	394	32	102	2	183	0	0	1008	18	990	315	125	865
JAN	55	154	182	538	34	160	2	189	0	0	1314	23	1290	185	105	1185
FEB	56	154	182	566	26	169	4	198	0	0	1355	24	1330	185	85	1245
MAR	58	154	182	568	37	177	10	104	0	0	1292	23	1270	270	85	1185
APR	60	150	182	568	43	187	14	109	137	1	1451	25	1425	130	50	1375
MAY	61	147	182	568	46	201	14	233	114	5	1572	27	1545	185	75	1470
JUN	60	147	182	568	65	207	12	246	80	0	1568	27	1540	80	130	1410
JUL	117	147	182	710	72	199	12	242	43	0	1725	30	1695	0	195	1500
AUG	57	147	182	710	59	188	9	232	0	0	1584	28	1555	30	180	1375
SEP	55	148	182	686	37	182	7	223	0	0	1520	27	1495	70	175	1320
OCT	53	149	182	669	12	119	2	219	0	0	1405	25	1380	105	125	1255

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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	54	0	3	12	38	2	3	10	120	45	75
DEC	55	0	3	13	51	2	3	7	135	45	85
JAN	46	0	2	11	46	1	4	9	120	40	80
FEB	31	0	2	5	15	1	5	7	65	30	35
MAR	34	0	2	5	14	1	5	8	70	30	35
APR	11	0	2	0	0	2	7	9	30	15	15
MAY	12	0	2	0	0	4	10	22	50	30	20
JUN	44	0	2	0	0	5	16	24	90	50	40
JUL	65	0	2	2	0	7	20	41	135	75	65
AUG	67	0	2	4	0	6	13	36	130	75	55
SEP	65	6	2	6	13	5	6	18	120	65	60
OCT	57	0	3	8	21	3	3	15	110	50	60
Total	541	6	28	65	198	39	94	207	1175	550	625

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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	81	81	0	0	4	4	20	20	0	125	3	3	6	6	14
DEC	81	81	0	0	4	4	20	20	0	160	2	2	6	6	10
JAN	66	66	0	0	3	3	16	16	0	133	1	1	6	6	12
FEB	51	51	0	0	3	3	8	8	0	66	1	1	12	12	11
MAR	51	51	0	0	3	3	8	8	0	47	2	2	12	12	11
APR	18	18	0	0	3	3	0	0	0	0	3	3	12	12	12
MAY	18	18	0	0	3	3	0	0	0	0	5	5	18	18	30
JUN	66	66	0	0	2	2	0	0	0	0	7	7	24	24	33
JUL	96	96	0	0	2	2	4	4	0	0	9	9	30	30	55
AUG	96	96	0	0	3	3	8	8	0	0	9	9	18	18	48
SEP	96	96	20	0	3	3	12	12	0	42	6	6	12	12	26
OCT	81	81	0	0	4	4	12	12	0	82	4	4	6	6	20