

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 90 Pct Forecast -B2, Dated 8/28/2023
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	29	20	15	247	45	70	8	69	35	0	538	9	130	400	290	460
SEP	28	20	15	160	31	48	6	32	0	0	340	6	100	230	170	270
OCT	7	0	11	154	30	34	4	31	0	0	271	5	120	150	90	180
NOV	7	3	0	120	22	31	4	7	0	0	194	3	125	70	0	110
DEC	6	0	0	123	23	31	4	7	0	0	194	3	145	50	0	90
JAN	7	2	0	124	23	26	4	8	0	0	194	3	55	140	60	180
FEB	5	0	0	112	21	20	3	12	3	0	176	3	55	120	50	160
MAR	7	1	0	106	19	23	3	8	0	0	167	3	45	120	50	160
APR	20	15	0	154	28	25	3	81	18	0	344	6	30	310	170	390
MAY	62	6	0	214	38	21	3	81	42	3	470	8	50	410	270	500
JUN	19	6	0	240	43	59	8	58	60	6	499	8	40	450	350	510
JUL	21	20	15	250	49	31	4	50	55	6	501	8	55	440	340	500
Total	218	93	56	2004	372	419	54	444	213	15	3888	65	950	2890	1840	3510

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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	60	147	91	710	62	128	12	383	161	0	1754	29	1725	120	195	1530
SEP	58	147	91	704	43	122	9	190	0	0	1366	24	1340	395	150	1190
OCT	57	150	91	688	40	118	6	190	0	0	1340	24	1315	335	175	1140
NOV	115	0	91	679	32	113	6	189	0	0	1225	22	1205	450	155	1050
DEC	115	0	91	677	32	109	6	190	0	0	1219	21	1195	430	155	1040
JAN	115	0	91	678	21	157	3	190	0	0	1255	22	1235	395	65	1170
FEB	116	77	182	683	21	155	2	190	190	0	1617	27	1590	205	90	1500
MAR	118	154	182	698	18	161	5	190	0	0	1526	27	1500	135	55	1445
APR	120	150	182	710	26	171	5	189	183	0	1735	29	1705	60	50	1655
MAY	120	147	182	707	35	180	4	373	154	4	1906	32	1875	15	90	1785
JUN	119	147	182	683	62	178	11	365	125	8	1881	32	1850	0	60	1790
JUL	118	74	91	647	69	167	6	355	93	9	1630	28	1600	105	100	1500

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Forecast of CVP Generation
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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
AUG	62	0	2	3	0	2	25	36	130	75	55
SEP	59	0	2	6	8	2	10	16	100	50	50
OCT	50	13	2	6	17	2	12	16	120	65	55
NOV	44	13	3	8	32	1	12	10	125	55	65
DEC	48	13	3	10	52	1	12	8	145	60	90
JAN	26	0	2	5	8	1	8	4	55	25	30
FEB	30	0	2	4	0	1	10	6	55	30	25
MAR	24	0	2	2	9	1	3	5	45	20	25
APR	13	0	2	0	0	2	6	9	30	20	15
MAY	15	0	2	0	0	2	10	23	50	30	25
JUN	10	0	2	0	0	3	15	10	40	20	15
JUL	12	3	2	0	0	4	18	17	55	30	25
Total	390	43	27	43	126	23	141	161	950	480	475

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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	8	8	0	0	3	3	36	36	49
SEP	96	96	0	0	3	3	8	8	0	25	3	3	18	18	22
OCT	81	81	40	0	3	3	8	8	0	75	3	3	18	18	22
NOV	66	66	40	0	4	4	12	12	0	125	2	2	18	18	14
DEC	66	66	40	0	4	4	16	16	0	174	2	2	18	18	11
JAN	36	36	0	0	3	3	8	8	0	49	1	1	12	12	5
FEB	51	51	0	0	3	3	8	8	0	0	1	1	18	18	9
MAR	36	36	0	0	3	3	4	4	0	48	1	1	6	6	7
APR	18	18	0	0	3	3	0	0	0	0	2	2	12	12	13
MAY	36	36	0	0	3	3	0	0	0	0	3	3	18	18	31
JUN	18	18	0	0	2	2	0	0	0	0	4	4	24	24	14
JUL	18	18	20	0	2	2	0	0	0	0	5	5	30	30	22

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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	29	20	15	247	45	70	8	69	35	0	9	530	130	400
SEP	28	20	15	160	31	48	6	32	0	0	6	330	100	230
OCT	7	0	11	154	30	34	4	31	0	0	5	270	120	150
NOV	7	3	0	120	22	31	4	7	0	0	4	190	125	65
DEC	6	0	0	123	23	31	4	7	0	0	4	190	145	45
JAN	7	2	0	124	23	26	4	8	0	0	3	190	55	135
FEB	5	0	0	112	21	20	3	12	3	0	3	170	55	115
MAR	7	1	0	106	19	23	3	8	0	0	3	160	45	115
APR	20	15	0	154	28	25	3	81	18	0	6	340	30	310
MAY	62	6	0	214	38	21	3	81	42	3	8	460	50	410
JUN	19	6	0	240	43	59	8	58	60	6	8	490	40	450
JUL	21	20	15	250	49	31	4	50	55	6	8	490	55	435
Total	220	95	58	2002	372	419	55	444	214	15	67	3810	950	2860

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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	60	147	91	710	62	128	12	383	161	0	1754	29	1725	120	195	1530
SEP	58	147	91	704	43	122	9	190	0	0	1366	24	1340	395	150	1190
OCT	57	150	91	688	40	118	6	190	0	0	1340	24	1315	335	175	1140
NOV	115	0	91	679	32	113	6	189	0	0	1225	22	1205	450	155	1050
DEC	115	0	91	677	32	109	6	190	0	0	1219	21	1195	430	155	1040
JAN	115	0	91	678	21	157	3	190	0	0	1255	22	1235	395	65	1170
FEB	116	77	182	683	21	155	2	190	190	0	1617	27	1590	205	90	1500
MAR	118	154	182	698	18	161	5	190	0	0	1526	27	1500	135	55	1445
APR	120	150	182	710	26	171	5	189	183	0	1735	29	1705	60	50	1655
MAY	120	147	182	707	35	180	4	373	154	4	1906	32	1875	15	90	1785
JUN	119	147	182	683	62	178	11	365	125	8	1881	32	1850	0	60	1790
JUL	118	74	91	647	69	167	6	355	93	9	1630	28	1600	105	100	1500

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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	62	0	2	3	0	2	25	36	130	75	55
SEP	59	0	2	6	8	2	10	16	100	50	50
OCT	50	13	2	6	17	2	12	16	120	65	55
NOV	44	13	3	8	32	1	12	10	125	55	65
DEC	48	13	3	10	52	1	12	8	145	60	90
JAN	26	0	2	5	8	1	8	4	55	25	30
FEB	30	0	2	4	0	1	10	6	55	30	25
MAR	24	0	2	2	9	1	3	5	45	20	25
APR	13	0	2	0	0	2	6	9	30	20	15
MAY	15	0	2	0	0	2	10	23	50	30	25
JUN	10	0	2	0	0	3	15	10	40	20	15
JUL	12	3	2	0	0	4	18	17	55	30	25
Total	390	43	27	43	126	23	141	161	950	480	475

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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	8	8	0	0	3	3	36	36	49
SEP	96	96	0	0	3	3	8	8	0	25	3	3	18	18	22
OCT	81	81	40	0	3	3	8	8	0	75	3	3	18	18	22
NOV	66	66	40	0	4	4	12	12	0	125	2	2	18	18	14
DEC	66	66	40	0	4	4	16	16	0	174	2	2	18	18	11
JAN	36	36	0	0	3	3	8	8	0	49	1	1	12	12	5
FEB	51	51	0	0	3	3	8	8	0	0	1	1	18	18	9
MAR	36	36	0	0	3	3	4	4	0	48	1	1	6	6	7
APR	18	18	0	0	3	3	0	0	0	0	2	2	12	12	13
MAY	36	36	0	0	3	3	0	0	0	0	3	3	18	18	31
JUN	18	18	0	0	2	2	0	0	0	0	4	4	24	24	14
JUL	18	18	20	0	2	2	0	0	0	0	5	5	30	30	22