APPENDIX F

RECORDS OF MINERAL ANALYSES OF SURFACE AND GROUND WATER SUPPLIES IN SAN LUIS OBISPO COUNTY AND VICINITY

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RECORDS OF MINERAL ANALYSES
OF SURFACE AND GROUND WATER SUPPLIES
IN SAN LUIS OBISPO COUNTY AND VICINITY

TABLE F-1

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date / Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million									F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na
						Ca^{c}	Mg^{c}	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3					
UPPER SALINAS UNIT																			
Atascadero Creek	At State Hwy. Bridge 49-49, U.S. Rt. #466 SLO-24	2-13-54 1705	65.4	233	8.15	26 / 1.3	10 / 0.85	9 / 0.40	1 / 0.03	0 / 0	110 / 1.8	25 / 0.53	2 / 0.05	4 / 0.07	0.2	0.00	181	107	16
Cholame Creek	At County Bridge, 1 Mi. So. of Parkfield M-3	4- 1-54 0930	2+	957	8.3	49 / 2.45	56 / 4.65	116 / 5.06	3 / 0.07	0 / 0	369 / 6.05	184 / 3.83	83 / 2.35	2 / 0.04	0.3	0.92	683	355	41
Cholame Creek	At County Bridge Above Cholame SLO-23	10-31-53 1035	0.5	2,810	8.3	84 / 4.2	120 / 9.90	380 / 16.50	11 / 0.28	0 / 0	464 / 7.6	588 / 12.22	393 / 11.1	2 / 0.03	0.8	3.10	1,910	705	53
Cholame Creek	At State Hwy. #1 Bridge, 3.4 Mi. NE of Shandon SLO-21	2-14-54 1230	100	972	7.9	49 / 2.45	30 / 2.45	115 / 5.00	8 / 0.21	0 / 0	214 / 3.5	124 / 2.58	124 / 3.5	7 / 0.12	0.3	0.60	645	245	50
Commatti Canyon Creek	At Creston-Simmler Rd. Bridge SLO-18	3-21-54 1350	1[d]	410	7.8	31 / 1.57	16 / 1.28	31 / 1.35	3 / 0.07	0 / 0	148 / 2.43	40 / 0.83	34 / 0.96	5 / 0.08	0.3	0.05	235	142	32
Estrella Creek	At Hillman Ranch Crossing, 2 Mi. Below River Grove SLO-27	10-31-54 1210	5[d]	1,327	8.2	84 / 4.2	68 / 5.65	242 / 10.5	9 / 0.23	0 / 0	570 / 9.35	296 / 6.16	156 / 4.4	2 / 0.03	0.7	0.95	1,171	493	51
Estrella Creek	At Estrella County Bridge SLO-3	10-31-53 1140	1-	1,350	8.25	74 / 3.7	59 / 4.9	163 / 7.10	9 / 0.23	0 / 0	393 / 6.45	217 / 4.52	138 / 3.9	3 / 0.05	0.7	0.53	902	430	45

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date / Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca[c]	Mg[c]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na
Estrella Creek	At State Hwy. #41 Bridge at River Grove 3-30	10-31-53 1230	3[d]	1,490	8.2	70 / 3.5	54 / 4.45	196 / 8.50	9 / 0.23	0 / 0	570 / 9.35	181 / 3.78	117 / 3.3	2 / 0.03	0.7	0.84	832	397	51
Fernandez Creek	At Creston-Simmler Rd. Bridge SLO-17	3-21-54 1345	8[d]	354	7.8	30 / 1.48	14 / 1.11	29 / 1.24	3 / 0.07	0 / 0	137 / 2.25	44 / 0.90	28 / 0.78	Tr. / Tr.	0.3	0.0	223	130	32
Huerhuero Creek	At county bridge NW of Genesco School SLO-2	3-23-54 1430	1.5[d]	944	8.25	72 / 3.6	39 / 3.25	108 / 4.68	3 / 0.08	0 / 0	323 / 5.3	104 / 2.16	138 / 3.9	9 / 0.14	0.4	0.15	667	342	40
East Br. Huerhuero Creek	At Calf Canyon Rd. Bridge SLO-16	3-21-54[f] 1310	5[d]	153	7.5	4 / 0.22	9 / 0.75	14 / 0.59	2 / 0.05	0 / 0	66 / 1.09	0 / 0	18 / 0.51	2 / 0.04	0.1	0.10	83	48	37
Middle Br. Huerhuero Creek	At Calf Canyon Rd. Bridge SLO-15	3-21-54[f] 1300	2[d]	300	7.9	27 / 1.35	9 / 0.75	24 / 1.04	2 / 0.06	0 / 0	114 / 1.87	18 / 0.38	30 / 0.84	4 / 0.06	0.1	0.10	170	105	32
Nacimiento River	At S.L.O.-Monterey County Line M-1	2-15-54 1130	562	175	7.9	16 / 0.8	9 / 0.75	5 / 0.21	0.6 / 0.015	0 / 0	85 / 1.4	9 / 0.18	4 / 0.1	0.9 / 0.014	0.1	0.00	104	78	12
Nacimiento River	At staff gage S.L.O.-Monterey County Line M-1	6-23-54 1200	2.5	380	8.4	41 / 2.63	16 / 1.33	16 / 0.68	1 / 0.03	2 / 0.08	173 / 2.84	34 / 0.70	12 / 0.34	11 / 0.18	0.0	0.10	215	168	17
Nacimiento River	Near San Miguel 3-33	2-14-54 1550	5,000	146	7.35	17 / 0.85	6 / 0.52	4 / 0.18	1 / 0.03	0 / 0	70 / 1.15	16 / 0.33	2 / 0.05	3 / 0.05	0.2	0.00	135	68	11

TABLE F-1 (continued)

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date / Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca^{++}	Mg^{++}	Na^{+}	K^{+}	CO_3^{--}	HCO_3^{-}	SO_4^{--}	Cl^{-}	NO_3^{-}	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Per cent Na
Palo Prieto Creek	1.5 mi. above Cholame Creek SLO-22	2-10-54 1430	0.1	1,086	7.7	58 / 2.92	25 / 2.07	147 / 6.37	3 / 0.08	0 / 0	326 / 5.35	191 / 3.97	70 / 1.98	1 / 0.02	0.7	1.80	659	245	56
Paso Robles Creek	At U.S. Hwy. #101 Bridge SLO-1	2-13-54 1630	200[d]	196	7.6	22 / 1.1	8 / 0.62	6 / 0.28	2 / 0.04	0 / 0	85 / 1.4	21 / 0.44	2 / 0.05	5 / 0.08	0.2	0.01	147	86	30
Pozo Creek	At mouth SLO-11	6-16-51 --	--	895	8.0	74 / 3.70	42 / 3.45	50 / 2.18	-- / --	0 / 0	223 / 3.65	44 / 1.24	202 / 4.20	6 / 0.10	--	0.0	596	357	23
Rinconada Creek	At State Hwy. #178 Bridge SLO-12	10-22-53 1515	0.2	633	7.9	62 / 3.1	36 / 2.95	25 / 1.08	2 / 0.06	0 / 0	299 / 4.9	70 / 1.46	18 / 0.5	5 / 0.08	0.3	0.30	383	305	15
Salinas River	Near Bradley M-2	3-17-54 1000	--	294	7.8	26 / 1.3	10 / 0.86	10 / 0.42	1 / 0.03	0 / 0	107 / 1.75	19 / 0.39	4 / 0.1	4 / 0.06	0.2	0.14	174	108	17
Salinas River	At San Miguel Bridge SLO-28	2-13-54 1500	29[d]	1,150	8.3	78 / 3.9	29 / 3.25	127 / 5.50	4 / 0.09	0 / 0	242 / 5.6	180 / 3.75	133 / 3.2	3 / 0.04	0.5	0.27	767	357	43
Salinas River	At San Miguel Bridge SLO-28	2-14-54 1445	353	435	7.6	50 / 2.5	11 / 0.95	16 / 0.69	3 / 0.08	0 / 0	168 / 2.75	49 / 1.02	27 / 0.75	5 / 0.08	0.2	0.14	300	172	16
Salinas River	At Paso Robles 3-29	4-13-51	--	851	7.6	-- / --	-- / --	-- / --	-- / --	- / -	315 / 5.16	-- / --	52 / 1.4	-- / --	--	--	--	321	--
Salinas River	At Paso Robles 3-29	5- 7-51	--	758	8.2	79 / 3.94	30 / 2.36	43[e] / 1.88	-- / --	19 / 0.64	259 / 4.24	105 / 2.18	43 / 1.21	1 / 0.02	--	0.09	450	320	23
Salinas River	At Paso Robles 3-29	6- 6-51 1500	Ponded	1,012	7.4	-- / --	-- / --	-- / --	-- / --	0 / 0	344 / 5.64	-- / --	64 / 1.81	-- / --	--	--	--	390	--
Salinas River	At Paso Robles 3-29	12-19-51 1300	--	617	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	233 / 3.82	-- / --	35 / 0.99	-- / --	--	--	--	241	--

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date / Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca[c]	Mg[c]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Per cent Na
Salinas River	At Paso Robles 3-29	1- 7-52 1430	--	833	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	174 / 2.86	-- / --	23 / 0.65	-- / --	--	--	--	211 †	--
Salinas River	At Paso Robles 3-29	2-13-52 1245	--	563	7.3	-- / --	-- / --	-- / --	-- / --	0 / 0	243 / 3.98	-- / --	31 / 0.87	-- / --	--	--	--	282 †	--
Salinas River	At Paso Robles 3-29	3- 4-52 0920	--	714	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	266 / 4.36	-- / --	36 / 1.02	-- / --	--	--	--	305	--
Salinas River	At Paso Robles 3-29	4- 1-52 0915	400[d]	556	8.0	-- / --	-- / --	-- / --	-- / --	0 / 0	237 / 3.88	-- / --	28 / 0.79	-- / --	--	--	--	280	--
Salinas River	At Paso Robles 3-29	5-13-52 0900	--	673	7.5	83 / 4.14	29 / 2.38	39 / 1.70	1 / 0.02	0 / 0	283 / 4.64	115 / 2.39	40 / 1.13	5 / 0.07	--	0.04	478	326	21
Salinas River	At Paso Robles 3-29	1- 5-53 1200	50[d]	536	7.4	-- / --	-- / --	-- / --	-- / --	0 / 0	239 / 3.92	-- / --	32 / 0.90	-- / --	--	--	--	272	--
Salinas River	At Paso Robles 3-29	2-16-53 1100	15[d]	804	7.6	-- / --	-- / --	-- / --	-- / --	0 / 0	290 / 4.76	-- / --	38 / 1.07	-- / --	--	--	--	333	--
Salinas River	At Paso Robles 3-29	3- 9-53 1230	10[d]	707	7.6+	-- / --	-- / --	-- / --	-- / --	0 / 0	305 / 5.0	-- / --	42 / 1.18	-- / --	--	--	--	360	--
Salinas River	At Paso Robles 3-29	3-31-53 1245	--	693	7.6	-- / --	-- / --	39[e] / 1.70	-- / --	22 / 0.72	251 / 4.12	-- / --	40 / 1.13	-- / --	--	0.24	--	321	--
Salinas River	At Paso Robles 3-29	5- 4-53 1730	30	640	7.6	72 / 3.59	28 / 2.30	38 / 1.65	2 / 0.05	10 / 0.32	261 / 4.28	105 / 2.18	34 / 0.96	2 / 0.03	0.4	0.77	425	294	22
Salinas River	At Paso Robles 3-29	2-13-54 1545	35.5	725	7.8	82 / 4.1	31 / 2.53	36 / 1.58	3 / 0.04	0 / 0	265 / 4.35	129 / 2.68	35 / 1.0	4 / 0.06	0.3	0.07	515	332	19
Salinas River	At Paso Robles 3-29	2- 8-54 1330	20	784	3.0	-- / --	-- / --	-- / --	-- / --	0 / 0	312 / --	-- / --	49 / --	-- / --	--	0.16	--	354	25

[redacted]

TABLE F-1 (continued)

F-47

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date / Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca^c	Mg^c	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Per cent Na
Salinas River	At Paso Robles 3-29	3-22-54 1300	—	450	8.0	— / —	— / —	— / —	— / —	0 / 0	205 / —	— / —	15 / —	— / —	—	0.06	—	192	21
Salinas River	At Paso Robles 3-29	4-13-54 1130	140[d]	664	8.0	— / —	— / —	— / —	— / —	7 / —	254 / —	— / —	29 / —	— / —	—	0.14	—	296	22
Salinas River	At Paso Robles 3-29	5-4-54 1130	10	711	8.0	77 / 3.84	30 / 2.47	38 / 1.65	2 / 0.05	0 / 0	273 / 4.48	117 / 2.44	32 / 0.90	4 / 0.06	0.5	0.12	433	315	23
Salinas River	At Templeton Bridge SLO-26	2-13-54 —	300[d]	227	7.4	24 / 1.20	8 / 0.70	7 / 0.33	1 / 0.03	0 / 0	92 / 1.5	19 / 0.39	4 / 0.1	2 / 0.03	0.55	0.06	192	95	25
Salinas River	At Eureka Bridge Near Atascadero SLO-28	10-23-53 1015	10	617	7.95	60 / 3.0	31 / 2.60	29 / 1.25	2 / 0.01	0 / 0	250 / 4.10	76 / 1.59	32 / 0.9	2 / 0.03	0.3	0.05	388	280	18
Salinas River	At Eureka Bridge Near Atascadero SLO-28	2-14-54 1200	316	228	7.25	24 / 1.2	15 / 1.22	12 / 0.53	2 / 0.05	0 / 0	107 / 1.75	37 / 0.78	11 / 0.3	5 / 0.08	0.2	0.00	213	121	18
Salinas River	At Calf Canyon Br. Near Santa Margarita 3-25	2-14-54 1015	250[d]	232	7.4	20 / 1.0	16 / 1.3	8 / 0.36	2 / 0.05	0 / 0	98 / 1.6	27 / 0.61	7 / 0.2	5 / 0.08	0.3	0.03	211	115	13
Salinas River	Near Pozo 3-21	10-22-53 1545	24	555	8.2	48 / 2.4	28 / 2.35	37 / 1.59	1 / 0.03	0 / 0	180 / 2.95	114 / 2.37	18 / 0.5	2 / 0.04	0.4	0.04	374	237	25
San Juan Creek	At State Hwy. #41 Bridge Near Shandon SLO-20	10-31-54 1300	0.5	1,298	8.1	104 / 5.2	37 / 3.05	173 / 7.50	5 / 0.12	0 / 0	418 / 6.85	278 / 5.79	110 / 3.1	2 / 0.02	0.6	0.26	848	412	47

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date / Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca[c]	Mg[c]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Per cent Na
San Juan Creek	At State Hwy. #178 Bridge SLO-19	1-28-54 1600	2[d]	976	8.1	104 / 5.2	40 / 3.30	66 / 2.89	3 / 0.08	0 / 0	238 / 3.9	300 / 6.25	30 / 0.85	2 / 0.04	0.6	0.13	757	425	25
San Juan Creek	At State Hwy. #178 Bridge SLO-19	3-21-54[f] 1410	50[d]	318	7.8	28 / 1.40	12 / 0.97	18 / 0.80	2 / 0.06	0 / 0	94 / 1.54	66 / 1.38	12 / 0.33	1 / 0.01	0.1	0.10	222	118	25
San Marcos Creek	At Oak Flat Rd. Bridge SLO-29	2-14-54 1415	--	562	7.9	62 / 3.1	25 / 2.1	28 / 1.21	4 / 0.09	0 / 0	128 / 2.1	162 / 3.38	25 / 0.7	6 / 0.10	0.15	0.10	435	260	19
San Marcos Creek	At Oak Flat Rd. Bridge SLO-29	3-25-54[f] 0935	0.4[d]	1,820	8.1	163 / 8.15	100 / 8.30	99 / 4.30	3 / 0.07	0 / 0	324 / 5.31	656 / 13.40	87 / 2.46	0 / 0	0.5	0.10	1,226	822	21
Santa Margarita Creek	At U.S. Hwy. #101 Bridge Stream mile 1.9 SLO-14	2-13-53 1720	70	277	7.6	20 / 1.0	13 / 1.10	13 / 0.58	2 / 0.04	0 / 0	95 / 1.55	33 / 0.69	21 / 0.6	5 / 0.08	0.2	0.01	185	105	21
Trout Creek	At State Hwy. #178 Bridge SLO-13	10-22-53	1.6	604	8.5	70 / 3.5	36 / 2.95	12 / 0.54	2 / 0.06	0 / 0	287 / 4.7	71 / 1.47	12 / 0.35	1 / 0.02	0.4	0.01	386	322	8
						COASTAL UNIT													
						Cambria Subunit													
Arroyo De La Cruz Creek	At State Hwy. #1 Bridge SLO-32	3-16-54 1630	Storm runoff	153	7.4	15 / 0.76	10 / 0.84	5 / 0.22	2 / 0.05	0 / 0	84 / 1.38	11 / 0.23	8 / 0.21	1 / 0.01	0.1	0.05	90	80	12
Arroyo De La Cruz Creek	Near San Simeon SLO-6	5-25-54 1340	Storm runoff	139	7.6	18 / 0.90	10 / 0.80	3 / 0.14	1 / 0.04	0 / 0	110 / 1.8	14 / 0.29	2 / 0.05	5 / 0.09	0.1	0.08	138	85	7

[redacted]

TABLE F-1 (continued)

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date / Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca[c]	Mg[c]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Per cent Na
						Cambria Subunit (continued)													
Arroyo De La Cruz Creek	Near San Simeon SLO-6	7-28-54[f] 1300	0.5[d]	495	7.8	50 / 2.48	28 / 2.27	13 / 0.58	1 / 0.03	0 / 0	259 / 4.24	27 / 0.56	18 / 0.51	2 / 0.04	0.0	0.15	272	238	11
Burnett Creek	At Upper Burnett Cr. Dam Site SLO-33	7-29-54[f] 1320	0.2	505	8.1	39 / 1.94	40 / 3.29	9 / 0.38	1 / 0.02	0 / 0	315 / 5.17	11 / 0.21	14 / 0.38	0 / 0	0.0	0.30	287	266	68
Cayucos Creek	At State Hwy. #1 Bridge SLO-37	3-22-54[f] 1230	15[d]	577	8.3	36 / 1.80	40 / 3.31	30 / 1.32	2 / 0.05	5 / 0.08	228 / 4.74	29 / 0.61	35 / 0.99	1 / 0.02	0.2	0.10	300	266	20
Old Creek	At State Hwy. #1 Bridge SLO-38	3-22-54[f] 1215	20[d]	648	8.3	67 / 3.35	33 / 2.69	30 / 1.28	1 / 0.04	5 / 0.08	301 / 4.94	80 / 1.66	23 / 0.66	4 / 0.06	0.2	0.05	360	302	17
San Carpoforo Creek	1 mi. above State Hwy. #1 SLO-31	7-28-54 1200	5	473	8.0	68 / 2.16	30 / 2.45	15 / 0.65	1 / 0.02	0 / 0	248 / 4.06	46 / 0.94	47 / 0.41	0 / 0	0.0	0.10	218	230	12
San Simeon Creek	At State Hwy. #1 SLO-34	7-10-54[f] 1455	1	610	8.1	54 / 2.70	39 / 3.24	19 / 0.82	1 / 0.03	0 / 0	314 / 5.16	41 / 0.83	23 / 0.65	1 / 0.02	0.1	0.15	370	296	12
San Simeon Creek	At State Hwy. #1 SLO-34	3-16-54 1710	175[d]	218	7.9	19 / 0.95	13 / 1.05	7 / 0.29	1 / 0.03	0 / 0	110 / 1.8	13 / 0.28	4 / 0.1	6 / 0.10	0.2	0.10	160	100	13
San Simeon Creek	2.8 mi. upstr. from State Hwy. #1 Bridge SLO-35	3-16-54 1700	175[d]	200	8.1	19 / 0.95	12 / 1.00	7 / 0.30	2 / 0.04	0 / 0	110 / 1.8	12 / 0.23	4 / 0.1	6 / 0.10	0.1	0.13	158	97	13

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date / Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca[c]	Mg[c]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	P ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na
Cambria Subunit (continued)																			
Santa Rosa Creek	At Cambria SLO-7	8-27-53 1410	4-5[d]	899	8.2	79 / 3.94	64 / 5.26	30 / 1.30	2 / 0.05	0 / 0	430 / 7.05	131 / 2.73	27 / 0.76	1 / 0.01	0.2	0.22	567	460	12
Santa Rosa Creek	At Cambria SLO-7	2-13-54 1600	270	333	7.5	35 / 1.75	20 / 1.67	15 / 0.65	2 / 0.06	0 / 0	177 / 2.9	27 / 0.56	16 / 0.45	4 / 0.07	0.3	0.03	253	171	16
Santa Rosa Creek	At Cambria SLO-7	7-18-54 1250	2[d]	866	8.1	63 / 3.15	62 / 5.06	32 / 1.40	2 / 0.05	0 / 0	392 / 6.44	118 / 2.41	30 / 0.85	1 / 0.02	0.1	0.12	588	410	14
Santa Rosa Creek	Above Santa Rosa School SLO-36	7-18-54[f] 1330	1	810	7.9	72 / 3.60	51 / 4.22	25 / 1.09	2 / 0.04	0 / 0	371 / 6.07	113 / 2.30	21 / 0.58	6 / 0.10	0.1	0.10	563	391	12
Toro Creek	¼ mi. above State Hwy. #1 SLO-8	8-27-53[g] 1320	2	901	8.3	60 / 2.99	66 / 5.43	40 / 1.74	1 / 0.03	10 / 0.33	388 / 6.36	60 / 1.25	76 / 2.14	0.2 / 0.00	0.1	0.10	534	421	17
Toro Creek	¼ mi. above State Hwy. #1 SLO-8	3-22-54[f] 1130	18.7	577	8.0	45 / 2.25	38 / 3.14	21 / 0.92	1 / 0.03	0 / 0	275 / 4.50	55 / 1.14	27 / 0.75	2 / 0.03	0.1	0.05	334	--	--
San Luis Obispo Subunit																			
Chorro Creek	At Baywood Park Rd. Bridge SLO-42	3-30-54 1330	150[d]	356	7.9	18 / 0.9	30 / 2.5	18 / 0.79	2 / 0.06	0 / 0	192 / 3.15	17 / 0.35	21 / 0.6	8 / 0.14	0.2	0.08	253	170	19
Chorro Creek	At ford near Banning Sch. SLO-43	8-27-53[g] 1130	--	1,080	8.3	37 / 1.85	102 / 8.39	48 / 2.09	4 / 0.11	12 / 0.40	518 / 8.49	56 / 1.17	77 / 2.17	10 / 0.16	0.3	0.11	627	512	17

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date / Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca[c]	Mg[c]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na
						San Luis Obispo Subunit (continued)													
Laguna Lake	At City of SLO Pumping Pl. SLO-48	9-28-54[f] 1120	--	730	7.4	31 / 1.54	53 / 4.39	48 / 2.10	2 / 0.05	0 / 0	338 / 5.54	6 / 0.12	82 / 2.30	4 / 0.07	0.3	0.20	422	---	--
Los Osos Creek	At Los Osos Valley Rd. Br. SLO-45	3-30-54[f] 1445	30[d]	344	8.0	28 / 1.39	22 / 1.85	16 / 0.71	3 / 0.07	0 / 0	178 / 2.92	24 / 0.50	20 / 0.57	2 / 0.04	0.2	0.35	182	162	18
Morro Creek	At State Hwy. #1 Bridge SLO-39	3-30-54[f] 1420	200[d]	325	7.7	28 / 1.39	17 / 1.38	15 / 0.64	1 / 0.04	0 / 0	156 / 2.56	23 / 0.46	15 / 0.42	4 / 0.06	0.1	0.10	175	138	18
Morro Creek	At State Hwy. #1 Bridge SLO-39	7-18-54[f] 1130	0.1	1,520	8.0	72 / 3.60	116 / 9.55	78 / 3.40	1 / 0.02	0 / 0	552 / 9.05	151 / 3.08	152 / 4.30	16 / 0.25	0.0	0.18	1,164	658	20
Morro Creek	At Cerro Alto Dam Site SLO-40	3-30-54	100[d]	276	8.1	27 / 1.35	14 / 1.15	11 / 0.49	1 / 0.02	0 / 0	134 / 2.2	28 / 0.59	7 / 0.2	5 / --	0.15	0.05	192	125	16
Morro Creek	At Cerro Alto Dam Site SLO-40	7-18-54[f] 1115	0.4	496	8.2	50 / 2.48	26 / 2.13	19 / 0.81	1 / 0.02	Tr. / Tr.	251 / 4.12	31 / 0.63	20 / 0.55	2 / 0.04	0.1	0.0	292	228	15
Pismo Creek	Near Hadley Tower SLO-52	11-24-52 1530	1[d]	1,127	8.2	105 / 5.25	81 / 6.65	46 / 2.00	2 / 0.06	0 / 0	556 / 9.12	158 / 3.30	49 / 1.38	11 / 0.18	0.5	0.14	756	595	14
Pismo Creek	Near Hadley Tower SLO-52	3-24-53 1200	2+	1,127	8.1	97 / 4.84	88 / 7.23	39 / 1.70	1 / 0.02	19 / 0.64	517 / 8.48	157 / 3.28	49 / 1.38	10 / 0.16	--	0.18	745	602	12

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date Time	Dis-charge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca^{c}	Mg^{c}	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Per cent Na
						San Luis Obispo Subunit (continued)													
Pismo Creek	Near Hadley Tower SLO-52	7-14-53 0930	1-	1,122	8.3	60 / 2.99	110 / 9.04	44 / 1.91	0.2 / 0.01	29 / 0.96	505 / 8.28	153 / 3.19	47 / 1.33	11 / 0.18	--	0.14	771[f]	604	14
Pismo Creek	Near Hadley Tower SLO-52	2-12-54 1715	2.5[d]	1,215	8.15	110 / 5.5	90 / 7.45	52 / 2.25	3 / 0.07	-- / --	570 / 9.35	176 / 3.70	53 / 1.5	12 / 0.19	0.6	0.11	851	647	15
Pismo Creek	Near Hadley Tower SLO-52	2-13-54 1400	5[d]	984	7.5	90 / 4.5	75 / 6.2	55 / 2.40	17 / 0.45	-- / --	469 / 7.7	169 / 3.53	64 / 1.8	5 / 0.08	0.4	0.05	778	534	18
Pismo Creek	Near Hadley Tower SLO-52	3-30-54[f] 0905	150[d]	321	7.6	26 / 1.32	18 / 1.53	13 / 0.58	4 / 0.10	0 / 0	149 / 2.44	28 / 0.59	13 / 0.36	5 / 0.08	0.1	0.1	162	143	16
Pismo Creek	Near Hadley Tower SLO-52	5-12-54 1400	6	1,070	8.4	107 / 5.35	81 / 6.72	49 / 2.15	1 / 0.04	7 / 0.23	528 / 8.67	170 / 3.55	46 / 1.3	18 / 0.29	0.35	0.09	772	604	15
Pismo Creek	Near Hadley Tower SLO-52	8-28-54 1220	0.5	1,170	8.2	88 / 4.39	88 / 7.23	50 / 2.18	2 / 0.04	23 / 0.77	483 / 7.91	175 / 3.64	40 / 1.13	13 / 0.21	--	0.12	740	---	---
Pismo Creek	Near Hadley Tower SLO-52	9-28-54[f] 1655	0.5	1,220	8.15	99 / 4.95	90 / 7.44	51 / 2.20	1 / 0.04	0 / 0	574 / 9.40	173 / 3.61	53 / 1.50	11 / 0.18	0.4	0.18	774	---	---
Pismo Creek	Near Hadley Tower SLO-52	10-29-54 1355	1.0	1,064	8.2	103 / 5.14	85 / 6.99	50 / 2.18	2 / 0.04	14 / 0.46	532 / 8.72	152 / 3.17	42 / 1.18	11 / 0.18	--	0.16	745	607	15

TABLE 9-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca[c]	Mg[c]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na
						San Luis Obispo Subunit (continued)													
Pismo Creek	At Lower SPRR Bridge SLO-56	2-12-54 1700	3[d]	1,353	7.9	106 / 5.3	82 / 6.8	99 / 4.32	3 / 0.08	0 / 0	576 / 9.45	149 / 3.11	111 / 3.1	5 / 0.08	0.5	0.28	915	606	2[e]
Pismo Creek	At Lower SPRR Bridge SLO-56	2-13-54 1430	30[d]	787	7.2	50 / 2.5	36 / 3.0	86 / 3.74	9 / 0.23	0 / 0	271 / 4.45	62 / 1.30	113 / 3.2	3 / 0.05	0.4	0.17	586	275	40
Pismo Creek	At Lower SPRR Bridge SLO-56	3-30-54[f] 0925	200[d]	324	7.5	25 / 1.26	13 / 1.09	23 / 1.02	2 / 0.06	0 / 0	131 / 2.15	17 / 0.36	29 / 0.81	4 / 0.06	0.2	0.05	202	118	33
Pismo Creek	At Lower SPRR Bridge SLO-56	5-12-54 1510	2[d]	1,042	7.9	101 / 5.05	76 / 6.3	83 / 3.62	2 / 0.06	0 / 0	562 / 9.2	151 / 3.14	87 / 2.45	11 / 0.18	0.35	0.26	812	568	24
Pismo Creek	At Lower SPRR Bridge SLO-56	7-28-54 1235	0.2[d]	1,250	8.3	103 / 5.14	79 / 6.49	104 / 4.52	2 / 0.06	53 / 1.69	511 / 8.37	139 / 2.90	96 / 2.71	4 / 0.06	0.30	0.30	870	582	28
Pismo Creek	At Lower SPRR Bridge SLO-56	9-28-54[f] 1010	0.3[d]	1,400	7.8	99 / 4.95	81 / 6.70	99 / 4.30	2 / 0.06	0 / 0	610 / 10.00	139 / 2.89	108 / 3.03	2 / 0.04	0.4	0.50	868	582	27
Pismo Creek	At Lower SPRR Bridge SLO-56	10-29-54 1405	0.7	1,316	8.5	101 / 5.04	77 / 6.33	103 / 4.48	3 / 0.07	62 / 2.07	487 / 7.99	132 / 2.75	100 / 2.82	2 / 0.03	--	0.42	825	....	--
Pismo Creek	Below Hadley Tower SLO-53	3-24-53 1120	3+	1,187	8.2	94 / 4.69	79 / 6.49	56 / 2.44	2 / 0.05	19 / 0.64	493 / 8.08	147 / 3.06	77 / 2.17	7 / 0.11	--	0.22	762	559	18

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date / Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca[a]	Mg[a]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Per cent Na
						San Luis Obispo Subunit (continued)													
Pismo Creek	Near Tiber RR Siding SLO-54	11-24-52 1545	1+	1,403	8.3	97 / 4.85	76 / 6.25	95 / 4.13	3 / 0.08	14 / 0.48	542 / 8.88	132 / 2.75	115 / 3.24	5 / 0.08	0.5	0.54	842	555	27
Pismo Creek	Near Tiber RR Siding SLO-54	3-24-53 1100	3[d]	1,221	7.8	96 / 4.79	80 / 6.58	100 / 4.35	2 / 0.06	0 / 0	583 / 9.56	141 / 2.94	117 / 3.30	8 / 0.14	--	0.48	858	568	28
Pismo Creek	Near Tiber RR Siding SLO-54	7-14-53 0940	1[d]	1,383	8.1	87 / 4.34	90 / 7.40	105 / 4.57	3 / 0.08	0 / 0	620 / 10.16	126 / 2.63	109 / 3.07	6 / 0.09	--	--	887	587	28
Unnamed Tributary to Pismo Creek	At Price Canyon Road Bridge SLO-55	3-30-54 0920	50[d]	404	7.2	23 / 1.17	13 / 1.10	37 / 1.62	3 / 1.07	0 / 0	114 / 1.87	31 / 0.64	50 / 1.41	5 / 0.08	0.2	0.15	300	114	41
Unnamed Tributary to Pismo Creek	At Price Canyon Road Bridge SLO-55	5-12-54 1500	0.3[d]	990	8.5	68 / 3.4	44 / 3.67	120 / 5.20	3 / 0.07	6 / 0.2	323 / 5.3	155 / 3.23	110 / 3.1	5 / 0.08	0.4	0.52	729	353	42
San Bernardo Creek	Near Banning School SLO-41	3-30-54 1320	5[d]	470	8.1	26 / 1.3	39 / 3.2	18 / 0.78	2 / 0.06	0 / 0	244 / 4.0	27 / 0.57	21 / 0.6	10 / 0.17	0.15	0.05	300	225	15
San Luis Obispo Creek	At San Luis Obispo below Marsh Street Bridge SLO-47	7-18-54 0845	1	970	8.2	64 / 3.20	75 / 6.17	36 / 1.56	2 / 0.05	0 / 0	468 / 7.68	82 / 1.68	47 / 1.33	14 / 0.22	0.1	0.15	627	468	14

[redacted]

TABLE F-1 (continued)

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca[c]	Mg[c]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Per cent Na
						San Luis Obispo Subunit (continued)													
San Luis Obispo Creek	Below Old U.S. Hwy. #101 Bridge SLO-49	12-24-53 0905	--	1,224	7.7	76 / 3.8	88 / 7.25	83 / 3.62	4 / 0.10	0 / 0	474 / 7.85	90 / 1.87	156 / 4.4	40 / 0.64	0.6	0.10	829	552	25
San Luis Obispo Creek	1.0 mi. below jct. of U.S. Hwy. #101 with Old Hwy. #101 SLO-50	12-24-53 0925	--	1,261	7.4	76 / 3.8	90 / 7.45	84 / 3.64	4 / 0.11	0 / 0	485 / 7.95	86 / 1.78	160 / 4.5	38 / 0.62	0.45	0.11	864	562	24
San Luis Obispo Creek	At U.S. Hwy. #101 Bridge Near Avila SLO-51	8-27-53[g]	2.5[d]	1,400	8.2	81 / 4.04	103 / 8.47	77 / 3.35	2 / 0.06	0 / 0	582 / 9.54	88 / 1.83	154 / 4.34	2 / 0.04	0.3	0.16	822	626	21
San Luis Obispo Creek	At U.S. Hwy. #101 Bridge Near Avila SLO-51	12-24-53 0940	--	1,261	7.95	80 / 4.0	93 / 7.73	83 / 3.62	3 / 0.08	0 / 0	533 / 8.75	81 / 1.69	160 / 4.5	2.5 / 0.41	0.45	0.20	856	586	23
San Luis Obispo Creek	At U.S. Hwy. #101 Bridge Near Avila SLO-51	7-18-54[f]	1.5[d]	1,420	8.2	85 / 4.23	104 / 8.56	72 / 3.10	2 / 0.04	Tr. / Tr.	635 / 10.41	84 / 1.71	133 / 3.76	11 / 0.18	0.2	0.0	986	639	20
San Luisito Creek	At State Hwy. #1 Near Banning School SLO-44	3-30-54 1315	26[d]	381	8.0	24 / 1.2	28 / 2.3	16 / 0.71	2 / 0.06	0 / 0	198 / 3.25	18 / 0.38	18 / 0.5	8 / 0.13	0.2	0.07	256	175	17
San Luisito Creek	At State Hwy. #1 Near Banning School SLO-44	7-18-54[f] 1020	0.1	778	8.4	98 / 4.90	35 / 2.89	25 / 1.07	1 / 0.03	6 / 0.20	419 / 6.87	33 / 0.68	35 / 0.99	12 / 0.19	0.1	0.0	481	389	12

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date / Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca[c]	Mg[c]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Per cent Na
San Luis Obispo Subunit (continued)																			
Steiner Creek	1.0 mi. Below SPRR Crossing SLO-46	6-18-51 1530	0.25	661	8.0	34 / 1.70	62 / 5.10	16[e] / 0.69	-- / --	0 / 0	380 / 6.23	21 / 0.59	29 / 0.61	0 / 0	--	0.0	426	340	9
Arroyo Grande Subunit																			
Arroyo Grande Creek	At SPRR Bridge SLO-58	4-12-54 1720	13	935	8.1	110 / 5.5	50 / 4.1	43 / 1.89	4 / 0.11	0 / 0	375 / 6.15	180 / 3.76	29 / 1.1	6 / 0.11	0.5	0.08	684	480	16
Arroyo Grande Creek	At Santa Manuela School SLO-59	2-13-54 1525	Storm runoff	694	7.4	108 / 5.4	25 / 2.1	50 / 2.17	4.5 / 0.11	0 / 0	305 / 5.0	165 / 3.44	35 / 1.0	4 / 0.07	0.4	0.05	607	375	2[illegible]
Arroyo Grande Creek	At Santa Manuela School SLO-59	3-30-54[f] 1210	99	514	7.9	59 / 2.96	24 / 1.98	20 / 0.85	2 / 0.05	0 / 0	218 / 3.57	80 / 1.66	17 / 0.48	1 / 0.02	0.2	0.05	342	247	14
Oso Flaco Lake	At Access Rd. SLO-61	11-7-53 1100	Lake	1,960	7.8	386 / 9.3	112 / 9.25	152 / 6.60	13 / 0.34	0 / 0	438 / 6.85	670 / 13.95	328 / 3.60	10.7 / 0.17	0.5	0.27	1,476	927	26
White Lake	50' out from North shore SLO-60	9-29-54 0415	Lake	3,200	7.7	58 / 2.92	89 / 7.34	430 / 18.70	20 / 0.50	0 / 0	737 / 11.75	148 / 3.09	487 / 13.71	37 / 0.60	0.6	1.4	2,221	513	63
SANTA MARIA UNIT																			
Santa Maria River	At Santa Maria SLO-67	1906 Mean	--	--	--	302 / --	133 / ---	200[e] / ---	-- / --	0 / -	254 / --	1,253 / --	105 / --	--- / --	--	--	2,412	--	--
Santa Maria River	At Guadalupe SLO-68	2-18-43[j]	--	--	--	230 / --	87 / --	120 / --	5.3 / --	0 / -	420 / --	680 / --	86 / --	0 / -	--	--	1,600	932	--

[illegible]

MINERAL ANALYSIS OF SURFACE WATERS

MINERAL ANALYSIS OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date Time	Discharge second-feet	ECx10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca[c]	Mg[c]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na
						CUYAMA UNIT													
Cuyama Unit	At U.S. Hwy. #399 Bridge SB-1	6-19-51	--	1,745	7.3	223 / 11.15	190 / 7.40	57[e] / 2.49	-- / --	0 / 0	174 / 2.85	793 / 16.52	17 / 0.48	2 / 0.04	--	0.07	1,533	927	12
Cuyama River	At Wheatley's Ranch, 2 mi. E. of State Hwy. #399 SB-2	4-27-52[f] 1145	40[d]	427	8.2	51 / 2.57	16 / 1.33	15[e] / 0.64	-- / --	0 / 0	118 / 1.93	115 / 2.40	5.0 / 0.14	Tr. / Tr.	--	0.0	288	195	14
Cuyama River	4 mi. W. Jct. State Hwy. #399 and #166 SLO-65	3-30-53 1355	10[d]	2,750	7.9	329 / 16.46	173 / 14.24	140 / 6.09	6 / 0.17	0 / 0	213 / 3.49	1,550 / 32.25	34 / 0.96	9 / 0.15	--	0.1	2,518	1,035	16
Cuyama River	Near Cuyama Ranch Hdqs. SLO-64	11-29-52 0915	2[d]	2,488	7.5	354 / 17.70	142 / 11.70	115 / 5.00	6 / 0.14	0 / 0	244 / 4.00	1,368 / 28.50	32 / 0.90	12 / 0.20	1.3	0.24	2,300	1,470	14
Cuyama River	Near Cuyama Ranch Hdqs. SLO-64	7-14-53 1300	1[d]	2,336	8.1	288 / 14.37	152 / 12.49	118 / 5.13	5 / 0.14	0 / 0	190 / 3.12	1,308 / 27.24	32 / 0.90	10 / 0.16	--	0.26	2,207	1,342	16
Cuyama River	At State Hwy. #166 Bridge SLO-63	11-29-52 1000	15[d]	2,967	7.8	296 / 14.8	153 / 12.6	230 / 10.0	8 / 0.20	0 / 0	310 / 5.08	1,339 / 27.9	147 / 415	2 / 0.04	1.3	0.56	2,535	1,370	27
Cuyama River	Below Cottonwood Canyon SLO-62	7-14-53 1210	--	3,164	7.9	273 / 13.62	162 / 13.31	340 / 14.79	6 / 0.16	0 / 0	320 / 5.24	1,365 / 28.44	245 / 6.91	1 / 0.02	--	0.48	2,734	1,346	35
Cuyama River	At State Hwy. #166 Bridge 3-42	3- 4-52[f] 0912	700	1,770	8.3	174 / 8.69	95 / 7.80	150[e] / 5.78	-- / --	20 / 0.68	271 / 4.43	744 / 15.50	78 / 2.20	6 / 0.09	--	0.36	1,048	774	26
Cuyama River	At State Hwy. #166 Bridge 3-42	3-30-53[f] 1030	15[d]	2,750	7.8	239 / 11.93	152 / 12.55	238 / 10.37	6 / 0.17	0 / 0	246 / 4.03	1,295 / 26.95	140 / 3.96	1 / 0.02	--	0.2	2,327	1,224	30

TABLE F-1 (continued)

MINERAL ANALYSES OF SURFACE WATERS
IN SAN LUIS OBISPO COUNTY[a] AND VICINITY

Stream name	Station[b] and map reference number	Date	Time	Discharge second-feet	EC x 10^6 at 25°C	pH	Mineral constituents in parts per million / equivalents per million: Ca^c	Mg^c	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na
CARRIZO PLAIN UNIT																				
Soda Lake	1 Mi. N. of Werling Gooding Ranch SLO-66	9-24-54[f] 1435	--	150,000	7.8	498 / 24.98	6,560 / 542	65,700 / 2,854	176 / 4.49	0 / 0	2,000 / 32.85	79,200 / 1,648	60,600 / 1,710	0 / 0		0.3	42.0	221,000	28,850	--

a. Analyzed by Division of Water Resources unless otherwise noted.
b. MRF is Map Reference Number. Major streams and tributaries listed north to south within the county.
c. These constituents in all analyses by Division of Water Resources and Pacific Chemical Consultants determined by titration.
d. Indicates estimate flow.
e. Na + K.
f. Analyzed by Pacific Chemical Consultants, Van Nuys, California
g. United States Geological Survey, Quality of Water Laboratory, Sacramento.
h. United States Geological Survey Professional Paper 135.
j. United States Geological Survey Water Supply Paper 1000, 1951.

TABLE F-2

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
UPPER SALINAS UNIT																				
24S/10E-9A1	7-27-54[f]	602	7.7	68 / 3.42	21 / 1.73	22 / 0.96	2.3 / 4.02	0 / 0	245 / 4.02	19 / 0.39	48 / 1.39	28 / 0.45	0.3	0.20	—	---	325	258	16	2.15
24S/11E-23J1	10-30-45[g]	---	7.4	42 / --	41 / --	-- / --	-- / --	- / -	-- / --	132 / --	319 / --	-- / --	1-	--	--	---	1,577	273	--	--
24S/11E-25N1	10-30-45[h]	---	7.4	38 / --	52 / --	-- / --	-- / --	- / -	-- / --	227 / --	120 / --	-- / --	1-	--	--	---	1,120	308	--	--
24S/11E-25N1	6- 3-54[h]	1,740	7.4	57 / 2.87	39 / 3.20	267 / 11.60	3.9 / 0.10	0 / 0	315 / 5.17	398 / 8.13	166 / 4.67	7 / 0.11	0.1	1.53	--	---	1,126	304	66	12.60
24S/11E-26G1	11-28-45[h]	---	7.6	36 / --	13 / --	-- / --	-- / --	- / -	-- / --	294 / --	320 / --	-- / --	1-	--	36	0.4	1,196	148	--	--
24S/11E-26N1	10-30-45[h]	---	7.4	30 / --	11 / --	-- / --	-- / --	- / -	-- / --	149 / --	89 / --	-- / --	1-	--	47	0.3	638	123	--	--
24S/11E-26Q1	10-30-45[h]	---	7.2	50 / --	46 / --	-- / --	-- / --	- / -	-- / --	305 / --	180 / --	-- / --	1-	--	43	0.5	1,013	314	--	--
24S/11E-33R1	10-30-45[h]	---	7.4	40 / --	35 / --	-- / --	-- / --	- / -	-- / --	72 / --	27 / --	-- / --	1-	--	33	0.8	319	244	--	--
24S/11E-34P1	6- 3-54[f]	1,890	8.0	15 / 0.76	8 / 0.67	428 / 18.60	2 / 0.05	0 / 0	415 / 6.88	175 / 3.57	326 / 9.18	6 / 0.09	0.2	2.65	--	---	1,213	714	93	18.65
24S/11E-35D1	10-30-45[h]	---	7.6	36 / --	19 / --	-- / --	-- / --	- / -	-- / --	198 / --	135 / --	-- / --	1-	--	32	0.5	917	168	--	--
24S/11E-35E1	6- 3-54[f]	1,205	7.8	31 / 1.57	15 / 1.24	223 / 9.70	12 / 0.05	0 / 0	339 / 5.59	209 / 4.27	93 / 2.63	2 / 0.04	0.3	1.67	--	---	762	140	77	9.75

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
24S/12E-17L1	6- 8-54[f]	1,300	7.8	107 / 5.35	69 / 5.68	85 / 3.70	1 / 0.02	0 / 0	282 / 4.62	450 / 9.18	34 / 0.96	8.1 / 0.13	0.2	0.40	--	---	986	551	25	9.40
24S/12E-27M1	6- 8-54[f]	735	7.6	40 / 1.98	48 / 3.94	44 / 1.90	2 / 0.06	0 / 0	276 / 4.62	92 / 1.87	32 / 0.90	34 / 0.55	0.3	0.32	--	---	433	296	24	3.26
24S/12E-33B1[j]	10-23-53	991	8.4	90 / 4.5	65 / 5.35	62 / 2.70	4 / 0.094	0 / 0	530 / 8.7	93 / 1.94	67 / 1.9	5 / 0.08	0.55	0.22	--	---	713	492	21	3.94
24S/12E-33H1	10-19-53	768	7.5	58 / 2.9	49 / 4.05	53 / 2.3	4 / 0.09	0 / 0	351 / 5.75	81 / 1.69	32 / 0.9	16.4 / 0.265	0.4	0.24	--	---	513	346	23	3.50
24S/14E-12A1	6- 8-54[f]	2,122	8.0	92 / 4.59	112 / 9.20	225 / 9.60	4 / 0.09	0 / 0	561 / 9.20	421 / 8.60	210 / 5.91	3 / 0.05	0.1	1.90	--	---	1,428	689	41	14.28
24S/15E-17F1	8- 7-53[f]	1,493	7.7	50 / 2.50	88 / 7.23	157 / 6.82	3 / 0.08	0 / 0	464 / 7.61	273 / 5.68	124 / 3.48	10 / 0.17	0.1	1.2	--	---	920	386	40	9.02
24S/15E-33C1	6- 7-54[f]	1,280	7.9	32 / 1.62	64 / 5.28	94 / 4.10	2 / 0.06	0 / 0	377 / 6.17	21 / 0.42	114 / 3.22	2 / 0.03	0.3	0.40	--	---	692	344	41	3.80
25S/11E-1A1	10-30-45[k]	---	7.6	24 / --	18 / --	-- / --	-- / --	- / -	-- / --	107 / --	43 / --	-- / --	1-	--	46	0.8	468	280	--	--
25S/11E-19B1	10- 8-53	730	8.3	64 / 3.2	39 / 3.24	35 / 1.53	0.4 / 0.01	0 / 0	238 / 3.9	31 / 0.65	92 / 2.6	16 / 0.27	0.5	0.06	--	---	473	322	19	4.08
25S/12E-6C1	10-30-45[k]	---	7.4	24 / --	21 / --	-- / --	-- / --	- / -	-- / --	81 / --	112 / --	-- / --	1-	--	48	0.8	696	146	--	--
25S/12E-16N1	4- 8-53[k]	---	7.8	34 / --	31 / --	52 / --	2 / --	0 / -	228 / --	50 / --	42 / --	2 / --	0.2	--	--	---	---	212	--	--
25S/12E-17J1	4- 8-53[k]	---	8.5	30 / --	30 / --	61 / --	2 / --	22 / --	207 / --	42 / --	33 / --	3 / --	0.3	--	--	---	---	198	--	--

[redacted]

TABLE F-2 (continued)

25S/12E-17J1 4- 8-53[k] --- 8.5 30 30 61 2 22 207 42 33 3 0.3 -- -- --- --- 198 -- --

[redacted]

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
25S/12E-17R1	4- 8-53[k]	---	8.2	48 / 2.40	45 / 3.70	98 / 4.25	3 / 0.7	0 / -	239 / 3.92	141 / 2.95	91 / 2.56	2 / 0.03	0.35	--	--	---	720	306	--	--
25S/12E-17R1	7-15-54[f]	672	8.05	36 / 1.80	28 / 2.30	64 / 2.80	2 / 0.05	0 / 0	285 / 4.67	46 / 0.95	42 / 0.95	17 / 0.28	0.3	0.50	--	---	379	205	40	2.85
25S/12E-21L1	5-31-54[f]	1,220	7.9	50 / 2.52	43 / 3.51	156 / 6.80	3 / 0.06	0 / 0	339 / 5.55	192 / 3.99	116 / 3.28	4 / 0.07	0.4	0.76	--	---	776	302	53	7.34
25S/12E-26K1	5-31-54[f]	493	7.8	31 / 1.57	21 / 1.74	48 / 2.08	1 / 0.04	0 / 0	238 / 3.90	22 / 0.44	32 / 0.91	6 / 0.10	0.2	0.37	--	---	289	165	38	2.12
25S/12E-28N1[j]	6- 9-54[f]	1,890	7.8	119 / 5.98	74 / 6.13	200 / 8.70	3 / 0.07	0 / 0	456 / 7.49	381 / 7.77	200 / 5.65	7 / 0.12	0.2	0.78	--	---	1,307	604	42	13.34
25S/12E-32A1	10- 2-53	893	8.0	36 / 1.8	34 / 2.83	127 / 5.51	1 / 0.03	0 / 0	296 / 4.85	166 / 3.46	53 / 1.50	4 / 0.06	0.2	0.50	--	---	615	232	54	6.01
25S/13E-19R1	6- 9-54[f]	528	8.0	35 / 1.75	28 / 2.31	34 / 1.46	2 / 0.05	0 / 0	223 / 3.65	11 / 0.23	40 / 1.14	28 / 0.45	0.6	0.20	--	---	316	203	26	1.92
25S/13E-35D1	7-22-54[f]	710	8.1	49 / 2.43	27 / 2.22	62 / 2.71	2 / 0.06	0 / 0	327 / 5.36	41 / 0.83	42 / 1.20	4 / 0.06	0.4	0.32	--	---	412	233	37	2.77
25S/13E-35E1	7-22-54[f]	710	7.9	48 / 2.39	28 / 2.31	63 / 2.75	2 / 0.06	0 / 0	332 / 5.44	44 / 0.89	42 / 1.20	1 / 0.02	0.4	0.32	--	---	508	235	37	2.81
25S/14E-33Q1	6- 9-54[f]	620	7.9	30 / 1.48	21 / 1.73	78 / 3.40	2 / 0.06	0 / 0	299 / 4.99	44 / 0.89	27 / 0.75	9 / 0.15	0.4	0.45	--	---	398	161	51	3.46
25S/15E-2B1	8- 7-53[f]	1,664	8.0	62 / 3.12	96 / 7.86	180 / 7.82	4 / 0.10	Tr. / Tr.	595 / 9.76	230 / 4.79	148 / 4.17	13 / 0.21	0.0	1.35	--	---	1,060	550	41	9.14
25S/16E-17L1	8- 7-53[f]	2,202	7.7	64 / 3.21	129 / 10.61	238 / 10.34	2 / 0.05	0 / 0	429 / 7.04	508 / 10.59	238 / 6.72	7 / 0.11	0.4	1.75	--	---	1,426	694	43	17.17

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
25S/16E-30M1	6- 7-54[f]	4,890	7.6	328 / 16.40	240 / 20.00	722 / 16.60	10 / 0.27	0 / 0	287 / 4.54	928 / 18.95	1,060 / 29.85	12 / 0.19	0.2	1.05	--	---	3,666	1,829	31	36.87
26S/12E-22P2	6- 9-54[f]	710	7.7	39 / 1.93	26 / 2.18	69 / 3.00	.2 / 0.05	0 / 0	277 / 4.54	26 / 0.53	65 / 1.83	16 / 0.26	0.2	0.35	--	---	425	206	42	3.05
26S/13E-4F1	9- 4-53[f]	843	8.0	45 / 2.26	17 / 1.39	115 / 4.97	2 / 0.05	0 / 0	289 / 4.74	90 / 1.87	69 / 1.95	14 / 0.22	0.5	0.65	--	---	540	183	57	5.02
26S/13E-4K1	9- 2-53[f]	1,680	7.95	82 / 4.08	61 / 5.04	191 / 8.30	3.1 / 0.08	0 / 0	315 / 5.16	310 / 6.46	201 / 5.67	22 / 0.35	0.6	0.65	--	---	1,186	467	47	12.34
26S/13E-10E1	5-31-54[f]	717	8.2	18 / 0.90	15 / 1.20	127 / 5.54	2 / 0.05	Tr. / Tr.	304 / 4.98	72 / 1.49	44 / 1.23	0 / 0	0.3	0.90	--	---	456	105	72	5.59
26S/13E-11C1	9- 4-53[f]	1,905	7.7	112 / 5.58	73 / 6.06	202 / 8.78	6 / 0.14	0 / 0	565 / 9.26	250 / 5.22	217 / 6.12	1 / 0.01	0.4	0.90	--	---	1,189	584	43	11.30
26S/13E-11F2	9- 4-53[f]	1,520	7.5	95 / 4.73	60 / 4.95	145 / 6.31	3 / 0.09	0 / 0	317 / 5.20	219 / 6.07	168 / 4.74	9 / 0.15	0.4	1.05	--	---	1,034	485	39	10.88
26S/13E-28J1	6- 9-54[f]	584	8.1	27 / 1.35	19 / 1.60	75 / 3.25	2 / 0.05	0 / 0	259 / 4.25	36 / 0.73	39 / 1.11	6 / 0.09	0.3	0.45	--	---	356	148	52	3.30
26S/13E-28J1	7-27-54[f]	594	8.1	32 / 1.58	17 / 1.42	72 / 3.15	2 / 0.05	0 / 0	262 / 4.28	38 / 0.78	42 / 1.09	3 / 0.05	0.2	0.45	--	---	326	150	51	3.21
26S/14E-14R1	10-31-53	549	8.15	20 / 1.0	5 / 0.43	94 / 4.07	3 / 0.08	0 / 0	232 / 3.8	10 / 0.21	35 / 1.0	13 / 0.21	0.4	0.0	--	---	503	72	73	4.15
26S/14E-25L1	8-27-53[f]	473	8.4	49 / 2.43	8 / 0.63	40 / 1.76	3 / 0.07	4 / 0.12	169 / 2.77	18 / 0.38	42 / 1.17	30 / 0.49	0.2	0.10	--	---	334	154	36	2.12
26S/14E-35D1	6- 7-54[f]	448	8.1	40 / 2.02	9 / 0.71	35 / 1.52	3 / 0.08	0 / 0	153 / 2.51	19 / 0.38	42 / 1.20	17 / 0.28	0.5	0.10	--	---	289	137	35	1.82

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
26S/15E-2N1	6- 7-54[f]	2,150	7.9	38 / 1.89	6 / 0.53	424 / 18.40	2 / 0.06	0 / 0	337 / 5.30	525 / 10.72	176 / 4.95	5.6 / 0.09	0.1	2.05	--	---	1,355	122	88	18.46
26S/15E-15C1	8- 7-53[f]	2,470	7.6	201 / 10.22	33 / 2.72	290 / 12.62	7 / 0.19	0 / 0	204 / 3.35	525 / 10.92	394 / 11.10	18 / 0.29	0.0	0.85	--	---	1,645	647	49	15.53
26S/15E-20N1	6- 8-54[f]	359	8.1	41 / 2.05	4 / 0.30	50 / 1.15	2 / 0.06	0 / 0	138 / 2.27	32 / 0.65	20 / 0.57	12 / 0.19	0.1	0.15	--	---	232	118	32	1.29
26S/15E-29D1	6- 9-54[f]	359	7.9	38 / 1.89	7 / 0.58	26 / 1.12	3 / 0.06	0 / 0	141 / 2.31	5 / 0.10	21 / 0.58	40 / 0.65	0.1	0.0	--	---	242	124	31	1.34
26S/16E-28M1	8- 6-54[f]	952	8.5	48 / 2.38	15 / 1.20	149 / 6.46	5 / 0.12	5 / 0.16	344 / 5.64	88 / 1.84	89 / 2.51	6 / 0.10	0.6	0.75	--	---	525	179	63	6.56
26S/16E-31B1	6- 8-54[f]	1,580	8.2	37 / 1.84	19 / 1.60	288 / 12.50	2 / 0.05	0 / 0	316 / 5.18	348 / 7.10	106 / 2.97	57 / 0.92	0.9	2.37	--	---	1,042	172	78	12.55
27S/12E-2D1	9-26-51[k]	---	---	33 / 1.65	19 / 1.56	-- / --	-- / --	0 / 0	393 / 6.45	44 / 0.92	67 / 1.89	9 / 0.15	---	--	41	1.4	551	158	--	--
27S/12E-3C1	6- 9-54[f]	1,412	8.0	114 / 5.70	62 / 5.10	59 / 2.55	2 / 0.05	0 / 0	257 / 4.22	10 / 0.20	309 / 8.70	14 / 0.22	0.2	0.15	--	---	1,376	540	19	8.98
27S/12E-4B1	8-19-53[f]	1,100	7.5	41 / 2.05	14 / 1.12	198 / 8.61	2 / 0.05	0 / 0	389 / 6.38	131 / 2.73	90 / 2.52	3 / 0.05	0.9	0.75	--	---	725	158	73	8.66
27S/12E-4F1	10-15-50[m]	---	7.3	90 / --	38 / --	108 / --	-- / --	0 / -	421 / --	128 / --	98 / --	-- / --	---	0.35	22	4.4 (+As)	729	384	38	--
27S/12E-4F3	3-19-48[k]	1,740	7.8	10 / 0.50	5 / 0.44	348[k] / 15.13	-- / --	0 / 0	593 / 9.73	100 / 2.08	151 / 4.26	0	---	0.07	47	0.07	952	47	93	15.13
27S/12E-4F3	4-18-51[k]	1,200	---	9 / 0.44	4 / 0.36	-- / --	-- / --	0 / 0	439 / 7.20	97 / 2.02	116 / 3.27	4 / 0.06	1.3	--	58	0.35	780	40	--	--

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^{d}	Mg^{d}	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
27S/12E-4F3	6- 1-53[f]	1,439	7.7	10 / 0.49	0.4 / 0.03	340 / 14.77	7 / 0.18	0 / 0	476 / 7.80	152 / 3.16	147 / 4.14	11 / 0.17	1.4	2.0	--	---	908	26	95	14.95
27S/12E-4K5	9-23-53	715	7.5	68 / 3.4	40 / 3.3	35 / 1.53	2 / 0.05	0 / 0	284 / 4.5	46 / 0.95	74 / 2.1	13 / 0.20	0.3	0.20	--	---	468	336	19	3.73
27S/12E-11E1	11-25-53	505	7.7	50 / 2.5	22 / 1.86	33 / 1.45	1 / 0.03	0 / 0	250 / 4.1	9 / 0.19	46 / 1.3	21 / 0.34	0.75	0.00	--	---	336	218	24	1.89
27S/12E-14A1	1-15-52[n]	---	8.1	-- / 0.3	-- / 0.2	-- / 11.0	-- / --	- / 0.8	-- / 0.8	-- / 6.3	-- / 1.9	-- / 3.0	---	1.12	--	---	---	25	96	11.00
27S/12E-14A1	9-24-53[k]	1,070	7.7	4 / 0.2	1 / 0.1	264 / 11.5	4 / 0.10	0 / 0	390 / 6.4	121 / 2.52	99 / 2.8	1 / 0.01	1.1	1.25	--	---	722	15	96	11.60
27S/12E-15G1[h]	12-21-53	1,282	8.2	4 / 0.2	1 / 0.1	314 / 13.65	3 / 0.08	0 / 0	451 / 7.4	147 / 3.06	136 / 3.85	1.5 / 0.025	1.4	1.25	--	---	873	15	97	13.73
27S/12E-21N1	5-31-54[f]	983	7.3	110 / 5.52	48 / 3.91	39 / 1.68	1 / 0.04	0 / 0	341 / 5.59	186 / 3.89	57 / 1.61	2 / 0.04	0.2	0.12	--	---	664	471	15	5.66
27S/12E-32E1	5-31-54[f]	800	7.9	99 / 4.94	34 / 2.76	27 / 1.16	1 / 0.04	0 / 0	316 / 5.18	138 / 2.87	34 / 0.96	0 / 0	0.2	0.10	--	---	534	435	13	3.72
27S/13E-9K1	3-23-54[f]	908	8.2	7 / 0.36	1 / 0.04	206 / 8.92	2 / 0.05	0 / 0	364 / 5.96	87 / 1.81	53 / 1.50	6 / 0.10	1.4	3.40	--	---	557	20	95	8.97
27S/13E-9P1	6- 9-54[f]	711	7.9	14 / 0.72	9 / 0.71	129 / 5.60	2 / 0.05	0 / 0	359 / 5.88	21 / 0.42	24 / 0.69	8 / 0.13	0.1	0.90	--	---	438	71	79	5.65
27S/13E-13Q1	9-24-53	770	7.6	53 / 2.65	36 / 2.95	70 / 3.05	4 / 0.11	0 / 0	247 / 4.05	38 / 0.79	113 / 3.2	9 / 0.14	0.5	0.12	--	---	475	280	36	4.60
27S/13E-17Q1	9-25-53	1,111	7.3	100 / 5.0	37 / 3.1	93 / 4.05	3 / 0.08	0 / 0	302 / 4.95	53 / 1.10	188 / 5.3	5 / 0.08	0.2	0.04	--	---	725	405	33	7.15

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million									F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
				Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3								
27S/13E-20R1	3-12-54	500	7.6	50 / 2.49	28 / 2.30	31 / 1.35	3 / 0.08	0 / 0	305 / 5.00	14 / 0.29	31 / 0.87	13 / 0.21	0.2	0.04	--	---	338	239	22	1.43
27S/13E-24N1	9-11-53[f]	548	7.8	58 / 2.92	17 / 1.39	32 / 1.39	2 / 0.05	0 / 0	229 / 3.76	22 / 0.47	46 / 1.29	12 / 0.20	0.3	0.25	--	---	356	205	24	1.99
27S/13E-36R1	6- 9-54[f]	509	8.0	60 / 3.01	8 / 0.67	27 / 1.18	2 / 0.05	0 / 0	178 / 2.92	16 / 0.32	46 / 1.29	28 / 0.45	0.3	0.10	--	---	300	184	24	1.90
27S/14E-2C1	6- 9-54[f]	499	7.9	50 / 2.52	6 / 0.49	25 / 1.08	2 / 0.06	0 / 0	156 / 2.56	15 / 0.30	32 / 0.90	28 / 0.45	0.3	0.15	--	---	300	150	26	1.59
27S/15E-13A1	3-23-54	4,274	7.6	132 / 6.59	71 / 5.84	775 / 33.7	8 / 0.19	0 / 0	437 / 7.16	1,030 / 21.4	670 / 18.9	2 / 0.03	1.2	2.66	--	---	3,000	622	73	39.14
27S/15E-14M1	8- 7-53	460	7.3	60 / 2.99	8 / 0.66	25 / 1.09	2 / 0.05	0 / 0	220 / 3.60	18 / 0.36	14 / 0.39	14 / 0.23	0.5	0.04	--	---	289	182	23	1.19
27S/15E-35F1	6- 8-54[f]	317	7.8	33 / 1.66	6 / 0.49	22 / 0.96	2 / 0.05	0 / 0	121 / 1.99	28 / 0.58	19 / 0.54	3 / 0.05	0.1	0.10	--	---	200	105	30	1.17
27S/16E-7P1	7-31-54[f]	2,930	7.8	92 / 4.58	38 / 3.15	484 / 21.00	4 / 0.10	0 / 0	251 / 4.21	548 / 11.20	451 / 12.72	27 / 0.44	0.6	2.05	--	---	1,747	386	74	24.25
27S/16E-17Q1	2- 7-54	1,835	7.7	86 / 4.29	24 / 1.97	310 / 13.5	6 / 0.141	0 / 0	232 / 3.80	232 / 6.79	325 / 9.16	31 / 0.50	0.8	1.22	--	---	1,258	313	68	15.61
27S/16E-21E1	6- 8-54[f]	1,100	7.8	44 / 2.20	3 / 0.27	183 / 7.95	3 / 0.07	0 / 0	161 / 2.72	179 / 3.66	130 / 3.66	35 / 0.57	0.6	1.20	--	---	642	124	76	8.02
27S/16E-23N1[j]	6- 9-54[f]	708	7.7	31 / 1.57	8 / 0.67	113 / 4.94	4 / 0.10	0 / 0	264 / 4.32	64 / 1.31	53 / 1.50	14 / 0.23	0.2	0.50	--	---	432	112	68	5.04
28S/12E-10B1	5-31-54[f]	620	7.5	59 / 2.96	29 / 2.40	29 / 1.30	1 / 0.03	0 / 0	255 / 4.18	78 / 1.59	33 / 0.93	4 / 0.07	0.1	0.0	--	---	408	218	19	2.51

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
28S/13-10R2	6-10-54[f]	700	7.4	66 / 3.32	36 / 2.98	28 / 1.24	1 / 0.04	0 / 0	270 / 4.42	104 / 2.16	39 / 1.09	2 / 0.04	0.2	0.12	--	---	408	315	16	3.16
28S/12E-14K1	6-10-54[f]	615	7.3	55 / 2.74	34 / 2.80	3 / 1.19	1.4 / 0.04	0 / 0	235 / 2.85	87 / 1.82	34 / 0.96	7 / 0.11	0.2	0.10	--	---	353	277	17	2.86
28S/12E-14G1	6- 1-53[f]	603	7.7	51 / 2.54	28 / 2.28	34 / 1.48	2 / 0.04	0 / 0	244 / 4.00	71 / 1.47	33 / 0.93	4 / 0.06	0.1	0.1	--	---	367	241	23	2.34
28S/13E-4K1	10-23-53	682	8.0	56 / 2.8	33 / 2.72	56 / 2.45	3 / 0.08	0 / 0	332 / 5.35	11 / 0.22	64 / 1.8	8 / 0.12	0.3	0.18	--	---	419	286	30	2.70
28S/13E-4K2	10-23-53	781	7.9	82 / 4.1	38 / 3.15	43 / 1.85	2 / 0.05	0 / 0	336 / 5.5	24 / 0.47	90 / 2.55	9 / 0.15	0.3	0.15	--	---	401	362	20	3.65
28S/15E-11B1	6- 8-54[f]	281	8.0	31 / 1.53	5 / 0.43	20 / 0.85	1 / 0.04	0 / 0	279 / 1.70	27 / 0.56	18 / 0.51	9 / 0.14	0.2	0.10	--	---	155	98	30	1.15
28S/16E-14N1	12- 2-54	790	7.2	105 / 5.25	28 / 2.3	44 / 1.89	2 / 0.04	0 / 0	345 / 5.65	119 / 2.48	32 / 0.9	19 / 0.304	0.3	0.09	--	---	563	377	20	3.83
28S/11E-33P1	6-11-54[f]	1,330	7.6	42 / 2.11	102 / 9.19	57 / 2.46	0.4 / 0.01	0 / 0	613 / 10.06	42 / 0.86	88 / 2.49	27 / 0.44	0.0	0.15	--	---	770	565	18	3.71
29S/13E-5K3	6-10-54[f]	797	7.0	79 / 3.96	43 / 3.51	35 / 1.52	1 / 0.02	0 / 0	294 / 4.82	128 / 2.67	45 / 1.27	7 / 0.11	0.3	0.12	--	---	452	373	17	4.19
29S/13E-17C1	6-10-54[f]	1,000	7.5	150 / 7.50	21 / 1.69	21 / 0.92	4 / 0.09	0 / 0	405 / 6.64	17 / 0.35	102 / 2.88	20 / 0.32	0.0	0.20	--	---	806	459	9	3.21
29S/15E-25HJ	6-16-51[k]	519	7.4	40 / 2.00	15 / 1.23	41[l] / 1.79	-- / --	0 / 0	250 / 4.10	24 / 0.67	19 / 0.40	2 / 0.03	---	0.03	--	---	286	162	36	1.79
30S/16E-33P	6-16-51[k]	454	8.2	45 / 2.25	23 / 1.89	24[k] / 1.04	-- / --	0 / 0	261 / 4.28	14 / 0.39	21 / 0.43	1 / 0.01	---	0.01	--	---	259	207	20	1.04

[redacted]

TABLE F-2 (continued)

30S 33W -16- 45 Z 2.25 1.89 1.04 -- 0 4.28 0.39 0.43 0.01

[redacted]

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
30S/15E-10G2	6-10-54[f]	813	7.8	53 / 2.65	15 / 1.20	110 / 4.80	4 / 0.10	0 / 0	270 / 4.29	166 / 3.45	34 / 0.96	2 / 0.03	0.6	0.20	--	---	447	192	55	4.30
30S/15E-13F1	9- 9-54[f]	540	7.2	58 / 2.92	14 / 1.18	32 / 1.38	3 / 0.08	0 / 0	130 / 2.13	122 / 2.55	30 / 0.83	4 / 0.06	0.5	0.10	--	---	349	205	25	2.64
30S/16E-21SW¼[j]	6-16-51[k]	800	8.1	80 / 4.00	40 / 3.29	31[l] / 1.35	-- / --	0 / 0	283 / 4.63	160 / 3.33	20 / 0.56	2 / 0.03	---	0.0	--	---	551	364	16	4.01
31S/16E-4SW¼[j]	6-16-51[k]	704	7.6	83 / 4.15	32 / 2.63	20[l] / 0.85	-- / --	0 / 0	306 / 5.02	90 / 1.87	15 / 0.42	0 / 0	---	0.0	--	---	451	339	11	2.61
31S/16E-25SE¼[j]	6-16-51[k]	646	7.7	71 / 3.55	21 / 1.73	30[l] / 1.29	-- / --	0 / 0	239 / 3.92	72 / 1.50	39 / 1.10	3 / 0.05	---	0.0	--	---	432	264	20	2.65
				COASTAL UNIT																
				Cambria Subunit																
25S/6E-35N1	5-29-54[f]	450	7.5	40 / 2.02	29 / 2.36	12 / 0.54	1 / 0.02	0 / 0	240 / 3.94	19 / 0.38	17 / 0.48	7 / 0.11	0.0	0.22	--	---	194	218	11	1.00
27S/8E-9P2	5-29-54[f]	588	7.7	44 / 2.20	37 / 3.08	17 / 0.74	1 / 0.02	0 / 0	287 / 4.70	35 / 0.71	21 / 0.60	4 / 0.06	0.1	0.20	--	---	163	264	12	1.34
27S/8E-10A2	5-29-54[f]	588	7.6	54 / 2.69	38 / 3.11	17 / 0.72	1 / 0.03	0 / 0	307 / 5.03	42 / 0.85	19 / 0.54	6 / 0.09	0.1	0.21	--	---	396	290	11	1.52
27S/9E-19M1	5-29-54[f]	1,245	7.5	106 / 5.29	86 / 7.06	43 / 1.88	1 / 0.02	0 / 0	674 / 11.06	74 / 1.57	56 / 0.22	14	0.2	0.20	--	---	816	668	13	3.19
27S/9E-28Q1	8- 7-53	941	7.4	73 / 3.64	66 / 5.43	43 / 1.87	1 / 0.02	0 / 0	549 / 9.00	11 / 0.22	50 / 1.41	0 / 0	0.6	0.32	--	---	547	453	17	1.96

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na[f]	Effective salinity[f] epm
27S/9E-34L1	8- 7-53	636	7.0	54 / 2.69	39 / 3.21	25 / 1.09	1 / 0.01	0 / 0	342 / 5.60	17 / 0.35	25 / 0.71	11 / 0.18	0.7	0.08	--	---	361	295	16	1.40
28S/9E-8Q1	8- 7-53[f]	1,890	7.6	88 / 4.41	73 / 6.03	191 / 8.31	1 / 0.03	0 / 0	452 / 7.40	31 / 0.64	372 / 10.47	18 / 0.29	0.2	1.40	--	---	1,278	522	44	11.38
29S/10E-11H1	5-29-54[f]	1,042	7.9	72 / 3.59	77 / 6.30	39 / 1.70	1 / 0.02	0 / 0	435 / 7.13	53 / 1.09	119 / 3.36	6 / 0.10	0.0	0.10	--	---	778	494	15	4.48
				San Luis Obispo Subunit																
29S/11E-9J1	5-29-54[f]	1,000	7.8	66 / 3.28	81 / 6.70	31 / 1.36	1 / 0.02	0 / 0	573 / 9.40	39 / 0.79	38 / 0.08	6 / 0.10	0.0	0.18	--	---	566	499	12	1.96
✓ 29S/11E-32M3	12-18-51[k]	4,540	8.2	149 / 7.44	286 / 23.52	390 / 16.96	6 / 0.17	0 / 0	620 / 10.16	198 / 4.12	190 / 33.56	2 / 0.04	0.0	0.09	--	---	2,560	1,550	35	37.93
✓ 29S/11E-32M3	7-23-52[k]	3,290	8.0	-- / (22	-- / .80)	250 / 10.87	-- / --	0 / 0	649 / 10.64	-- / --	628 / 17.71	-- / --	---	0.09	--	---	---	1,140	32	23.03
✓ 29S/11E-32M2	6-11-54[k]	2,200	7.6	77 / 3.86	131 / 10.82	202 / 8.80	6 / 0.15	0 / 0	672 / 11.02	102 / 2.13	372 / 10.50	0	0.0	0.12	--	---	1,410	734	37	12.01
✓ 29S/11E-32M3	6-30-52[k]	3,522	7.8	-- / --	-- / --	-- / --	-- / --	- / -	666 / 10.92	-- / --	1,110 / 31.30	--	---	--	--	---	---	1,520	--	--
30S/10E-13P1	10- 2-54[f]	244	7.2	10 / 0.49	6 / 0.49	27 / 1.19	0.8 / 0.02	0 / 0	44 / 0.72	7 / 0.14	34 / 0.97	22 / 0.35	0.1	0.0	--	---	171	49	54	1.47
30S/11E-6F1	6-11-54[k]	2,342	7.8	50 / 249	142 / 11.68	198 / 8.60	6 / 0.14	0 / 0	667 / 10.96	100 / 2.05	349 / 0.84	0 / 0	0.0	0.55	--	---	1,460	708	38	11.95
30S/11E-7N1	10- 2-54[f]	298	7.4	17 / 0.84	11 / 0.94	24 / 1.04	1 / 0.03	0 / 0	96 / 1.57	4 / 0.08	41 / 1.16	4 / 0.07	0.0	0.0	--	---	201	89	30	1.28

[redacted]

TABLE F-2 (continued)

[redacted]

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca[d]	Mg[d]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
30S/11E-18Q1	6-11-54[f]	210	7.1	6 / 0.30	8 / 0.62	23 / 1.01	1 / 0.02	0 / 0	44 / 0.73	Tr. / Tr.	4 / 1.10	9 / 0.14	0.0	0.1	--	---	125	46	52	1.22
30S/11E-22L1	6-11-54[f]	1,380	8.2	36 / 1.80	82 / 6.79	94 / 4.10	5 / 0.12	Tr. / Tr.	380 / 6.24	32 / 0.66	211 / 5.94	5 / 0.08	0.3	0.25	--	---	884	429	32	6.57
31S/12E-1N3	6-11-54[f]	1,270	7.6	44 / 2.20	122 / 10.01	48 / 2.08	0.4 / 0.01	0 / 0	546 / 8.95	65 / 1.35	106 / 2.98	67 / 1.08	0.1	0.10	--	---	821	610	15	5.35
31S/12E-10G2	6-11-54[f]	1,305	7.6	51 / 2.56	102 / 8.39	38 / 1.64	1 / 0.02	0 / 0	475 / 7.79	29 / 0.60	133 / 3.75	35 / 0.56	0.0	0.15	--	---	836	545	13	5.82
31S/12E-12N1	6-21-53	2,024	7.5	102 / 5.09	109 / 8.96	105 / 4.57	2 / 0.06	0 / 0	163 / 2.68	22 / 0.46	530 / 14.95	18 / 0.29	0.6	0.08	--	---	1,770	702	25	15.54
31S/12E-12Q2	6-11-54[f]	1,522	7.8	76 / 3.78	97 / 7.98	63 / 2.73	1 / 0.04	0 / 0	259 / 4.26	15 / 0.31	341 / 9.54	25 / 0.41	0.1	0.15	--	---	1,354	588	19	6.45
31S/12E-16R1	10-12-53	1,250	8.8	90 / 4.5	67 / 5.53	122 / 5.31	12 / 0.31	9 / 0.30	561 / 9.2	75 / 1.57	133 / 3.75	1 / 0.02	0.25	0.25	--	---	844	502	34	6.45
31S/13E-19H2	9-30-54[f]	1,135	7.9	102 / 5.09	74 / 6.11	36 / 1.58	0.4 / 0.01	0 / 0	523 / 8.59	74 / 1.54	57 / 1.60	61 / 0.99	0.2	0.20	--	---	766	560	12	4.20
31S/13E-29E1	9-29-54[k]	1,570	7.9	118 / 5.88	124 / 10.20	63 / 2.73	0.4 / 0.01	0 / 0	697 / 11.45	264 / 5.50	67 / 1.88	2 / 0.04	0.4	0.38	--	---	977	804	15	7.37
31S/13E-29E1	10-29-54	1,493	7.9	125 / 6.25	121 / 9.94	65 / 2.83	1 / 0.015	0 / 0	691 / 11.33	271 / 5.64	63 / 1.78	0 / 0	0.5	0.30	--	---	985	809	14	7.70
31S/13E-29F1	5-12-54	840	7.5	72 / 3.6	54 / 4.50	31 / 1.34	0 / 0	0 / 0	403 / 6.6	82 / 1.70	25 / 0.7	16 / 0.25	0.3	0.15	--	---	633	405	14	2.84
32S/12E-13A1	9-28-54[f]	2,900	8.0	159 / 7.96	157 / 12.95	285 / 12.40	11 / 0.29	0 / 0	508 / 8.35	740 / 15.40	314 / 8.87	42 / 0.67	0.6	9.5	--	---	2,132	1,045	36	22.25
32S/12E-13A1	10-29-54	2,740	7.4	162 / 8.08	158 / 12.99	272 / 11.83	13 / 0.33	0 / 0	515 / 8.45	737 / 15.35	307 / 8.66	39 / 0.63	0.6	0.72	--	---	2,055	1,053	36	24.78

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids: ppm	Total hardness as $CaCO_3$: ppm	Percent Na[f]	Effective salinity,[g] epm
32S/12E-13J1	10-29-54[f]	2,985	7.9	127 / 6.34	140 / 11.51	344 / 14.96	18 / 0.46	0 / 0	797 / 13.06	252 / 5.26	504 / 14.21	7 / 0.112	0.2	0.62	--	---	1,830	892	45	20.21
				Arroyo Grande Subunit																
32S/13E-1Q1	9-30-54[f]	865	8.2	92 / 4.61	46 / 3.80	28 / 1.21	2 / 0.05	Tr. / Tr.	382 / 6.26	132 / 2.75	24 / 0.67	5 / 0.08	0.2	0.0	--	---	556	220	13	3.41
32S/13E-11M1	6-11-54[f]	267	7.3	9 / 0.45	3 / 0.22	30 / 1.28	1 / 0.04	0 / 0	49 / 0.81	8 / 0.16	35 / 0.99	0 / 0	1.0	0.1	--	---	207	34	64	1.32
32S/13E-12C1	7- 1-54[f]	1,190	7.4	135 / 6.75	62 / 5.10	33 / 1.44	2 / 0.06	0 / 0	462 / 7.57	239 / 4.88	37 / 1.03	5 / 0.08	0.1	0.1	--	---	938	593	11	5.78
32S/13E-12Q2	6-11-54[f]	950	7.5	106 / 3.82	37 / 3.02	44 / 1.95	1 / 0.03	0 / 0	341 / 5.59	83 / 1.70	57 / 1.62	3 / 0.05	0.4	0.15	--	---	550	344	22	3.23
32S/13E-14R2	9-30-54[f]	1,110	7.7	82 / 4.11	64 / 5.28	73 / 3.16	4 / 0.16	0 / 0	573 / 9.40	73 / 1.52	53 / 1.50	5 / 0.08	0.0	0.68	--	---	678	470	25	3.26
32S/13E-19N1	9-29-54[f]	454	6.9	23 / 1.14	9 / 0.71	47 / 2.06	1 / 0.03	0 / 0	22 / 0.36	41 / 0.85	57 / 1.60	75 / 1.21	0.1	0.03	--	---	292	94	52	2.80
32S/13E-28E1	9-29-54[f]	1,020	7.4	105 / 5.24	58 / 4.74	47 / 2.02	2 / 0.05	0 / 0	422 / 6.91	177 / 3.68	51 / 1.43	14 / 0.22	0.1	0.0	--	---	692	499	17	5.24
32S/13E-29D1	9-29-54[f]	934	7.8	97 / 4.85	48 / 3.99	44 / 1.90	3 / 0.08	0 / 0	412 / 6.75	144 / 2.99	31 / 0.87	2 / 0.04	0.1	0.05	--	---	583	442	17	4.07
32S/13E-30L2	9-29-54[f]	761	7.5	92 / 4.61	41 / 3.35	40 / 1.74	2 / 0.06	0 / 0	353 / 5.78	124 / 2.58	43 / 1.21	20 / 0.32	0.1	0.20	--	---	580	398	18	3.98
32S/13E-31B1	6- 3-53[f]	1,114	7.3	107 / 5.37	37 / 3.08	73 / 3.16	4 / 0.09	0 / 0	258 / 4.17	183 / 3.80	91 / 2.57	90 / 1.45	0.0	0.1	--	---	795	422	27	7.53
32S/13E-32A1	6-11-54[f]	868	7.4	77 / [illegible]	38 / [illegible]	39 / [illegible]	1 / [illegible]	0 / [illegible]	243 / [illegible]	117 / [illegible]	53 / [illegible]	63 / [illegible]	0.2	0.0	--	---	704	352	19	4.78

[illegible]

TABLE F-2 (continued)

32S/13E-32A1	6-11-54[f]	868	7.4	77 / 3.86	38 / 3.16	39 / 1.70	1 / 0.04	0 / 0	243 / 3.98	117 / 2.40	53 / 1.50	63 / 1.02	0.2	0.0	--	---	704	352	19	4.78

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca[d]	Mg[d]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
32S/12E-32D2	9-19-54[f]	813	7.6	87 / 4.36	38 / 3.16	28 / 1.32	2 / 0.05	0 / 0	314 / 5.14	111 / 2.32	39 / 1.11	24 / 0.38	0.2	0.0	--	---	494	376	15	3.75
32S/13E-33F1	10-21-53	1,106	8.4	136 / 6.8	68 / 5.63	46 / 2.0	1 / 0.02	0 / 0	464 / 7.6	231 / 4.82	35 / 1.0	6 / 0.09	0.3	0.12	--	---	821	622	14	6.83
11N/35W-7A1°	7-27-51°	---	7.6	114 / --	45 / --	59 / --	-- / --	0 / -	225 / --	360 / --	27 / --	-- / --	---	--	37	---	858	470	20	--
11N/35W-7A1°	10-29-53	1,070	7.8	212 / 6.05	46 / 3.80	62 / 2.60	4 / 0.10	0 / 0	223 / 3.65	360 / 7.50	46 / 1.3	2 / 0.03	0.2	0.32	--	---	858	492	21	6.50
11N/35W-9P1°	10-28-53	236	7.3	6 / 0.3	5 / 0.43	40 / 1.72	3 / 0.07	0 / 0	43 / 0.7	7 / 0.15	50 / 1.4	8 / 0.13	0.1	0.07	--	---	198	38	68	1.82
11N/35W-12E1°	10-29-53	236	7.3	6 / 0.3	7 / 0.55	32 / 1.37	1 / 0.03	0 / 0	52 / 0.85	6 / 0.12	44 / 1.25	3 / 0.05	0.3	0.0	--	---	173	42	61	1.67
SANTA MARIA UNIT																				
10N/36W-12P1°	7- 1-46[q]	995	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	44 / --	-- / --	---	--	--	---	---	440	--	--
11N/34W-19R1°	7- 1-46[q]	549	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	63 / --	-- / --	---	--	--	---	---	150	--	--
11N/34W-29P2°	4-15-42[q]	1,170	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	70 / --	-- / --	---	--	--	---	---	516	--	--
11N/35W-18M1°	10-19-27[q]	---	---	123 / --	51 / --	65 / --	3.0 / --	0 / -	215 / --	368 / --	68 / --	1.6 / --	--	--	38	1.1	863	516	--	--
11N/35W-19E1°	8-27-42[q]	1,360	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	48 / --	-- / --	--	--	--	---	---	315	--	--
11N/35W-22C2°	7- 1-46[q]	1,200	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	46 / --	-- / --	--	--	--	---	---	550	--	--

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] S.B.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids: ppm	Total hardness as $CaCO_3$: ppm	Percent Na	Effective salinity epm
11N/35W-25P1	8-27-42[q]	1,010	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	50 / --	-- / --	---	--	--	---	---	400	--	--
11N/35W-27H1	6- 1-42[q]	773	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	41 / --	-- / --	---	--	--	---	---	315	--	--
11N/35W-28M1	6-29-42[q]	1,240	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	36 / --	-- / --	---	--	--	---	---	600	--	--
11N/35W-28Q1	10-19-27[q]	---	---	162 / --	56 / --	94 / --	-- / --	0 / -	232 / --	529 / --	51 / --	Tr. / --	---	--	10	---	1,136	635	--	--
11N/35W-33F1	10- 1-41[q]	1,180	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	47 / --	-- / --	---	--	--	---	---	525	--	--
11N/35W-35A2	6-16-42[q]	1,060	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	33 / --	-- / --	---	--	--	---	---	465	--	--
11N/36W-13R1	8-27-42[q]	1,190	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	46 / --	-- / --	---	--	--	---	---	490	--	--
								CUYAMA UNIT												
10N/24W-19F1	12- 8-45[r]	---	---	-- / --	-- / --	-- / --	-- / --	0 / -	232 / --	940 / --	753 / --	-- / --	---	12.0	--	---	---	444	80	--
10/24W-20M1	1942 or 43	---	---	213 / --	86 / --	420 / --	-- / --	- / -	222 / --	605 / --	669 / --	-- / --	---	14.0	--	---	---	885	51	--
10N/25W-8P1	6-17-42[r]	2,050	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	84 / --	-- / --	---	--	--	---	---	1,075	--	--
10N/25W-15Q1	4-23-47[r]	2,010	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	151 / --	-- / --	---	--	--	---	---	550	--	--

TABLE F-2 (continued)

10N/25W-18K1 4-23-47r 1,880 --- -- -- -- -- - -- -- 14 -- --- -- -- --- --- 900 ---

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY[a]

Well number[b] S.B.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca^d	Mg^d	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
10N/25W-22H1	8- 4-45r	---	---	-- / --	-- / --	-- / --	-- / --	0 / -	175 / --	762 / --	23 / --	-- / --	---	0.16	--	---	---	896	7.6	--
10N/25W-25M1	4-23-47r	1,670	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	15 / --	-- / --	---	--	--	---	---	1,050	--	--
10N/25W-26E1	7-14-42r	1,640	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	10 / --	-- / --	---	--	--	---	---	975	--	--
10N/25W-27R1	7-14-42r	1,670	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	11 / --	-- / --	---	--	--	---	---	950	--	--
10N/25W-29A1 or 2	8-12-42r	1,650	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	13 / --	-- / --	---	--	--	---	---	950	--	--
10N/25W-29A2	1942 or 43r	---	---	211 / --	84 / --	50 / --	-- / --	- / -	168 / --	752 / --	10 / --	-- / --	---	0.36	--	---	---	872	11	--
10N/25W-35C1	7-14-42r	1,720	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	10 / --	-- / --	---	--	--	---	---	1,100	--	--
10N/25W-35F1	7-14-42r	1,780	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	17 / --	-- / --	---	--	--	---	---	1,150	--	--
10N/26W-13G1	4-23-47r	1,690	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	14 / --	-- / --	---	--	--	---	---	800	--	--
10N/26W-14C1	2-13-34r	---	---	242 / --	50 / --	184 / --	-- / --	- / -	226 / --	970 / --	18 / --	-- / --	---	--	--	---	---	810	--	--
10N/26W-14C1	7- 9-40r	---	---	242 / --	70 / --	73 / --	-- / --	- / -	183 / --	887 / --	17 / --	-- / --	---	--	--	---	---	892	--	--
10N/26W-14C3	4-23-47r	1,720	---	-- / --	-- / --	-- / --	-- / --	- / -	-- / --	-- / --	14 / --	-- / --	---	--	--	---	---	875	--	--

TABLE F-2 (continued)

MINERAL ANALYSES OF GROUND WATERS IN SAN LUIS OBISPO COUNTY

Well number[b] M.D.B.&M.	Date sampled	EC x 10^6 at 25° C	pH	Mineral constituents in parts per million / equivalents per million: Ca[d]	Mg[d]	Na	K	CO_3	HCO_3	SO_4	Cl	NO_3	F ppm	B ppm	SiO_2 ppm	Fe ppm	Total dissolved solids ppm	Total hardness as $CaCO_3$ ppm	Percent Na	Effective salinity epm
CARRIZO PLAIN UNIT																				
29S/17E-13R1	10-21-53	335	8.4	49 / 2.45	15 / 1.24	144 / 6.25	0.4 / 0.01	0 / 0	165 / 2.7	166 / 3.46	74 / 2.1	38 / 0.62	0.85	0.58	--	---	619	185	63	7.24
29S/18E-29E1	10-21-53	885	8.1	47 / 2.35	15 / 1.20	135 / 5.87	0.4 / 0.01	0 / 0	186 / 3.05	166 / 3.45	34 / 1.6	34 / 0.563	0.7	0.60	--	---	635	177	62	6.37
29S/19E-31F1	9-21-54[f]	2,770	8.1	115 / 5.74	69 / 5.67	405 / 17.60	2.1 / 0.05	0 / 0	187 / 3.06	768 / 16.00	276 / 7.78	116 / 1.87	0.6	1.7	--	---	1,944	570	60	23.32
30S/18E-1D1	10-21-53	2,580	8.05	176 / 8.8	67 / 5.53	352 / 15.3	2 / 0.05	0 / 0	134 / 2.2	888 / 18.50	259 / 7.3	54 / 0.89	0.65	1.20	--	---	2,004	616	52	20.83
30S/18E-2N1	3-12-54	602	7.7	52 / 2.59	14 / 1.15	60 / 2.61	1 / 0.036	0 / 0	185 / 3.04	73 / 1.52	39 / 1.10	45 / 0.72	0.4	0.18	--	---	396	182	41	3.35
30S/19E-29M1	3-12-54[f]	2,130	8.3	83 / 4.15	44 / 3.66	323 / 14.10	2 / 0.06	4 / 0.06	252 / 4.14	614 / 12.80	172 / 4.88	24 / 0.35	1.5	2.95	--	---	1,477	390	64	17.82
11N/26W-2G1[c]	10-13-53	3,070	8.1	58 / 2.9	31 / 2.67	632 / 27.5	4 / 0.10	0 / 0	241 / 3.95	808 / 16.85	383 / 10.8	19 / 0.30	0.7	1.58	--	---	2,076	279	84	29.12

a. Analyzed by Division of Water Resources unless otherwise noted.
b. See Plate 9 for map location.
c. San Bernardino Base Line and Meridian.
d. These constituents in all analyses by Division of Water Resources and Pacific Chemical Consultants determined by titration.
e. Analyzed by United States Geological Survey Laboratory, Quality of Water Branch, Sacramento, California
f. Analyzed by Pacific Chemical Consultants, Van Nuys, California.
g. Analyzed by Letterman General Hospital.
h. Analyzed by United States Army, Presidio of Monterey.
j. Spring
k. Originof analysis unknown.
l. Na + K
m. Analyzed by Twinning Laboratory.
n. Analyzed by University of California Laboratory

a. Analyzed by Irrining Laboratory.
n. Analyzed by University of California Laboratory
p. Analyzed by Curtis Laboratory.

APPENDIX G

APPLICATIONS TO APPROPRIATE WATER IN SAN LUIS OBISPO COUNTY

(Filed with the Division of Water Resources and its predecessors
through June 30, 1956, under provisions of
Water Code, State of California)

APPENDIX G

APPLICATIONS TO APPROPRIATE WATER IN SAN LUIS OBISPO COUNTY

Application number	Date filed	Applicant	Source	Location of point of diversion: 1/4	1/4	Section	Township	Range	Meridian	Amount applied for, or licensed	Purpose	Status
231	1-13-16	Atascadero Mutual Water Company	Salinas River	S E and 3 other points	S E	31	28S	13E	MD	7.0 cfs	Irrigation, domestic and municipal	Permit
				Henry Ranch within the J. H.								
2499	8-15-21	Mary and Earnest F. Shuey	Vineyard Spring	N E	S W	4	25S	12E	MD	0.25 cfs	Irrigation, domestic and stock water	License
3022	9- 2-22	Charles and Anita S. Johnson	San Luis Obispo Creek	E½	S W	21	31S	12E	MD	0.25 cfs	Irrigation and stock water	License
3039	9-16-22	A. W. Burt	Unnamed spring tributary to Paso Robles Creek	S W	N E	15	27S	10E	MD	.006 cfs	Irrigation, domestic and stock	License
3591	8-16-23	Kathleen Burke Hale	Atascadero Creek	S W	S W	10	29S	12E	MD	74 af	Irrigation, domestic and stock	License
4421	1-15-25	Duane R. Hall	Salinas River	S E	S W	4	27S	12E	MD	0.55 cfs	Irrigation	License
5918	5-19-28	Paso Robles Beach Water Association	Old Creek	S W	S W	3	29S	10E	MD	28,800 gpd	Domestic	License
6150	1- 5-29	Henry J. Coventry	Tassajera Creek	S W	S W	22	29S	12E	MD	0.125 cfs	Irrigation, domestic and fish culture	License
7934	5-17-34	United States, Los Padres National Forest	Branch of East Fork Morro Creek	S E	N E	12	29S	11E	MD	300 gpd	Domestic and recreation	License
8276	3- 8-35	Maude and Clarence E. Blinn	Salinas River (underflow)	N W	N E	19S	30S	15E	MD	1.78 cfs	Irrigation	Permit
8572	3- 6-36	United States, Los Padres National Forest	Unnamed spring tributary to San Juan Creek	N E	N E	3	30S	16E	MD	1,950 gpd	Domestic, stock and recreation	License
10071	11-22-40	Gene E. Brendlin	Unnamed spring tributary to East Fork Morro Creek	N W	N E	12	29S	11E	MD	75 gpd	Domestic	License

APPLICATIONS TO APPROPRIATE WATER IN SAN LUIS OBISPO COUNTY
(continued)

Application number	Date filed	Applicant	Source	Location of point of diversion: 1/4	1/4	Sec.	Township	Range	Meridian	Amount applied for or licensed	Purpose	Status
10072	11-22-40	William G. and Carolyne R. Peck	Unnamed spring tributary to East Fork Morro Creek	N W	N E	12	29S	11E	MD	75 gpd	Domestic	License
10202	5- 8-41	C. W. Clarke Company	Estrella River	S W	N E	24	26S	14E	MD	0.47 cfs	Irrigation	License
10211	5-27-41	United States Army	Salinas River	N W	N W	8	30S	14E	MD	12.4 cfs and 45,000 af	Domestic and municipal	Permit
10216	6- 4-41	City of San Luis Obispo	Salinas River	N W	N W	8	30S	14E	MD	12.4 cfs and 45,000 af	Municipal	Permit
10279	9- 2-41	Frank Machado	Los Osos Creek	S W	N E	20	30S	10E	MD	140 gpm	Irrigation and domestic	License
10294	10-10-41	City of El Paso de Robles	Salinas River	Movable			26S 27S	12E	MD	8.0 cfs	Domestic and municipal	Permit
10803	4-21-44	J. F. Goodwin Company	Four unnamed springs tributary to an unnamed stream thence Pozo Creek	N W N W N W N W	N E S E N E N E	10 10 15 15	30S 30S 30S 30S	15E 15E 15E 15E	MD) MD) MD) MD)	2.53 cfs	Irrigation, Domestic and stock	Permit
11343	3-25-46	United States Bureau of Reclamation	Cuyama River	N E	S W	35	11N	33W	SB)	214,000 af	Irrigation, domestic and salinity control	Permit
11344	3-25-46	United States Bureau of Reclamation	Cuyama River	N E	S W	35	11N	33W	SB)			
11459	7- 5-46	Harry Kyle	East Fork Morro Creek	N W	N E	12	29S	11E	MD	75 gpd	Domestic	License
11732	2-17-47	City of El Paso de Robles	Salinas River	N W	N W	8	30S	14E	MD	2,400 af	Domestic and municipal	Permit
11745	2-26-47	San Luis Obispo County Waterworks District No. 6	Salinas River	N W	N W	8	30S	14E	MD	1.5 cfs and 200 af	Domestic and Municipal	Permit
12285	1-30-48	Charles William Hunter	Salinas River	N W S E	S E S W	9	27S	12E	MD	0.5 cfs	Irrigation	Permit

[redacted]

(continued)

[redacted]

APPLICATIONS TO APPROPRIATE WATER IN SAN LUIS OBISPO COUNTY
(continued)

Application number	Date filed	Applicant	Source	Location of point of diversion: 1/4	1/4	Section	Township	Range	Meridian	Amount applied for or licensed	Purpose	Status
12526	5-28-46	San Luis Obispo County Waterworks District No. 5	Salinas River	N W	N W	8	30S	14E	MD	1.5 cfs and 200 af	Domestic and municipal	Permit
12559	6-24-48	United States, Los Padres National Forest	Lyda Spring	S W	S E	33	29S	16E	MD	130 gpd	Domestic	License
12560	6-24-48	United States, Los Padres National Forest	Pine Spring	N W	N E	25	30S	16E	MD	1,040 gpd	Domestic and stock	License
12561	6-24-48	United States, Los Padres National Forest	Friis Spring	N W	S W	23	29S	15E	MD	0.002 cfs	Stock water	Permit
12562	6-24-48	United States, Los Padres National Forest	Navajo Spring	S E	N E	25	29S	15E	MD	700 gpd	Domestic and stock	License
12586	7- 7-48	Carl F. Slaten	Steiner Creek	N W	S W	11	30S	12E	MD	0.029 cfs	Fish Culture	License
12609	7-22-48	United States, Los Padres National Forest	Aqua Escondido Spring	S E	S E	35	31S	16E	MD	600 gpd	Domestic and stock	License
12610	7-22-48	United States, Los Padres National Forest	Unnamed spring tributary to Stony Creek	N E	N E	28	31S	16E	MD	1,300 gpd	Fire protection	License
13068	5- 2-49	California State Polytechnic College	Brizziolari Creek	S E	S E	14	30S	12E	MD	0.06 cfs) 23 af)	Irrigation	License
13690	4-14-50	Jack M. Greer, Jr.	Paso Robles Creek	S E	N W	35	27S	11E	MD	0.42 cfs	Irrigation	Permit
15393	6-29-53	P. G. and E.Company	Toro Creek	N W	N W	12	29S	10E	MD	1.79 cfs and 5,000 af	Industrial and domestic	Pending
15788	3-22-54	County of San Luis Obispo	Atascadero Creek	S E	S W	28	28S	12E	MD	140 af	Recreation	Permit
15855	4-30-54	Rancho Las Yeagues	Bitterwater Creek	S W	S E	22	28S	18E	MD	44 af	Stock Water	Permit
15900	6- 9-54	Charles W. Hunter	Salinas River (underflow)	N W	S E	9	27S	12E	MD	0.86 cfs	Irrigation	Permit

APPLICATIONS TO APPROPRIATE WATER IN SAN LUIS OBISPO COUNTY
(continued)

Application number	Date filed	Applicant	Source	Location of point of diversion: 1/4	1/4	Section	Township	Range	Meridian	Amount applied for, or licensed	Purpose	Status
16124	11- 4-54	Monterey County Flood Control and Water Conservation District	Nacimiento River		N W	15	25S	10E	MD	350,000 af	Irrigation, domestic, municipal, industrial, recreation and incidental flood control	Permit
16567	8-31-55	J. F. Mac Gillivray	Unnamed stream tributary to Las Tablas Creek, Nacimiento River	N E	S W	19	26S	11E	MD	15 af	Stock water	Pending
16568	8-31-55	J. F. Mac Gillivray	Unnamed stream tributary to Las Tablas Creek, Nacimiento River	S W	N E	25	26S	10E	MD	40 af	Irrigation and stock water	Pending
16569	8-31-55	J. F. Mac Gillivray	Unnamed stream tributary to Las Tablas Creek, Nacimiento River	N W	N E	25	26S	10E	MD	20 af	Irrigation and stock water	Pending
16570	8-31-55	Arthur and Bernice Forrester	Unnamed stream tributary to Las Tablas Creek, Nacimiento River	S E	N E	7	26S	10E	MD	5.12 af	Stock water	Permit
16571	8-31-55	Arthur and Bernice Forrester	Unnamed stream tributary to Las Tablas Creek, Nacimiento River	S E	N W	18	26S	10E	MD	25 af	Stock water	Permit
16587	9- 6-55	Joe Trigueiro	Unnamed stream tributary to Las Nacimiento River	S W N W	S W S W	19	25S	10E	MD	3.8 af	Stock water	Pending
16588	9- 6-55	Frank Trigueiro	Unnamed stream tributary to Las Tablas Creek	N W	S W	30	25S	10E	MD	4.8 af	Stock water	Permit

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APPLICATIONS TO APPROPRIATE WATER IN SAN LUIS OBISPO COUNTY
(continued)

APPLICATIONS TO APPROPRIATE WATER IN SAN LUIS OBISPO COUNTY
(continued)

Application number	Date filed	Applicant	Source	Location of point of diversion: 1/4	1/4	Sect-tion	Town-ship	Range	Merid-ian	Amount applied for, or licensed	Purpose	Status
16601	9-14-55	Donn Bonnheim	Unnamed stream tributary to Las Tablas Creek	N E N E	N W S E	20 17	26S	10E	MD	30 af) 15 af)	Stock water	Permit
16603	9-14-55	Anson Lisk	Unnamed stream tributary to Salinas River	N E	N E	24	30S	15E	MD	17 af	Stock water	Permit
16609	9-19-55	Roland T. Abbey	Unnamed stream tributary to Nacimiento River	N W	S W	32	25S	11E	MD	25 af	Stock water	Permit
16621	9-26-55	Anson Lisk	Unnamed stream tributary to Salinas River	S E	S E	22	30S	15E	MD	5 af	Stock water	Permit
16630	9-28-55	Gage H. Irving	Unnamed stream tributary to Las Tablas Creek	S E	S W	6	26S	10E	MD	15 af	Stock water	Permit
16631	9-28-55	William Gerst	Unnamed stream tributary to Las Tablas Creek	S E	S W	14	26S	10E	MD	20 af	Irrigation and stock water	Permit
16632	9-28-55	Arian Ramage	Las Tablas Creek	N W	N E	35	26S	10E	MD	45 af	Irrigation, stock and recreation	Permit
16633	9-28-55	L. V. Hughes	Unnamed stream tributary to Nacimiento River	N E	N E	18	25S	10E	MD	15 af	Stock water	Pending
16634	9-28-55	L. V. Hughes	Unnamed stream tributary to Nacimiento River	N W	S W	17	25S	10E	MD	6 af	Stock water	Pending
16665	10-13-55	Achilles F. Franscioni	Morro Creek	N E	N E	2	29S	11E	MD	.075 cfs	Irrigation, domestic, stock and fire protection	Pending
16747	11-25-55	Louis Bergman	Jack Creek	N W	N E	14	27S	10E	MD	48 af	Irrigation	Pending

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AM 02428

APPLICATIONS TO APPROPRIATE WATER IN SAN LUIS OBISPO COUNTY
(continued)

Application number	Date filed	Applicant	Source	Location of point of diversion: 1/4	1/4	Section	Township	Range	Meridian	Amount applied for, or licensed	Purpose	Status
16757	11-30-55	California National Guard	El Chorro Creek	N E	N E	9	30S	12E	MD	1.5 cfs and 220 af	Irrigation and domestic	Incomplete
16779	12- 9-55	San Luis Obispo County Flood Control and Water Conservation District	Nacimiento River			9	25S	10E	MD	265,000 af	Irrigation, domestic, industrial, recreation, municipal and flood control	Incomplete
16811	12-27-55	Donn Bonnheim	Dip Creek	S E S E	S W S W	2 3	26S	10E	MD	8 af) 20 af)	Stock water	Pending
16812	12-27-55	Donn Bonnheim	Unnamed stream tributary to Dip Creek	S W N W S E	S E N W S E	9 9 31	26S 26S 25S	10E 10E 10E	MD MD MD	10 af) 10 af) 25 af)	Stock water Stock water Stock water	Pending
16827	1-12-56	Arthur W. Burt	Unnamed stream tributary to Jack Creek	S E	N E	15	27S	10E	MD	20 af	Irrigation, domestic and stock water	Pending
16829	1-12-56	A. B. and J. M. McKinley	San Marcos Creek	N½ S E N E	N W N E N W	9 8 17	26S	11E	MD	250 af	Irrigation and stock water	Pending
16911	2-29-56	Ernest F. Shuey	Unnamed stream tributary to Nacimiento River	S W	N E	17	25S	9E	MD	2 af	Stock water	Pending
16912	2-29-56	Ernest F. Shuey	Unnamed stream tributary to Nacimiento River	S E	N E	17	25S	9E	MD	2 af	Stock water	Pending
16921	3- 8-56	William H. Luther	Jack Creek	S W	N W	28	27S	11E	MD	0.25 cfs	Irrigation and stock water	Pending
16930	3-12-56	C. H. Evans	Unnamed stream tributary to Poso Creek	NE	N E	15	30S	15E	MD	30 af	Stock water	Pending

APPLICATIONS TO APPROPRIATE WATER IN SAN LUIS OBISPO COUNTY
(continued)

[redacted] APPLICATIONS TO APPROPRIATE WATER IN SAN LUIS OBISPO COUNTY
(continued)

Application number	Date filed	Applicant	Souce	Location of point of diversion: 1/4	1/4	Section	Township	Range	Meridian	Amount applied for or licensed	Purpose	Status
16948	3-19-56	C. E. Palmer	Unnamed stream tributary to Las Tablas Creek	S E	N W	19	26S	11E	MD	6 af	Stock water	Pending
16990	4- 5-56	John B. Wineman	Unnamed stream tributary to Nipomo Creek	Lot 62		25	11N	33W	SB	15 af	Stock water and fish culture	Pending
17060	4-30-56	Avenales Cattle Company	Unnamed stream tributary to Salinas River	S W	S E	32	30S	16E	MD	20 af	Stock water	Pending
17077	5- 8-56	J. A. and Pearl L. Weishar	Estrella Creek (underflow)	7 wells within	N E	27	25S	12E	MD	1.0 cfs	Irrigation, domestic and stock water	Pending
17088	5-14-56	Walter C. Rietz	Toro Creek	W½	N E	27	28S	11E	MD	0.166 cfs and 4 af	Irrigation, domestic and stock water	Incomplete
17114	6- 7-56	City of San Luis Obispo	Old Creek	N W	N E	3	29S	10E	MD	16 cfs and 22,040 af	Municipal	Incomplete
17115	6- 7-56	California Men's Colony Department of Corrections	Old Creek	N W	N E	3	29S	10E	MD	16 cfs and 4,480 af	Domestic	Pending
17116	6- 7-56	California State Polytechnic College	Old Creek	N W	N E	3	29S	10E	MD	16 cfs and 4,480 af	Irrigation	Incomplete
17123	6-12-56	City of El Paso de Robles	Paso Robles Creek			36	27S	11E	MD	20,000 af	Municipal	Incomplete

APPENDIX H

SOIL MOISTURE DEPLETION AND APPLIED WATER STUDIES

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APPENDIX H

SOIL MOISTURE DEPLETION AND APPLIED WATER STUDIES

Introduction

Soil moisture depletion and applied water studies were conducted in San Luis Obispo County during the 1953 and 1954 irrigation seasons for the purpose of determining unit values of consumptive use of water and applied water for various prevailing irrigated crops. In connection with the study, data were also obtained with regard to consumptive use of water by certain classes of nonirrigated agriculture and native vegetation. Information developed and evaluated in connection with the soil moisture depletion and applied water studies were used to derive estimates of consumptive use of applied water and total applied water as described in Chapter III.

Successful completion of the soil moisture depletion and applied water studies was due in large part to the valuable assistance furnished by the several federal, state, county, and private agencies working in cooperation with the Division of Water Resources, together with the cooperation furnished by irrigators who assisted in the establishment of study plots and maintenance of records. Special mention is made of the helpful cooperation of the Soil Science Department, California State Polytechnic College, and the San Luis Obispo County Farm Advisor, who made available their laboratory facilities and field sampling equipment. Basic soil moisture relationships were established from the results of office and laboratory studies by personnel of the Western Soil and Water Management Section, Agricultural Research Service,

Location of Study Plots

Care was exercised in the selection of study plots so that they would be as nearly representative of the prevailing crop pattern as possible. Consideration was also given to a possible change in the crop pattern under ultimate conditions of development. Within certain crop groupings, as for example alfalfa and permanent pasture, considerable variation was noted throughout San Luis Obispo County with regard to soil types and depths, topography, and method of irrigation. In the case of sugar beets, variations occur in methods of cultivation and harvesting as well as in soil types and methods of irrigation. Within reasonable limits, an attempt was made to resolve these variables in the group of plots selected for study. Care was also taken to select plots with adequate drainage. Plots were not fenced or otherwise disturbed so as to interfere with normal cultivation, irrigation and harvesting.

A total of 13 plots were selected for study during the 1953 irrigation season, of which four were later dropped because of high water table condiditons or the presence of excessive rock in the sampling zone. Of the nine plots at which studies were completed, two were alfalfa, two were pasture, four were truck and one was sugar beets. In addition to the nine plots at which continuous soil moisture depletion studies were conducted, intermittent studies were conducted at 15 other irrigated and non-irrigated plots for the purpose of checking data and assumptions obtained from similar studies in other areas, as well as for the purpose of providing support data for the current study.

Presented in Table H-1 are descriptions of the 13 base plots selected for the 1953 soil moisture depletion study. Data developed at the plots listed in Table H-1 formed the principal bases for the determination of units of

consumptive use of water in San Luis Obispo County. Map reference numbers listed in Table H-1 refer to plot locations shown on Plate 11, "Present and Probable Ultimate Land Use, 1953".

Table H-1

LOCATION AND DESCRIPTION OF SOIL MOISTURE DEPLETION STUDY PLOTS

Map reference number	Owner	Crop	Method of irrigation	Location referenced to Mt. Diablo Base and Meridian	Soil description	Average soil depth sampled, in inches	Sampling period From	Sampling period To	Remarks
Upper Salinas Unit									
1	Jespersen	Alfalfa	Sprinkler	SW¼, S13, T28S, R12E	Lockwood gravelly sandy loam	72	4/ 9/53	10/18/53	
2	Van Horn	Alfalfa	Sprinkler	SE¼, S 5, T29S, R13E	Yolo loam	72	4/17/53	10/ 5/53	
3	Heilmann Bros.	Pasture	Border check	NW¼, S14, T28S, R12E	Huerhuero sandy loam	72	4/ 7/53	3/ 4/54	Inconclusive results, excessive drainage
4	Van Horn	Pasture	Sprinkler	SW¼, S31, T28S, R13E	Metz or Agueda gravelly sandy loam	72	4/17/53	10/27/53	
5	Giorgi Bros.	Pasture	Sprinkler	NW¼, S24, T28S, R12E	Lockwood gravelly sandy loam	72	4/ 6/53	--	Dropped-excessive rock and gravel in root zone
Coastal Unit									
6	Maino	Pasture	Sprinkler	SE¼, S36, T31S, R12E	Metz loam	72	4/15/53	6/10/53	Dropped-high water table
7	Nagano Corp.	Sugar beets	Sprinkler	SW¼, S19, T29S, R11E	Dublin clay	48	4/ 1/53	9/12/53	
8	Nagano Corp.	Artichokes	Sprinkler	SW¼, S19, T29S, R11E	Yolo clay loam	72	8/ 3/53	11/ 9/53	
9	Phelan	Lettuce	Furrow	SE¼, S30, T12N, R35W*	Dublin fine sandy loam	36	9/ 5/53	10/26/53	
10	Fukuhara	Broccoli	Furrow	NW¼, S33, T32S, R13E	Dublin clay	48	9/ 6/54	2/ 1/54	
11	Phelan	Celery	Furrow	SW¼, S29, T12N, R35W*	Clay loam	48	8/ 4/53	11/30/53	Poor drainage-perched water
12	Taylor	Celery	Furrow	SW¼, S33, T32S, R13E	Dublin clay loam	36	5/24/53	7/23/53	Dropped-perched water
13	Taylor	Celery	Furrow	NW¼, S33, T32S, R13E	Dublin clay	36	5/28/53	9/ 8/53	Dropped-perched water

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Methods and Procedures

Routine work accomplished in connection with the soil moisture depletion study included a coordinated program of field collection and laboratory processing of soil samples conducted concurrently with office compilation and reduction of data to usable form. Special field and laboratory work included the collection of undisturbed soil samples for the determination of basic soil moisture relationships including volume weights, field capacities, and wilting percentages.

Routine soil sampling was accomplished using a modified Veihmeyer soil tube which took soil cores having a diameter of about 25/32 inches. The tube was forced into the soil by blows from a 15- or 25-pound drop hammer and was removed by hand or by a specially designed jack. Soil samples were taken from two to five days following each irrigation, and again immediately prior to the next irrigation. Samples were also taken prior to and following infrequent rain storms. With work schedule permitting, additional samples were taken between irrigations to provide further data on loss of soil moisture between irrigations. Soil moisture in samples taken following an irrigation was found to be generally at or near field capacity whereas soil moisture in preirrigation samples taken near the ground surface was generally near the wilting percentage with soil moisture increasing with depth.

Sampling depths varied at different plots. With deeper rooted crops such as alfalfa, pasture, certain field crops, and native vegetation, samples were taken by one-foot depth increments to six feet at most plots. On shallower rooted crops, samples were taken at six-inch depth increments to a depth of two feet. Below two feet, samples were taken at one-foot depth

increments to depths of three, four, or six feet. Depending upon the cropping practice, from three to nine cores were taken from each plot at each sampling. At truck crop plots, cores were taken at quarter points along runs at the tops and bottoms of the furrows. In the case of pasture irrigated by the border check method, three evenly spaced cores were taken at quarter points along the runs. For sprinkler irrigated plots, cores were taken in a pattern radiating out from sprinkler heads.

Soil samples were placed in covered cans upon removal from the soil tube and then taken to the laboratory to be weighed and dried.

Volume weights of soils in test plots were determined from soil samples collected with either specially designed coring devices or the Veihmeyer soil tube. Undisturbed cores were taken with either a three inch Uhland coring device or a two-inch diameter Pomona soil sampling device in one to three inch depth increments. The number of increments and total length of each core taken depended upon the depth of the principal root zone and the degree of stratification encountered. Cores were retained in protective cylinders and transported to the laboratory for processing. Routine soil samples collected with the Veihmeyer soil tube were also used to check volume weights by a method discussed in a later section of this appendix. In some instances, grab samples were also obtained for field capacity and wilting percentage determinations where it was impossible to obtain undisturbed cores with the special coring devices.

Laboratory processing of routine soil samples included initial weight determination of soil samples brought in from the field, controlled drying of samples to remove all moisture, and final weight determinations of dry samples.

Soil samples were brought directly to the laboratory following their collection. As moisture losses during transportation from field to laboratory were negligible, the initial moisture content determined in the laboratory was assumed to be equal to the field moisture content of the soil at the time of sampling. Soil samples were then dried while still in cans in thermostatically controlled electric ovens at 105°C for a period of 24 to 48 hours depending upon the soil. A temperature of 105°C was used to avoid the possiblity of burning organic matter contained in the samples. Following drying, samples were again weighed to determine their net or dry weight.

Presented as Table H-2 is a reproduction of a typical field and laboratory data sheet which shows actual data obtained from a pre-irrigation sampling at Plot No. 1 near Atascadero. It will be noted that samples were weighed to the nearest tenth of a gram before and after oven drying. As all cans had been brought to a uniform weight, a counter balance made it possible to eliminate the can weight from computations. Data obtained from Plot No. 1 are considered representative and are cited hereinafter for illustrative purposes.

TABLE H-2

FIELD AND LABORATORY DATA SHEET
FOR SOIL MOISTURE SAMPLES

Date Sampled: 8/18/53 Purpose: Post-irrigation Crop: Alfalfa

Date Previous Samping: 8/12/53 Property: Jespersen Sampled by: R. E. M.

Hole No. 1

Depth	0-1	1-2	2-3	3-4	4-5	5-6
Can number	117	118	119	120	122	123
Wet weight	100.4	97.4	103.0	130.0	143.5	121.2
Dry weight	82.4	80.7	87.1	113.0	125.0	107.3
Loss	18.0	16.7	15.9	17.0	18.5	13.9
Per cent water*	21.9	20.7	18.3	15.1	14.8	12.9

Hole No. 2

Depth	0-1	1-2	2-3	3-4	4-5	5-6
Can number	124	127	128	130	131	132
Wet weight	118.9	109.4	94.5	116.7	136.0	149.5
Dry weight	97.6	92.1	79.6	100.1	117.0	127.0
Loss	21.3	17.3	14.9	16.6	19.0	22.5
Per cent water*	22.1	18.8	18.7	16.6	16.3	17.7

Hole No. 3

Depth	0-1	1-2	2-3	3-4	4-5	5-6
Can number	133	134	135	136	137	138
Wet weight	117.6	104.4	105.8	149.6	108.3	145.8
Dry weight	96.4	86.4	86.7	128.2	92.5	123.6
Loss	21.2	18.0	19.1	21.4	15.8	22.2
Per cent water*	22.0	20.9	22.0	16.7	17.1	18.0

Hole No. 4

Depth	0-1	1-2	2-3	3-4	4-5	5-6
Can number	143	146	147	148	149	150
Wet weight	83.4	669	116.9	125.4	151.3	148.7
Dry weight	68.3	55.9	97.9	107.1	129.8	126.7
Loss	15.1	11.0	19.0	18.3	21.5	22.0
Per cent water*	22.1	19.7	19.4	17.1	16.6	17.4

* Per cent water on a dry weight basis.

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FIELD AND LABORATORY DATA SHEET
FOR SOIL MOISTURE SAMPLES
(continued)

Hole No. 5

Depth	0-1	1-2	2-3	3-4	4-5	5-6
Can number	151	152	154	155	156	157
Wet weight	108.3	83.9	107.8	80.3	142.0	144.7
Dry weight	87.7	69.3	88.7	69.0	121.2	126.4
Loss	20.6	14.6	19.1	11.3	20.8	18.3
Per cent water*	23.5	21.1	21.5	16.4	17.1	14.5

* Per cent water on a dry weight basis.

Soil samples collected with the Uhland coring device and Pomona soil sampling device were processed in a more elaborate manner than were the routine samples collected for moisture determinations. The soil cores were first saturated by partial immersion in water for 48 hours. They were then placed on a Leamer-Shaw blotter tension table with a tension of 60 centimeters of water. Samples remained on this table until moisture equilibrium was reached. Samples were then weighed and placed on ceramic plates. Subsequent tensions of 100, 200, and 330 centimeters of water were applied. Samples were weighed between each tension run. At the end of the run, samples were oven dried. The soil was then removed from the cores, broken down, and passed through a 20 mesh screen. The 15,000 centimeter tension was run on this material, using the standard Richards' type pressure plate technique.

Disturbed samples were processed in similar fashion except the air dried soil sample was packed uniformly into small soil cans two inches in diameter and one inch deep. All 15,000 centimeters tension observations were replicated three times. Many of the undisturbed cores were replicated and all disturbed samples were replicated three times.

Presented as Table H-3 is a reproduction of laboratory test results from undisturbed cores obtained at Plot No. 1.

TABLE H-3

SUMMARY OF TYPICAL LABORATORY DETERMINATION
OF BASIC SOIL MOISTURE RELATIONSHIPS

Map reference No. 1 Owner: Jespersen Crop: Alfalfa

Profile Description: Depth, in inches	Texture	Color	Laboratory sample number	Depth, in inches	Volume weight	Per cent soil moisutre for 60, 100, 200, and 15,000 centimeters of water tension: 60	100	200	300	15,000
0-36	Loam	Dark brown	367	12-18	1.07	20.6	17.6	15.8	14.6	8.5
36-72	Sandy loam	Brown	368	30-36	1.34	20.4	18.7	15.9	13.4	8.7
			369	40-60	1.34	21.9	19.3	14.8	12.3	5.4

Volume weights or apparent specific gravities of soils were derived as described in the previous section and were checked by comparison of the average dry weight of a number of soil samples obtained from a selected group of stations with the weight of an equal volume of water. Volume weights determined in this manner checked closely with the results of laboratory determinations.

Data obtained from routine sampling of plots were summarized by averaging the per cent moisture content at equal depths. Loss of soil moisture between samplings was derived as the difference in moisture content measured after each sampling. For the short periods immediately before, during, and after irrigations, when no measurements of moisture depletion could be made, depletion rates were estimated using the rates measured prior to and after irrigations. In a few cases, it was necessary to eliminate certain plots from the study program due to the presence of a perched water table and in one case due to the presence of excessive rock and gravel in the sampling zone. Results from one plot proved to be inconclusive apparently because of excessive drainage which occurred after the soil had reached its field capacity, with a resultant depletion rate in excess of what actually occurred due to transpiration and evaporation alone.

Summary of Results

Results of soil moisture depletion determinations expressed in equivalent inches of depth of water are summarized in Table H-4 for all plots at which studies could be completed and evaluated. Soil moisture depletion and accretion rates at Plot No. 1 as measured during the 1953 study season are depicted graphically on Plate H-1, "Soil Moisture Depletion and Accretion". Vertical lines shown on Plate H-1 indicate times precipitation

occurred or irrigation water was applied. Rates of consumptive use are indicated by the slopes of lines between irrigations, and the sum of the ordinates of the sloping lines for any period represents the total amount of water consumptively used for that period. Soil moisture depletion curves as shown on Plate H-1 are normally straight lines since the rate of depletion is relatively independent of the level of soil moisture as long as the moisture content is maintained between the moisture equivalent and the permanent wilting point.

TABLE H-4

OBSERVED CONSUMPTIVE USE OF WATER
AT SOIL MOISTURE DEPLETION STUDY PLOTS, 1953 AND 1954
(In inches of depth)

Map reference number	Crop	Number of irrigations	1953 April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1954 Jan.	Feb.	Total
Upper Salinas Unit														
1	Alfalfa	6	4.94	4.93	4.30	5.18	5.93	5.47	4.68	--	--	--	--	35.43
2	Alfalfa	9	--	2.53	5.15	5.10	4.42	4.98	5.15	--	--	--	--	27.33
3	Pasture	14	3.03	5.03	8.36	11.13	11.32	7.72	5.55	--	--	--	--	52.14[a]
4	Pasture	14	--	4.14	7.82	4.56	6.70	2.64	2.72	--	--	--	--	28.58
Coastal Unit														
7	Sugar Beets	4	1.83	2.13	2.13	2.25	2.10	2.05	--	--	--	--	--	12.49
8	Artichokes	3	--	--	--	--	2.58	2.52	2.21	--	--	--	--	7.31
9	Lettuce	3	--	--	--	--	--	3.77	3.31	--	--	--	--	7.08
10	Broccoli	6	--	--	--	--	--	4.22	3.03	2.31	4.22	3.07	2.97	19.82
11	Celery	8	--	--	--	--	0.97	0.95	0.83	0.72	--	--	--	3.47[b]

a. Observed soil moisture depletion greater than actual consumptive use apparently due to continued drainage after soil had reached field capacity.
b. Observed soil moisture depletion less than actual consumptive use due to presence of perched water.

Applied Water Study

A study of current practice in the application of water to irrigated crops was conducted in San Luis Obispo County during the 1953 and 1954 irrigation seasons in conjunction with the soil moisture depletion study. In addition to providing a basis for the determination of units of applied water, the study furnished a considerable amount of data on irrigation methods and frequencies and local crop management. From the combined results of the soil moisture depletion and applied water studies, sufficient data were available to provide a basis for estimating irrigation efficiencies.

Field and office work in connection with the applied water study included the maintenance of records of power consumption at wells serving 27 study plots and the computations of total applied water for various desired units of time based on the quotient of measured kilowatt-hours and a conversion factor of kilowatt-hours per acre-foot of water pumped. Conversion factors were obtained from the results of pump tests performed during the periods for which power consumption was measured and for which units of applied water were desired.

As in the case of the soil moisture depletion study, efforts were directed towards securing a representative group of test plots for the applied water study. Care was taken to include typical plots with regard to crop type and variety, soil type, slope, method of irrigation and method of cultivation. In the case of the applied water study, however, entire fields or cropped areas were used, with units of water application being expressed in acre-feet per acre per unit of time. Areas of study plots were determined from field surveys and by planimetering from base maps.

Summarized in Table H-5 are descriptions of the 27 plots studied during the 1953 and 1954 irrigation seasons together with measured monthly quantities of applied water. Locations of study plots are shown on Plate 11, "Present and Probable Ultimate Land Use, 1953".

APPLICATION OF WATER TO REPRESENTATIVE CROPS IN SAN LUIS OBISPO COUNTY
IN 1953 AND 1954

Crop	Season	Reference	Well number	Method of irrigation	Soil description	Area in acres	Depth of applied water, in inches								Total depth in inches
							Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	
Upper Salinas Unit															
Alfalfa	1953	14	28S/12E-10G1	Border check	Yolo fine sandy loam	16.0	1.8	2.9	2.9	3.4	3.5	3.5	3.6	--	21.6
	1953	1	28S/12E-13N1	Sprinkler	Lockwood gravelly sandy loam	23.0	6.1	4.6	4.6	7.4	8.3	5.5	3.2	--	39.7
	1953	15	26S/12E-14L1	Sprinkler	Huerhuero gravelly sandy loam	30.0	5.2	8.3	9.0	9.7	9.1	8.3	7.9	--	57.5
	1953	2	29S/13E- 5K2	Sprinkler	Yolo loam	9.2	4.9	8.5	8.3	12.6	13.9	12.2	12.1	--	72.5
	1954	15	26S/12E-14L1	Sprinkler	Huerhuero gravelly	30.0	3.0	4.2	6.8	8.2	4.9	5.9	0.8	--	33.8
	1954	16	26S/12E-26D1 26S/12E-27H2	Sprinkler	Hames sandy loam	86.0	4.0	4.8	5.2	5.8	4.4	5.2	0.2	--	29.6
Pasture	1953	5	28S/12E-24C1	Sprinkler	Lockwood gravelly sandy loam	20.7	4.6	5.0	10.0	10.9	10.3	7.9	8.2	--	56.9
	1953	3	28S/12E-14G1	Border check	Huerhuero sandy loam	88.0	3.1	3.2	10.2	9.1	10.2	10.3	9.8	--	55.9
	1953	17	26S/12E-14L1	Sprinkler	Huerhuero gravelly sandy loam	32.0	4.8	7.8	8.4	9.1	8.5	7.8	7.4	--	53.8
	1953	4	28S/13E-31K1	Sprinkler	Metz or Agueda gravelly sand loam	27.6	3.4	3.2	6.4	12.6	11.9	10.9	10.4	--	58.8
	1954	5	28S/12E-24C1	Sprinkler	Lockwood gravelly sandy loam	20.7	0.1	3.2	13.8	7.0	10.1	8.6	5.6	--	48.4
	1954	3	28S/12E-14G1	Border check	Huerhuero sandy loam	88.0	(--7.9--)		15.0	6.7	10.3	9.4	7.8	--	57.4
	1954	18	25S/12E-21L1	Sprinkler	Hames sandy loam	36.0	1.6	3.8	5.0	5.6	5.5	3.6	4.2	--	29.3

TABLE H-5 (continued)

APPLICATION OF WATER TO REPRESENTATIVE CROPS IN SAN LUIS OBISPO COUNTY
IN 1953 AND 1954

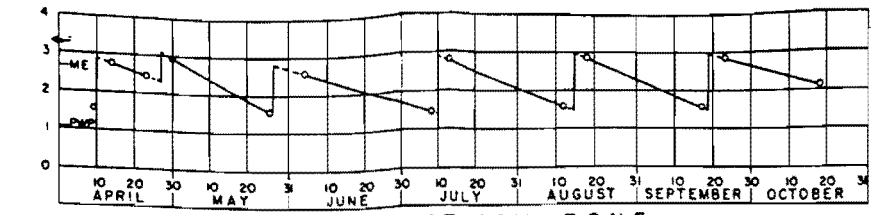
Crop	Season	Map reference number	Well number	Method of irrigation	Soil description	Area, in acres	Depth of applied water, in inches							Total depth, in inches
							Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	
	1954	17	26S/12E-14L1	Sprinkler	Huerhuero gravelly sandy loam	32.0	2.9	4.0	6.4	7.7	4.7	5.5	0.7	--	31.9
Field corn	1954	4	28S/13E-31K1	Furrow	Metz or Agueda gravelly sandy loam	27.6	--	3.6	5.2	(---9.4---)		2.2	2.9	1	23.3
Coastal Unit															
Alfalfa	1954	19	30S/11E-20K2	Sprinkler	Metz loam	47.0	--	5.6	5.9	5.2	5.4	5.9	1.4	--	29.4
Pasture	1954	20	32S/13E-34D1	Sprinkler	Dublin loam	20.5	--	2.8	5.3	7.2	5.5	5.4	2.8	--	29.0
Walnuts	1954	21	31S/13E-19H1	Furrow	Botella clay loam	25.5	--	0.1	1.9	7.7	8.4	0.2	--	--	18.3
Sugar beets	1953	7	29S/11E-19P1 19L1 19K1 19K2 30D1	Sprinkler	Dublin clay	86.0	2.2	3.0	3.0	3.7	--	--	--	--	11.9
	1954	7	29S/11E-19P1 19L1 19K1 19K2 30D2	Sprinkler	Dublin clay	86.0	--	3.1	4.3	3.7	2.3	--	--	--	13.4
Celery	1953	11	32S/13E-34R3	Furrow	Dublin clay loam	7.9	--	--	--	--	6.1	8.2	7.3	--	21.6
	1953	12	32S/13E-33L2	Furrow	Dublin clay loam	4.2	16.0	9.0	27.0	5.0	--	--	--	--	57.0
	1953	13	32S/13E-33E3	Furrow	Yolo sandy loam	16.0	--	4.0	21.6	29.7	14.3	--	--	--	69.6
Lettuce	1953	9	32S/13E-34R3	Furrow	Dublin fine sandy loam	9.7	--	--	--	--	1.4	3.8	2.6	--	7.8
Artichokes	1953	8	29S/11E-19P1 19L1 19K1 19K2 30D1	Sprinkler	Dublin sandy loam	43.7	--	--	--	1.0	4.8	2.9	2.9	1.6	13.2

TABLE H-5 (continued)

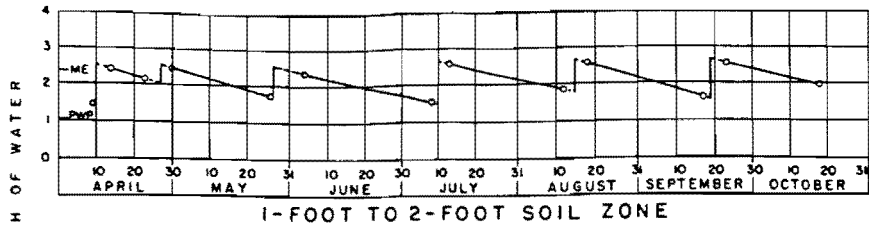
TABLE H-5 (continued)

APPLICATION OF WATER TO REPRESENTATIVE CROPS IN SAN LUIS OBISPO COUNTY
IN 1953 AND 1954

Crop	Season	Map reference number	Well number	Method of irrigation	Soil description	Area, in acres	Depth of applied water, in inches								Total depth, in inches
							Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	
Artichokes	1954	22	29S/11E-19P1 19L1 19K1 19K2 30D1	Sprinkler	Dublin sandy loam	32.8	--	--	--	--	2.6	2.6	3.0	--	8.2
	1954	8	29S/11E-19P1 19L1 19K1 19K2 30D1	Sprinkler	Dublin sandy loam	43.7	--	--	--	--	2.3	2.5	2.4	--	7.2

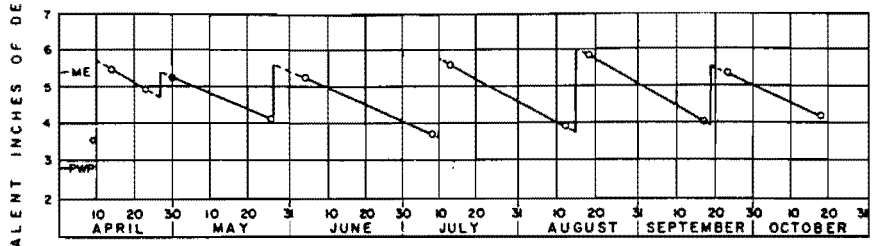


0 TO 1-FOOT SOIL ZONE

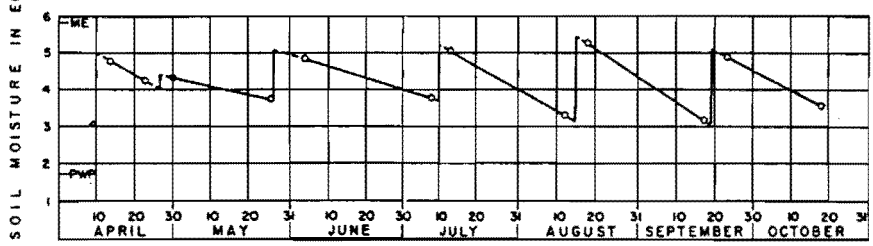


1-FOOT TO 2-FOOT SOIL ZONE

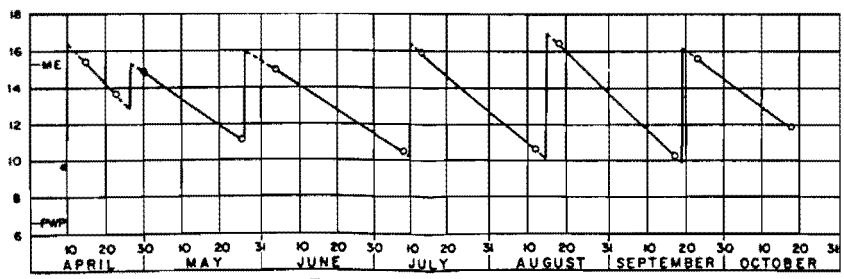
SOIL MOISTURE IN EQUIVALENT INCHES OF DEPTH OF WATER



2-FOOT TO 4-FOOT SOIL ZONE



4-FOOT TO 6-FOOT SOIL ZONE



TOTAL SOIL ZONE

ME - MOISTURE EQUIVALENT
PWP - PERMANENT WILTING POINT

SOIL MOISTURE DEPLETION AND ACCRETION
PLOT NO. 1 ALFALFA SAN LUIS OPISPO COUNTY
1953

DEPARTMENT OF WATER RESOURCES

AM 02452

APPENDIX I

PLANS FOR THE PROTECTION AND DEVELOPMENT OF RECREATIONAL RESOURCES IN SAN LUIS OBISPO COUNTY

By
David E. Pelgen, Senior Fisheries Biologist
and
Leonard O. Fisk, Assistant Fisheries Biologist
Under the Direction of
Robert M. Paul, Water Projects Coordinator
California Department of
Fish and Game

Prepared in Cooperation with the
California Department of Water Resources
Division of Resources Planning

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PLANS FOR THE PROTECTION AND DEVELOPMENT OF RECREATIONAL RESOURCES IN SAN LUIS OBISPO COUNTY

Introduction

The recreational resources of San Luis Obispo County are concentrated along the coast, and are largely ocean-associated. Prominent are such activities as fishing, clam digging, hunting, abalone fishing, swimming, and boating. The coastal area enjoys cool summer weather and, as is typical along all of California's coast, recreational seekers from the warm interior areas find it attractive.

The interior portions of San Luis Obispo County, although adapted to fewer types of outdoor recreation, are by no means devoid of these resources. The activities in inland areas are largely devoted to hunting and fishing, and to the large category of general highway use and outdoor enjoyment.

It is expected that recreational activities in California will increase in the future, and that the rate of this increase will be more rapid than the rate of population increase. In that most types of outdoor recreation are directly associated with water, it follows that a plan for the future development of water resources must include provisions for the recreational use of the water resources. The water requirements of many types of recreation are nonconsumptive in nature, and can frequently be met without interfering with other uses. In instances where recreational use of water conflicts with its other beneficial uses, a decision must be reached regarding the higher use in that particular case.

This report describes the present recreational resources of San Luis Obispo County, the areas that are believed to be susceptible to future

recreational development, and the effect that the proposed water development plans would have upon them.

Present Recreational Resources

Fisheries

The rainbow trout is the only native species of game fish presently found in numbers in inland waters of San Luis Obispo County. It is found in its resident form in the headwaters of several streams in the County, while its anadromous form, the steelhead rainbow trout, runs into the larger coastal streams. During extremely wet years in the past, large numbers of steelhead have been known to reach the upper Salinas River to a point several miles above the present site of Salinas Dam. However, runs into the Salinas River have been small or nonexistent during recent dry years. Future water developments in the Salinas River Basin are expected to almost entirely prevent steelhead from using its streams.

Several of the coastal streams in San Luis Obispo County have sufficient flows to support significant populations of steelhead. Typical of such streams are San Carpoforo, Arroyo de la Cruz, San Simeon, Santa Rosa, and San Luis Obispo Creeks. All of them presently provide some steelhead angling in tidewater.

Trout fishing in the County is supported largely by catchable-size rainbow trout planted by the State Department of Fish and Game. The waters and the numbers of trout planted during the 1955 season are shown in Table I-1. Some of the trout taken in the County result from natural reproduction and some are yearling or older steelhead, but with heavy fishing pressure and limited trout habitat, most of the fishing is provided by planted fish.

TABLE I-1

NUMBER OF TROUT PLANTED IN
SAN LUIS OBISPO COUNTY WATERS DURING 1955

Water	Number of trout planted
Arroyo de la Cruz Lagoon	14,000
San Simeon Lagoon	14,000
San Simeon Creek	6,000
Arroyo Grande Creek	4,000
Lopez Creek	19,000
Santa Rosa Creek	4,000
Morro Creek	1,000
Chorro Reservoir	5,000
Reservoir Canyon Lake	10,000
TOTAL	78,000

Warm-water game fishes, including largemouth black bass, sunfish, crappie, and catfish, have been introduced into suitable waters in San Luis Obispo County and support a limited amount of angling. These fish are best adapted to lakes, and are found in Salinas Reservoir, Atascadero, and Oso Flaco Lakes, and some of the small, privately-owned reservoirs and farm ponds in the County. Oso Flaco and Atascadero Lakes and Oceano Lagoon are the only warm-water fishing areas generally available to the public at the present time. It is expected that Salinas Reservoir will be opened to controlled public fishing for the first time during the early part of 1957.

Marine sport fishing is available along the entire coast line of San Luis Obispo County, and surf and rock fishing are popular sports. Party boats are available at Cayucos, Morro Bay, and Avila, and moorage for private pleasure boats is also available at the latter two harbors. Table I-2 gives the reported 1955 party boat landings. Clamming is very popular in the Morro Bay and Pismo

Beach areas. The area from Shell Beach to Oso Flaco Lake is the most important and productive clamming area in the State. Abalone and mussels are also sought by sportsmen along the rocky portions of the coast.

TABLE I-2

NUMBER OF FISH REPORTED
BY MARINE PARTY BOAT OPERATORS
IN SAN LUIS OBISPO COUNTY DURING 1955

Species	Number of fish
Rockfish	260,797
Lingcod	5,673
Jack mackerel	3,038
Miscellaneous flatfish	2,982
Cabezon	2,791
Pacific mackerel	1,259
White croaker	84
Salmon	64
California halibut	27
Sablefish	25
Albacore	9
Kelp or sand bass	5
Sculpin	2
Others	441
TOTAL	277,197
No. Angler Days	21,590

Although it has no recreational value, commercial fishing deserves mention in this report. It is a significant industry in San Luis Obispo County, providing a large portion of income to several coastal towns. Some of the commercial species are taken immediately adjacent to the coast, while others are taken at sea some distance from the ports of landing. The 1954 commercial fish landings in San Luis Obispo County are shown in Table I-3. These fish had a value of approximately $586,500 to the commercial fishermen.

TABLE I-3

COMMERCIAL FISH LANDINGS AT
SAN LUIS OBISPO COUNTY PORTS DURING 1954

In Pounds

Species	Port of landing		
	Port San Luis	Morro Bay	San Simeon
Abalone	89,897	178,189	432,350
Albacore	121,200	666,783	
Anchovy	1,193,000		
Sardine	1,552,250	147,160	
Salmon	213,867	92,710	
Sole	283,509	397,608	
Rockfish	95,475	405,526	
Pacific mackerel	261,850	267,993	
Crab	23,800	24,218	
Shark	306,632		
Bigeye tuna	68,951		
Yellowfin tuna	50,000		
California halibut	33,739		
Pacific oyster		311,519	
All other	90,593	69,600	
TOTALS	4,384,763	2,561,306	432,350

Wildlife

Numerous hunting opportunities exist throughout much of San Luis Obispo County. Big game, waterfowl, and upland game species are all present in the County and are taken in significant numbers. Table I-4 gives estimates of the numbers of various wildlife species taken in the County during 1955.

TABLE I-4

ESTIMATED 1955 WILDLIFE KILL
IN SAN LUIS OBISPO COUNTY

Species	Number taken	Per cent of State total
Black-tailed deer	1,933	2.7
Ducks	31,000	0.9
Geese	1,700	0.5
Valley quail	36,900	2.8
Mourning dove	58,400	2.3
Band-tailed pigeon	18,800	13.9
Brush and cottontail rabbits	5,400	1.2
Jack rabbit	8,700	0.7
Coot	3,100	0.5

In addition to the species listed in Table I-4, elk, wild turkeys, chukar partridges, and beaver are present, the latter three species having been planted by the Department of Fish and Game. A controlled hunting season for chukar partridges was opened for the first time in 1954, and some birds were taken. As yet no hunting has been allowed for wild turkeys.

Several areas in the County are subject to intensive use by hunters. Most of these areas are shown on Plate 1. The Morro Bay area is a favorite for black sea brant. Quail and doves are found in large concentrations in the upper Salinas Basin, and the Dune Lakes area supports large populations of doves, quail, and waterfowl. Big game hunting is important in the Santa Lucia Range and the La Panza Range east of Pozo. Chukars and quail are found in the Temblor Range and the upper Salinas Basin. Pigeons are numerous in Lopez Canyon and the Adelaida area.

The Department of Fish and Game and local groups have made various improvements to benefit wildlife in San Luis Obispo County. Some 80 "gallinaceous guzzlers", watering devices for upland game, have been installed,

and cover crops have been planted in several areas to increase the quality of game habitat.

Allied Outdoor Recreation

Facilities for outdoor recreation in San Luis Obispo County are considered to be above average for California as a whole. The many miles of coast line have contributed largely to this development. Present developments consist of State Parks, which are listed in Table I-5 and shown on Plate I-1 entitled "Major Existing and Proposed Recreational Areas", County Parks, listed in Table I-6 and shown on Plate I-1, facilities provided by the United States Forest Service within Los Padres National Forest, and developments by private individuals. State Highway No. 1, which parallels the coast in the northern portion of the County, is considered a major recreational facility. It is used mainly by people enjoying the scenic and recreational features of the area. In addition to the developments mentioned above, portions of beaches and coast line are owned by the State and County but have been left largely undeveloped. The acquisition of more coast line for recreational purposes is to be encouraged.

Of considerable importance to ocean sport fishermen are the four public fishing piers located in the County. These piers are located at Cayucos, Avila (2), and Pismo Beach, where they were developed by local interests. The Board of Supervisors is currently considering a plan to provide a public fishing pier at San Simeon. Boating and water skiing enthusiasts as well as sport fishermen are benefited by boat harbors at Morro Bay and Avila.

TABLE I-5

STATE PARKS LOCATED IN SAN LUIS OBISPO COUNTY

Map reference number	Name	Area in acres	Facilities
1	San Simeon Beach	42	Day use
2	Cayucos Beach	25	Day use
3	Morro Strand Beach	15	Day use
4	Morro Bay	1,529	Camping, golf course, boat basin
5	Avila Beach	9	Day use
6	Pismo Beach	311	Camping, day use

TABLE I-6

SAN LUIS OBISPO COUNTY PARKS

Map reference number	Name	Area in acres	Facilities
7	La Grande Beach	850	Day use
8	Morro Bay	1	Day use
9	Atascadero Beach	--	Day use
10	Cambria	2	Day use
11	San Simeon	4	Day use
12	San Miguel	1½	Day use, sports
13	Shandon	5	Day use, sports
14	Templeton	5	Day use, sports
15	Atascadero Lake	40	Day use
16	Atascadero Memorial	--	None
17	Cuesta Canyon	5	Day use, sports
18	Routzahn	30	Day use, sports
19	Oceano Memorial	7	Day use
20	Grover City	4½	Day use, sports

Development of summer and weekend cottages has taken place in Lopez Canyon, and to a lesser degree in such areas as the canyon of the East Fork of Morro Creek.

Salinas Reservoir is presently open to the public, and provides facilities for fishing, boating, picnicking, as well as associated types of recreation. It is anticipated that Nacimiento Reservoir will also be opened to the public for similar uses. Vaquero Reservoir is presently under construction.

Water Conservation Plans

The water conservation plans discussed in Chapter IV of this bulletin comprise several storage reservoirs on streams tributary to the Salinas River and on the major coastal streams. These reservoirs would impound water during the winter rainy season to be released later for irrigation, domestic, and municipal use and to replenish ground water basins. The reservoirs considered and their sizes are listed in Table I-7. They are also shown on Plate I-1.

TABLE I-7

MAJOR RESERVOIRS CONSIDERED FOR DEVELOPMENT
IN SAN LUIS OBISPO COUNTY AND VICINITY

River and site	Depth of water at dam in feet	Water surface elevation, maximum pool	Capacity of reservoir, in acre-feet	Maximum surface area, in acres	Reservation for silt, in acre-feet
Santa Rita Creek					
Santa Rita	138	1,143	15,000	340	500
Jack Creek					
Lower Jack	140	1,130	25,000	500	500
Nacimiento River					
San Miguelito	158	1,268	130,000	3,060	1,000
Jarrett Shut-In	214	1,114	110,000	1,960	1,000
San Carpoforo Creek					
Bald Top	175	845	20,000	250	500
Upper Ragged Point	230	300	30,000	255	500
Arroyo de la Cruz					
Yellow Hill	190	220	80,000	790	1,000
San Simeon Creek					
San Simeon	170	25	60,000	740	500
Santa Rosa Creek					
Santa Rosa	198	438	35,000	420	500
Old Creek					
Whale Rock	163	203	40,000	610	500
Arroyo Grande Creek					
Lopez	143	518	50,000	940	1,000

San Miguelito and Jarrett Shut-In Reservoirs, on the Nacimiento River, could release water downstream to Nacimiento Reservoir, thence by conduit to various water service areas in the Upper Salinas Unit.

Lower Jack and Santa Rita Reservoirs could be constructed to replenish ground water supplies and for municipal and domestic supplies in the Paso Robles-Atascadero area.

Lopez Reservoir could recharge ground water basins and could also provide municipal water supplies to the Arroyo Grande area by a pipe line. In addition, its operation would result in certain flood control benefits for the Arroyo Grande Valley.

The remaining reservoirs on the coastal streams could release water downstream or into conduits for use along the coast for irrigation, domestic, and municipal purposes.

Effect of the Water Conservation Plans on Recreational Resources

Fisheries

Many of the water conservation developments considered in this bulletin would be detrimental to steelhead populations in the streams concerned insofar as they exist at the present time. The dams would prevent steelhead from ascending the streams to spawning gravels in the upper reaches. There would be little possibility of providing adequate spawning grounds below the dams in most streams, due to the proximity of the dams to the ocean. At none of the dams would a fish ladder seem to be a feasible remedial measure. The dams are for the most part rather high, and with widely fluctuating water levels fish ladders would be quite costly. Furthermore, the major spawning areas would be flooded by the reservoir in most cases. It is possible, however, that if a development were located far enough upstream and a satisfactory flow were released to the stream below, the steelhead fishery could be maintained in that stream. Such releases, however, would reduce the amount of water available from the reservoir for water conservation purposes.

The reservoirs considered in this report could also be operated to produce new lake fisheries of considerable value. It is probable that most of them would be of the warm-water type. The limiting factors in these reservoirs would be water level fluctuation and size of minimum pools. While fluctuation of these reservoirs is a necessary feature in the operation of the project and cannot be curtailed, a warm-water fishery could not be maintained without a minimum pool reservation. These reservoirs would not produce optimum populations of game fish due to fluctuation, but they could be made to produce numbers commensurate with the size of the minimum pools. The reservoirs could provide more opportunities for angling and support heavier angling pressure than is now present if public access were permitted at each reservoir.

Wildlife

The wildlife species in the County would probably not be affected to any great degree by water conservation plans considered herein. Limited areas now occupied by game would be inundated by reservoirs, but it is expected that the shore lines of the reservoirs would compensate for this loss. Since no open canals are included in the projects discussed in this bulletin, the hazard of these structures to deer is not a consideration. The reservoirs considered in this bulletin could also serve as resting areas for waterfowl. It is doubtful, however, that they would produce much food, since extreme fluctuation of water levels would prevent the establishment of rooted aquatic vegetation.

Allied Outdoor Recreation

Other outdoor recreational pursuits should be enhanced by the water development plan. Picnicking, boating, and camping, as well as fishing, may become popular at the reservoirs considered, if permitted.

Routzahn Park, located at the junction of Lopez and Arroyo Grande Creeks, would be inundated by Lopez Reservoir. However, the reservoir area could become a major recreational attraction of far greater value after construction.

Of the utmost importance to recreation at all of the projects is the matter of public access. This should be an integral part of the planning, and should be secured for each reservoir to be constructed, providing adequate public health safeguards are maintained. Since public use of these areas would in no way interfere with the operation or yield of the reservoirs, it would be a relatively simple matter to supply the few developments needed for public use.

Plans for Recreational Resources

Fisheries

As stated in the previous section, the construction of dams on the coastal streams would have the effect of reducing the populations of steelhead in these streams. Yet, the reservoirs impounded by the dams would provide habitat for populations of game fishes. It is simply a matter of removing a stream fishery and replacing it with a reservoir fishery. In some parts of California, particularly the large salmon and steelhead streams in the north, this would seriously reduce the total amount of fishing available. In the San Luis Obispo County streams under consideration, however, the value of the reservoir fisheries should be sufficient to offset the lost stream fisheries, provided the reservoirs are operated in a manner compatible with fish production.

The reservoirs included in the considered water development plans could be provided with dead storage pools suitable for the protection of fish populations during periods of maximum drawdown. Suggestions for minimum pool elevations are given in Table I-8. These suggestions are considered the minimum required to provide suitable fish populations. If larger minimum pools were to be reserved, larger fish populations would result. As previously discussed, however, maintenance of minimum pools suggested in Table I-8 would result in less water conservation yield from the several reservoirs considered. During the build-up period prior to full utilization of the yield of each reservoir, minimum pools could be maintained, however, with very satisfactory results.

TABLE I-8

MINIMUM POOL SUGGESTIONS FOR FISHERY PROTECTION
IN POTENTIAL SAN LUIS OBISPO COUNTY RESERVOIRS

River and site	Water surface elevation, minimum pool	Minimum pool capacity, in acre-feet*	Minimum pool surface area, in acres
Santa Rita Creek			
Santa Rita	1,070	1,020	66
Jack Creek			
Lower Jack	1,040	1,200	98
Nacimiento River			
San Miguelito	1,200	8,860	540
Jarrett Shut-In	1,000	9,200	320
San Carpoforo Creek			
Bald Top	730	790	58
Upper Ragged Point	110	660	62
Arroyo de la Cruz			
Yellow Hill	70	2,680	180
San Simeon Creek			
San Simeon	90	2,090	150
Santa Rosa Creek			
Santa Rosa	290	970	71
Old Creek			
Whale Rock	100	1,860	130
Arroyo Grande Creek			
Lopez	420	1,490	160

* Exclusive of silt reservation.

Table I-9 lists the minimum flows that are considered necessary to maintain resident or anadromous fish populations in streams below dams. Releases from storage at the expense of water conservation yield would be required to supplement natural flows to maintain the flows listed in Table I-9. In some instances, this water would be available for later downstream use.

TABLE I-9

SUGGESTED STREAM FLOW RELEASES BELOW
POTENTIAL RESERVOIRS IN SAN LUIS OBISPO COUNTY

Reservoir	flow to stream
Santa Rita	5 c.f.s.
Lower Jack	5 c.f.s.
Jarrett Shut-In	50 c.f.s.
Bald Top	5 c.f.s.
Santa Rosa	5 c.f.s. (May-November)
	10 c.f.s. (December-April)

Several lakes in the County are susceptible of developments to provide fishing and allied recreation. Foremost of these are the Dune Lakes, several small lakes located along the coast near the town of Arroyo Grande. These lakes appear to be quite similar to Oso Flaco Lake, located several miles to the south, which provides good warm-water angling. The main expenditure on these lakes would be to acquire access, since few developments would be required.

Laguna Lake located near San Luis Obispo is also considered as having possibilities for recreational development. This lake is relatively shallow at the present time, and would perhaps require dredging in some parts to provide a suitable habitat for fish. Because of its proximity to San Luis Obispo, it would probably have considerable fishing and recreational value if developed for these purposes.

Chorro Reservoir located in Camp San Luis Obispo and part of the water supply for that facility possesses potentiality as a trout water. If public access were made available and adequate public health safeguards were maintained, Chorro Reservoir would be a valuable addition to the fishing resources of the County. It is not anticipated that any expenditure would be necessary for this project, except that for planting catchable-sized trout.

Possibilities exist for the erection of stream flow maintenance dams on streams that will contain no water conservation developments, such as San Luis Obispo Creek. No specific recommendations are made for this type of development in this report, but as recreational needs become greater they should receive consideration.

Wildlife

No specific recommendations will be made for wildlife species in San Luis Obispo County. It is possible that additional watering devices and more cover crops would increase the carrying capacity for upland game. Further study is required before it can be determined how much more development is needed.

The acquisition of the Dune Lakes and Laguna Lake for public use would increase public hunting opportunities in the County, especially for upland game and waterfowl. Both of these areas are presently under private control and exclude public use.

Allied Outdoor Recreation

The portions of San Luis Obispo County that are presently used for recreational purposes, or are believed to be susceptible to future recreational development, are shown on Plate I-1. The classification of a land or water area as recreational does not necessarily preclude other types of use on the same land or water. It is intended to delineate the areas which recreational use should be encouraged. There are undoubtedly areas in which recreation is or will be important that have been omitted from this classification. These may have been omitted due to their small area, their

relatively minor recreational importance, or through an oversight. For the purpose of this investigation, it is believed that all major areas have been included, with the exception of the hunting areas. Deer and upland game species are hunted throughout most of the County, but since this type of recreation is of relatively short duration and covers extensive areas, they are not shown on Plate I-1, although they are of major importance.

An examination of Plate I-1 will show that the entire coast line is considered a potential recreational area. It is believed that in the future, with the expected increase in population and resulting recreational needs, this use will far outweigh any other. This section is admirably suited to recreation, being composed of long stretches of wide, sandy beaches and rugged, rocky coast lines. It is expected that large numbers of summer cottages and suburban developments will be constructed in this area in the future, as more leisure time becomes available and population increases. One-fourth of the shore line in the County is now public property, County, State, or Federal, and it has been proposed by the County that an additional 38 miles of ocean frontage be acquired. Even though some 30 per cent would remain in private ownership, this does not alter the fact that most of it should be considered recreational, if for no other reason than its scenic value for motorists.

To further recreational uses along the coast, several harbors could be improved for small craft and fishing boats. At present, only Morro Bay and Avila are safe harbors for these types of vessels. Both of these harbors could be improved and enlarged to accommodate more use. State funds were recently expended on the improvement of a small boat basin at Morro Bay State Park. Additional dredging of Morro Bay could greatly increase its usable area.

Its breakwaters also need repairs. Such activities as fishing, sailboating, water skiing and swimming would be enhanced. The harbor at Avila could be expanded by developing an inner boat basin in the lagoon of San Luis Obispo Creek. This would increase facilities for boat storage and use in the area. San Simeon Bay could be improved by the addition of a breakwater to further protect the bay, and a wharf for landing boats. All of these ports have been recommended for further development or study by the U. S. Corps of Engineers or local interests.

Several lagoons, such as those of the Arroyo de la Cruz and San Carpoforo and Villa Creeks, could possibly be enlarged by dredging and should certainly be opened for public use, especially fishing and camping.

Several of the better trout fishing streams, including Lopez, Morro, Tassajara, and Atascadero Creeks, are classified as recreational, primarily because of angler use. The construction of cottages in these areas should not be discouraged, but public access to the streams should be assured.

In addition, all present and potential reservoirs are included in the recreational classification. The large recreational potential of these areas is obvious.

Summary

San Luis Obispo County contains many recreational resources. Marine and fresh water angling are popular sports, especially along the coastal area. Hunting, mainly for deer and upland game, is conducted throughout the County. Numerous State and County parks are present, mostly along the coast. Commercial fishing is a significant industry.

The water conservation plans considered herein for the County would include several storage reservoirs on streams in the Upper Salinas Unit, and others in the Coastal Unit. The dams on most of the coastal streams would prevent steelhead from using these streams; however, the reservoir fisheries created may be expected to more than compensate for this loss. It is not expected that any of the plans would have an adverse effect on hunting, and other outdoor recreational pursuits should be substantially benefited by it.

Suggestions are given for minimum pools which could be reserved in the reservoirs for fisheries, and for stream flow releases from several reservoirs, if desired.

Major recreational areas now present, as well as additional proposed recreational areas, are shown on a map of the County, Plate I-1.