

SANTA ANA RIVER FLOW AND GAGING DATA

SAN BERNARDINO PRECIPITATION DATA

OCWD FOREBAY RECHARGE DATA

USACE PREDICTED SANTA ANA RIVER FLOWS

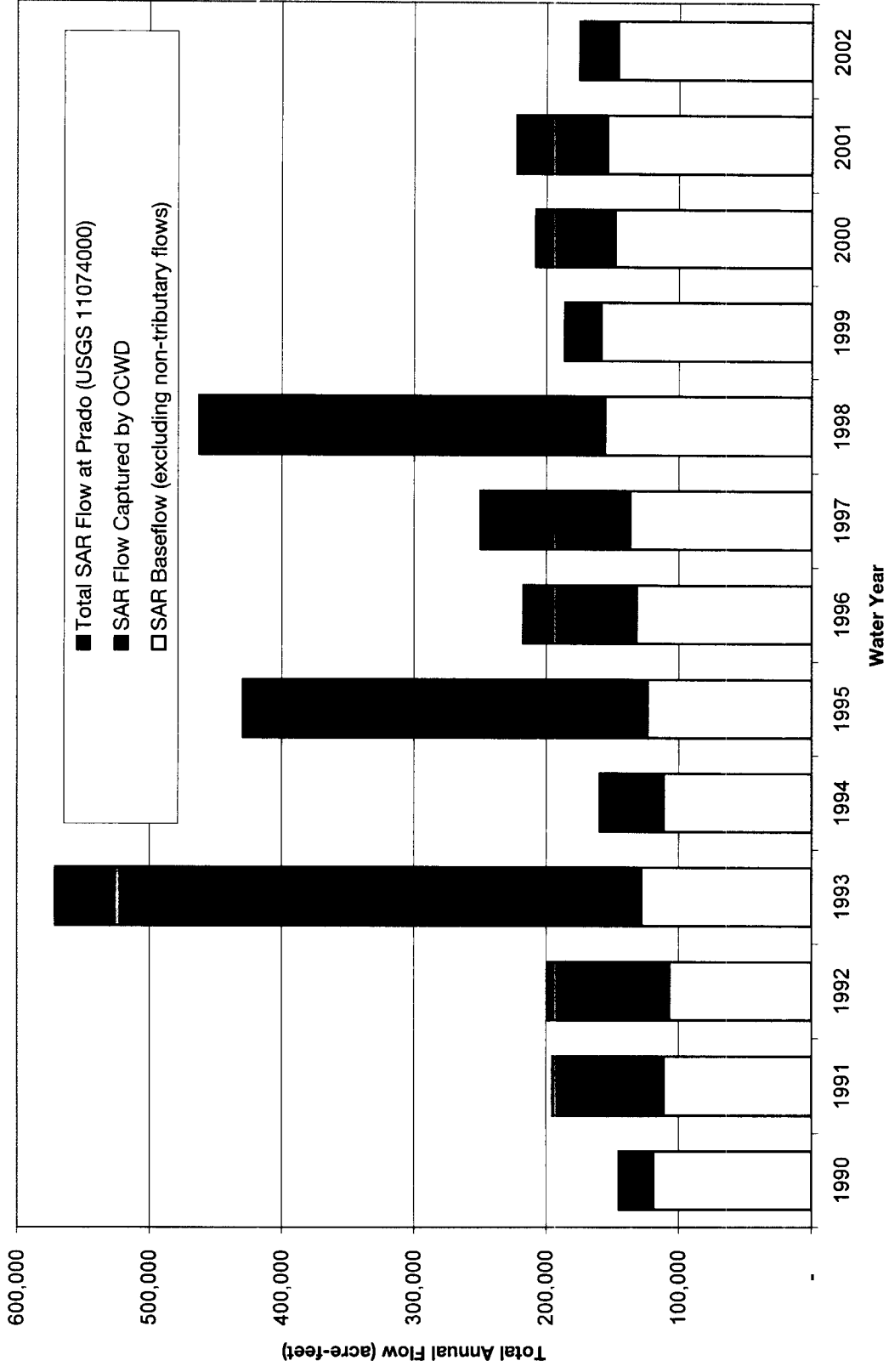
A. Annual SAR Flow Data for Figure A

Source:	USGS (a)	Watermaster (b)	OCWD (c)
Water Year	Total Annual Flow Below Prado Dam (acre-feet)	Baseflow at Prado Dam (acre-feet)	Total Flow Captured by OCWD (acre-feet)
1990	144,817	119,149	141,060
1991	195,185	111,151	159,805
1992	198,280	106,948	174,771
1993	571,138	128,068	260,196
1994	159,560	111,186	156,560
1995	429,269	123,468	264,857
1996	217,160	131,861	171,491
1997	249,685	136,676	190,237
1998	462,646	155,711	271,494
1999	185,762	158,637	186,065
2000	207,850	148,269	186,042
2001	222,559	153,914	179,949
2002	174,968	145,981	155,156
mean	262,991	133,155	192,130
median	207,850	131,861	179,949

NOTES:

- a Source: USGS Gage 11074000
- b Source: Thirty-Second Annual Report of the Santa Ana River Watermaster (April 30, 2003).
Excludes Non-Tributary flow.
- c Source: Data provided by Gwen M. Sharp, OCWD (1/31/05)

Figure A.



% of total	4.6	5.6	8.5	13.0	15.6	16.1	10.0	7.5	5.9	5.0	4.2	3.9	100
Mean (1941-1970)	3,876	5,289	8,596	10,440	12,107	14,631	8,955	5,769	4,067	3,487	3,227	3,253	83,697
% of total	4.6	6.3	10.3	12.5	14.5	17.5	10.7	6.9	4.9	4.2	3.9	3.9	100
Mean (1950-1988)	5,538	6,814	11,024	13,580	16,837	21,079	12,903	9,212	7,638	6,152	5,083	4,397	120,257
% of total	4.6	5.7	9.2	11.3	14.0	17.5	10.7	7.7	6.4	5.1	4.2	3.7	100
Mean (1971-2004)	9,741	11,344	16,530	27,772	33,446	32,749	20,353	16,141	13,234	11,224	8,929	8,091	209,556
% of total	4.6	5.4	7.9	13.3	16.0	15.6	9.7	7.7	6.3	5.4	4.3	3.9	100
Mean (1989-2003)	11,736	13,638	18,481	39,608	45,012	35,732	22,271	19,104	14,985	13,659	10,868	10,554	255,646
% of total	4.6	5.3	7.2	15.5	17.6	14.0	8.7	7.5	5.9	5.3	4.3	4.1	100

NOTES:

a Volumes are calculated from the mean daily flow data recorded by USGS. Data in cubic feet per second are converted to acre-feet using the number of days in the given month.

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA

LOCATION.—Lat 33°53'00", long 117°38'40", in La Sierra Grant, Riverside County, Hydrologic Unit 18070203, on left bank of outlet channel, 2,500 ft downstream from axis of Prado Dam, and 4.5 mi west of Corona

DRAINAGE AREA.—1,490 mi², excludes 768 mi² above Lake Elsinore.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—May 1930 to November 1939 (irrigation seasons only), March 1940 to current year. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, and Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

GAGE.—Water-stage recorder and concrete control since August 1944. Datum of gage is approximately 449 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Mar. 18, 1940, at about same site at various datums.

REMARKS.—Records good below 500 ft³/s and fair above, except for estimated daily discharges, which are poor. Flow regulated since 1940 by Prado Flood-Control Reservoir, capacity, 196,200 acre-ft. Natural streamflow affected by extensive ground-water withdrawals, diversion for irrigation, discharges of treated effluent, and return flow from irrigated areas. Releases of imported water are made to the basin by the California Water Project at times in some years, via San Antonio Creek from Rialto Pipeline below San Antonio Dam. During the current year, the California Water Project released 8,040 acre-ft to the basin. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,440 ft³/s, Feb. 21, 1980, gage height, 6.88 ft; maximum gage height, 7.29 ft, Jan. 19, 1993; minimum daily, 2.4 ft³/s, July 29 to Aug. 3, Sept. 20, 1978 (result of gate closure).

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2, 1938, reached a discharge of 100,000 ft³/s, on basis of slope-area measurement of peak flow at site 2.5 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	227	331	257	285	387	432	263	372	239	200	159	178
2	226	241	266	289	283	462	416	367	184	201	157	185
3	227	235	248	291	221	461	507	385	189	209	e150	181
4	226	236	244	292	220	462	295	395	186	207	e168	184
5	237	230	242	379	218	460	308	399	192	201	164	185
6	235	209	238	426	214	454	338	389	196	201	160	186
7	208	219	237	425	212	451	333	369	195	200	157	180
8	204	235	238	426	209	464	338	287	191	196	151	180
9	199	241	234	429	342	487	339	219	184	204	150	185
10	204	245	229	426	388	488	333	218	194	208	146	170
11	207	252	226	423	387	497	327	206	183	198	e118	157
12	208	265	227	423	392	496	333	205	187	193	e146	161
13	244	273	227	420	396	495	334	200	185	193	165	168
14	241	306	227	417	392	497	328	199	186	185	151	173
15	284	303	274	412	385	495	327	231	187	186	159	176
16	327	299	283	406	380	493	327	243	179	186	169	179
17	328	302	275	403	405	488	328	246	179	183	151	197
18	334	304	270	400	285	483	323	245	178	183	158	195
19	328	302	263	396	247	480	331	245	177	180	147	194
20	315	298	251	389	249	419	333	246	184	181	151	196
21	238	294	243	399	250	257	331	242	185	182	149	196
22	195	289	238	341	258	233	337	242	188	177	150	235
23	192	283	233	308	1360	221	339	246	214	152	154	246
24	189	280	214	308	1350	219	319	252	232	155	154	252
25	189	278	226	301	2700	217	317	247	230	161	165	243
26	184	276	307	377	4430	218	331	237	235	159	179	190
27	193	270	303	404	2490	221	334	246	237	172	178	168
28	194	267	231	398	881	222	330	246	233	170	183	160
29	196	264	232	393	572	226	341	249	230	157	186	158
30	195	261	264	386	---	233	378	245	188	154	185	205
31	213	---	282	366	---	252	---	240	---	157	178	---
TOTAL	7187	8088	7729	11738	20503	11983	10118	8358	5947	5691	4938	5663
MEAN	232	270	249	379	707	387	337	270	198	184	159	189
MAX	334	331	307	429	4430	497	507	399	239	209	186	252
MIN	184	209	214	285	209	217	263	199	177	152	118	157
AC-FT	14260	16040	15330	23280	40670	23770	20070	16580	11800	11290	9790	11230

e Estimated

SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	114	143	208	320	418	394	252	183	150	124	102	97.9
MAX	344	322	709	3543	2733	2556	1101	915	736	446	352	372
(WY)	1984	1997	1967	1993	1998	1980	1980	1998	1983	1998	1983	1997
MIN	22.4	33.5	39.5	49.2	49.8	54.3	43.3	35.2	29.0	17.7	14.8	16.2
(WY)	1962	1963	1963	1963	1961	1961	1961	1961	1961	1960	1960	1960

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004	
ANNUAL TOTAL	125541		107943			
ANNUAL MEAN	344		295		208	
HIGHEST ANNUAL MEAN					789	
LOWEST ANNUAL MEAN					36.4	
HIGHEST DAILY MEAN	3850	Feb 13	4430	Feb 26	6440	Feb 23 1980
LOWEST DAILY MEAN	90	May 18	118	Aug 11	2.4	Jul 29 1978
ANNUAL SEVEN-DAY MINIMUM	181	Aug 23	147	Aug 8	3.0	Sep 24 1973
MAXIMUM PEAK FLOW			6230	Feb 25	7440	Feb 21 1980
MAXIMUM PEAK STAGE			7.26	Feb 25	7.29	Jan 19 1993
ANNUAL RUNOFF (AC-FT)	249000		214100		150600	
10 PERCENT EXCEEDS	503		418		361	
50 PERCENT EXCEEDS	270		238		129	
90 PERCENT EXCEEDS	199		168		40	

WATER YEAR 2005

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA

SANTA ANA RIVER BASIN

LOCATION.--Lat 33°53'00", long 117°38'40" referenced to North American Datum of 1927, Riverside County, Hydrologic Unit 18070203, in La Sierra Grant, on left bank of outlet channel, 2,500 ft downstream from axis of Prado Dam, and 4.5 mi west of Corona

DRAINAGE AREA.--2,258 mi² of which 768 mi² probably is noncontributing, above Lake Elsinore.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1930 to November 1939 (irrigation seasons only), March 1940 to current year Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, and Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

GAGE.--Water-stage recorder and concrete control since August 1944 and through Apr. 25, 2005. Datum of gage is approximately 449 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Mar. 18, 1940, at about same site at various datums Since Apr. 26, 2005, gage is located on the right bank of a temporary bypass (diversion) channel, in use during the construction of an improved outlet channel from Prado Dam. The temporary gage is at a different datum

REMARKS.--Records good below 500 ft³/s and fair above, except for estimated daily discharges, which are poor Flow regulated since 1940 by Prado Flood-Control Reservoir, capacity, 196,200 acre-ft. Natural streamflow affected by extensive ground-water withdrawals, diversion for irrigation, discharges of treated effluent, and return flow from irrigated areas. Releases of imported water are made to the basin by the California Water Project at times in some years, via San Antonio Creek from Rialto Pipeline below San Antonio Dam. During the current year, the California Water Project released 662 acre-ft to the basin. See schematic diagram of Santa Ana River Basin

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft³/s, Jan. 15, 2005, gage height, 8.73 ft, site and datum then in use, from rating curve extended above 11,600 ft³/s; minimum daily, 2.4 ft³/s, July 29 to Aug. 3, Sept. 20, 1978 (result of gate closure).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 100,000 ft³/s, on basis of slope-area measurement of peak flow at site 2.5 mi downstream.

WATER YEAR 2005

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

[c, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	201	366	371	1,350	479	2,620	1,090	e625	438	380	313	453
2	188	375	358	596	461	2,640	1,100	e375	439	382	340	422
3	185	362	348	1,460	461	2,090	1,090	e297	439	381	347	342
4	190	321	349	1,780	460	1,170	595	562	443	382	346	236
5	187	303	346	840	461	564	315	549	442	377	344	220
6	155	299	337	1,750	461	564	385	605	441	379	343	229
7	182	297	320	1,280	458	688	596	692	441	379	345	221
8	187	271	322	2,730	631	813	820	686	441	378	359	233
9	185	221	323	4,830	735	720	751	526	440	378	375	211
10	175	202	322	7,540	727	362	756	441	442	376	383	206
11	182	199	325	10,700	1,380	217	770	434	444	373	382	217
12	186	213	328	9,330	1,860	238	972	429	443	372	380	229
13	182	273	326	5,710	1,810	238	1,080	429	414	368	380	228
14	172	336	325	11,400	1,770	413	836	428	399	368	382	231
15	174	308	326	11,400	1,460	545	655	427	398	370	386	222
16	175	243	378	11,400	502	555	613	423	399	368	385	236
17	384	239	434	7,870	403	567	614	421	397	364	408	233
18	441	237	459	3,830	1,040	577	596	421	397	323	433	225
19	464	234	459	1,390	2,240	582	584	420	395	286	458	226
20	1,370	234	476	e662	2,890	588	585	420	393	285	457	230
21	2,750	1,130	495	1,750	2,980	786	365	420	390	287	456	246
22	2,620	378	498	835	3,440	1,190	432	419	388	286	453	268
23	2,540	268	493	205	4,810	3,220	509	415	387	286	448	262
24	2,460	261	491	207	4,670	1,170	507	414	386	285	445	259
25	2,460	238	489	206	4,690	980	e380	416	384	284	455	258
26	287	238	486	210	4,750	977	e570	415	384	282	458	258
27	2,490	240	333	378	4,650	979	e665	421	383	311	451	262
28	2,610	443	258	700	4,200	978	e1,660	424	381	321	437	251
29	2,550	435	1,730	701	---	918	e852	427	380	318	445	259
30	1,520	327	2,490	699	---	825	e690	431	380	316	437	254
31	351	---	1,770	567	---	831	---	434	---	312	446	---
Total	28,203	9,491	16,765	104,306	54,879	29,605	21,433	14,246	12,328	10,557	12,477	7,627
Mean	910	316	541	3,365	1,960	955	714	460	411	341	402	254
Max	2,750	1,130	2,490	11,400	4,810	3,220	1,660	692	444	382	458	453
Min	155	199	258	205	403	217	315	297	380	282	313	206
Ac-ft	55,940	18,830	33,250	206,900	108,900	58,720	42,510	28,260	24,450	20,940	24,750	15,130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)

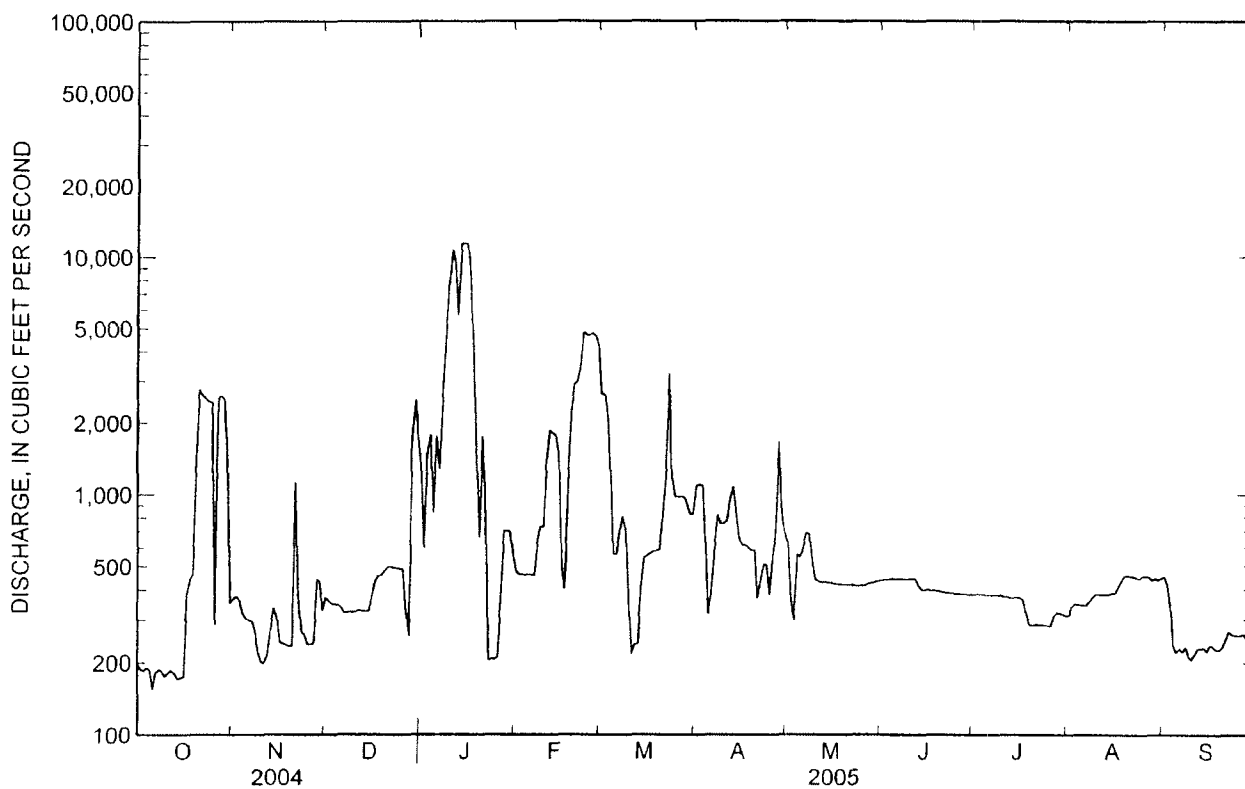
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	126	146	213	366	442	403	259	188	154	127	106	100
Max	910	322	709	3,543	2,733	2,556	1,101	915	736	446	402	372
(WY)	(2005)	(1997)	(1967)	(1993)	(1998)	(1980)	(1980)	(1998)	(1983)	(1998)	(2005)	(1997)
Min	22.4	33.5	39.5	49.2	49.8	54.3	43.3	35.2	29.0	17.7	14.8	16.2
(WY)	(1962)	(1963)	(1963)	(1963)	(1961)	(1961)	(1961)	(1961)	(1961)	(1960)	(1960)	(1960)

WATER YEAR 2005

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

SUMMARY STATISTICS

	Calendar Year 2004		Water Year 2005		Water Years 1941 - 2005	
Annual total	139,398		321,917			
Annual mean	381		882		218	
Highest annual mean					882	2005
Lowest annual mean					36.4	1961
Highest daily mean	4,430	Feb 26	11,400	Jan 14	11,400	Jan 14, 2005
Lowest daily mean	118	Aug 11	155	Oct 6	2.4	Jul 29, 1978
Annual seven-day minimum	147	Aug 8	178	Oct 10	3.0	Sep 24, 1973
Maximum peak flow			13,200	Jan 15	13,200	Jan 15, 2005
Maximum peak stage			8.73	Jan 15	8.73	Jan 15, 2005
Annual runoff (ac-ft)	276,500		638,500		158,100	
10 percent exceeds	486		1,790		380	
50 percent exceeds	246		420		132	
90 percent exceeds	168		230		40	



C. USGS Gage 11078000 (Santa Ana River at Santa Ana CA)

Monthly and Annual Total Runoff (acre-feet) ^b

MONTH	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
1924	0	145	234	818	118	154	215	36	0	0	0	0	1,719	
1925	0	0	144	71	0	9	251	0	0	0	0	0	474	
1926	0	0	0	0	223	6	21,297	113	0	0	0	0	21,640	
1927	0	99	309	194	57,079	6,147	2,975	91	0	0	0	0	66,894	
1928	0	117	210	144	861	229	35	0	0	0	0	0	1,595	
1929	3	6	199	85	0	0	16	0	0	0	0	0	309	
1930	0	0	0	47	1	614	0	97	0	0	0	0	758	
1931	0	0	0	0	0	0	0	0	0	0	0	0	0	
1932	0	0	701	68	7,440	21	0	0	0	0	0	0	8,230	
1933	0	0	0	404	91	0	0	0	0	0	0	0	496	
1934	0	0	335	2,102	0	0	0	0	0	0	0	0	2,437	
1935	488	49	579	695	114	438	0	0	0	0	0	0	2,363	
1936	0	26	0	0	1,832	0	1	0	0	0	0	0	1,859	
1937	0	0	1,359	272	30,038	10,696	1,362	0	0	0	0	0	43,728	
1938	0	0	0	18	811	124,729	2,820	286	0	0	0	0	128,663	
1939	0	0	1,801	494	972	47	0	0	0	0	0	0	3,412	
1940	0	0	0	1,998	955	36	134	0	0	0	0	0	3,123	
1941	0	0	4,119	97	10,716	49,363	19,037	775	1	0	0	0	84,107	
1942	0	15	447	57	31	36	12	5	0	0	0	0	604	
1943	0	0	0	22,991	11,216	29,753	672	134	0	0	0	0	64,766	
1944	0	1	358	444	12,160	2,815	79	105	2	0	0	0	15,964	
1945	0	547	244	151	2,376	2,686	23	41	2	2	0	0	6,073	
1946	0	0	2,219	93	30	311	148	0	0	0	0	0	2,801	
1947	0	648	836	365	135	10	4	4	2	0	0	0	2,005	
1948	4	2	5	5	5	30	19	5	2	0	0	0	77	
1949	0	0	3	1	0	0	0	0	0	0	0	0	5	
1950	0	3	197	135	234	6	55	3	0	1	2	2	637	
1951	5	37	5	5	13	4	1	16	0	0	0	0	85	
1952	5	2	205	10,881	9	5,520	20	3	0	0	0	0	16,648	
1953	2	59	304	0	0	0	37	46	12	1	7	20	489	
1954	11	6	18	406	716	183	16	15	14	7	5	5	1,401	
1955	4	100	11	55	3	0	10	12	3	5	32	0	237	
1956	0	12	1	3,344	361	1	42	12	6	2	0	7	3,789	
1957	6	3	2	65	26	3	23	6	1	2	1	0	137	
1958	8	3	34	29	4,198	2,693	12,374	5	0	3	4	0	19,350	
1959	30	15	0	76	214	0	4	1	0	0	0	0	339	
1960	0	0	37	299	162	4	145	0	0	0	0	0	647	
1961	0	16	6	12	0	2	0	0	0	0	0	0	36	
1962	0	21	73	244	3,692	12	0	0	0	0	0	0	4,042	
1963	0	0	0	6	783	430	11	1	0	0	0	0	1,230	
1964	0	684	0	158	0	58	28	0	0	0	0	0	928	
1965	0	24	29	6	0	148	720	6	27	15	28	2	1,005	
1966	0	8,805	6,701	5,274	83	0	0	0	0	0	0	0	20,863	
1967	0	426	26,249	7,008	1	210	353	0	0	0	0	26	34,272	
1968	0	1,410	732	100	29	4,936	99	5	0	0	0	0	7,310	
1969	1	13	93	48,933	164,740	143,970	24,272	6,762	0	0	0	0	388,783	
1970	0	178	0	181	289	1,660	0	0	0	0	0	0	2,308	
1971	0	744	2,275	984	62	11	22	0	0	0	0	0	4,096	
1972	0	0	2,072	2,465	0	0	0	0	2	0	10	0	4,548	
1973	3	720	285	879	3,454	7,807	371	0	0	0	0	0	13,518	
1974	0	126	6	8,114	28	1,500	9	0	0	0	0	0	9,782	
1975	0	0	3,006	1	1,094	1,820	279	1	0	0	0	0	6,201	
1976	0	0	0	0	1,205	416	206	6	6	6	0	988	2,833	
1977	0	165	48	811	138	218	0	688	0	0	602	0	2,671	
1978	0	0	1,383	6,209	53,359	125,651	34,028	41	2	0	0	0	220,673	
1979	0	190	1,537	10,082	5,552	9,221	436	127	0	0	0	0	27,145	
1980	15	2	0	28,708	167,349	137,638	52,887	10,758	256	1,408	50	4	399,075	
1981	0	0	6	6,516	605	7,930	13	3	1	0	10	4	15,089	
1982	18	511	58	490	561	7,561	8,745	10	9	2	0	5	17,970	
1983	3	2,124	2,680	16,229	30,982	122,762	33,374	37,683	25,759	55	6,270	1,285	279,207	
1984	11,004	9,161	14,139	5,668	0	0	3	0	0	0	0	1	39,976	
1985	1	1,440	26,310	4,401	6,496	462	221	0	0	0	0	0	43	39,375
1986	0	7,020	2,361	1,272	25,930	21,454	3,855	1	0	0	0	2,415	64,308	
1987	14	2,856	732	7,069	577	532	18	65	0	0	0	0	11,862	
1988	848	367	3,442	14,077	705	3	1,273	0	0	0	0	0	20,716	
1989	0	212	11,188	1,107	6,385	64	0	0	0	0	0	77	19,033	
1990	0	0	0	0	0	0	0	0	0	0	0	0	0	
1991	0	0	0	381	3,309	39,035	12	0	0	0	0	0	42,738	
1992	0	0	1,266	1,297	30,205	11,004	93	25	0	0	0	0	43,890	
1993	53	11	6,701	243,556	156,189	33,072	2,433	56	1,196	0	0	7	443,274	
1994	9	126	50	38	3,021	498	13	12	0	0	0	0	3,766	
1995	0	5	195	138,437	9,661	114,770	14,278	2,539	696	1	0	0	280,582	
1996	0	5	77	854	19,156	1,389	37	0	0	0	0	0	21,518	

1997	192	2,481	2,047	22,868	0	0	0	0	0	0	0	54	27,642
1998	0	797	9,897	4,291	166,961	29,999	11,006	42,170	2,677	1,906	39	121	269,864
1999	114	904	216	2,785	12	121	573	0	0	2	0	0	4,726
2000	0	0	0	29	16,213	3,854	531	0	5	0	12	53	20,698
2001	1,027	6	81	15,245	58,411	5,305	233	3	1	1	2	10	80,325
2002	0	1,755	290	593	7	104	20	0	0	0	0	0	2,770
2003	5	3,879	21,946	12	38,145	21,208	4,842	1,377	1	8	1	2	91,425
Mean	173	613	2,039	8,179	13,982	13,667	3,214	1,302	384	43	88	65	43,749
% of total	0.4	1.4	4.7	18.7	32.0	31.2	7.3	3.0	0.9	0.1	0.2	0.1	100
Mean (1924-1940)	29	26	345	436	5,914	8,419	1,712	37	0	0	0	6	16,924
% of total	0.2	0.2	2.0	2.6	34.9	49.7	10.1	0.2	0.0	0.0	0.0	0.0	100
Mean (1941-1970)	3	434	1,431	3,381	7,074	8,161	1,940	265	2	1	3	2	22,698
% of total	0.0	1.9	6.3	14.9	31.2	36.0	8.5	1.2	0.0	0.0	0.0	0.0	100
Mean (1950-1988)	307	955	2,437	4,902	12,145	15,508	4,460	1,443	669	39	180	123	43,169
% of total	0.7	2.2	5.6	11.4	28.1	35.9	10.3	3.3	1.6	0.1	0.4	0.3	100
Mean (1971-2003)	403	1,079	3,463	16,529	24,417	21,376	5,146	2,896	928	103	212	154	76,706
% of total	0.5	1.4	4.5	21.5	31.8	27.9	6.7	3.8	1.2	0.1	0.3	0.2	100
Mean (1989-2003)	93	679	3,597	28,766	33,845	17,362	2,271	3,079	305	128	4	22	90,150
% of total	0.1	0.8	4.0	31.9	37.5	19.3	2.5	3.4	0.3	0.1	0.0	0.0	100

NOTES:

a Recorded mean flow values from USGS Gage 11078000

b Volumes are calculated from the reported, mean monthly flow and the number of days in the given month

D. USGS Gages 11074500 and 11074000 (Santa Ana River below Prado) - Frequency Distributions for Flow Duration Curves

P = probability of exceedence

Water Year 1937
 SAR @ County Line, below Prado (USGS 11074500)
 $n_1 = 365$
 total ppt = 31.5 inches

Gage#	Date	Flow (cfs)	rank	P
USGS 11074500	2/7/1937	7720	1	0.2732
USGS 11074500	2/14/1937	4060	2	0.5464
USGS 11074500	2/6/1937	3340	3	0.8197
USGS 11074500	2/15/1937	1980	4	1.0929
USGS 11074500	12/31/1936	1710	5	1.3661
USGS 11074500	2/6/1937	1080	6	1.6393
USGS 11074500	3/16/1937	883	7	1.9126
USGS 11074500	3/17/1937	585	8	2.1858
USGS 11074500	12/28/1936	554	9	2.4590
USGS 11074500	2/16/1937	515	10	2.7322
USGS 11074500	3/22/1937	514	11	3.0055
USGS 11074500	3/18/1937	454	12	3.2787
USGS 11074500	1/1/1937	429	13	3.5519
USGS 11074500	3/19/1937	423	14	3.8251
USGS 11074500	3/23/1937	412	15	4.0984
USGS 11074500	3/13/1937	411	16	4.3716
USGS 11074500	3/25/1937	392	17	4.6448
USGS 11074500	3/21/1937	384	18	4.9180
USGS 11074500	3/20/1937	368	19	5.1913
USGS 11074500	2/9/1937	362	20	5.4645
USGS 11074500	4/16/1937	358	21	5.7377
USGS 11074500	4/17/1937	358	22	6.0109
USGS 11074500	3/24/1937	350	23	6.2842
USGS 11074500	2/18/1937	338	24	6.5574
USGS 11074500	2/19/1937	338	25	6.8306
USGS 11074500	2/17/1937	326	26	7.1038
USGS 11074500	4/12/1937	305	27	7.3770
USGS 11074500	2/20/1937	302	28	7.6503
USGS 11074500	4/13/1937	300	29	7.9235
USGS 11074500	4/15/1937	300	30	8.1967
USGS 11074500	2/21/1937	287	31	8.4699
USGS 11074500	4/19/1937	286	32	8.7432
USGS 11074500	2/10/1937	282	33	9.0164
USGS 11074500	4/14/1937	282	34	9.2896
USGS 11074500	4/12/1937	277	35	9.5628
USGS 11074500	3/26/1937	272	36	9.8361
USGS 11074500	4/11/1937	268	37	10.1093
USGS 11074500	4/20/1937	268	38	10.3825
USGS 11074500	4/10/1937	259	39	10.6557
USGS 11074500	2/22/1937	257	40	10.9290
USGS 11074500	3/14/1937	257	41	11.2022
USGS 11074500	2/26/1937	255	42	11.4754
USGS 11074500	2/11/1937	250	43	11.7486
USGS 11074500	4/3/1937	247	44	12.0219
USGS 11074500	2/25/1937	242	45	12.2951
USGS 11074500	4/21/1937	241	46	12.5683
USGS 11074500	3/15/1937	240	47	12.8415
USGS 11074500	3/28/1937	237	48	13.1148
USGS 11074500	3/27/1937	232	49	13.3880
USGS 11074500	12/29/1936	229	50	13.6612
USGS 11074500	1/2/1937	229	51	13.9344
USGS 11074500	4/9/1937	226	52	14.2077
USGS 11074500	2/23/1937	226	53	14.4809
USGS 11074500	4/2/1937	226	54	14.7541
USGS 11074500	2/12/1937	220	55	15.0273

Water Year 1978
 Below Prado (USGS 11074000)
 $n_2 = 365$
 total ppt = 30.5 inches

Gage#	Date	Flow (cfs)	rank	P
USGS 11074000	3/6/1978	2470	1	0.2732
USGS 11074000	3/10/1978	2440	2	0.5464
USGS 11074000	3/5/1978	2420	3	0.8197
USGS 11074000	3/7/1978	2400	4	1.0929
USGS 11074000	3/9/1978	2380	5	1.3661
USGS 11074000	3/11/1978	2370	6	1.6393
USGS 11074000	3/3/1978	2230	7	1.9126
USGS 11074000	3/12/1978	2230	8	2.1858
USGS 11074000	3/4/1978	2200	9	2.4590
USGS 11074000	3/2/1978	2180	10	2.7322
USGS 11074000	3/2/1978	1890	11	3.0055
USGS 11074000	3/8/1978	1690	12	3.2787
USGS 11074000	3/13/1978	1380	13	3.5519
USGS 11074000	3/16/1978	1380	14	3.8251
USGS 11074000	4/18/1978	1210	15	4.0984
USGS 11074000	4/18/1978	1180	16	4.3716
USGS 11074000	4/19/1978	1170	17	4.6448
USGS 11074000	4/20/1978	1160	18	4.9180
USGS 11074000	4/21/1978	1160	19	5.1913
USGS 11074000	4/22/1978	1150	20	5.4645
USGS 11074000	4/23/1978	1150	21	5.7377
USGS 11074000	4/24/1978	1140	22	6.0109
USGS 11074000	2/1/1978	1130	23	6.2842
USGS 11074000	4/25/1978	1130	24	6.5574
USGS 11074000	4/26/1978	1130	25	6.8306
USGS 11074000	4/27/1978	1120	26	7.1038
USGS 11074000	2/10/1978	1070	27	7.3770
USGS 11074000	4/17/1978	1010	28	7.6503
USGS 11074000	1/17/1978	962	29	7.9235
USGS 11074000	3/27/1978	938	30	8.1967
USGS 11074000	3/4/1978	930	31	8.4699
USGS 11074000	3/28/1978	928	32	8.7432
USGS 11074000	4/12/1978	887	33	9.0164
USGS 11074000	4/13/1978	887	34	9.2896
USGS 11074000	4/14/1978	887	35	9.5628
USGS 11074000	4/15/1978	887	36	9.8361
USGS 11074000	4/16/1978	887	37	10.1093
USGS 11074000	2/14/1978	858	38	10.3825
USGS 11074000	4/28/1978	857	39	10.6557
USGS 11074000	2/15/1978	814	40	10.9290
USGS 11074000	4/11/1978	790	41	11.2022
USGS 11074000	3/22/1978	690	42	11.4754
USGS 11074000	4/8/1978	690	43	11.7486
USGS 11074000	4/8/1978	690	44	12.0219
USGS 11074000	4/9/1978	690	45	12.2951
USGS 11074000	4/10/1978	690	46	12.5683
USGS 11074000	4/12/1978	678	47	12.8415
USGS 11074000	3/31/1978	667	48	13.1148
USGS 11074000	4/1/1978	667	49	13.3880
USGS 11074000	4/3/1978	667	50	13.6612
USGS 11074000	3/29/1978	656	51	13.9344
USGS 11074000	3/30/1978	644	52	14.2077
USGS 11074000	3/25/1978	644	53	14.4809
USGS 11074000	2/13/1978	635	54	14.7541
USGS 11074000	3/26/1978	633	55	15.0273

Water Year 1993
 Below Prado (USGS 11074000)
 $n_3 = 365$
 total ppt = 30.9 inches

Gage#	Date	Flow (cfs)	rank	P
USGS 11074000	1/20/1993	6210	1	0.2732
USGS 11074000	2/21/1993	6140	2	0.5464
USGS 11074000	2/20/1993	6080	3	0.8197
USGS 11074000	1/21/1993	6040	4	1.0929
USGS 11074000	1/22/1993	6020	5	1.3661
USGS 11074000	1/24/1993	6020	6	1.6393
USGS 11074000	1/23/1993	5990	7	1.9126
USGS 11074000	1/11/1993	5950	8	2.1858
USGS 11074000	2/22/1993	5940	9	2.4590
USGS 11074000	1/25/1993	5920	10	2.7322
USGS 11074000	2/9/1993	5870	11	3.0055
USGS 11074000	1/14/1993	5850	12	3.2787
USGS 11074000	2/23/1993	5730	13	3.5519
USGS 11074000	1/19/1993	5720	14	3.8251
USGS 11074000	2/14/1993	5720	15	4.0984
USGS 11074000	2/10/1993	5650	16	4.3716
USGS 11074000	2/25/1993	5630	17	4.6448
USGS 11074000	1/9/1993	5150	18	4.9180
USGS 11074000	1/17/1993	4840	19	5.1913
USGS 11074000	1/18/1993	4840	20	5.4645
USGS 11074000	1/15/1993	4820	21	5.7377
USGS 11074000	1/8/1993	4700	22	6.0109
USGS 11074000	1/16/1993	4540	23	6.2842
USGS 11074000	1/26/1993	4500	24	6.5574
USGS 11074000	1/12/1993	4480	25	6.8306
USGS 11074000	2/26/1993	4480	26	7.1038
USGS 11074000	1/10/1993	4430	27	7.3770
USGS 11074000	2/11/1993	4380	28	7.6503
USGS 11074000	1/13/1993	4080	29	7.9235
USGS 11074000	2/8/1993	3010	30	8.1967
USGS 11074000	2/19/1993	2550	31	8.4699
USGS 11074000	1/29/1993	2260	32	8.7432
USGS 11074000	2/27/1993	2230	33	9.0164
USGS 11074000	3/27/1993	1790	34	9.2896
USGS 11074000	3/26/1993	1670	35	9.5628
USGS 11074000	1/27/1993	1650	36	9.8361
USGS 11074000	2/12/1993	1540	37	10.1093
USGS 11074000	2/28/1993	1530	38	10.3825
USGS 11074000	2/17/1993	1420	39	10.6557
USGS 11074000	2/16/1993	1390	40	10.9290
USGS 11074000	1/19/1993	1280	41	11.2022
USGS 11074000	3/1/1993	1270	42	11.4754
USGS 11074000	3/28/1993	1140	43	11.7486
USGS 11074000	3/2/1993	1040	44	12.0219
USGS 11074000	3/29/1993	984	45	12.2951
USGS 11074000	3/20/1993	970	46	12.5683
USGS 11074000	3/21/1993	967	47	12.8415
USGS 11074000	3/4/1993	929	48	13.1148
USGS 11074000	12/18/1992	915	49	13.3880
USGS 11074000	3/5/1993	911	50	13.6612
USGS 11074000	3/3/1993	899	51	13.9344
USGS 11074000	3/6/1993	879	52	14.2077
USGS 11074000	3/7/1993	878	53	14.4809
USGS 11074000	1/28/1993	866	54	14.7541
USGS 11074000	3/19/1993	850	55	15.0273

USGS	11074500	4/22/1937	220	15 3005	11074000	2/18/1978	630	56	15 3005	USGS	11074000	3/25/1993	832	56	15 3005
USGS	11074500	3/29/1937	219	15 5738	11074000	2/19/1978	612	57	15 5738	USGS	11074000	3/24/1993	809	57	15 5738
USGS	11074500	2/13/1937	210	15 8470	11074000	1/19/1978	598	58	15 8470	USGS	11074000	3/13/1993	797	58	15 8470
USGS	11074500	3/12/1937	209	16 1202	11074000	2/16/1978	596	59	16 1202	USGS	11074000	3/14/1993	796	59	16 1202
USGS	11074500	4/4/1937	207	16 3934	11074000	2/12/1978	590	60	16 3934	USGS	11074000	12/9/1992	773	60	16 3934
USGS	11074500	4/6/1937	201	16 6667	11074000	2/20/1978	587	61	16 6667	USGS	11074000	3/10/1993	772	61	16 6667
USGS	11074500	1/13/1937	200	16 9399	11074000	1/24/1978	571	62	16 9399	USGS	11074000	3/12/1993	764	62	16 9399
USGS	11074500	4/7/1937	198	17 2131	11074000	1/20/1978	553	63	17 2131	USGS	11074000	3/11/1993	754	63	17 2131
USGS	11074500	4/23/1937	196	17 4863	11074000	1/16/1978	551	64	17 4863	USGS	11074000	2/15/1993	713	64	17 4863
USGS	11074500	2/24/1937	197	17 7596	11074000	1/13/1978	550	65	17 7596	USGS	11074000	2/14/1993	710	65	17 7596
USGS	11074500	1/27/1937	195	18 0328	11074000	2/19/1978	539	66	18 0328	USGS	11074000	2/13/1993	709	66	18 0328
USGS	11074500	2/27/1937	195	18 3060	11074000	4/4/1978	518	67	18 3060	USGS	11074000	3/30/1993	695	67	18 3060
USGS	11074500	4/5/1937	195	18 5792	11074000	12/30/1977	504	68	18 5792	USGS	11074000	3/23/1993	692	68	18 5792
USGS	11074500	4/8/1937	191	18 8525	11074000	4/6/1978	504	69	18 8525	USGS	11074000	3/18/1993	675	69	18 8525
USGS	11074500	3/30/1937	185	19 1257	11074000	1/11/1978	503	70	19 1257	USGS	11074000	3/18/1993	675	70	19 1257
USGS	11074500	2/28/1937	181	19 3989	11074000	12/31/1977	492	71	19 3989	USGS	11074000	12/10/1992	670	71	19 3989
USGS	11074500	3/31/1937	181	19 6721	11074000	6/9/1978	480	72	19 6721	USGS	11074000	12/11/1992	645	72	19 6721
USGS	11074500	1/6/1937	179	19 9454	11074000	1/17/1978	462	73	19 9454	USGS	11074000	4/15/1993	644	73	19 9454
USGS	11074500	3/1/1937	179	20 2186	11074000	2/17/1978	458	74	20 2186	USGS	11074000	12/12/1992	638	74	20 2186
USGS	11074500	3/1/1937	179	20 4918	11074000	2/17/1978	458	74	20 4918	USGS	11074000	3/8/1993	632	74	20 4918
USGS	11074500	3/2/1937	177	20 7650	11074000	1/14/1978	454	75	20 7650	USGS	11074000	12/13/1992	624	75	20 7650
USGS	11074500	1/3/1937	174	21 0383	11074000	1/21/1978	448	76	21 0383	USGS	11074000	1/31/1993	621	76	21 0383
USGS	11074500	12/30/1936	172	21 3115	11074000	3/24/1978	448	77	21 3115	USGS	11074000	2/1/1993	620	77	21 3115
USGS	11074500	3/10/1937	172	21 5847	11074000	1/22/1978	445	78	21 5847	USGS	11074000	3/9/1993	614	78	21 5847
USGS	11074500	3/11/1937	172	21 8579	11074000	1/15/1978	429	79	21 8579	USGS	11074000	4/18/1993	610	79	21 8579
USGS	11074500	4/1/1937	172	22 1311	11074000	12/29/1977	428	80	22 1311	USGS	11074000	3/17/1993	608	80	22 1311
USGS	11074500	4/27/1937	170	22 4044	11074000	1/27/1978	428	81	22 4044	USGS	11074000	4/17/1993	607	81	22 4044
USGS	11074500	4/28/1937	170	22 6776	11074000	6/10/1978	409	82	22 6776	USGS	11074000	4/14/1993	596	82	22 6776
USGS	11074500	4/24/1937	167	22 9508	11074000	7/17/1978	406	83	22 9508	USGS	11074000	3/15/1993	591	83	22 9508
USGS	11074500	3/3/1937	166	23 2240	11074000	6/11/1978	405	84	23 2240	USGS	11074000	4/3/1993	584	84	23 2240
USGS	11074500	3/9/1937	166	23 4973	11074000	7/9/1978	404	85	23 4973	USGS	11074000	1/4/1993	574	85	23 4973
USGS	11074500	3/6/1937	164	23 7705	11074000	6/12/1978	402	86	23 7705	USGS	11074000	4/11/1993	573	86	23 7705
USGS	11074500	3/4/1937	162	24 0437	11074000	7/8/1978	402	87	24 0437	USGS	11074000	4/10/1993	572	87	24 0437
USGS	11074500	3/5/1937	162	24 3169	11074000	7/10/1978	401	88	24 3169	USGS	11074000	4/1/1993	569	88	24 3169
USGS	11074500	1/7/1937	160	24 5902	11074000	7/16/1978	398	89	24 5902	USGS	11074000	4/18/1993	566	89	24 5902
USGS	11074500	3/8/1937	160	24 8634	11074000	7/11/1978	396	90	24 8634	USGS	11074000	4/27/1993	564	90	24 8634
USGS	11074500	4/25/1937	160	25 1366	11074000	7/12/1978	394	91	25 1366	USGS	11074000	4/4/1993	564	91	25 1366
USGS	11074500	3/7/1937	158	25 4098	11074000	1/23/1978	393	92	25 4098	USGS	11074000	4/3/1993	562	92	25 4098
USGS	11074500	1/14/1937	134	25 6831	11074000	7/3/1978	387	93	25 6831	USGS	11074000	3/31/1993	553	93	25 6831
USGS	11074500	12/16/1936	144	25 9563	11074000	7/4/1978	387	94	25 9563	USGS	11074000	4/29/1993	548	94	25 9563
USGS	11074500	4/26/1937	144	26 2295	11074000	7/5/1978	387	95	26 2295	USGS	11074000	4/21/1993	548	95	26 2295
USGS	11074500	5/18/1937	141	26 5027	11074000	7/13/1978	387	96	26 5027	USGS	11074000	4/20/1993	538	96	26 5027
USGS	11074500	12/15/1936	139	26 7760	11074000	7/13/1978	384	97	26 7760	USGS	11074000	12/14/1992	533	97	26 7760
USGS	11074500	5/19/1937	138	27 0492	11074000	6/7/1978	380	98	27 0492	USGS	11074000	4/19/1993	533	98	27 0492
USGS	11074500	1/4/1937	137	27 3224	11074000	6/8/1978	380	99	27 3224	USGS	11074000	4/6/1993	531	99	27 3224
USGS	11074500	4/29/1937	136	27 5956	11074000	6/29/1978	380	100	27 5956	USGS	11074000	4/12/1993	530	100	27 5956
USGS	11074500	1/14/1937	134	27 8689	11074000	6/30/1978	380	101	27 8689	USGS	11074000	4/27/1993	524	101	27 8689
USGS	11074500	5/18/1937	130	28 1421	11074000	7/1/1978	380	102	28 1421	USGS	11074000	4/30/1993	524	102	28 1421
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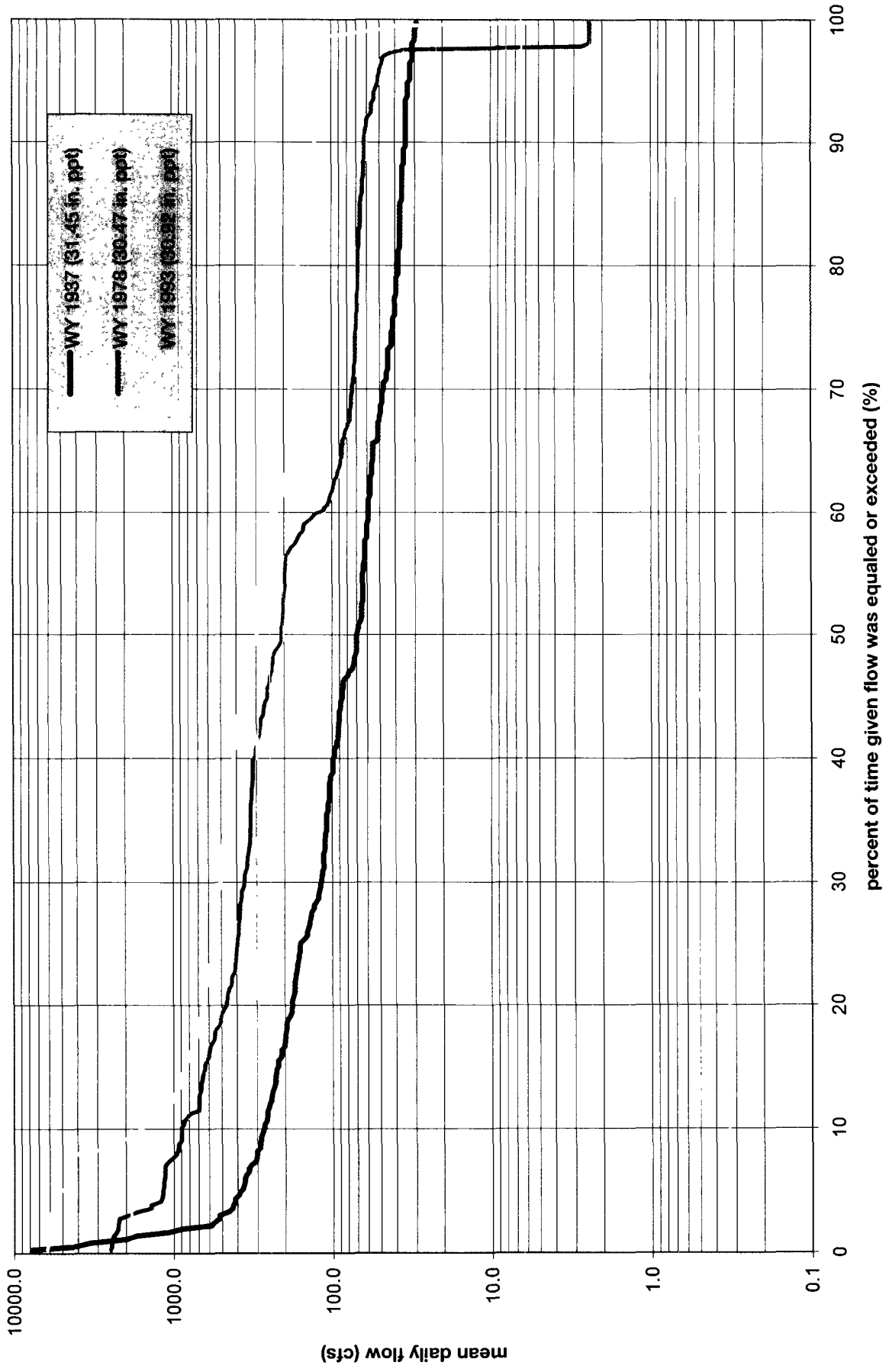
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USGS	11074500	6/29/1937	48	255	69 6721	USGS	11074000	11/30/1992	182	255	69 6721
USGS	11074500	6/26/1937	47	256	69 9454	USGS	11074000	7/27/1993	182	256	69 9454

USGS	11074500	6/28/1937	47	257	70 2186	USGS	11074000	8/20/1978	74	257	70 2186	USGS	11074000	7/28/1993	182	257	70 2186
USGS	11074500	7/1/1937	47	258	70 4918	USGS	11074000	12/1/1977	73	258	70 4918	USGS	11074000	12/31/1992	181	258	70 4918
USGS	11074500	6/23/1937	45	259	70 7650	USGS	11074000	12/13/1977	72	259	70 7650	USGS	11074000	10/28/1992	180	259	70 7650
USGS	11074500	7/2/1937	45	260	71 0383	USGS	11074000	11/17/1977	73	260	71 0383	USGS	11074000	11/18/1992	180	260	71 0383
USGS	11074500	7/6/1937	45	261	71 3115	USGS	11074000	11/21/1977	72	261	71 3115	USGS	11074000	12/27/1992	180	261	71 3115
USGS	11074500	7/3/1937	44	262	71 5847	USGS	11074000	11/28/1977	72	262	71 5847	USGS	11074000	7/29/1993	180	262	71 5847
USGS	11074500	7/19/1937	44	263	71 8579	USGS	11074000	12/12/1977	72	263	71 8579	USGS	11074000	10/22/1992	177	263	71 8579
USGS	11074500	7/8/1937	44	264	72 1311	USGS	11074000	11/5/1977	71	264	72 1311	USGS	11074000	7/30/1993	177	264	72 1311
USGS	11074500	7/11/1937	44	265	72 4044	USGS	11074000	11/8/1977	71	265	72 4044	USGS	11074000	10/31/1992	176	265	72 4044
USGS	11074500	7/12/1937	44	266	72 6776	USGS	11074000	11/22/1977	71	266	72 6776	USGS	11074000	11/21/1992	176	266	72 6776
USGS	11074500	7/16/1937	44	267	72 9508	USGS	11074000	11/26/1977	71	267	72 9508	USGS	11074000	11/22/1992	176	267	72 9508
USGS	11074500	9/3/1937	44	268	73 2240	USGS	11074000	11/27/1977	71	268	73 2240	USGS	11074000	11/26/1992	175	268	73 2240
USGS	11074500	7/9/1937	42	269	73 4973	USGS	11074000	11/30/1977	71	269	73 4973	USGS	11074000	11/29/1992	175	269	73 4973
USGS	11074500	7/13/1937	42	270	73 7705	USGS	11074000	12/2/1977	71	270	73 7705	USGS	11074000	11/13/1992	174	270	73 7705
USGS	11074500	7/15/1937	42	271	74 0437	USGS	11074000	12/14/1977	71	271	74 0437	USGS	11074000	10/19/1992	174	271	74 0437
USGS	11074500	7/17/1937	42	272	74 3169	USGS	11074000	12/15/1977	71	272	74 3169	USGS	11074000	11/17/1992	174	272	74 3169
USGS	11074500	7/19/1937	42	273	74 5902	USGS	11074000	12/16/1977	71	273	74 5902	USGS	11074000	11/27/1992	174	273	74 5902
USGS	11074500	7/4/1937	41	274	74 8634	USGS	11074000	10/30/1977	70	274	74 8634	USGS	11074000	10/20/1992	173	274	74 8634
USGS	11074500	7/5/1937	41	275	75 1366	USGS	11074000	10/31/1977	70	275	75 1366	USGS	11074000	11/28/1992	173	275	75 1366
USGS	11074500	7/10/1937	41	276	75 4098	USGS	11074000	11/14/1977	70	276	75 4098	USGS	11074000	10/18/1992	171	276	75 4098
USGS	11074500	7/18/1937	41	277	75 6831	USGS	11074000	11/20/1977	70	277	75 6831	USGS	11074000	11/16/1992	171	277	75 6831
USGS	11074500	7/14/1937	40	278	75 9563	USGS	11074000	12/7/1977	70	278	75 9563	USGS	11074000	10/12/1992	170	278	75 9563
USGS	11074500	7/22/1937	40	279	76 2295	USGS	11074000	11/19/1977	69	279	76 2295	USGS	11074000	11/15/1992	170	279	76 2295
USGS	11074500	8/1/1937	40	280	76 5027	USGS	11074000	12/8/1977	69	280	76 5027	USGS	11074000	7/31/1993	170	280	76 5027
USGS	11074500	8/29/1937	40	281	76 7760	USGS	11074000	12/10/1977	69	281	76 7760	USGS	11074000	10/23/1992	169	281	76 7760
USGS	11074500	9/1/1937	40	282	77 0492	USGS	11074000	12/17/1977	68	282	77 0492	USGS	11074000	10/29/1992	169	282	77 0492
USGS	11074500	9/2/1937	40	283	77 3224	USGS	11074000	7/29/1978	68	283	77 3224	USGS	11074000	11/12/1992	168	283	77 3224
USGS	11074500	7/20/1937	39	284	77 5956	USGS	11074000	8/21/1978	68	284	77 5956	USGS	11074000	11/13/1992	168	284	77 5956
USGS	11074500	7/21/1937	39	285	77 8689	USGS	11074000	10/29/1977	68	285	77 8689	USGS	11074000	8/1/1993	168	285	77 8689
USGS	11074500	7/23/1937	39	286	78 1421	USGS	11074000	11/1/1977	68	286	78 1421	USGS	11074000	10/17/1992	166	286	78 1421
USGS	11074500	7/24/1937	39	287	78 4153	USGS	11074000	11/4/1977	68	287	78 4153	USGS	11074000	8/2/1993	166	287	78 4153
USGS	11074500	8/16/1937	39	288	78 6885	USGS	11074000	11/13/1977	68	288	78 6885	USGS	11074000	8/3/1993	166	288	78 6885
USGS	11074500	8/16/1937	39	289	78 9617	USGS	11074000	11/18/1977	68	289	78 9617	USGS	11074000	10/16/1992	165	289	78 9617
USGS	11074500	10/13/1936	38	290	79 2350	USGS	11074000	11/29/1977	68	290	79 2350	USGS	11074000	11/14/1992	164	290	79 2350
USGS	11074500	8/6/1937	38	291	79 5082	USGS	11074000	12/3/1977	68	291	79 5082	USGS	11074000	10/15/1992	163	291	79 5082
USGS	11074500	8/12/1937	38	292	79 7814	USGS	11074000	12/5/1977	68	292	79 7814	USGS	11074000	8/4/1993	163	292	79 7814
USGS	11074500	8/13/1937	38	293	80 0546	USGS	11074000	12/9/1977	68	293	80 0546	USGS	11074000	8/5/1993	161	293	80 0546
USGS	11074500	9/27/1937	38	294	80 3279	USGS	11074000	12/11/1977	68	294	80 3279	USGS	11074000	10/14/1992	159	294	80 3279
USGS	11074500	9/28/1937	38	295	80 6011	USGS	11074000	9/1/1978	68	295	80 6011	USGS	11074000	8/6/1993	159	295	80 6011
USGS	11074500	9/29/1937	38	296	80 8743	USGS	11074000	9/2/1978	68	296	80 8743	USGS	11074000	10/6/1992	158	296	80 8743
USGS	11074500	9/30/1937	38	297	81 1475	USGS	11074000	9/3/1978	68	297	81 1475	USGS	11074000	8/7/1993	157	297	81 1475
USGS	11074500	10/6/1936	37	298	81 4208	USGS	11074000	11/3/1977	67	298	81 4208	USGS	11074000	8/8/1993	157	298	81 4208
USGS	11074500	10/11/1936	37	299	81 6940	USGS	11074000	11/9/1977	67	299	81 6940	USGS	11074000	10/7/1992	155	299	81 6940
USGS	11074500	10/13/1936	37	300	81 9672	USGS	11074000	12/6/1977	67	300	81 9672	USGS	11074000	8/9/1993	154	300	81 9672
USGS	11074500	10/14/1936	37	301	82 2404	USGS	11074000	8/4/1978	67	301	82 2404	USGS	11074000	10/5/1992	153	301	82 2404
USGS	11074500	7/25/1937	37	302	82 5137	USGS	11074000	8/31/1978	67	302	82 5137	USGS	11074000	8/10/1993	152	302	82 5137
USGS	11074500	7/26/1937	37	303	82 7869	USGS	11074000	9/4/1978	67	303	82 7869	USGS	11074000	8/11/1993	152	303	82 7869
USGS	11074500	7/31/1937	37	304	83 0601	USGS	11074000	10/28/1977	66	304	83 0601	USGS	11074000	10/8/1992	151	304	83 0601
USGS	11074500	8/14/1937	37	305	83 3333	USGS	11074000	11/2/1977	66	305	83 3333	USGS	11074000	10/9/1992	150	305	83 3333
USGS	11074500	8/15/1937	37	306	83 6066	USGS	11074000	11/12/1977	66	306	83 6066	USGS	11074000	8/12/1993	150	306	83 6066
USGS	11074500	8/18/1937	37	307	83 8798	USGS	11074000	11/15/1977	66	307	83 8798	USGS	11074000	8/13/1993	147	307	83 8798
USGS	11074500	8/28/1937	37	308	84 1530	USGS	11074000	11/17/1977	66	308	84 1530	USGS	11074000	10/4/1992	146	308	84 1530
USGS	11074500	8/30/1937	37	309	84 4262	USGS	11074000	1/4/1977	66	309	84 4262	USGS	11074000	10/27/1992	145	309	84 4262
USGS	11074500	9/4/1937	37	310	84 6995	USGS	11074000	8/23/1978	66	310	84 6995	USGS	11074000	10/3/1992	144	310	84 6995
USGS	11074500	9/26/1937	37	311	84 9727	USGS	11074000	9/5/1978	66	311	84 9727	USGS	11074000	10/11/1992	144	311	84 9727
USGS	11074500	10/4/1936	36	312	85 2459	USGS	11074000	8/22/1978	65	312	85 2459	USGS	11074000	8/14/1993	144	312	85 2459
USGS	11074500	7/27/1937	36	313	85 5191	USGS	11074000	8/24/1978	65	313	85 5191	USGS	11074000	8/15/1993	144	313	85 5191
USGS	11074500	8/2/1937	36	314	85 7923	USGS	11074000	10/27/1977	64	314	85 7923	USGS	11074000	10/2/1992	143	314	85 7923
USGS	11074500	8/6/1937	36	315	86 0656	USGS	11074000	11/16/1977	64	315	86 0656	USGS	11074000	10/10/1992	142	315	86 0656
USGS	11074500	8/7/1937	36	316	86 3388	USGS	11074000	8/27/1978	64	316	86 3388	USGS	11074000	8/17/1993	141	316	86 3388
USGS	11074500	8/17/1937	36	317	86 6120	USGS	11074000	8/29/1978	64	317	86 6120	USGS	11074000	8/16/1993	138	317	86 6120
USGS	11074500	8/20/1937	36	318	86 8852	USGS	11074000	8/30/1978	64	318	86 8852	USGS	11074000	10/1/1992	136	318	86 8852
USGS	11074500	8/24/1937	36	319	87 1585	USGS	11074000	10/19/1977	63	319	87 1585	USGS	11074000	8/30/1993	135	319	87 1585
USGS	11074500	8/27/1937	36	320	87 4317	USGS	11074000	10/24/1977	63	320	87 4317	USGS	11074000	8/20/1993	133	320	87 4317
USGS	11074500	9/22/1937	36	321	87 7049	USGS	11074000	8/25/1978	63	321	87 7049	USGS	11074000	8/18/1993	132	321	87 7049
USGS	11074500	9/23/1937	36	322	87 9781	USGS	11074000	8/26/1978									

USGS	11074500	10/3/1936	35	324	88 5246	USGS	11074000	10/18/1977	62	324	88 5246	USGS	11074000	8/22/1993	130	324	88 5246
USGS	11074500	10/5/1936	35	325	88 7978	USGS	11074000	10/20/1977	62	325	88 7978	USGS	11074000	9/19/1993	130	325	88 7978
USGS	11074500	10/10/1936	35	326	89 0710	USGS	11074000	10/21/1977	62	326	89 0710	USGS	11074000	8/19/1993	129	326	89 0710
USGS	11074500	10/12/1936	35	327	89 3443	USGS	11074000	10/22/1977	62	327	89 3443	USGS	11074000	8/23/1993	129	327	89 3443
USGS	11074500	10/11/1936	34	328	89 6175	USGS	11074000	10/23/1977	62	328	89 6175	USGS	11074000	9/17/1993	129	328	89 6175
USGS	11074500	10/7/1936	34	329	89 8907	USGS	11074000	11/10/1977	62	329	89 8907	USGS	11074000	8/24/1993	127	329	89 8907
USGS	11074500	10/8/1936	34	330	90 1639	USGS	11074000	11/11/1977	62	330	90 1639	USGS	11074000	8/25/1993	126	330	90 1639
USGS	11074500	10/9/1936	34	331	90 4372	USGS	11074000	3/17/1978	62	331	90 4372	USGS	11074000	8/26/1993	126	331	90 4372
USGS	11074500	7/29/1937	34	332	90 7104	USGS	11074000	10/25/1977	61	332	90 7104	USGS	11074000	8/29/1993	126	332	90 7104
USGS	11074500	7/30/1937	34	333	90 9836	USGS	11074000	10/26/1977	61	333	90 9836	USGS	11074000	9/25/1993	126	333	90 9836
USGS	11074500	8/1/1937	34	334	91 2568	USGS	11074000	10/12/1977	60	334	91 2568	USGS	11074000	9/28/1993	126	334	91 2568
USGS	11074500	8/4/1937	34	335	91 5301	USGS	11074000	10/13/1977	60	335	91 5301	USGS	11074000	9/30/1993	125	335	91 5301
USGS	11074500	8/7/1937	34	336	91 8033	USGS	11074000	9/23/1978	60	336	91 8033	USGS	11074000	9/26/1993	124	336	91 8033
USGS	11074500	8/9/1937	34	337	92 0765	USGS	11074000	10/17/1977	59	337	92 0765	USGS	11074000	9/27/1993	124	337	92 0765
USGS	11074500	8/19/1937	34	338	92 3497	USGS	11074000	10/14/1977	59	338	92 3497	USGS	11074000	9/29/1993	124	338	92 3497
USGS	11074500	8/26/1937	34	339	92 6230	USGS	11074000	10/16/1977	56	339	92 6230	USGS	11074000	8/27/1993	123	339	92 6230
USGS	11074500	9/5/1937	34	340	92 8962	USGS	11074000	9/24/1978	56	340	92 8962	USGS	11074000	8/28/1993	123	340	92 8962
USGS	11074500	9/24/1937	34	341	93 1694	USGS	11074000	9/25/1978	56	341	93 1694	USGS	11074000	8/31/1993	123	341	93 1694
USGS	11074500	9/25/1937	34	342	93 4426	USGS	11074000	10/11/1977	54	342	93 4426	USGS	11074000	9/21/1993	122	342	93 4426
USGS	11074500	7/28/1937	33	343	93 7158	USGS	11074000	10/15/1977	54	343	93 7158	USGS	11074000	9/14/1993	122	343	93 7158
USGS	11074500	8/31/1937	33	344	93 9891	USGS	11074000	3/18/1978	54	344	93 9891	USGS	11074000	9/3/1993	121	344	93 9891
USGS	11074500	8/21/1937	33	345	94 2623	USGS	11074000	10/4/1977	53	345	94 2623	USGS	11074000	9/13/1993	121	345	94 2623
USGS	11074500	8/23/1937	33	346	94 5355	USGS	11074000	10/10/1977	52	346	94 5355	USGS	11074000	9/16/1993	121	346	94 5355
USGS	11074500	8/25/1937	33	347	94 8087	USGS	11074000	10/3/1977	51	347	94 8087	USGS	11074000	9/15/1993	120	347	94 8087
USGS	11074500	8/5/1937	32	348	95 0820	USGS	11074000	10/7/1977	51	348	95 0820	USGS	11074000	9/11/1993	119	348	95 0820
USGS	11074500	8/22/1937	32	349	95 3552	USGS	11074000	10/8/1977	51	349	95 3552	USGS	11074000	9/12/1993	119	349	95 3552
USGS	11074500	9/15/1937	32	350	95 6284	USGS	11074000	10/1/1977	50	350	95 6284	USGS	11074000	9/1/1993	118	350	95 6284
USGS	11074500	9/17/1937	32	351	95 9016	USGS	11074000	10/9/1977	50	351	95 9016	USGS	11074000	9/7/1993	118	351	95 9016
USGS	11074500	9/19/1937	32	352	96 1749	USGS	11074000	10/5/1977	49	352	96 1749	USGS	11074000	9/4/1993	116	352	96 1749
USGS	11074500	9/21/1937	32	353	96 4481	USGS	11074000	10/2/1977	48	353	96 4481	USGS	11074000	9/10/1993	116	353	96 4481
USGS	11074500	9/7/1937	31	354	96 7213	USGS	11074000	10/6/1977	48	354	96 7213	USGS	11074000	9/5/1993	115	354	96 7213
USGS	11074500	9/8/1937	31	355	96 9945	USGS	11074000	3/19/1978	47	355	96 9945	USGS	11074000	9/6/1993	115	355	96 9945
USGS	11074500	9/13/1937	31	356	97 2678	USGS	11074000	7/28/1978	43	356	97 2678	USGS	11074000	9/8/1993	115	356	97 2678
USGS	11074500	9/14/1937	31	357	97 5410	USGS	11074000	9/18/1978	35	357	97 5410	USGS	11074000	9/9/1993	115	357	97 5410
USGS	11074500	9/16/1937	31	358	97 8142	USGS	11074000	9/19/1978	27	358	97 8142	USGS	11074000	11/17/1992	113	358	97 8142
USGS	11074500	9/20/1937	31	359	98 0874	USGS	11074000	7/29/1978	24	359	98 0874	USGS	11074000	10/31/1992	111	359	98 0874
USGS	11074500	9/6/1937	30	360	98 3607	USGS	11074000	7/30/1978	24	360	98 3607	USGS	11074000	10/30/1992	104	360	98 3607
USGS	11074500	9/11/1937	30	361	98 6339	USGS	11074000	7/31/1978	24	361	98 6339	USGS	11074000	9/24/1993	104	361	98 6339
USGS	11074500	9/12/1937	30	362	98 9071	USGS	11074000	8/1/1978	24	362	98 9071	USGS	11074000	9/23/1993	71	362	98 9071
USGS	11074500	9/18/1937	30	363	99 1803	USGS	11074000	8/2/1978	24	363	99 1803	USGS	11074000	9/20/1993	49	363	99 1803
USGS	11074500	9/9/1937	29	364	99 4536	USGS	11074000	8/3/1978	24	364	99 4536	USGS	11074000	9/22/1993	46	364	99 4536
USGS	11074500	9/10/1937	29	365	99 7268	USGS	11074000	9/20/1978	24	365	99 7268	USGS	11074000	9/21/1993	58	365	99 7268

Figure D. Flow Duration Curves: USGS 11074000 and 11074500, SAR Below Prado
WET YEARS



E. USGS Gage 11078000 (Santa Ana River at Santa Ana CA) - Frequency Distributions for Flow Duration Curves

p = probability of exceedence

Water Year 1937
 $n_1 = 365$
 total ppt = 31.5 inches

Gage#	Date	Flow (cfs)	rank	p
USGS 11078000	2/14/1937	6300.00	1	0.2732
USGS 11078000	2/14/1937	3140.00	2	0.5464
USGS 11078000	2/6/1937	1840.00	3	0.8197
USGS 11078000	2/15/1937	1720.00	4	1.0929
USGS 11078000	2/8/1937	1320.00	5	1.3661
USGS 11078000	3/17/1937	964.00	6	1.6393
USGS 11078000	3/16/1937	959.00	7	1.9126
USGS 11078000	12/31/1936	500.00	8	2.1858
USGS 11078000	3/18/1937	400.00	9	2.4590
USGS 11078000	3/22/1937	370.00	10	2.7322
USGS 11078000	3/19/1937	350.00	11	3.0055
USGS 11078000	2/16/1937	292.00	12	3.2787
USGS 11078000	3/20/1937	292.00	13	3.5519
USGS 11078000	3/21/1937	276.00	14	3.8251
USGS 11078000	3/23/1937	270.00	15	4.0984
USGS 11078000	2/13/1937	222.00	16	4.3716
USGS 11078000	3/24/1937	220.00	17	4.6448
USGS 11078000	3/25/1937	210.00	18	4.9180
USGS 11078000	3/26/1937	175.00	19	5.1913
USGS 11078000	3/14/1937	160.00	20	5.4645
USGS 11078000	3/27/1937	155.00	21	5.7377
USGS 11078000	3/28/1937	140.00	22	6.0109
USGS 11078000	2/17/1937	128.00	23	6.2842
USGS 11078000	3/15/1937	120.00	24	6.5574
USGS 11078000	3/29/1937	115.00	25	6.8306
USGS 11078000	12/28/1936	100.00	26	7.1038
USGS 11078000	3/30/1937	100.00	27	7.3770
USGS 11078000	3/31/1937	90.00	28	7.6503
USGS 11078000	4/5/1937	84.00	29	7.9235
USGS 11078000	4/3/1937	83.00	30	8.1967
USGS 11078000	4/4/1937	82.00	31	8.4699
USGS 11078000	4/1/1937	78.00	32	8.7432
USGS 11078000	4/2/1937	75.00	33	9.0164
USGS 11078000	2/25/1937	70.00	34	9.2896
USGS 11078000	12/27/1936	65.00	35	9.5628
USGS 11078000	4/8/1937	63.00	36	9.8361
USGS 11078000	1/1/1937	60.00	37	10.1093
USGS 11078000	2/9/1937	60.00	38	10.3825
USGS 11078000	3/13/1937	57.00	39	10.6557
USGS 11078000	4/6/1937	56.00	40	10.9290
USGS 11078000	12/29/1936	20.00	41	11.2022
USGS 11078000	2/10/1937	20.00	42	11.4754
USGS 11078000	4/7/1937	20.00	43	11.7486
USGS 11078000	12/21/1937	15.00	44	12.0219
USGS 11078000	4/9/1937	15.00	45	12.2951
USGS 11078000	4/10/1937	14.00	46	12.5683
USGS 11078000	2/18/1937	13.00	47	12.8415
USGS 11078000	2/26/1937	13.00	48	13.1148
USGS 11078000	4/11/1937	13.00	49	13.3880
USGS 11078000	4/12/1937	13.00	50	13.6612
USGS 11078000	1/30/1937	12.00	51	13.9344
USGS 11078000	4/13/1937	12.00	52	14.2077
USGS 11078000	4/14/1937	12.00	53	14.4809
USGS 11078000	4/15/1937	11.00	54	14.7541
USGS 11078000	4/16/1937	11.00	55	15.0273

Water Year 1978
 $n_2 = 365$
 total ppt = 30.5 inches

Gage#	Date	Flow (cfs)	rank	p
USGS 11078000	3/4/1978	6300.00	1	0.2732
USGS 11078000	3/5/1978	6170.00	2	0.5464
USGS 11078000	3/2/1978	6000.00	3	0.8197
USGS 11078000	3/3/1978	4500.00	4	1.0929
USGS 11078000	3/1/1978	4100.00	5	1.3661
USGS 11078000	3/6/1978	3960.00	6	1.6393
USGS 11078000	3/11/1978	3630.00	7	1.9126
USGS 11078000	3/12/1978	3620.00	8	2.1858
USGS 11078000	3/7/1978	3450.00	9	2.4590
USGS 11078000	3/10/1978	3400.00	10	2.7322
USGS 11078000	2/10/1978	3300.00	11	3.0055
USGS 11078000	3/15/1978	2900.00	12	3.2787
USGS 11078000	3/8/1978	2940.00	13	3.5519
USGS 11078000	3/13/1978	2740.00	14	3.8251
USGS 11078000	3/8/1978	2660.00	15	4.0984
USGS 11078000	2/11/1978	2550.00	16	4.3716
USGS 11078000	2/12/1978	2390.00	17	4.6448
USGS 11078000	3/16/1978	2340.00	18	4.9180
USGS 11078000	2/8/1978	2130.00	19	5.1913
USGS 11078000	2/15/1978	2100.00	20	5.4645
USGS 11078000	2/13/1978	2060.00	21	5.7377
USGS 11078000	2/14/1978	2040.00	22	6.0109
USGS 11078000	2/16/1978	1920.00	23	6.2842
USGS 11078000	2/18/1978	1350.00	24	6.5574
USGS 11078000	2/17/1978	1320.00	25	6.8306
USGS 11078000	2/19/1978	1000.00	26	7.1038
USGS 11078000	4/24/1978	898.00	27	7.3770
USGS 11078000	3/28/1978	894.00	28	7.6503
USGS 11078000	4/19/1978	894.00	29	7.9235
USGS 11078000	4/18/1978	873.00	30	8.1967
USGS 11078000	4/20/1978	873.00	31	8.4699
USGS 11078000	4/23/1978	831.00	32	8.7432
USGS 11078000	4/25/1978	831.00	33	9.0164
USGS 11078000	4/22/1978	772.00	34	9.2896
USGS 11078000	4/27/1978	772.00	35	9.5628
USGS 11078000	2/7/1978	767.00	36	9.8361
USGS 11078000	2/6/1978	760.00	37	10.1093
USGS 11078000	3/31/1978	759.00	38	10.3825
USGS 11078000	4/12/1978	744.00	39	10.6557
USGS 11078000	4/21/1978	735.00	40	10.9290
USGS 11078000	4/26/1978	717.00	41	11.2022
USGS 11078000	4/28/1978	716.00	42	11.4754
USGS 11078000	2/20/1978	700.00	43	11.7486
USGS 11078000	4/15/1978	699.00	44	12.0219
USGS 11078000	4/16/1978	655.00	45	12.2951
USGS 11078000	4/17/1978	647.00	46	12.5683
USGS 11078000	4/13/1978	645.00	47	12.8415
USGS 11078000	2/28/1978	600.00	48	13.1148
USGS 11078000	2/28/1978	600.00	49	13.3880
USGS 11078000	2/8/1978	597.00	50	13.6612
USGS 11078000	4/2/1978	589.00	51	13.9344
USGS 11078000	4/14/1978	573.00	52	14.2077
USGS 11078000	4/1/1978	549.00	53	14.4809
USGS 11078000	3/14/1978	490.00	54	14.7541
USGS 11078000	3/29/1978	482.00	55	15.0273

Water Year 1993
 $n_3 = 365$
 total ppt = 30.9 inches

Gage#	Date	Flow (cfs)	rank	p
USGS 11078000	2/20/1993	7560.00	1	0.2732
USGS 11078000	1/19/1993	7900.00	2	0.5464
USGS 11078000	1/17/1993	7750.00	3	0.8197
USGS 11078000	1/18/1993	7500.00	4	1.0929
USGS 11078000	1/15/1993	7140.00	5	1.3661
USGS 11078000	1/20/1993	6970.00	6	1.6393
USGS 11078000	2/21/1993	6710.00	7	1.9126
USGS 11078000	2/9/1993	6450.00	8	2.1858
USGS 11078000	2/22/1993	6270.00	9	2.4590
USGS 11078000	1/21/1993	6180.00	10	2.7322
USGS 11078000	1/14/1993	6090.00	11	3.0055
USGS 11078000	1/22/1993	5900.00	12	3.2787
USGS 11078000	2/10/1993	5890.00	13	3.5519
USGS 11078000	2/23/1993	5800.00	14	3.8251
USGS 11078000	1/23/1993	5580.00	15	4.0984
USGS 11078000	1/25/1993	5580.00	16	4.3716
USGS 11078000	1/24/1993	5580.00	17	4.6448
USGS 11078000	1/19/1993	5530.00	18	4.9180
USGS 11078000	2/24/1993	5380.00	19	5.1913
USGS 11078000	1/11/1993	5220.00	20	5.4645
USGS 11078000	1/28/1993	5110.00	21	5.7377
USGS 11078000	2/11/1993	5100.00	22	6.0109
USGS 11078000	2/25/1993	5090.00	23	6.2842
USGS 11078000	2/26/1993	5060.00	24	6.5574
USGS 11078000	1/12/1993	4880.00	25	6.8306
USGS 11078000	1/24/1993	4210.00	26	7.1038
USGS 11078000	1/8/1993	4060.00	27	7.3770
USGS 11078000	1/13/1993	3960.00	28	7.6503
USGS 11078000	1/10/1993	3910.00	29	7.9235
USGS 11078000	2/8/1993	3210.00	30	8.1967
USGS 11078000	2/19/1993	2900.00	31	8.4699
USGS 11078000	1/7/1993	2800.00	32	8.7432
USGS 11078000	1/27/1993	2600.00	33	9.0164
USGS 11078000	1/27/1993	2380.00	34	9.2896
USGS 11078000	1/29/1993	2340.00	35	9.5628
USGS 11078000	2/12/1993	2250.00	36	9.8361
USGS 11078000	2/27/1993	2120.00	37	10.1093
USGS 11078000	1/6/1993	1730.00	38	10.3825
USGS 11078000	3/26/1993	1640.00	39	10.6557
USGS 11078000	2/17/1993	1550.00	40	10.9290
USGS 11078000	3/28/1993	1490.00	41	11.2022
USGS 11078000	3/27/1993	1460.00	42	11.4754
USGS 11078000	2/16/1993	1200.00	43	11.7486
USGS 11078000	2/28/1993	1180.00	44	12.0219
USGS 11078000	1/30/1993	983.00	45	12.2951
USGS 11078000	3/1/1993	920.00	46	12.5683
USGS 11078000	3/2/1993	907.00	47	12.8415
USGS 11078000	2/13/1993	867.00	48	13.1148
USGS 11078000	3/5/1993	750.00	49	13.3880
USGS 11078000	3/5/1993	708.00	50	13.6612
USGS 11078000	3/31/1993	682.00	51	13.9344
USGS 11078000	1/31/1993	668.00	52	14.2077
USGS 11078000	3/29/1993	665.00	53	14.4809
USGS 11078000	3/4/1993	653.00	54	14.7541
USGS 11078000	3/6/1993	617.00	55	15.0273

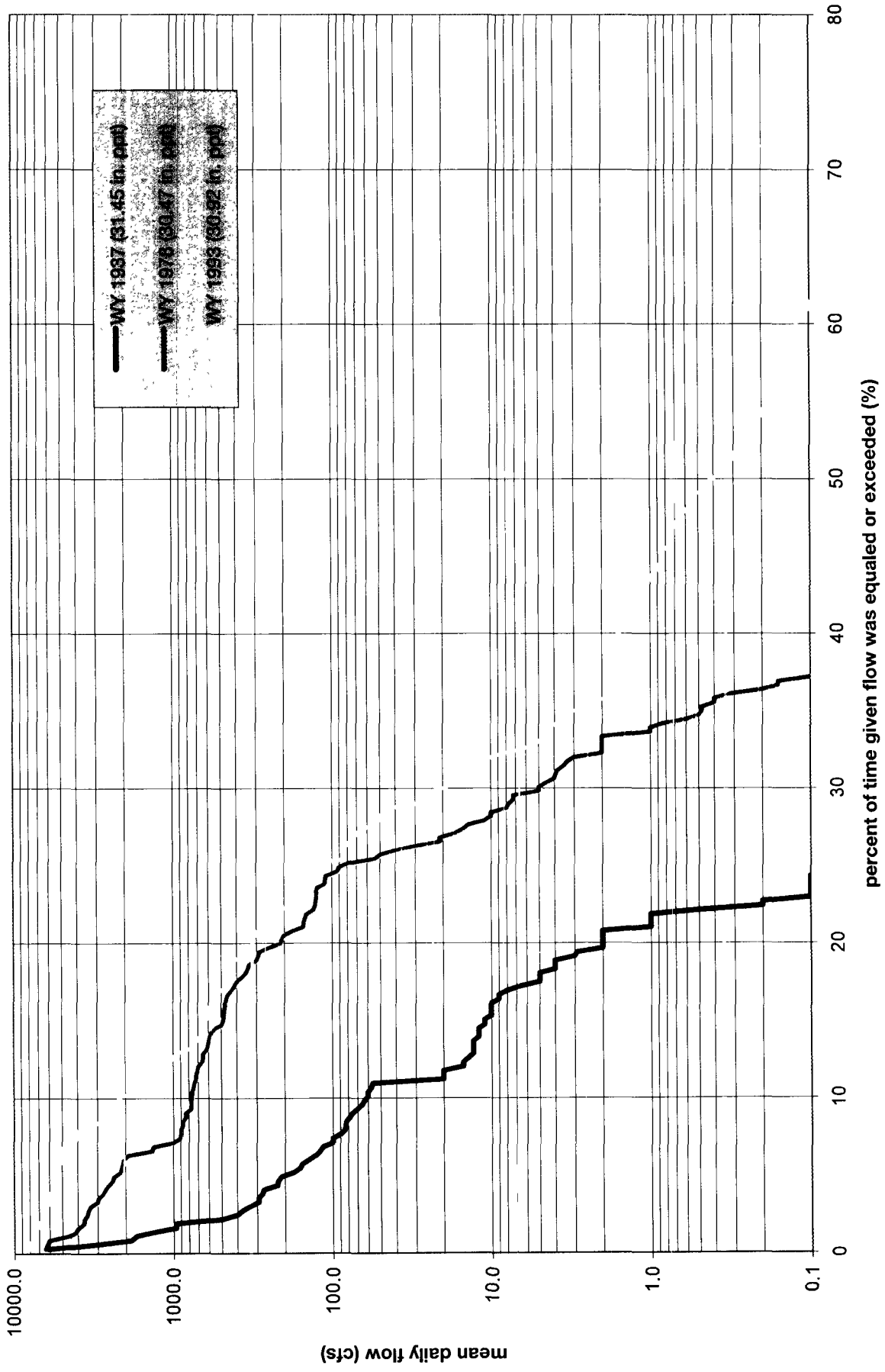
USGS	11078000	11/2/1936	0.00	123	33 6066	11078000	1/31/1978	1.00	123	33 6066	11078000	12/9/1992	4.20	123	33 6066
USGS	11078000	11/4/1936	0.00	124	33 8798	11078000	5/5/1978	1.00	124	33 8798	11078000	1/3/1993	4.20	124	33 8798
USGS	11078000	11/5/1936	0.00	125	34 1530	11078000	1/24/1978	0.84	125	34 1530	11078000	12/13/1992	3.90	125	34 1530
USGS	11078000	11/6/1936	0.00	126	34 4262	11078000	2/1/1978	0.59	126	34 4262	11078000	12/18/1992	3.40	126	34 4262
USGS	11078000	11/7/1936	0.00	127	34 6995	11078000	5/6/1978	0.50	127	34 6995	11078000	6/7/1993	3.00	127	34 6995
USGS	11078000	11/8/1936	0.00	128	34 9727	11078000	1/25/1978	0.48	128	34 9727	11078000	6/7/1993	3.00	128	34 9727
USGS	11078000	11/9/1936	0.00	129	35 2459	11078000	2/24/1978	0.48	129	35 2459	11078000	4/24/1993	2.70	129	35 2459
USGS	11078000	11/10/1936	0.00	130	35 5191	11078000	2/24/1978	0.40	130	35 5191	11078000	4/25/1993	2.40	130	35 5191
USGS	11078000	11/11/1936	0.00	131	35 7923	11078000	2/4/1978	0.40	131	35 7923	11078000	12/31/1992	1.90	131	35 7923
USGS	11078000	11/12/1936	0.00	132	36 0656	11078000	1/12/1978	0.32	132	36 0656	11078000	4/27/1993	1.90	132	36 0656
USGS	11078000	11/13/1936	0.00	133	36 3388	11078000	5/7/1978	0.20	133	36 3388	11078000	4/29/1993	1.80	133	36 3388
USGS	11078000	11/14/1936	0.00	134	36 6120	11078000	1/8/1978	0.16	134	36 6120	11078000	5/1/1993	1.80	134	36 6120
USGS	11078000	11/15/1936	0.00	135	36 8852	11078000	1/13/1978	0.16	135	36 8852	11078000	10/24/1992	1.70	135	36 8852
USGS	11078000	11/16/1936	0.00	136	37 1585	11078000	5/8/1978	0.10	136	37 1585	11078000	12/14/1992	1.70	136	37 1585
USGS	11078000	11/17/1936	0.00	137	37 4317	11078000	5/9/1978	0.05	137	37 4317	11078000	4/26/1993	1.70	137	37 4317
USGS	11078000	11/18/1936	0.00	138	37 7049	11078000	5/10/1978	0.04	138	37 7049	11078000	4/30/1993	1.70	138	37 7049
USGS	11078000	11/19/1936	0.00	139	37 9781	11078000	5/11/1978	0.04	139	37 9781	11078000	5/3/1993	1.70	139	37 9781
USGS	11078000	11/20/1936	0.00	140	38 2514	11078000	5/12/1978	0.04	140	38 2514	11078000	5/5/1993	1.70	140	38 2514
USGS	11078000	11/21/1936	0.00	141	38 5246	11078000	5/13/1978	0.04	141	38 5246	11078000	6/13/1993	1.70	141	38 5246
USGS	11078000	11/22/1936	0.00	142	38 7978	11078000	5/14/1978	0.04	142	38 7978	11078000	12/10/1992	1.60	142	38 7978
USGS	11078000	11/23/1936	0.00	143	39 0710	11078000	5/15/1978	0.04	143	39 0710	11078000	4/14/1993	1.60	143	39 0710
USGS	11078000	11/24/1936	0.00	144	39 3443	11078000	5/16/1978	0.04	144	39 3443	11078000	4/28/1993	1.60	144	39 3443
USGS	11078000	11/25/1936	0.00	145	39 6175	11078000	5/17/1978	0.04	145	39 6175	11078000	5/2/1993	1.60	145	39 6175
USGS	11078000	11/26/1936	0.00	146	39 8907	11078000	5/18/1978	0.04	146	39 8907	11078000	5/4/1993	1.60	146	39 8907
USGS	11078000	11/27/1936	0.00	147	40 1639	11078000	5/19/1978	0.04	147	40 1639	11078000	11/2/1992	1.50	147	40 1639
USGS	11078000	11/28/1936	0.00	148	40 4372	11078000	5/20/1978	0.04	148	40 4372	11078000	5/6/1993	1.50	148	40 4372
USGS	11078000	11/29/1936	0.00	149	40 7104	11078000	5/21/1978	0.04	149	40 7104	11078000	5/11/1993	1.50	149	40 7104
USGS	11078000	11/30/1936	0.00	150	40 9836	11078000	5/22/1978	0.04	150	40 9836	11078000	5/7/1993	1.40	150	40 9836
USGS	11078000	12/1/1936	0.00	151	41 2568	11078000	5/23/1978	0.04	151	41 2568	11078000	5/13/1993	1.40	151	41 2568
USGS	11078000	12/2/1936	0.00	152	41 5301	11078000	5/24/1978	0.04	152	41 5301	11078000	6/8/1993	1.40	152	41 5301
USGS	11078000	12/3/1936	0.00	153	41 8033	11078000	5/25/1978	0.04	153	41 8033	11078000	1/4/1993	1.30	153	41 8033
USGS	11078000	12/4/1936	0.00	154	42 0765	11078000	5/26/1978	0.04	154	42 0765	11078000	5/9/1993	1.30	154	42 0765
USGS	11078000	12/5/1936	0.00	155	42 3497	11078000	5/27/1978	0.04	155	42 3497	11078000	5/14/1993	1.30	155	42 3497
USGS	11078000	12/6/1936	0.00	156	42 6230	11078000	5/28/1978	0.04	156	42 6230	11078000	4/9/1993	1.20	156	42 6230
USGS	11078000	12/7/1936	0.00	157	42 8962	11078000	5/29/1978	0.04	157	42 8962	11078000	5/8/1993	1.20	157	42 8962
USGS	11078000	12/8/1936	0.00	158	43 1694	11078000	5/30/1978	0.04	158	43 1694	11078000	5/12/1993	1.10	158	43 1694
USGS	11078000	12/9/1936	0.00	159	43 4426	11078000	5/31/1978	0.04	159	43 4426	11078000	5/10/1993	1.00	159	43 4426
USGS	11078000	12/10/1936	0.00	160	43 7158	11078000	6/1/1978	0.04	160	43 7158	11078000	5/19/1993	1.00	160	43 7158
USGS	11078000	12/11/1936	0.00	161	43 9891	11078000	6/2/1978	0.04	161	43 9891	11078000	6/16/1993	0.92	161	43 9891
USGS	11078000	12/12/1936	0.00	162	44 2623	11078000	6/3/1978	0.04	162	44 2623	11078000	12/19/1992	0.90	162	44 2623
USGS	11078000	12/13/1936	0.00	163	44 5355	11078000	6/4/1978	0.04	163	44 5355	11078000	1/13/1992	0.87	163	44 5355
USGS	11078000	12/14/1936	0.00	164	44 8087	11078000	6/5/1978	0.04	164	44 8087	11078000	1/1/1993	0.87	164	44 8087
USGS	11078000	12/15/1936	0.00	165	45 0820	11078000	6/6/1978	0.04	165	45 0820	11078000	5/15/1993	0.86	165	45 0820
USGS	11078000	12/16/1936	0.00	166	45 3552	11078000	6/7/1978	0.04	166	45 3552	11078000	1/5/1993	0.82	166	45 3552
USGS	11078000	12/17/1936	0.00	167	45 6284	11078000	6/8/1978	0.03	167	45 6284	11078000	12/15/1992	0.77	167	45 6284
USGS	11078000	12/18/1936	0.00	168	45 9016	11078000	6/9/1978	0.03	168	45 9016	11078000	5/18/1993	0.77	168	45 9016
USGS	11078000	12/19/1936	0.00	169	46 1749	11078000	6/10/1978	0.03	169	46 1749	11078000	5/16/1993	0.73	169	46 1749
USGS	11078000	12/20/1936	0.00	170	46 4481	11078000	6/11/1978	0.03	170	46 4481	11078000	10/25/1992	0.72	170	46 4481
USGS	11078000	12/21/1936	0.00	171	46 7213	11078000	6/12/1978	0.03	171	46 7213	11078000	12/21/1992	0.72	171	46 7213
USGS	11078000	12/22/1936	0.00	172	46 9945	11078000	6/13/1978	0.03	172	46 9945	11078000	6/14/1993	0.71	172	46 9945
USGS	11078000	12/23/1936	0.00	173	47 2678	11078000	6/14/1978	0.03	173	47 2678	11078000	5/24/1993	0.68	173	47 2678
USGS	11078000	12/24/1936	0.00	174	47 5410	11078000	6/15/1978	0.03	174	47 5410	11078000	5/20/1993	0.66	174	47 5410
USGS	11078000	12/25/1936	0.00	175	47 8142	11078000	6/16/1978	0.03	175	47 8142	11078000	6/15/1993	0.61	175	47 8142
USGS	11078000	12/26/1936	0.00	176	48 0874	11078000	6/17/1978	0.03	176	48 0874	11078000	12/20/1992	0.58	176	48 0874
USGS	11078000	1/3/1937	0.00	177	48 3607	11078000	6/18/1978	0.03	177	48 3607	11078000	12/22/1992	0.57	177	48 3607
USGS	11078000	1/4/1937	0.00	178	48 6339	11078000	6/19/1978	0.03	178	48 6339	11078000	5/17/1993	0.57	178	48 6339
USGS	11078000	1/5/1937	0.00	179	48 9071	11078000	6/20/1978	0.03	179	48 9071	11078000	5/23/1993	0.54	179	48 9071
USGS	11078000	1/11/1937	0.00	180	49 1803	11078000	6/21/1978	0.03	180	49 1803	11078000	5/21/1993	0.48	180	49 1803
USGS	11078000	1/12/1937	0.00	181	49 4536	11078000	6/22/1978	0.03	181	49 4536	11078000	6/17/1993	0.48	181	49 4536
USGS	11078000	1/13/1937	0.00	182	49 7268	11078000	6/23/1978	0.03	182	49 7268	11078000	12/16/1992	0.46	182	49 7268
USGS	11078000	1/14/1937	0.00	183	50 0000	11078000	6/24/1978	0.03	183	50 0000	11078000	12/17/1992	0.40	183	50 0000
USGS	11078000	1/15/1937	0.00	184	50 2732	11078000	6/25/1978	0.03	184	50 2732	11078000	5/25/1993	0.38	184	50 2732
USGS	11078000	1/16/1937	0.00	185	50 5464	11078000	6/26/1978	0.03	185	50 5464	11078000	12/23/1992	0.35	185	50 5464
USGS	11078000	1/17/1937	0.00	186	50 8197	11078000	6/27/1978	0.03	186	50 8197	11078000	12/27/1992	0.33	186	50 8197
USGS	11078000	1/18/1937	0.00	187	51 0929	11078000	6/28/1978	0.03	187	51 0929	11078000	6/24/1993	0.31	187	51 0929
USGS	11078000	1/19/1937	0.00	188	51 3661	11078000	6/29/1978	0.03	188	51 3661	11078000	5/26/1993	0.30	188	51 3661
USGS	11078000	1/19/1937	0.00	189	51 6393	11078000	6/30/1978	0.03	189	51 6393	11078000	5/26/1993	0.30	189	51 6393

USGS	11078000	1/20/1937	0.00	190	51 9126	11078000	7/1/1978	0.03	190	51 9126	USGS	11078000	6/18/1993	0.28	190	51 9126
USGS	11078000	1/21/1937	0.00	191	52 1858	11078000	7/2/1978	0.03	191	52 1858	USGS	11078000	9/18/1993	0.28	191	52 1858
USGS	11078000	2/2/1937	0.00	192	52 4590	11078000	7/3/1978	0.03	192	52 4590	USGS	11078000	6/25/1993	0.27	192	52 4590
USGS	11078000	2/9/1937	0.00	193	52 7322	11078000	7/4/1978	0.02	193	52 7322	USGS	11078000	9/17/1993	0.27	193	52 7322
USGS	11078000	2/11/1937	0.00	194	53 0055	11078000	7/5/1978	0.02	194	53 0055	USGS	11078000	9/19/1993	0.26	194	53 0055
USGS	11078000	2/5/1937	0.00	195	53 2787	11078000	7/6/1978	0.02	195	53 2787	USGS	11078000	10/26/1992	0.22	195	53 2787
USGS	11078000	3/2/1937	0.00	196	53 5519	11078000	7/7/1978	0.02	196	53 5519	USGS	11078000	6/26/1993	0.22	196	53 5519
USGS	11078000	3/3/1937	0.00	197	53 8251	11078000	7/8/1978	0.01	197	53 8251	USGS	11078000	5/27/1993	0.21	197	53 8251
USGS	11078000	3/4/1937	0.00	198	54 0984	11078000	7/9/1978	0.01	198	54 0984	USGS	11078000	9/7/1993	0.20	198	54 0984
USGS	11078000	3/5/1937	0.00	199	54 3716	11078000	7/10/1978	0.01	199	54 3716	USGS	11078000	9/28/1993	0.20	199	54 3716
USGS	11078000	3/6/1937	0.00	200	54 6448	11078000	7/11/1978	0.01	200	54 6448	USGS	11078000	12/24/1992	0.19	200	54 6448
USGS	11078000	3/7/1937	0.00	201	54 9180	11078000	7/12/1978	0.01	201	54 9180	USGS	11078000	6/19/1993	0.19	201	54 9180
USGS	11078000	3/8/1937	0.00	202	55 1913	11078000	7/13/1978	0.01	202	55 1913	USGS	11078000	6/20/1993	0.19	202	55 1913
USGS	11078000	3/9/1937	0.00	203	55 4645	11078000	7/14/1978	0.01	203	55 4645	USGS	11078000	6/21/1993	0.19	203	55 4645
USGS	11078000	3/10/1937	0.00	204	55 7377	11078000	10/1/1977	0.01	204	55 7377	USGS	11078000	9/30/1993	0.19	204	55 7377
USGS	11078000	3/11/1937	0.00	205	56 0109	11078000	10/2/1977	0.01	205	56 0109	USGS	11078000	1/14/1992	0.18	205	56 0109
USGS	11078000	3/12/1937	0.00	206	56 2842	11078000	10/3/1977	0.00	206	56 2842	USGS	11078000	5/28/1993	0.18	206	56 2842
USGS	11078000	4/25/1937	0.00	207	56 5574	11078000	10/4/1977	0.00	207	56 5574	USGS	11078000	9/8/1993	0.18	207	56 5574
USGS	11078000	4/26/1937	0.00	208	56 8306	11078000	10/5/1977	0.00	208	56 8306	USGS	11078000	9/23/1993	0.18	208	56 8306
USGS	11078000	4/27/1937	0.00	209	57 1038	11078000	10/6/1977	0.00	209	57 1038	USGS	11078000	9/27/1993	0.18	209	57 1038
USGS	11078000	4/28/1937	0.00	210	57 3770	11078000	10/7/1977	0.00	210	57 3770	USGS	11078000	9/29/1993	0.18	210	57 3770
USGS	11078000	4/29/1937	0.00	211	57 6503	11078000	10/8/1977	0.00	211	57 6503	USGS	11078000	9/14/1993	0.17	211	57 6503
USGS	11078000	4/30/1937	0.00	212	57 9235	11078000	10/9/1977	0.00	212	57 9235	USGS	11078000	9/16/1993	0.17	212	57 9235
USGS	11078000	5/1/1937	0.00	213	58 1967	11078000	10/10/1977	0.00	213	58 1967	USGS	11078000	9/24/1993	0.17	213	58 1967
USGS	11078000	5/2/1937	0.00	214	58 4699	11078000	10/11/1977	0.00	214	58 4699	USGS	11078000	5/29/1993	0.16	214	58 4699
USGS	11078000	5/3/1937	0.00	215	58 7432	11078000	10/12/1977	0.00	215	58 7432	USGS	11078000	6/22/1993	0.16	215	58 7432
USGS	11078000	5/4/1937	0.00	216	59 0164	11078000	10/13/1977	0.00	216	59 0164	USGS	11078000	9/25/1993	0.16	216	59 0164
USGS	11078000	5/5/1937	0.00	217	59 2896	11078000	10/14/1977	0.00	217	59 2896	USGS	11078000	9/26/1993	0.16	217	59 2896
USGS	11078000	5/6/1937	0.00	218	59 5628	11078000	10/15/1977	0.00	218	59 5628	USGS	11078000	6/30/1993	0.15	218	59 5628
USGS	11078000	5/7/1937	0.00	219	59 8361	11078000	10/16/1977	0.00	219	59 8361	USGS	11078000	5/31/1993	0.15	219	59 8361
USGS	11078000	5/8/1937	0.00	220	60 1093	11078000	10/17/1977	0.00	220	60 1093	USGS	11078000	9/20/1993	0.12	220	60 1093
USGS	11078000	5/9/1937	0.00	221	60 3825	11078000	10/18/1977	0.00	221	60 3825	USGS	11078000	9/20/1993	0.12	221	60 3825
USGS	11078000	5/10/1937	0.00	222	60 6557	11078000	10/19/1977	0.00	222	60 6557	USGS	11078000	9/15/1993	0.11	222	60 6557
USGS	11078000	5/11/1937	0.00	223	60 9290	11078000	10/20/1977	0.00	223	60 9290	USGS	11078000	12/25/1992	0.10	223	60 9290
USGS	11078000	5/12/1937	0.00	224	61 2022	11078000	10/21/1977	0.00	224	61 2022	USGS	11078000	6/27/1993	0.10	224	61 2022
USGS	11078000	5/13/1937	0.00	225	61 4754	11078000	10/22/1977	0.00	225	61 4754	USGS	11078000	9/13/1993	0.10	225	61 4754
USGS	11078000	5/14/1937	0.00	226	61 7486	11078000	10/23/1977	0.00	226	61 7486	USGS	11078000	5/31/1993	0.09	226	61 7486
USGS	11078000	5/15/1937	0.00	227	62 0219	11078000	10/24/1977	0.00	227	62 0219	USGS	11078000	6/1/1993	0.09	227	62 0219
USGS	11078000	5/16/1937	0.00	228	62 2951	11078000	10/25/1977	0.00	228	62 2951	USGS	11078000	6/2/1993	0.09	228	62 2951
USGS	11078000	5/17/1937	0.00	229	62 5683	11078000	10/26/1977	0.00	229	62 5683	USGS	11078000	6/3/1993	0.09	229	62 5683
USGS	11078000	5/18/1937	0.00	230	62 8415	11078000	10/27/1977	0.00	230	62 8415	USGS	11078000	9/10/1993	0.09	230	62 8415
USGS	11078000	5/19/1937	0.00	231	63 1148	11078000	10/28/1977	0.00	231	63 1148	USGS	11078000	9/22/1993	0.09	231	63 1148
USGS	11078000	5/20/1937	0.00	232	63 3880	11078000	10/29/1977	0.00	232	63 3880	USGS	11078000	6/4/1993	0.07	232	63 3880
USGS	11078000	5/21/1937	0.00	233	63 6612	11078000	10/30/1977	0.00	233	63 6612	USGS	11078000	10/23/1992	0.06	233	63 6612
USGS	11078000	5/22/1937	0.00	234	63 9344	11078000	10/31/1977	0.00	234	63 9344	USGS	11078000	12/28/1992	0.05	234	63 9344
USGS	11078000	5/23/1937	0.00	235	64 2077	11078000	11/1/1977	0.00	235	64 2077	USGS	11078000	9/11/1993	0.04	235	64 2077
USGS	11078000	5/24/1937	0.00	236	64 4809	11078000	11/2/1977	0.00	236	64 4809	USGS	11078000	9/12/1993	0.04	236	64 4809
USGS	11078000	5/25/1937	0.00	237	64 7541	11078000	11/3/1977	0.00	237	64 7541	USGS	11078000	9/12/1993	0.04	237	64 7541
USGS	11078000	5/26/1937	0.00	238	65 0273	11078000	11/4/1977	0.00	238	65 0273	USGS	11078000	10/27/1992	0.01	238	65 0273
USGS	11078000	5/27/1937	0.00	239	65 3005	11078000	11/5/1977	0.00	239	65 3005	USGS	11078000	6/28/1993	0.01	239	65 3005
USGS	11078000	5/28/1937	0.00	240	65 5738	11078000	11/6/1977	0.00	240	65 5738	USGS	11078000	10/1/1992	0.01	240	65 5738
USGS	11078000	5/29/1937	0.00	241	65 8470	11078000	11/7/1977	0.00	241	65 8470	USGS	11078000	10/2/1992	0.00	241	65 8470
USGS	11078000	5/30/1937	0.00	242	66 1202	11078000	11/8/1977	0.00	242	66 1202	USGS	11078000	10/3/1992	0.00	242	66 1202
USGS	11078000	6/1/1937	0.00	243	66 3934	11078000	11/9/1977	0.00	243	66 3934	USGS	11078000	10/4/1992	0.00	243	66 3934
USGS	11078000	6/2/1937	0.00	244	66 6667	11078000	11/10/1977	0.00	244	66 6667	USGS	11078000	10/5/1992	0.00	244	66 6667
USGS	11078000	6/3/1937	0.00	245	66 9399	11078000	11/11/1977	0.00	245	66 9399	USGS	11078000	10/6/1992	0.00	245	66 9399
USGS	11078000	6/4/1937	0.00	246	67 2131	11078000	11/12/1977	0.00	246	67 2131	USGS	11078000	10/7/1992	0.00	246	67 2131
USGS	11078000	6/5/1937	0.00	247	67 4863	11078000	11/13/1977	0.00	247	67 4863	USGS	11078000	10/8/1992	0.00	247	67 4863
USGS	11078000	6/6/1937	0.00	248	67 7596	11078000	11/14/1977	0.00	248	67 7596	USGS	11078000	10/9/1992	0.00	248	67 7596
USGS	11078000	6/7/1937	0.00	249	68 0328	11078000	11/15/1977	0.00	249	68 0328	USGS	11078000	10/10/1992	0.00	249	68 0328
USGS	11078000	6/8/1937	0.00	250	68 3060	11078000	11/16/1977	0.00	250	68 3060	USGS	11078000	10/11/1992	0.00	250	68 3060
USGS	11078000	6/9/1937	0.00	251	68 5792	11078000	11/17/1977	0.00	251	68 5792	USGS	11078000	10/12/1992	0.00	251	68 5792
USGS	11078000	6/10/1937	0.00	252	68 8525	11078000	11/18/1977	0.00	252	68 8525	USGS	11078000	10/13/1992	0.00	252	68 8525
USGS	11078000	6/11/1937	0.00	253	69 1257	11078000	11/19/1977	0.00	253	69 1257	USGS	11078000	10/14/1992	0.00	253	69 1257
USGS	11078000	6/12/1937	0.00	254	69 3989	11078000	11/20/1977	0.00	254	69 3989	USGS	11078000	10/15/1992	0.00	254	69 3989
USGS	11078000	6/13/1937	0.00	255	69 6721	11078000	11/21/1977	0.00	255	69 6721	USGS	11078000	10/16/1992	0.00	255	69 6721

USGS	11078000	6/14/1937	0.00	70 2186	USGS	11078000	11/23/1977	0.00	257	70 2186	USGS	11078000	10/16/1992	0.00	257	70 2186
USGS	11078000	6/15/1937	0.00	70 4918	USGS	11078000	11/24/1977	0.00	258	70 4918	USGS	11078000	10/19/1992	0.00	258	70 4918
USGS	11078000	6/16/1937	0.00	70 7650	USGS	11078000	11/25/1977	0.00	259	70 7650	USGS	11078000	10/20/1992	0.00	259	70 7650
USGS	11078000	6/17/1937	0.00	71 0383	USGS	11078000	11/26/1977	0.00	260	71 0383	USGS	11078000	10/21/1992	0.00	260	71 0383
USGS	11078000	6/18/1937	0.00	71 3115	USGS	11078000	11/28/1977	0.00	261	71 3115	USGS	11078000	10/22/1992	0.00	261	71 3115
USGS	11078000	6/19/1937	0.00	71 5847	USGS	11078000	11/28/1977	0.00	262	71 5847	USGS	11078000	10/23/1992	0.00	262	71 5847
USGS	11078000	6/20/1937	0.00	71 8579	USGS	11078000	11/29/1977	0.00	263	71 8579	USGS	11078000	10/24/1992	0.00	263	71 8579
USGS	11078000	6/21/1937	0.00	72 1311	USGS	11078000	11/30/1977	0.00	264	72 1311	USGS	11078000	10/24/1992	0.00	264	72 1311
USGS	11078000	6/22/1937	0.00	72 4044	USGS	11078000	12/1/1977	0.00	265	72 4044	USGS	11078000	11/6/1992	0.00	265	72 4044
USGS	11078000	6/23/1937	0.00	72 6776	USGS	11078000	12/3/1977	0.00	266	72 6776	USGS	11078000	11/7/1992	0.00	266	72 6776
USGS	11078000	6/24/1937	0.00	72 9508	USGS	11078000	12/3/1977	0.00	267	72 9508	USGS	11078000	11/8/1992	0.00	267	72 9508
USGS	11078000	6/25/1937	0.00	73 2240	USGS	11078000	12/4/1977	0.00	268	73 2240	USGS	11078000	11/9/1992	0.00	268	73 2240
USGS	11078000	6/26/1937	0.00	73 4973	USGS	11078000	12/5/1977	0.00	269	73 4973	USGS	11078000	11/10/1992	0.00	269	73 4973
USGS	11078000	6/26/1937	0.00	73 4973	USGS	11078000	12/5/1977	0.00	269	73 4973	USGS	11078000	11/10/1992	0.00	269	73 4973
USGS	11078000	6/27/1937	0.00	73 7705	USGS	11078000	12/6/1977	0.00	270	73 7705	USGS	11078000	11/11/1992	0.00	270	73 7705
USGS	11078000	6/27/1937	0.00	74 0437	USGS	11078000	12/7/1977	0.00	271	74 0437	USGS	11078000	11/12/1992	0.00	271	74 0437
USGS	11078000	6/28/1937	0.00	74 3169	USGS	11078000	12/8/1977	0.00	272	74 3169	USGS	11078000	11/13/1992	0.00	272	74 3169
USGS	11078000	6/29/1937	0.00	74 5902	USGS	11078000	12/8/1977	0.00	273	74 5902	USGS	11078000	11/14/1992	0.00	273	74 5902
USGS	11078000	6/30/1937	0.00	74 8634	USGS	11078000	12/9/1977	0.00	274	74 8634	USGS	11078000	11/15/1992	0.00	274	74 8634
USGS	11078000	7/1/1937	0.00	75 1366	USGS	11078000	12/10/1977	0.00	275	75 1366	USGS	11078000	11/16/1992	0.00	275	75 1366
USGS	11078000	7/2/1937	0.00	75 4098	USGS	11078000	12/11/1977	0.00	276	75 4098	USGS	11078000	11/17/1992	0.00	276	75 4098
USGS	11078000	7/3/1937	0.00	75 6831	USGS	11078000	12/12/1977	0.00	277	75 6831	USGS	11078000	11/18/1992	0.00	277	75 6831
USGS	11078000	7/4/1937	0.00	75 9563	USGS	11078000	12/13/1977	0.00	278	75 9563	USGS	11078000	11/19/1992	0.00	278	75 9563
USGS	11078000	7/5/1937	0.00	76 2295	USGS	11078000	12/14/1977	0.00	279	76 2295	USGS	11078000	11/20/1992	0.00	279	76 2295
USGS	11078000	7/6/1937	0.00	76 5027	USGS	11078000	12/15/1977	0.00	280	76 5027	USGS	11078000	11/21/1992	0.00	280	76 5027
USGS	11078000	7/7/1937	0.00	76 7760	USGS	11078000	12/16/1977	0.00	281	76 7760	USGS	11078000	11/22/1992	0.00	281	76 7760
USGS	11078000	7/8/1937	0.00	77 0492	USGS	11078000	12/17/1977	0.00	282	77 0492	USGS	11078000	11/23/1992	0.00	282	77 0492
USGS	11078000	7/9/1937	0.00	77 3224	USGS	11078000	12/20/1977	0.00	283	77 3224	USGS	11078000	11/24/1992	0.00	283	77 3224
USGS	11078000	7/10/1937	0.00	77 5956	USGS	11078000	12/21/1977	0.00	284	77 5956	USGS	11078000	11/25/1992	0.00	284	77 5956
USGS	11078000	7/11/1937	0.00	77 8689	USGS	11078000	12/22/1977	0.00	285	77 8689	USGS	11078000	11/26/1992	0.00	285	77 8689
USGS	11078000	7/12/1937	0.00	78 1421	USGS	11078000	12/23/1977	0.00	286	78 1421	USGS	11078000	11/27/1992	0.00	286	78 1421
USGS	11078000	7/13/1937	0.00	78 4153	USGS	11078000	12/24/1977	0.00	287	78 4153	USGS	11078000	11/28/1992	0.00	287	78 4153
USGS	11078000	7/14/1937	0.00	78 6885	USGS	11078000	7/15/1978	0.00	288	78 6885	USGS	11078000	11/29/1992	0.00	288	78 6885
USGS	11078000	7/15/1937	0.00	78 9617	USGS	11078000	7/16/1978	0.00	288	78 9617	USGS	11078000	11/30/1992	0.00	288	78 9617
USGS	11078000	7/16/1937	0.00	79 2350	USGS	11078000	7/17/1978	0.00	289	79 2350	USGS	11078000	12/1/1992	0.00	289	79 2350
USGS	11078000	7/17/1937	0.00	79 5082	USGS	11078000	7/18/1978	0.00	291	79 5082	USGS	11078000	12/2/1992	0.00	291	79 5082
USGS	11078000	7/18/1937	0.00	79 7814	USGS	11078000	7/19/1978	0.00	292	79 7814	USGS	11078000	12/3/1992	0.00	292	79 7814
USGS	11078000	7/19/1937	0.00	80 0546	USGS	11078000	7/20/1978	0.00	293	80 0546	USGS	11078000	12/4/1992	0.00	293	80 0546
USGS	11078000	7/20/1937	0.00	80 3279	USGS	11078000	7/21/1978	0.00	294	80 3279	USGS	11078000	12/5/1992	0.00	294	80 3279
USGS	11078000	7/21/1937	0.00	80 6011	USGS	11078000	7/21/1978	0.00	295	80 6011	USGS	11078000	12/6/1992	0.00	295	80 6011
USGS	11078000	7/22/1937	0.00	80 8743	USGS	11078000	7/22/1978	0.00	296	80 8743	USGS	11078000	12/6/1992	0.00	296	80 8743
USGS	11078000	7/23/1937	0.00	81 1475	USGS	11078000	7/23/1978	0.00	297	81 1475	USGS	11078000	12/6/1992	0.00	297	81 1475
USGS	11078000	7/24/1937	0.00	81 4208	USGS	11078000	7/24/1978	0.00	298	81 4208	USGS	11078000	12/6/1992	0.00	298	81 4208
USGS	11078000	7/25/1937	0.00	81 6940	USGS	11078000	7/25/1978	0.00	299	81 6940	USGS	11078000	12/6/1992	0.00	299	81 6940
USGS	11078000	7/26/1937	0.00	81 9672	USGS	11078000	7/26/1978	0.00	300	81 9672	USGS	11078000	12/6/1992	0.00	300	81 9672
USGS	11078000	7/27/1937	0.00	82 2404	USGS	11078000	7/27/1978	0.00	301	82 2404	USGS	11078000	12/6/1992	0.00	301	82 2404
USGS	11078000	7/28/1937	0.00	82 5137	USGS	11078000	7/28/1978	0.00	302	82 5137	USGS	11078000	12/6/1992	0.00	302	82 5137
USGS	11078000	7/29/1937	0.00	82 7869	USGS	11078000	7/29/1978	0.00	303	82 7869	USGS	11078000	12/6/1992	0.00	303	82 7869
USGS	11078000	7/30/1937	0.00	83 0601	USGS	11078000	7/31/1978	0.00	304	83 0601	USGS	11078000	12/6/1992	0.00	304	83 0601
USGS	11078000	7/31/1937	0.00	83 3333	USGS	11078000	8/1/1978	0.00	305	83 3333	USGS	11078000	12/6/1992	0.00	305	83 3333
USGS	11078000	8/1/1937	0.00	83 6066	USGS	11078000	8/2/1978	0.00	306	83 6066	USGS	11078000	12/6/1992	0.00	306	83 6066
USGS	11078000	8/2/1937	0.00	83 8798	USGS	11078000	8/2/1978	0.00	307	83 8798	USGS	11078000	12/6/1992	0.00	307	83 8798
USGS	11078000	8/3/1937	0.00	84 1530	USGS	11078000	8/3/1978	0.00	308	84 1530	USGS	11078000	12/6/1992	0.00	308	84 1530
USGS	11078000	8/4/1937	0.00	84 4262	USGS	11078000	8/4/1978	0.00	309	84 4262	USGS	11078000	12/6/1992	0.00	309	84 4262
USGS	11078000	8/5/1937	0.00	84 6995	USGS	11078000	8/5/1978	0.00	310	84 6995	USGS	11078000	12/6/1992	0.00	310	84 6995
USGS	11078000	8/6/1937	0.00	84 9727	USGS	11078000	8/6/1978	0.00	311	84 9727	USGS	11078000	12/6/1992	0.00	311	84 9727
USGS	11078000	8/7/1937	0.00	85 2459	USGS	11078000	8/7/1978	0.00	312	85 2459	USGS	11078000	12/6/1992	0.00	312	85 2459
USGS	11078000	8/8/1937	0.00	85 5191	USGS	11078000	8/8/1978	0.00	313	85 5191	USGS	11078000	12/6/1992	0.00	313	85 5191
USGS	11078000	8/9/1937	0.00	85 7923	USGS	11078000	8/9/1978	0.00	314	85 7923	USGS	11078000	12/6/1992	0.00	314	85 7923
USGS	11078000	8/10/1937	0.00	86 0656	USGS	11078000	8/10/1978	0.00	315	86 0656	USGS	11078000	12/6/1992	0.00	315	86 0656
USGS	11078000	8/11/1937	0.00	86 3388	USGS	11078000	8/11/1978	0.00	316	86 3388	USGS	11078000	12/6/1992	0.00	316	86 3388
USGS	11078000	8/12/1937	0.00	86 6120	USGS	11078000	8/12/1978	0.00	317	86 6120	USGS	11078000	12/6/1992	0.00	317	86 6120
USGS	11078000	8/13/1937	0.00	86 8852	USGS	11078000	8/13/1978	0.00	318	86 8852	USGS	11078000	12/6/1992	0.00	318	86 8852
USGS	11078000	8/14/1937	0.00	87 1585	USGS	11078000	8/14/1978	0.00	319	87 1585	USGS	11078000	12/6/1992	0.00	319	87 1585
USGS	11078000	8/15/1937	0.00	87 4317	USGS	11078000	8/15/1978	0.00	320	87 4317	USGS	11078000	12/6/1992	0.00	320	87 4317
USGS	11078000	8/16/1937	0.00	87 7049	USGS	11078000	8/16/1978	0.00	321	87 7049	USGS	11078000	12/6/1992	0.00	321	87 7049
USGS	11078000	8/17/1937	0.00													

USGS	11078000	8/20/1937	0.00	324	88 5246	USGS	11078000	7/27/1993	0.00	324	88 5246
USGS	11078000	8/21/1937	0.00	325	88 7978	USGS	11078000	7/28/1993	0.00	325	88 7978
USGS	11078000	8/22/1937	0.00	326	89 0710	USGS	11078000	7/29/1993	0.00	326	89 0710
USGS	11078000	8/23/1937	0.00	327	89 3443	USGS	11078000	7/30/1993	0.00	327	89 3443
USGS	11078000	8/24/1937	0.00	328	89 6175	USGS	11078000	7/31/1993	0.00	328	89 6175
USGS	11078000	8/25/1937	0.00	329	89 8907	USGS	11078000	8/1/1993	0.00	329	89 8907
USGS	11078000	8/26/1937	0.00	330	90 1639	USGS	11078000	8/2/1993	0.00	330	90 1639
USGS	11078000	8/27/1937	0.00	331	90 4372	USGS	11078000	8/3/1993	0.00	331	90 4372
USGS	11078000	8/28/1937	0.00	332	90 7104	USGS	11078000	8/4/1993	0.00	332	90 7104
USGS	11078000	8/29/1937	0.00	333	90 9836	USGS	11078000	8/5/1993	0.00	333	90 9836
USGS	11078000	8/30/1937	0.00	334	91 2568	USGS	11078000	8/6/1993	0.00	334	91 2568
USGS	11078000	8/31/1937	0.00	335	91 5301	USGS	11078000	8/7/1993	0.00	335	91 5301
USGS	11078000	9/1/1937	0.00	336	91 8033	USGS	11078000	8/8/1993	0.00	336	91 8033
USGS	11078000	9/2/1937	0.00	337	92 0765	USGS	11078000	8/9/1993	0.00	337	92 0765
USGS	11078000	9/3/1937	0.00	338	92 3497	USGS	11078000	8/10/1993	0.00	338	92 3497
USGS	11078000	9/4/1937	0.00	339	92 6230	USGS	11078000	8/11/1993	0.00	339	92 6230
USGS	11078000	9/5/1937	0.00	340	92 8962	USGS	11078000	8/12/1993	0.00	340	92 8962
USGS	11078000	9/6/1937	0.00	341	93 1694	USGS	11078000	8/13/1993	0.00	341	93 1694
USGS	11078000	9/7/1937	0.00	342	93 4426	USGS	11078000	8/14/1993	0.00	342	93 4426
USGS	11078000	9/8/1937	0.00	343	93 7158	USGS	11078000	8/15/1993	0.00	343	93 7158
USGS	11078000	9/9/1937	0.00	344	93 9891	USGS	11078000	8/16/1993	0.00	344	93 9891
USGS	11078000	9/10/1937	0.00	345	94 2623	USGS	11078000	8/17/1993	0.00	345	94 2623
USGS	11078000	9/11/1937	0.00	346	94 5355	USGS	11078000	8/18/1993	0.00	346	94 5355
USGS	11078000	9/12/1937	0.00	347	94 8087	USGS	11078000	8/19/1993	0.00	347	94 8087
USGS	11078000	9/13/1937	0.00	348	95 0820	USGS	11078000	8/20/1993	0.00	348	95 0820
USGS	11078000	9/14/1937	0.00	349	95 3552	USGS	11078000	8/21/1993	0.00	349	95 3552
USGS	11078000	9/15/1937	0.00	350	95 6284	USGS	11078000	8/22/1993	0.00	350	95 6284
USGS	11078000	9/16/1937	0.00	351	95 9016	USGS	11078000	8/23/1993	0.00	351	95 9016
USGS	11078000	9/17/1937	0.00	352	96 1749	USGS	11078000	8/24/1993	0.00	352	96 1749
USGS	11078000	9/18/1937	0.00	353	96 4481	USGS	11078000	8/25/1993	0.00	353	96 4481
USGS	11078000	9/19/1937	0.00	354	96 7213	USGS	11078000	8/26/1993	0.00	354	96 7213
USGS	11078000	9/20/1937	0.00	355	96 9945	USGS	11078000	8/27/1993	0.00	355	96 9945
USGS	11078000	9/21/1937	0.00	356	97 2678	USGS	11078000	8/28/1993	0.00	356	97 2678
USGS	11078000	9/22/1937	0.00	357	97 5410	USGS	11078000	8/29/1993	0.00	357	97 5410
USGS	11078000	9/23/1937	0.00	358	97 8142	USGS	11078000	8/30/1993	0.00	358	97 8142
USGS	11078000	9/24/1937	0.00	359	98 0874	USGS	11078000	8/31/1993	0.00	359	98 0874
USGS	11078000	9/25/1937	0.00	360	98 3607	USGS	11078000	9/1/1993	0.00	360	98 3607
USGS	11078000	9/26/1937	0.00	361	98 6339	USGS	11078000	9/2/1993	0.00	361	98 6339
USGS	11078000	9/27/1937	0.00	362	98 9071	USGS	11078000	9/3/1993	0.00	362	98 9071
USGS	11078000	9/28/1937	0.00	363	99 1803	USGS	11078000	9/4/1993	0.00	363	99 1803
USGS	11078000	9/29/1937	0.00	364	99 4536	USGS	11078000	9/5/1993	0.00	364	99 4536
USGS	11078000	9/30/1937	0.00	365	99 7268	USGS	11078000	9/6/1993	0.00	365	99 7268

Figure E. Flow Duration Curves: USGS 11078000 Santa Ana River @ Santa Ana
WET YEARS



F. SAN BERNARDINO CA PRECIPITATION (WY 1871-2003)

(inches)

Source

1 Global Historical Climatology Network (GHCN) Oct 1870-Dec 1989
 2 Wester Regional Climate Center - DRI (NCDC dataset) Jan 1990-Sep 2003

WY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
1871	0.09	3.11	0.89	6.91	2.21	0.19	0.34	0.11	0.07	0.00	0.04	0.13	14.09
1872	0.60	0.88	3.91	0.00	2.20	0.37	0.79	0.06	0.00	0.00	0.18	0.04	9.03
1873	0.00	1.17	4.40	6.50	1.25	0.51	0.84	0.21	0.00	0.00	1.06	0.02	15.96
1874	0.01	0.74	5.73	5.51	8.76	1.08	0.48	0.42	0.00	0.00	0.00	0.06	22.79
1875	1.82	1.88	2.20	7.20	0.15	0.22	0.07	0.05	0.00	0.00	0.00	0.00	13.59
1876	0.00	7.50	0.02	6.55	1.92	3.41	0.44	0.03	0.03	0.00	0.00	0.00	19.91
1877	0.20	0.40	0.00	3.50	4.03	0.83	0.26	0.30	0.00	0.00	0.00	0.00	9.52
1878	0.86	0.50	3.95	3.33	6.68	2.57	1.71	0.66	0.07	0.07	0.00	0.02	20.42
1879	0.14	0.05	4.70	3.59	1.00	0.50	1.20	0.24	0.03	0.11	0.02	0.01	11.60
1880	0.94	3.40	6.50	1.56	1.33	1.45	5.00	0.04	0.00	0.00	0.00	0.00	20.22
1881	0.14	0.67	8.80	1.40	0.36	1.66	0.46	0.01	0.00	0.00	0.00	0.00	13.50
1882	0.80	0.27	0.50	1.11	2.65	3.30	2.91	0.00	0.00	0.00	0.00	0.00	11.54
1883	0.10	0.15	0.45	1.60	1.10	2.82	2.95	0.00	0.00	0.19	0.00	0.53	9.88
1884	0.85	0.09	2.63	1.63	12.20	9.95	5.68	3.17	0.59	0.00	0.00	0.00	36.79
1885	0.00	0.11	3.75	2.79	0.11	0.28	1.89	1.69	0.19	0.00	0.00	0.00	10.81
1886	0.39	4.36	1.20	6.44	2.52	4.18	2.36	0.32	0.16	0.00	0.00	0.00	21.93
1887	0.00	0.11	0.61	0.39	6.44	4.41	1.90	0.42	0.22	0.11	0.04	0.09	14.74
1888	1.17	2.29	1.91	4.01	3.60	3.41	0.58	0.52	0.03	0.00	0.00	0.00	17.52
1889	0.05	4.12	4.64	0.93	1.50	6.55	2.05	1.13	0.00	0.17	0.63	0.11	21.88
1890	2.30	2.23	10.85	5.44	2.15	0.89	0.00	0.31	0.00	0.13	2.16	0.88	27.34
1891	0.58	1.27	3.02	0.00	7.78	0.06	0.53	1.67	0.00	0.00	0.91	0.93	16.75
1892	0.01	0.01	1.67	3.24	3.30	1.75	0.37	2.10	0.08	0.00	0.01	0.00	12.54
1893	0.16	1.02	2.23	4.53	3.37	8.00	0.48	0.03	0.00	0.20	0.00	0.05	20.07
1894	1.05	0.30	2.28	1.26	0.88	1.15	0.40	0.56	0.00	0.01	0.16	0.37	8.43
1895	0.15	0.00	7.25	7.36	1.14	3.44	0.64	0.44	0.00	0.00	0.00	0.00	20.43
1896	0.00	1.14	0.66	2.02	0.00	2.92	0.37	1.00	0.00	0.01	0.17	0.00	8.30
1897	2.10	0.98	1.09	3.40	5.40	3.41	0.08	0.11	0.00	0.01	0.00	0.13	16.71
1898	2.10	0.21	0.57	2.10	0.60	0.97	0.48	1.08	0.00	0.00	0.00	0.00	8.10
1899	0.03	0.05	0.44	2.03	0.51	3.22	0.07	0.19	0.95	0.00	0.01	0.01	7.52
1900	0.81	1.47	0.84	0.92	0.00	0.92	1.96	1.71	0.01	0.34	0.00	0.23	9.21
1901	0.36	6.10	0.00	3.48	4.58	0.43	0.56	1.23	0.05	0.00	0.27	0.07	17.13
1902	1.09	0.28	0.04	1.65	3.02	3.89	0.57	0.12	0.15	0.01	0.00	0.00	10.82
1903	0.09	1.94	1.94	1.96	1.67	6.47	3.10	0.24	0.00	0.00	0.15	0.46	18.02
1904	0.07	0.00	0.00	0.18	2.21	5.34	0.80	0.16	0.00	0.00	0.14	0.06	8.96
1905	0.32	0.00	1.03	3.92	6.58	6.00	1.18	1.55	0.00	0.00	0.00	0.13	20.71
1906	0.00	2.81	0.74	2.97	2.89	8.00	1.16	0.96	0.22	0.01	0.01	0.05	19.83
1907	0.01	2.42	7.12	6.33	2.14	4.58	0.16	0.11	0.25	0.00	0.00	0.00	23.13
1908	2.75	0.10	0.97	4.71	4.20	2.03	0.53	0.31	0.02	0.05	0.00	1.11	16.78
1909	1.45	0.26	0.66	7.49	3.76	2.29	0.17	0.02	0.10	0.00	1.28	0.00	17.48
1910	0.04	2.28	7.19	2.43	0.08	1.58	0.14	0.00	0.01	0.05	0.03	0.36	14.19
1911	1.04	0.54	0.03	6.58	4.22	2.52	0.48	0.40	0.19	0.01	0.00	1.47	17.48
1912	0.50	0.58	1.17	0.75	0.00	5.18	3.67	0.52	0.00	0.00	0.06	0.01	12.44
1913	1.42	0.47	0.01	1.69	5.26	0.63	0.66	0.48	0.39	0.19	0.05	0.02	11.27
1914	0.00	2.54	0.96	8.73	4.71	0.64	3.45	0.03	0.13	0.01	0.00	0.01	21.21
1915	0.91	0.26	2.98	4.99	5.52	1.25	2.29	1.43	0.00	0.00	0.53	0.05	20.21
1916	0.00	0.67	3.92	15.51	1.86	1.90	0.08	0.20	0.00	0.00	0.37	1.06	25.57
1917	1.80	0.03	2.81	3.24	2.70	0.19	0.97	0.62	0.00	0.21	0.04	0.00	12.61
1918	0.01	0.40	0.00	0.53	3.05	7.44	0.32	0.32	1.02	0.05	0.03	0.29	13.47
1919	0.89	1.95	1.72	0.52	3.79	2.60	1.08	0.70	0.00	0.02	0.14	2.37	15.78
1920	0.67	1.20	0.90	0.62	4.78	6.15	1.36	1.07	0.00	0.00	0.00	0.18	16.93
1921	1.76	0.26	1.41	3.94	1.03	3.85	0.69	3.34	0.00	0.00	0.00	1.10	17.38
1922	1.10	0.11	10.62	6.60	3.75	2.45	0.75	1.27	0.00	0.02	0.02	0.00	26.69
1923	0.46	2.04	3.16	1.88	1.09	0.50	1.86	0.01	0.00	0.00	0.02	0.13	11.15
1924	0.34	0.96	1.84	0.85	0.20	4.51	2.49	0.01	0.00	0.00	0.00	0.02	11.22
1925	1.02	1.15	2.18	0.36	0.69	2.05	1.77	1.07	0.58	0.01	0.00	0.01	10.89
1926	2.29	1.02	1.49	0.92	3.14	1.08	9.35	1.07	0.03	0.00	0.01	0.00	20.41
1927	0.02	2.18	3.08	1.36	9.83	2.66	0.94	0.40	0.08	0.00	0.00	0.00	20.55
1928	3.27	1.09	3.39	0.74	2.65	1.30	0.51	1.10	0.00	0.00	0.00	0.00	14.05
1929	0.82	1.10	1.99	2.28	1.89	1.60	2.41	0.00	0.12	0.00	0.00	0.53	12.73
1930	0.05	0.00	0.00	5.12	1.16	3.80	1.08	2.32	0.00	0.00	0.00	0.00	13.53
1931	0.89	2.22	0.00	2.88	3.99	0.45	3.55	1.26	0.07	0.00	1.16	0.15	16.82
1932	1.25	3.06	4.54	1.86	8.83	0.16	0.82	0.01	0.12	0.00	0.00	0.00	20.65
1933	0.28	0.00	3.51	5.37	0.22	0.47	2.16	0.95	0.20	0.00	0.05	0.00	13.21
1934	0.24	0.38	6.31	2.55	2.40	0.67	0.14	0.00	0.24	0.00	0.01	0.14	13.09
1935	2.44	1.63	4.24	3.77	3.30	3.24	1.70	0.21	0.00	0.00	1.28	0.02	21.83
1936	0.40	0.35	0.71	0.01	11.12	2.19	1.02	0.00	0.00	0.09	0.00	0.06	15.95
1937	4.63	0.26	8.24	3.58	8.64	5.43	0.60	0.00	0.07	0.00	0.00	0.00	31.45
1938	0.00	0.02	3.44	2.12	6.48	10.10	2.46	0.65	0.09	0.42	0.00	0.04	25.82
1939	0.67	0.06	6.48	3.43	2.29	1.87	0.85	0.06	0.00	0.00	0.04	2.22	17.97
1940	0.79	1.01	0.57	5.54	4.21	1.53	2.42	0.00	0.00	0.00	0.01	0.01	16.09
1941	1.89	0.95	7.34	2.57	9.05	9.65	3.82	0.25	0.38	0.00	0.54	0.00	36.44

G. Forebay Recharge

data provided by Gwen M. Sharp, OCWD (1/31/05)

	ANNUAL			ANNUAL (Water Year)		
	Available Supply	Native Inflow Purch	Percolation	Available Supply	Native Inflow Purch	Annual Percolation
Jul-86	10,419	8,590	na			
Aug-86	9,686	7,740	na			
Sep-86	14,910	7,430	na			
Oct-86	18,700	11,570	na			
Nov-86	13,820	8,450	na			
Dec-86	13,598	11,428	na			
Jan-87	9,267	9,196	na			
Feb-87	10,662	10,650	na			
Mar-87	15,170	15,162	na			
Apr-87	18,640	18,640	na			
May-87	11,861	11,220	na			
Jun-87	8,500	8,030	na	155,232	128,106	na
Jul-87	8,512	8,050	na			
Aug-87	11,657	7,820	na			
Sep-87	9,989	4,720	na			
Oct-87	19,302	14,830	na			
Nov-87	22,735	16,740	na			
Dec-87	19,078	13,340	na			
Jan-88	19,444	17,941	na			
Feb-88	18,768	18,130	na			
Mar-88	19,107	19,000	na			
Apr-88	13,484	12,415	na			
May-88	17,635	14,200	na			
Jun-88	14,473	9,518	na	194,183	156,704	na
Jul-88	8,947	6,248	na			
Aug-88	9,472	7,611	na			
Sep-88	8,999	6,513	na			
Oct-88	11,924	10,278	na			
Nov-88	10,896	9,588	na			
Dec-88	16,495	16,470	na			

	ANNUAL			ANNUAL (Water Year)		
	Available Supply	Native Inflow-Purch	Percolation	Available Supply	Native Inflow Purch	Annual Percolation
Jan-89	17,135	16,620	na			
Feb-89	13,807	13,740	na			
Mar-89	17,417	17,417	na			
Apr-89	14,840	13,872	na			
May-89	8,528	8,284	na			
Jun-89	12,935	10,910	na	151,395	137,551	na
Jul-89	16,116	5,079	18,341			
Aug-89	10,567	7,759	12,872			
Sep-89	8,545	8,510	9,453			
Oct-89	10,212	10,210	10,307			
Nov-89	13,131	11,210	11,251			
Dec-89	12,402	12,310	12,187			
Jan-90	16,880	16,880	14,714			
Feb-90	16,520	16,520	14,691			
Mar-90	18,656	16,050	17,088			
Apr-90	24,070	14,170	20,777			
May-90	12,545	12,250	16,543			
Jun-90	10,136	8,740	13,049	169,780	139,688	171,273
Jul-90	7,815	7,631	10,631			
Aug-90	8,322	7,684	9,055			
Sep-90	10,117	7,405	10,243	160,806	141,060	160,536
Oct-90	16,969	8,444	15,954			
Nov-90	12,738	9,765	12,650			
Dec-90	11,290	10,935	10,462			
Jan-91	19,754	17,021	15,757			
Feb-91	15,134	14,218	15,690			
Mar-91	31,290	31,290	23,156			
Apr-91	27,810	27,709	26,825			
May-91	11,060	10,542	16,034			
Jun-91	9,990	9,535	12,364	182,289	162,179	178,821
Jul-91	8,850	7,472	10,003			
Aug-91	9,883	6,612	12,510			
Sep-91	17,748	6,262	16,240	192,516	159,805	187,645

	ANNUAL			ANNUAL (Water Year)		
	Available Supply	Native Inflow-Purch	Percolation	Available Supply	Native Inflow-Purch	Annual Percolation
Oct-91	26,090	6,707	24,183			
Nov-91	18,767	8,504	19,050			
Dec-91	25,413	11,772	21,663			
Jan-92	20,867	20,643	19,717			
Feb-92	30,600	30,204	25,107			
Mar-92	26,395	26,041	25,789			
Apr-92	29,063	25,550	28,204			
May-92	13,320	13,250	19,602			
Jun-92	9,920	9,266	13,290	236,916	172,285	235,358
Jul-92	12,103	8,033	13,944			
Aug-92	16,210	7,395	18,468			
Sep-92	10,399	7,405	12,349			
Oct-92	9,955	8,404	10,213			
Nov-92	13,957	11,600	14,328			
Dec-92	35,392	28,692	25,060			
Jan-93	39,757	38,174	32,342			
Feb-93	48,988	48,640	29,092			
Mar-93	26,406	26,406	30,172			
Apr-93	29,470	29,470	32,525			
May-93	24,930	24,930	27,493			
Jun-93	20,874	18,850	22,216	288,441	258,000	268,202
Jul-93	13,497	11,843	17,150			
Aug-93	20,012	7,315	22,065			
Sep-93	13,601	5,871	17,240			
Oct-93	9,670	9,425	10,424			
Nov-93	11,510	11,076	11,774			
Dec-93	15,120	14,678	13,516			
Jan-94	16,801	12,988	15,819			
Feb-94	30,252	30,110	22,132			
Mar-94	28,391	21,579	26,947			
Apr-94	26,807	12,326	27,003			
May-94	28,735	9,901	28,013			
Jun-94	28,059	9,335	28,130	242,455	156,449	240,213
				239,147	174,771	241,366
				296,838	260,196	279,896

	ANNUAL		ANNUAL (Water Year)	
	Available Supply	Native Inflow-Purch	Available Supply	Native Inflow-Purch
Percolation				
Jul-94	11,365	11,365	19,492	19,492
Aug-94	7,037	6,805	12,460	12,460
Sep-94	7,643	6,971	10,043	10,043
Oct-94	16,319	9,511	14,297	14,297
Nov-94	20,881	9,858	20,098	20,098
Dec-94	15,598	12,297	14,326	14,326
Jan-95	32,600	32,600	22,674	22,674
Feb-95	26,260	26,260	25,682	25,682
Mar-95	44,633	44,633	34,777	34,777
Apr-95	33,226	33,226	30,619	30,619
May-95	26,142	26,142	26,820	26,820
Jun-95	28,141	28,141	27,945	27,945
Jul-95	24,241	24,241	25,968	25,968
Aug-95	8,661	8,661	14,369	14,369
Sep-95	9,287	9,287	11,140	11,140
Oct-95	9,790	9,790	10,628	10,628
Nov-95	10,810	10,810	10,601	10,601
Dec-95	13,740	13,193	13,768	13,768
Jan-96	15,743	15,297	15,356	15,356
Feb-96	26,457	26,172	23,257	23,257
Mar-96	28,134	28,054	28,104	28,104
Apr-96	22,048	17,983	24,605	24,605
May-96	18,950	11,953	21,468	21,468
Jun-96	16,730	10,212	17,617	17,617
Jul-96	15,500	8,822	17,156	17,156
Aug-96	10,320	9,716	14,158	14,158
Sep-96	10,430	9,489	11,902	11,902
Oct-96	18,698	11,573	18,636	18,636
Nov-96	19,515	18,361	15,349	15,349
Dec-96	30,507	29,650	23,744	23,744
Jan-97	31,211	30,650	28,825	28,825
Feb-97	23,533	22,910	22,719	22,719
Mar-97	16,912	16,109	19,941	19,941
			269,844	247,809
			259,233	
			285,988	264,857
			221,390	156,560
			204,591	185,654
			216,881	
			198,652	171,491
				208,620

	ANNUAL		ANNUAL (Water Year)			
	Available Supply	Native Inflow Purch	Annual Percolation	Available Supply	Native Inflow Purch	Annual Percolation
Apr-97	16,503	11,875	17,471			
May-97	22,269	10,180	23,807			
Jun-97	17,322	10,377	18,582	232,719	189,712	232,290
Jul-97	16,230	9,303	16,855			
Aug-97	20,915	8,715	21,157			
Sep-97	22,701	10,534	20,655	256,315	190,237	247,741
Oct-97	14,710	11,904	18,261			
Nov-97	15,783	15,171	14,644			
Dec-97	24,350	24,235	19,734			
Jan-98	25,615	25,615	22,820			
Feb-98	34,443	34,443	21,300			
Mar-98	25,573	25,573	23,277			
Apr-98	27,787	27,787	26,281			
May-98	22,275	22,275	23,078	278,793	243,966	255,546
Jun-98	28,411	28,411	27,484			
Jul-98	26,690	25,540	26,991			
Aug-98	16,932	15,953	19,008			
Sep-98	15,101	14,588	16,418	277,670	271,494	259,296
Oct-98	22,090	12,207	21,946			
Nov-98	17,450	17,450	15,723			
Dec-98	18,920	18,920	20,068			
Jan-99	18,857	18,829	17,850			
Feb-99	18,331	17,984	17,049			
Mar-99	16,921	16,593	16,898			
Apr-99	16,629	16,355	16,138			
May-99	19,364	19,271	20,205	220,794	207,075	224,139
Jun-99	13,509	13,388	15,845			
Jul-99	15,793	12,777	17,661			
Aug-99	14,707	11,210	15,075			
Sep-99	14,535	11,083	13,487	207,105	186,065	207,945
Oct-99	19,468	11,899	18,081			
Nov-99	13,450	13,102	16,425			
Dec-99	19,150	15,628	16,172			

	ANNUAL			ANNUAL (Water Year)		
	Available Supply	Native Inflow Purch	Annual Percolation	Available Supply	Native Inflow Purch	Annual Percolation
Jan-00	23,220	19,022	20,700			
Feb-00	23,552	21,133	20,374			
Mar-00	27,329	27,052	24,466			
Apr-00	20,229	19,732	20,030			
May-00	14,838	14,216	17,565			
Jun-00	15,791	11,715	16,900	222,060	188,569	216,936
Jul-00	20,344	11,616	23,383			
Aug-00	22,718	10,673	23,295			
Sep-00	22,306	10,254	21,751			
Oct-00	27,490	12,969	24,955			
Nov-00	20,315	12,523	18,903			
Dec-00	16,990	13,289	17,178			
Jan-01	20,521	19,808	18,317			
Feb-01	20,861	20,744	20,343			
Mar-01	24,452	24,364	24,354			
Apr-01	23,757	19,009	23,193			
May-01	15,242	14,139	18,396			
Jun-01	12,210	10,919	13,209	247,206	180,307	247,277
Jul-01	11,877	11,488	15,028			
Aug-01	10,591	10,285	12,084			
Sep-01	10,859	10,412	12,067			
Oct-01	21,752	11,999	19,848			
Nov-01	26,827	14,917	25,503			
Dec-01	19,672	17,414	19,896			
Jan-02	19,303	15,956	18,982			
Feb-02	16,134	15,633	17,526			
Mar-02	16,263	14,515	17,156			
Apr-02	15,404	13,232	17,427			
May-02	15,122	12,565	17,794			
Jun-02	18,260	11,029	19,881	202,064	159,443	213,192
Jul-02	22,023	9,574	20,592			
Aug-02	22,347	9,106	22,566			
Sep-02	13,156	9,218	16,030			
				242,394	186,042	239,142
				215,165	179,949	218,027
				226,263	155,156	233,201

	ANNUAL			ANNUAL (Water Year)		
	Available Supply	Native Inflow-Purch	Percolation	Available Supply	Native Inflow-Purch	Annual Percolation
Oct-02	16,343	10,408	16,732			
Nov-02	15,946	13,471	14,323			
Dec-02	15,687	15,111	14,624			
Jan-03	20,993	19,913	17,663			
Feb-03	21,651	20,086	17,409			
Mar-03	30,336	28,704	24,549			
Apr-03	28,810	28,342	27,955			
May-03	23,066	22,984	26,292			
Jun-03	18,895	18,187	20,658	249,253	205,102	239,393
Jul-03	17,622	11,736	20,903			
Aug-03	12,498	9,834	16,152			
Sep-03	12,235	9,718	13,974			
Oct-03	13,956	10,775	15,490			
Nov-03	18,133	14,814	15,576			
Dec-03	17,618	14,396	17,454			
Jan-04	23,057	22,700	16,997			
Feb-04	18,939	18,186	16,918			
Mar-04	23,532	23,473	21,354			
Apr-04	19,029	18,741	19,499			
May-04	14,743	14,583	20,705			
Jun-04	10,815	10,697	14,895	202,177	179,653	209,917
Jul-04	11,040	9,898	14,516			
Aug-04	9,912	9,508	11,412			
Sep-04	10,954	9,638	12,353			
Oct-04	16,100	15,918	13,264			
Nov-04	16,460	16,261	16,338			
Dec-04						
	avg	1990-2004		229,737	192,239	227,086
	avg	1990-2002		232,327	192,130	229,068
	avg	1990-2003		232,452	193,298	229,223
				191,727	177,408	197,169
				234,083	208,493	231,234

H. USACE (2004) Predicted SAR Flows

Base Year	USACE (2004) "PRESENT" CONDITION (for 2002)				USACE (2004) "FUTURE" CONDITION (for 2052)			
	Inflow to Prado	Total Water Spread by OCWD	Water "Lost"	Total Inflow to OCWD Area ^a	Inflow to Prado	Total Water Spread by OCWD	Water "Lost"	Total Inflow to OCWD Area ^a
1950	234,000	239,000	0	239,000	319,000	321,000	3,750	324,750
1951	214,000	216,000	0	216,000	299,000	301,000	0	301,000
1952	358,000	284,000	93,200	377,200	462,000	345,000	139,000	484,000
1953	234,000	238,000	0	238,000	320,000	324,000	0	324,000
1954	251,000	247,000	12,000	259,000	341,000	323,000	26,700	349,700
1955	246,000	251,000	2,470	253,470	334,000	329,000	12,500	341,500
1956	246,000	227,000	19,900	246,900	336,000	308,000	28,300	336,300
1957	209,000	213,000	20	213,020	295,000	297,000	2,740	299,740
1958	321,000	266,000	64,800	330,800	425,000	328,000	109,000	437,000
1959	202,000	202,000	0	202,000	288,000	285,000	2,520	287,520
1960	202,000	206,000	230	206,230	289,000	289,000	3,370	292,370
1961	188,000	197,000	120	197,120	273,000	281,000	1,070	282,070
1962	213,000	211,000	9,660	220,660	302,000	287,000	23,500	310,500
1963	200,000	204,000	0	204,000	288,000	286,000	4,640	290,640
1964	197,000	201,000	0	201,000	283,000	286,000	2,660	288,660
1965	210,000	214,000	0	214,000	298,000	300,000	2,130	302,130
1966	280,000	225,000	56,600	281,600	380,000	297,000	83,800	380,800
1967	294,000	223,000	81,900	304,900	395,000	299,000	109,000	408,000
1968	224,000	233,000	220	233,220	315,000	309,000	15,900	324,900
1969	699,000	282,000	435,900	717,900	846,000	348,000	520,000	868,000
1970	214,000	217,000	0	217,000	302,000	296,000	NA ^b	302000 ^b
1971	217,000	214,000	6,560	220,560	306,000	288,000	21,200	309,200
1972	208,000	202,000	9,600	211,600	296,000	281,000	19,700	300,700
1973	257,000	246,000	14,100	260,100	350,000	325,000	29,700	354,700
1974	240,000	230,000	19,100	249,100	333,000	312,000	30,800	342,800
1975	216,000	218,000	0	218,000	304,000	304,000	2,210	306,210
1976	214,000	217,000	500	217,500	302,000	296,000	8,980	304,980
1977	205,000	206,000	0	206,000	293,000	288,000	6,800	294,800
1978	493,000	268,000	254,900	522,900	624,000	332,000	325,000	657,000
1979	302,000	280,000	25,600	305,600	402,000	342,000	63,900	405,900
1980	707,000	298,000	427,100	725,100	847,000	363,000	505,000	868,000
1981	234,000	237,000	910	237,910	322,000	313,000	14,000	327,000
1982	276,000	270,000	11,000	281,000	372,000	334,000	43,900	377,900
1983	589,000	341,000	274,900	615,900	713,000	396,000	353,000	749,000
1984	284,000	265,000	27,200	292,200	374,000	335,000	42,300	377,300
1985	263,000	253,000	12,600	265,600	353,000	328,000	26,000	354,000
1986	281,000	269,000	23,400	292,400	376,000	337,000	51,300	388,300
1987	220,000	224,000	0	224,000	307,000	304,000	7,380	311,380
1988	247,000	251,000	980	251,980	339,000	326,000	19,200	345,200
Mean	279,205	238,077	48,345	286,422	374,436	313,923	70,025	382,306
Median								327,000
80% Exceed								300,880

NOTES:

- a [Total Inflow to OCWD Area] is calculated as: [Total Water Spread by OCWD] + [Water "Lost"]
- b USACE (2004) reported [Water "Lost"] to be 296,000 acre-feet; this was likely an error since the [Total Water Spread by OCWD] was also reported as 296,000 acre-feet. Thus, [Water "Lost"] was omitted in this case and the [Total Inflow to OCWD Area] was set equal to the [Inflow to Prado].