

**11055500 Plunge Creek near East Highlands, CA**

Santa Ana River Basin

LOCATION.--Lat 34°07'06", long 117°08'27" referenced to North American Datum of 1927, in NE ¼ NE ¼ sec.1, T.1 S., R.3 W., San Bernardino County, CA, Hydrologic Unit 18070203, on left bank, at mouth of canyon, at crossing of North Fork Ditch siphon, and 1.8 mi northeast of East Highlands.

DRAINAGE AREA.--16.9 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--January 1919 to current year; combined records of creek and diversions, March 1951 to current year.

REVISED RECORDS.--WSP 1635: 1924, 1926, 1935-36 (instantaneous maximum discharge), 1943, 1944 (instantaneous maximum discharge), 1945, 1946 (instantaneous maximum discharge), 1947, 1950 (instantaneous maximum discharge). WSP 1715: 1956-58 (instantaneous maximum discharge). WSP 1928: Drainage area.

GAGE.--Water-stage recorder and concrete control on creek. Since March 1951, water-stage recorder and weir on upper diversion discontinued Sept. 30, 1991, reactivated July 27, 1993; water-stage recorder and concrete-lined canal on middle diversion; crest-stage gage and sharp-crested weir on lower diversion. The crest-stage gage on the lower diversion was removed in June 2008. Elevation of creek gage is 1,590 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1969, creek gage at datum 4.00 ft higher. Diversions all at different datums.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Diversion from Alder Creek to Upper Plunge Creek area was active 1904-67. Diversions for irrigation are made, at times, at sites 0.5 mi (station 11055450), 1.0 mi (station 11055400), and 2.5 mi (station 11055350) upstream from streamflow station. Water has been subject to diversion for irrigation from upstream sites during entire period of record. For combined discharge of Plunge Creek and diversions, see station 11055501. No flow in lower diversion since May 29, 1966. No flow in middle diversion since Feb. 8, 2004. No flow in upper diversion since Oct. 11, 2000. See schematic diagram of Santa Ana River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 5,740 ft<sup>3</sup>/s, Dec 22, 2010, on basis of independent high water mark; maximum recorded gage height, 11.29 ft, Dec 22, 2010, from flood marks left by a debris flow near gage. The maximum stage for the period of record is not related to the maximum discharge on that day, but rather it is associated with a debris flow at the gage station. The actual discharge associated with the maximum stage is unknown; no flow at times in some years.

Combined creek and diversions: Maximum discharge, 5,740 ft<sup>3</sup>/s, Dec. 22, 2010; no flow Nov. 12, 1964, Sept. 29, 1965, Aug. 4, 1987, several days in November 1988, September 1991, many days in 1992, and several days in September 2003.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Creek Only		Combined Creek and Diversions
		Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
Dec 19	1845	521	5.06	521
Dec 20	2145	1,430	6.73	1,430
Dec 22	0735	*5,740	*11.29	*5,740
Feb 26	0445	239	4.29	239

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**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**  
**DAILY MEAN VALUES**  
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.4	1.8	e2.9	43	11	36	32	12	8.5	5.2	e3.5	2.5
2	1.3	1.6	2.8	40	11	32	28	12	8.5	5.0	e3.1	2.5
3	1.4	1.5	2.7	43	11	37	26	12	8.2	4.8	e3.0	2.4
4	1.7	1.5	2.7	37	11	33	24	12	8.2	4.6	e3.1	2.3
5	2.0	1.5	2.8	34	11	30	23	12	7.7	4.6	e3.1	2.7
6	2.1	1.6	4.7	29	11	29	23	12	8.2	4.7	e3.2	2.6
7	1.8	1.8	3.5	27	11	43	23	12	8.3	4.5	e3.1	2.3
8	1.6	3.0	3.2	25	11	34	25	12	8.8	4.4	e3.2	2.3
9	1.4	2.2	3.2	23	11	28	23	13	8.8	4.3	e3.6	2.3
10	1.3	1.9	3.2	21	9.9	25	21	13	8.5	4.1	e3.1	2.4
11	1.2	1.8	3.1	18	9.6	21	19	12	8.7	e4.1	e3.4	2.5
12	1.2	1.8	3.1	16	9.3	19	17	11	8.0	e4.6	e3.4	2.3
13	1.1	1.8	3.0	15	9.1	17	16	11	7.8	e5.3	e3.2	2.3
14	1.1	1.7	3.0	14	9.3	14	15	11	7.3	e5.5	e3.1	2.4
15	1.4	1.7	3.2	13	9.4	13	14	13	7.2	e5.3	e3.0	2.3
16	1.5	1.8	3.9	12	20	11	13	12	7.3	e5.3	e2.9	2.4
17	1.8	1.8	4.2	12	13	9.8	11	12	7.3	e5.0	e2.8	2.6
18	2.2	1.7	17	12	11	8.4	11	14	7.1	e4.7	e2.5	2.3
19	2.2	1.9	158	12	57	7.9	11	13	7.1	e4.3	e2.5	2.1
20	2.4	17	340	12	37	8.3	11	e12	6.6	e3.9	e2.6	2.1
21	2.7	15	294	11	27	50	11	e12	6.2	e3.6	e2.6	2.0
22	2.6	4.7	e986	11	20	29	11	e10	6.0	e3.6	e2.4	1.9
23	2.3	3.5	e310	11	16	23	12	e9.6	6.4	e3.4	e2.3	1.9
24	2.2	4.2	e172	10	13	21	12	e8.8	6.6	e3.2	e2.1	2.0
25	2.5	3.3	e121	10	13	39	12	e9.1	6.7	e2.9	e2.0	2.3
26	2.1	3.0	e123	9.9	90	34	12	9.6	6.1	e2.8	e1.9	2.4
27	1.8	e2.9	e69	9.9	52	31	11	9.5	5.9	e2.7	e1.8	2.0
28	1.7	e3.8	e43	9.7	42	34	11	9.5	5.6	e3.0	e1.8	1.9
29	1.6	e2.8	e55	9.4	---	36	12	11	5.7	e3.0	e1.8	1.9
30	2.0	e2.8	e55	12	---	36	11	9.4	5.4	e3.1	2.1	1.9
31	2.0	---	48	11	---	36	---	8.6	---	e4.1	2.4	---
<b>Total</b>	55.6	97.4	2,846.2	572.9	566.6	825.4	501	350.1	218.7	129.6	84.6	67.8
<b>Mean</b>	1.79	3.25	91.8	18.5	20.2	26.6	16.7	11.3	7.29	4.18	2.73	2.26
<b>Max</b>	2.7	17	986	43	90	50	32	14	8.8	5.5	3.6	2.7
<b>Min</b>	1.1	1.5	2.7	9.4	9.1	7.9	11	8.6	5.4	2.7	1.8	1.9
<b>Ac-ft</b>	110	193	5,650	1,140	1,120	1,640	994	694	434	257	168	134

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2011, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	0.45	2.02	7.12	13.3	21.9	21.8	12.6	4.35	1.32	0.47	0.27	0.41
<b>Max</b>	7.76	44.7	106	170	224	176	74.2	51.7	15.1	5.52	4.87	10.9
<b>(WY)</b>	(2005)	(1966)	(1967)	(1993)	(1969)	(1938)	(1958)	(1998)	(1998)	(1998)	(1983)	(1978)
<b>Min</b>	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
<b>(WY)</b>	(1920)	(1921)	(1930)	(1963)	(1961)	(1961)	(1961)	(1919)	(1919)	(1919)	(1919)	(1919)

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SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1919 - 2011	
<b>Annual total</b>	6,410.57		6,315.9			
<b>Annual mean</b>	17.6		17.3		7.13	
<b>Highest annual mean</b>					42.5	1969
<b>Lowest annual mean</b>					0.05	1961
<b>Highest daily mean</b>	986	Dec 22	986	Dec 22	1,840	Jan 25, 1969
<b>Lowest daily mean</b>	0.97	Sep 26	1.1	Oct 13	0.00	May 1, 1919
<b>Annual seven-day minimum</b>	1.1	Sep 24	1.2	Oct 9	0.00	May 1, 1919
<b>Maximum peak flow</b>			5,740	Dec 22	5,740	Dec 22, 2010
<b>Maximum peak stage</b>			11.29	Dec 22	11.29	Dec 22, 2010
<b>Annual runoff (ac-ft)</b>	12,720		12,530		5,170	
<b>10 percent exceeds</b>	30		32		14	
<b>50 percent exceeds</b>	3.8		7.3		0.40	
<b>90 percent exceeds</b>	1.4		1.9		0.00	

