11055800 City Creek near Highland, CA

Santa Ana River Basin

LOCATION.--Lat 34°08′38″, long 117°11′16″ referenced to North American Datum of 1927, in SW ¼ NW ¼ sec.27, T.1 N., R.3 W., San Bernardino County, Hydrologic Unit 18070203, on right bank, 0.6 mi upstream from Highland Avenue, and 1.5 mi northeast of Highland.

DRAINAGE AREA.--19.6 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1919 to current year; combined records of creek and City Creek Water Co.'s canal, June 1924 to September 1986, October 1988 to current year.

REVISED RECORDS.--WSP 1635: 1920(M), 1923(M), 1937(M), 1939(M), 1946. WSP 1928: Drainage area.

GAGE.--Water-stage recorder on creek; water-stage recorder on canal. Elevation of creek gage is 1,580 ft above NGVD of 1929, from topographic map. Prior to Mar. 1, 1939, at site 0.2 mi downstream at different datum. Canal gage at different datum.

REMARKS.--Records fair except for discharges above 100 ft^3/s and estimated daily discharges, which are poor. No regulation upstream from station. City Creek Water Co.'s canal (station 11055700) diverted from a site 0.5 mi upstream from station for irrigation throughout period of record until Sept. 30, 1986, and resumed diversion on Mar. 31, 1989. Diversion canal damaged by storms of January 1993, with no flow in canal from Jan. 14, 1993, to Apr. 5, 1995. For combined discharge of City Creek and canal see station 11055801. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 9,900 ft^3/s, Jan. 10, 2005, gage height, 10.68 ft, on basis of slope-area measurement of peak flow, at site 0.50 mile downstream; maximum gage height, 11.06 ft, Dec. 25, 2003, from floodmark left by a debris flow near the gage; no flow for many days in some years. The maximum stage for the period of record is not related to the maximum discharge on that day, but rather is associated with a debris flow at the gaging station. The stage associated with the maximum discharge on Dec. 25, 2003 is unknown. The maximum discharge on Dec. 25, 2003, (8,000 ft^3/s) is based on hydraulic computations that were applied to a possible hyperconcentrated flow event. The peak flow was the result of an intense rain storm that occurred less than two months after a wildfire burned over 90 percent of the drainage basin.

Combined creek and canal: Maximum discharge, 9,900 ft^3/s, Jan. 10, 2005; no flow at times in some years.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 110 ft^3/s and (or) maximum (*), from rating curve extended above 860 ft^3/s on basis of slope-area measurement at gage height 10.68 ft:

		Creek Only		Combined Creek and Canal
Date	Time	Discharge (ft^3/s)	Gage height (ft)	Discharge (ft^3/s)
Jan 02	1405	753	*5.90	753
Feb 28	0620	856	5.44	856
Mar 28	2300	195	4.01	195
Apr 04	2220	*1,220	5.85	*1,220
Apr 14	1915	188	3.54	188

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	6.2	6.8	6.5	10	6.2	21	45	24	13	9.0	7.7	5.0
2	6.2	6.8	6.5	65	6.0	17	42	23	12	8.8	7.4	5.0
3	6.3	6.9	6.9	e32	5.7	26	40	22	12	8.6	7.2	5.0
4	6.2	7.1	6.5	16	5.5	17	152	22	12	8.8	7.1	5.0
5	6.1	7.1	6.5	13	5.3	15	281	21	12	8.7	6.9	5.0
6	6.1	7.0	6.3	13	5.8	16	e140	21	12	8.5	6.8	4.9
7	6.1	7.0	6.2	12	6.5	21	84	20	12	8.3	6.8	4.7
8	6.2	6.9	6.2	12	5.8	24	65	20	12	8.2	6.4	4.7
9	6.4	7.1	6.3	12	5.9	19	57	20	12	8.5	6.2	4.7
10	6.2	7.2	6.2	12	6.1	21	52	20	11	8.0	6.1	4.8
11	6.3	7.2	6.2	11	6.0	24	48	19	11	7.9	6.1	4.8
12	6.3	6.9	6.2	11	5.6	23	45	19	11	7.7	6.1	4.8
13	6.2	6.8	6.2	11	4.9	25	42	18	11	7.7	6.1	4.8
14	6.2	6.7	6.2	11	4.6	28	59	18	11	7.6	6.1	5.0
15	6.2	6.6	6.2	10	4.9	27	57	18	11	7.5	6.1	5.2
16	6.6	6.6	6.2	9.8	4.7	25	41	17	11	7.4	6.1	5.2
17	7.5	6.6	6.2	9.5	4.7	25	39	17	11	7.7	6.0	4.9
18	9.9	6.5	6.2	9.2	5.0	27	37	16	10	7.8	5.9	4.8
19	7.7	6.5	6.2	9.4	5.2	26	35	16	10	7.5	5.9	5.0
20	7.3	6.5	6.2	9.0	4.7	26	33	16	10	7.5	5.6	5.0
21	7.1	6.5	6.2	8.4	4.5	50	32	15	10	7.3	5.6	5.1
22	7.1	6.6	6.2	8.1	4.3	29	30	18	10	7.1	5.5	5.3
23	7.1	6.6	6.2	7.7	4.4	26	29	16	9.9	7.3	5.4	5.2
24	7.1	6.6	6.2	7.5	4.5	25	28	15	9.8	7.2	5.3	5.1
25	7.3	6.7	6.2	7.6	4.3	24	28	15	9.6	7.0	5.3	5.0
26	7.2	6.7	6.2	7.4	4.2	24	28	15	9.7	7.0	5.3	5.0
27	7.2	6.7	6.2	7.2	9.9	23	27	15	9.6	7.0	5.3	5.2
28	7.2	6.5	6.2	7.0	151	42	26	14	9.4	7.3	5.2	5.2
29	7.1	6.5	6.2	6.9	---	68	25	13	9.3	7.6	5.2	5.1
30	7.1	6.5	6.2	6.7	---	48	24	13	9.1	8.0	5.2	5.2
31	6.9	---	14	6.5	---	43	---	13	---	8.1	5.1	---
Total	210.6	202.7	202.1	378.9	296.2	855	1,671	549	323.4	242.6	187.0	149.7
Mean	6.79	6.76	6.52	12.2	10.6	27.6	55.7	17.7	10.8	7.83	6.03	4.99
Max	9.9	7.2	14	65	151	68	281	24	13	9.0	7.7	5.3
Min	6.1	6.5	6.2	6.5	4.2	15	24	13	9.1	7.0	5.1	4.7
Ac-ft	418	402	401	752	588	1,700	3,310	1,090	641	481	371	297

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1.33	3.42	8.61	19.0	30.6	28.8	18.1	7.67	3.04	1.26	0.74	0.74
Max	19.2	43.4	89.5	269	451	219	148	52.3	26.1	11.7	9.56	6.60
(WY)	(2005)	(1966)	(1967)	(2005)	(1969)	(1938)	(1926)	(1998)	(1998)	(1980)	(1983)	(2005)
Min	0.00	0.00	0.00	0.13	0.35	0.18	0.03	0.00	0.00	0.00	0.00	0.00
(WY)	(1927)	(1922)	(1930)	(1936)	(1924)	(1926)	(1934)	(1934)	(1924)	(1924)	(1920)	(1920)

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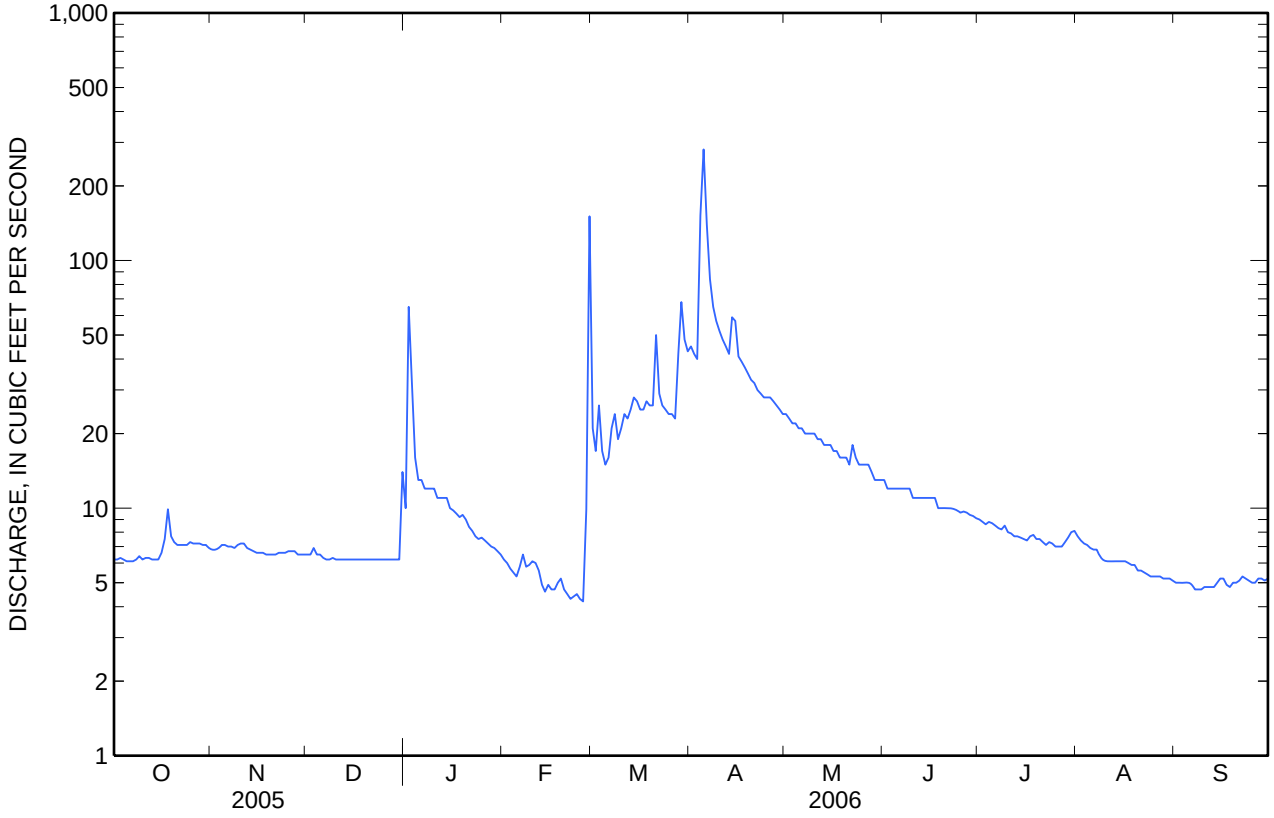
SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1920 - 2006	
Annual total	16,734.7		5,268.2			
Annual mean	45.8		14.4		10.2	
Highest annual mean					75.3	1969
Lowest annual mean					0.46	1961
Highest daily mean	2,000	Jan 10	281	Apr 5	3,360	Feb 25, 1969
Lowest daily mean	6.1	Oct 5	4.2	Feb 26	0.00	Jul 18, 1920
Annual seven-day minimum	6.2	Oct 1	4.4	Feb 20	0.00	Jul 18, 1920
Maximum peak flow			1,220	Apr 4	9,900	Jan 10, 2005
Maximum peak stage			5.90	Jan 2	[a]11.06	Dec 25, 2003
Annual runoff (ac-ft)	33,190		10,450		7,370	
10 percent exceeds	73		27		20	
50 percent exceeds	11		7.3		1.6	
90 percent exceeds	6.2		5.1		0.00	

[a] Maximum stage for the 2004 water year and period of record is not related to the maximum discharge on that date, but rather is associated with a debris flow at the gaging station.