

Water-Data Report 2011

11048553 Sand Canyon Creek at Irvine, CA

San Diego Creek Basin

LOCATION.--Lat 33°39'26", long 117°49'36" referenced to North American Datum of 1927, Orange County, CA, Hydrologic Unit 18070204, in San Joaquin Grant, on right bank, at culvert on Culver Drive, 0.85 mi upstream from mouth, at Irvine.

DRAINAGE AREA.--7.06 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 2001 to current year.

GAGE.--Water-stage recorder, culvert control, and crest-stage gage. Elevation of gage is 50 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. No diversion upstream from station. Releases of treated wastewater from Sand Canyon Reservoir may occur at times. Irrigation return flow can cause low-flow fluctuations in discharge at times.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,380 ft³/s, Dec. 22, 2010, gage height, 10.71 ft, from rating curve extended above 533 ft³/s, on basis of critical-depth computations; no flow at times Sept. 11-14, 2002.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and (or) maximum (*), from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 19	1700	61	5.37
Dec 22	0700	*1,380	*10.71
Dec 29	1300	57	5.34
Feb 26	0315	51	5.36
Mar 23	2030	73	5.55

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

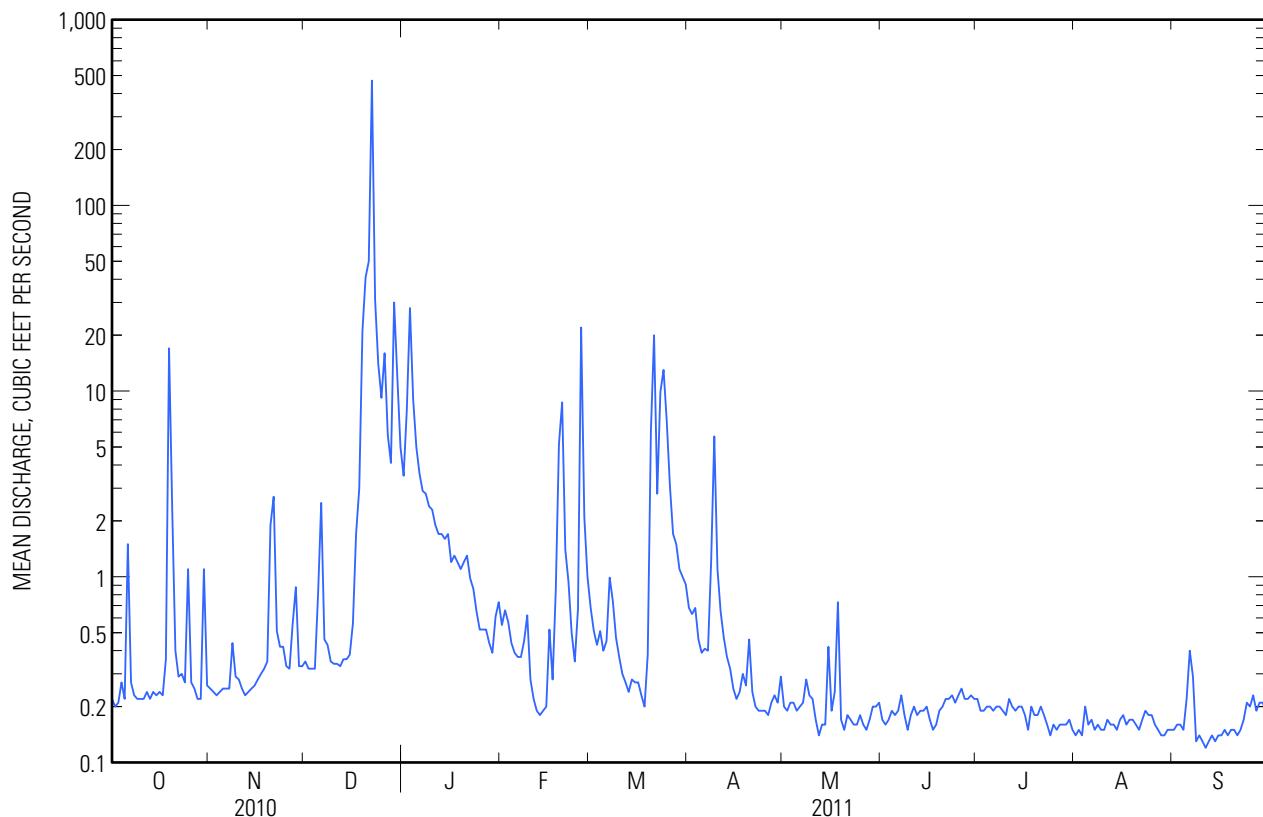
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.22	0.25	0.35	3.5	0.55	0.68	0.68	0.20	0.17	0.22	0.14	0.15
2	0.20	0.24	0.32	7.9	0.66	0.51	0.63	0.19	0.16	0.19	0.15	0.16
3	0.21	0.23	0.32	28	0.57	0.43	0.68	0.21	0.17	0.19	0.14	0.16
4	0.27	0.24	0.32	9.1	0.44	0.51	0.46	0.21	0.19	0.20	0.20	0.15
5	0.22	0.25	0.80	5.0	0.39	0.40	0.39	0.19	0.18	0.20	0.16	0.22
6	1.5	0.25	2.5	3.6	0.37	0.45	0.41	0.20	0.19	0.19	0.17	0.40
7	0.27	0.25	0.46	2.9	0.37	0.99	0.40	0.21	0.23	0.20	0.15	0.29
8	0.23	0.44	0.43	2.8	0.45	0.74	1.2	0.28	0.18	0.20	0.16	0.13
9	0.22	0.29	0.35	2.4	0.62	0.47	5.7	0.23	0.15	0.19	0.15	0.14
10	0.22	0.28	0.34	2.3	0.28	e0.37	1.1	0.22	0.18	0.18	0.15	0.13
11	0.22	0.25	0.34	1.9	0.22	e0.30	0.65	0.17	0.20	0.22	0.17	0.12
12	0.24	0.23	0.33	1.7	0.19	0.27	0.47	0.14	0.18	0.20	0.16	0.13
13	0.22	0.24	0.36	1.7	0.18	0.24	0.37	0.16	0.19	0.19	0.16	0.14
14	0.24	0.25	0.36	1.6	0.19	0.28	0.32	0.16	0.19	0.20	0.15	0.13
15	0.23	0.26	0.38	1.7	0.20	0.27	0.25	0.42	0.20	0.20	0.17	0.14
16	0.24	0.28	0.56	1.2	0.52	0.27	0.22	0.19	0.17	0.18	0.18	0.14
17	0.23	0.30	1.7	1.3	0.28	0.23	0.24	0.24	0.15	0.15	0.16	0.15
18	0.36	0.32	3.0	1.2	0.85	0.20	0.30	0.73	0.16	0.20	0.17	0.14
19	17	0.35	21	1.1	5.2	0.38	0.26	0.17	0.19	0.18	0.17	0.15
20	2.3	1.9	41	1.2	8.7	6.1	0.46	0.15	e0.20	0.18	0.16	0.15
21	0.40	2.7	50	1.3	1.4	20	0.24	0.18	0.22	0.20	0.15	0.14
22	0.29	0.51	470	0.98	0.94	2.8	0.20	0.17	0.22	0.18	0.17	0.15
23	0.30	0.42	31	0.86	0.50	9.9	0.19	0.16	0.23	0.16	0.19	0.17
24	0.27	0.42	14	0.65	0.35	13	0.19	0.16	0.21	0.14	0.18	0.21
25	1.1	0.33	9.2	0.52	0.67	6.9	0.19	0.18	0.23	0.16	0.18	0.20
26	0.27	0.32	16	0.52	22	3.1	0.18	0.16	0.25	0.15	0.16	0.23
27	0.25	0.56	5.8	0.52	2.1	1.7	0.21	0.15	0.22	0.16	0.15	0.19
28	0.22	0.88	4.1	0.44	e1.0	1.5	0.23	0.17	0.22	0.16	0.14	0.21
29	0.22	0.33	30	0.39	---	1.1	0.21	0.20	0.23	0.16	0.14	0.21
30	1.1	0.33	12	0.61	---	1.0	0.29	0.20	0.22	0.17	0.15	0.19
31	0.26	---	5.0	0.73	---	0.91	---	0.21	---	0.15	0.15	---
Total	29.52	13.90	722.32	89.62	50.19	76.00	17.32	6.61	5.88	5.65	4.98	5.22
Mean	0.95	0.46	23.3	2.89	1.79	2.45	0.58	0.21	0.20	0.18	0.16	0.17
Max	17	2.7	470	28	22	20	5.7	0.73	0.25	0.22	0.20	0.40
Min	0.20	0.23	0.32	0.39	0.18	0.20	0.18	0.14	0.15	0.14	0.14	0.12
Ac-ft	59	28	1,430	178	100	151	34	13	12	11	9.9	10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	0.65	0.42	3.08	3.25	4.73	1.30	0.74	0.29	0.22	0.21	0.18	0.20
Max	3.94	0.80	23.3	21.1	29.6	3.16	1.91	0.64	0.33	0.34	0.28	0.43
(WY)	(2005)	(2009)	(2011)	(2005)	(2005)	(2003)	(2003)	(2003)	(2003)	(2005)	(2005)	(2007)
Min	0.10	0.15	0.25	0.19	0.32	0.23	0.16	0.06	0.09	0.13	0.12	0.10
(WY)	(2002)	(2010)	(2004)	(2004)	(2002)	(2009)	(2002)	(2004)	(2004)	(2004)	(2003)	(2002)

11048553 Sand Canyon Creek at Irvine, CA—Continued**SUMMARY STATISTICS**

	Calendar Year 2010	Water Year 2011	Water Years 2001 - 2011	
Annual total	1,082.20	1,027.21		
Annual mean	2.96	2.81	1.26	
Highest annual mean			5.00	2005
Lowest annual mean			0.23	2002
Highest daily mean	470 Dec 22	470 Dec 22	470 Dec 22	2010
Lowest daily mean	0.18 Jan 1	0.12 Sep 11	0.02 May 16,	2004
Annual seven-day minimum	0.20 May 27	0.13 Sep 8	0.04 May 12,	2004
Maximum peak flow		1,380 Dec 22	1,380 Dec 22	2010
Maximum peak stage		10.71 Dec 22	10.71 Dec 22	2010
Annual runoff (ac-ft)	2,150	2,040	911	
10 percent exceeds	2.3	2.4	0.84	
50 percent exceeds	0.26	0.24	0.25	
90 percent exceeds	0.21	0.15	0.13	



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PERIOD OF RECORD.--Water years 2002 to current year.

SEDIMENT DATA: Water years 2002 to current year.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

[ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius; A, average]

Sample date-time	Discharge, instantane- ous, ft ³ /s (00061)	Tempera- ture, °C (00010)	Suspended sediment, sieve diameter,	Suspended sediment, sieve diameter,	Suspended sediment, sieve diameter,	Suspended sediment, sieve diameter,	Suspended sediment concen- tration, mg/L (80154)	Suspended sediment discharge, tons per day (80155)
			percent smaller than 0.0625 mm (70331)	percent smaller than 0.125 mm (70332)	percent smaller than 0.25 mm (70333)	percent smaller than 0.5 mm (70334)		
12-19-2010 1540	12	15.4	84	--	--	--	25	.81
12-19-2010 1545	12	15.4	A 86	--	--	--	A 19	A .62
12-19-2010 1550	12	15.4	88	--	--	--	13	.42
12-20-2010 1655	71	15.0	69	--	--	--	97	19
12-20-2010 1700	71	15.0	A 74	--	--	--	A 91	A 17
12-20-2010 1705	71	15.0	80	--	--	--	85	16
12-22-2010 1210	416	13.1	93	97	98	100	321	361
12-22-2010 1215	416	13.1	A 95	A 97	A 99	A 100	A 315	A 354
12-22-2010 1220	416	13.1	96	98	99	100	309	347
02-26-2011 1155	21	13.3	96	--	--	--	30	1.7
02-26-2011 1200	21	13.3	A 96	--	--	--	A 29	A 1.6
02-26-2011 1205	21	13.3	95	--	--	--	28	1.6
03-21-2011 1040	11	13.5	--	--	--	--	12	.36
03-21-2011 1045	11	13.5	--	--	--	--	A 13	A .39
03-21-2011 1050	11	13.5	--	--	--	--	14	.42