Water-Data Report 2013

06481500 SKUNK CREEK AT SIOUX FALLS, SD

Big Sioux Basin
Lower Big Sioux Subbasin

LOCATION.--Lat 43°32′01″, long 96°47′26″ referenced to North American Datum of 1927, in NW ¼ NW ¼ SW ¼ sec.24, T.101 N., R.50 W., Minnehaha County, SD, Hydrologic Unit 10170203, on downstream left bank 180 ft from bridge on Marion Road, 1.3 mi upstream from mouth, 1.8 mi downstream from small right-bank tributary, and 0.5 mi west of I-29 in Sioux Falls.

DRAINAGE AREA.--620 mi^2 of which 14 mi^2 probably is noncontributing.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1948 to current year. October 2001 to September 2003, daily gage height. May 1948 to September 1971 published as "near Sioux Falls".

REVISED RECORDS.--WDR SD-10-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,400.10 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Oct. 24, 1949, nonrecording gage, and Oct. 24, 1949, to Apr. 28, 1972, water-stage recorder, both at site 1.9 mi upstream at datum 15.19 ft higher. Apr. 28, 1972, to Sept. 30, 2002, near downstream end of bridge, at same site, at datum 5.00 ft higher (gage moved from right to left bank May 18, 1987).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Satellite data-collection platform at station. Water temperature and specific conductance measured with each discharge measurement.

06481500 SKUNK CREEK AT SIOUX FALLS, SD—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.6	5.8	e6.0	e3.3	e2.7	e2.8	e35	78	139	64	11	9.4
2	2.7	5.8	e6.2	e3.2	e3.0	e2.6	e35	63	120	56	15	6.6
3	3.5	5.5	e7.0	e3.2	e3.3	e2.8	e35	55	102	50	12	6.7
4	3.1	6.2	e7.4	e3.2	e3.5	e3.0	e33	50	107	46	10	5.7
5	7.9	6.9	e7.6	e3.1	e4.0	e3.0	e31	49	103	40	9.9	5.0
6	2.4	6.5	e7.0	e3.3	e4.0	e3.0	e31	49	94	38	9.8	5.0
7	2.5	6.4	e6.8	e3.5	e3.8	e3.5	e30	47	84	36	8.5	4.8
8	2.5	6.3	e7.0	e3.5	e3.8	e8.0	e31	63	162	34	7.9	4.4
9	2.6	6.5	e6.5	e3.6	e4.0	e40	e35	62	413	32	7.8	5.9
10	3.1	7.3	e5.5	e3.8	e4.0	e400	e34	68	494	29	12	4.5
11	3.3	e7.0	e5.0	e3.7	e3.7	e278	e35	61	370	26	55	4.2
12	3.3	e4.8	e4.7	e3.2	e3.7	e193	e37	53	245	25	42	4.0
13	3.4	e5.2	e4.8	e3.1	e3.7	e160	45	48	175	23	33	4.1
14	3.4	e5.4	e4.7	e3.1	e3.7	e133	42	46	141	22	24	4.1
15	3.8	e5.6	e9.0	e3.2	e3.6	e115	42	43	124	22	18	4.0
16	3.9	e5.5	e8.0	e3.5	e3.1	e110	44	43	120	29	16	4.5
17	4.0	e5.8	e7.6	e3.7	e3.5	e90	49	55	96	25	14	4.4
18	7.9	e5.8	e7.0	e3.9	e3.2	e60	62	49	82	21	13	4.6
19	10	e5.7	e6.4	e3.8	e2.8	e45	55	63	73	19	12	4.4
20	7.9	e5.6	e5.8	e3.5	e2.7	e40	55	56	65	20	11	4.6
21	7.5	e5.7	e5.0	e3.3	e2.9	e34	57	54	61	19	9.9	4.2
22	6.8	e5.7	e4.4	e2.8	e2.9	e29	66	55	123	18	9.6	4.0
23	6.1	e5.2	e4.3	e2.8	e2.7	e25	75	51	178	16	9.1	3.6
24	6.1	e5.3	e4.0	e2.8	e2.8	e22	74	50	188	15	12	3.3
25	9.0	e5.3	e3.8	e2.8	e3.0	e19	73	85	192	14	8.7	3.4
26	6.9	e5.5	e3.8	e2.9	e3.0	e18	85	1,030	163	13	8.1	3.8
27	6.1	e5.4	e3.7	e3.5	e3.0	e17	97	837	142	12	7.3	4.7
28	6.0	e5.5	e3.6	e3.5	e3.0	e16	89	556	115	11	6.7	7.2
29	5.9	e5.5	e3.5	e3.1	---	e18	78	333	91	11	6.2	4.7
30	6.0	e5.6	e3.2	e3.0	---	e26	69	224	76	11	5.7	4.1
31	5.9	---	e3.2	e2.7	---	e34	---	168	---	10	7.2	---
Total	156.1	174.3	172.5	101.6	93.1	1,950.7	1,559	4,544	4,638	807	432.4	143.9
Mean	5.04	5.81	5.56	3.28	3.33	62.9	52.0	147	155	26.0	13.9	4.80
Max	10	7.3	9.0	3.9	4.0	400	97	1,030	494	64	55	9.4
Min	2.4	4.8	3.2	2.7	2.7	2.6	30	43	61	10	5.7	3.3
Ac-ft	310	346	342	202	185	3,870	3,090	9,010	9,200	1,600	858	285

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2013, BY WATER YEAR (WY)*

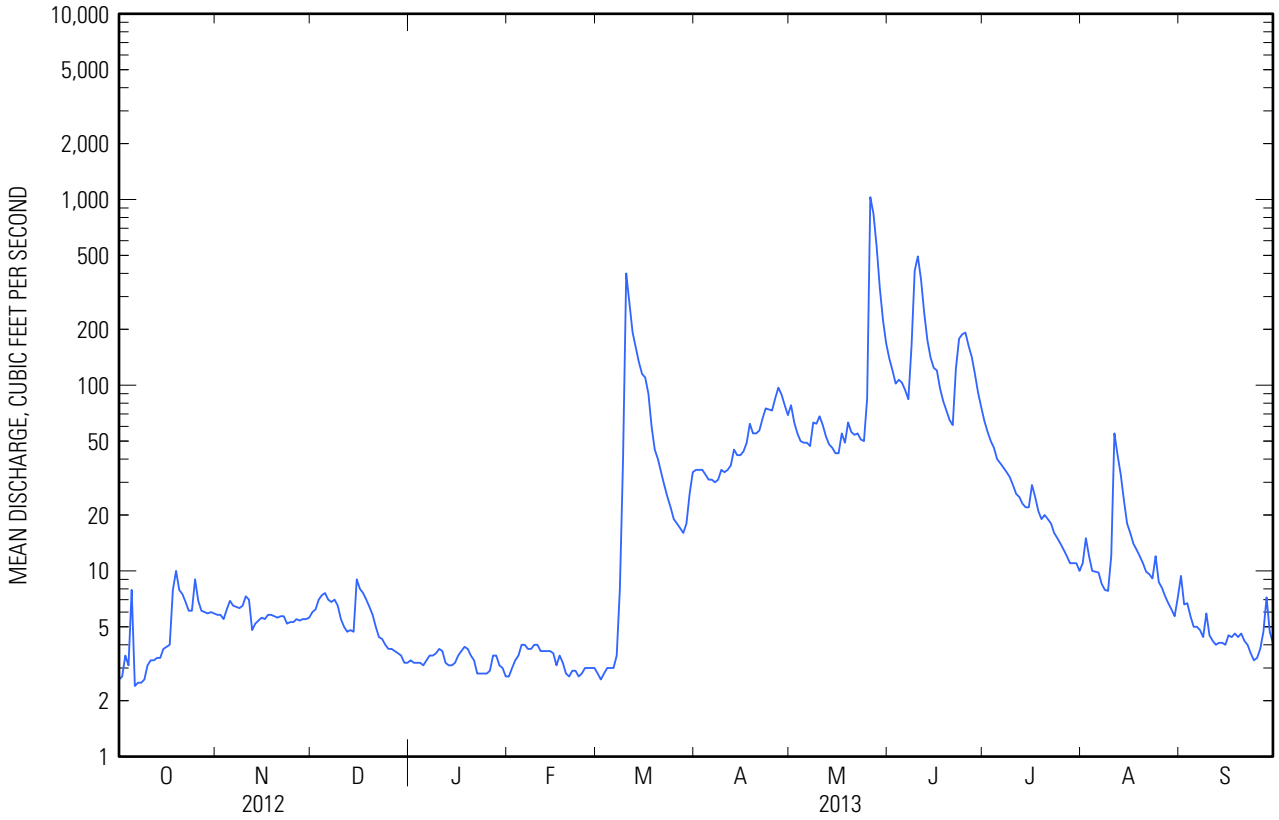
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	45.6	37.5	19.6	11.7	35.4	218	302	178	174	133	55.5	48.9
Max	545	358	177	111	321	975	1,530	967	1,903	2,915	655	798
(WY)	(2011)	(1999)	(1999)	(2006)	(1983)	(2010)	(1984)	(1995)	(1984)	(1993)	(1993)	(1986)
Min	0.14	0.29	0.10	0.05	0.04	1.20	1.35	0.82	0.50	0.16	0.11	0.07
(WY)	(1959)	(1965)	(1965)	(1977)	(1977)	(1968)	(1959)	(1981)	(1977)	(1977)	(1976)	(1958)

06481500 SKUNK CREEK AT SIOUX FALLS, SD—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1949 - 2013*	
Annual total	31,566.3		14,772.6			
Annual mean	86.2		40.5		[a]105	
Highest annual mean					625	1993
Lowest annual mean					1.55	1981
Highest daily mean	1,240	May 9	1,030	May 26	11,500	Jun 17, 1957
Lowest daily mean	2.4	Oct 6	2.4	Oct 6	[b]0.00	Jan 26, 1951
Annual seven-day minimum	2.7	Sep 21	2.8	Oct 6	0.00	Jan 26, 1951
Maximum peak flow			2,680	May 26	[c]29,400	Jun 17, 1957
Maximum peak stage			9.24	May 26	17.78	Jun 17, 1957
Annual runoff (ac-ft)	62,610		29,300		76,080	
10 percent exceeds	236		95		247	
50 percent exceeds	17		7.5		15	
90 percent exceeds	3.7		3.1		0.70	

* Water years 1949-2001 and 2004-2013. See PERIOD OF RECORD.
[a] Median of annual mean discharges, 64 ft³/s.
[b] No flow at times in some years.
[c] Site and datum then in use, from rating curve extended above 8,100 ft³/s on basis of slope-area measurement of peak flow.



06481500 SKUNK CREEK AT SIOUX FALLS, SD—Continued

WATER-QUALITY RECORDS

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

[ft³/s, cubic feet per second; °C, degrees Celsius; µS/cm, microsiemens per centimeter]

Date	Sample start time	Discharge, instantaneous, ft³/s (00061)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, air, °C (00020)	Temperature, water, °C (00010)
10-16-2012	**1250**	4.3	1,320	19.0	14.0
12-17-2012	**1420**	7.6	1,380	-1.0	0.0
02-04-2013	**1502**	3.5	1,750	-3.0	0.0
03-11-2013	**1226**	278	276	-2.0	0.5
03-14-2013	**1147**	133	405	6.0	2.5
03-28-2013	**0900**	16	1,010	2.0	0.0
05-02-2013	**0832**	61	1,320	4.0	6.3
06-19-2013	**1235**	72	1,420	29.0	25.1
08-01-2013	**1016**	10	1,260	27.0	22.1
09-03-2013	**1810**	6.2	1,210	28.0	24.0