Water-Data Report 2011

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.

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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	1,030	352	e75	e43	e60	e79	891	681	844	314	498	140
2	936	335	e80	e47	e58	e74	853	616	699	295	448	133
3	859	317	e90	e50	e64	e76	828	566	606	316	403	125
4	802	286	e86	e50	e66	e79	814	524	540	329	362	113
5	760	268	e76	e59	e63	e74	767	515	489	344	328	106
6	721	257	e65	e70	e56	e74	738	499	437	341	308	99
7	680	250	e63	e75	e49	e80	713	466	388	325	287	93
8	646	244	e72	e69	e44	e80	690	491	345	300	266	86
9	622	242	e100	e70	e41	e80	682	533	320	277	244	80
10	599	239	e97	e75	e39	e83	694	510	336	270	226	75
11	573	238	e76	e69	e40	e88	725	476	346	400	219	71
12	549	236	e59	e75	e43	e90	703	479	343	1,590	220	67
13	e525	233	e56	e80	e47	e90	697	500	403	1,520	215	64
14	e500	227	e63	e89	e52	e190	730	472	503	1,700	202	61
15	480	222	e70	e86	e57	e600	1,070	499	536	1,750	190	57
16	466	219	e60	e85	e70	e1,400	1,640	508	470	2,000	178	57
17	447	216	e55	e85	e105	e3,000	1,330	459	409	1,600	169	57
18	431	208	e50	e74	e300	2,440	1,180	412	366	1,330	162	57
19	416	205	e45	e65	e350	1,960	1,400	376	331	1,180	158	54
20	399	e190	e55	e60	e309	1,830	1,450	419	335	1,070	146	51
21	383	e170	e60	e60	e208	1,690	1,240	680	812	966	141	e50
22	367	e140	e55	e55	e108	1,550	1,170	1,110	1,030	878	136	49
23	352	e110	e55	e50	e82	e1,400	1,100	1,070	894	809	131	48
24	338	e100	e55	e55	e60	e1,250	1,010	866	740	739	200	47
25	335	e90	e45	e57	e53	e1,150	910	784	618	677	218	46
26	449	e85	e43	e60	e55	e1,100	868	883	568	635	201	45
27	527	e90	e46	e66	e58	1,020	868	829	536	1,260	177	44
28	473	e100	e50	e73	e73	1,040	796	839	480	1,130	172	43
29	439	e90	e55	e69	---	981	735	781	410	852	158	41
30	408	e80	e50	e64	---	925	727	712	353	662	154	38
31	377	---	e45	e63	---	893	---	882	---	554	144	---
Total	16,889	6,039	1,952	2,048	2,610	25,466	28,019	19,437	15,487	26,413	7,061	2,097
Mean	545	201	63.0	66.1	93.2	821	934	627	516	852	228	69.9
Max	1,030	352	100	89	350	3,000	1,640	1,110	1,030	2,000	498	140
Min	335	80	43	43	39	74	682	376	320	270	131	38
Ac-ft	33,500	11,980	3,870	4,060	5,180	50,510	55,580	38,550	30,720	52,390	14,010	4,160

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2011, BY WATER YEAR (WY)*

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	46.4	38.1	19.7	11.7	36.2	222	310	172	174	137	57.0	50.4
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)

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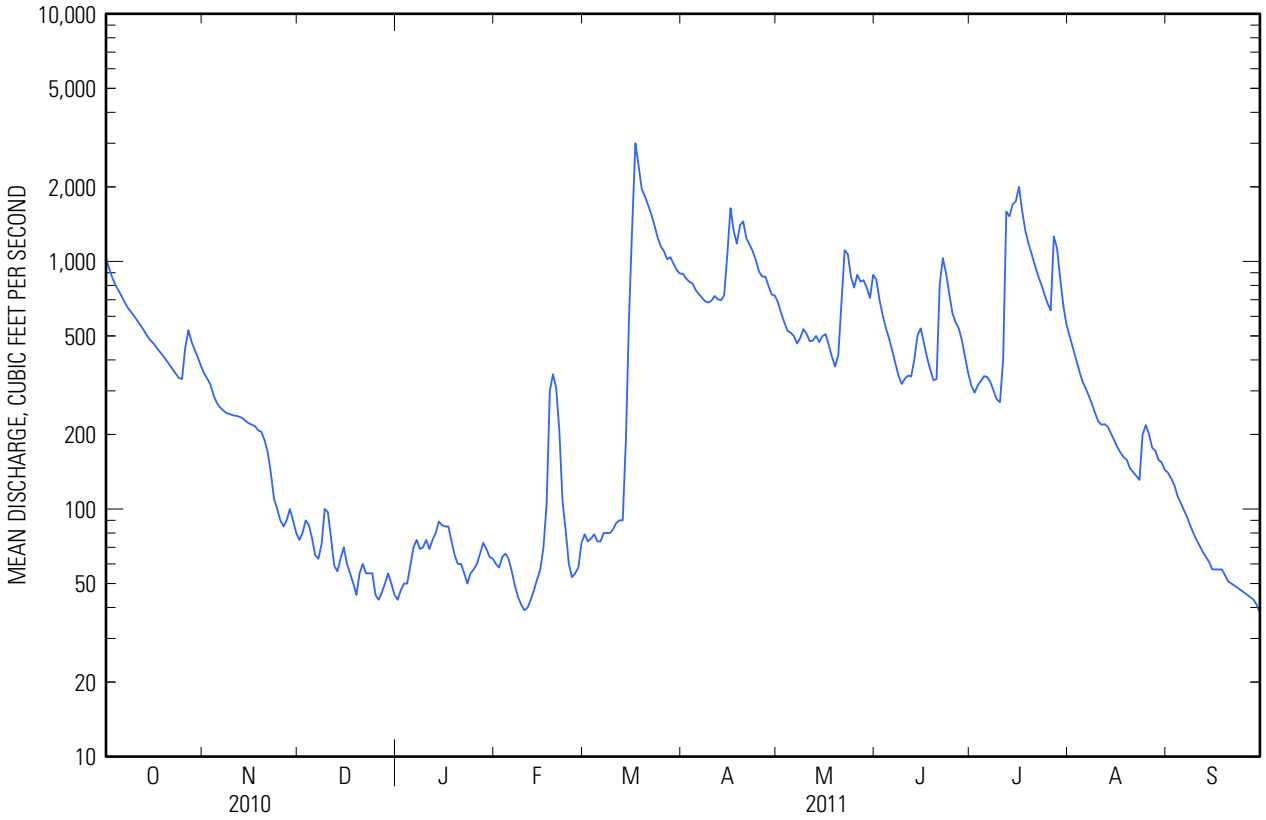
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1949 - 2011*	
Annual total	167,618.5		153,518			
Annual mean	459		421		[a]106	
Highest annual mean					625	1993
Lowest annual mean					1.55	1981
Highest daily mean	4,000	Mar 14	3,000	Mar 17	11,500	Jun 17, 1957
Lowest daily mean	8.0	Jan 9	38	Sep 30	[b]0.00	Jan 26, 1951
Annual seven-day minimum	11	Jan 3	43	Feb 7	0.00	Jan 26, 1951
Maximum peak flow			3,500	Mar 17	[c]29,400	Jun 17, 1957
Maximum peak stage			[d]11.22	Mar 17	17.78	Jun 17, 1957
Annual runoff (ac-ft)	332,500		304,500		77,000	
10 percent exceeds	1,120		1,020		250	
50 percent exceeds	308		277		14	
90 percent exceeds	30		55		0.70	

* Water years 1949-2001 and 2004-2011. 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.
[d] Backwater from ice.



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WATER-QUALITY RECORDS

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

[ft^3/s, cubic feet per second; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data]

Date	Sample start time	Discharge, instantaneous, ft^3/s (00061)	Specific conductance, water, unfiltered, µS/cm at 25 °C (00095)	Temperature, air, °C (00020)	Temperature, water, °C (00010)
11-01-2010	**1520**	355	1,530	15.0	8.0
12-09-2010	**1145**	100	1,580	3.0	0.0
02-03-2011	**1510**	64	1,550	-2.0	0.0
03-15-2011	**1755**	884	722	10.0	3.0
03-19-2011	**1720**	1,900	682	10.0	5.5
04-20-2011	**1000**	1,510	1,820	2.0	4.9
06-08-2011	**1145**	360	1,410	25.0	22.0
07-26-2011	**0855**	635	--	27.0	28.0