Water-Data Report 2013

05050000 BOIS DE SIOUX RIVER NEAR WHITE ROCK, SD

Upper Red Basin
Bois De Sioux Subbasin

LOCATION.--Lat 45°51′45″, long 96°34′25″ referenced to North American Datum of 1927, in SW ¼ SW ¼ sec.27, T.128 N., R.47 W., Roberts County, SD, Hydrologic Unit 09020101, on Sisseton Indian Reservation, on left bank at Big Slough Outlet, 300 ft downstream from White Rock Dam, 4 mi south of White Rock and 5 mi northwest of Wheaton, MN.

DRAINAGE AREA.--1,160 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 960.00 ft. above sea level, (adjustment of 1912, levels by U.S. Army Corps of Engineers). Prior to Jan. 14, 1943, non-recording gage at same site at datum 0.11 ft lower. Jan. 15, 1943 to Sept. 30, 1963, water-stage recorder at same site at datum 0.11 ft lower.

REMARKS.--Records good to fair except those for estimated daily discharges, which are poor. Flow regulated by Lake Traverse-Boise de Sioux Flood Control and Water Conservation project. Backwater from Rabbit River at times.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 05050000, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/05050000.2013.pdf

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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	2.2	5.1	3.2	e1.6	e1.3	e140	e113	e1,300	732	868	148	4.8
2	2.0	4.9	3.3	e1.6	e1.3	e245	e116	e1,290	732	853	129	2.8
3	2.2	5.0	4.4	e1.7	e1.3	e251	e116	e1,290	724	840	108	1.9
4	2.4	4.9	4.5	e1.8	e1.4	e242	e116	e1,290	717	827	108	1.5
5	2.5	5.3	4.3	e1.9	e1.5	e236	e116	e1,280	714	818	111	1.2
6	2.6	5.7	4.6	e2.0	e1.5	e228	e116	e1,270	644	805	111	1.3
7	2.7	4.4	3.9	e2.2	e1.5	e225	e115	e1,260	469	797	112	1.0
8	2.7	4.5	3.6	e2.2	e1.6	e225	e115	1,230	467	786	91	0.72
9	2.7	5.0	3.0	e2.2	e1.6	e223	e116	1,200	472	808	42	1.5
10	2.6	5.4	e0.70	e2.1	e1.6	e220	e118	1,180	479	820	2.6	1.9
11	2.5	5.6	e0.20	e1.9	e1.6	e220	e118	1,150	474	785	2.2	2.0
12	2.3	4.8	e0.30	e1.7	e1.6	e317	e121	1,120	471	763	2.5	1.7
13	2.6	5.1	e0.63	e1.6	e1.6	e317	e262	1,100	334	772	2.2	1.4
14	2.3	4.8	e1.1	e1.6	e1.6	e320	e262	1,070	167	752	2.1	1.9
15	2.8	4.9	e1.3	e1.5	e1.6	e322	e267	1,030	165	742	1.9	4.8
16	3.2	3.8	e1.4	e1.4	e1.5	e323	e538	844	163	725	1.6	5.4
17	3.9	4.7	e1.5	e1.4	e1.4	e325	e828	687	160	707	1.1	3.9
18	7.5	4.8	e1.5	e1.3	e1.4	e328	e856	680	156	693	0.32	3.1
19	11	5.1	e1.6	e1.3	e1.3	e330	e850	672	152	678	0.38	3.0
20	9.5	4.2	e1.6	e1.2	e1.3	e331	e932	724	e156	666	0.98	3.1
21	8.0	4.0	e1.5	e1.2	e1.3	e331	e969	766	e148	652	1.3	2.9
22	7.1	e3.3	e1.5	e1.2	e1.3	e331	e1,210	776	e179	440	1.1	2.4
23	6.2	e3.5	e1.4	e1.2	e1.2	e343	e1,290	759	e183	159	0.99	1.6
24	5.5	e3.5	e1.4	e1.2	e1.2	e336	e1,290	718	e181	153	0.95	1.4
25	6.2	e3.3	e1.3	e1.3	e1.2	e336	e1,310	690	e176	152	0.84	1.5
26	5.9	e2.9	e1.4	e1.4	e1.1	e334	e540	673	e174	154	0.90	1.5
27	5.4	2.9	e1.5	e1.4	e40	e249	e219	673	e289	151	0.94	1.7
28	5.0	3.0	e1.5	e1.4	e75	e106	e229	658	736	149	0.64	5.6
29	4.9	3.1	e1.6	e1.4	---	e108	e335	627	901	148	0.61	11
30	5.1	3.2	e1.6	e1.3	---	e111	e633	718	885	149	0.80	6.2
31	5.0	---	e1.6	e1.3	---	e113	---	764	---	150	3.5	---
Total	136.5	130.7	62.93	48.5	151.8	8,066	14,216	29,489	12,400	17,962	990.45	84.72
Mean	4.40	4.36	2.03	1.56	5.42	260	474	951	413	579	31.9	2.82
Max	11	5.7	4.6	2.2	75	343	1,310	1,300	901	868	148	11
Min	2.0	2.9	0.20	1.2	1.1	106	113	627	148	148	0.32	0.72
Ac-ft	271	259	125	96	301	16,000	28,200	58,490	24,600	35,630	1,960	168
Cfsm	0.00	0.00	0.00	0.00	0.00	0.22	0.41	0.82	0.36	0.50	0.03	0.00
In.	0.00	0.00	0.00	0.00	0.00	0.26	0.46	0.95	0.40	0.58	0.03	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	40.9	36.5	17.2	10.3	15.9	132	420	366	282	206	85.5	51.9
Max	588	482	240	213	271	823	3,814	1,445	1,173	1,066	1,182	1,062
(WY)	(2005)	(2005)	(2011)	(2011)	(2011)	(2007)	(1997)	(1997)	(2011)	(2005)	(1993)	(1993)
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.01	0.00	0.00	0.00
(WY)	(1942)	(1942)	(1942)	(1942)	(1942)	(1942)	(1942)	(1977)	(1977)	(1961)	(1970)	(1960)

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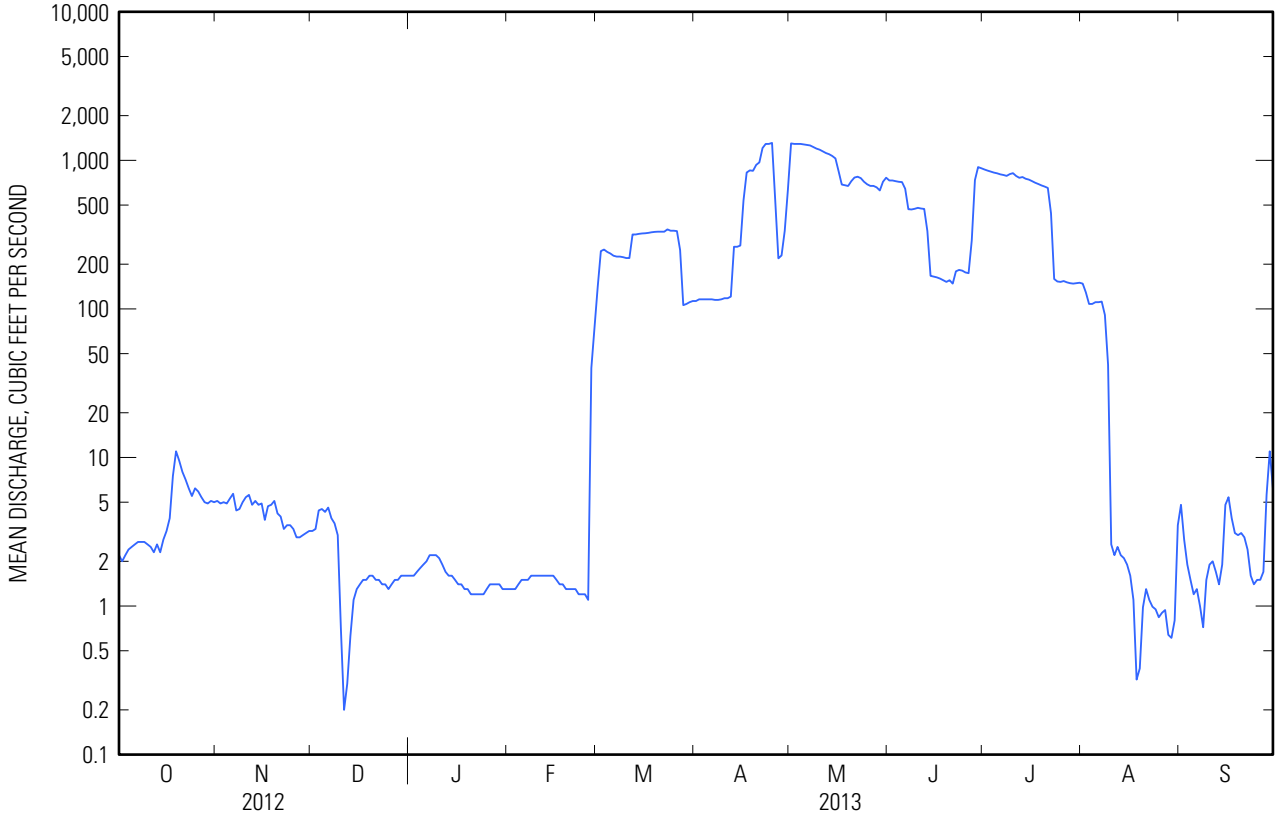
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1942 - 2013	
Annual total	28,088.56		83,738.60			
Annual mean	76.7		229		[a]139	
Highest annual mean					839	2011
Lowest annual mean					0.38	1977
Highest daily mean	885	Mar 13	1,310	Apr 25	7,710	Apr 16, 1997
Lowest daily mean	0.20	Dec 11	[b]0.20	Dec 11	[c]0.00	Oct 1, 1941
Annual seven-day minimum	0.80	Dec 10	0.80	Dec 10	0.00	Oct 1, 1941
Maximum peak flow			[d]1,310	Apr 25	[f]8,750	Apr 20, 1997
Maximum peak stage			[g]12.41	Apr 24	16.90	Apr 20, 1997
Instantaneous low flow			[h]0.10	Aug 18	[c]0.00	Oct 1, 1941
Annual runoff (ac-ft)	55,710		166,100		100,700	
Annual runoff (cfsm)	0.066		0.198		0.120	
Annual runoff (inches)	0.90		2.69		1.63	
10 percent exceeds	202		790		500	
50 percent exceeds	9.3		5.1		4.9	
90 percent exceeds	1.6		1.3		0.00	

[a] Median of annual mean discharges is 91 ft³/s.
[b] Due in part to regulation.
[c] Many days, several years, result of regulation.
[d] Estimated daily-mean discharge, variable backwater.
[f] Estimated from observed readings made under non-ideal conditions. Some evidence that peak occurred Apr. 16 at discharge of 7,930 ft³/s.
[g] Result of variable backwater.
[h] Result of regulation. Discharge known to be <0.10 ft³/s.