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, nonrecording 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 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.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	5.5	18	9.0	9.2	e3.7	e2.1	e150	555	7.6	150	0.94	0.46
2	5.6	15	10	8.5	e3.7	e2.0	14	547	7.7	9.0	0.79	6.9
3	5.4	15	9.9	8.1	e3.6	e3.4	17	547	8.2	8.3	0.84	e10
4	5.1	14	9.9	8.1	e3.6	e6.4	18	544	8.9	8.0	0.86	7.4
5	5.0	12	10	7.8	e3.4	e11	19	533	11	8.0	0.80	5.9
6	5.6	12	10	8.0	e3.3	e20	19	529	329	8.5	0.74	4.6
7	5.8	14	10	8.1	e3.2	e35	165	528	663	8.3	0.60	5.1
8	6.6	13	9.7	8.4	e3.1	e60	281	526	623	8.2	0.52	6.7
9	7.4	13	9.4	8.2	e3.0	e110	274	525	607	7.8	0.50	7.3
10	7.0	13	9.2	8.2	e2.7	e185	123	524	648	7.3	0.46	7.0
11	6.3	13	9.2	8.1	e2.6	e200	15	538	587	7.1	1.6	7.1
12	6.2	14	9.0	8.2	e2.6	e192	16	523	729	6.3	15	7.4
13	6.1	19	9.2	8.2	e2.5	e180	20	524	869	5.1	13	7.9
14	6.2	11	8.8	8.0	e2.4	e400	18	517	980	4.5	11	13
15	7.0	12	8.4	7.5	e2.3	e610	39	508	995	3.7	12	14
16	11	12	8.6	7.5	e2.4	e620	53	454	1,010	3.4	14	14
17	13	11	8.5	7.2	e2.3	e600	207	398	1,010	3.6	14	12
18	12	14	8.4	7.3	e2.2	e590	382	390	994	3.3	13	11
19	14	11	8.3	7.2	e2.1	e580	381	262	982	3.0	11	10
20	14	9.6	8.2	e7.1	e2.0	e570	379	145	968	3.0	9.4	7.7
21	12	8.9	8.3	e6.8	e2.0	e560	389	67	953	2.7	7.0	6.8
22	11	10	8.9	e6.3	e2.1	e550	394	9.9	937	2.3	5.9	6.7
23	239	11	9.0	e5.9	e2.1	e540	461	8.7	923	1.9	4.1	6.7
24	393	11	8.4	e5.3	e2.2	e530	513	8.4	896	1.7	3.3	6.7
25	392	11	8.4	e5.0	e2.2	e520	512	7.9	867	1.6	2.4	7.1
26	279	10	8.4	e4.8	e2.1	e520	516	6.9	794	1.4	1.6	6.9
27	6.5	8.5	8.6	e5.0	e2.1	e510	535	6.5	564	1.4	1.7	6.0
28	6.1	10	8.7	e5.3	e2.0	e450	535	6.6	378	1.5	1.4	5.1
29	12	9.3	8.8	e5.1	e2.0	e440	543	6.9	370	1.4	1.1	5.1
30	16	8.5	8.9	e4.4	---	e430	559	7.8	359	1.1	0.83	4.7
31	15	---	9.2	e3.9	---	e420	---	7.7	---	1.0	0.57	---
Total	1,536.4	363.8	279.3	216.7	75.5	10,446.9	7,547	9,761.3	19,078.4	284.4	150.95	227.26
Mean	49.6	12.1	9.01	6.99	2.60	337	252	315	636	9.17	4.87	7.58
Max	393	19	10	9.2	3.7	620	559	555	1,010	150	15	14
Min	5.0	8.5	8.2	3.9	2.0	2.0	14	6.5	7.6	1.0	0.46	0.46
Ac-ft	3,050	722	554	430	150	20,720	14,970	19,360	37,840	564	299	451
Cfsm	0.04	0.01	0.01	0.01	0.00	0.29	0.22	0.27	0.55	0.01	0.00	0.01
In.	0.05	0.01	0.01	0.01	0.00	0.34	0.24	0.31	0.61	0.01	0.00	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	38.7	23.7	12.9	5.62	8.75	103	340	327	274	195	73.7	37.5
Max	588	482	207	152	148	823	3,814	1,445	1,103	1,066	1,182	1,062
(WY)	(2005)	(2005)	(1999)	(2006)	(1997)	(2007)	(1997)	(1997)	(1986)	(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

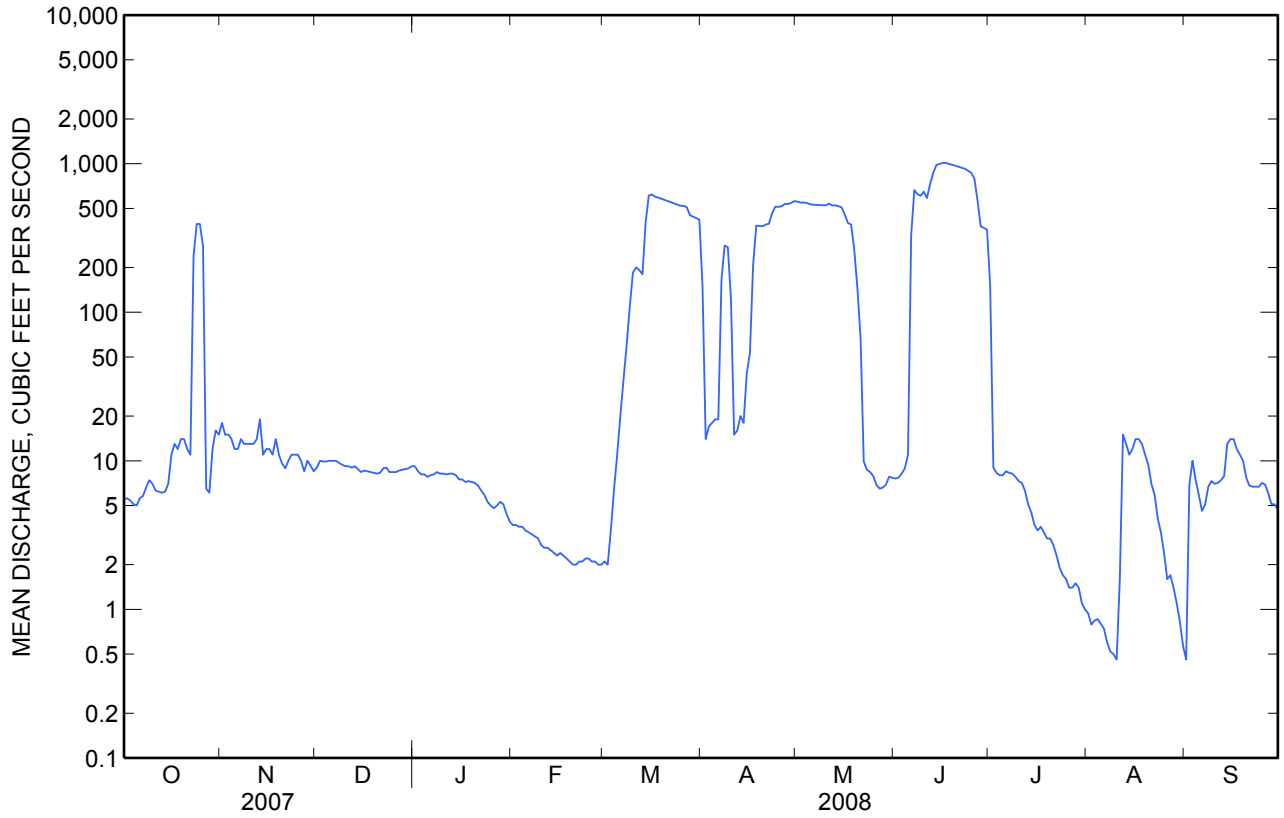
	Calendar Year 2007		Water Year 2008		Water Years 1942 - 2008	
Annual total	135,257.05		49,967.91			
Annual mean	371		137		[a]120	
Highest annual mean					536	1997
Lowest annual mean					0.38	1977
Highest daily mean	1,430	May 6	1,010	Jun 16	7,710	Apr 16, 1997
Lowest daily mean	0.57	Feb 5	0.46	Aug 10	[b]0.00	Oct 1, 1941
Annual seven-day minimum	0.60	Feb 4	0.64	Aug 4	0.00	Oct 1, 1941
Maximum peak flow			[c]1,010	Jun 16	[d]8,750	Apr 20, 1997
Maximum peak stage			[f]10.19	Mar 20	16.90	Apr 20, 1997
Instantaneous low flow			[g]0.30	Sep 1	[b]0.00	Oct 1, 1941
Annual runoff (ac-ft)	268,300		99,110		87,200	
Annual runoff (cfsm)	0.319		0.118		0.104	
Annual runoff (inches)	4.34		1.60		1.41	
10 percent exceeds	1,200		539		415	
50 percent exceeds	9.9		8.9		4.2	
90 percent exceeds	1.2		2.1		0.00	

[a] Median of annual mean discharges is 70 ft³/s.

[b] Many days, several years, result of regulation.

[c] Affected by regulation; gage-height, 8.86 ft.

[d] Estimated from observed readings made under non-ideal conditions. Some evidence that peak occurred Apr. 16 at discharge of 7,930 ft³/s.

[f] Backwater from ice.

[g] Result of regulation.