

Water-Data Report 2009

05051300 BOIS DE SIOUX RIVER NEAR DORAN, MN

Upper Red Basin
Bois De Sioux Subbasin

LOCATION.--Lat 46°09'08", long 96°34'44" referenced to North American Datum of 1927, in NE ¼ NE ¼ sec.21, T.131 N., R.47 W., Wilkin County, MN, Hydrologic Unit 09020101, on right bank, 10 ft downstream from bridge on County Highway 6, 3 miles downstream from Rabbit River, 4.3 mi southwest of Doran.

DRAINAGE AREA.--1,880 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 12, 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 943.90 ft above sea level (NGVD of 1929, elevation data obtained from Wilkin County Highway Engineers).

REMARKS.--Records good to fair except those for estimated daily discharges, which are poor. Flow regulated by Lake Traverse-Bois de Sioux Flood Control and Water Conservation project near White Rock, S.D.

05051300 BOIS DE SIOUX RIVER NEAR DORAN, MN—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	71	138	e45	e17	e86	e52	4,280	1,640	343	197	9.7	1.4
2	37	120	e20	e18	e87	e81	4,240	1,550	201	119	10	1.3
3	23	108	e12	e18	e81	e119	4,300	1,480	120	93	10	1.6
4	18	104	e12	e19	e77	e166	4,260	1,430	66	81	9.7	1.4
5	17	101	e12	e20	e74	e252	4,140	1,380	39	73	9.2	1.1
6	18	108	e12	e19	e71	e340	4,090	1,330	29	66	7.7	1.0
7	54	321	e10	e19	e68	e490	4,150	1,260	30	60	6.6	0.95
8	106	561	e10	e18	e70	e545	4,190	1,210	29	55	7.7	1.1
9	84	468	e10	e18	e66	e719	4,290	1,180	30	50	7.4	35
10	221	318	e9.2	e18	e64	e810	4,550	1,170	31	45	6.6	43
11	756	229	e9.3	e18	e64	e810	4,850	1,160	29	41	5.9	37
12	1,020	189	e9.0	e19	e65	e797	5,100	1,160	26	37	5.8	26
13	1,810	442	e8.8	e18	e63	e832	5,140	1,170	23	33	5.7	13
14	1,430	633	e9.2	e20	e53	e832	4,950	1,160	23	70	5.7	6.4
15	874	606	e9.0	e21	e52	e832	4,810	1,170	18	206	5.5	3.0
16	511	579	e8.0	e23	e48	e827	4,660	1,150	21	208	211	2.3
17	272	560	e8.0	e23	e47	e1,070	4,490	1,130	131	145	342	2.0
18	161	e536	e8.0	e24	e45	e1,780	4,330	1,110	362	84	231	1.8
19	111	e466	e7.8	e24	e45	e2,550	4,280	1,100	758	49	159	1.9
20	87	e462	e7.9	e25	e42	e3,130	4,150	1,090	e319	39	130	2.8
21	69	e458	e8.5	e27	e44	e3,560	4,060	1,050	e269	52	82	3.1
22	73	e454	e7.9	e28	e43	e4,000	3,970	1,000	e357	36	52	3.5
23	311	e405	e7.7	e29	e41	5,210	3,820	790	e500	24	35	3.4
24	443	e279	e7.9	e32	e34	7,010	3,470	730	609	19	23	4.0
25	1,150	e130	e8.1	e62	e34	7,690	3,090	722	573	17	18	3.6
26	1,040	e64	e8.9	e130	e35	7,880	2,610	717	492	14	11	3.6
27	703	e63	e9.7	e136	e38	7,630	2,210	607	415	12	4.3	3.4
28	409	e59	e10	e121	e41	6,730	1,920	555	498	12	2.1	3.1
29	250	e57	e16	e109	---	5,340	1,730	427	463	11	1.6	2.4
30	184	e56	e18	e98	---	4,910	1,690	386	323	9.7	1.8	3.2
31	155	---	e19	e91	---	4,600	---	368	---	9.4	1.8	---
Total	12,468	9,074	358.9	1,262	1,578	81,594	117,820	32,382	7,127	1,967.1	1,418.8	217.35
Mean	402	302	11.6	40.7	56.4	2,632	3,927	1,045	238	63.5	45.8	7.25
Max	1,810	633	45	136	87	7,880	5,140	1,640	758	208	342	43
Min	17	56	7.7	17	34	52	1,690	368	18	9.4	1.6	0.95
Ac-ft	24,730	18,000	712	2,500	3,130	161,800	233,700	64,230	14,140	3,900	2,810	431
Cfs/m	0.21	0.16	0.01	0.02	0.03	1.40	2.09	0.56	0.13	0.03	0.02	0.00
In.	0.25	0.18	0.01	0.02	0.03	1.61	2.33	0.64	0.14	0.04	0.03	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	144	87.2	36.0	16.6	29.4	618	1,326	708	624	472	173	150
Max	1,005	652	222	181	155	2,632	5,936	1,893	2,246	1,554	1,486	1,244
(WY)	(2005)	(2005)	(1999)	(2006)	(1998)	(2009)	(1997)	(1997)	(2005)	(2005)	(1993)	(1993)
Min	0.00	0.59	0.15	0.00	0.00	25.5	12.6	11.8	12.6	4.37	0.00	0.00
(WY)	(2004)	(2004)	(2004)	(2004)	(1990)	(1990)	(1990)	(1990)	(1990)	(1990)	(1990)	(1990)

05051300 BOIS DE SIOUX RIVER NEAR DORAN, MN—Continued

SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1990 - 2009	
Annual total	94,867.18		267,267.15			
Annual mean	259		732		366	
Highest annual mean					786	2001
Lowest annual mean					8.77	1990
Highest daily mean	1,980	Jun 7	^a 7,880	Mar 26	11,500	Apr 16, 1997
Lowest daily mean	0.54	Aug 8	^b 0.95	Sep 7	^c 0.00	Jan 7, 1990
Annual seven-day minimum	0.62	Aug 4	1.2	Sep 2	0.00	Jan 7, 1990
Maximum peak flow			^a 8,340	Mar 26	12,300	Apr 16, 1997
Maximum peak stage			24.05	Mar 26	24.42	Apr 16, 1997
Instantaneous low flow			^b 0.85	Sep 7	^c 0.00	Jan 7, 1990
Annual runoff (ac-ft)	188,200		530,100		265,100	
Annual runoff (cfsm)	0.138		0.389		0.195	
Annual runoff (inches)	1.88		5.29		2.64	
10 percent exceeds	727		3,110		1,220	
50 percent exceeds	34		71		21	
90 percent exceeds	2.1		6.6		0.35	

^a Affected by regulation.

^b Due in part to regulation.

^c Many days, several years. Due in part to regulation.

