

RED RIVER OF THE NORTH BASIN

05049995 MUD LAKE ABOVE WHITE ROCK DAM NEAR WHITE ROCK, SD

LOCATION.--Lat 45°51'41", long 96°34'20", in NW¹/₄NW¹/₄ sec. 34, T.128 N., R.47 W., Roberts County, Hydrologic Unit 09020101, on Sisseton Indian Reservation, on left bank, 10 ft west of White Rock Dam, 4 mi south of White Rock and 5 mi northwest of Wheaton, MN.

DRAINAGE AREA.--

PERIOD OF RECORD.--October 2000 to current year. Gage height record prior to October 2000 can be obtained from Corp of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 960.00 ft, adjustment of 1912 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair. Lake regulated by Lake Traverse-Boise de Sioux Flood Control and Water Conservation project.

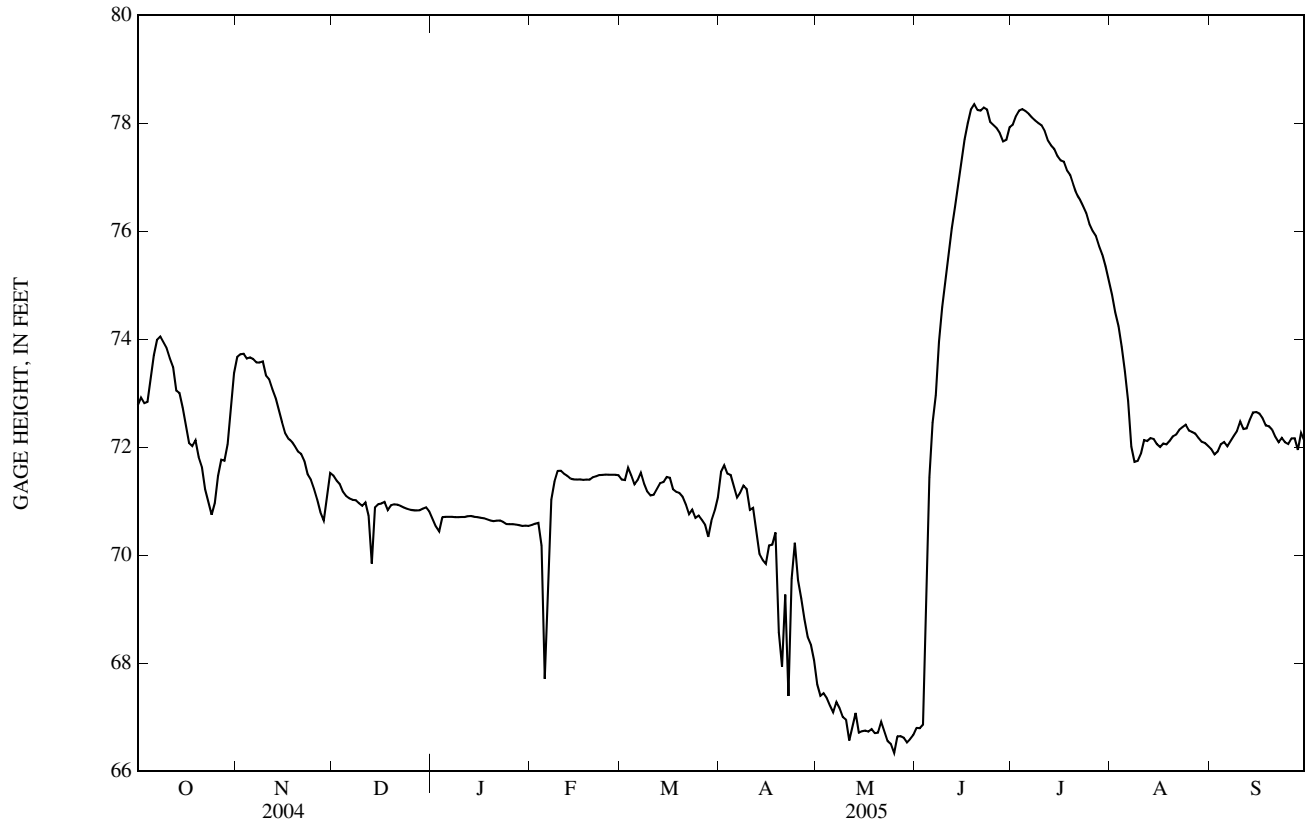
EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 80.90 ft, Apr. 29, 2001; maximum daily, 80.76 ft, Apr. 19, 2001; minimum gage height recorded, 65.14 ft, many days, several years (due in part to regulation), stage was observed lower than the detection limits of gage but precise stage readings were not determined; minimum daily recorded, 65.22 ft, June 14, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 78.39 ft, June 19; maximum daily, 78.35 ft, June 19; minimum gage height, 65.95 ft, May 25; minimum daily, 66.34 ft, May 25.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72.78	73.67	71.47	70.67	70.56	71.40	71.54	67.61	66.80	77.97	74.83	71.96
2	72.92	73.72	71.38	70.54	70.58	71.39	71.67	67.40	66.80	78.13	74.50	71.87
3	72.82	73.73	71.32	70.44	70.60	71.62	71.51	67.44	66.86	78.23	74.24	71.92
4	72.84	73.64	71.18	70.70	70.18	71.48	71.49	67.36	69.24	78.26	73.86	72.06
5	73.27	73.66	71.10	70.71	67.71	71.31	71.27	67.22	71.45	78.22	73.40	72.10
6	73.71	73.63	71.05	70.71	69.56	71.39	71.07	67.09	72.45	78.17	72.86	72.02
7	73.99	73.57	71.03	70.71	71.03	71.53	71.16	67.28	72.96	78.11	72.01	72.12
8	74.05	73.57	71.02	70.70	71.36	71.33	71.29	67.17	73.95	78.05	71.73	72.21
9	73.94	73.59	70.96	70.71	71.56	71.18	71.23	67.01	74.59	78.00	71.74	72.30
10	73.83	73.33	70.91	70.71	71.56	71.11	70.84	66.96	75.12	77.96	71.88	72.48
11	73.65	73.26	70.98	70.71	71.51	71.12	70.88	66.57	75.57	77.85	72.13	72.34
12	73.49	73.07	70.73	70.72	71.47	71.23	70.45	66.82	76.05	77.68	72.11	72.35
13	73.05	72.92	69.85	70.73	71.42	71.33	70.02	67.08	76.44	77.58	72.17	72.51
14	73.00	72.69	70.89	70.71	71.40	71.36	69.91	66.72	76.90	77.52	72.15	72.64
15	72.73	72.47	70.95	70.70	71.40	71.45	69.84	66.74	77.31	77.39	72.05	72.65
16	72.41	72.26	70.96	70.69	71.41	71.44	70.18	66.75	77.70	77.31	72.00	72.62
17	72.08	72.16	70.99	70.68	71.40	71.22	70.19	66.73	78.00	77.28	72.07	72.53
18	72.02	72.11	70.84	70.66	71.40	71.17	70.42	66.78	78.26	77.12	72.05	72.40
19	72.13	72.02	70.93	70.64	71.40	71.15	68.57	66.71	78.35	77.03	72.12	72.39
20	71.82	71.92	70.94	70.63	71.44	71.08	67.94	66.71	78.24	76.85	72.20	72.32
21	71.63	71.88	70.94	70.64	71.46	70.94	69.27	66.92	78.23	76.68	72.23	72.19
22	71.22	71.74	70.91	70.64	71.48	70.76	67.39	66.74	78.29	76.58	72.32	72.09
23	71.00	71.50	70.88	70.62	71.49	70.84	69.56	66.56	78.25	76.46	72.37	72.17
24	70.75	71.40	70.86	70.58	71.49	70.69	70.23	66.50	78.02	76.33	72.41	72.09
25	70.97	71.23	70.84	70.57	71.49	70.73	69.54	66.34	77.97	76.13	72.31	72.06
26	71.47	71.03	70.84	70.58	71.49	70.66	69.20	66.65	77.91	76.00	72.28	72.16
27	71.77	70.80	70.83	70.57	71.49	70.56	68.81	66.65	77.82	75.91	72.25	72.17
28	71.75	70.64	70.83	70.56	71.48	70.34	68.49	66.62	77.66	75.72	72.17	71.95
29	72.06	71.06	70.86	70.54	---	70.64	68.35	66.54	77.69	75.57	72.10	72.27
30	72.75	71.52	70.89	70.55	---	70.82	68.06	66.60	77.92	75.35	72.08	72.13
31	73.37	---	70.81	70.54	---	71.07	---	66.67	---	75.09	72.02	---
MEAN	72.56	72.46	70.93	70.64	71.10	71.11	70.01	66.87	75.43	77.11	72.47	72.24
MAX	74.05	73.73	71.47	70.73	71.56	71.62	71.67	67.61	78.35	78.26	74.83	72.65
MIN	70.75	70.64	69.85	70.44	67.71	70.34	67.39	66.34	66.80	75.09	71.73	71.87

05049995 MUD LAKE ABOVE WHITE ROCK DAM NEAR WHITE ROCK, SD--Continued



RED RIVER OF THE NORTH BASIN

05050000 BOIS DE SIOUX RIVER NEAR WHITE ROCK, SD

LOCATION.--Lat 45°51'45", long 96°34'25", in SW¹/₄SW¹/₄ sec. 27, T.128 N., R.47 W., Roberts County, 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 mi² (approximately).

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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	654	617	164	e62	e0.58	e140	216	309	191	730	1,090	88
2	667	609	193	e62	e0.64	e160	161	292	196	611	1,110	59
3	658	603	211	e7.0	e0.68	e160	159	293	225	333	1,130	11
4	652	604	229	e1.0	e20	e230	157	279	356	74	1,130	12
5	665	609	224	e1.0	e20	e260	159	262	462	710	1,130	18
6	681	607	222	e0.90	e18	e270	159	243	500	1,280	1,090	30
7	727	604	208	e0.90	e10	e300	155	261	673	1,270	998	73
8	789	601	198	e0.90	e10	e400	151	253	e350	1,270	799	97
9	806	551	200	e0.90	e12	e450	148	233	e180	1,260	693	97
10	798	512	185	e0.90	e24	e700	147	229	e190	1,250	535	95
11	795	500	177	e0.94	e40	e800	168	161	e170	1,120	422	93
12	786	494	e160	e0.94	e74	e800	267	197	e350	1,160	371	120
13	779	486	e130	e0.94	e110	e780	293	240	e320	1,160	286	163
14	748	478	e100	e0.37	e100	e780	278	209	e400	1,150	282	171
15	685	469	e110	e0.50	e80	e780	204	210	e315	1,150	277	160
16	647	460	e110	e0.52	e70	e980	148	208	e300	1,160	231	153
17	626	457	e110	e0.50	e65	1,040	145	194	e280	1,150	141	149
18	521	455	e110	e0.54	e60	1,020	145	201	e260	1,150	116	147
19	446	453	e90	e0.60	e62	1,010	184	188	751	1,150	175	133
20	439	455	e90	e0.56	e62	977	215	181	1,130	1,150	228	122
21	429	448	e95	e0.56	e60	937	246	213	894	1,160	218	121
22	420	442	e80	e0.54	e80	901	188	190	807	1,180	228	120
23	446	441	e75	e0.50	e86	808	252	149	1,160	1,200	241	55
24	450	429	e70	e0.54	e90	694	261	139	1,230	1,190	263	12
25	289	423	e70	e0.54	e90	660	254	117	1,230	1,180	281	13
26	205	419	e70	e0.56	e90	591	291	186	1,230	1,190	236	15
27	238	415	e70	e0.54	e90	538	342	177	1,150	1,160	156	15
28	390	405	e70	e0.54	e90	494	350	165	1,250	1,140	152	15
29	554	265	e66	e0.54	---	435	345	148	1,330	1,130	116	13
30	613	153	e62	e0.54	---	396	333	155	1,130	1,130	93	12
31	624	---	e62	e0.54	---	351	---	168	---	1,110	90	---
TOTAL	18,227	14,464	4,011	149.85	1,514.90	18,842	6,521	6,450	19,010	33,058	14,308	2,382
MEAN	588	482	129	4.83	54.1	608	217	208	634	1,066	462	79.4
MAX	806	617	229	62	110	1,040	350	309	1,330	1,280	1,130	171
MIN	205	153	62	0.37	0.58	140	145	117	170	74	90	11
AC-FT	36,150	28,690	7,960	297	3,000	37,370	12,930	12,790	37,710	65,570	28,380	4,720

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2005, BY WATER YEAR (WY)

MEAN	36.5	23.1	11.9	3.35	8.04	80.8	321	307	257	194	76.9	38.1
MAX	588	482	207	42.4	148	628	3,814	1,445	1,103	1,066	1,182	1,062
(WY)	(2005)	(2005)	(1999)	(1997)	(1997)	(1996)	(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)

05050000 BOIS DE SIOUX RIVER NEAR WHITE ROCK, SD—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1942 - 2005	
ANNUAL TOTAL	61,209.89		138,937.75			
ANNUAL MEAN	167		381		^a 113	
HIGHEST ANNUAL MEAN					536	1997
LOWEST ANNUAL MEAN					0.38	1977
HIGHEST DAILY MEAN	806	Oct 9	1,330	Jun 29	7,710	Apr 16, 1997
LOWEST DAILY MEAN	0.00	Jan 1	0.37	Jan 14	^b 0.00	Oct 1, 1941
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.51	Jan 14	0.00	Oct 1, 1941
MAXIMUM PEAK FLOW			^c 1,660	Jun 30	^d 8,750	Apr 20, 1997
MAXIMUM PEAK STAGE			10.67	Jun 30	16.90	Apr 20, 1997
ANNUAL RUNOFF (AC-FT)	121,400		275,600		82,210	
10 PERCENT EXCEEDS	517		1,120		375	
50 PERCENT EXCEEDS	56		230		3.7	
90 PERCENT EXCEEDS	0.00		12		0.00	

- a Median of annual mean discharges, 66 ft³/s.
- b Many days, several years; result of regulation.
- c Due in part to regulation.
- d Estimated from observed readings made under non-ideal conditions. Some evidence that peak occurred Apr. 16 at 7,930 ft³/s.
- e Estimated.

