

## 05051522 RED RIVER OF THE NORTH AT HICKSON, ND

LOCATION.--Lat 46°39'35", long 96°47'44", in SW<sup>1</sup>/<sub>4</sub> sec.19, T.137 N., R.48 W., Clay County, MN, Hydrologic Unit 09020104, on right bank 60 ft downstream from bridge on township road and 1 mi southeast of Hickson.

DRAINAGE AREA.--4,300 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 877.06 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Orwell Reservoir, flood storage capacity, 13,300 acre-ft at elevation 1,070 ft above mean sea level, adjustment of 1912; Mud Lake, flood storage capacity, 78,600 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; Lake Traverse, flood storage capacity, 75,100 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; and numerous other controlled lakes and ponds and several powerplants.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	122	e160	e120	e96	e255	758	484	2,510	678	467	267
2	100	120	e140	e135	e96	e270	775	484	2,720	644	484	235
3	124	140	e140	e150	e96	e275	690	436	2,570	610	452	212
4	123	139	e140	e150	e96	e275	591	405	2,530	580	437	241
5	114	136	e130	e150	e96	e275	496	396	2,350	603	448	428
6	110	121	e115	e150	e100	e280	453	397	1,960	633	497	643
7	108	92	e110	e145	e100	e290	436	407	1,550	678	537	753
8	106	103	e110	e145	e100	e305	456	445	1,360	881	567	1,250
9	102	107	e110	e145	e120	e330	494	468	1,330	1,130	541	1,300
10	100	140	e110	e140	e135	e350	509	464	1,330	1,220	540	1,120
11	115	181	e105	e130	e140	e355	460	471	1,320	1,240	538	961
12	123	214	e105	e130	e140	e405	436	552	1,290	1,290	530	866
13	126	204	e100	e130	e140	e425	434	521	1,290	1,440	518	810
14	123	158	e98	e130	e140	e430	432	495	1,350	1,630	514	781
15	116	176	e97	e130	e150	e435	430	487	1,280	1,570	532	773
16	122	207	e97	e140	e175	e455	426	496	1,200	1,380	537	729
17	123	e180	e96	e145	e180	e475	431	549	1,140	1,210	534	673
18	107	e150	e95	e145	e180	e500	484	584	1,060	1,100	528	779
19	102	e130	e95	e145	e180	e510	512	581	1,020	1,070	505	930
20	119	e120	e95	e140	e190	e550	510	563	979	1,050	482	929
21	132	e110	e100	e140	e200	e560	519	569	939	1,010	464	873
22	125	e100	e105	e140	e200	e610	530	581	934	958	459	1,210
23	127	e91	e110	e130	e200	e700	533	574	915	921	441	2,060
24	120	e89	e110	e115	e205	e760	535	567	853	885	425	2,510
25	107	e94	e110	e100	e205	e800	539	583	789	835	443	2,840
26	110	e97	e110	e98	e210	e810	527	613	741	788	542	3,060
27	107	e105	e110	e98	e215	e810	513	611	721	732	451	3,130
28	109	e125	e115	e98	e225	e785	503	617	704	668	250	3,000
29	118	e220	e115	e98	e240	e760	497	677	684	533	223	2,670
30	116	e185	e120	e96	---	e740	478	1,080	679	472	266	2,250
31	124	---	e120	e96	---	703	---	1,800	---	465	275	---
TOTAL	3,555	4,156	3,473	4,004	4,550	15,483	15,387	17,957	40,098	28,904	14,427	38,283
MEAN	115	139	112	129	157	499	513	579	1,337	932	465	1,276
MAX	132	220	160	150	240	810	775	1,800	2,720	1,630	567	3,130
MIN	97	89	95	96	96	255	426	396	679	465	223	212
AC-FT	7,050	8,240	6,890	7,940	9,020	30,710	30,520	35,620	79,530	57,330	28,620	75,930

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

	416	364	348	328	388	980	2,110	1,337	1,159	1,009	568	481
MEAN	416	364	348	328	388	980	2,110	1,337	1,159	1,009	568	481
MAX	1,558	900	932	747	1,058	2,687	9,864	3,925	3,264	2,674	2,674	2,135
(WY)	(1994)	(1987)	(1999)	(1986)	(1998)	(1995)	(1997)	(1997)	(2001)	(1993)	(1993)	(1993)
MIN	2.02	0.00	0.00	4.95	14.0	75.9	165	22.0	86.4	73.4	35.6	12.6
(WY)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1976)

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1975 - 2004

ANNUAL TOTAL	211,332	190,277	
ANNUAL MEAN	579	520	791
HIGHEST ANNUAL MEAN			1,772
LOWEST ANNUAL MEAN			53.1
HIGHEST DAILY MEAN	4,350	Jun 29	3,130
LOWEST DAILY MEAN	85	Sep 26	89
ANNUAL SEVEN-DAY MINIMUM	92	Sep 24	96
MAXIMUM PEAK FLOW			a3,140
MAXIMUM PEAK STAGE			16.51
ANNUAL RUNOFF (AC-FT)	419,200	377,400	573,100
10 PERCENT EXCEEDS	1,190	1,160	1,800
50 PERCENT EXCEEDS	340	432	460
90 PERCENT EXCEEDS	106	104	103

05051522 RED RIVER OF THE NORTH AT HICKSON, ND—Continued

a Gage height, 16.46  
e Estimated

