RED RIVER OF THE NORTH BASIN

05051522 RED RIVER OF THE NORTH AT HICKSON, ND

LOCATION.--Lat 4639'35", long 96 47'44", in SW *1* / *4* 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, ND.
DRAINAGE AREA.--4,300 mi *2* , approximately.
PERIOD OF RECORD.--October 1975 to current year.
GAGE.--Water-stage recorder and concrete control. Datum of gage is 877.06 ft above sea level.
REMARKS.--Records good except those for periods of estimated daily discharges, which are fair. Flow regulated by Orwell Reservoir, capacity, 14,100 acre-ft at 1,070 ft above sea level, adjustment of 1912; Lake Traverse, capacity, 137,000 acre-ft, available for flood control, numerous other controlled lakes and ponds, and several power plants.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	513	517	563	e480	e480	4460	2640	1100	1070	3540	1210	777
2	521	480	564	e480	e480	4060	2250	1080	1040	3370	1210	767
3	516	489	563	e460	e480	e3200	1960	1060	1010	2910	1210	760
4	514	487	e520	e470	e500	e2600	2120	1050	986	2400	1220	755
5	514	468	e420	e470	e510	e2200	2280	1030	931	2440	1210	752
6	475	535	e340	e460	e530	e1800	2330	1000	901	3040	1200	742
7	442	516	e280	e450	e530	e1500	2200	973	870	3230	1140	735
8	441	519	e350	e450	e530	e1200	2010	1000	816	3300	986	728
9	451	582	e450	e470	e530	e1000	1830	1120	766	3200	962	718
10	454	585	e620	e460	e530	e900	1690	1110	736	2960	1020	709
11	454	544	e700	e450	e520	e850	1560	906	744	2600	1040	672
12	500	384	e600	e450	e520	e980	1460	926	719	2190	1040	636
13	600	362	e540	e450	e520	1e200	1400	1100	729	1910	1070	596

14	717	373	e520	e450	e520	1e800	1350	1200	722	1850	1070	543
15	817	e370	e560	e460	e530	2140	1310	1530	711	1750	1050	547
16	787	e370	e590	e470	e540	1950	1270	3020	712	1530	1030	540
17	785	e370	e580	e480	e550	1660	1180	3450	754	1400	1010	538
18	762	e380	e540	e490	e560	1540	1090	3270	816	1420	994	526
19	727	e390	e500	e490	e590	1540	1040	2890	876	1540	968	423
20	692	e410	e470	e480	e610	1630	1010	1840	917	1510	890	447
21	683	e430	e430	e480	e690	1880	993	1760	1030	1470	824	537
22	662	e450	e400	e490	e900	2230	982	1910	958	1420	605	528
23	616	e460	e400	e500	1340	2210	969	2160	761	1380	651	364
24	585	e460	e430	e520	1760	1750	963	1920	583	1330	802	236
25	575	e460	e450	e520	2420	1440	969	1540	519	1170	851	196
26	570	e470	e470	e510	3320	1390	989	1360	712	1030	859	336
27	571	494	e470	e500	4100	1390	1070	1290	1660	1120	859	438
28	566	600	e470	e500	4540	1350	1100	1250	2300	1190	857	470
29	557	606	e460	e500	---	1270	1110	1200	2900	1190	845	491
30	563	587	e470	e490	---	1820	1100	1160	3330	1200	805	499
31	564	---	e480	e490	---	2670	---	1110	---	1210	778	---
TOTAL	18194	14148	15200	14820	29630	57610	44225	47315	31579	61800	30266	17006
MEAN	587	472	490	478	1058	1858	1474	1526	1053	1994	976	567
MAX	817	606	700	520	4540	4460	2640	3450	3330	3540	1220	777
MIN	441	362	280	450	480	850	963	906	519	1030	605	196
AC-FT	36090	28060	30150	29400	58770	114300	87720	93850	62640	122600	60030	33730
CFSM	.14	.11	.11	.11	.25	.43	.34	.35	.24	.46	.23	.13
IN.	.16	.12	.13	.13	.26	.50	.38	.41	.27	.53	.26	.15

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	406	338	300	293	367	963	2173	1295	1040	890	531	439
MAX	1558	900	817	747	1058	2687	9864	3925	2485	2674	2674	2135
(WY)	1994	1987	1986	1986	1998	1995	1997	1997	1986	1993	1993	1993
MIN	2.02	.000	.000	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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1975 - 1998		
ANNUAL TOTAL	651222		381793				
ANNUAL MEAN	1784		1046		753		
HIGHEST ANNUAL MEAN					1729		1997
LOWEST ANNUAL MEAN					53.1		1977
HIGHEST DAILY MEAN	13100	Apr 15	4540	Feb 28	13100	Apr 15	1997
LOWEST DAILY MEAN	258	Sep 14	196	Sep 25	.00	Oct 26	1976
ANNUAL SEVEN-DAY MINIMUM	341	Jan 8	362	Sep 23	.00	Oct 26	1976
INSTANTANEOUS PEAK FLOW			4590	Feb 28	13300	Apr 14	1997
INSTANTANEOUS PEAK STAGE			21.06	Feb 28	37.60	Apr 16	1997
ANNUAL RUNOFF (AC-FT)	1292000		757300		545600		
ANNUAL RUNOFF (CFSM)	.41		.24		.18		
ANNUAL RUNOFF (INCHES)	5.63		3.30		2.38		
10 PERCENT EXCEEDS	4440		2170		1810		
50 PERCENT EXCEEDS	738		762		410		
90 PERCENT EXCEEDS	430		451		89