

# RED RIVER OF THE NORTH BASIN

## 05051500 RED RIVER OF THE NORTH AT WAHPETON, N.D.

LOCATION.--Lat 4615'55", long 9635'40", in NE 1 / 4 sec. 8, T.132 N., R.47 W., Richland County, Hydrologic Unit 09020104, on left bank in Wahpeton, 800 ft downstream from confluence of Bois de Sioux and Otter Tail Rivers, and at mile 548.6.

DRAINAGE AREA.--4,010 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--April 1942 to October 1942, March 1943 to current year. Gage-height records collected in this vicinity since 1917 are contained in reports of the National Weather Service.

GAGE.--Water-stage recorder and concrete and wooden dam. Datum of gage is 942.97 ft above sea level. Prior to Aug. 6, 1943, National Weather Service nonrecording gage 800 ft upstream, converted to present datum. Aug. 6, 1943 to Oct. 27, 1950, nonrecording gage at present site and datum.

REMARKS.--Records fair. Flow regulated by Orwell Reservoir, capacity, 14,100 acre-ft at elevation 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 17.0 ft, discharge, 10,500 ft<sup>3</sup>/s, occurred in the spring of 1897.

## 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	522	498	e540	e420	e450	2150	1510	1120	1020	2250	1190	750
2	518	502	e540	e410	e450	2000	1390	1120	1000	1770	1200	746
3	515	e500	e570	e410	e460	1810	1550	1110	965	1730	1210	739
4	494	e500	e570	e400	e450	1640	1850	1100	898	1800	1200	734
5	434	518	e560	e390	e440	e1450	1910	1080	887	1960	1180	725
6	428	505	e550	e390	e440	e1300	1790	1040	845	2450	1030	723
7	434	564	e550	e390	e460	e1160	1670	1090	786	2600	852	717
8	432	623	e550	e400	e480	e1040	1590	1230	740	2390	942	711
9	451	601	e550	e390	e490	e970	1520	1100	713	2110	988	686
10	447	e580	e560	e380	e500	e940	1460	867	696	1750	986	638

11	540	e550	e560	e380	e500	e980	1420	816	689	1530	987	597
12	596	e530	e580	e380	e490	e1050	1380	881	729	1590	1000	529
13	772	e520	e620	e390	e500	e1150	1360	972	698	1700	992	536
14	766	e540	e710	e400	e500	e1220	1330	1340	686	1510	973	545
15	752	e540	e730	e400	e500	e1300	1290	1630	718	1370	959	538
16	783	e530	e710	e400	e510	e1300	1190	2250	778	1250	941	537
17	765	e520	e650	e400	e520	1300	1120	2430	806	1400	930	448
18	720	e520	e590	e400	e540	1380	1080	2160	784	1500	866	382
19	710	e520	e540	e400	e600	1420	1060	1810	896	1450	799	537
20	704	e530	e530	e410	e700	1280	1050	1700	1000	1400	641	562
21	664	e530	e520	e410	e850	1310	1030	1610	831	1350	529	411
22	607	e530	e500	e420	e1250	1340	1000	1530	614	1300	718	193
23	599	e520	e480	e440	1560	1280	1010	1410	447	1220	823	175
24	596	e510	e460	e460	1650	1200	1010	1290	503	1150	826	286
25	595	e500	e460	e470	1500	1150	1060	1240	821	990	828	427
26	592	e490	e470	e470	2250	1180	1140	1210	993	1020	826	460
27	588	e490	e470	e470	2780	1180	1150	1180	2090	1190	824	496
28	585	e540	e460	e470	2490	1080	1140	1140	3810	1180	810	504
29	586	e540	e450	e460	---	1060	1130	1090	4170	1180	769	506
30	564	e550	e440	e450	---	1580	1130	1080	3330	1200	759	516
31	505	---	e420	e450	---	1660	---	1050	---	1200	757	---
TOTAL	18264	15891	16890	12910	24310	40860	39320	40676	33943	48490	28335	16354
MEAN	589	530	545	416	868	1318	1311	1312	1131	1564	914	545
MAX	783	623	730	470	2780	2150	1910	2430	4170	2600	1210	750
MIN	428	490	420	380	440	940	1000	816	447	990	529	175
AC-FT	36230	31520	33500	25610	48220	81050	77990	80680	67330	96180	56200	32440

e Estimated

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	333	311	281	271	294	682	1420	1118	1057	794	431	337
MAX	1599	952	820	678	868	2629	8717	3344	2675	2787	2496	2148
(WY)	1994	1987	1987	1986	1998	1995	1997	1997	1962	1993	1993	1993
MIN	5.72	7.40	6.60	8.81	18.0	84.3	138	22.5	90.0	65.6	53.5	2.18
(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 1942 - 1998		
ANNUAL TOTAL	606820		336243				
ANNUAL MEAN	1663		921		607		
HIGHEST ANNUAL MEAN					1600		1997
LOWEST ANNUAL MEAN					54.0		1977
HIGHEST DAILY MEAN	12700	Apr 15	4170	Jun 29	12700	Apr 15	1997
LOWEST DAILY MEAN	200	Sep 12	175	Sep 23	1.7	Aug 28	1976
ANNUAL SEVEN-DAY MINIMUM	391	Jan 6	350	Sep 21	1.7	Aug 28	1976
INSTANTANEOUS PEAK FLOW			4250	Jun 29	12800	Apr 15	1997
INSTANTANEOUS PEAK STAGE			11.06	Jun 29	19.42a	Apr 6	1997
INSTANTANEOUS LOW FLOW					1.7	Aug 28	1976
ANNUAL RUNOFF (AC-FT)	1204000		666900		439900		
10 PERCENT EXCEEDS	3520		1590		1450		
50 PERCENT EXCEEDS	767		752		376		
90 PERCENT EXCEEDS	480		440		106		

a Backwater from ice, from floodmark.

