

RED RIVER OF THE NORTH BASIN--Continued

05080000 RED LAKE RIVER AT FISHER, MN

LOCATION.--Lat 47°48'01", long 96°48'31", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T.150 N., R.48 W., Polk County, Hydrologic Unit 09020303, on left bank 10 ft upstream from bridge on county highway, 0.3 mile west of Fisher and at river mile 27.6.

DRAINAGE AREA.--5,678 mi².

PERIOD OF RECORD.--Mar. to Sep. 1999 (gage heights and maximum discharge only), Oct. 1, 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is 800.00 ft above sea level (levels by Minnesota Department of Transportation).

REMARKS.-- Records good except those for estimated daily discharges, which are poor. Runoff from 1,950 mi² of Red Lake River basin above Lower Red Lake outlet is completely controlled by dam at outlet of Lower Red Lake. Flow partially affected by occasional runoff of Thief and Mud Lakes in Thief River Basin.

EXTREMES OUTSIDE PERIOD OF RECORD.-- A stage of 41.00 ft occurred in spring of 1997 (from information provided by the National Weather Service).

DISCHARGE, in CFS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	1660	1290	e1430	e840	e700	e1300	2030	2220	5810	3280	9250
2	1190	1660	1230	e1410	e840	e720	e1350	1990	2170	5340	3150	10200
3	1170	1690	e1250	e1380	e840	e740	e1400	1900	1920	5030	3050	9010
4	1140	1730	e1300	e1360	e840	e770	e1450	1860	1750	4860	3070	6590
5	1100	1660	e1400	e1330	e850	e800	e1460	1800	1660	4800	2990	4460
6	1120	1650	e1550	e1290	e850	e830	e1500	1800	1660	4740	2890	3490
7	1110	1660	e1650	e1270	e850	e850	e1530	1820	1640	4610	2690	3030
8	1050	1660	e1750	e1240	e850	e880	e1570	1920	1660	4970	2490	2760
9	1010	1630	e1730	e1220	e850	e900	e1580	2210	3170	5430	2510	2610
10	1050	1610	e1680	e1200	e850	e910	e1600	3080	8740	7380	2400	2620
11	1050	1660	e1650	e1170	e850	e920	e1610	3650	13600	11700	2310	2500
12	1000	1770	e1450	e1140	e850	e930	e1650	3540	14200	14100	2210	2330
13	1030	1890	e1450	e1120	e850	e940	e1700	3090	10700	12400	2200	2200
14	1170	1960	e1580	e1080	e850	e940	e1750	2740	8830	10200	1880	2090
15	1130	1950	e1600	e1070	e850	e930	1810	2500	7900	8360	1890	1880
16	1230	1980	e1600	e1040	e850	e920	1740	2290	7320	7000	1820	1750
17	1280	2100	e1600	e1020	e850	e910	1670	2140	6750	6020	1740	1640
18	1290	2180	e1750	e982	e830	e900	1670	1950	6160	5330	1730	1660
19	1300	e2600	e2030	e951	e820	e900	1750	1850	5650	4730	1710	1630
20	1270	2720	2140	e923	e820	e880	2080	1780	5540	4330	1760	1550
21	1260	2550	1910	e880	e840	e880	2250	1690	6300	4070	1810	1470
22	1240	2380	1690	e860	e860	e880	2190	1660	6800	3920	1840	1420
23	1220	2240	1620	e850	e880	e890	2110	1660	7540	3820	1810	1360
24	1270	2000	e1620	e850	e880	e910	2080	1610	9020	3740	1790	1330
25	1380	1980	e1590	e850	e870	e940	1990	1550	9660	3690	1780	1270
26	1410	2000	e1560	e840	e850	e970	2080	1550	9170	3610	1760	1250
27	1390	1940	e1520	e840	e770	e1020	2120	1540	8450	3550	1860	1270
28	1490	1470	e1490	e840	e680	e1080	2060	1510	7650	3480	3180	1260
29	1590	1350	e1470	e810	---	e1150	2020	1450	6990	3400	7920	1240
30	1600	1340	e1470	e840	---	e1200	2040	1500	6410	3330	9050	1210
31	1650	---	e1430	e840	---	e1250	---	1790	---	3280	7970	---
TOTAL	38370	56670	49050	32926	23510	28440	53110	63450	191230	177030	88540	86330
MEAN	1238	1889	1582	1062	839.6	917.4	1770	2047	6374	5711	2856	2878
MAX	1650	2720	2140	1430	880	1250	2250	3650	14200	14100	9050	10200
MIN	1000	1340	1230	810	680	700	1300	1450	1640	3280	1710	1210
AC-FT	76110	112400	97290	65310	46630	56410	105300	125900	379300	351100	175600	171200
CFSM	0.22	0.33	0.28	0.19	0.15	0.16	0.31	0.36	1.12	1.01	0.50	0.51
IN.	0.25	0.37	0.32	0.22	0.15	0.19	0.35	0.42	1.25	1.16	0.58	0.57

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1531	2645	1444	1106	1017	1443	4031	2423	4022	3334	2350	1735
MAX	2261	4103	1566	1187	1106	2280	8063	3666	6374	5711	3188	2878
(WY)	2000	2001	2002	2001	2001	2000	2001	2001	2002	2002	2001	2002
MIN	1095	1889	1324	1044	840	917	1770	1555	2770	1772	1006	858
(WY)	2001	2002	2000	2002	2002	2002	2002	2000	2000	2001	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 2000 - 2002
ANNUAL TOTAL	888010	888656	
ANNUAL MEAN	2433	2435	2257
HIGHEST ANNUAL MEAN			2591
LOWEST ANNUAL MEAN			1748
HIGHEST DAILY MEAN	22200	Apr 10	14200
LOWEST DAILY MEAN	1000	Oct 12	680
ANNUAL SEVEN-DAY MINIMUM	1030	Mar 7	740
MAXIMUM PEAK FLOW			15000
MAXIMUM PEAK STAGE			34.35
ANNUAL RUNOFF (AC-FT)	1761000	1763000	1635000
ANNUAL RUNOFF (CFSM)		0.43	0.40
ANNUAL RUNOFF (INCHES)		5.82	5.40
10 PERCENT EXCEEDS	4540	5580	4380
50 PERCENT EXCEEDS	1640	1650	1610
90 PERCENT EXCEEDS	1100	850	940

e Estimated.

