

RED RIVER OF THE NORTH BASIN--Continued

05078500 CLEARWATER RIVER AT RED LAKE FALLS, MN

LOCATION.--Lat 47°53'15", long 96°16'25", in NW¹/₄NE¹/₄ sec. 22, T.151 N., R.44 W., Red Lake County, Hydrologic Unit 09020305, on left bank 40 ft downstream from Great Northern Railroad bridge in Red Lake Falls, 1.4 mi upstream from mouth, and 3 mi downstream from Badger Creek.

DRAINAGE AREA.--1,380 mi².

PERIOD OF RECORD.--June 1909 to September 1917, October 1934 to September 1981, March 1982 to current year. Monthly discharge only for October, November, 1934, published in WSP 1308. October 1981 to February 1982, operated as a high-flow partial-record station.

REVISED RECORDS.--WSP 355: 1911-12. WSP 1438: 1910-11, 1917(M). WDR MN-84-1:1983.

GAGE.--Water-stage recorder. Datum of gage is 948.94 ft above sea level (NGVD of 1929, levels by U.S. Army Corps of Engineers). Prior to Sept. 12, 1911, nonrecording gage at site 0.5 mi upstream, and Sept. 12, 1911 to Sept. 30, 1917, nonrecording gage at site 40 ft upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	213	523	e410	e240	e190	e140	e325	1440	1670	285	929	125
2	210	668	e403	e235	e189	e139	e520	1320	1670	267	1340	119
3	219	1030	e395	e233	e188	e138	e850	1210	1620	243	1210	115
4	205	1190	e385	e231	e187	e137	e1350	1150	1470	227	851	112
5	196	1240	e375	e230	e185	e136	e1450	1060	1270	221	582	106
6	189	1260	e371	e230	e183	e135	e1520	1020	1050	205	447	106
7	174	1540	e365	e229	e180	e135	e2300	1020	896	194	367	134
8	170	e2280	e358	e228	e179	e136	e4000	1020	795	202	323	146
9	162	2770	e355	e226	e178	e136	e5200	1040	721	201	316	200
10	154	2830	e348	e224	e176	e137	5080	1000	653	184	532	209
11	150	2500	e342	e221	e174	e138	4710	941	609	180	551	207
12	147	2190	e338	e219	e172	e139	5300	900	562	208	455	197
13	142	2040	e330	e217	e171	e140	5170	859	543	191	398	169
14	162	1900	e325	e215	e170	e141	4800	809	545	193	355	142
15	210	1650	e322	e213	e168	e143	4620	760	829	199	335	126
16	591	1480	e317	e212	e166	e144	4130	708	888	210	293	121
17	677	1320	e313	e211	e164	e145	3600	726	813	188	283	113
18	703	1160	e308	e210	e162	e149	3220	776	702	224	274	98
19	654	e1000	e304	e209	e160	e152	2890	737	615	254	258	94
20	552	e820	e300	e207	e158	e160	2630	696	601	248	255	87
21	469	e670	e295	e205	e156	e167	2460	663	576	362	247	88
22	430	e610	e288	e203	e154	e180	2280	700	527	424	249	81
23	403	e550	e282	e202	e152	e178	2130	872	492	365	252	80
24	385	e500	e279	e201	e150	e179	2030	1310	454	330	230	96
25	373	e480	e276	e200	e148	e165	2060	1600	423	327	215	113
26	369	e465	e273	e199	e146	e155	2030	1770	389	285	196	121
27	383	e450	e269	e197	e144	e150	1930	1890	355	259	181	106
28	474	e435	e264	e196	e142	e150	1810	1990	339	236	165	104
29	554	e425	e259	e195	---	e150	1690	1990	326	225	154	101
30	552	e418	e255	e194	---	e153	1560	1870	313	211	146	87
31	528	---	e248	e192	---	e220	---	1720	---	281	136	---
TOTAL	10800	36394	9952	6624	4692	4667	83645	35567	22716	7629	12525	3703
MEAN	348	1213	321	214	168	151	2788	1147	757	246	404	123
MAX	703	2830	410	240	190	220	5300	1990	1670	424	1340	209
MIN	142	418	248	192	142	135	325	663	313	180	136	80
AC-FT	21420	72190	19740	13140	9310	9260	165900	70550	45060	15130	24840	7340
CFSM	.25	.88	.23	.15	.12	.11	2.02	.83	.55	.18	.29	.09
IN.	.29	.98	.27	.18	.13	.13	2.25	.96	.61	.21	.34	.10

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	193	156	96.5	76.4	73.4	250	1194	705	498	404	212	196
MAX	1350	1233	321	221	385	1136	3507	5059	3042	2389	1686	1599
(WY)	1972	1972	2001	1998	1998	1995	1997	1950	1962	1997	1985	1999
MIN	10.0	19.0	21.4	21.4	19.1	13.6	61.0	32.2	26.5	8.34	1.49	2.92
(WY)	1935	1935	1937	1940	1937	1937	1981	1977	1980	1936	1936	1936

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1909 - 2001
ANNUAL TOTAL	153291	238914	
ANNUAL MEAN	419	655	335a
HIGHEST ANNUAL MEAN			855
LOWEST ANNUAL MEAN			64.4
HIGHEST DAILY MEAN	3350	Jun 22	5300
LOWEST DAILY MEAN	94	Feb 14	80
ANNUAL SEVEN-DAY MINIMUM	94	Feb 13	89
MAXIMUM PEAK FLOW			5590
MAXIMUM PEAK STAGE			10.75c
INSTANTANEOUS LOW FLOW			78
ANNUAL RUNOFF (AC-FT)	304100	473900	242900
ANNUAL RUNOFF (CFSM)	.30	.47	.24
ANNUAL RUNOFF (INCHES)	4.13	6.44	3.30
10 PERCENT EXCEEDS	790	1680	819
50 PERCENT EXCEEDS	284	283	118
90 PERCENT EXCEEDS	108	140	38

- a Median of annual mean discharges is 290 ft³/s.
- b Gage-height, 12.38 ft.
- c Backwater from ice.
- d From highwater mark, backwater from ice.
- e Estimated.
- f Also occurred Sep. 14, 1939, and Aug. 19-22, 1940.

