

RED RIVER OF THE NORTH BASIN--Continued

05076000 THIEF RIVER NEAR THIEF RIVER FALLS, MN

LOCATION.--Lat 48°11'08", long 96°10'11", in NW¹/₄SW¹/₄ sec. 3, T.154 N., R.43 W., Marshall County, Hydrologic Unit 09020304, on right bank, 0.2 mi upstream from highway bridge, 5 mi north of Thief River Falls, 7 mi upstream from mouth, and 9 mi downstream from Mud Lake National Wildlife Refuge.

DRAINAGE AREA.--985 mi².

PERIOD OF RECORD.--July 1909 to September 1917, April 1920 to September 1921, October 1922 to September 1924, October 1928 to September 1981, March 1982 to current year. Monthly discharge only for some periods, annual maximums for water years 1919, 1922, 1925, 1926, published in WSP 1308. October 1981 to February 1982, operated as a high-flow partial-record station.

REVISED RECORDS.--WSP 925: Drainage area. WSP 1308: 1917(M), 1924(M), 1929(M), 1931-33(M), 1935(M), 1937(M).

GAGE.--Water-stage recorder and control of grouted boulders. Datum of gage is 1,112.33 ft above sea level (levels by Minnesota Department of Transportation). Prior to May 4, 1939, nonrecording gages at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Thief and Mud Lakes.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	593	457	e20	e14	e7.6	e2800	1560	1750	746	278	329
2	8.6	577	499	e18	e15	e7.8	e3000	1500	1590	714	261	973
3	9.0	596	505	e16	e16	e8.1	e3000	1450	1470	629	162	1610
4	9.1	581	508	e15	e16	e8.4	e3100	1410	1570	629	130	2100
5	15	557	e520	e14	e16	e8.7	e3600	1520	1720	627	121	2390
6	24	460	e510	e13	e16	e9.0	e3900	1510	1580	616	116	2280
7	28	179	e490	e12	e16	e9.3	e3790	1520	1470	603	120	2170
8	53	176	e460	e11	e16	e9.4	3770	1640	1450	593	123	2240
9	58	293	e390	e10	e16	e9.7	3760	1590	1540	592	126	2320
10	60	295	e320	e9.2	e17	e10	3720	2190	1620	592	365	2300
11	58	402	e200	e8.5	e18	e10	3660	2830	1610	588	404	2230
12	65	e400	e60	e7.8	e19	e11	3560	2860	1540	582	417	2150
13	63	e400	e60	e7.4	e20	e11	3390	2950	1450	523	466	2040
14	63	e100	e60	e6.8	e20	e11	3230	2850	1370	400	463	2060
15	87	e50	157	e6.4	e19	e12	3020	2740	1320	439	443	2030
16	90	e80	161	e6.5	e17	e15	2830	2610	1290	417	597	1900
17	438	e380	160	e6.7	e15	e20	2650	2420	1260	487	659	1730
18	1000	e380	164	e7.0	e13	e30	2510	2230	1160	478	587	1610
19	953	e380	e160	e7.5	e11	e42	2370	2070	949	465	458	1510
20	1230	e390	e157	e8.0	e9.2	e52	2270	1900	930	387	355	1430
21	1130	e430	e135	e8.5	e8.2	e64	2190	1790	917	372	296	1350
22	1020	e430	e110	e9.0	e7.6	e90	2120	1700	831	370	254	1300
23	905	e420	e87	e9.5	e7.0	e98	2030	1640	834	368	718	1200
24	591	e410	e73	e10	e6.8	e102	1940	1590	845	367	902	991
25	545	e390	e59	e10	e6.8	e104	1880	1540	869	373	722	1150
26	557	295	e47	e11	e6.9	e110	1820	1490	886	404	548	1160
27	619	211	e41	e12	e7.1	e160	1750	1440	878	442	435	1170
28	609	201	e33	e12	e7.3	e250	1680	1420	841	346	363	1020
29	597	198	e28	e13	---	e500	1610	1420	753	349	303	964
30	605	221	e25	e13	---	e1250	1550	1420	756	326	251	866
31	607	---	e22	e14	---	e2050	---	1890	---	301	214	---
TOTAL	12104.8	10475	6658	332.8	376.9	5080.0	82500	58690	37049	15125	11657	48573
MEAN	390	349	215	10.7	13.5	164	2750	1893	1235	488	376	1619
MAX	1230	596	520	20	20	2050	3900	2950	1750	746	902	2390
MIN	8.1	50	22	6.4	6.8	7.6	1550	1410	753	301	116	329
AC-FT	24010	20780	13210	660	748	10080	163600	116400	73490	30000	23120	96340
CFSM	.40	.35	.22	.01	.01	.17	2.79	1.92	1.25	.50	.38	1.64
IN.	.46	.40	.25	.01	.01	.19	3.12	2.22	1.40	.57	.44	1.83

e Estimated

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	91.1	71.4	23.2	5.69	4.72	77.8	618	510	313	233	103	115
MAX	637	844	215	100	101	773	2827	4274	1774	2103	1012	1619
(WY)	1986	1972	1999	1910	1998	1995	1966	1950	1962	1975	1993	1999
MIN	.000	.000	.000	.000	.000	.000	7.75	1.83	.032	.000	.000	.000
(WY)	1911	1911	1911	1911	1911	1930	1981	1990	1980	1932	1932	1929

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1909 - 1999
ANNUAL TOTAL	118016.01	288621.5	
ANNUAL MEAN	323	791	180 ^a
HIGHEST ANNUAL MEAN			791
LOWEST ANNUAL MEAN			1.28
HIGHEST DAILY MEAN	1760	May 17	3900 ^b Apr 6
LOWEST DAILY MEAN	.88	Jan 22	6.4 ^b Jan 15
ANNUAL SEVEN-DAY MINIMUM	.89	Jan 19	6.9 Jan 13
INSTANTANEOUS PEAK FLOW			5610
INSTANTANEOUS PEAK STAGE			17.38
ANNUAL RUNOFF (AC-FT)	234100	572500	130500
ANNUAL RUNOFF (CFSM)	.33	.80	.18
ANNUAL RUNOFF (INCHES)	4.46	10.90	2.48
10 PERCENT EXCEEDS	969	2180	570
50 PERCENT EXCEEDS	130	430	9.0
90 PERCENT EXCEEDS	1.1	9.9	.00

- a Median of annual mean discharges is 120 ft³/s.
- b Estimated.
- c Many days, several years.
- d Backwater from ice.

