

RED RIVER OF THE NORTH BASIN

05076000 THIEF RIVER NEAR THIEF RIVER FALLS, MN

LOCATION.--Lat 4811'08", long 9610'11", in NW 1 / 4 SW 1 / 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 (revised).

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 mean 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, 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	3.5	122	e75	e2.5	e1.1	e940	79	92	553	1100	185	211
2	3.1	132	e74	e1.9	e1.1	e800	63	19	542	1000	157	139
3	3.5	e125	e74	e1.5	e1.1	e650	52	16	526	739	152	120
4	3.3	e130	e74	e1.2	e1.1	e500	47	15	515	736	140	65
5	4.0	133	e74	e1.0	e1.1	e370	45	13	458	714	135	117
6	4.1	160	e72	e1.0	e1.0	e250	52	13	400	739	130	125
7	4.0	140	e70	e.98	e1.0	e150	66	16	402	1070	127	115
8	4.3	124	e69	e.98	e1.0	e100	91	17	396	1310	123	111

9	16	e117	e67	e.96	e1.0	e70	97	21	391	1220	121	110
10	29	e110	e66	e.95	e1.0	e45	104	26	376	1120	119	107
11	26	e110	e65	e.95	e1.1	e35	95	30	258	1060	117	105
12	26	e105	e63	e.92	e1.1	e25	90	42	244	1010	115	102
13	46	e103	e62	e.90	e1.1	e20	108	165	244	974	114	102
14	110	e100	e60	e.90	e1.1	e18	182	269	247	953	112	99
15	115	e99	e59	e.90	e1.2	e16	386	304	282	e940	111	98
16	179	e95	e58	e.90	e1.2	e15	376	1010	397	936	109	97
17	176	e90	e56	e.90	e1.3	e14	349	1760	409	837	109	96
18	155	e86	e56	e.90	e1.4	e13	334	1610	406	432	110	99
19	144	e84	e54	e.90	e1.5	e15	325	1430	613	762	112	95
20	133	e84	e54	e.90	e1.8	e17	318	1290	988	854	111	93
21	130	e84	e54	e.90	e2.5	e20	311	1180	985	1150	108	92
22	125	e82	e56	e.88	e5.0	e23	304	1120	898	1140	93	92
23	125	e80	e56	e.88	e20	e25	291	1150	826	1120	91	92
24	125	e78	e54	e.88	e70	e29	286	1060	811	1070	90	74
25	121	e76	e54	e.88	e200	e36	279	984	1200	965	90	68
26	125	e76	e52	e.90	e600	e50	271	841	1730	893	95	69
27	160	e76	e53	e.95	e900	e100	266	451	1660	834	152	68
28	119	e76	e50	e1.0	e1000	e160	267	500	1450	738	630	68
29	118	e75	e45	e1.0	---	188	263	750	1270	651	916	66
30	118	e75	e10	e1.0	---	99	261	601	1190	430	804	18
31	120	---	e3.5	e1.1	---	78	---	570	---	386	590	---
TOTAL	2570.8	3027	1789.5	32.41	2820.8	4871	6058	17365	20667	27883	6168	2913
MEAN	82.9	101	57.7	1.05	101	157	202	560	689	899	199	97.1
MAX	179	160	75	2.5	1000	940	386	1760	1730	1310	916	211
MIN	3.1	75	3.5	.88	1.0	13	45	13	244	386	90	18
AC-FT	5100	6000	3550	64	5600	9660	12020	34440	40990	55310	12230	5780
CFSM	.08	.10	.06	.00	.10	.16	.21	.57	.70	.91	.20	.10
IN.	.10	.11	.07	.00	.11	.18	.23	.66	.78	1.05	.23	.11

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	87.3	67.9	20.8	5.62	4.61	76.8	592	493	301	230	99.2	97.2
MAX	637	844	206	100	101	773	2827	4274	1774	2103	1012	1012
(WY)	1986	1972	1945	1910	1998	1995	1966	1950	1962	1975	1993	1993
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 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1909 - 1998			
ANNUAL TOTAL	183589.0	96165.51				
ANNUAL MEAN	503	263		172a		
HIGHEST ANNUAL MEAN				607		1966
LOWEST ANNUAL MEAN				1.28		1939
HIGHEST DAILY MEAN	4080	Apr 22	1760	May 17	5580	May 13 1950
LOWEST DAILY MEAN	1.6	Sep 14	.88	Jan 22	.00	Oct 1 1910
ANNUAL SEVEN-DAY MINIMUM	1.7	Feb 14	.89	Jan 19	.00	Oct 1 1910
INSTANTANEOUS PEAK FLOW			1770b	May 17	5610	May 13 1950
INSTANTANEOUS PEAK STAGE			11.42c	Feb 27	17.38	May 13 1950
ANNUAL RUNOFF (AC-FT)	364100	190700		124900		
ANNUAL RUNOFF (CFSM)	.51	.27		.18		
ANNUAL RUNOFF (INCHES)	6.93	3.63		2.38		
10 PERCENT	1750	938		549		

