

RED RIVER OF THE NORTH BASIN

05107500 ROSEAU RIVER AT ROSS, MN

LOCATION.--Lat 48° 54'37", long 95° 55'18", in NE¼SE¼ sec. 27, T. 163 N., R. 41 W., Roseau County, Hydrologic Unit 090203014, on left bank 300 ft downstream from highway bridge, 0.2 mi. north of Ross, and 2.3 mi downstream from Pine Creek.

DRAINAGE AREA.--1,220 mi², approximately.

PERIOD OF RECORD.--July 1928 to September 1991, April 1995 to current year.

REVISED RECORDS.--WSP 1055: 1945. WSP 1175: Drainage area. WSP 1308: 1936(m). WSP 1508: 1848-49(P).

GAGE.--Water-stage recorder. Datum of gage is 1,018.61 ft above National Geodetic Vertical Datum of 1929 (levels by Geodetic Survey of Canada). Prior to Mar. 13, 1929, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor.. High flow affected by natural storage in Roseau Lake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 19 ft in 1896. Other outstanding floods reached the following stages, from information by local residents: flood of July 1919, 17.5 ft; flood of 1927, about 16 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
1	70	e142	e97	e75	e56	e44	e50	3950	1300
216	188	17							
2	63	e136	e96	e75	e55	e44	e56	3780	1230
324	145	14							
3	61	e130	e94	e74	e55	e44	e70	3590	1190
612	114	12							
4	59	e125	e93	e74	e54	e44	e120	3420	1160
768	90	11							
5	52	e127	e92	e73	e54	e44	e200	3270	1130
806	75	9.9							
6	48	e132	e91	e73	e53	e44	e400	3160	1100
794	67	9.3							
7	44	e138	e90	e72	e53	e44	e1200	3060	1050
772	60	9.4							

8	43	e140	e90	e72	e52	e44	e1150	2930	1000
759	53	28							
9	44	e140	e89	e71	e52	e44	e1100	2900	940
725	46	35							
10	52	e135	e89	e71	e51	e43	e1000	2860	874
676	41	26							
11	51	e128	e88	e70	e51	e43	e900	2770	800
612	36	19							
12	48	e125	e88	e69	e51	e43	e850	2750	720
541	31	18							
13	44	e123	e87	e69	e50	e43	e820	2710	635
486	28	22							
14	41	e122	e86	e69	e50	e43	e1000	2620	539
448	26	26							
15	39	e121	e86	e69	e50	e43	e1360	2550	447
407	24	21							
16	38	e120	e85	e68	e49	e43	e1560	2490	378
356	31	25							
17	37	e119	e84	e67	e49	e43	e1800	2440	330
300	44	54							
18	47	e118	e84	e66	e49	e43	e2100	2380	291
242	52	58							
19	74	e117	e83	e65	e48	e43	e2600	2300	229
192	50	49							
20	92	e116	e82	e64	e48	e43	3030	2240	197
157	43	42							
21	93	e114	e82	e63	e48	e43	3450	2170	175
132	38	36							
22	101	e112	e81	e62	e47	e43	3880	2110	151
108	34	31							
23	e105	e110	e80	e62	e47	e43	4260	2040	137
90	32	27							
24	e104	e108	e80	e61	e47	e43	4500	1980	138
77	32	23							
25	e100	e106	e80	e60	e46	e43	4600	1910	162
67	32	19							
26	e98	e105	e79	e60	e46	e43	4600	1830	168
301	34	15							
27	e99	e103	e79	e59	e45	e43	4560	1740	157
572	32	17							
28	e110	e101	e78	e58	e45	e43	4430	1650	163
520	25	21							
29	e130	e99	e78	e58	---	e43	4180	1560	168
433	23	31							
30	e145	e98	e77	e57	---	e44	4130	1470	206
335	23	34							
31	e148	---	e76	e57	---	e45	---	1380	---
252	20	---							
TOTAL	2280	3610	2644	2063	1401	1345	63956	78010	17165
13080	1569	759.6							

MEAN	73.5	120	85.3	66.5	50.0	43.4	2132	2516	572
422	50.6	25.3							
MAX	148	142	97	75	56	45	4600	3950	1300
806	188	58							
MIN	37	98	76	57	45	43	50	1380	137
67	20	9.3							
AC-FT	4520	7160	5240	4090	2780	2670	126900	154700	34050
25940	3110	1510							
CFSM	.06	.10	.07	.05	.04	.04	1.75	2.06	.47
.35	.04	.02							
IN.	.07	.11	.08	.06	.04	.04	1.95	2.38	.52
.40	.05	.02							

o e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1997, BY WATER YEAR (WY)

	JUN	JUL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
		MEAN	131	92.0	30.5	15.7	12.2	77.2	868	916
484		289	123	130						
		MAX	974	513	107	66.5	50.0	551	3234	4583
2258		1494	1352	1041						
		(WY)	1942	1957	1978	1997	1997	1946	1966	1950
1970		1968	1968	1968						
		MIN	1.91	1.63	.27	.001	.000	2.76	32.1	29.5
6.83		1.39	.84	.38						
		(WY)	1991	1977	1977	1977	1977	1989	1991	1988
1980		1980	1961	1990						

<i>SUMMARY STATISTICS</i>	<i>FOR 1996 CALENDAR YEAR</i>	<i>FOR 1997 WATER YEAR</i>	<i>WATER YEARS 1928 - 1997</i>	
ANNUAL TOTAL	221275.7	187882.6		
ANNUAL MEAN	605	515		
265a				
	HIGHEST ANNUAL MEAN			
725	1950			
	LOWEST ANNUAL MEAN			
28.9	1934			
	HIGHEST DAILY MEAN	4490	May 24	4600 Apr 25,26
6510	May 12 1950			
	LOWEST DAILY MEAN	7.1	Sep 25	9.3 Sep 6
.00b	Aug 29 1961			
	ANNUAL SEVEN-DAY MINIMUM	9.0	Sep 21	12 Sep 1
.00	Jan 3 1977			
	INSTANTANEOUS PEAK FLOW			4670 Apr 26
6560	May 12 1950			
	INSTANTANEOUS PEAK STAGE			17.30 Apr 26
18.25	May 12 1950			
	INSTANTANEOUS LOW FLOW			7.5 Sep 7
.00b	Aug 29 1961			
	ANNUAL RUNOFF (AC-FT)	438900		372700
191700				
	ANNUAL RUNOFF (CFSM)	.50		.42
.22				

2.95	ANNUAL RUNOFF (INCHES)	6.75	5.73
846	10 PERCENT EXCEEDS	2680	2000
38	50 PERCENT EXCEEDS	85	82
5.8	90 PERCENT EXCEEDS	27	33

a Median of annual mean discharges is 231 ft³/s.

b Many days in 1961.