

RED RIVER OF THE NORTH BASIN--Continued

05107500 ROSEAU RIVER AT ROSS, MN

LOCATION.--Lat 48°54'37", long 95°55'18", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T. 163 N., R. 41 W., Roseau County, Hydrologic Unit 090203014, on left bank 300 ft downstream from State Highway 89 bridge, 0.2 mi. north of Ross, and 2.3 mi downstream from Pine Creek.

DRAINAGE AREA.--1,090 mi².

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 sea level (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 fair. High flow affected by natural storage in Roseau Lake.

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

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	4.2	197	e130	e37	e23	e21	e1000	1990	1530	1600	120	40
2	4.0	189	e134	e36	e23	e21	e1100	1920	1540	1550	94	39
3	3.8	180	e133	e35	e23	e21	e1150	1850	1550	1490	74	43
4	3.8	169	e131	e34	e23	e21	e1250	1780	1570	1440	63	61
5	5.6	157	e129	e33	e23	e21	e1350	1720	1610	1420	55	141
6	11	149	e125	e32	e23	e21	e1650	1640	1640	1460	50	312
7	20	138	e122	e32	e23	e21	1860	1590	1660	1470	55	411
8	20	130	e118	e31	e23	e21	2060	1560	1670	1430	63	488
9	21	122	e115	e31	e23	e21	2240	1540	1740	1400	64	507
10	21	117	e111	e30	e22	e21	2390	1540	1850	1370	67	504
11	21	113	e104	e30	e22	e21	2480	1540	1960	1320	63	495
12	25	e113	e100	e29	e22	e21	2560	1580	2020	1250	57	478
13	32	e118	e95	e29	e22	e21	2630	1670	2080	1200	52	471
14	31	e119	e90	e28	e22	e21	2670	1770	2090	1170	48	515
15	33	e117	e85	e27	e22	e21	2690	1860	2070	1170	45	552
16	39	e115	e80	e27	e22	e21	2710	1960	2020	1150	46	548
17	63	e110	e78	e26	e22	e21	2720	2020	1960	1110	50	529
18	272	e100	e74	e26	e22	e22	2710	2050	1880	1060	62	501
19	443	e100	e70	e25	e22	e23	2690	2060	1800	993	65	461
20	451	e100	e67	e25	e22	e24	2660	2030	1720	923	61	409
21	443	e105	e64	e25	e22	e25	2610	1990	1630	850	56	345
22	399	e108	e60	e24	e22	e28	2560	1970	1530	780	51	287
23	355	e110	e57	e24	e22	e31	2480	1930	1470	706	54	247
24	314	e115	e54	e24	e22	e40	2420	1890	1390	631	60	220
25	278	e115	e51	e24	e21	e60	2370	1860	1330	550	62	195
26	254	e120	e48	e23	e21	e100	2320	1810	1450	467	61	176
27	237	e120	e45	e23	e21	e200	2270	1750	1590	404	58	167
28	225	e125	e43	e23	e21	e300	2210	1690	1650	348	54	164
29	214	e125	e42	e23	---	e600	2140	1620	1670	296	49	164
30	209	e130	e40	e23	---	e800	2070	1560	1650	235	44	164
31	204	---	e38	e23	---	e900	---	1530	---	167	41	---
TOTAL	4656.4	3826	2633	862	621	3510	66020	55270	51320	31410	1844	9634
MEAN	150	128	84.9	27.8	22.2	113	2201	1783	1711	1013	59.5	321
MAX	451	197	134	37	23	900	2720	2060	2090	1600	120	552
MIN	3.8	100	38	23	21	21	1000	1530	1330	167	41	39
AC-FT	9240	7590	5220	1710	1230	6960	131000	109600	101800	62300	3660	19110
CFSM	.14	.12	.08	.03	.02	.10	2.02	1.64	1.57	.93	.05	.29
IN.	.16	.13	.09	.03	.02	.12	2.25	1.89	1.75	1.07	.06	.33

e Estimated

05107500 ROSEAU RIVER AT ROSS, MN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	134	93.6	31.8	16.1	13.6	84.8	885	928	504	303	121	131
MAX	974	512	107	66.5	99.2	551	3234	4583	2258	1494	1352	1041
(WY)	1942	1957	1978	1997	1998	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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1928 - 1999
ANNUAL TOTAL	116816.0	231606.4	
ANNUAL MEAN	320	635	271 ^a
HIGHEST ANNUAL MEAN			725 1950
LOWEST ANNUAL MEAN			28.9 1934
HIGHEST DAILY MEAN	1640	May 21	2720 Apr 17 6510 May 12 1950
LOWEST DAILY MEAN	3.8	Oct 3	3.8 Oct 3,4 .00 ^b Aug 29 1961
ANNUAL SEVEN-DAY MINIMUM	3.9	Sep 18	7.5 Oct 1 .00 Jan 3 1977
INSTANTANEOUS PEAK FLOW			2730 Apr 16 6560 May 12 1950
INSTANTANEOUS PEAK STAGE			15.15 Apr 16 18.25 May 12 1950
INSTANTANEOUS LOW FLOW			3.6 Oct 3 .00 ^c Aug 29 1961
ANNUAL RUNOFF (AC-FT)	231700	459400	196400
ANNUAL RUNOFF (CFSM)	.29	.58	.25
ANNUAL RUNOFF (INCHES)	3.99	7.90	3.38
10 PERCENT EXCEEDS	925	1960	870
50 PERCENT EXCEEDS	125	125	40
90 PERCENT EXCEEDS	14	22	6.0

a Median of annual mean discharges is 239 ft³/s.
 b Several days in 1961, 1977, and 1980.
 c Many days, several years.

