

RED RIVER OF THE NORTH BASIN--Continued

05104500 ROSEAU RIVER BELOW SOUTH FORK NEAR MALUNG, MN

LOCATION.--Lat 48°47'30", long 95°44'40", in NW¹/₄SW¹/₄ sec. 6, T.161 N., R.39 W., Roseau County, Hydrologic Unit 09020314, on left bank 0.3 mi downstream from South Fork and 1.5 mi northwest of Malung.

DRAINAGE AREA.--430 mi².

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 2113: 1948, 1950, 1951, 1956(M), 1957(M), 1962(M). WRIR 97-4249: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,029.67 ft above sea level (NGVD of 1912).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some flow bypasses the gaging station through a natural overflow channel 0.8 mi. upstream and returns to river 0.5 mi downstream. Overflow begins at stage of about 13.0 ft, discharge, 1,800 ft³/s. These records include any flow in the overflow channel.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	85	55	e17	e6.9	4.9	e34	221	547	609	34	52
2	25	100	50	e16	e6.4	e4.8	e30	208	544	471	32	73
3	26	116	47	15	6.3	e4.8	e27	188	478	374	29	102
4	25	117	49	15	e6.1	e4.5	e25	176	377	273	26	102
5	24	110	48	15	e6.1	e4.2	e23	167	297	361	25	92
6	21	104	47	e15	e6.4	e4.1	e22	188	244	391	22	75
7	21	99	45	14	e6.6	e4.0	22	240	209	320	21	63
8	21	97	45	14	e6.6	e4.0	24	290	180	290	20	52
9	24	95	44	15	e6.6	e4.1	27	432	192	365	21	44
10	24	94	45	15	e6.6	e4.0	33	588	1380	406	21	45
11	26	94	42	15	e6.8	e4.0	47	634	11200	332	21	46
12	27	90	40	15	e6.6	e4.0	64	606	15800	258	23	49
13	28	87	40	14	e6.8	e3.9	92	549	12600	211	22	50
14	34	84	38	13	e7.1	3.9	131	512	7440	161	18	45
15	49	81	38	12	e7.3	3.9	170	490	4880	131	16	39
16	41	78	e38	11	e7.5	4.1	190	451	3580	109	24	34
17	37	76	e37	11	e7.6	4.3	161	382	2680	94	37	30
18	35	74	e35	e11	7.6	e5.6	146	324	1990	83	39	23
19	35	71	e34	e11	7.7	e6.3	149	274	1570	75	40	27
20	34	68	e32	e11	7.7	e7.1	150	239	1300	70	47	23
21	34	65	e30	e10	7.1	e8.2	138	217	1110	66	44	21
22	36	63	e28	e10	7.2	e8.4	124	195	1220	60	42	e20
23	37	61	e26	e10	7.4	e8.5	112	176	1810	54	37	e19
24	40	61	e24	e10	6.6	e7.8	217	166	2240	50	33	e18
25	42	60	22	e9.7	6.2	7.9	360	161	2530	48	30	e17
26	47	59	21	e9.7	5.6	7.9	438	155	2250	45	25	e16
27	54	41	e21	e9.2	5.1	e8.2	378	146	1780	43	22	e16
28	54	48	e20	e8.9	4.9	e12	292	140	1370	40	27	e15
29	62	57	e19	e8.4	---	e20	244	154	1030	38	28	e15
30	68	60	18	e7.8	---	e41	227	233	781	37	29	e15
31	78	---	e18	e7.6	---	e37	---	453	---	37	33	---
TOTAL	1134	2395	1096	376.3	187.4	257.4	4097	9355	83609	5902	888	1238
MEAN	36.6	79.8	35.4	12.1	6.69	8.30	137	302	2787	190	28.6	41.3
MAX	78	117	55	17	7.7	41	438	634	15800	609	47	102
MIN	21	41	18	7.6	4.9	3.9	22	140	180	37	16	15
AC-FT	2250	4750	2170	746	372	511	8130	18560	165800	11710	1760	2460
CFSM	0.09	0.19	0.08	0.03	0.02	0.02	0.32	0.70	6.48	0.44	0.07	0.10
IN.	0.10	0.21	0.09	0.03	0.02	0.02	0.35	0.81	7.23	0.51	0.08	0.11

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	66.1	65.0	17.5	7.93	8.69	66.6	610	331	278	160	74.7	80.8
MAX	351	848	65.6	22.2	102	524	2035	1589	2787	1152	896	710
(WY)	1983	2001	1995	1997	1998	1995	1966	1950	2002	1968	2001	1957
MIN	0.029	0.16	0.013	0.000	0.000	0.83	5.60	8.77	4.17	0.092	0.000	0.025
(WY)	1991	1991	1977	1977	1977	1977	1991	1990	1980	1980	1961	1988

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1947 - 2002

ANNUAL TOTAL	106162.5	110535.1	
ANNUAL MEAN	291	303	147a
HIGHEST ANNUAL MEAN			355 2001
LOWEST ANNUAL MEAN			7.28 1990
HIGHEST DAILY MEAN	3940 Aug 3	15800 Jun 12	15800 Jun 12 2002
LOWEST DAILY MEAN	7.4 Mar 5	3.9 Mar 13-15	0.00b Jul 23 1961
ANNUAL SEVEN-DAY MINIMUM	7.7 Feb 23	4.0 Mar 9	0.00 Jul 23 1961
MAXIMUM PEAK FLOW		16000 Jun 12	16000 Jun 12 2002
MAXIMUM PEAK STAGE		26.96 Jun 12	26.96 Jun 12 2002
INSTANTANEOUS LOW FLOW		3.7 Mar 15	
ANNUAL RUNOFF (AC-FT)	210600	219200	106500
ANNUAL RUNOFF (CFSM)	0.68	0.70	0.34
ANNUAL RUNOFF (INCHES)	9.18	9.56	4.65
10 PERCENT EXCEEDS	891	416	339
50 PERCENT EXCEEDS	61	39	20
90 PERCENT EXCEEDS	10	6.9	1.9

a Median of annual mean discharges is 132 ft³/s.

b Many days, several years.

e Estimated.

