

05104500 ROSEAU RIVER BELOW SOUTH FORK NEAR MALUNG, MN

LOCATION.--Lat 48°47'30", long 95°44'40", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 poor. 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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	32	e21	e12	e8.1	8.0	e1,400	216	2,030	52	24	95
2	27	35	e20	e12	e8.0	8.1	e1,200	197	1,820	46	22	92
3	32	31	e19	e12	e7.9	8.2	e1,050	184	1,350	47	19	91
4	30	36	e18	12	e7.8	8.2	914	172	1,000	82	17	88
5	26	34	e17	12	e7.8	8.2	882	162	785	144	15	88
6	24	e28	e17	12	e7.7	8.4	863	155	646	160	14	89
7	21	e26	e16	11	e7.7	8.2	1,280	144	919	162	53	128
8	18	e24	e16	11	e7.7	8.3	2,370	137	938	175	131	219
9	16	e23	e15	10	e7.6	8.4	2,230	129	718	179	306	278
10	16	e22	e14	10	e7.6	8.6	1,650	121	578	165	374	294
11	18	e22	e14	11	7.5	e8.6	1,200	132	457	145	420	272
12	20	e23	e13	11	7.5	e8.7	895	2,150	387	119	423	240
13	22	e23	e13	11	e7.4	e8.8	704	6,220	339	99	396	209
14	24	e24	e13	11	e7.4	8.9	600	6,230	294	81	350	179
15	19	e26	e13	11	e7.4	e9.0	529	4,510	255	67	291	159
16	19	e28	e13	10	e7.3	e9.3	492	3,530	233	56	230	148
17	19	32	e12	10	e7.3	9.4	464	2,800	205	53	188	152
18	18	39	e12	10	e7.3	9.5	441	2,140	195	51	156	163
19	18	50	e12	9.7	e7.3	9.6	431	1,640	184	50	125	168
20	19	73	e12	9.3	7.2	e9.7	416	1,480	167	48	105	165
21	23	89	e12	9.2	7.3	e9.8	412	1,270	156	49	92	194
22	23	81	e12	9.2	7.3	e9.8	409	1,030	130	49	80	365
23	21	65	e12	9.2	7.4	e9.9	395	833	113	46	71	480
24	17	50	e12	9.2	7.4	10	373	685	103	44	64	549
25	15	e41	e12	8.9	7.4	11	348	624	94	39	59	602
26	15	e34	12	8.8	7.4	12	326	610	88	37	59	628
27	15	e30	e12	8.8	7.4	e15	301	602	83	33	60	608
28	17	e26	e12	8.8	7.5	e210	273	564	77	32	66	544
29	19	e24	e12	8.6	7.7	e1,850	248	502	69	29	84	462
30	22	e22	e12	8.2	---	e1,750	240	870	61	26	97	391
31	27	---	e12	e8.2	---	e1,560	---	1,780	---	26	100	---
TOTAL	649	1,093	432	315.1	218.3	5,621.6	23,336	41,819	14,474	2,391	4,491	8,140
MEAN	20.9	36.4	13.9	10.2	7.53	181	778	1,349	482	77.1	145	271
MAX	32	89	21	12	8.1	1,850	2,370	6,230	2,030	179	423	628
MIN	15	22	12	8.2	7.2	8.0	240	121	61	26	14	88
AC-FT	1,290	2,170	857	625	433	11,150	46,290	82,950	28,710	4,740	8,910	16,150
CFSM	0.05	0.08	0.03	0.02	0.02	0.42	1.81	3.14	1.12	0.18	0.34	0.63
IN.	0.06	0.09	0.04	0.03	0.02	0.49	2.02	3.62	1.25	0.21	0.39	0.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2004, BY WATER YEAR (WY)

MEAN	64.4	63.6	17.3	7.99	8.65	68.5	604	345	279	157	74.6	83.3
MAX	351	848	65.6	22.2	102	524	2,035	1,589	2,787	1,152	896	710
(WY)	(1983)	(2001)	(1995)	(1997)	(1998)	(1995)	(1966)	(1950)	(2002)	(1968)	(2001)	(1957)
MIN	0.03	0.16	0.01	0.00	0.00	0.83	5.60	8.77	4.17	0.09	0.00	0.02
(WY)	(1991)	(1991)	(1977)	(1977)	(1977)	(1977)	(1991)	(1990)	(1980)	(1980)	(1961)	(1988)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1947 - 2004	
ANNUAL TOTAL	16,489.24		102,980.0			
ANNUAL MEAN	45.2		281		a148	
HIGHEST ANNUAL MEAN					355	2001
LOWEST ANNUAL MEAN					7.28	1990
HIGHEST DAILY MEAN	325	Jun 15	6,230	May 14	15,800	Jun 12, 2002
LOWEST DAILY MEAN	0.00	Aug 23	7.2	Feb 20	0.00	Jul 23, 1961
ANNUAL SEVEN-DAY MINIMUM	0.02	Aug 20	7.3	Feb 16	0.00	Jul 23, 1961
MAXIMUM PEAK FLOW			7,280	May 13	16,000	Jun 12, 2002
MAXIMUM PEAK STAGE			22.43	May 13	26.96	Jun 12, 2002
INSTANTANEOUS LOW FLOW			7.2	Feb 19	0.00	Jul 23, 1961
ANNUAL RUNOFF (AC-FT)	32,710		204,300		106,900	
ANNUAL RUNOFF (CFSM)	0.105		0.654		0.343	
ANNUAL RUNOFF (INCHES)	1.43		8.91		4.66	
10 PERCENT EXCEEDS	119		738		339	
50 PERCENT EXCEEDS	19		38		20	
90 PERCENT EXCEEDS	3.9		8.2		2.0	

a Median of annual mean discharges is 130 ft³/s.
 b Many days, several years.
 e Estimated.

