05104500 ROSEAU RIVER BELOW SOUTH FORK NEAR MALUNG, MN

LOCATION.--Lat 48°47'30", long 95°44'40", in NW¼SW¼ 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 mi^2.

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 ft^3/s. These records include any flow in the overflow channel.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	17	e12	e10	e8.0	e6.8	e140	88	77	69	10	2.9
2	21	17	e11	e10	e8.0	e6.8	e194	79	73	65	10	2.1
3	14	17	e10	e11	e8.0	e6.8	e120	72	67	60	11	1.9
4	14	16	e9.8	e11	e8.2	e6.8	e84	68	61	54	9.6	1.5
5	14	16	e9.5	e10	e8.2	e6.8	e80	67	55	49	7.8	1.1
6	15	16	e9.2	e10	e8.2	e6.8	e65	69	58	44	6.5	0.86
7	13	16	e9.2	e10	e8.2	e6.5	e60	78	54	32	5.6	0.72
8	11	16	e9.2	e10	e8.0	e6.5	e54	86	73	24	4.8	0.89
9	11	e16	e9.2	e10	e8.0	e6.5	60	78	85	22	3.9	0.66
10	12	e15	e9.2	e10	e8.0	e6.5	62	77	97	20	2.6	1.2
11	e12	e14	e9.5	e9.8	e8.0	e6.2	69	84	124	15	2.4	1.3
12	11	e14	e9.5	e9.5	e7.8	e6.2	74	98	199	12	2.2	1.4
13	12	e14	e10	e9.2	e7.5	e6.0	76	110	242	15	1.7	2.5
14	e12	e13	e10	e9.0	e7.5	e5.8	77	104	297	17	1.7	3.9
15	12	e13	e10	e8.8	e7.2	e6.0	76	93	325	21	1.1	4.8
16	11	e12	e10	e8.8	e7.2	e7.0	72	83	289	17	0.50	5.4
17	12	e12	e10	e8.5	e7.2	e30	72	75	224	14	0.35	6.5
18	14	e13	e11	e8.5	e7.0	e140	69	74	178	12	0.21	96
19	16	e13	e11	e8.5	e7.0	e220	70	93	145	11	0.09	130
20	16	e13	e11	e8.5	e7.0	e235	102	152	119	9.0	0.03	153
21	15	e13	e11	e8.2	e7.0	e220	159	235	100	8.1	0.02	135
22	16	e13	e11	e8.0	e7.2	e200	194	254	91	8.1	0.01	109
23	16	e13	e11	e8.0	e7.0	e175	180	217	60	7.6	0.00	92
24	16	e13	e10	e7.8	e7.0	e160	156	189	50	7.1	0.00	78
25	16	e12	e11	e7.8	e7.2	e136	137	161	62	7.2	0.00	68
26	17	e12	e10	e7.5	e7.0	e60	132	136	83	7.7	0.07	58
27	17	e12	e10	e7.8	e7.0	e34	117	116	89	8.2	0.14	50
28	18	e12	e10	e7.8	e7.0	e44	107	100	82	8.7	1.2	42
29	19	e12	e10	e7.8	---	e39	99	87	77	8.0	0.99	35
30	18	e12	e10	e7.8	---	e45	95	80	72	5.3	1.2	31
31	17	---	e10	e7.8	---	e70	---	81	---	8.2	2.7	---
TOTAL	458	417	314.3	277.4	210.6	1,912.0	3,052	3,384	3,608	666.2	88.41	1,116.63
MEAN	14.8	13.9	10.1	8.95	7.52	61.7	102	109	120	21.5	2.85	37.2
MAX	21	17	12	11	8.2	235	194	254	325	69	11	153
MIN	11	12	9.2	7.5	7.0	5.8	54	67	50	5.3	0.00	0.66
AC-FT	908	827	623	550	418	3,790	6,050	6,710	7,160	1,320	175	2,210
CFSM	0.03	0.03	0.02	0.02	0.02	0.14	0.24	0.25	0.28	0.05	0.01	0.09
IN.	0.04	0.04	0.03	0.02	0.02	0.17	0.26	0.29	0.31	0.06	0.01	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)

MEAN	65.2	64.1	17.3	7.95	8.67	66.5	601	327	275	158	73.4	80.0
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	0.029	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)

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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 2003	
ANNUAL TOTAL	107,099.4		15,504.54			
ANNUAL MEAN	293		42.5		a145	
HIGHEST ANNUAL MEAN					355	2001
LOWEST ANNUAL MEAN					7.28	1990
HIGHEST DAILY MEAN	15,800	Jun 12	325	Jun 15	15,800	Jun 12, 2002
LOWEST DAILY MEAN	3.9	Mar 13	0.00	Aug 23-25	b0.00	Jul 23, 1961
ANNUAL SEVEN-DAY MINIMUM	4.0	Mar 9	0.02	Aug 20	0.00	Jul 23, 1961
MAXIMUM PEAK FLOW			c329	Jun 15	16,000	Jun 12, 2002
MAXIMUM PEAK STAGE			d8.79	Mar 19	26.96	Jun 12, 2002
INSTANTANEOUS LOW FLOW			0.00	Aug 23	b0.00	Jul 23, 1961
ANNUAL RUNOFF (AC-FT)	212,400		30,750		105,200	
ANNUAL RUNOFF (CFSM)	0.68		0.099		0.34	
ANNUAL RUNOFF (INCHES)	9.27		1.34		4.59	
10 PERCENT EXCEEDS	416		119		332	
50 PERCENT EXCEEDS	18		12		20	
90 PERCENT EXCEEDS	6.9		3.9		1.9	

a Median of annual mean discharges is 120 ft^3/s.
b Many days, several years.
c Gage height, 6.57 ft.
d Backwater from ice.
e Estimated.