

## 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 09020314, 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 mi<sup>2</sup>.

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 (NGVD 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 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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	330	178	e55	e29	e20	e20	e1,110	1,480	3,470	1,280	63	373
2	286	174	e53	e29	e20	e20	e1,550	1,400	3,530	1,190	58	349
3	250	165	e50	e28	e20	e20	e1,750	1,330	3,570	1,120	52	313
4	227	e156	e48	e28	e20	e20	e1,900	1,260	3,520	1,040	45	285
5	207	e147	e47	e27	e19	e20	e2,000	1,200	3,440	982	40	268
6	189	e128	e45	e26	e19	e20	2,110	1,150	3,330	928	38	281
7	174	e117	e44	e26	e19	e20	2,160	1,100	3,380	864	230	360
8	159	e108	e43	e25	e19	e20	2,260	1,050	3,320	806	642	443
9	146	e100	e42	e25	e19	e20	2,370	998	3,390	763	796	497
10	134	e92	e41	e25	e19	e21	2,460	945	3,330	718	870	506
11	131	e87	e39	e25	e19	e21	2,500	947	3,230	673	882	497
12	178	e86	e38	e24	e19	e21	2,490	1,390	2,960	626	866	467
13	207	e87	e37	e24	e19	e21	2,480	1,690	2,820	566	847	422
14	204	e91	e36	e24	e19	e21	2,450	2,000	2,760	502	834	412
15	196	e94	e36	e24	e19	e22	2,410	2,410	2,660	441	800	400
16	190	e99	e35	e23	e19	e22	2,340	2,900	2,570	387	756	371
17	177	e105	e34	e23	e19	e22	2,310	3,460	2,480	322	705	346
18	164	e115	e34	e23	e18	e22	2,270	3,810	2,390	245	654	337
19	156	e145	e33	e23	e18	e23	2,200	4,050	2,310	183	607	330
20	147	e185	e33	e22	e19	e23	2,160	4,180	2,230	144	553	326
21	142	e190	e33	e22	e19	e23	2,110	4,280	2,170	132	491	473
22	136	e180	e33	e22	e20	e23	2,060	4,230	2,080	134	432	618
23	132	e140	e32	e22	e20	e24	2,010	4,140	2,000	120	377	687
24	123	e115	e32	e22	e20	e24	1,940	3,940	1,910	108	328	791
25	119	e95	e32	e22	e20	e25	1,880	3,750	1,830	97	281	886
26	115	e84	e32	e21	e20	e28	1,830	3,640	1,740	84	266	902
27	114	e73	e32	e21	e20	e50	1,760	3,530	1,650	73	302	902
28	120	e66	e32	e21	e20	e90	1,690	3,370	1,550	65	306	895
29	144	e62	e31	e21	e20	e180	1,620	3,260	1,460	63	286	887
30	166	e58	e30	e21	---	e650	1,540	3,290	1,370	61	315	869
31	174	---	e30	e21	---	e900	---	3,410	---	61	372	---
TOTAL	5,337	3,522	1,172	739	561	2,436	61,720	79,590	78,450	14,778	14,094	15,493
MEAN	172	117	37.8	23.8	19.3	78.6	2,057	2,567	2,615	477	455	516
MAX	330	190	55	29	20	900	2,500	4,280	3,570	1,280	882	902
MIN	114	58	30	21	18	20	1,110	945	1,370	61	38	268
AC-FT	10,590	6,990	2,320	1,470	1,110	4,830	122,400	157,900	155,600	29,310	27,960	30,730
CFSM	0.16	0.11	0.03	0.02	0.02	0.07	1.89	2.36	2.40	0.44	0.42	0.47
IN.	0.18	0.12	0.04	0.03	0.02	0.08	2.11	2.72	2.68	0.50	0.48	0.53

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2004, BY WATER YEAR (WY)

MEAN	134	119	37.4	16.5	14.6	86.3	891	937	599	335	141	139
MAX	974	1,926	395	66.5	99.2	551	3,234	4,583	4,553	2,300	1,352	1,041
(WY)	(1942)	(2001)	(2001)	(1997)	(1998)	(1946)	(1966)	(1950)	(2002)	(2002)	(1968)	(1968)
MIN	1.91	1.63	0.27	0.00	0.00	2.76	32.1	29.5	6.83	1.39	0.84	0.38
(WY)	(1991)	(1977)	(1977)	(1977)	(1977)	(1989)	(1991)	(1988)	(1980)	(1980)	(1961)	(1990)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1928 - 2004	
ANNUAL TOTAL	57,997.8		277,892			
ANNUAL MEAN	159		759		a288	
HIGHEST ANNUAL MEAN					759	2004
LOWEST ANNUAL MEAN					28.9	1934
HIGHEST DAILY MEAN	706	Sep 20	4,280	May 21	10,100	Jun 16, 2002
LOWEST DAILY MEAN	9.0	Aug 25	b18	Feb 18,19	c0.00	Aug 29, 1961
ANNUAL SEVEN-DAY MINIMUM	9.1	Feb 16	19	Feb 13	0.00	Jan 3, 1977
MAXIMUM PEAK FLOW			4,300	May 21	10,500	Jun 16, 2002
MAXIMUM PEAK STAGE			16.77	May 21	18.89	Jun 16, 2002
INSTANTANEOUS LOW FLOW			b18	Feb 18	c0.00	Aug 29, 1961
ANNUAL RUNOFF (AC-FT)	115,000		551,200		208,900	
ANNUAL RUNOFF (CFSM)	0.146		0.697		0.265	
ANNUAL RUNOFF (INCHES)	1.98		9.48		3.59	
10 PERCENT EXCEEDS	459		2,470		912	
50 PERCENT EXCEEDS	90		178		42	
90 PERCENT EXCEEDS	9.6		20		6.1	

- a Median of annual mean discharges is 240 ft<sup>3</sup>/s.
- b Estimated, daily-mean.
- c Many days, several years.
- e Estimated.

