



Water-Data Report 2009

05107500 ROSEAU RIVER AT ROSS, MN

Lower Red Basin
Roseau Subbasin

LOCATION.--Lat 48°54'37", long 95°55'18" referenced to North American Datum of 1927, in NE ¼ SE ¼ sec.27, T.163 N., R.41 W., Roseau County, MN, 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 mi².

SURFACE-WATER RECORDS

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, non-recording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. High flows affected by natural storage in Roseau Lake, located approximately 3 miles upstream.

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.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	129	425	e154	e33	e26	e34	e2,070	2,860	2,310	862	60	96
2	120	390	e142	e33	e26	e33	e2,220	2,840	2,270	827	62	80
3	111	360	e135	e33	e26	e33	e2,290	2,810	2,220	783	57	68
4	102	339	e127	e33	e26	e33	e2,340	2,790	2,170	732	54	60
5	92	344	e119	e32	e26	e34	e2,380	2,750	2,110	677	50	52
6	92	538	e107	e31	e26	e35	e2,390	2,700	2,060	618	47	46
7	138	e831	e89	e30	e25	e36	2,380	2,610	2,000	561	44	41
8	226	e942	e85	e30	e25	e36	2,320	2,560	1,930	503	41	37
9	257	e955	e81	e30	e26	e36	2,290	2,500	1,850	447	43	53
10	254	e962	e76	e30	e26	e35	2,310	2,440	1,780	381	47	94
11	235	968	e72	e29	e27	e34	2,370	2,390	1,710	295	49	126
12	298	966	e68	e29	e29	e34	2,470	2,340	1,630	219	47	153
13	685	962	e64	e28	e31	e34	2,610	2,230	1,560	164	43	145
14	847	957	e59	e28	e33	e34	2,750	2,230	1,490	126	38	129
15	836	945	e52	e28	e35	e35	2,880	2,200	1,410	161	69	114
16	802	923	e46	e27	e37	e36	3,010	2,140	1,340	209	342	97
17	773	884	e45	e27	e39	e38	3,140	2,110	1,270	217	457	82
18	757	837	e43	e28	e42	e45	3,290	2,060	1,210	212	444	73
19	743	823	e42	e28	e44	e69	3,390	2,040	1,150	199	390	63
20	718	791	e41	e28	e45	e142	3,430	1,970	1,090	174	403	58
21	685	e740	e40	e28	e45	e281	3,440	1,890	1,040	150	403	52
22	651	e678	e39	e28	e44	e526	3,450	1,830	981	128	383	46
23	626	e613	e38	e28	e43	e848	3,400	1,760	923	114	340	42
24	604	e554	e37	e28	e42	e1,050	3,310	1,690	863	105	303	39
25	581	e493	e36	e28	e39	e1,150	3,220	1,670	799	96	281	36
26	560	e411	e36	e27	e37	e1,240	3,180	1,880	733	86	251	34
27	552	e339	e37	e27	e36	e1,330	3,060	2,050	757	75	216	34
28	532	e298	e37	e27	e34	e1,410	2,990	2,190	848	68	186	41
29	508	e239	e36	e27	---	e1,460	2,940	2,280	878	60	161	48
30	484	e195	e35	e26	---	e1,600	2,900	2,320	877	57	135	45
31	460	---	e34	e26	---	e1,840	---	2,330	---	56	115	---
Total	14,458	19,702	2,052	895	940	13,581	84,220	70,460	43,259	9,362	5,561	2,084
Mean	466	657	66.2	28.9	33.6	438	2,807	2,273	1,442	302	179	69.5
Max	847	968	154	33	45	1,840	3,450	2,860	2,310	862	457	153
Min	92	195	34	26	25	33	2,070	1,670	733	56	38	34
Ac-ft	28,680	39,080	4,070	1,780	1,860	26,940	167,100	139,800	85,800	18,570	11,030	4,130
Cfs/m	0.43	0.60	0.06	0.03	0.03	0.40	2.58	2.09	1.32	0.28	0.16	0.06
In.	0.49	0.67	0.07	0.03	0.03	0.46	2.87	2.40	1.48	0.32	0.19	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	146	138	38.1	17.1	15.0	89.2	943	944	621	353	143	136
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

	Calendar Year 2008		Water Year 2009		Water Years 1928 - 2009	
Annual total	112,891.4		266,574			
Annual mean	308		730		^a 299	
Highest annual mean					759	2004
Lowest annual mean					28.9	1934
Highest daily mean	1,180	Jun 17	3,450	Apr 22	10,100	Jun 16, 2002
Lowest daily mean	7.3	Mar 7	^b 25	Feb 7	^c 0.00	Aug 29, 1961
Annual seven-day minimum	7.5	Mar 4	26	Feb 2	0.00	Jan 3, 1977
Maximum peak flow			3,460	Apr 21	10,500	Jun 16, 2002
Maximum peak stage			16.35	Apr 21	18.89	Jun 16, 2002
Instantaneous low flow			^b 25	Feb 7	^c 0.00	Aug 29, 1961
Annual runoff (ac-ft)	223,900		528,700		216,900	
Annual runoff (cfsm)	0.283		0.670		0.275	
Annual runoff (inches)	3.85		9.10		3.73	
10 percent exceeds	756		2,330		951	
50 percent exceeds	178		199		44	
90 percent exceeds	8.9		30		6.4	

^a Median of annual mean discharges is 250 ft³/s.

^b Estimated daily-mean discharge, backwater from ice.

^c Many days, several years.

