

## 05112000 ROSEAU RIVER BELOW STATE DITCH 51, NEAR CARIBOU, MN

LOCATION.--Lat 48°58'54", long 96°27'46", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T.164 N., R.45 W., Kittson County, Hydrologic Unit 09020314, on left bank 400 ft downstream from State ditch 51 (known locally as Caribou cutoff ditch) and 0.6 mi west of Caribou.

DRAINAGE AREA.--1,420 mi<sup>2</sup>.

PERIOD OF RECORD.--April to October 1917, April 1920 to current year (no winter records in water years 1931, 1932, 1934-36, 1938-40, 1944-72).

Published as "at Caribou," prior to April 1929; as "below Cutoff ditch, near Caribou" April 1929 to September 1936. Records published for both sites April 1929 to September 1930. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1938(M). WSP 1508: 1917(M), 1920, 1932(M), 1934-35(M). WSP 1913: 1954(M).

GAGE.--Water-stage recorder. Datum of gage is 1,002.31 ft above sea level (NGVD of 1929, levels by Geodetic Survey of Canada). Prior to Apr. 1, 1929, nonrecording gage at site at Caribou 0.6 mi upstream at datum 0.95 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation from wildlife management impoundments several miles upstream of gage. Occasionally, at high stages, there is some natural diversion of flow above station to headwaters of Two Rivers.

COOPERATION.--Red Lake Watershed Management Board.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1916 is reported to have reached a stage of about 15.5 ft at former site.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,110	1,270	e235	e30	e27	e24	e270	2,050	1,220	2,220	1,670	249
2	1,090	1,300	e215	e29	e28	e24	e460	1,990	1,210	2,190	1,590	265
3	1,060	1,320	e195	e29	e28	e24	e800	1,940	1,250	2,350	1,510	274
4	1,020	1,340	e175	e28	e28	e24	e1,350	1,880	1,400	2,340	1,420	262
5	975	1,360	e157	e28	e28	e24	e1,800	1,820	1,660	2,300	1,320	243
6	923	1,380	e140	e27	e29	e24	1,780	1,750	1,680	2,280	1,210	232
7	859	1,390	e130	e26	e28	e24	1,770	1,690	1,600	2,270	1,070	229
8	791	1,400	e117	e26	e27	e24	1,810	1,640	1,570	2,400	894	224
9	721	1,410	e106	e25	e27	e24	1,880	1,630	1,530	2,430	688	204
10	661	1,400	e100	e25	e27	e24	1,960	1,670	1,490	2,400	476	181
11	610	1,380	e94	e24	e27	e24	2,070	1,580	1,490	2,390	323	164
12	562	1,350	e89	e24	e28	e24	2,180	1,500	1,570	2,380	248	151
13	515	1,320	e85	e23	e28	e24	2,250	1,450	1,610	2,380	205	144
14	462	1,270	e79	e23	e28	e24	2,290	1,410	1,740	2,370	181	133
15	412	1,230	e75	e23	e28	e24	2,320	1,370	1,770	2,360	162	124
16	383	1,180	e72	e23	e28	e24	2,330	1,340	1,750	2,360	145	122
17	367	1,110	e68	e23	e27	e24	2,340	1,310	1,760	2,340	133	117
18	351	1,030	e65	e23	e27	e24	2,360	1,280	1,780	2,330	131	124
19	353	940	e63	e23	e26	e24	2,360	1,250	1,800	2,310	188	126
20	384	842	e59	e24	e26	e25	2,350	1,210	1,830	2,280	437	125
21	417	754	e56	e24	e26	e25	2,340	1,210	1,860	2,250	625	117
22	445	667	e53	e24	e26	e26	2,330	1,260	1,900	2,220	705	110
23	524	578	e48	e24	e25	e26	2,310	1,240	1,930	2,180	678	103
24	621	e520	e45	e25	e25	e27	2,290	1,230	1,960	2,140	624	102
25	743	e450	e42	e25	e25	e28	2,270	1,250	1,980	2,090	570	104
26	846	e400	e39	e26	e25	e29	2,240	1,240	2,000	2,050	531	136
27	910	e360	e37	e26	e24	e32	2,200	1,260	2,060	2,000	478	121
28	962	e320	e36	e26	e24	e36	2,160	1,310	2,060	1,950	424	102
29	1,070	e285	e34	e27	---	e57	2,130	1,300	2,080	1,890	365	82
30	1,170	e260	e33	e27	---	e88	2,090	1,270	2,210	1,820	313	74
31	1,220	---	e31	e27	---	e170	---	1,250	---	1,750	271	---
TOTAL	22,537	29,816	2,773	787	750	1,025	59,090	45,580	51,750	69,020	19,585	4,744
MEAN	727	994	89.5	25.4	26.8	33.1	1,970	1,470	1,725	2,226	632	158
MAX	1,220	1,410	235	30	29	170	2,360	2,050	2,210	2,430	1,670	274
MIN	351	260	31	23	24	24	270	1,210	1,210	1,750	131	74
AC-FT	44,700	59,140	5,500	1,560	1,490	2,030	117,200	90,410	102,600	136,900	38,850	9,410
CFSM	0.51	0.70	0.06	0.02	0.02	0.02	1.39	1.04	1.21	1.57	0.44	0.11
IN.	0.59	0.78	0.07	0.02	0.02	0.03	1.55	1.19	1.36	1.81	0.51	0.12

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2005, BY WATER YEAR (WY)

MEAN	179	185	70.3	27.4	23.1	129	858	988	687	484	188	188
MAX	1,302	2,022	813	134	75.4	793	2,168	3,029	3,066	3,080	1,582	1,451
(WY)	(1942)	(2001)	(2001)	(1927)	(1997)	(1995)	(1966)	(1950)	(2004)	(2002)	(1993)	(1968)
MIN	0.12	0.26	0.53	0.09	0.06	1.57	38.2	26.9	6.70	0.65	2.09	0.30
(WY)	(1991)	(1991)	(1991)	(1991)	(1991)	(1989)	(1981)	(1988)	(1980)	(1980)	(1936)	(1990)

05112000 ROSEAU RIVER BELOW STATE DITCH 51, NEAR CARIBOU, MN—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1917 - 2005	
ANNUAL TOTAL	362,618		307,457			
ANNUAL MEAN	991		842		359	
HIGHEST ANNUAL MEAN					933	2001
LOWEST ANNUAL MEAN					35.9	1977
HIGHEST DAILY MEAN	3,460	May 31	2,430	Jul 9	4,320	Jun 25, 2002
LOWEST DAILY MEAN	21	Feb 14	23	Jan 13-19	a.00	Sep 15, 1990
ANNUAL SEVEN-DAY MINIMUM	22	Feb 10	23	Jan 13	0.04	Sep 12, 1990
MAXIMUM PEAK FLOW			2,450	Jul 8	4,320	Jun 24, 2002
MAXIMUM PEAK STAGE			9.39	Jul 8	11.91	Jun 24, 2002
INSTANTANEOUS LOW FLOW			b23	Jan 13	c.00	Aug 13, 1936
ANNUAL RUNOFF (AC-FT)	719,300		609,800		260,100	
ANNUAL RUNOFF (CFSM)	0.698		0.593		0.253	
ANNUAL RUNOFF (INCHES)	9.50		8.05		3.44	
10 PERCENT EXCEEDS	2,670		2,200		1,250	
50 PERCENT EXCEEDS	619		476		70	
90 PERCENT EXCEEDS	23		25		9.0	

- a Also occurred, Sept. 16,17, 1990.
- b Estimated, minimum-daily.
- c Also occurred, Sept. 15-17, 1990.
- e Estimated.

