

## RED RIVER OF THE NORTH BASIN--Continued

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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	243	1100	e2140	e105	e34	e25	e200	2700	1660	1200	946	438
2	236	1260	e2020	e97	e34	e25	e230	2680	1670	1150	1220	354
3	228	1330	e1930	e89	e34	e25	e360	2640	1670	1100	1290	298
4	230	1350	e1800	e82	e33	e25	e530	2600	1680	1040	1310	259
5	236	1370	e1700	e75	e33	e25	e660	2560	1680	928	1320	231
6	230	1500	e1600	e70	e33	e25	e843	2550	1690	798	1340	205
7	224	1720	e1500	e65	e33	e25	e1050	2550	1700	655	1370	191
8	219	1850	e1400	e61	e32	e25	e1300	2550	1740	528	1390	181
9	214	1840	e1280	e58	e32	e25	e1500	2500	1780	426	1430	210
10	209	1850	e1180	e54	e32	e25	e1700	2440	1770	335	1450	248
11	205	1880	e1080	e52	e31	e25	e2000	2380	1760	254	1480	241
12	203	1930	e970	e50	e31	e25	e2300	2320	1750	198	1510	216
13	201	2010	e864	e48	e31	e26	e2600	2270	1730	159	1530	190
14	176	2070	e750	e47	e30	e26	2860	2210	1720	134	1560	166
15	150	2130	e660	e45	e30	e26	2870	2160	1720	120	1590	149
16	141	2180	e580	e44	e30	e27	2810	2110	1700	113	1610	157
17	139	e2230	e500	e43	e29	e28	2800	2060	1660	111	1620	153
18	139	e2280	e435	e42	e29	e29	2810	2000	1640	110	1630	142
19	138	e2350	e370	e41	e29	e31	2820	1950	1710	134	1620	134
20	137	e2380	e335	e40	e28	e34	2830	1900	1690	154	1600	128
21	136	e2400	e295	e39	e28	e43	2820	1870	1650	246	1580	118
22	134	e2440	e270	e38	e28	e54	2810	1820	1590	361	1550	108
23	144	e2480	e240	e37	e27	e73	2810	1810	1540	464	1510	105
24	279	e2490	e220	e37	e27	e95	2800	1780	1490	528	1460	100
25	315	e2500	e200	e36	e27	e130	2800	1730	1460	529	1440	99
26	377	e2480	e185	e36	e26	e190	2790	1690	1420	462	1380	97
27	694	e2420	e165	e35	e26	e220	2770	1700	1380	407	1280	93
28	941	e2350	e150	e35	e26	e225	2770	1700	1350	497	1150	88
29	1020	e2290	e137	e35	---	e215	2750	1670	1310	464	985	81
30	1060	e2210	e123	e34	---	e200	2730	1650	1260	429	787	68
31	1070	---	e114	e34	---	e195	---	1640	---	457	579	---
TOTAL	10068	60670	25193	1604	843	2167	62923	66190	48570	14491	42517	5248
MEAN	325	2022	813	51.7	30.1	69.9	2097	2135	1619	467	1372	175
MAX	1070	2500	2140	105	34	225	2870	2700	1780	1200	1630	438
MIN	134	1100	114	34	26	25	200	1640	1260	110	579	68
AC-FT	19970	120300	49970	3180	1670	4300	124800	131300	96340	28740	84330	10410
CFSM	.23	1.42	.57	.04	.02	.05	1.48	1.50	1.14	.33	.97	.12
IN.	.26	1.59	.66	.04	.02	.06	1.65	1.73	1.27	.38	1.11	.14

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	174	172	70.8	27.6	23.4	134	841	977	628	428	172	181
MAX	1302	2022	813	134	75.4	793	2168	3029	2588	1653	1582	1451
(WY)	1942	2001	2001	1927	1997	1995	1966	1950	1970	1968	1993	1968
MIN	.12	.26	.53	.090	.060	1.57	38.2	26.9	6.70	.65	2.09	.30
(WY)	1991	1991	1991	1991	1991	1989	1981	1988	1980	1980	1936	1990

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1917 - 2001
ANNUAL TOTAL	193350	340484	
ANNUAL MEAN	528	933	334
HIGHEST ANNUAL MEAN			933
LOWEST ANNUAL MEAN			35.9
HIGHEST DAILY MEAN	2500	Nov 25	4020
LOWEST DAILY MEAN	22	Feb 19	.00a
ANNUAL SEVEN-DAY MINIMUM	22	Feb 17	.04
MAXIMUM PEAK FLOW			4080
MAXIMUM PEAK STAGE			11.81
INSTANTANEOUS LOW FLOW			.00a
ANNUAL RUNOFF (AC-FT)	383500	675400	242000
ANNUAL RUNOFF (CFSM)	.37	.66	.24
ANNUAL RUNOFF (INCHES)	5.07	8.92	3.20
10 PERCENT EXCEEDS	1480	2380	1260
50 PERCENT EXCEEDS	244	464	84
90 PERCENT EXCEEDS	25	31	9.6

- a Many days, several years.
- b Gage-height, 10.13 ft.
- c Backwater from ice.
- e Estimated.

