

RED RIVER OF THE NORTH BASIN

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

LOCATION.--Lat 4858'54", long 9627'46", in SE 1 / 4 SW 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 mi² (revised).

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 (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 fair. Satellite telemeter at station. 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, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	409	e110	e49	e34	e700	1070	651	1540	1160	69	37
2	70	435	e105	e48	e34	e750	1060	590	1520	1190	59	32
3	67	450	e100	e47	e34	e800	1070	533	1500	1250	53	29
4	64	532	e95	e46	e34	e850	1070	433	1470	1240	48	26
5	65	510	e92	e45	e34	e900	1060	360	1440	1240	44	25
6	65	501	e88	e44	e34	e920	1060	307	1400	1240	40	23

7	62	470	e86	e43	e34	e940	1060	278	1350	1270	37	22
8	62	456	e84	e43	e34	e950	1050	265	1290	1280	33	21
9	84	473	e83	e42	e34	e960	1050	247	1220	1260	30	19
10	140	490	e80	e41	e34	e970	1050	229	1120	1250	27	19
11	295	e500	e78	e40	e34	e970	1050	232	993	1240	25	19
12	330	e510	e76	e40	e34	e930	1050	236	818	1200	24	18
13	469	e515	e74	e39	e35	e890	1090	247	630	1160	24	18
14	704	e490	e73	e38	e36	e860	1140	276	486	1110	23	19
15	864	e450	e72	e38	e36	e830	1180	366	542	1050	21	18
16	920	e400	e71	e37	e37	e800	1200	846	584	936	22	18
17	950	e350	e70	e37	e37	e750	1210	1200	551	797	20	17
18	966	e310	e68	e36	e37	e660	1220	1270	505	650	20	17
19	959	e270	e67	e36	e37	e540	1230	1290	484	524	21	20
20	956	e250	e66	e35	e37	e470	1230	1330	608	411	21	21
21	943	e220	e65	e35	e37	e430	1230	1350	736	367	19	19
22	924	e200	e64	e35	e38	e380	1210	1380	833	335	19	21
23	893	e185	e62	e35	e42	e370	1190	1410	879	346	21	22
24	838	e170	e60	e34	e50	e360	1150	1440	910	343	21	22
25	764	e160	e58	e34	e60	e360	1120	1470	937	306	20	24
26	654	e148	e57	e34	e150	e450	1070	1490	975	259	20	25
27	543	e140	e55	e34	e350	e560	1010	1510	1010	213	24	28
28	448	e130	e54	e34	e610	e900	952	1570	1070	164	26	30
29	402	e123	e53	e34	---	e1050	880	1590	1120	126	27	26
30	397	e116	e52	e34	---	1070	760	1580	1140	100	34	25
31	389	---	e50	e34	---	1070	---	1560	---	82	39	---
TOTAL	15356	10363	2268	1201	2037	23440	32772	27536	29661	24099	931	680
MEAN	495	345	73.2	38.7	72.8	756	1092	888	989	777	30.0	22.7
MAX	966	532	110	49	610	1070	1230	1590	1540	1280	69	37
MIN	62	116	50	34	34	360	760	229	484	82	19	17
AC-FT	30460	20560	4500	2380	4040	46490	65000	54620	58830	47800	1850	1350

CFSM	.32	.22	.05	.02	.05	.48	.70	.57	.63	.50	.02	.01
IN.	.37	.25	.05	.03	.05	.56	.78	.66	.71	.57	.02	.02

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	172	137	53.2	26.9	22.3	131	817	955	596	406	158	176
MAX	1302	712	303	134	75.4	793	2168	3029	2588	1653	1582	1451
(WY)	1942	1995	1995	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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1917 - 1998		
ANNUAL TOTAL	235081		170344				
ANNUAL MEAN	644		467		310		
HIGHEST ANNUAL MEAN					683		1927
LOWEST ANNUAL MEAN					35.9		1977
HIGHEST DAILY MEAN	3310		May 8	1590	May 29	4020	May 19 1950
LOWEST DAILY MEAN	17		Sep 6	17	Sep 17,18	.00	Sep 15 1990
ANNUAL SEVEN-DAY MINIMUM	19		Sep 1	18	Sep 12	.04	Sep 12 1990
INSTANTANEOUS PEAK FLOW				1590	May 28	4080	May 19 1950
INSTANTANEOUS PEAK STAGE				7.86a	Mar 28	11.81	May 19 1950
INSTANTANEOUS LOW FLOW				17	Sep 15	.00b	Aug 13 1936
ANNUAL RUNOFF (AC-FT)	466300			337900		224800	

ANNUAL RUNOFF (CFSM)	.41		.30		.20		
ANNUAL RUNOFF (INCHES)	5.61		4.06		2.70		
10 PERCENT EXCEEDS	2490		1210		79		
90 PERCENT EXCEEDS	49		25		9.0		

a Backwater from ice.

b Many days, several years.

