

RED RIVER OF THE NORTH BASIN

05030500 OTTER TAIL RIVER NEAR ELIZABETH, MN

LOCATION.--Lat 46° 22'10", long 96° 01'02", in SW¼SE¼ sec. 31, T.134 N., R.42 W.,Ottertail County, Hydrologic Unit 09020103, on right bank, 2.5 miles below Taplin Gorge Dam, 5.0 miles above the Diversion Dam, 5.7 miles east of Elizabeth and 6.6 miles northeast of Fergus Falls.

DRAINAGE AREA.--1,230 mi², approximately.

PERIOD OF RECORD.--May 1904 to September 1917, monthly discharge only, published as at German Church near Fergus Falls in WSP 1308. July 1992 to current year.

REVISED RECORD.-- Peak discharge changed to 1080 ft³/s (June 23, 1904), beginning with 1997 record.

GAGE.--Water-stage recorder. Datum of gage is 1,250 ft above mean sea level, from topographic map. Nonrecording gage at same site Nov. 1913 to September 1917 at datum 1,265 ft from topographic map.

REMARKS.--Records good except those for estimated daily discharge, which are fair. Flow regulated by power plant upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
1	120	140	289	e275	e315	e305	333	894	882
544	573	484							
2	115	141	330	e280	e315	e300	340	925	872
595	571	487							
3	114	143	358	e290	e310	e290	348	926	827
574	575	480							
4	114	144	294	e300	e310	e290	359	928	820
570	572	475							
5	113	145	290	e310	e305	e280	403	935	826
568	570	458							
6	109	160	295	e310	e305	e290	477	940	818
563	579	448							
7	107	162	322	e310	e310	e300	482	960	811
566	575	447							
8	106	157	312	e310	e310	e300	482	976	798
574	571	446							
9	104	156	298	e310	e310	e300	478	978	783
558	565	440							
10	103	155	299	e310	e310	e300	479	986	770

559	558	435							
11	102	154	299	e310	e305	e310	491	989	752
564	552	413							
12	101	155	307	e310	e300	e320	521	980	711
558	520	412							
13	102	157	e315	e310	e300	e330	536	984	702
554	511	412							
14	101	162	e320	e320	e305	e340	559	987	695
569	518	409							
15	99	169	e320	e325	e310	e355	578	979	706
569	512	400							
16	99	175	e315	e330	e320	e365	609	976	697
574	511	375							
17	107	182	e315	e330	e325	e380	621	970	689
577	509	358							
18	110	170	e310	e330	e330	e385	635	969	678
580	506	358							
19	112	189	e290	e340	e330	e390	655	955	653
582	507	328							
20	114	210	e280	e350	e330	e395	704	948	651
585	504	388							
21	111	223	e270	e358	e320	e395	720	941	649
597	497	366							
22	111	235	e265	e350	e320	e390	726	943	641
604	493	350							
23	112	232	e260	e350	e315	e390	764	965	639
597	492	343							
24	111	244	e255	e345	e315	e385	774	972	628
595	488	334							
25	112	282	e255	e335	e310	e385	786	965	589
598	480	324							
26	114	331	e255	e335	e320	e377	819	955	581
596	471	319							
27	112	313	e250	e330	e320	326	839	940	581
595	468	313							
28	113	285	e255	e325	e310	304	868	930	556
590	471	311							
29	134	280	e260	e320	---	303	878	921	606
577	476	284							
30	145	314	e270	e320	---	307	884	906	581
572	478	279							
31	139	---	e275	e320	---	326	---	895	---
573	475	---							
TOTAL	3466	5965	9028	9948	8785	10413	18148	29518	21192
17877	16148	11676							
MEAN	112	199	291	321	314	336	605	952	706
577	521	389							
MAX	145	331	358	358	330	395	884	989	882
604	579	487							

MIN	99	140	250	275	300	280	333	894	556
544	468	279							
AC-FT	6870	11830	17910	19730	17430	20650	36000	58550	42030
35460	32030	23160							
CFSM	.09	.16	.24	.26	.26	.27	.49	.77	.57
.47	.42	.32							
IN.	.10	.18	.27	.30	.27	.31	.55	.89	.64
.54	.49	.35							

- e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
MEAN	287	292	296	286	314	365	520	733	637
514	381	326							
MAX	740	571	489	400	439	443	632	952	754
745	759	817							
(WY)	1994	1994	1994	1994	1994	1994	1995	1997	1996
1993	1993	1993							
MIN	112	143	141	181	209	314	357	453	454
358	218	134							
(WY)	1997	1993	1993	1993	1993	1993	1993	1993	1995
1995	1996	1996							

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1992 - 1997

ANNUAL TOTAL	133950	162164	
ANNUAL MEAN	366	444	418
HIGHEST ANNUAL MEAN			
495	1994		
LOWEST ANNUAL MEAN			
349	1995		
HIGHEST DAILY MEAN	959	May 20	989
May 11 1997			May 11
LOWEST DAILY MEAN	99	Oct 15	99
Oct 15 1996			Oct 15
ANNUAL SEVEN-DAY MIN	101	Oct 10	101
Oct 10 1996			Oct 10
INSTANTANEOUS PEAK FLOW			994
May 11 1997			May 11
INSTANTANEOUS PEAK STAGE			8.40
May 11 1997			May 11
INSTANTANEOUS LOW FLOW			98
Aug 9 1996			Oct 14
ANNUAL RUNOFF (AC-FT)	265700	321700	302500
ANNUAL RUNOFF (CFSM)	.30	.36	.34
ANNUAL RUNOFF (INCHES)	4.05	4.90	4.61
10 PERCENT EXCEEDS	776	851	743

50 PERCENT EXCEEDS	310	358	343
90 PERCENT EXCEEDS	120	150	160

- ^a Result of regulation.