

RED RIVER OF THE NORTH BASIN

05030500 OTTER TAIL RIVER NEAR ELIZABETH, MN

LOCATION.--Lat 46°22'10", long 96°01'02", in SW¹/₄SE¹/₄ sec. 31, T.134 N., R.42 W., Ottertail County, Hydrologic Unit 09020103, on right bank at County Highway 10, 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.

GAGE.--Water-stage recorder. Elevation of gage is 1,250 ft above sea level (from topographic map). Nonrecording gage at same site Nov. 1913 to September 1917 at elevation 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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	573	431	330	e300	e299	394	597	551	596	602	575	362
2	578	433	329	e301	e299	378	570	558	564	589	548	361
3	562	434	328	e301	e299	371	532	563	594	594	540	358
4	568	429	324	e301	e300	365	533	554	597	592	544	356
5	557	422	323	e300	e302	364	552	565	597	589	539	314
6	550	414	316	e299	e305	364	570	559	596	615	530	280
7	548	413	314	e299	e308	365	578	556	593	598	523	311
8	546	416	316	e298	e310	380	577	562	589	602	515	331
9	545	426	316	e297	e311	392	581	559	584	620	499	331
10	543	414	315	e296	e312	395	582	572	573	614	494	326
11	540	400	316	e296	e313	400	576	591	565	613	495	317
12	534	389	314	e297	e312	404	579	588	528	618	470	301
13	527	388	314	e298	e312	407	580	600	545	588	480	291
14	524	386	312	e299	e311	413	610	602	562	627	451	281
15	519	380	311	e298	e310	422	614	606	550	617	443	268
16	513	379	e294	e297	e310	428	607	582	585	608	444	258
17	507	373	e290	e296	e311	e440	608	612	603	599	454	259
18	506	365	e288	e296	e312	e455	605	626	605	565	426	261
19	502	358	e278	e297	e312	468	603	622	608	564	432	260
20	498	364	e260	e298	e312	502	607	619	612	576	504	248
21	493	368	e230	e298	e312	509	605	608	633	574	447	259
22	483	365	e260	e299	e320	526	605	603	625	573	396	267
23	476	364	e280	e299	e335	525	603	599	620	569	382	267
24	476	360	e270	e297	e360	527	599	591	614	565	389	266
25	464	358	e270	e296	398	525	595	585	610	599	383	265
26	462	353	e280	e295	416	528	589	583	610	610	393	267
27	446	350	e285	e296	409	532	586	585	609	611	387	266
28	408	343	e290	e298	401	533	578	580	608	598	381	265
29	435	334	e294	e299	404	550	573	584	609	591	371	264
30	437	332	e299	e300	---	565	568	575	613	583	365	261
31	438	---	e300	e300	---	600	---	604	---	576	364	---
TOTAL	15758	11541	9246	9241	9515	14027	17562	18144	17797	18439	14164	8721
MEAN	508	385	298	298	328	452	585	585	593	595	457	291
MAX	578	434	330	301	416	600	614	626	633	627	575	362
MIN	408	332	230	295	299	364	532	551	528	564	364	248
AC-FT	31260	22890	18340	18330	18870	27820	34830	35990	35300	36570	28090	17300
CFSM	.41	.31	.24	.24	.27	.37	.48	.48	.48	.48	.37	.24
IN.	.48	.35	.28	.28	.29	.42	.53	.55	.54	.56	.43	.26

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	328	340	335	322	346	403	561	714	645	572	433	358
MAX	740	571	529	479	523	477	725	952	870	770	759	817
(WY)	1994	1994	1999	1999	1999	1999	1999	1997	1999	1998	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 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1992 - 2000
ANNUAL TOTAL	209585	164155	
ANNUAL MEAN	574	449	451
HIGHEST ANNUAL MEAN			593 1999
LOWEST ANNUAL MEAN			349 1995
HIGHEST DAILY MEAN	993 Jun 6	633 Jun 21	993 Jun 6 1999
LOWEST DAILY MEAN	230 Dec 21	230 ^a Dec 21	99 Oct 15 1996
ANNUAL SEVEN-DAY MINIMUM	264 Dec 19	259 Sep 16	101 Oct 10 1996
INSTANTANEOUS PEAK FLOW		656 Jun 20	1040 May 11 1999
INSTANTANEOUS PEAK STAGE		7.39 Jun 20	9.11 May 11 1999
INSTANTANEOUS LOW FLOW		144 ^b Sep 20	61 ^b Aug 9 1996
ANNUAL RUNOFF (AC-FT)	415700	325600	326400
ANNUAL RUNOFF (CFSM)	.47	.36	.37
ANNUAL RUNOFF (INCHES)	6.34	4.96	4.98
10 PERCENT EXCEEDS	894	605	738
50 PERCENT EXCEEDS	530	439	406
90 PERCENT EXCEEDS	356	296	199

a Result of freezeup.
 b Result of regulation.
 e Estimated.

