

## RED RIVER OF THE NORTH BASIN--Continued

05046000 OTTER TAIL RIVER BELOW ORWELL DAM, NEAR FERGUS FALLS, MN

LOCATION.--Lat 46°12'35", long 96°11'05", in NE $\frac{1}{4}$  sec. 34, T.132 N., R.44 W., Otter Tail County, Hydrologic Unit 09020103, on left bank 0.7 mi downstream from Orwell Dam on County Highway 15, 6.1 mi downstream from Dayton Hollow Dam, 8 mi southwest of Fergus Falls, and 11.1 mi downstream from Pelican River.

DRAINAGE AREA.--1,740 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1952, published as "Otter Tail River below Pelican River, near Fergus Falls". Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 785: 1934(M). WSP 1208: 1947(M). WSP 1308: 1931(M).

GAGE.--Water-stage recorder. Datum of gage is 1,029.65 ft above sea level ((NGVD of 1912, levels by U.S. Army Corps of Engineers). Oct. 11, 1930 to Nov. 17, 1933, at same site at datum 2.00 ft higher; Nov. 18, 1933 to Mar. 21, 1953, at site 6.1 mi upstream at datum 40.30 ft higher.

REMARKS.--Records good. Flow regulated at Orwell Lake (station 05045950) beginning Mar. 21, 1953, and by power plant upstream.

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	446	307	819	655	670	599	671	1150	1430	1430	890	497
2	443	318	814	671	662	685	709	1170	1390	1330	890	496
3	443	329	808	680	658	794	745	1220	1390	1250	889	496
4	431	326	769	677	655	783	818	1170	1390	1250	883	496
5	421	330	735	679	593	777	888	1130	1340	1210	880	493
6	388	337	671	676	531	769	924	1160	1310	1160	812	493
7	362	426	641	675	583	759	1130	1180	1300	1160	766	498
8	368	525	572	680	587	745	1200	1160	1310	1160	770	496
9	369	561	525	682	537	768	1140	1150	1310	1160	771	495
10	374	562	535	743	635	785	1160	1160	1310	1150	710	496
11	381	562	540	766	623	776	1170	1180	1440	1170	670	495
12	366	562	540	753	601	765	1170	1190	1570	1170	668	496
13	330	567	540	751	612	756	1180	1200	1570	1170	493	496
14	295	571	559	747	604	739	1170	1220	1560	1160	212	485
15	291	573	589	747	595	732	1160	1250	1490	1150	119	472
16	314	638	604	731	584	723	1150	1280	1460	1150	318	476
17	329	685	609	711	574	718	1130	1290	1450	1150	666	495
18	278	682	655	710	574	723	1130	1280	1450	1140	775	507
19	234	683	797	683	572	721	1150	1280	1450	1090	768	507
20	251	701	827	658	566	748	1160	1290	1490	1050	761	487
21	268	630	761	659	564	787	1160	1300	1530	1050	593	471
22	281	589	696	658	563	784	1160	1310	1520	1040	509	471
23	225	589	691	658	601	776	1180	1310	1510	1000	527	473
24	114	589	699	667	635	766	1150	1310	1500	955	528	471
25	117	592	697	665	635	745	1130	1310	1490	923	528	405
26	123	601	696	664	635	719	1160	1310	1480	894	531	335
27	249	653	668	664	635	675	1140	1320	1470	849	460	342
28	377	771	648	658	631	635	1140	1320	1460	827	412	385
29	377	827	651	658	---	619	1170	1580	1450	827	340	390
30	335	825	652	659	---	635	1160	1580	1450	867	372	390
31	302	---	646	660	---	654	---	1520	---	890	469	---
TOTAL	9882	16911	20654	21345	16915	22660	32505	39280	43270	33782	18980	14005
MEAN	319	564	666	689	604	731	1084	1267	1442	1090	612	467
MAX	446	827	827	766	670	794	1200	1580	1570	1430	890	507
MIN	114	307	525	655	531	599	671	1130	1300	827	119	335
AC-FT	19600	33540	40970	42340	33550	44950	64470	77910	85830	67010	37650	27780
CFSM	.18	.32	.38	.40	.35	.42	.62	.73	.83	.63	.35	.27
IN.	.21	.36	.44	.46	.36	.48	.69	.84	.93	.72	.41	.30

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	254	266	257	250	254	340	507	610	597	450	305	256
MAX	973	831	740	737	742	785	1199	1427	1442	1246	1080	1026
(WY)	1994	1986	1999	1999	1999	1999	1997	1986	2001	1953	1985	1993
MIN	9.15	8.42	8.10	15.1	10.8	23.5	39.5	14.1	14.2	12.8	11.5	7.99
(WY)	1977	1977	1977	1937	1935	1937	1934	1977	1934	1936	1934	1934

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1931 - 2001
ANNUAL TOTAL	231291	290189	
ANNUAL MEAN	632	795	362
HIGHEST ANNUAL MEAN			846
LOWEST ANNUAL MEAN			20.4
HIGHEST DAILY MEAN	986	1580	1670
LOWEST DAILY MEAN	88	114	1.6
ANNUAL SEVEN-DAY MINIMUM	197	197	5.9
MAXIMUM PEAK FLOW		2040a	2040a
MAXIMUM PEAK STAGE		5.46a	5.60
INSTANTANEOUS LOW FLOW		78a	.70a
ANNUAL RUNOFF (AC-FT)	458800	575600	262600
ANNUAL RUNOFF (CFSM)	.36	.46	.21
ANNUAL RUNOFF (INCHES)	4.94	6.20	2.83
10 PERCENT EXCEEDS	882	1310	792
50 PERCENT EXCEEDS	636	696	289
90 PERCENT EXCEEDS	376	377	36

a Result of regulation.

