

RED RIVER OF THE NORTH BASIN--Continued

05054000 RED RIVER OF THE NORTH AT FARGO, ND

LOCATION.--Lat 46°51'40", long 96°47'00", in NW¹/₄NE¹/₄ sec.18, T.139 N., R.48 W., Cass County, Hydrologic Unit 09020104, at waterplant on 4th St. S. in Fargo, 25 mi upstream from mouth of Sheyenne River, and at mile 453.

DRAINAGE AREA.--6,800 mi² (approximately).

PERIOD OF RECORD.--May 1901 to current year. Published as "at Moorhead, MN.", 1901. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1902-4, 1906-7, 1910-14, 1916, 1918, 1924. WSP 1388: 1905-6, 1917-20(M), 1935(M), 1938-39(M), 1943.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 861.8 ft above sea level. Oct. 1, 1960, to Sept. 30, 1962, water-stage recorder at present site at datum 5.6 ft higher. See WSP 1728 or 1913 for history of changes prior to Oct. 1, 1960.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Orwell Reservoir, flood storage capacity, 13,300 acre-ft at elevation 1,070 ft above mean sea level, adjustment of 1912; Mud Lake, flood storage capacity, 78,600 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; Lake Traverse, flood storage capacity, 75,100 acre-ft at elevation 981 ft above mean sea level, adjustment of 1912; and numerous other controlled lakes and ponds and several powerplants. Figures of daily discharge do not include diversions from the Sheyenne River to the cities of Fargo, ND and Moorhead, MN

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 7, 1897, reached a stage of 39.1 ft present datum, discharge, 25,000 ft³/s at site 1.5 mi downstream.

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	579	729	e830	e700	e700	e690	1330	7670	e3050	2910	1760	482
2	604	855	e880	e690	e700	e700	1910	7290	e3100	2880	1680	442
3	532	716	e900	e690	e700	e720	2740	6880	e3100	2870	1640	519
4	500	584	e900	e690	e700	e740	3170	6530	e3100	2850	1600	585
5	494	495	e880	e690	e700	e770	3670	6180	e3040	2820	1560	596
6	484	608	e850	e690	e690	e810	4540	5870	e3000	2760	1490	622
7	477	1620	e820	e690	e690	e890	6400	5530	e2900	2690	1420	654
8	471	2130	e770	e690	e680	e1000	8460	5220	e2900	2620	1400	627
9	451	1450	e720	e690	e680	e1150	9950	5020	e2900	2540	1330	627
10	426	1070	e690	e690	e670	1420	11800	4810	e2900	2470	1150	631
11	416	981	e650	e700	e660	1520	14500	4530	e2950	2440	1050	630
12	410	984	e600	e710	e660	1560	17600	4120	e3130	2400	975	627
13	433	951	e560	e740	e670	1580	19800	3750	3450	2390	913	614
14	500	898	e570	e770	e680	1580	20200	3520	3780	2390	852	624
15	459	857	e590	e800	e680	1540	19500	3350	4010	2400	931	618
16	429	761	e610	e800	e680	1500	18300	3220	3840	2390	718	616
17	396	614	e630	e780	e680	1460	17400	3130	3580	2410	480	615
18	379	701	e650	e770	e680	1400	16200	3080	3550	2430	315	601
19	367	754	e680	e760	e680	1340	14300	3070	3850	2490	293	588
20	365	748	e730	e740	e680	1320	12600	3060	4140	2630	568	624
21	364	700	e790	e720	e680	1290	11400	3050	4270	2840	840	634
22	324	561	e900	e710	e680	1250	10500	3030	4060	2880	886	638
23	297	469	e920	e700	e670	1230	9890	3030	3800	2910	886	620
24	306	561	e880	e700	e670	1240	9420	3010	3610	2820	789	585
25	353	e600	e840	e690	e670	1280	9040	3010	3440	2660	677	571
26	411	e670	e810	e690	e670	1330	8690	3010	3270	2330	689	566
27	338	e710	e780	e690	e670	1310	8430	3040	3130	1990	678	559
28	255	e750	e750	e690	e680	1280	8310	3020	3040	1750	656	524
29	264	e770	e730	e700	---	1260	8180	3030	2980	1520	653	461
30	278	e800	e720	e700	---	1210	7970	3030	2950	1550	612	405
31	411	---	e710	e700	---	1240	---	e3030	---	1770	538	---
TOTAL	12773	25097	23340	22170	19050	37610	316200	129120	100820	76800	30029	17505
MEAN	412	837	753	715	680	1213	10540	4165	3361	2477	969	584
MAX	604	2130	920	800	700	1580	20200	7670	4270	2910	1760	654
MIN	255	469	560	690	660	690	1330	3010	2900	1520	293	405
AC-FT	25340	49780	46290	43970	37790	74600	627200	256100	200000	152300	59560	34720
CFSM	.06	.12	.11	.11	.10	.18	1.55	.61	.49	.36	.14	.09
IN.	.07	.14	.13	.12	.10	.21	1.73	.71	.55	.42	.16	.10
+	1280	1150	1240	1210	1140	538	311	1230	1310	1660	1560	1380
*	26620	50930	47530	45180	38930	75140	627500	257300	201300	154000	61120	36100

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	326	286	238	220	232	771	2018	1152	1080	915	434	327
MAX	1741	942	801	740	1353	4722	17920	5365	5120	5690	3293	2280
(WY)	1994	1907	1987	1986	1998	1995	1997	1997	1962	1962	1993	1993
MIN	.000	.000	.000	.000	.18	26.8	102	8.12	2.87	.000	.000	.000
(WY)	1935	1937	1938	1933	1933	1937	1934	1934	1936	1934	1932	1934

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1901 - 2001
ANNUAL TOTAL	392696	810514	
ANNUAL MEAN	1073 *(1096)	2221 *(2239)	668
HIGHEST ANNUAL MEAN			2619
LOWEST ANNUAL MEAN			17.5
HIGHEST DAILY MEAN	5220 Jun 20	20200 Apr 14	27800 Apr 17 1997
LOWEST DAILY MEAN	237 Sep 29	255 Oct 28	.00 Jul 25 1932
ANNUAL SEVEN-DAY MINIMUM	315 Oct 24	315 Oct 24	.00 Jul 25 1932
MAXIMUM PEAK FLOW		20300 Apr 14	28000a Apr 17 1997
MAXIMUM PEAK STAGE		36.69 Apr 14	39.72 Apr 18 1997
ANNUAL RUNOFF (AC-FT)	778900 *(794000)	1608000 *(1622000)	483700
ANNUAL RUNOFF (CFSM)	.16	.33	.098
ANNUAL RUNOFF (INCHES)	2.15	4.43	1.33
10 PERCENT EXCEEDS	1910	4370	1490
50 PERCENT EXCEEDS	852	840	324
90 PERCENT EXCEEDS	410	500	41

a Gage height, 22.20 ft.
 + Diversions, in acre-ft, to cities of Fargo and Moorhead.
 * Adjusted for diversions to cities of Fargo and Moorhead.
 e Estimated.

