

## RED RIVER OF THE NORTH BASIN--Continued

05087500 MIDDLE RIVER AT ARGYLE, MN

LOCATION.--Lat 48°20'25", long 96°48'58", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec. 15, T.156 N., R.48 W., Marshall County, Hydrologic Unit 09020309, on left bank 30 ft upstream of bridge on County Highway 4 in Argyle and 14 mi upstream from mouth.

DRAINAGE AREA.--255 mi<sup>2</sup>.

PERIOD OF RECORD.--March to September 1945, November 1950 to September 1981, February 1982 to current year. Monthly discharge only for some periods, published in WSP 1728. October 1981 to January 1982, operated as a high-flow partial-record station.

GAGE.--Water-stage recorder. Datum of gage is 828.53 ft above sea level (NGVD of 1929). Prior to Nov. 8, 1951, nonrecording gage and Nov. 8, 1951 to Sept. 18, 1952, water-stage recorder at site 800 ft downstream at datum 1.0 ft higher. Sept. 19, 1952 to June 28, 1982, recording gage at site 800 feet downstream at present datum. June 29, 1982 to Sept. 20, 1983, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 1950 reached a stage of 15.25 ft present datum, site then in use, from floodmarks, discharge, 2,790 ft<sup>3</sup>/s.

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	e5.2	255	e42	e9.5	e5.8	e5.3	e61	160	e200	20	66	7.4
2	e5.2	358	e38	e9.0	e5.7	e5.3	e60	149	e170	18	285	6.7
3	e5.1	595	e35	e8.5	e5.7	e5.3	e100	140	151	16	376	5.6
4	e5.0	813	e32	e8.0	e5.6	e5.3	e200	131	e130	14	410	4.8
5	e5.0	833	e30	e7.5	e5.5	e5.3	e400	123	110	13	398	4.7
6	e4.8	765	e27	e7.2	e5.4	e5.3	e700	124	96	12	314	4.2
7	e4.8	864	e25	e7.0	e5.4	e5.3	995	166	83	10	229	4.4
8	e4.8	1180	e23	e6.7	e5.4	e5.3	1620	177	70	9.3	174	4.2
9	e4.7	1640	e22	e6.5	e5.5	e5.4	2190	183	59	8.1	133	3.5
10	e4.6	1640	e21	e6.3	e5.5	e5.4	1820	189	51	7.3	102	3.9
11	e4.6	1280	e20	e6.2	e5.6	e5.4	1320	184	45	6.7	77	3.0
12	e4.6	1070	e20	e6.1	e5.6	e5.5	1100	166	39	6.3	58	2.3
13	e5.5	842	e19	e6.1	e5.7	e5.5	996	143	36	5.7	45	1.8
14	e10	687	e19	e6.0	e5.7	e5.6	990	124	34	5.4	36	2.1
15	e9.2	567	e18	e6.0	e5.7	e5.7	979	110	32	5.0	31	5.0
16	e8.7	474	e17	e6.0	e5.7	e5.8	928	101	30	4.7	31	4.2
17	e8.2	e400	e16	e5.9	e5.7	e6.0	748	97	28	5.4	32	3.2
18	e7.7	e300	e16	e5.9	e5.7	e6.3	602	94	29	3.8	43	3.0
19	e7.3	e250	e15	e5.9	e5.7	e7.0	514	85	28	4.1	41	3.3
20	e7.0	e220	e15	e5.8	e5.7	e8.0	468	80	29	3.7	47	3.6
21	e6.6	e190	e15	e5.8	e5.7	e10	459	75	31	3.9	42	4.3
22	e6.3	e160	e14	e5.8	e5.6	e14	452	75	51	3.6	34	4.0
23	e6.0	e130	e14	e5.8	e5.6	e19	428	79	73	3.4	27	3.3
24	6.5	e110	e13	e5.8	e5.5	e30	382	108	70	3.0	23	3.6
25	8.2	e100	e13	e5.7	e5.5	e50	328	139	57	2.7	19	3.6
26	18	e83	e12	e5.7	e5.4	e140	281	154	46	2.7	16	3.5
27	106	e75	e12	e5.7	e5.4	e120	245	154	38	11	14	2.8
28	202	e65	e11	e5.7	e5.4	e100	216	167	31	11	12	e2.7
29	224	e57	e11	e5.7	---	e85	194	228	27	9.8	11	e2.8
30	268	e48	e10	e5.7	---	e75	174	281	23	12	9.7	2.9
31	279	---	e10	e5.7	---	e67	---	e280	---	15	8.6	---
TOTAL	1252.6	16051	605	199.2	156.4	824.0	19950	4466	1897	256.6	3144.3	114.4
MEAN	40.4	535	19.5	6.43	5.59	26.6	665	144	63.2	8.28	101	3.81
MAX	279	1640	42	9.5	5.8	140	2190	281	200	20	410	7.4
MIN	4.6	48	10	5.7	5.4	5.3	60	75	23	2.7	8.6	1.8
AC-FT	2480	31840	1200	395	310	1630	39570	8860	3760	509	6240	227
CFSM	.16	2.10	.08	.03	.02	.10	2.61	.56	.25	.03	.40	.01
IN.	.18	2.34	.09	.03	.02	.12	2.91	.65	.28	.04	.46	.02

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.0	19.1	3.80	1.49	2.99	37.3	240	94.2	81.2	61.8	14.8	18.1
MAX	94.1	535	22.2	8.77	69.8	335	966	896	660	688	265	272
(WY)	1983	2001	1995	1995	2000	1995	1997	1996	1970	1975	1993	1993
MIN	.000	.000	.000	.000	.000	.000	.20	2.12	.37	.000	.000	.000
(WY)	1954	1954	1954	1953	1953	1954	1991	1981	1973	1961	1961	1952

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1945 - 2001
ANNUAL TOTAL	38215.4	48916.5	
ANNUAL MEAN	104	134	49.1a
HIGHEST ANNUAL MEAN			198
LOWEST ANNUAL MEAN			1.60
HIGHEST DAILY MEAN	1640	2190	4800
LOWEST DAILY MEAN	2.7	1.8	.00b
ANNUAL SEVEN-DAY MINIMUM	2.8	3.0	.00
MAXIMUM PEAK FLOW		2290	5020
MAXIMUM PEAK STAGE		15.59	18.27c
ANNUAL RUNOFF (AC-FT)	75800	97030	35590
ANNUAL RUNOFF (CFSM)	.41	.53	.19
ANNUAL RUNOFF (INCHES)	5.57	7.14	2.62
10 PERCENT EXCEEDS	300	388	103
50 PERCENT EXCEEDS	24	16	3.0
90 PERCENT EXCEEDS	3.4	4.7	.00

- a Median of annual mean discharges is 41 ft<sup>3</sup>/s.
- b Many days, several years.
- c From floodmark.
- e Estimated.

