

05087500 MIDDLE RIVER AT ARGYLE, MN

LOCATION.--Lat 48°20'25", long 96°48'58", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 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 mi².

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.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	6.5	e2.3	e6.5	e1.1	e0.32	e49	26	30	21	3.4	0.39
2	6.0	6.4	e2.0	e5.7	e1.1	e0.30	e60	24	31	19	2.9	0.45
3	5.8	6.2	e1.9	e5.2	e1.1	e0.28	e75	21	30	16	2.3	0.28
4	5.6	6.3	e1.8	e4.5	e1.0	e0.25	e90	20	26	14	2.2	0.24
5	5.6	6.2	e1.7	e4.0	e0.95	e0.25	e70	19	23	13	2.4	0.20
6	5.7	6.0	e1.7	e4.1	e0.85	e0.25	e55	19	21	11	2.2	0.15
7	5.6	6.1	e1.7	e4.6	e0.82	e0.25	74	19	19	10	1.6	0.28
8	5.6	6.3	e1.7	e4.7	e0.78	e0.25	56	20	22	9.1	1.4	0.15
9	5.9	6.7	e1.7	e4.7	e0.76	e0.25	53	20	24	8.5	1.4	0.05
10	6.8	7.0	e1.7	e4.6	e0.75	e0.25	51	21	30	8.5	1.4	0.13
11	6.5	7.4	e1.7	e4.5	e0.74	e0.22	50	21	34	8.0	1.2	0.13
12	6.4	6.8	e1.7	e4.3	e0.73	e0.20	46	27	62	7.0	1.1	0.12
13	7.2	6.3	e2.0	e4.2	e0.71	e0.20	44	34	126	6.1	1.0	e0.12
14	7.0	6.1	e2.1	e4.0	e0.70	e0.50	40	37	257	6.1	1.3	e0.12
15	6.8	5.5	e2.4	e3.8	e0.68	e2.0	37	34	320	5.3	1.7	e0.12
16	7.2	5.2	e2.4	e3.5	e0.67	e7.5	34	30	279	5.1	1.7	e0.13
17	6.5	5.4	e2.4	e3.1	e0.65	e40	33	28	212	5.1	1.3	e0.35
18	7.2	5.6	e2.4	e2.8	e0.62	e100	31	27	164	4.7	1.3	e0.25
19	8.1	4.9	e2.4	e2.5	e0.57	e250	31	29	134	4.0	1.2	e0.15
20	7.3	3.5	e2.4	e2.1	e0.46	e180	35	72	104	3.7	0.83	e0.13
21	7.2	e3.4	e2.5	e1.9	e0.42	e140	50	125	77	3.1	0.53	e0.11
22	7.3	e3.3	e2.4	e1.7	e0.41	e110	81	130	58	2.7	0.38	e0.10
23	6.8	e3.2	e2.7	e1.5	e0.40	e85	90	115	45	2.4	0.79	e0.09
24	6.7	e3.1	e2.9	e1.4	e0.40	e70	73	94	37	2.0	0.49	e0.09
25	6.4	e3.0	e3.7	e1.3	e0.40	e58	56	75	35	1.9	0.41	e0.09
26	6.2	e2.9	e4.0	e1.3	e0.38	e52	45	61	31	2.0	0.36	e0.09
27	6.0	e2.8	e7.0	e1.2	e0.36	e46	38	50	28	2.2	0.34	e0.10
28	7.1	e2.7	e5.5	e1.2	e0.34	e42	34	41	27	1.9	0.88	e0.10
29	6.9	e2.6	e5.0	e1.1	---	e40	31	35	26	1.5	0.55	e0.11
30	6.2	e2.5	e4.5	e1.1	---	e40	28	32	24	3.0	0.58	e0.13
31	6.1	---	e5.2	e1.1	---	e45	---	29	---	3.8	0.53	---
TOTAL	201.9	149.9	85.5	98.2	18.85	1,311.27	1,540	1,335	2,336	211.7	39.67	4.95
MEAN	6.51	5.00	2.76	3.17	0.67	42.3	51.3	43.1	77.9	6.83	1.28	0.17
MAX	8.1	7.4	7.0	6.5	1.1	250	90	130	320	21	3.4	0.45
MIN	5.6	2.5	1.7	1.1	0.34	0.20	28	19	19	1.5	0.34	0.05
AC-FT	400	297	170	195	37	2,600	3,050	2,650	4,630	420	79	9.8
CFSM	0.03	0.02	0.01	0.01	0.00	0.17	0.20	0.17	0.31	0.03	0.01	0.00
IN.	0.03	0.02	0.01	0.01	0.00	0.19	0.22	0.19	0.34	0.03	0.01	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2003, BY WATER YEAR (WY)

MEAN	12.7	18.9	3.81	1.56	2.94	36.7	233	93.4	91.5	61.5	14.8	18.3
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	0.000	0.000	0.000	0.000	0.000	0.000	0.20	2.12	0.37	0.000	0.000	0.000
(WY)	(1954)	(1954)	(1954)	(1953)	(1953)	(1954)	(1991)	(1981)	(1973)	(1961)	(1961)	(1952)

05087500 MIDDLE RIVER AT ARGYLE, MN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 2003	
ANNUAL TOTAL	30,380.8		7,332.94			
ANNUAL MEAN	83.2		20.1		a49.3	
HIGHEST ANNUAL MEAN					198	1999
LOWEST ANNUAL MEAN					1.60	1977
HIGHEST DAILY MEAN	2,550	Jun 13	320	Jun 15	4,800	May 19, 1996
LOWEST DAILY MEAN	1.7	Dec 5	0.05	Sep 9	b0.00	Aug 18, 1952
ANNUAL SEVEN-DAY MINIMUM	1.7	Dec 5	0.09	Sep 22	0.00	Aug 18, 1952
MAXIMUM PEAK FLOW			327	Jun 15	5,020	May 19, 1996
MAXIMUM PEAK STAGE			7.38	Jun 15	c18.27	May 19, 1996
ANNUAL RUNOFF (AC-FT)	60,260		14,540		35,680	
ANNUAL RUNOFF (CFSM)	0.33		0.079		0.19	
ANNUAL RUNOFF (INCHES)	4.43		1.07		2.62	
10 PERCENT EXCEEDS	188		55		100	
50 PERCENT EXCEEDS	6.8		4.7		3.0	
90 PERCENT EXCEEDS	2.4		0.28		0.00	

- a Median of annual mean discharges is 41 ft³/s.
- b Many days, several years.
- c From floodmark.
- e Estimated.

