

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 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.13	3.6	e2.5	e0.52	e0.50	e0.95	789	24	1,410	23	10	13
2	0.11	3.8	e2.4	e0.52	e0.52	e0.95	562	24	1,660	22	9.7	10
3	0.10	e4.1	e2.2	e0.53	e0.52	e0.96	447	20	1,260	21	9.6	7.0
4	0.14	e4.2	e2.2	e0.53	e0.53	e0.98	405	18	920	33	9.4	5.9
5	0.17	e4.2	e2.1	e0.53	e0.53	e1.0	384	16	665	51	9.0	6.4
6	0.20	e4.2	e2.1	e0.53	e0.56	e1.1	322	16	490	38	9.5	11
7	0.22	e4.1	e1.7	e0.53	e0.59	e1.1	271	14	393	30	12	17
8	0.25	e4.1	e1.4	e0.54	e0.61	e1.1	248	13	343	42	12	34
9	0.25	4.1	e1.1	e0.56	e0.62	e1.1	250	12	313	43	14	65
10	0.24	4.1	e0.82	e0.58	e0.63	e1.0	232	12	284	51	13	69
11	0.40	4.6	e0.80	e0.59	e0.64	e1.0	199	28	227	49	13	59
12	0.53	4.9	e0.77	e0.60	e0.63	e1.0	161	370	183	46	13	51
13	0.56	4.6	e0.74	e0.61	e0.62	e1.0	127	1,120	151	46	14	46
14	0.58	4.4	e0.74	e0.61	e0.63	e1.0	103	1,730	130	41	24	39
15	0.71	4.2	e0.74	e0.61	e0.66	e1.0	91	1,950	116	34	23	38
16	0.75	4.3	e0.74	e0.61	e0.70	e1.0	82	1,490	104	28	20	45
17	0.66	4.5	e0.72	e0.61	e0.74	e1.0	74	1,280	92	25	17	40
18	0.68	4.9	e0.71	e0.60	e0.82	e1.0	68	1,210	79	23	13	35
19	0.79	4.8	e0.71	e0.59	e0.90	e1.0	62	985	70	21	10	30
20	0.95	4.9	e0.71	e0.58	e0.96	e1.1	58	771	61	19	9.0	26
21	1.1	4.8	e0.71	e0.56	e1.0	e1.1	60	649	53	17	8.3	23
22	1.3	e4.7	e0.70	e0.53	e1.0	e1.1	65	556	46	16	7.2	24
23	1.7	e4.5	e0.70	e0.49	e1.0	e1.6	67	478	41	15	8.0	98
24	2.0	e4.2	e0.68	e0.47	e1.1	e2.8	63	389	38	14	10	150
25	2.0	e3.6	e0.65	e0.45	e1.1	e7.0	54	320	36	13	8.1	171
26	2.7	e3.3	e0.63	e0.44	e1.1	e14	45	297	33	12	7.5	182
27	3.4	e3.1	e0.62	e0.44	e1.1	e28	38	294	31	11	6.6	171
28	3.7	e3.1	e0.62	e0.44	e1.0	e350	33	279	29	12	6.4	142
29	3.4	e2.9	e0.60	e0.44	e1.0	e700	30	250	27	12	5.8	115
30	3.7	e2.7	e0.56	e0.45	---	e1,000	27	328	25	11	5.7	92
31	3.6	---	e0.54	e0.47	---	1,080	---	875	---	10	11	---
TOTAL	37.02	123.5	32.91	16.56	22.31	3,205.94	5,417	15,818	9,310	829	348.8	1,815.3
MEAN	1.19	4.12	1.06	0.53	0.77	103	181	510	310	26.7	11.3	60.5
MAX	3.7	4.9	2.5	0.61	1.1	1,080	789	1,950	1,660	51	24	182
MIN	0.10	2.7	0.54	0.44	0.50	0.95	27	12	25	10	5.7	5.9
AC-FT	73	245	65	33	44	6,360	10,740	31,380	18,470	1,640	692	3,600
CFSM	0.00	0.02	0.00	0.00	0.00	0.41	0.71	2.00	1.22	0.10	0.04	0.24
IN.	0.01	0.02	0.00	0.00	0.00	0.47	0.79	2.31	1.36	0.12	0.05	0.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2004, BY WATER YEAR (WY)

MEAN	12.5	18.6	3.76	1.54	2.90	38.0	232	101	95.5	60.9	14.7	19.0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.20	2.12	0.37	0.00	0.00	0.00
(WY)	(1954)	(1954)	(1954)	(1953)	(1953)	(1954)	(1991)	(1981)	(1973)	(1961)	(1961)	(1952)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1945 - 2004	
ANNUAL TOTAL	7,089.07		36,976.34		a50.2	
ANNUAL MEAN	19.4		101		198 1999	
HIGHEST ANNUAL MEAN					1.60 1977	
LOWEST ANNUAL MEAN					4,800 May 19, 1996	
HIGHEST DAILY MEAN	320	Jun 15	1,950	May 15		
LOWEST DAILY MEAN	0.05	Sep 9	0.10	Oct 3	b0.00 Aug 18, 1952	
ANNUAL SEVEN-DAY MINIMUM	0.09	Sep 22	0.15	Oct 1	0.00 Aug 18, 1952	
MAXIMUM PEAK FLOW			2,090	May 15	5,020 May 19, 1996	
MAXIMUM PEAK STAGE			14.91	May 15	c18.27 May 19, 1996	
ANNUAL RUNOFF (AC-FT)	14,060		73,340		36,390	
ANNUAL RUNOFF (CFSM)	0.076		0.396		0.197	
ANNUAL RUNOFF (INCHES)	1.03		5.39		2.68	
10 PERCENT EXCEEDS	55		295		102	
50 PERCENT EXCEEDS	2.9		7.0		3.0	
90 PERCENT EXCEEDS	0.25		0.55		0.00	

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

