

## 05078470 JUDICIAL DITCH 64 NEAR MENTOR, MN

LOCATION.--Lat 47°44'16", long 96°12'09", in SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 7, T.149 N., R.43 W., Polk County, Hydrologic Unit 09020303, at culvert on township road, 0.5 miles north of U.S. Highway 2, 4.2 miles northwest of Mentor.

DRAINAGE AREA.--9.6 mi<sup>2</sup>.

PERIOD OF RECORD.--September 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,120 ft above sea level (from topographic map).

REMARKS.--Records fair except those for estimated daily discharges, and discharges less than 1.0 ft<sup>3</sup>/s, which are poor.

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	0.02	0.28	e0.06	e0.02	e0.00	e0.03	13	0.57	17	0.19	0.15	1.5
2	0.02	0.23	e0.06	e0.02	e0.00	e0.01	11	0.52	14	0.18	0.12	1.1
3	0.02	0.17	e0.07	e0.02	e0.00	e0.00	9.7	0.49	11	0.26	0.09	0.68
4	0.02	0.14	0.07	e0.02	e0.00	e0.00	8.6	0.45	9.1	0.43	0.07	0.56
5	0.02	0.16	e0.07	e0.02	e0.00	e0.00	6.6	0.44	7.6	0.43	0.05	1.1
6	0.02	e0.13	e0.08	e0.02	e0.00	e0.00	5.2	0.59	6.3	0.75	0.06	6.9
7	0.02	e0.10	e0.08	e0.02	e0.00	e0.00	4.9	0.53	5.1	1.8	0.17	7.5
8	0.02	e0.08	0.08	e0.02	e0.00	e0.00	4.9	0.52	3.9	1.5	0.25	4.7
9	0.02	e0.08	e0.08	e0.02	e0.00	e0.01	4.0	0.61	2.9	1.3	0.32	3.3
10	0.02	e0.09	e0.06	e0.02	e0.00	e0.03	3.2	0.72	2.1	0.93	0.41	2.4
11	0.07	e0.10	e0.03	e0.02	e0.00	e0.02	2.6	4.8	1.6	1.8	0.36	1.7
12	0.05	e0.11	e0.02	e0.02	e0.00	e0.01	2.2	40	1.4	2.0	0.27	1.3
13	0.04	e0.07	0.02	e0.02	e0.00	e0.01	2.1	26	1.1	1.5	0.20	1.0
14	0.04	e0.08	0.02	e0.02	e0.00	e0.01	1.9	19	0.95	0.88	0.16	0.82
15	0.07	e0.10	0.02	e0.02	e0.00	e0.01	1.8	16	0.82	1.2	0.14	0.85
16	0.09	e0.11	0.02	e0.02	e0.00	e0.01	1.8	14	0.74	1.9	0.12	1.5
17	0.10	e0.12	0.02	e0.02	e0.00	e0.01	1.7	12	0.65	1.6	0.10	1.4
18	0.07	e0.14	0.02	e0.02	e0.00	e0.01	1.6	9.9	0.56	1.0	0.09	1.1
19	0.09	e0.16	0.02	e0.02	e0.00	e0.03	1.6	8.4	0.45	0.71	0.07	0.86
20	0.10	e0.14	0.02	e0.02	e0.00	e0.10	1.6	8.5	0.38	0.50	0.06	1.0
21	0.07	e0.12	0.02	e0.02	e0.00	e0.05	1.8	6.7	0.34	0.36	0.05	2.4
22	0.09	e0.10	0.02	e0.02	e0.00	e0.05	1.5	5.1	0.32	0.28	0.05	2.5
23	0.09	e0.08	0.02	e0.02	e0.00	e0.12	1.4	3.9	0.42	0.22	0.04	3.7
24	0.09	e0.07	e0.02	e0.02	e0.00	e1.3	1.2	3.2	0.48	0.18	0.12	7.5
25	0.07	e0.06	0.02	e0.02	e0.00	e14	1.1	4.9	0.54	0.16	0.11	6.4
26	0.06	e0.06	0.02	e0.02	e0.01	e13	0.98	4.9	0.47	0.13	4.7	4.9
27	0.12	e0.06	e0.02	e0.02	e0.02	e16	0.87	3.8	0.41	0.10	2.6	3.5
28	0.22	e0.06	e0.03	e0.01	e0.03	e20	0.79	3.0	0.34	0.18	1.5	2.5
29	0.37	e0.06	e0.03	e0.00	e0.03	e18	0.71	2.5	0.30	0.19	1.5	2.0
30	0.44	e0.06	e0.03	e0.00	---	e14	0.64	14	0.22	0.23	3.4	1.8
31	0.40	---	e0.02	e0.00	---	14	---	21	---	0.19	2.5	---
TOTAL	2.94	3.32	1.17	0.55	0.09	110.82	100.99	237.04	91.49	23.08	19.83	78.47
MEAN	0.09	0.11	0.04	0.02	0.00	3.57	3.37	7.65	3.05	0.74	0.64	2.62
MAX	0.44	0.28	0.08	0.02	0.03	20	13	40	17	2.0	4.7	7.5
MIN	0.02	0.06	0.02	0.00	0.00	0.00	0.64	0.44	0.22	0.10	0.04	0.56
AC-FT	5.8	6.6	2.3	1.1	0.2	220	200	470	181	46	39	156
CFSM	0.01	0.01	0.00	0.00	0.00	0.37	0.35	0.80	0.32	0.08	0.07	0.27
IN.	0.01	0.01	0.00	0.00	0.00	0.43	0.39	0.92	0.35	0.09	0.08	0.30

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

MEAN	0.69	0.64	0.10	0.03	0.00	2.80	2.64	7.81	6.08	1.47	0.33	1.31
MAX	1.29	1.17	0.17	0.04	0.00	3.57	3.37	7.98	9.12	2.20	0.64	2.62
(WY)	(2003)	(2003)	(2003)	(2003)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)	(2004)	(2004)
MIN	0.09	0.11	0.04	0.02	0.00	2.02	1.91	7.65	3.05	0.74	0.03	0.01
(WY)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)	(2003)	(2004)	(2004)	(2004)	(2003)	(2003)

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SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2002 - 2004	
ANNUAL TOTAL	718.69		669.79		2.00	
ANNUAL MEAN	1.97		1.83		2.17 2003	
HIGHEST ANNUAL MEAN					1.83 2004	
LOWEST ANNUAL MEAN					40 May 12, 2004	
HIGHEST DAILY MEAN	21	Jun 10	40	May 12	40 May 12, 2004	
LOWEST DAILY MEAN	0.00	Jan 23	a0.00	Jan 29	b0.00 Jan 23, 2003	
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 23	0.00	Jan 29	0.00 Jan 23, 2003	
MAXIMUM PEAK FLOW			50	May 12	50 May 12, 2004	
MAXIMUM PEAK STAGE			3.11	May 12	3.11 May 12, 2004	
INSTANTANEOUS LOW FLOW			c0.00	Jan 29	b0.00 Jan 23, 2003	
ANNUAL RUNOFF (AC-FT)	1,430		1,330		1,450	
ANNUAL RUNOFF (CFSM)	0.205		0.191		0.208	
ANNUAL RUNOFF (INCHES)	2.78		2.60		2.83	
10 PERCENT EXCEEDS	7.0		5.1		6.5	
50 PERCENT EXCEEDS	0.08		0.14		0.21	
90 PERCENT EXCEEDS	0.00		0.01		0.00	

- a Many days.
- b Many days, several years.
- c Estimated, daily-mean discharge.
- e Estimated.

