

05078470 JUDICIAL DITCH 64 NEAR MENTOR, MN

LOCATION.--Lat 47°44'16", long 96°12'09", in SE¹/₄NE¹/₄ 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 mi².

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 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	36	e1.2	e0.03	e0.01	e0.01	e24	3.3	5.2	8.1	0.04	0.10
2	1.2	29	e1.1	e0.03	e0.01	e0.01	23	3.0	4.6	6.5	0.04	0.08
3	1.1	25	e1.0	e0.03	e0.01	e0.01	20	2.6	5.6	6.4	0.08	0.07
4	0.84	22	e0.94	e0.02	e0.01	e0.01	21	2.3	6.4	5.8	0.05	0.06
5	0.75	20	e0.90	e0.02	e0.01	e0.01	21	2.1	12	4.7	0.03	0.17
6	0.68	18	e0.87	e0.02	e0.01	e0.01	17	1.9	28	3.7	0.03	0.97
7	0.58	16	e0.83	e0.02	e0.01	e0.01	15	1.7	21	2.8	0.03	3.1
8	0.54	14	e0.80	e0.02	e0.01	e0.01	14	2.1	27	2.2	0.03	0.88
9	0.45	13	e0.77	e0.02	e0.01	e0.01	13	5.1	23	1.7	0.03	0.87
10	0.41	12	e0.74	e0.02	e0.01	e0.01	12	5.9	16	1.3	0.03	2.8
11	0.39	11	e0.71	e0.02	e0.01	e0.01	17	5.2	19	1.1	0.12	2.3
12	0.36	10	e0.67	e0.02	e0.01	e0.01	25	4.1	47	1.1	0.07	1.0
13	0.33	9.5	e0.65	e0.02	e0.01	e0.01	25	3.9	33	0.95	0.04	0.83
14	0.33	9.1	e0.62	e0.02	e0.01	e0.01	19	5.5	41	0.67	0.03	0.65
15	0.43	8.7	e0.60	e0.02	e0.01	e0.01	15	5.3	32	0.49	0.03	0.89
16	0.58	8.4	e0.57	e0.01	e0.01	e0.01	13	4.6	23	0.39	0.03	0.70
17	0.66	8.1	e0.55	e0.01	e0.01	e0.01	13	3.8	18	0.33	0.18	0.61
18	0.65	7.5	e0.52	e0.01	e0.01	e0.01	12	3.2	14	0.32	0.22	0.42
19	0.77	7.0	e0.47	e0.01	e0.01	e0.01	11	2.9	12	0.27	0.62	0.38
20	0.97	6.8	e0.41	e0.01	e0.01	e0.01	10	2.6	11	0.20	1.0	0.31
21	0.96	5.9	e0.35	e0.01	e0.01	e0.01	9.5	4.2	9.6	0.13	0.72	0.28
22	0.98	5.3	e0.29	e0.01	e0.01	e0.07	8.9	7.1	8.5	0.09	0.36	0.25
23	3.2	4.7	e0.24	e0.01	e0.01	e0.50	8.0	5.7	7.8	0.07	0.20	0.22
24	5.2	4.0	e0.19	e0.01	e0.01	e0.35	7.4	5.0	7.6	0.06	0.15	0.22
25	5.7	2.8	e0.15	e0.01	e0.01	e0.28	7.0	6.7	6.7	0.07	0.30	0.21
26	5.1	2.3	e0.11	e0.01	e0.01	e0.90	6.7	8.4	5.9	0.10	0.72	0.19
27	4.4	1.9	e0.09	e0.01	e0.01	e3.0	6.0	8.3	5.2	0.62	0.53	0.18
28	4.9	e1.7	e0.07	e0.01	e0.01	e7.6	5.2	9.6	4.5	0.34	0.38	0.16
29	20	e1.5	e0.06	e0.01	---	e28	4.4	10	4.3	0.10	0.23	0.14
30	e91	e1.3	e0.05	e0.01	---	e30	3.8	8.6	6.6	0.06	0.16	0.14
31	57	---	e0.04	e0.01	---	e26	---	6.6	---	0.05	0.12	---
TOTAL	211.96	322.5	16.56	0.49	0.28	96.91	406.9	151.3	465.5	50.71	6.60	19.18
MEAN	6.84	10.8	0.53	0.02	0.01	3.13	13.6	4.88	15.5	1.64	0.21	0.64
MAX	91	36	1.2	0.03	0.01	30	25	10	47	8.1	1.0	3.1
MIN	0.33	1.3	0.04	0.01	0.01	0.01	3.8	1.7	4.3	0.05	0.03	0.06
AC-FT	420	640	33	1.0	0.6	192	807	300	923	101	13	38
CFSM	0.71	1.12	0.06	0.00	0.00	0.33	1.41	0.51	1.62	0.17	0.02	0.07
IN.	0.82	1.25	0.06	0.00	0.00	0.38	1.58	0.59	1.80	0.20	0.03	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2005, BY WATER YEAR (WY)

MEAN	2.74	4.01	0.25	0.02	0.00	2.91	6.28	6.84	9.23	1.53	0.29	1.09
MAX	6.84	10.8	0.53	0.04	0.01	3.57	13.6	7.98	15.5	2.20	0.64	2.62
(WY)	(2005)	(2005)	(2005)	(2003)	(2005)	(2004)	(2005)	(2003)	(2005)	(2003)	(2004)	(2004)
MIN	0.09	0.11	0.04	0.02	0.00	2.02	1.91	4.88	3.05	0.74	0.03	0.01
(WY)	(2004)	(2004)	(2004)	(2005)	(2003)	(2003)	(2003)	(2005)	(2004)	(2004)	(2003)	(2003)

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SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2002 - 2005	
ANNUAL TOTAL	1,213.38		1,748.89		2.93	
ANNUAL MEAN	3.32		4.79		4.79	
HIGHEST ANNUAL MEAN					1.83	
LOWEST ANNUAL MEAN					91	
HIGHEST DAILY MEAN	91	Oct 30	91	Oct 30	91	Oct 30, 2004
LOWEST DAILY MEAN	0.00	Jan 29	0.01	Jan 16-Mar 21	a0.00	Jan 23, 2003
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 29	0.01	Jan 16	0.00	Jan 23, 2003
MAXIMUM PEAK FLOW			b114	Oct 30	114	Oct 30, 2004
MAXIMUM PEAK STAGE			c4.84	Mar 26	4.84	Mar 26, 2005
INSTANTANEOUS LOW FLOW			d0.01	Jan 16	a0.00	Jan 23, 2003
ANNUAL RUNOFF (AC-FT)	2,410		3,470		2,120	
ANNUAL RUNOFF (CFSM)	0.345		0.499		0.305	
ANNUAL RUNOFF (INCHES)	4.70		6.78		4.15	
10 PERCENT EXCEEDS	9.8		15		8.8	
50 PERCENT EXCEEDS	0.68		0.68		0.41	
90 PERCENT EXCEEDS	0.01		0.01		0.01	

- a Many days, several years.
- b Gage-height, 4.26 ft, from highwater mark.
- c Backwater from ice.
- d Estimated, daily-minimum.
- e Estimated.

