

## STREAMS TRIBUTARY TO LAKE SUPERIOR--Continued

04024098 DEER CREEK NEAR HOLYOKE, MN

LOCATION.--Lat 46°31'30", long 92°23'20", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec. 29, T.47 N., R.16 W., Carlton County, Hydrologic Unit 04010301, on left bank 179 ft west of State Highway No. 23, 0.9 mi upstream from mouth and 4.0 mi north of Holyoke.

DRAINAGE AREA.--7.70 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1976 to September 30, 2001 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 786.14 ft above sea level (NGVD of 1929).

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

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	1.4	3.8	e1.7	e1.6	e1.7	2.1	15	25	3.8	2.0	3.4	1.7
2	1.3	4.7	e1.7	e1.7	e1.6	e2.2	18	19	5.1	2.0	1.7	1.6
3	1.3	2.9	e1.7	e1.8	1.7	e2.4	24	13	5.7	2.1	1.5	1.5
4	1.2	2.2	e1.6	e1.9	1.6	e2.7	35	9.6	3.8	1.9	1.5	1.5
5	2.0	2.2	e1.6	2.0	1.7	e2.9	47	7.6	3.1	1.9	1.5	1.5
6	2.1	5.8	e1.6	2.0	1.8	e3.0	72	17	3.1	1.9	1.6	1.5
7	1.7	41	e1.6	2.0	1.9	e3.3	254	36	3.1	2.0	1.5	1.6
8	1.7	18	e1.5	2.0	1.9	e3.0	126	23	2.9	1.9	1.4	1.8
9	1.7	9.4	1.6	e1.9	1.8	e2.8	92	15	2.8	1.8	1.5	1.7
10	1.8	6.6	e1.4	1.9	e1.6	e2.6	81	21	4.2	1.7	1.4	1.7
11	1.7	4.7	e1.4	2.1	1.6	e2.5	167	15	4.0	1.5	1.4	1.7
12	1.8	5.8	e1.3	1.9	1.8	e2.7	120	10	6.4	1.6	2.3	1.6
13	1.7	32	e1.4	1.9	1.7	e3.1	78	8.2	6.2	1.6	3.1	1.7
14	3.0	21	e1.5	1.8	1.7	e3.4	60	6.7	48	1.5	1.8	1.7
15	2.2	11	1.7	1.7	e1.4	e3.8	51	5.9	17	2.2	2.0	1.7
16	2.0	7.0	1.7	1.6	e1.5	e4.1	29	5.5	11	2.1	2.7	1.8
17	1.8	5.3	1.7	1.6	e1.6	e4.5	18	5.0	11	2.0	2.9	1.8
18	1.9	3.8	1.6	1.6	e1.8	e7.0	15	3.4	27	2.2	7.0	1.7
19	1.8	3.3	1.7	e1.5	e1.9	e5.0	13	3.1	20	2.1	2.8	1.8
20	1.8	2.9	1.7	e1.5	e1.7	e12	13	3.2	8.0	2.2	1.9	1.7
21	1.9	e2.3	1.7	e1.5	e1.4	e18	82	12	8.8	2.1	1.7	1.7
22	1.8	e1.4	e1.5	e1.6	e1.6	e11	163	33	5.6	1.5	1.6	1.7
23	1.8	e1.4	e1.4	e1.6	e1.6	e7.3	393	36	3.3	1.4	1.6	2.4
24	1.8	e1.5	e1.3	e1.7	e2.0	e6.4	93	21	2.8	1.6	1.7	2.0
25	1.8	e1.5	e1.3	e1.7	e2.8	e5.7	48	28	3.2	1.6	1.6	1.6
26	2.8	e1.6	e1.4	e1.6	2.3	e6.1	34	44	2.6	2.2	1.7	1.4
27	3.0	e1.6	e1.5	e1.6	1.9	e6.7	25	28	2.3	1.7	1.6	1.4
28	2.3	e1.7	e1.7	1.8	e1.9	e7.5	18	16	2.2	2.9	1.5	1.4
29	1.9	e1.8	e1.9	1.7	---	e7.8	15	9.2	2.2	1.7	1.5	2.4
30	2.2	e1.7	e1.8	e1.9	---	11	17	5.9	2.1	1.5	1.7	1.6
31	2.3	---	e1.7	1.9	---	13	---	4.4	---	1.5	1.7	---
TOTAL	59.5	209.9	48.9	54.6	49.5	175.6	2216	489.7	231.3	57.9	62.8	50.9
MEAN	1.92	7.00	1.58	1.76	1.77	5.66	73.9	15.8	7.71	1.87	2.03	1.70
MAX	3.0	41	1.9	2.1	2.8	18	393	44	48	2.9	7.0	2.4
MIN	1.2	1.4	1.3	1.5	1.4	2.1	13	3.1	2.1	1.4	1.4	1.4
AC-FT	118	416	97	108	98	348	4400	971	459	115	125	101
CFSM	.25	.91	.20	.23	.23	.74	9.59	2.05	1.00	.24	.26	.22
IN.	.29	1.01	.24	.26	.24	.85	10.71	2.37	1.12	.28	.30	.25

04024098 DEER CREEK NEAR HOLYOKE, MN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.14	4.66	2.44	1.90	2.70	8.45	24.7	10.1	7.63	6.98	4.99	6.75
MAX	21.8	12.2	4.35	2.92	9.29	21.5	90.8	24.3	31.4	26.7	36.9	30.4
(WY)	1983	1983	1999	1992	1998	1995	1986	1991	1993	1999	1986	1986
MIN	1.69	1.59	1.31	.97	1.06	2.34	4.11	2.15	1.39	1.50	.89	1.24
(WY)	1988	1977	1977	1979	1979	1986	1977	1980	1995	1988	1982	1993

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1976 - 2001
ANNUAL TOTAL	1656.2	3706.6	
ANNUAL MEAN	4.53	10.2	7.29
HIGHEST ANNUAL MEAN			19.3
LOWEST ANNUAL MEAN			3.65
HIGHEST DAILY MEAN	68	Mar 8	553
LOWEST DAILY MEAN	1.2	Sep 13	.21
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 28	.47
MAXIMUM PEAK FLOW			2000a
MAXIMUM PEAK STAGE			32.76b
INSTANTANEOUS LOW FLOW			.10
ANNUAL RUNOFF (AC-FT)	3290	7350	5280
ANNUAL RUNOFF (CFSM)	.59	1.32	.95
ANNUAL RUNOFF (INCHES)	8.00	17.91	12.87
10 PERCENT EXCEEDS	9.6	20	14
50 PERCENT EXCEEDS	2.1	2.0	2.5
90 PERCENT EXCEEDS	1.4	1.5	1.5

- a From rating curve extended above 1000 ft<sup>3</sup>/s on basis of flow-thru-culvert computations.
- b From floodmark.
- c Result of freezeup.
- e Estimated.

