

STREAMS TRIBUTARY TO LAKE SUPERIOR--Continued

04024098 DEER CREEK NEAR HOLYOKE, MN

LOCATION.--Lat 46°31'30", long 92°23'20", in NE¹/₄SE¹/₄ 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 mi².

PERIOD OF RECORD.--October 1976 to current year.

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.5	4.4	e1.8	e1.8	e2.0	11	2.5	1.9	2.4	2.2	2.7
2	1.7	2.4	4.3	e1.7	e1.7	e1.9	8.2	2.1	2.4	2.4	1.9	2.6
3	1.7	2.5	4.2	e1.6	e1.6	e1.6	7.5	2.1	2.9	6.1	29	2.6
4	1.5	2.6	4.1	e1.5	e1.6	e1.4	84	2.2	1.9	4.6	8.2	5.1
5	1.7	2.6	14	e1.5	e1.5	1.2	35	6.3	15	3.3	3.9	3.8
6	2.7	2.6	10	e1.5	e1.5	1.0	45	21	7.7	2.8	3.0	3.1
7	2.1	2.9	6.3	e1.5	e1.4	.92	89	45	7.9	2.2	2.5	3.8
8	1.7	2.7	5.3	e1.5	e1.4	.89	41	21	6.7	215	2.4	6.5
9	1.7	2.7	4.7	e1.5	e1.3	1.0	22	10	3.5	96	2.6	3.8
10	2.1	23	4.5	e1.5	e1.3	1.0	13	6.5	2.7	24	3.2	3.5
11	1.6	14	4.5	e1.5	e1.2	1.1	13	6.3	2.7	9.7	2.7	2.8
12	1.7	5.1	4.4	e1.5	e1.2	1.1	12	14	3.7	5.5	63	3.6
13	1.8	4.2	4.3	e1.6	1.2	1.1	9.5	11	2.4	4.0	68	3.2
14	1.9	3.8	4.3	e1.6	1.3	1.3	8.1	6.4	1.8	3.4	15	2.8
15	2.0	3.6	4.3	e1.7	1.3	e1.6	13	4.9	1.8	2.9	6.7	3.4
16	3.0	3.5	4.0	e1.8	1.3	e2.0	17	4.2	2.0	76	8.8	2.6
17	7.1	3.5	3.9	e1.9	1.2	e2.2	11	4.3	1.8	16	4.2	2.3
18	3.5	4.2	4.2	e2.0	1.1	e2.1	7.9	3.7	1.7	5.7	43	2.3
19	2.6	e8.0	3.9	e2.1	1.0	e2.0	6.4	2.5	1.8	4.2	35	2.5
20	2.3	6.2	e4.0	e2.1	1.0	e1.9	5.5	2.1	1.7	3.2	10	2.3
21	2.2	5.0	e4.0	e2.1	1.0	e2.3	5.1	2.4	2.0	2.8	5.2	2.2
22	2.1	4.7	e3.7	e2.2	.96	e2.7	4.5	2.3	62	2.6	3.9	2.2
23	2.2	11	e3.4	e2.2	.99	e3.2	3.7	3.6	63	3.3	238	2.2
24	2.0	7.6	e3.2	e2.2	1.0	e3.9	3.3	2.8	15	2.8	35	2.0
25	2.3	6.2	e3.0	e2.1	.98	e4.6	3.2	2.2	5.1	114	13	1.9
26	2.5	5.5	e2.8	e2.1	1.1	e6.0	2.9	1.9	2.8	184	6.2	5.1
27	2.4	5.0	e2.6	e2.0	1.3	e10	2.6	1.9	2.2	15	4.5	3.9
28	2.5	4.8	e2.4	e2.0	e1.5	e53	2.6	1.7	2.4	4.8	3.6	2.8
29	2.5	4.6	e2.2	e1.9	---	26	2.2	2.8	2.9	3.0	3.0	2.7
30	2.5	4.5	e2.1	e1.9	---	18	2.2	1.6	2.4	2.5	2.8	2.4
31	2.6	---	e2.0	e1.8	---	15	---	1.5	---	3.1	3.0	---
TOTAL	72.0	161.5	135.0	55.9	35.73	174.01	491.4	202.8	233.8	827.3	633.5	92.7
MEAN	2.32	5.38	4.35	1.80	1.28	5.61	16.4	6.54	7.79	26.7	20.4	3.09
MAX	7.1	23	14	2.2	1.8	53	89	45	63	215	238	6.5
MIN	1.5	2.4	2.0	1.5	.96	.89	2.2	1.5	1.7	2.2	1.9	1.9
AC-FT	143	320	268	111	71	345	975	402	464	1640	1260	184
CFSM	.30	.70	.57	.23	.17	.73	2.13	.85	1.01	3.47	2.65	.40
IN.	.35	.78	.65	.27	.17	.84	2.37	.98	1.13	4.00	3.06	.45

e Estimated

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.36	4.58	2.46	1.89	2.56	8.41	23.4	10.0	7.73	7.35	5.23	7.20
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 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1976 - 1999
ANNUAL TOTAL	1770.13	3115.64	
ANNUAL MEAN	4.85	8.54	7.28
HIGHEST ANNUAL MEAN			19.3 1986
LOWEST ANNUAL MEAN			3.65 1980
HIGHEST DAILY MEAN	72 Feb 27	238 Aug 23	553 Sep 6 1990
LOWEST DAILY MEAN	.95 Sep 1	.89 Mar 8	.21 Jul 2 1976
ANNUAL SEVEN-DAY MINIMUM	1.0 Aug 31	.99 Feb 19	.47 Aug 10 1982
INSTANTANEOUS PEAK FLOW		791 Jul 8	2000 ^a Sep 3 1985
INSTANTANEOUS PEAK STAGE		19.93 Jul 8	32.76 ^b Sep 3 1985
INSTANTANEOUS LOW FLOW		.69 Mar 7	.10 Nov 13 1996
ANNUAL RUNOFF (AC-FT)	3510	6180	5270
ANNUAL RUNOFF (CFSM)	.63	1.11	.95
ANNUAL RUNOFF (INCHES)	8.55	15.05	12.85
10 PERCENT EXCEEDS	9.4	14	14
50 PERCENT EXCEEDS	2.5	2.7	2.5
90 PERCENT EXCEEDS	1.4	1.5	1.5

a From rating curve extended above 1000 ft³/s on basis of flow-thru-culvert computations.
 b From floodmark.

