

ST. CROIX RIVER BASIN--Continued

05337400 KNIFE RIVER NEAR MORA, MN

LOCATION.--Lat 45°55'12", long 93°18'26", in SW¹/₄SW¹/₄ sec. 26, T.40 N., R.24 W., Kanabec County, Hydrologic Unit 07030004, on left bank 400 ft upstream from bridge on County Highway 77, 1.1 mi upstream from mouth and 2.5 mi north of Mora.

DRAINAGE AREA.--102 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1969-74; July 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 991.20 ft above sea level (NGVD of 1929, Kanabec County bench mark).

REMARKS.--Records good except those for periods of estimated daily discharges, which are fair to poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 26, 1972, reached a stage of 14.0 ft, from information by local resident (discharge not determined). Result of dam failure and backwater from collapsed bridge.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jul 10	0030	*386	*3.93	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	42	18	e7.7	e6.8	170	88	46	24	21	16	4.2
2	13	47	19	e7.6	e6.8	140	80	40	18	30	14	2.9
3	12	44	19	e7.6	e6.8	121	80	34	16	24	10	2.3
4	10	42	19	e7.4	e6.8	105	70	35	23	20	8.3	2.1
5	12	40	18	e7.4	e6.8	91	64	29	22	21	7.3	1.8
6	12	36	18	e7.3	e7.6	80	69	26	19	22	6.2	1.6
7	12	33	18	e7.3	e7.9	73	64	30	18	22	4.6	1.5
8	15	32	17	e7.3	e8.5	82	48	54	19	28	3.9	1.3
9	15	31	17	e7.2	e8.5	124	50	53	20	275	3.5	1.4
10	18	36	16	e7.2	e8.2	136	46	58	17	355	2.6	1.4
11	17	24	16	e7.0	e7.7	139	48	61	16	287	2.0	1.5
12	17	24	15	e7.0	e7.4	129	43	52	14	214	1.8	1.8
13	18	25	15	e6.9	e7.4	113	43	49	13	149	2.0	1.5
14	14	24	15	e6.9	e7.8	100	48	46	20	110	2.0	1.4
15	15	21	e14	e6.9	e8.0	91	43	40	21	83	2.7	1.4
16	15	21	e11	e7.4	e8.0	78	41	46	36	65	2.4	1.4
17	13	20	e9.4	e7.2	e7.7	68	36	45	42	52	3.8	1.4
18	12	23	e8.3	e7.0	e7.6	60	35	46	46	40	3.9	1.3
19	13	22	e7.7	e6.6	e7.5	54	43	31	51	32	3.2	1.4
20	12	19	e7.3	e6.4	e7.5	50	55	28	56	29	2.6	1.5
21	12	18	e7.0	e6.3	e7.6	46	56	29	52	22	2.2	1.5
22	19	20	e7.0	e6.4	e7.7	43	69	27	56	19	2.2	1.5
23	14	23	e7.0	e6.4	e9.5	44	79	22	52	17	2.2	1.8
24	9.8	19	e7.3	e6.4	e18	65	75	24	49	14	2.1	1.7
25	11	18	e7.3	e6.5	e45	109	71	24	42	26	2.1	1.7
26	10	19	e7.3	e6.5	185	144	66	21	37	43	3.7	1.5
27	11	18	e7.2	e6.5	236	155	64	23	32	40	3.9	1.5
28	12	18	e7.0	e6.6	202	141	66	25	29	36	3.0	1.5
29	12	18	e7.5	e6.6	184	124	55	20	29	30	2.9	1.5
30	37	18	e8.0	e6.6	---	110	46	22	31	22	2.8	1.4
31	39	---	e7.8	e6.8	---	96	---	24	---	18	2.6	---
TOTAL	463.8	795	378.1	214.9	1046.1	3081	1741	1110	920	2166	132.5	50.7
MEAN	15.0	26.5	12.2	6.93	36.1	99.4	58.0	35.8	30.7	69.9	4.27	1.69
MAX	39	47	19	7.7	236	170	88	61	56	355	16	4.2
MIN	9.8	18	7.0	6.3	6.8	43	35	20	13	14	1.8	1.3
AC-FT	920	1580	750	426	2070	6110	3450	2200	1820	4300	263	101
CFSM	.15	.26	.12	.07	.35	.97	.57	.35	.30	.69	.04	.02
IN.	.17	.29	.14	.08	.38	1.12	.63	.40	.34	.79	.05	.02

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	50.9	36.5	22.6	13.2	16.1	72.1	218	111	60.8	45.7	34.4	36.7
MAX	242	78.4	63.6	28.8	48.9	238	472	338	233	133	218	257
(WY)	1985	1984	1984	1984	1984	1983	1986	1986	1984	1991	1995	1986
MIN	3.62	1.38	1.17	1.23	1.16	15.3	35.2	11.4	3.06	.98	1.94	1.69
(WY)	1988	1990	1990	1990	1990	1980	1987	1998	1988	1988	1988	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1979 - 2000
ANNUAL TOTAL	19917.2	12099.1	
ANNUAL MEAN	54.6	33.1	59.9
HIGHEST ANNUAL MEAN			135 1986
LOWEST ANNUAL MEAN			16.8 1988
HIGHEST DAILY MEAN	1080 May 13	355 Jul 10	1790 Apr 6 1997
LOWEST DAILY MEAN	5.5 Jan 9	1.3 Sep 8,18	.76 Jul 7 1988
ANNUAL SEVEN-DAY MINIMUM	5.6 Jan 9	1.4 Sep 13	.86 Jul 23 1988
INSTANTANEOUS PEAK FLOW		386 Jul 10	1870 Apr 6 1997
INSTANTANEOUS PEAK STAGE		3.93 Jul 10	6.69 ^a Nov 24 1977
INSTANTANEOUS LOW FLOW		1.2 Sep 7	.74 Jul 6 1988
ANNUAL RUNOFF (AC-FT)	39510	24000	43360
ANNUAL RUNOFF (CFSM)	.53	.32	.59
ANNUAL RUNOFF (INCHES)	7.26	4.41	7.97
10 PERCENT EXCEEDS	137	78	142
50 PERCENT EXCEEDS	24	18	23
90 PERCENT EXCEEDS	6.7	2.3	5.4

^a From floodmarks, backwater from ice.
^e Estimated.

