

05094000 SOUTH BRANCH TWO RIVERS AT LAKE BRONSON, MN

LOCATION.--Lat 48°43'50", long 96°39'50", in SW¹/₄SW¹/₄ sec. 30, T.161 N., R.46 W., Kittson County, Hydrologic Unit 09020312, on left bank 70 ft upstream from culvert on U.S. Highway 59 at Lake Bronson and 3.4 mi downstream from dam at outlet of Bronson Lake.

DRAINAGE AREA.--422 mi².

PERIOD OF RECORD.--September 1928 to November 1936, April to September 1937, April 1941 to October 1943, April to December 1944, April 1945 to September 1947, October 1953 to September 1981, April 1985 to current year. Monthly discharge only for some periods, published in WSP 1308. October 1981 to March 1985, annual maximums only. Published as South Fork Two Rivers at Bronson prior to 1941.

REVISED RECORDS.--WSP 1308: 1929(M), 1931(M), 1936(M), 1944(M), 1947(M).

GAGE.--Water-stage recorder. Datum of gage is 928.53 ft above sea level (NGVD of 1929, Minnesota Department of Transportation benchmark). Prior to Nov. 23, 1953, nonrecording gage at bridge 100 ft downstream at datum 2.00 ft higher. Nov 23, 1953 to Oct. 5, 1963, water-stage recorder at same site at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow partly regulated since 1937 at Bronson Lake; usable capacity, 3,700 acre-ft.

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	28	11	e3.0	e5.2	e5.0	588	48	26	12	201	4.6	569
2	28	11	e2.5	e5.2	e5.0	592	47	25	11	164	3.8	468
3	28	13	e2.1	e5.2	e5.0	534	50	26	10	134	2.7	363
4	27	19	2.1	e5.2	e4.8	450	144	27	8.9	115	2.0	282
5	25	18	2.3	e5.2	e4.7	378	151	25	7.8	109	1.7	223
6	23	17	2.7	e5.2	e4.5	330	131	24	6.7	103	1.6	180
7	23	17	2.7	e5.2	e4.5	304	133	24	7.3	93	1.5	152
8	22	16	3.4	e5.2	e4.5	300	129	28	7.2	81	1.2	132
9	21	15	e4.0	e5.0	e4.5	262	110	35	9.4	82	.94	119
10	19	14	e4.5	e5.0	e4.5	133	97	38	7.6	85	.74	102
11	18	13	e5.0	e5.0	e4.8	111	83	39	4.0	81	.65	88
12	17	13	e5.2	e5.0	e5.4	71	68	43	7.5	69	51	74
13	25	12	e5.2	e5.0	e6.6	54	58	39	19	60	23	62
14	32	12	e5.2	e5.0	e9.0	39	48	38	36	58	12	54
15	23	11	e5.2	e5.0	e13	30	50	40	262	57	7.5	35
16	19	3.4	e5.2	e5.0	e17	28	44	40	656	33	5.6	6.6
17	17	2.3	e5.2	e5.0	e19	30	42	35	712	3.0	5.4	17
18	16	3.3	e5.2	e5.0	e21	29	41	29	640	2.9	5.0	21
19	15	3.2	e5.2	e5.0	e22	26	41	25	492	2.7	4.7	26
20	14	3.6	e5.2	e5.0	27	27	44	22	375	3.4	9.1	27
21	12	4.0	e5.2	e5.0	31	26	46	21	437	6.8	19	28
22	6.3	6.7	e5.2	e5.0	35	15	44	20	688	8.6	103	32
23	6.7	31	e5.6	e5.0	41	30	43	19	843	9.0	173	40
24	9.2	28	e7.5	e5.0	46	36	41	21	872	9.2	136	57
25	14	23	e7.2	e5.0	48	41	36	21	813	8.8	93	102
26	14	19	e6.6	e5.0	72	59	33	21	699	8.5	64	106
27	14	20	e6.0	e5.0	150	83	31	19	534	7.5	31	89
28	12	18	e5.8	e5.0	339	83	29	18	398	6.9	80	75
29	12	e15	e5.6	e5.0	504	70	27	17	314	6.4	429	65
30	12	e7.0	e5.4	e5.0	---	60	26	17	253	5.2	726	58
31	12	---	e5.4	e5.0	---	53	---	14	---	4.5	658	---
TOTAL	564.2	399.5	146.6	156.6	1457.8	4872	1915	836	9142.4	1618.4	2656.73	3652.6
MEAN	18.2	13.3	4.73	5.05	50.3	157	63.8	27.0	305	52.2	85.7	122
MAX	32	31	7.5	5.2	504	592	151	43	872	201	726	569
MIN	6.3	2.3	2.1	5.0	4.5	15	26	14	4.0	2.7	.65	6.6
AC-FT	1120	792	291	311	2890	9660	3800	1660	18130	3210	5270	7240
CFSM	.04	.03	.01	.01	.12	.37	.15	.06	.72	.12	.20	.29
IN.	.05	.04	.01	.01	.13	.43	.17	.07	.81	.14	.23	.32

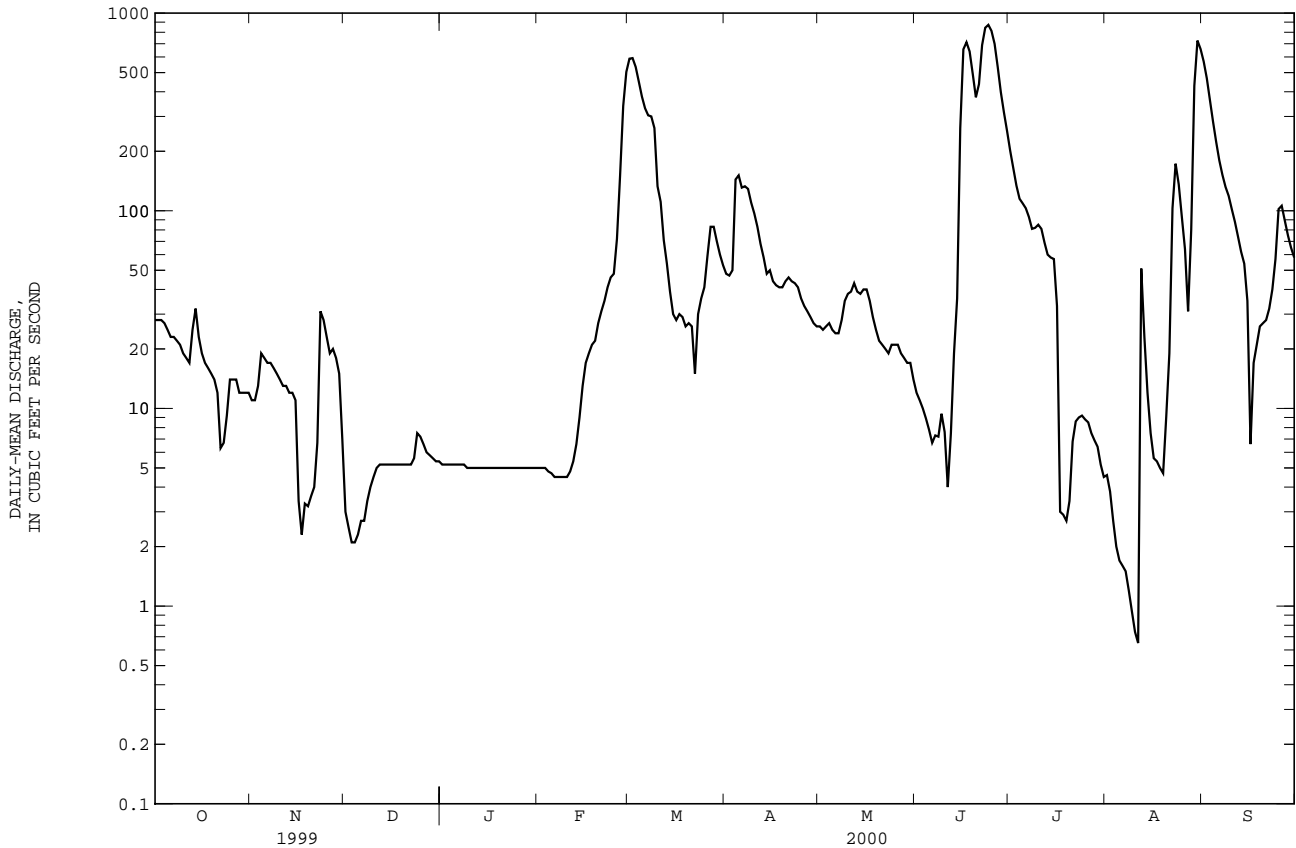
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.7	13.6	5.37	3.19	5.98	79.0	439	219	173	115	48.3	45.2
MAX	153	97.0	34.5	12.1	93.1	689	1977	1500	1336	1136	1349	525
(WY)	1958	1995	1992	1998	1995	1996	1996	1996	1970	1956	1993	1957
MIN	.40	.38	.13	.12	.12	.66	.54	.98	1.43	.44	.089	.000
(WY)	1991	1990	1987	1987	1987	1934	1991	1991	1980	1988	1988	1937

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SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1929 - 2000	
ANNUAL TOTAL	101642.9		27417.83			
ANNUAL MEAN	278		74.9		98.2 ^a	
HIGHEST ANNUAL MEAN					312 1966	
LOWEST ANNUAL MEAN					2.89 1934	
HIGHEST DAILY MEAN	3350	Apr 8	872	Jun 24	5290	Apr 5 1966
LOWEST DAILY MEAN	2.1	Dec 3	.65	Aug 11	.00 ^b	Jul 25 1937
ANNUAL SEVEN-DAY MINIMUM	2.5	Dec 1	1.2	Aug 5	.00	Aug 2 1937
INSTANTANEOUS PEAK FLOW			881	Jun 24	5410	Apr 5 1966
INSTANTANEOUS PEAK STAGE			7.23	Jun 24	18.23	Apr 5 1966
ANNUAL RUNOFF (AC-FT)	201600		54380		71130	
ANNUAL RUNOFF (CFSM)	.66		.18		.23	
ANNUAL RUNOFF (INCHES)	8.96		2.42		3.16	
10 PERCENT EXCEEDS	947		186		241	
50 PERCENT EXCEEDS	21		21		5.2	
90 PERCENT EXCEEDS	6.0		4.5		.80	

^a Median of annual mean discharges is 60 ft³/s.
^b Many days, several years.
^e Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 2000.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
SEP 12..	1305	73	425	7.9	15.4	20	732	9.1	95	9	99