

RED RIVER OF THE NORTH BASIN--Continued

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 (Minnesota Department of Transportation bench mark). 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 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	21	26	e8.4	e7.0	e15	e2600	193	240	977	60	8.8
2	.72	35	29	e8.0	e7.0	e12	2690	198	371	e800	58	9.2
3	.81	40	33	e8.0	e7.0	e10	2460	197	233	685	19	10
4	.80	39	36	e8.0	e7.0	e9.5	2450	194	243	626	13	13
5	2.0	36	39	e7.8	e6.8	e9.0	2240	193	360	641	3.4	17
6	2.5	33	42	e7.6	e6.6	e8.5	2190	190	642	e500	11	72
7	1.8	31	39	e7.6	e6.4	e8.5	2690	185	564	e400	33	146
8	2.1	29	36	e7.4	e6.2	e8.5	3350	184	416	e350	46	121
9	3.1	27	32	e7.4	e6.2	e8.5	3180	351	623	e300	39	230
10	3.0	27	30	e7.4	e6.2	e8.5	3240	514	1630	e250	35	123
11	4.8	24	25	e7.4	e6.0	e8.2	3150	590	1640	e220	35	110
12	7.2	22	23	e7.4	e6.0	e8.2	2630	912	1580	e200	34	114
13	7.2	21	21	e7.6	e6.0	e8.2	2150	937	1420	e200	26	99
14	8.3	20	20	e7.6	e6.0	e8.2	1860	1020	1360	e300	17	80
15	9.3	19	19	e7.8	e6.0	e9.0	1670	1000	1150	410	17	70
16	9.8	19	18	e8.2	e6.2	e10	1450	1020	1010	484	19	79
17	15	19	e18	e8.6	e6.2	e10	1370	971	636	346	19	81
18	47	e19	e18	e8.6	e6.2	e10	1140	843	463	376	20	71
19	344	e18	e18	e8.6	e6.2	e15	963	606	421	383	17	59
20	309	e17	e17	e8.6	e6.2	e20	855	393	258	330	14	61
21	166	e15	e16	e8.8	e6.4	e18	720	287	210	277	20	64
22	102	e14	e15	e8.6	e6.4	e30	689	259	128	265	21	42
23	117	15	e14	e8.4	e6.4	e80	574	263	305	157	59	31
24	117	15	e13	e8.2	e6.4	e74	439	270	718	135	58	19
25	113	16	e12	e8.0	e6.4	e74	347	271	451	147	40	19
26	75	17	e10	e7.6	e8.0	e450	386	225	821	60	20	22
27	41	19	e9.5	e7.6	e12	e15	369	173	1350	62	8.3	25
28	39	20	e9.0	e7.4	e16	e25	349	141	1280	65	9.3	27
29	43	22	e9.0	e7.4	---	e100	282	129	1070	67	11	26
30	54	24	e8.8	e7.2	---	e350	171	107	1060	65	11	27
31	50	---	e8.6	e7.2	---	e1600	---	114	---	62	26	---
TOTAL	1696.04	693	663.9	244.4	195.4	3020.8	48654	12930	22653	10140	819.0	1876.0
MEAN	54.7	23.1	21.4	7.88	6.98	97.4	1622	417	755	327	26.4	62.5
MAX	344	40	42	8.8	16	1600	3350	1020	1640	977	60	230
MIN	.61	14	8.6	7.2	6.0	8.2	171	107	128	60	3.4	8.8
AC-FT	3360	1370	1320	485	388	5990	96510	25650	44930	20110	1620	3720
CFSM	.13	.05	.05	.02	.02	.23	3.84	.99	1.79	.78	.06	.15
IN.	.15	.06	.06	.02	.02	.27	4.29	1.14	2.00	.89	.07	.17

e Estimated

05094000 SOUTH BRANCH TWO RIVERS AT LAKE BRONSON, MN--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.7	13.6	5.38	3.15	5.13	77.6	446	222	171	116	47.6	43.9
MAX	153	97.0	34.5	12.1	93.1	689	1977	1500	1336	1136	1349	525
(WY)	1958	1995	1992	1992	1998	1995	1966	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

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1929 - 1999
ANNUAL TOTAL	47829.31	103585.54	
ANNUAL MEAN	131	284	98.6 ^a
HIGHEST ANNUAL MEAN			312 1966
LOWEST ANNUAL MEAN			2.89 1934
HIGHEST DAILY MEAN	1500 Mar 5	3350 Apr 8	5290 Apr 5 1966
LOWEST DAILY MEAN	.48 Sep 27	.61 ^b Oct 1	.00 ^c Jul 25 1937
ANNUAL SEVEN-DAY MINIMUM	.56 Sep 25	1.3 Oct 1	.00 Aug 2 1937
INSTANTANEOUS PEAK FLOW		4290 Apr 8	5410 Apr 5 1966
INSTANTANEOUS PEAK STAGE		14.64 Apr 8	18.23 Apr 5 1966
ANNUAL RUNOFF (AC-FT)	94870	205500	71440
ANNUAL RUNOFF (CFSM)	.31	.67	.23
ANNUAL RUNOFF (INCHES)	4.22	9.13	3.18
10 PERCENT EXCEEDS	395	947	241
50 PERCENT EXCEEDS	22	32	5.1
90 PERCENT EXCEEDS	4.3	7.0	.80

a Median of annual mean discharges is 59 ft³/s.
 b Rising stage.
 c Many days, several years.

