

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 (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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	21	14	8.5	e5.0	e4.1	343	28	275	826	246	87
2	4.4	28	14	8.5	e4.9	e4.0	280	24	123	846	233	258
3	3.4	39	14	8.3	e4.9	e3.9	221	24	70	821	229	384
4	3.4	50	13	8.5	e4.8	e3.7	162	24	32	744	218	125
5	3.7	57	14	e8.4	e4.8	e3.7	104	25	29	772	214	12
6	3.7	67	14	e7.8	e4.8	e3.6	64	25	25	769	209	34
7	4.7	72	13	e7.4	e4.7	e3.4	47	25	25	748	117	67
8	8.0	64	13	e7.1	e4.7	e3.4	39	134	25	762	38	62
9	10	59	13	e6.9	e4.7	e3.3	34	190	26	854	165	61
10	14	56	12	e6.6	e4.6	e3.2	32	240	291	847	224	61
11	15	52	12	e6.4	e4.5	e3.2	30	374	2070	763	210	54
12	13	47	11	e6.5	e4.4	e3.2	28	325	2400	684	175	38
13	12	42	11	e6.4	e4.5	e3.2	27	279	2630	683	122	3.7
14	12	38	11	e6.3	e4.6	e3.2	29	222	2680	654	87	2.9
15	12	35	11	e6.2	e5.0	e3.2	35	205	2410	610	91	2.3
16	13	26	11	e6.2	e5.3	e3.2	37	205	2030	546	98	2.1
17	13	18	11	e6.1	e5.5	e3.2	37	171	1730	493	119	1.7
18	13	23	11	e6.0	e5.5	e3.2	31	86	1490	526	160	1.6
19	12	23	11	e6.0	e5.4	e3.2	30	83	1310	504	190	2.0
20	13	23	11	e5.9	e5.3	e3.3	29	61	831	435	185	1.9
21	13	23	e11	e5.8	e5.1	e3.3	29	28	862	466	153	7.0
22	13	22	e11	e5.7	e5.0	e3.3	23	28	953	469	92	16
23	11	21	e10	e5.6	e4.9	e3.4	15	27	1510	452	25	90
24	18	20	e10	e5.5	e4.8	e3.5	16	25	1710	410	28	3.1
25	19	19	e9.9	e5.4	e4.7	e13	17	25	1980	358	35	1.8
26	17	18	e9.6	e5.4	e4.5	e30	228	25	1850	336	53	2.8
27	15	16	e9.2	e5.3	e4.4	e45	244	26	1700	347	70	6.1
28	13	16	e9.0	e5.2	e4.3	e80	54	26	1550	348	76	7.3
29	12	15	e8.6	e5.2	---	e170	41	27	1180	324	74	8.5
30	12	14	e8.6	e5.1	---	e260	30	40	904	305	73	9.1
31	13	---	8.5	e5.0	---	332	---	299	---	257	79	---
TOTAL	348.7	1024	350.4	199.2	135.6	1011.9	2336	3326	34701	17959	4088	1412.9
MEAN	11.2	34.1	11.3	6.43	4.84	32.6	77.9	107	1157	579	132	47.1
MAX	19	72	14	8.5	5.5	332	343	374	2680	854	246	384
MIN	3.4	14	8.5	5.0	4.3	3.2	15	24	25	257	25	1.6
AC-FT	692	2030	695	395	269	2010	4630	6600	68830	35620	8110	2800
CFSM	0.03	0.08	0.03	0.02	0.01	0.08	0.18	0.25	2.74	1.37	0.31	0.11
IN.	0.03	0.09	0.03	0.02	0.01	0.09	0.21	0.29	3.06	1.58	0.36	0.12

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.2	33.2	6.04	3.45	6.02	77.8	451	220	189	121	54.1	44.7
MAX	153	1132	37.9	15.3	93.1	689	1977	1500	1336	1136	1349	525
(WY)	1958	2001	2001	2001	1998	1995	1966	1996	1970	1956	1993	1957
MIN	0.40	0.38	0.13	0.12	0.12	0.66	0.54	0.98	1.43	0.44	0.089	0.000
(WY)	1991	1990	1987	1987	1987	1934	1991	1991	1980	1988	1988	1937

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1929 - 2002

ANNUAL TOTAL	79236.8		66892.7		103a	
ANNUAL MEAN	217		183		314	
HIGHEST ANNUAL MEAN					2001	
LOWEST ANNUAL MEAN					2.89	
HIGHEST DAILY MEAN	3290		Apr 10		5290	
LOWEST DAILY MEAN	3.2		Jul 17		0.00b	
ANNUAL SEVEN-DAY MINIMUM	4.0		Aug 30		2.1	
MAXIMUM PEAK FLOW					2730	
MAXIMUM PEAK STAGE					11.23	
ANNUAL RUNOFF (AC-FT)	157200		132700		74960	
ANNUAL RUNOFF (CFSM)	0.51		0.43		0.25	
ANNUAL RUNOFF (INCHES)	6.98		5.90		3.33	
10 PERCENT EXCEEDS	613		534		244	
50 PERCENT EXCEEDS	18		23		5.2	
90 PERCENT EXCEEDS	8.8		3.8		0.88	

- a Median of annual mean discharges is 67 ft³/s.
- b Many days, several years.
- e Estimated.

