

RAINY RIVER BASIN--Continued

05130500 STURGEON RIVER NEAR CHISHOLM, MN

LOCATION.--Lat 47°40'25", long 92°54'00", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec. 20, T.60 N., R.20 W., St. Louis County, Hydrologic Unit 09030005, on left bank 1,000 ft upstream from County Highway 65 bridge, 0.6 mi downstream from East Branch Sturgeon River, and 11.5 mi north of Chisholm.

DRAINAGE AREA.--180 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1942 to current year.

REVISED RECORDS.--WSP 1438: 1946.

GAGE.--Water-stage recorder. Datum of gage is 1,305.7 ft above sea level. Prior to Aug. 24, 1944, nonrecording gage at site 1,000 ft downstream at different datum. Aug. 25, 1944 to Sept. 30, 1975 at present site at datum 1.00 ft higher.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr 2	0230	729	4.32	Jul 7	0330	*2,400	*6.68
Apr 7	1800	857	4.57	Jul 18	1830	572	3.98

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	36	163	e175	e61	e34	e33	618	154	125	282	176	118
2	35	153	e180	e59	e34	e33	625	144	119	323	161	122
3	35	142	e180	e56	e34	e33	575	137	107	321	146	145
4	36	134	e180	e54	e34	e33	600	132	91	303	134	243
5	37	127	e190	e51	e34	e32	731	133	89	906	122	270
6	49	119	e210	e48	e35	e32	806	157	92	1840	123	260
7	55	114	e235	e45	e35	e31	840	212	94	2280	121	248
8	57	110	e235	e43	e35	e31	825	244	90	1740	117	228
9	72	106	e225	e40	e35	e31	780	248	84	1410	113	208
10	75	e110	e205	e38	e35	e31	709	275	87	1080	117	193
11	63	e115	e180	e37	e35	e31	622	302	82	889	113	180
12	60	e120	e165	e35	e35	e31	540	388	76	720	135	177
13	55	130	e145	e34	e35	e31	476	446	69	585	240	177
14	51	130	e140	e33	e35	e32	426	439	61	476	279	174
15	56	127	e130	e33	e35	e32	394	395	56	393	296	173
16	136	125	e124	e33	e35	e33	375	353	55	464	278	165
17	246	122	e118	e33	e35	e34	357	347	50	494	238	158
18	335	111	e112	e33	e35	e35	337	357	45	558	315	151
19	375	102	e106	e33	e35	e37	320	344	41	542	365	146
20	366	e105	e100	e33	e34	e39	297	327	38	453	347	138
21	311	e115	e96	e33	e34	e41	280	321	35	371	287	135
22	253	e120	e91	e34	e34	e44	260	320	43	308	240	130
23	209	e125	e87	e34	e34	e47	244	308	71	262	213	127
24	183	e130	e83	e34	e34	e50	229	289	109	225	188	124
25	179	e135	e79	e34	e33	55	217	265	121	210	175	124
26	200	e140	e76	e34	e32	62	203	237	112	259	165	177
27	207	e140	e73	e34	e32	79	190	201	173	257	165	204
28	205	e140	e71	e34	e33	193	181	179	195	259	182	235
29	194	e140	e68	e34	---	339	175	157	197	236	144	224
30	184	e150	e65	e34	---	437	165	138	209	214	134	194
31	173	---	e63	e34	---	552	---	131	---	193	126	---
TOTAL	4528	3800	4187	1205	960	2554	13397	8080	2816	18853	5955	5348
MEAN	146	127	135	38.9	34.3	82.4	447	261	93.9	608	192	178
MAX	375	163	235	61	35	552	840	446	209	2280	365	270
MIN	35	102	63	33	32	31	165	131	35	193	113	118
AC-FT	8980	7540	8300	2390	1900	5070	26570	16030	5590	37390	11810	10610
CFSM	.81	.70	.75	.22	.19	.46	2.48	1.45	.52	3.38	1.07	.99
IN.	.94	.79	.87	.25	.20	.53	2.77	1.67	.58	3.90	1.23	1.11

e Estimated

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	122	94.6	49.4	29.4	23.9	51.2	369	300	181	128	73.1	93.5
MAX	600	264	135	66.0	47.7	337	868	1451	528	623	268	424
(WY)	1996	1978	1999	1966	1984	1945	1948	1950	1944	1993	1988	1977
MIN	7.85	8.90	4.82	3.98	4.54	10.0	41.0	22.9	14.7	5.99	12.6	4.60
(WY)	1977	1977	1977	1977	1977	1957	1977	1977	1988	1988	1961	1976

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1942 - 1999
ANNUAL TOTAL	32089	71683	
ANNUAL MEAN	87.9	196	126
HIGHEST ANNUAL MEAN			218
LOWEST ANNUAL MEAN			63.1
HIGHEST DAILY MEAN	375	Oct 19	2280
LOWEST DAILY MEAN	18	Sep 12	31 <sup>a</sup>
ANNUAL SEVEN-DAY MINIMUM	20	Sep 7	31
INSTANTANEOUS PEAK FLOW			2400
INSTANTANEOUS PEAK STAGE			6.68
ANNUAL RUNOFF (AC-FT)	63650	142200	91590
ANNUAL RUNOFF (CFSM)	.49	1.09	.70
ANNUAL RUNOFF (INCHES)	6.63	14.81	9.54
10 PERCENT EXCEEDS	194	390	297
50 PERCENT EXCEEDS	62	134	59
90 PERCENT EXCEEDS	26	34	18

a Estimated.  
b Present datum.

