

## 05130500 STURGEON RIVER NEAR CHISHOLM, MN

LOCATION.--Lat 47°40'25", long 92°54'00", in NE $\frac{1}{4}$ NW $\frac{1}{4}$  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 (NGVD of 1929). 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 (\*):

	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr 2	0730	(ice jam)	*4.85	0430	705	4.30
Apr 5	--	*e810	(daily)			

Minimum discharge, 14 ft<sup>3</sup>/s, Sept. 4, gage height, 1.29 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	325	92	e49	e41	e32	e470	167	336	93	25	17
2	152	314	82	e49	e41	e31	e640	163	279	87	24	16
3	154	287	81	e49	e41	e31	e750	157	238	83	30	16
4	147	259	86	e48	e41	e31	e780	145	207	77	44	16
5	137	235	81	e47	e41	e30	e810	139	202	72	35	16
6	126	211	78	e46	e42	e30	e800	147	203	68	30	16
7	118	194	82	e45	e42	e29	781	153	197	64	27	15
8	112	177	85	e44	e43	e29	711	148	198	60	26	15
9	113	165	85	e43	e43	e29	626	145	206	57	26	15
10	110	156	85	e42	e43	e29	553	153	199	54	26	16
11	108	147	83	e42	e43	e28	518	145	195	50	24	16
12	106	141	80	e41	e42	e28	495	137	191	47	24	19
13	105	135	60	e41	e41	e28	465	141	182	44	23	29
14	106	130	e60	e40	e40	e28	421	159	239	41	24	27
15	105	125	e62	e40	e40	e28	376	170	397	42	23	25
16	103	121	e67	e40	e40	e28	335	172	446	41	22	24
17	103	121	e65	e39	e40	e28	298	162	404	39	22	26
18	101	119	e63	e39	e39	e29	278	151	324	40	23	24
19	100	119	e61	e39	e39	e29	257	153	248	38	23	26
20	100	121	e59	e39	e38	e29	242	158	199	36	22	28
21	97	119	e58	e39	e38	e29	228	156	172	33	21	28
22	96	117	e58	e39	e37	e29	209	161	150	31	19	30
23	111	114	e57	e39	e36	e30	197	173	133	29	19	25
24	145	113	e55	e39	e35	e31	185	181	117	29	18	25
25	186	111	e53	e39	e35	e32	178	215	105	27	18	27
26	202	105	e51	e39	e34	e33	179	511	91	28	18	28
27	202	103	e49	e40	e33	e35	186	653	85	26	18	29
28	188	101	e48	e40	e33	e38	185	701	81	26	17	27
29	180	89	e47	e40	---	e44	179	646	76	25	17	26
30	245	93	e47	e40	---	e60	173	524	88	25	16	26
31	303	---	e48	e40	---	e170	---	416	---	25	16	---
TOTAL	4,294	4,667	2,068	1,296	1,101	1,115	12,505	7,402	6,188	1,437	720	673
MEAN	139	156	66.7	41.8	39.3	36.0	417	239	206	46.4	23.2	22.4
MAX	303	325	92	49	43	170	810	701	446	93	44	30
MIN	96	89	47	39	33	28	173	137	76	25	16	15
AC-FT	8,520	9,260	4,100	2,570	2,180	2,210	24,800	14,680	12,270	2,850	1,430	1,330
CFSM	0.77	0.86	0.37	0.23	0.22	0.20	2.32	1.33	1.15	0.26	0.13	0.12
IN.	0.89	0.96	0.43	0.27	0.23	0.23	2.58	1.53	1.28	0.30	0.15	0.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2005, BY WATER YEAR (WY)

MEAN	120	95.9	50.6	29.7	24.0	50.6	364	292	182	123	71.7	91.0
MAX	600	264	135	66.0	47.7	337	868	1,451	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)

05130500 STURGEON RIVER NEAR CHISHOLM, MN—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1942 - 2005	
ANNUAL TOTAL	43,101		43,466		125	
ANNUAL MEAN	118		119		218	
HIGHEST ANNUAL MEAN					63.1	1996
LOWEST ANNUAL MEAN					63.1	1977
HIGHEST DAILY MEAN	667	Apr 3	810	Apr 5	3,530	May 8, 1950
LOWEST DAILY MEAN	18	Aug 29	15	Sep 7-9	2.5	Jul 30, 1988
ANNUAL SEVEN-DAY MINIMUM	19	Aug 25	16	Sep 3	3.0	Jul 24, 1988
MAXIMUM PEAK FLOW			a810	Apr 5	b3,630	May 7, 1950
MAXIMUM PEAK STAGE			c4.85	Apr 2	d7.41	May 7, 1950
INSTANTANEOUS LOW FLOW			14	Sep 4	a2.5	Jul 30, 1988
ANNUAL RUNOFF (AC-FT)	85,490		86,210		90,390	
ANNUAL RUNOFF (CFSM)	0.654		0.662		0.693	
ANNUAL RUNOFF (INCHES)	8.91		8.98		9.42	
10 PERCENT EXCEEDS	258		252		290	
50 PERCENT EXCEEDS	81		58		60	
90 PERCENT EXCEEDS	25		25		18	

- a Estimated daily-mean discharge.
- b From rating curve extended above 1,600 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.
- c Backwater from ice.
- d Present datum.
- e Estimated.

