

05317000 COTTONWOOD RIVER NEAR NEW ULM, MN

LOCATION.--Lat 44°17'29", long 94°26'24", in SW¼NE¼ sec. 33, T.110 N., R.30 W., Brown County, Hydrologic Unit 07020008, on left bank 600 ft upstream from highway bridge, 1.8 mi south of New Ulm, and 3.2 mi upstream from mouth.

DRAINAGE AREA.--1,300 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1909 to December 1913, March 1931 to March 1938, August 1938 to current year (winter records incomplete prior to 1936).

REVISED RECORDS.--WSP 355: 1912.

GAGE.--Water-stage recorder. Datum of gage is 796.83 ft above sea level (NGVD of 1929). July 1, 1909 to Dec. 13, 1913, nonrecording gage at site 2.7 mi upstream at different datum. Mar. 15, 1931 to Mar. 31, 1938, nonrecording gage 2.2 mi upstream at datum 11.41 ft higher. Aug. 23, 1938 to June 25, 1948, nonrecording gage at present site and datum.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 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 18	0000	1,600	7.36	2200	1,560	7.30
May 14	1200	2,400	8.55	1100	1,200	6.63
May 19	2200	*2,840	*9.10			

Minimum discharge, 19 ft<sup>3</sup>/s, Jan. 17, (estimated daily).

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	360	186	97	e67	e45	e76	446	471	678	389	329	74
2	333	185	118	e67	e48	e75	384	443	654	373	294	66
3	311	180	161	e64	e51	e75	339	421	631	364	269	60
4	293	172	188	e61	e53	e75	303	406	648	358	258	55
5	283	168	158	e54	e61	e76	280	406	967	342	215	51
6	271	165	169	e50	e71	e82	264	441	1,250	332	202	63
7	266	164	167	e47	e76	e94	251	434	1,020	324	234	92
8	259	161	162	e44	e76	e113	240	728	1,040	313	218	106
9	253	158	147	e42	e75	e131	232	1,180	1,140	308	197	105
10	240	154	146	e40	e75	e132	253	1,500	1,180	308	179	107
11	230	154	142	e40	e76	e129	318	1,520	1,260	305	161	146
12	222	152	144	e40	e79	e123	667	1,500	1,480	305	144	180
13	216	145	77	e40	e85	e116	932	1,970	1,500	297	132	208
14	208	139	e44	e34	e107	e109	1,400	2,370	1,360	280	119	473
15	206	138	e75	e27	e129	e102	1,400	2,200	1,360	270	112	706
16	199	139	e98	e22	e142	e91	1,310	1,840	1,310	262	105	679
17	194	140	e99	e19	e149	e83	1,520	1,560	1,170	240	98	526
18	189	139	e95	e19	e149	e75	1,580	1,770	1,050	211	118	411
19	186	156	e82	e21	e138	e74	1,470	2,640	941	189	112	530
20	181	167	e77	e23	e128	e78	1,290	2,630	849	176	107	743
21	181	162	e75	e25	e116	e79	1,110	2,080	785	167	104	719
22	181	166	e63	e28	e107	e104	972	1,690	703	155	136	613
23	194	170	e48	e30	e100	e141	869	1,450	654	141	122	512
24	191	170	e39	e34	e94	e192	776	1,260	615	133	104	435
25	187	163	e41	e40	e89	e242	707	1,130	570	159	94	457
26	182	164	e45	e42	e84	e299	658	1,040	524	182	109	599
27	178	164	e48	e42	e80	354	608	959	492	205	99	875
28	176	161	e50	e42	e78	399	570	885	468	413	92	1,170
29	185	146	e55	e42	---	551	528	821	438	472	101	1,070
30	187	131	e63	e43	---	634	498	766	417	419	95	946
31	187	---	e65	e43	---	527	---	713	---	370	84	---
TOTAL	6,929	4,759	3,038	1,232	2,561	5,431	22,175	39,224	27,154	8,762	4,743	12,777
MEAN	224	159	98.0	39.7	91.5	175	739	1,265	905	283	153	426
MAX	360	186	188	67	149	634	1,580	2,640	1,500	472	329	1,170
MIN	176	131	39	19	45	74	232	406	417	133	84	51
AC-FT	13,740	9,440	6,030	2,440	5,080	10,770	43,980	77,800	53,860	17,380	9,410	25,340
CFSM	0.17	0.12	0.08	0.03	0.07	0.13	0.57	0.97	0.70	0.22	0.12	0.33
IN.	0.20	0.14	0.09	0.04	0.07	0.16	0.63	1.12	0.78	0.25	0.14	0.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2005, BY WATER YEAR (WY)

MEAN	171	158	109	57.7	99.2	628	1,059	610	659	373	188	154
MAX	3,208	1,099	572	282	628	3,350	7,075	3,497	5,831	3,815	1,791	2,438
(WY)	(1969)	(1980)	(1980)	(1992)	(1983)	(1997)	(1969)	(1993)	(1993)	(1993)	(1993)	(1986)
MIN	4.57	7.97	5.77	1.61	1.47	13.9	40.0	7.57	8.58	4.37	1.05	3.28
(WY)	(1934)	(1940)	(1936)	(1940)	(1940)	(1965)	(1959)	(1934)	(1911)	(1934)	(1934)	(1933)

05317000 COTTONWOOD RIVER NEAR NEW ULM, MN—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1909 - 2005	
ANNUAL TOTAL	153,162		138,786		a381	
ANNUAL MEAN	418		380		1,796	
HIGHEST ANNUAL MEAN					41.1 1940	
LOWEST ANNUAL MEAN					27,100 Apr 9, 1969	
HIGHEST DAILY MEAN	6,290	Jun 1	2,640	May 19	0.60 Aug 1, 1934	
LOWEST DAILY MEAN	19	Jan 29	19	Jan 17,18	0.64 Feb 1, 1940	
ANNUAL SEVEN-DAY MINIMUM	20	Jan 27	22	Jan 15	28,700 Apr 10, 1969	
MAXIMUM PEAK FLOW			2,840	May 19	20.86 Apr 8, 1965	
MAXIMUM PEAK STAGE			9.10	May 19	c0.50 Nov 27, 1952	
INSTANTANEOUS LOW FLOW			b19	Jan 17		
ANNUAL RUNOFF (AC-FT)	303,800		275,300		275,900	
ANNUAL RUNOFF (CFSM)	0.322		0.292		0.293	
ANNUAL RUNOFF (INCHES)	4.38		3.97		3.98	
10 PERCENT EXCEEDS	927		1,090		918	
50 PERCENT EXCEEDS	166		181		99	
90 PERCENT EXCEEDS	24		51		14	

- a Median of annual mean discharges is 260 ft<sup>3</sup>/s.
- b Estimated daily-mean discharge.
- c Minimum observed.
- e Estimated.

