

MINNESOTA RIVER BASIN

05317000 COTTONWOOD RIVER NEAR NEW ULM, MN

LOCATION.--Lat 44°17'29", long 94°26'24", in SW¹/₄NE¹/₄ 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.--1,280 mi² (approximately).

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 mean sea level. 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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s and maximum (*):

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
1	116	202	e370	e149	e170	e250	8260	918	572
2940	1560	270							
2	112	203	e365	e151	e171	e265	6720	904	555
3210	1370	248							
3	104	212	e360	e160	e170	e280	5900	929	531
2510	1200	234							
4	101	239	e359	e168	e170	e279	5480	1080	512
1870	1050	227							
5	99	253	e352	e170	e170	e270	5240	1340	495
1500	961	220							
6	98	243	e350	e172	e169	e240	5600	1370	479
1250	938	211							
7	97	232	e350	e172	e168	e230	6570	1280	460
1070	846	200							
8	96	224	e350	e171	e167	e240	6840	1200	444
930	758	188							

9	97	218	e345	e170	e166	e280	6720	1130	421
833	680	182							
10	96	210	e341	e169	e165	e350	5890	1050	405
786	635	178							
11	94	180	e340	e168	e165	e640	5340	986	389
707	610	172							
12	94	151	e330	e165	e163	e960	4630	940	371
631	609	171							
13	94	129	e320	e162	e162	e1020	3790	890	347
591	594	163							
14	93	173	e301	e161	e162	e1010	3220	851	332
596	558	157							
15	94	225	e280	e160	e160	e1000	2800	808	319
792	520	156							
16	113	267	e265	e160	e160	e1050	2480	759	303
778	480	157							
17	248	424	e245	e160	e160	e1100	2200	723	291
674	435	145							
18	200	719	e225	e159	e159	e1200	2010	696	279
641	395	143							
19	241	747	e205	e159	e164	e1400	1860	682	279
684	386	145							
20	251	712	e190	e160	e172	1910	1710	661	276
595	385	142							
21	243	541	e175	e160	e180	3310	1590	625	276
513	889	137							
22	219	436	e160	e162	e172	4220	1480	593	267
732	882	136							
23	233	e415	e149	e170	e171	5280	1390	572	261
1010	690	141							
24	222	e390	e140	e173	e171	6280	1310	575	408
858	565	138							
25	209	e355	e138	e170	e176	6690	1210	579	1260
1410	475	142							
26	205	e335	e135	e162	e183	8000	1130	579	1820
4310	409	148							
27	195	e335	e134	e169	e200	9290	1060	585	1860
5330	362	153							
28	183	e340	e134	e165	e220	10500	1010	579	1400
4110	324	152							
29	181	e360	e138	e165	---	11700	968	575	1300
3070	296	143							
30	188	e355	e140	e165	---	13500	941	575	1570
2420	298	132							
31	195	---	e142	e170	---	11100	---	575	---
1920	275	---							
TOTAL	4811	9825	7828	5097	4786	103844	105349	25609	18482
49271	20435	5131							
MEAN	155	328	253	164	171	3350	3512	826	616
1589	659	171							

MAX	251	747	370	173	220	13500	8260	1370	1860
5330	1560	270							
MIN	93	129	134	149	159	230	941	572	261
513	275	132							
AC-FT	9540	19490	15530	10110	9490	206000	209000	50800	36660
97730	40530	10180							
CFSM	.12	.26	.20	.13	.13	2.62	2.74	.65	.48
1.24	.51	.13							

o e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
MEAN	179	159	105	55.9	95.4	662	1008	577	618
365	193	156							
MAX	3208	1099	572	282	628	3350	7075	3497	5831
3815	1791	2438							
(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							

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1909 - 1997

ANNUAL TOTAL		192982				360468			
ANNUAL MEAN		527				988			376a
HIGHEST ANNUAL MEAN									
1796		1993							
LOWEST ANNUAL MEAN									
41.1		1940							
HIGHEST DAILY MEAN			6440	Jun 19		13500	Mar 30		27100
Apr 9 1969									
LOWEST DAILY MEAN			83	Feb 1		93	Oct 14		.60
Aug 1 1934									
ANNUAL SEVEN-DAY MINIMUM			84	Jan 29		95	Oct 9		.64
Feb 1 1940									
INSTANTANEOUS PEAK FLOW						13800	Mar 30		28700 Apr
10 1969									
INSTANTANEOUS PEAK STAGE						16.03	Mar 30		20.86
Apr 8 1965									
INSTANTANEOUS LOW FLOW						92	Oct 16		.50 Nov
27 1952									
ANNUAL RUNOFF (AC-FT)			382800			715000			272200
10 PERCENT EXCEEDS			1080			2090			846
50 PERCENT EXCEEDS			285			340			80
90 PERCENT EXCEEDS			109			147			11

a Median of annual mean discharges is 237 ft³/s.