

MINNESOTA RIVER BASIN

05317000 COTTONWOOD RIVER NEAR NEW ULM, MN

LOCATION.--Lat 4417'29", long 9426'24", in SW 1 / 4 NE 1 / 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.--1,300 mi² (revised).

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 (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 24	2000 1630		7.77	Apr. 02	1200	*6000	*12.45

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	137	177	e140	99	855	5560	686	419	493	157	94
2	123	137	191	e130	100	792	5920	669	412	430	153	87
3	122	140	193	e135	e102	730	5280	652	403	408	155	80
4	120	132	186	e135	104	661	4060	626	390	376	141	75
5	119	143	164	e130	104	620	3220	608	380	336	146	73
6	117	143	152	e130	104	597	2730	593	363	335	175	70

7	116	137	158	e125	109	581	2410	574	339	373	221	69
8	114	143	174	e120	106	559	2210	575	323	359	269	68
9	112	149	182	e110	104	497	2380	555	314	327	256	67
10	110	160	176	e105	100	345	2580	537	309	281	233	66
11	110	161	174	e94	99	e310	2500	532	311	245	208	65
12	119	152	167	e88	99	e290	2290	528	379	211	182	65
13	119	142	166	e80	100	e280	2030	521	376	185	162	64
14	118	151	169	e71	98	e290	1770	498	364	171	148	64
15	119	154	178	e70	99	e300	1550	499	362	339	132	63
16	134	116	178	e71	105	e310	1400	494	341	382	128	64
17	161	97	170	e72	124	e320	1280	493	335	338	120	65
18	157	158	185	e75	173	e330	1170	498	373	376	106	64
19	151	175	185	e76	260	e340	1090	490	479	350	102	65
20	147	159	182	e79	427	e360	1030	466	576	476	101	64
21	143	146	175	e81	725	e380	972	448	562	673	93	63
22	141	143	192	e83	1070	e410	921	435	490	677	94	62
23	139	138	196	e85	1020	e450	883	425	433	600	90	63
24	138	129	196	e86	1220	505	852	428	391	489	86	64
25	137	145	189	e88	1360	509	820	487	506	417	82	63
26	138	142	189	e90	1350	591	796	525	529	359	79	65
27	138	147	180	e91	1090	1040	766	523	568	305	94	64
28	135	151	193	e92	952	2850	734	502	864	283	108	64
29	135	158	187	e95	---	4820	717	476	745	246	127	75
30	134	167	185	97	---	5560	702	448	585	204	112	70
31	135	---	163	98	---	5330	---	442	---	178	100	---
TOTAL	4028	4352	5552	3022	11403	31812	60623	16233	13221	11222	4360	2045
MEAN	130	145	179	97.5	407	1126	2021	524	441	362	141	68.2
MAX	161	175	196	140	1360	5560	5920	686	864	677	269	94
MIN	110	97	152	70	98	280	702	425	309	171	79	62
AC-FT	7990	8630	11010	5990	22620	63100	120200	32200	26220	22260	8650	4060

CFSM	.10	.11	.14	.07	.31	.79	1.55	.40	.34	.28	.11	.05
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e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	178	159	106	56.6	100	668	1022	576	616	365	192	155
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1909 - 1998		
ANNUAL TOTAL	351936		167873				
ANNUAL MEAN	964		460		377a		
HIGHEST ANNUAL MEAN					1796		1993
LOWEST ANNUAL MEAN					41.1		1940
HIGHEST DAILY MEAN	13500	Mar 30	5920	Apr 2	27100	Apr 9	1969
LOWEST DAILY MEAN	97	Nov 17	62	Sep 22	.60	Aug 1	1934
ANNUAL SEVEN-DAY MINIMUM	114	Oct 5	63	Sep 19	.64	Feb 1	1940
INSTANTANEOUS PEAK FLOW			6000	Apr 2	28700	Apr 10	1969
INSTANTANEOUS PEAK STAGE			12.45	Apr 2	20.86	Apr 8	1965
INSTANTANEOUS LOW FLOW			62b	Sep 21-23,25,26	.50	Nov 27	1952
ANNUAL RUNOFF (AC-FT)	698100		333000		273100		
ANNUAL RUNOFF	.74		.35		.29		

(CFSM)							
	10.07		4.80		3.94		
10 PERCENT EXCEEDS	2090		859		846		
50 PERCENT EXCEEDS	248		180		82		
90 PERCENT EXCEEDS	139		80		12		

a Median of annual mean discharges is 240 ft³/s.

