

MINNESOTA RIVER BASIN--Continued

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.--1,300 mi².

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 poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 4	2300	8,880	14.18	May 27	1900	1,450	7.30
Apr 13	0100	7,660	13.64	Jun 16	0400	1,730	7.71
Apr 25	1200	*20,200	*18.18	Jul 24	1600	1,510	7.31

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	75	e51	e46	e44	e44	e1900	3230	1120	583	496	90
2	27	77	e50	e45	e44	e44	e4200	2810	1070	557	454	82
3	25	64	e48	e46	e45	e45	6450	2500	1010	552	414	75
4	25	60	e47	e48	e46	e48	8450	2240	949	540	377	73
5	30	66	e45	e48	e49	e49	8600	2050	953	522	345	70
6	25	102	e45	e49	e49	e49	8290	1940	953	491	309	68
7	24	114	e46	e49	e50	e51	8260	2090	1000	460	281	88
8	24	99	e45	e48	e49	e52	8010	2220	1060	431	252	87
9	25	102	e45	e48	e47	e52	7100	2030	1080	403	223	103
10	28	149	e44	e48	e45	e50	5910	1840	1070	369	194	87
11	27	181	e43	e48	e44	e49	5840	1660	1020	330	171	84
12	28	183	e42	e48	e44	e49	7030	1510	974	301	155	80
13	30	169	e41	e49	e44	e52	7440	1380	986	280	142	74
14	28	153	e42	e49	e45	e52	6530	1280	1060	259	138	69
15	31	e120	e43	e49	e45	e54	5690	1210	1500	239	138	71
16	37	e94	e44	e48	e44	e53	5000	1130	1680	216	135	72
17	33	e78	e44	e48	e44	e52	4150	1060	1510	191	133	75
18	32	e68	e44	e46	e44	e50	3440	987	1420	168	141	75
19	33	e61	e44	e46	e44	e51	2840	931	1320	153	148	75
20	34	e55	e43	e44	e44	e53	2360	905	1190	142	128	81
21	33	e49	e43	e45	e44	e57	2230	953	1070	141	121	87
22	39	e49	e42	e46	e44	e63	2380	1120	967	264	116	106
23	43	e50	e41	e47	e44	e69	5380	1210	888	977	111	126
24	41	e51	e40	e47	e44	e74	10500	1160	827	1430	104	119
25	43	e51	e39	e46	e45	e74	18700	1160	774	1340	100	141
26	41	e51	e40	e45	e45	e73	14600	1260	722	1150	96	119
27	40	e52	e42	e45	e45	e75	9550	1410	670	955	92	104
28	42	e52	e43	e45	e44	e100	6660	1420	625	807	85	92
29	43	e51	e44	e46	---	e170	4950	1330	621	693	89	84
30	48	e51	e46	e45	---	e391	3960	1260	612	612	121	79
31	51	---	e46	e44	---	e950	---	1180	---	550	104	---
TOTAL	1040	2577	1362	1451	1265	3095	196400	48466	30701	16106	5913	2636
MEAN	33.5	85.9	43.9	46.8	45.2	99.8	6547	1563	1023	520	191	87.9
MAX	51	183	51	49	50	950	18700	3230	1680	1430	496	141
MIN	24	49	39	44	44	44	1900	905	612	141	85	68
AC-FT	2060	5110	2700	2880	2510	6140	389600	96130	60900	31950	11730	5230
CFSM	.03	.07	.03	.04	.03	.08	5.04	1.20	.79	.40	.15	.07
IN.	.03	.07	.04	.04	.04	.09	5.62	1.39	.88	.46	.17	.08

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	174	160	107	56.6	99.4	649	1087	594	619	371	190	151
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 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1909 - 2001
ANNUAL TOTAL	58004	311012	
ANNUAL MEAN	158	852	382a
HIGHEST ANNUAL MEAN			1796
LOWEST ANNUAL MEAN			41.1
HIGHEST DAILY MEAN	2180	May 19	18700
LOWEST DAILY MEAN	23	Sep 21	24
ANNUAL SEVEN-DAY MINIMUM	25	Jan 18	25
MAXIMUM PEAK FLOW			20200
MAXIMUM PEAK STAGE			18.18
INSTANTANEOUS LOW FLOW			24
ANNUAL RUNOFF (AC-FT)	115100	616900	276500
ANNUAL RUNOFF (CFSM)	.12	.66	.29
ANNUAL RUNOFF (INCHES)	1.66	8.90	3.99
10 PERCENT EXCEEDS	427	2040	860
50 PERCENT EXCEEDS	56	84	83
90 PERCENT EXCEEDS	29	43	12

a Median of annual mean discharges is 241 ft³/s.
 b Minimum observed.
 e Estimated.

