

05315000 REDWOOD RIVER NEAR MARSHALL, MN

LOCATION.--Lat 44°25'49", long 95°50'43", in SW¹/₄SE¹/₄ sec. 12, T.111 N., R.42 W., Lyon County, Hydrologic Unit 07020006, on right bank 1.7 mi upstream from Redwood River diversion structure on southwest edge of town of Marshall, MN. Prior to Apr. 10, 1980, at site 5 mi downstream.

DRAINAGE AREA.--259 mi².

PERIOD OF RECORD.--March 1940 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WDR MN-89-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,188.23 ft above sea level (NGVD of 1929). March 1940 to April 9, 1980, nonrecording gage 5.0 mi downstream from present site at datum 43.35 ft lower (crest-stage gage added June 12, 1968). From March 1964 to April 1980, nonrecording gage and crest-stage gage on diversion channel 1.5 mi downstream at datum 1,100.00 ft above sea level.

REMARKS.--Records good except those for estimated daily discharge, which are fair to poor. Water diverted at medium and high stages into diversion channel 3.4 mi below station. Diversion began Mar. 18, 1964. Unknown amount of natural diversion into Cottonwood River Basin occurs at extremely high stages 0.8 mi below station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	e20	e16	e9.8	e5.3	e4.7	21	164	64	47	9.6	6.4
2	6.7	e20	e15	e9.9	e5.8	e4.6	19	150	65	44	8.9	6.5
3	7.1	e19	e14	e9.9	e6.3	e4.5	16	138	65	40	8.7	6.5
4	26	19	e13	e9.9	e6.2	e4.3	14	129	65	40	8.4	6.6
5	26	18	e12	e9.9	e6.1	e4.2	13	132	63	31	10	6.4
6	25	19	e12	e9.9	e6.0	e4.1	13	139	66	27	9.3	6.5
7	21	18	e12	e9.9	e5.9	e4.0	13	134	69	25	8.7	6.7
8	17	18	e13	e9.9	e5.6	e3.9	12	125	72	24	8.4	6.8
9	16	19	e13	e10	e5.4	e3.8	12	167	70	28	8.3	6.3
10	16	19	e13	e9.7	e5.2	e3.7	12	191	70	30	8.5	13
11	17	18	e13	e9.3	e5.1	e3.6	13	218	67	29	8.3	22
12	18	17	e13	e8.8	e4.9	e3.5	13	231	62	25	8.1	17
13	17	19	e13	e8.5	e4.9	e3.5	12	211	58	19	7.9	15
14	16	19	e13	e8.2	e4.9	e5.0	12	199	53	17	7.6	11
15	16	20	e13	e7.7	e4.9	e191	13	193	48	16	7.5	9.7
16	18	e20	e13	e7.3	e5.0	e269	141	184	45	15	7.5	8.6
17	17	e19	e14	e6.9	e5.1	e234	377	171	46	14	6.9	7.6
18	17	e19	e14	e6.5	e5.1	e156	374	156	58	13	6.6	8.9
19	20	18	e14	e6.2	e5.2	e105	442	158	50	13	6.3	8.4
20	19	16	e14	e6.0	e5.3	e70	494	148	43	14	7.1	7.5
21	19	16	e14	e5.9	e5.4	e53	455	133	37	14	7.0	7.6
22	18	16	e14	e5.8	e5.4	e43	390	125	34	14	6.6	7.5
23	18	15	e14	e5.6	e5.3	e38	363	120	33	12	6.7	7.3
24	20	e15	e13	e5.5	e5.1	e38	317	114	42	12	6.8	7.2
25	20	e13	e11	e5.4	e4.9	37	284	110	55	11	6.6	6.3
26	20	e13	e9.9	e5.4	e4.9	34	260	104	74	9.9	7.0	6.1
27	19	e13	e9.5	e5.3	e4.8	35	237	97	72	9.9	6.2	5.9
28	20	e14	e9.4	e5.2	e4.8	27	213	93	68	11	6.5	5.8
29	21	e15	e9.3	e5.2	---	e21	186	86	59	11	6.1	5.9
30	22	e16	e9.4	e5.2	---	e21	170	78	55	15	6.2	5.7
31	20	---	e9.8	e5.3	---	e21	---	76	---	13	6.4	---
TOTAL	561.0	520	390.3	234.0	148.8	1,495.4	4,911	4,474	1,728	643.8	234.7	252.7
MEAN	18.1	17.3	12.6	7.55	5.31	48.2	164	144	57.6	20.8	7.57	8.42
MAX	26	20	16	10	6.3	269	494	231	74	47	10	22
MIN	6.7	13	9.3	5.2	4.8	3.5	12	76	33	9.9	6.1	5.7
AC-FT	1,110	1,030	774	464	295	2,970	9,740	8,870	3,430	1,280	466	501
CFSM	0.07	0.07	0.05	0.03	0.02	0.19	0.63	0.56	0.22	0.08	0.03	0.03
IN.	0.08	0.07	0.06	0.03	0.02	0.21	0.71	0.64	0.25	0.09	0.03	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	27.3	27.3	16.3	9.25	16.3	120	244	128	120	69.3	33.7	25.1
MAX	310	202	115	59.4	101	571	1,252	1,205	936	1,161	610	292
(WY)	(1996)	(1996)	(1999)	(1994)	(1983)	(1983)	(2001)	(1993)	(1993)	(1993)	(1993)	(1986)
MIN	0.029	0.58	0.87	0.000	0.090	2.70	7.36	3.90	0.83	0.058	0.042	0.007
(WY)	(1977)	(1977)	(1977)	(1977)	(1979)	(1965)	(1990)	(1981)	(1976)	(1976)	(1941)	(1941)

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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	25,533.3		15,593.7			
ANNUAL MEAN	70.0		42.7		a70.3	
HIGHEST ANNUAL MEAN					421	1993
LOWEST ANNUAL MEAN					5.13	1981
HIGHEST DAILY MEAN	372	Apr 1	494	Apr 20	5,300	May 9, 1993
LOWEST DAILY MEAN	4.0	Sep 22	3.5	Mar 12, 13	0.00	Jul 28, 1940
ANNUAL SEVEN-DAY MINIMUM	5.0	Sep 18	3.7	Mar 7	0.00	Jul 28, 1940
MAXIMUM PEAK FLOW			532	Apr 19	6,380	May 9, 1993
MAXIMUM PEAK STAGE			11.44	Apr 19	17.00	May 9, 1993
INSTANTANEOUS LOW FLOW			c1.3	Nov 2	0.00	Jul 28, 1940
ANNUAL RUNOFF (AC-FT)	50,650		30,930		50,900	
ANNUAL RUNOFF (CFSM)	0.27		0.16		0.27	
ANNUAL RUNOFF (INCHES)	3.67		2.24		3.69	
10 PERCENT EXCEEDS	213		133		168	
50 PERCENT EXCEEDS	30		14		13	
90 PERCENT EXCEEDS	11		5.4		2.0	

- a Median of annual mean discharges is 44.0 ft³/s.
- b Many days, several years.
- c Result of freezeup.
- e Estimated.

