

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 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 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e11	17	9.9	e8.0	e9.2	e8.9	26	49	42	71	12	14
2	e15	17	9.5	e8.1	e9.6	e8.8	22	49	40	63	11	15
3	e14	16	9.3	e7.7	e9.9	e8.7	21	44	40	63	11	14
4	e14	15	10	e6.8	e9.9	e8.8	20	42	45	60	16	13
5	e13	15	10	e6.4	e11	e9.4	20	40	49	54	14	13
6	e12	14	12	e6.0	e14	e11	20	42	53	50	12	13
7	e12	14	11	e5.3	e12	e12	20	43	58	44	11	17
8	e11	14	11	e5.3	e10	e12	20	42	86	55	10	27
9	e11	14	12	e5.1	e9.5	e11	19	45	99	57	12	24
10	e11	14	12	e5.0	e9.8	e10	20	48	97	50	11	19
11	e10	14	12	e5.2	e9.9	e9.8	77	50	103	46	12	17
12	e10	14	11	e4.9	e11	e9.8	154	60	100	44	13	25
13	e10	13	10	e4.5	e12	e10	168	86	111	38	13	66
14	e10	13	10	e4.4	e13	e9.7	155	96	136	34	14	54
15	e10	13	10	e3.7	e15	e9.6	132	90	148	31	15	41
16	e10	13	11	e3.1	e13	e9.6	129	80	145	27	15	31
17	e10	12	10	e2.6	e13	e9.5	143	77	121	25	14	24
18	e10	11	9.9	e2.3	e12	e9.5	144	73	105	24	19	20
19	e9.9	12	e6.9	e2.7	e12	e9.4	135	75	93	21	17	30
20	e9.9	13	e6.6	e3.6	e13	e9.5	123	71	85	20	16	36
21	10	11	e7.4	e3.8	e12	e9.4	114	70	120	18	12	33
22	13	11	e6.1	e4.3	e11	e9.5	104	67	131	17	13	27
23	19	12	e5.2	e4.5	e10	e11	89	64	132	16	15	24
24	19	12	e4.7	e6.6	e9.5	e14	84	58	133	14	15	25
25	19	10	e5.2	e8.9	e9.3	e23	83	58	153	15	15	88
26	18	11	e6.0	e8.7	e9.2	e26	77	59	133	19	14	170
27	18	11	e6.6	e8.2	e9.3	e33	71	57	113	18	15	159
28	19	9.6	e7.5	e7.8	e9.2	e49	59	55	96	19	15	145
29	19	11	e8.4	e7.8	---	55	55	51	86	18	15	128
30	18	e11	e8.9	e8.0	---	48	51	47	82	16	15	115
31	18	---	e8.4	e8.7	---	33	---	43	---	13	15	---
TOTAL	413.8	387.6	278.5	178.0	308.3	507.9	2,355	1,831	2,935	1,060	427	1,427
MEAN	13.3	12.9	8.98	5.74	11.0	16.4	78.5	59.1	97.8	34.2	13.8	47.6
MAX	19	17	12	8.9	15	55	168	96	153	71	19	170
MIN	9.9	9.6	4.7	2.3	9.2	8.7	19	40	40	13	10	13
AC-FT	821	769	552	353	612	1,010	4,670	3,630	5,820	2,100	847	2,830
CFSM	0.05	0.05	0.03	0.02	0.04	0.06	0.30	0.23	0.38	0.13	0.05	0.18
IN.	0.06	0.06	0.04	0.03	0.04	0.07	0.34	0.26	0.42	0.15	0.06	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	26.8	26.8	16.0	9.12	16.1	117	238	126	124	68.7	33.2	25.2
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	0.03	0.58	0.87	0.00	0.09	2.70	7.36	3.90	0.83	0.06	0.04	0.01
(WY)	(1977)	(1977)	(1977)	(1977)	(1979)	(1965)	(1990)	(1981)	(1976)	(1976)	(1941)	(1941)

05315000 REDWOOD RIVER NEAR MARSHALL, MN—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	20,498.2		12,109.1			
ANNUAL MEAN	56.0		33.2		a69.5	
HIGHEST ANNUAL MEAN					421	1993
LOWEST ANNUAL MEAN					5.13	1981
HIGHEST DAILY MEAN	1,500	Jun 18	170	Sep 26	5,300	May 9, 1993
LOWEST DAILY MEAN	3.3	Feb 4	2.3	Jan 18	b0.00	Jul 28, 1940
ANNUAL SEVEN-DAY MINIMUM	3.4	Jan 30	3.1	Jan 15	0.00	Jul 28, 1940
MAXIMUM PEAK FLOW			177	Sep 26	6,380	May 9, 1993
MAXIMUM PEAK STAGE			9.29	Sep 26	17.00	May 9, 1993
INSTANTANEOUS LOW FLOW			c2.3	Jan 18	b0.00	Jul 28, 1940
ANNUAL RUNOFF (AC-FT)	40,660		24,020		50,320	
ANNUAL RUNOFF (CFSM)	0.216		0.128		0.268	
ANNUAL RUNOFF (INCHES)	2.94		1.74		3.64	
10 PERCENT EXCEEDS	107		91		165	
50 PERCENT EXCEEDS	14		14		13	
90 PERCENT EXCEEDS	4.6		8.1		2.1	

- a Median of annual mean discharges is 44 ft³/s.
- b Many days, several years.
- c Estimated daily-mean discharge, backwater from ice.
- e Estimated.

