

MINNESOTA RIVER BASIN--Continued

05315000 REDWOOD RIVER NEAR MARSHALL, MN

LOCATION.--Lat 44°25'49", long 95°50'43", in SE¹/₄SW¹/₄ sec. 12, T.111 N., R.42 W., Lyon County, Hydrologic Unit 07020006, on right bank 2.0 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). Since March 1964, nonrecording gage and crest-stage gage on diversion channel 1.5 mi downstream at datum 1,100.00 ft above sea level.

REMARKS.--Records fair to poor. Water diverted at medium and high stages into diversion channel 2.0 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 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.9	8.5	7.3	e5.6	e5.0	15	11	14	380	34	35	e9.6
2	e6.8	8.5	8.3	e5.6	e5.1	13	e11	13	317	41	30	e9.4
3	e7.6	8.5	8.9	e5.5	e5.2	12	e10	12	294	37	25	e9.2
4	e8.3	8.7	7.6	e5.5	e5.3	12	e10	12	288	33	22	e9.0
5	e9.5	8.3	e7.8	e5.5	e5.4	12	e10	12	272	38	26	e8.9
6	e8.1	8.3	e7.7	e5.4	e5.5	12	e10	12	237	49	27	e8.8
7	e7.8	8.5	e7.6	e5.4	e5.5	12	e10	11	201	41	25	e8.6
8	e7.7	8.6	7.6	e5.4	e5.6	14	e10	16	174	37	49	e8.3
9	e7.5	8.6	e7.8	e5.4	e5.6	14	e11	17	142	39	50	e7.8
10	e7.3	8.5	e7.7	e5.4	e5.6	13	e12	19	119	171	36	e7.4
11	e7.2	8.3	7.6	e5.4	e5.7	12	e11	21	101	184	31	e6.9
12	e7.4	8.3	e7.7	e5.4	e5.7	12	e11	23	85	219	25	e6.3
13	e7.8	8.3	e7.6	e5.4	e5.8	13	e11	20	77	186	22	e5.8
14	e8.3	8.3	7.5	e5.3	e5.8	11	e11	18	78	153	19	e5.5
15	e9.0	7.9	e7.8	e5.3	e5.8	11	e12	17	76	130	17	e5.4
16	e9.3	7.9	e7.5	e5.2	e5.9	11	e12	21	74	145	16	e5.4
17	e9.5	8.1	e7.2	e5.2	e6.0	11	e12	65	66	132	15	e5.4
18	e9.6	8.6	e6.9	e5.1	e6.2	10	e13	247	61	111	15	e5.3
19	e10	8.7	e6.7	e5.0	e7.0	11	e13	312	55	95	14	e4.9
20	e10	8.3	e6.5	e5.0	17	11	e14	234	50	85	13	e4.8
21	11	8.1	e6.2	e5.0	34	11	e15	202	48	74	e13	e5.1
22	10	8.3	e6.0	e4.9	54	11	e14	205	44	65	e12	e5.5
23	11	8.2	e5.8	e4.9	60	12	e13	192	42	57	e12	e5.9
24	12	8.7	e5.6	e4.9	64	12	e12	163	40	51	e11	e6.4
25	11	8.2	e5.4	e4.9	61	12	e12	132	42	54	e11	e6.2
26	9.4	7.9	e5.5	e4.9	47	13	13	108	63	162	e11	e6.0
27	8.9	7.6	e5.7	e4.9	35	12	17	123	57	111	e10	e6.0
28	8.3	7.5	e5.8	e4.9	25	12	15	170	48	77	e10	e5.4
29	8.5	7.1	e5.8	e5.0	17	12	15	164	43	59	e9.7	e5.2
30	9.4	7.2	e5.7	e5.0	---	12	14	191	37	49	e9.4	e5.0
31	8.7	---	e5.7	e5.0	---	12	---	399	---	41	e9.2	---
TOTAL	273.8	246.5	214.5	161.3	521.7	373	365	3165	3611	2760	630.3	199.4
MEAN	8.83	8.22	6.92	5.20	18.0	12.0	12.2	102	120	89.0	20.3	6.65
MAX	12	8.7	8.9	5.6	64	15	17	399	380	219	50	9.6
MIN	6.8	7.1	5.4	4.9	5.0	10	10	11	37	33	9.2	4.8
AC-FT	543	489	425	320	1030	740	724	6280	7160	5470	1250	396
CF5M	.03	.03	.03	.02	.07	.05	.05	.39	.46	.34	.08	.03
IN.	.04	.04	.03	.02	.07	.05	.05	.45	.52	.40	.09	.03

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	28.0	27.7	16.0	8.90	16.3	123	229	123	118	70.4	34.4	25.8
MAX	310	202	115	59.4	101	571	1152	1205	936	1161	610	292
(WY)	1996	1996	1999	1994	1983	1983	1969	1993	1993	1993	1993	1986
MIN	.029	.58	.87	.000	.090	2.70	7.36	3.90	.83	.058	.042	.007
(WY)	1977	1977	1977	1977	1979	1965	1990	1981	1976	1976	1941	1941

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1940 - 2000
ANNUAL TOTAL	33107.2	12521.5	
ANNUAL MEAN	90.7	34.2	68.9 ^a
HIGHEST ANNUAL MEAN			421 1993
LOWEST ANNUAL MEAN			5.13 1981
HIGHEST DAILY MEAN	789 Apr 12	399 May 31	5300 May 9 1993
LOWEST DAILY MEAN	5.4 Dec 25	4.8 ^b Sep 20	.00 ^c Jul 28 1940
ANNUAL SEVEN-DAY MINIMUM	5.6 Dec 24	4.9 Jan 22	.00 ^c Jul 28 1940
INSTANTANEOUS PEAK FLOW		440 May 31	6380 May 9 1993
INSTANTANEOUS PEAK STAGE		11.19 May 31	17.00 May 9 1993
INSTANTANEOUS LOW FLOW			.00 ^c Jul 28 1940
ANNUAL RUNOFF (AC-FT)	65670	24840	49930
ANNUAL RUNOFF (CFSM)	.35	.13	.27
ANNUAL RUNOFF (INCHES)	4.76	1.80	3.62
10 PERCENT EXCEEDS	245	97	162
50 PERCENT EXCEEDS	37	11	13
90 PERCENT EXCEEDS	7.6	5.4	2.0

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

