

# RED RIVER OF THE NORTH BASIN

## 05067500 MARSH RIVER NEAR SHELLY, MN

LOCATION.--Lat 4724'45", long 9645'50", in NE 1 / 4 NW 1 / 4 sec. 3, T.145 N., R.48 W., Norman County, Hydrologic Unit 09020107, near center of span on downstream truss of bridge, 3.8 mi southeast of Shelly and 10 mi upstream from mouth.

DRAINAGE AREA.--220 mi<sup>2</sup> (revised).

PERIOD OF RECORD.--March 1944 to September 1983 and April 1985 to current year (no winter records since 1989). Monthly discharge only for March 1944, published in WSP 1308. Operated as a high-flow partial-record station October 1983 to March 1985.

GAGE.--Water-stage recorder. Datum of gage is 841.14 ft above mean sea level (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1965, nonrecording gage at datum 3.0 ft higher. Oct. 1, 1965 to May 17, 1989, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Large part of high flow of Wild Rice River diverted into Marsh River basin at overflow section 4.6 mi east of Ada. Another diversion from Wild Rice River basin formed in 1947, 1.5 mi southeast of Ada and diverted water at all stages 1947-51, after which it was closed except for a small regulated flow diverted for abatement of pollution from Ada sewage plant effluent.

## 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	e2.3	11	---	---	---	e900	104	5.4	37	329	.08	2.6
2	e2.6	9.1	---	---	---	e700	73	4.7	32	226	.03	2.5
3	e2.8	e4.0	---	---	---	e450	58	4.2	27	161	.08	2.2
4	e3.2	---	---	---	---	e270	50	3.6	22	118	.15	1.9
5	e3.3	---	---	---	---	e180	44	3.1	18	87	.30	1.6
6	e2.8	---	---	---	---	e120	47	2.8	13	70	.27	1.4
7	e2.2	---	---	---	---	e90	70	2.8	10	59	.20	.94
8	e4.0	---	---	---	---	e74	95	3.0	8.1	63	.16	e.50
9	e6.0	---	---	---	---	e62	95	3.4	6.7	41	.07	e.30
10	17	---	---	---	---	e53	82	3.6	6.5	30	.05	e.20

11	19	---	---	---	---	e46	92	3.9	7.3	23	.04	e.10
12	15	---	---	---	---	e40	66	45	7.3	17	.05	e.08
13	29	---	---	---	---	e37	71	455	8.5	12	.01	e.06
14	102	---	---	---	---	e38	218	613	7.8	13	.00	e.04
15	158	---	---	---	---	e40	238	490	6.5	47	.00	e.02
16	119	---	---	---	---	e41	163	1090	6.5	42	.00	e.00
17	90	---	---	---	---	e44	117	1470	6.5	42	.00	e.00
18	69	---	---	---	---	e48	87	1290	7.9	28	.00	e.00
19	50	---	---	---	---	e56	67	828	27	15	.00	e.00
20	35	---	---	---	---	e66	54	500	492	9.5	.00	e.00
21	22	---	---	---	---	e70	44	367	574	6.4	.00	e.00
22	16	---	---	---	---	e72	38	307	389	4.0	.04	e.00
23	11	---	---	---	---	e71	48	270	257	2.9	.41	e.00
24	7.1	---	---	---	---	e70	38	246	194	2.4	.48	e.00
25	6.6	---	---	---	e700	e68	25	227	243	2.0	.77	e.00
26	6.2	---	---	---	e900	e65	19	207	398	1.6	1.2	e.00
27	5.1	---	---	---	e1000	58	14	181	573	1.2	1.9	e.00
28	6.7	---	---	---	e1030	57	11	147	824	.84	2.3	e.00
29	6.8	---	---	---	---	57	8.3	76	706	.59	2.4	.00
30	7.8	---	---	---	---	83	6.5	53	488	.35	2.4	.00
31	8.6	---	---	---	---	127	---	45	---	.21	2.5	---
TOTAL	836.1	---	---	---	---	4153	2142.8	8947.5	5403.6	1454.99	15.89	14.44
MEAN	27.0	---	---	---	---	134	71.4	289	180	46.9	.51	.48
MAX	158	---	---	---	---	900	238	1470	824	329	2.5	2.6
MIN	2.2	---	---	---	---	37	6.5	2.8	6.5	.21	.00	.00
AC-FT	1660	---	---	---	---	8240	4250	17750	10720	2890	32	29
CFSM	.12	---	---	---	---	.61	.32	1.31	.82	.21	.00	.00
IN.	.14	---	---	---	---	.70	.36	1.51	.91	.25	.00	.00

e Estimated

# STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.4	11.0	5.60	3.79	3.29	77.9	306	129	84.7	76.8	19.4	12.3
MAX	130	102	77.1	64.5	62.1	437	1537	2617	1030	820	363	144
(WY)	1952	1952	1951	1951	1951	1945	1950	1950	1950	1950	1949	1944
MIN	.000	.000	.000	.000	.000	.000	.078	.87	.000	.000	.000	.000
(WY)	1955	1956	1956	1946	1946	1964	1981	1980	1980	1961	1959	1954

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1944 - 1998				
ANNUAL MEAN					63.3a		
HIGHEST ANNUAL MEAN					543a		1950
LOWEST ANNUAL MEAN					1.24a		1977
HIGHEST DAILY MEAN	4100	Apr 18	1470	May 17	4740	Apr 19	1979
LOWEST DAILY MEAN	.20	Apr 1	.00b	Aug 14	.00c	Sep 4	1945
ANNUAL SEVEN-DAY MINIMUM	.65	Sep 3	.00	Aug 14	.00	Sep 12	1945
INSTANTANEOUS PEAK FLOW			1490	May 17	4880d	Apr 19	1979
INSTANTANEOUS PEAK STAGE			15.84e	Feb 26	25.45f	Apr 18	1997

a Based on complete years only, 1945-83, 86-89.

b Many days.

c Many days, most years.

d Gage-height, 22.36 ft., from floodmark.

e Backwater from ice.

f From floodmark.

