

MINNESOTA RIVER BASIN

05313500 YELLOW MEDICINE RIVER NEAR GRANITE FALLS, MN

LOCATION.--Lat 4443'18", long 9531'07", in SW 1 / 4 sec. 35, T.115 N., R.39 W., Yellow Medicine County, Hydrologic Unit 07020004, on right bank 50 ft downstream from highway bridge, 6 mi upstream from mouth, and 8 mi south of town of Granite Falls.

DRAINAGE AREA.--664 mi² (revised).

PERIOD OF RECORD.--March 1931 to September 1935 (no winter records), October 1935 to September 1938, October 1939 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1508: 1931, 1934(M), 1937(M), 1946(M), 1950(M).

GAGE.--Water-stage recorder. Datum of gage is 960.64 ft above mean sea level. Mar. 16, 1931 to June 13, 1938, nonrecording gage, on bridge 50 ft upstream at present datum. Oct. 12, 1939 to Nov. 30, 1952, nonrecording gage 500 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair to poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1919 reached a stage of 17.5 ft, from information by local residents, discharge, 25,200 ft³ /s.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 300 ft³ /s and maximum (*):

Discharge			Discharge		
Date	Time	Gage height (ft)	Date	Time	Gage height (ft)
		(ft ³ /s)			(ft ³ /s)
Feb. 27	2100	712	4.40	Apr. 10	1800 *1680
					*5.87

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	36	74	e59	e46	e25	480	1230	288	112	41	16	8.6
2	33	77	e57	e45	e25	407	1270	278	109	39	15	12
3	33	83	e53	e43	e25	371	1260	269	100	38	16	9.9
4	32	87	e50	e42	e25	336	1300	260	96	35	16	8.5
5	33	81	e47	e42	e25	300	1320	250	93	35	15	7.0
6	35	83	e45	e42	e26	310	1330	239	86	38	15	5.6

7	35	80	e45	e42	e26	290	1390	229	81	41	15	5.6
8	33	86	e44	e39	e26	262	1430	224	77	46	16	5.3
9	32	99	e44	e35	e26	173	1490	218	78	43	20	4.8
10	34	101	e44	e31	e26	e150	1640	217	85	40	20	5.1
11	39	102	e43	e28	e27	e145	1550	226	87	35	22	4.4
12	55	66	e44	e23	e27	e130	1320	224	86	31	20	4.2
13	71	83	e46	e21	e27	e130	1100	220	83	29	17	4.5
14	87	101	e47	e22	e28	e130	935	209	80	32	16	4.9
15	152	88	e48	e22	e30	e130	817	206	90	51	15	7.9
16	174	62	e50	e22	e33	e130	720	210	93	52	15	5.0
17	171	59	e53	e22	e40	e135	639	204	110	75	13	4.5
18	158	e56	e55	e22	e50	e140	574	206	179	58	12	5.2
19	139	e56	e56	e23	e66	155	521	187	167	44	11	4.4
20	130	e56	e57	e23	e90	162	477	172	159	37	10	4.1
21	119	e56	e56	e24	e150	181	441	160	145	44	12	3.5
22	106	e56	e55	e24	e250	219	412	151	126	46	9.6	3.3
23	98	e56	e53	e25	e330	239	390	143	98	43	9.0	3.6
24	93	e56	e52	e25	388	261	372	146	85	37	9.9	3.6
25	91	e57	e52	e25	558	286	357	141	85	31	12	3.5
26	86	e58	e51	e25	627	355	343	142	78	27	8.9	3.4
27	83	e61	e51	e25	621	568	328	138	74	24	7.4	3.4
28	83	e64	e50	e25	578	946	328	131	62	21	8.5	3.5
29	79	e63	e50	e25	---	1070	319	119	54	19	8.9	4.0
30	76	e61	e49	e25	---	1100	306	112	45	18	8.9	4.6
31	74	---	e48	e25	---	1150	---	116	---	17	8.0	---
TOTAL	2500	2168	1554	908	4175	10841	25909	6035	2903	1167	418.1	157.9
MEAN	80.6	72.3	50.1	29.3	149	350	864	195	96.8	37.6	13.5	5.26
MAX	174	102	59	46	627	1150	1640	288	179	75	22	12
MIN	32	56	43	21	25	130	306	112	45	17	7.4	3.3
AC-FT	4960	4300	3080	1800	8280	21500	51390	11970	5760	2310	829	313

CFSM	.12	.11	.08	.04	.22	.53	1.30	.29	.15	.06	.02	.01
IN.	.14	.12	.09	.05	.23	.61	1.45	.34	.16	.07	.02	.01

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	44.3	46.7	28.6	13.8	18.9	227	505	202	277	140	70.1	43.1
MAX	561	392	256	88.3	149	933	3302	1087	2484	1600	510	1005
(WY)	1996	1996	1996	1996	1998	1986	1969	1944	1984	1993	1953	1986
MIN	1.41	1.60	1.39	.90	.13	3.67	2.58	1.18	1.18	.34	.38	.47
(WY)	1937	1938	1936	1948	1959	1975	1934	1934	1934	1933	1934	1976

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1931 - 1998
ANNUAL TOTAL	148930.5	58736.0	
ANNUAL MEAN	408	161	144a
HIGHEST ANNUAL MEAN			566 1993
LOWEST ANNUAL MEAN			8.32 1959
HIGHEST DAILY MEAN	8680 Mar 31	1640 Apr 10	16400 Apr 10 1969
LOWEST DAILY MEAN	7.8 Jan 17	3.3 Sep 22	.00b Jul 26 1931
ANNUAL SEVEN-DAY MINIMUM	8.0 Jan 14	3.5 Sep 21	.00 Jan 21 1948
INSTANTANEOUS PEAK FLOW		1680 Apr 10	17200 Apr 10 1969
INSTANTANEOUS PEAK STAGE		5.87 Apr 10	14.90 Apr 10 1969
INSTANTANEOUS LOW FLOW		2.9 Sep 21	.00b Jul 26 1931
ANNUAL RUNOFF (AC-FT)	295400	116500	104200
ANNUAL RUNOFF (CFSM)	.61	.24	.22

ANNUAL RUNOFF (INCHES)	8.34		3.29		2.94		
10 PERCENT EXCEEDS	689		371		316		
50 PERCENT EXCEEDS	64		56		19		
90 PERCENT EXCEEDS	12		9.8		2.3		

a Median of annual mean discharges is 87 ft³/s.

b Many days, several years.

