



Water-Data Report 2009

05313500 YELLOW MEDICINE RIVER NEAR GRANITE FALLS, MN

Minnesota Basin
Hawk-Yellow Medicine Subbasin

LOCATION.--Lat 44°43'18", long 95°31'07" referenced to North American Datum of 1927, in NW ¼ SW ¼ sec.35, T.115 N., R.39 W., Yellow Medicine County, MN, 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.

SURFACE-WATER RECORDS

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 sea level (NGVD of 1929). Mar. 16, 1931 to June 13, 1938, non-recording gage, on bridge 50 ft upstream at present datum. Oct. 12, 1939 to Nov. 30, 1952, non-recording gage 500 ft downstream at present datum.

REMARKS.--Records good to fair 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 discharges greater than base discharge of 260 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 24	0900	1,060	4.91

Minimum discharge, 1.9 ft³/s, Sept. 20, gage height, 2.08 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.7	20	e23	e12	e10	e14	431	146	45	46	12	4.2
2	3.5	18	e23	e11	e10	e18	401	145	42	41	12	3.8
3	3.6	17	e22	e12	e9.8	e24	370	140	36	37	11	3.7
4	3.7	15	e21	e10	e9.6	e30	347	134	35	35	12	3.8
5	3.7	14	e21	e12	e10	e32	331	129	34	33	11	3.6
6	4.3	17	e20	e11	e14	e30	310	122	34	29	9.7	3.2
7	10	23	e20	e10	e14	e28	295	118	34	37	12	3.1
8	9.6	24	e21	e10	e13	e28	283	112	35	39	11	3.1
9	6.8	28	e20	e11	e13	e29	278	112	35	41	11	3.1
10	21	34	e21	e10	e13	e28	267	110	38	57	9.2	3.0
11	19	34	e20	e11	e12	e27	253	113	43	70	7.9	2.7
12	14	35	e20	e10	e12	e26	238	112	45	75	7.7	3.1
13	12	34	e19	e9.0	e12	e51	225	112	45	71	8.2	2.9
14	10	34	e19	e8.0	e11	e93	215	105	45	64	7.5	2.8
15	8.5	34	e17	e7.0	e11	e115	206	101	43	58	7.0	2.6
16	8.4	35	e17	e9.0	e12	e133	197	99	42	53	7.6	2.3
17	8.8	36	e16	e11	e13	e161	186	95	40	48	7.5	2.2
18	7.7	26	e16	e14	e12	e244	178	93	41	43	6.7	2.6
19	7.2	34	e17	e13	e12	e360	174	88	158	38	6.3	2.5
20	8.2	e30	e17	e12	e12	e480	171	80	180	34	9.0	2.1
21	8.0	e27	e16	e13	e12	e608	167	75	164	33	9.2	2.2
22	10	e26	e15	e12	e11	e738	163	69	134	28	8.9	2.4
23	19	e26	e16	e11	e11	e913	159	67	114	24	8.0	2.5
24	20	e27	e15	e10	e15	963	153	65	110	21	6.9	2.5
25	24	e27	e14	e9.5	e15	945	145	61	99	19	6.0	8.2
26	35	e27	e13	e9.2	e14	1,030	145	59	87	17	5.5	12
27	34	e27	e12	e9.7	e14	872	140	56	78	15	5.6	9.3
28	32	e27	e11	e10	e14	678	141	54	66	14	5.0	14
29	27	e26	e10	e10	---	573	145	52	58	12	5.1	19
30	23	e25	e9.0	e10	---	512	146	51	52	11	5.7	15
31	21	---	e8.5	e10	---	468	---	47	---	11	4.6	---
Total	426.7	807	529.5	327.4	341.4	10,251	6,860	2,922	2,012	1,154	256.8	147.5
Mean	13.8	26.9	17.1	10.6	12.2	331	229	94.3	67.1	37.2	8.28	4.92
Max	35	36	23	14	15	1,030	431	146	180	75	12	19
Min	3.5	14	8.5	7.0	9.6	14	140	47	34	11	4.6	2.1
Ac-ft	846	1,600	1,050	649	677	20,330	13,610	5,800	3,990	2,290	509	293
Cfsm	0.02	0.04	0.03	0.02	0.02	0.50	0.34	0.14	0.10	0.06	0.01	0.01
In.	0.02	0.05	0.03	0.02	0.02	0.57	0.38	0.16	0.11	0.06	0.01	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	43.6	46.1	30.8	16.8	21.9	219	512	220	278	131	63.8	40.0
Max	561	392	256	200	249	933	3,302	1,087	2,484	1,600	510	1,005
(WY)	(1996)	(1996)	(1996)	(2006)	(2006)	(1986)	(1969)	(1944)	(1984)	(1993)	(1953)	(1986)
Min	1.41	1.60	1.39	0.90	0.13	3.67	2.58	1.18	1.18	0.34	0.38	0.47
(WY)	(1937)	(1938)	(1936)	(1948)	(1959)	(1975)	(1934)	(1934)	(1934)	(1933)	(1934)	(1976)

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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1931 - 2009	
Annual total	51,078.8		26,035.3			
Annual mean	140		71.3		^a 143	
Highest annual mean					566	1993
Lowest annual mean					8.32	1959
Highest daily mean	1,320	Jun 14	1,030	Mar 26	16,400	Apr 10, 1969
Lowest daily mean	3.4	Sep 27	2.1	Sep 20	^b 0.00	Jul 26, 1931
Annual seven-day minimum	3.8	Sep 26	2.3	Sep 16	0.00	Jan 21, 1948
Maximum peak flow			^c 1,060	Mar 24	17,200	Apr 10, 1969
Maximum peak stage			^d 5.62	Mar 21	14.90	Apr 10, 1969
Instantaneous low flow			1.9	Sep 20	^b 0.00	Jul 26, 1931
Annual runoff (ac-ft)	101,300		51,640		103,500	
Annual runoff (cfsm)	0.210		0.107		0.215	
Annual runoff (inches)	2.86		1.46		2.92	
10 percent exceeds	499		165		339	
50 percent exceeds	23		21		24	
90 percent exceeds	7.5		5.9		2.8	

^a Median of annual mean discharges is 100 ft³/s.

^b Many days, several years.

^c Gage height 4.91

^d Backwater from ice.

