Water-Data Report 2013

05292000 MINNESOTA RIVER AT ORTONVILLE, MN

Minnesota Basin
Upper Minnesota Subbasin

LOCATION.--Lat 45°17′44″, long 96°26′38″ referenced to North American Datum of 1927, in NE ¼ NW ¼ sec.16, T.121 N., R.46 W., Big Stone County, MN, Hydrologic Unit 07020001, on left bank 400 ft downstream from bridge on U.S. Highway 12 and 1,300 ft downstream from dam at outlet of Big Stone Lake, at Ortonville.

DRAINAGE AREA.--1,160 mi^2, (1190 sq. miles from StreamStats, 2012)

SURFACE-WATER RECORDS

PERIOD OF RECORD.--February 1938 to current year.

REVISED RECORDS.--WSP 895: 1939. WSP 1508: 1942 (yearly mean).

GAGE.--Water-stage recorder. Datum of gage is 956.38 ft above sea level (NGVD of 1929). Prior to Mar. 31, 1939, non-recording gage on downstream side of dam 1,300 ft upstream at datum 1.31 ft higher.

REMARKS.--Records good except those for estimated daily discharge, which are poor. Affected by regulation of Big Stone Lake.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 05292000, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/05292000.2013.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	9.2	13	e11	e8.7	e5.9	e13	81	2,380	540	532	66	39
2	7.4	13	e11	e8.5	e5.9	e15	86	2,120	522	511	67	38
3	6.7	13	e11	e8.2	e5.9	e17	97	1,630	513	318	67	38
4	15	13	e11	e8.0	e5.9	e20	186	1,420	509	148	67	38
5	12	13	e11	e7.9	e6.1	e25	271	1,380	519	150	50	37
6	11	12	e11	e7.8	e6.3	e31	564	1,320	514	149	49	35
7	8.6	12	e11	e7.8	e6.6	e40	750	1,210	510	152	44	33
8	7.7	11	e11	e7.7	e6.9	e48	661	917	495	187	44	31
9	8.2	11	e11	e7.6	e7.1	e56	478	712	512	217	44	31
10	8.9	11	e11	e7.5	e7.5	e65	336	516	507	254	44	31
11	9.0	10	e11	e7.4	e7.8	e76	302	368	e590	287	43	30
12	9.4	9.4	e11	e7.3	e8.2	e90	302	359	702	428	49	30
13	9.1	9.8	e11	e7.1	e8.6	e104	300	356	632	574	51	29
14	9.3	8.4	e11	e7.1	e8.8	e106	302	361	565	560	51	29
15	10	6.5	e11	e6.9	e9.0	e99	173	355	581	538	52	30
16	12	6.8	e11	e6.7	e9.0	e93	67	352	573	716	52	30
17	13	6.9	e11	e6.5	e9.0	e86	99	343	572	464	51	28
18	13	7.0	e11	e6.3	e8.9	e83	225	344	340	276	53	29
19	13	6.9	e11	e6.1	e8.9	e80	300	346	215	253	53	30
20	12	7.4	e11	e5.9	e8.9	e78	296	351	215	248	55	30
21	12	7.7	e10	e5.8	e8.9	e76	290	357	1,410	244	55	29
22	12	8.1	e10	e5.7	e8.8	76	290	360	1,900	212	56	24
23	12	8.7	e10	e5.6	e9.0	72	289	536	2,030	103	55	16
24	12	8.1	e9.9	e5.6	e9.2	69	289	634	1,910	51	55	23
25	13	7.5	e9.8	e5.7	e9.8	70	291	620	1,430	64	55	25
26	13	e9.0	e9.7	e5.7	e10	56	555	618	1,240	68	49	18
27	13	e10	e9.6	e5.8	e11	53	949	627	1,150	64	44	26
28	13	e10	e9.4	e5.9	e12	54	1,210	435	1,100	63	43	19
29	13	e10	e9.3	e6.0	---	58	2,070	315	898	63	43	17
30	13	e11	e9.1	e5.9	---	70	2,590	317	736	65	43	18
31	13	---	e8.9	e5.9	---	91	---	412	---	66	41	---
Total	343.5	291.2	325.7	210.6	229.9	1,970	14,699	22,371	23,930	8,025	1,591	861
Mean	11.1	9.71	10.5	6.79	8.21	63.5	490	722	798	259	51.3	28.7
Max	15	13	11	8.7	12	106	2,590	2,380	2,030	716	67	39
Min	6.7	6.5	8.9	5.6	5.9	13	67	315	215	51	41	16
Ac-ft	681	578	646	418	456	3,910	29,160	44,370	47,470	15,920	3,160	1,710
Cfsm	0.01	0.01	0.01	0.01	0.01	0.05	0.42	0.62	0.69	0.22	0.04	0.02
In.	0.01	0.01	0.01	0.01	0.01	0.06	0.47	0.72	0.77	0.26	0.05	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	45.7	38.9	29.0	27.0	37.4	272	578	296	238	161	82.5	40.8
Max	607	769	251	164	273	2,689	4,109	904	1,348	1,781	1,299	250
(WY)	(2010)	(2010)	(2010)	(1943)	(1998)	(2010)	(1997)	(2001)	(2008)	(1993)	(1993)	(1942)
Min	0.20	0.20	0.20	0.17	0.16	1.14	1.27	0.91	1.30	1.11	0.25	0.18
(WY)	(1939)	(1939)	(1939)	(1940)	(1940)	(1941)	(1941)	(1941)	(1977)	(1977)	(1959)	(1988)

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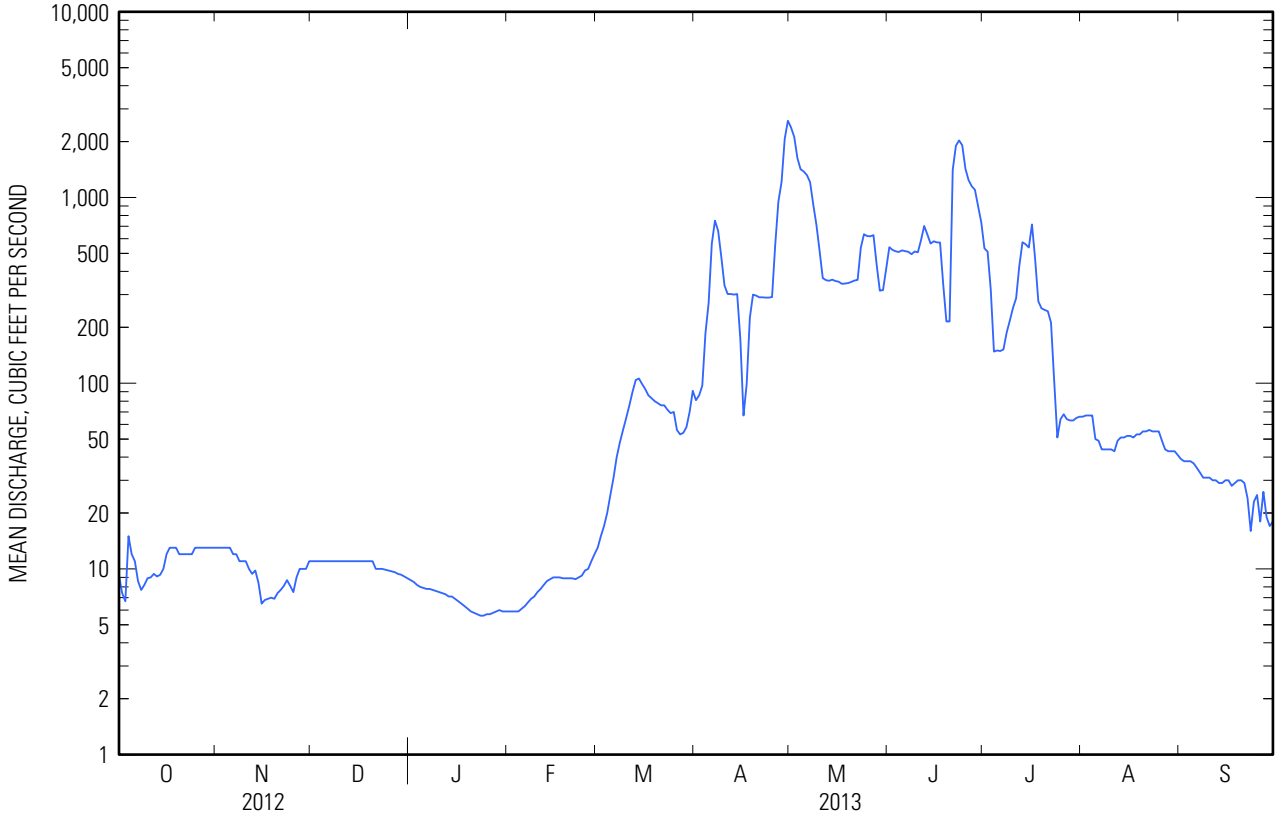
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1938 - 2013	
Annual total	35,363.6		74,847.9			
Annual mean	96.6		205		[a]155	
Highest annual mean					733	2011
Lowest annual mean					2.39	1977
Highest daily mean	1,310	Apr 18	2,590	Apr 30	5,660	Mar 20, 2010
Lowest daily mean	6.0	Sep 15	[b]5.6	Jan 23	0.00	Dec 13, 1940
Annual seven-day minimum	6.6	Sep 12	5.7	Jan 21	0.08	Sep 12, 1988
Maximum peak flow			[c]2,680	Apr 29	[c]5,680	Mar 20, 2010
Maximum peak stage			8.45	Apr 29	[d]12.92	Apr 13, 1952
Instantaneous low flow			[f,g]5.6	Jan 23	0.00	Dec 13, 1940
Annual runoff (ac-ft)	70,140		148,500		112,600	
Annual runoff (cfsm)	0.083		0.177		0.134	
Annual runoff (inches)	1.13		2.40		1.82	
10 percent exceeds	295		572		402	
50 percent exceeds	41		37		28	
90 percent exceeds	8.9		7.4		1.4	

[a] Median of annual mean discharges is 100 ft³/s.
[b] Also occurred January 24.
[c] Affected by regulation.
[d] Possible backwater from debris, discharge, 5,070 ft³/. Determined from measurements before and after this peak.
[f] Due to regulation.
[g] Estimated daily mean discharge, backwater from ice.