



Water-Data Report 2009

**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<sup>2</sup>.

**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. Affected by regulation of Big Stone Lake.

## 05292000 MINNESOTA RIVER AT ORTONVILLE, MN—Continued

**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	31	194	107	109	67	e88	2,430	279	57	45	39	50
2	29	198	107	107	70	e88	2,120	280	58	45	37	50
3	28	165	107	110	65	89	1,900	280	56	45	38	50
4	27	182	107	104	57	96	1,810	280	56	46	54	50
5	26	169	107	99	58	96	1,770	293	57	46	41	50
6	26	190	107	101	57	100	1,540	480	56	50	39	50
7	26	209	107	100	63	100	1,300	615	55	50	49	49
8	25	205	108	92	59	99	1,210	613	53	44	44	50
9	24	194	109	98	63	e100	1,150	601	51	53	45	51
10	24	190	108	91	74	e97	1,140	578	51	56	154	51
11	23	189	108	92	79	e91	1,090	549	51	55	176	52
12	22	189	156	99	80	90	1,030	434	51	54	157	52
13	22	190	197	91	81	90	1,020	564	51	54	148	52
14	27	155	e197	95	79	90	974	520	52	56	148	52
15	39	110	e196	89	73	140	877	281	50	59	148	52
16	38	110	191	84	73	827	867	210	49	56	156	52
17	120	109	181	88	78	1,990	950	200	48	55	134	52
18	191	106	175	86	82	2,240	1,010	203	49	52	119	52
19	196	111	167	84	70	1,870	951	203	48	51	177	52
20	194	116	167	80	72	1,820	1,080	153	48	49	415	52
21	162	109	163	80	78	1,770	759	59	48	46	409	55
22	189	108	142	80	75	1,820	655	58	47	44	303	54
23	192	108	143	81	72	2,790	399	59	48	44	297	51
24	226	108	139	73	75	3,310	263	59	47	90	204	50
25	260	107	128	70	84	3,520	252	59	47	46	119	53
26	288	107	131	67	e87	3,480	262	61	47	43	101	49
27	261	107	128	65	e87	3,360	274	59	48	44	84	46
28	259	107	118	66	e88	3,200	266	59	46	56	53	38
29	246	107	118	68	---	3,050	266	58	45	45	51	35
30	227	107	122	65	---	2,880	281	58	46	43	50	33
31	239	---	108	67	---	2,740	---	57	---	42	50	---
<b>Total</b>	3,687	4,356	4,249	2,681	2,046	42,121	29,896	8,262	1,516	1,564	4,039	1,485
<b>Mean</b>	119	145	137	86.5	73.1	1,359	997	267	50.5	50.5	130	49.5
<b>Max</b>	288	209	197	110	88	3,520	2,430	615	58	90	415	55
<b>Min</b>	22	106	107	65	57	88	252	57	45	42	37	33
<b>Ac-ft</b>	7,310	8,640	8,430	5,320	4,060	83,550	59,300	16,390	3,010	3,100	8,010	2,950
<b>Cfs/m</b>	0.10	0.13	0.12	0.07	0.06	1.17	0.86	0.23	0.04	0.04	0.11	0.04
<b>In.</b>	0.12	0.14	0.14	0.09	0.07	1.35	0.96	0.26	0.05	0.05	0.13	0.05

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	36.5	27.8	25.1	24.2	34.4	227	535	283	221	148	72.7	36.9
<b>Max</b>	441	269	194	164	273	1,519	4,109	904	1,348	1,781	1,299	250
<b>(WY)</b>	(1996)	(1996)	(1943)	(1943)	(1998)	(1994)	(1997)	(2001)	(2008)	(1993)	(1993)	(1942)
<b>Min</b>	0.20	0.20	0.20	0.17	0.16	1.14	1.27	0.91	1.30	1.11	0.25	0.18
<b>(WY)</b>	(1939)	(1939)	(1939)	(1940)	(1940)	(1941)	(1941)	(1941)	(1977)	(1977)	(1959)	(1988)

05292000 MINNESOTA RIVER AT ORTONVILLE, MN—Continued

SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1938 - 2009	
<b>Annual total</b>	106,606		105,902			
<b>Annual mean</b>	291		290		<sup>a</sup> 141	
<b>Highest annual mean</b>					514	1997
<b>Lowest annual mean</b>					2.39	1977
<b>Highest daily mean</b>	3,350	Jun 13	3,520	Mar 25	5,010	Apr 10, 1997
<b>Lowest daily mean</b>	22	Oct 12	<sup>b</sup> 22	Oct 12	0.00	Dec 13, 1940
<b>Annual seven-day minimum</b>	24	Oct 7	24	Oct 7	0.08	Sep 12, 1988
<b>Maximum peak flow</b>			<sup>c</sup> 3,530	Mar 25	5,070	Apr 10, 1997
<b>Maximum peak stage</b>			10.00	Mar 25	12.92	Apr 13, 1952
<b>Instantaneous low flow</b>			<sup>d</sup> 20	Oct 14	0.00	Dec 13, 1940
<b>Annual runoff (ac-ft)</b>	211,500		210,100		102,000	
<b>Annual runoff (cfsm)</b>	0.251		0.250		0.121	
<b>Annual runoff (inches)</b>	3.42		3.40		1.65	
<b>10 percent exceeds</b>	770		786		364	
<b>50 percent exceeds</b>	107		90		26	
<b>90 percent exceeds</b>	38		45		1.3	

<sup>a</sup> Median of annual mean discharges is 95 ft<sup>3</sup>/s.

<sup>b</sup> Also occurred Oct. 13th.

<sup>c</sup> Affected by regulation.

<sup>d</sup> Due to regulation.

