Water-Data Report 2009

05311000 MINNESOTA RIVER AT MONTEVIDEO, MN

Minnesota Basin
Hawk-Yellow Medicine Subbasin

LOCATION.--Lat 44°56′00″, long 95°44′00″ referenced to North American Datum of 1927, in NW ¼ NW ¼ sec.19, T.117 N., R.40 W., Yellow Medicine County, MN, Hydrologic Unit 07020004, on right bank 20 ft upstream from bridge on U.S. Highway 212, at Montevideo, and 480 ft downstream from Chippewa River.

DRAINAGE AREA.--6,180 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1909 to September 1917, October 1917 to September 1929 (no winter records), October 1929 to current year. Prior to October 1939, published as "near Montevideo." Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1035: 1919(M). WSP 1085: 1935-36. WSP 1508: 1912, 1925(M), 1929(M), WDR MN-2000-1; 1995, 1996.

GAGE.--Water-stage recorder. Datum of gage is 909.12 ft above sea level (NGVD of 1929). July 22, 1909 to Feb. 4, 1932, nonrecording gage at bridge 600 ft downstream at present datum. Feb. 5, 1932 to Nov. 26, 1934, nonrecording gage at bridge 100 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharge, which are fair to poor. Flow regulated by Big Stone Lake since Apr. 17, 1937, Lac qui Parle since Jan. 1938, and Marsh Lake since Nov. 1, 1939.

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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	107	573	863	e531	e368	e501	13,500	3,960	1,170	714	263	550
2	132	566	878	e533	e366	e666	12,500	3,840	1,170	701	254	371
3	166	567	853	e530	e363	e879	11,600	3,730	1,160	655	252	230
4	182	567	e811	e522	e361	e928	10,900	3,630	1,160	652	250	202
5	185	566	e758	e533	e369	e906	10,500	3,520	1,120	648	246	191
6	195	576	e702	e534	e378	e898	10,100	3,430	936	637	190	184
7	219	628	e678	e534	e379	e901	9,950	3,340	912	576	202	183
8	261	844	e662	e533	e381	e898	10,500	3,240	926	534	238	183
9	376	958	e634	e528	e385	e789	10,200	3,160	909	447	427	183
10	400	1,290	e610	e524	e407	e618	9,720	3,060	963	437	448	183
11	478	1,260	e592	e521	e450	e593	9,280	2,950	1,010	455	440	185
12	493	1,190	e579	e513	e492	e598	8,870	2,840	996	454	467	187
13	503	1,200	e564	e504	e501	e598	8,530	2,750	990	454	476	183
14	497	1,260	e553	e493	e498	e593	8,210	2,720	983	498	436	185
15	490	1,300	e546	e470	e492	e598	7,890	2,700	948	505	382	183
16	492	1,280	e541	e421	e492	820	7,500	2,480	817	503	380	182
17	473	1,250	e541	e374	e490	1,300	7,160	2,380	821	502	377	180
18	401	1,150	e538	e348	e492	1,950	6,890	2,320	818	504	372	178
19	389	968	e534	e343	e492	2,500	6,610	2,290	814	502	319	176
20	390	753	e528	e337	e490	2,840	6,250	2,090	810	506	451	175
21	388	e826	e525	e335	e489	3,160	5,930	1,880	816	493	625	178
22	405	e831	e521	e349	e494	3,380	5,430	1,850	823	444	676	178
23	439	e836	e521	e381	e498	4,000	5,020	1,840	819	431	688	177
24	568	e884	e527	e388	e496	6,280	4,780	1,810	816	343	702	179
25	659	969	e528	e381	e494	9,440	4,660	1,670	857	374	789	251
26	743	1,050	e534	e378	e498	11,200	4,530	1,470	981	383	801	574
27	829	1,050	e530	e380	e494	13,800	4,400	1,310	933	375	798	629
28	684	1,010	e527	e378	e498	16,300	4,290	1,230	919	283	784	486
29	657	893	e519	e374	---	16,600	4,150	1,170	904	331	780	428
30	650	869	e518	e375	---	15,700	4,050	1,180	769	331	779	407
31	615	---	e522	e371	---	14,600	---	1,180	---	266	705	---
Total	13,466	27,964	18,737	13,716	12,607	134,834	233,900	77,020	28,070	14,938	14,997	7,761
Mean	434	932	604	442	450	4,349	7,797	2,485	936	482	484	259
Max	829	1,300	878	534	501	16,600	13,500	3,960	1,170	714	801	629
Min	107	566	518	335	361	501	4,050	1,170	769	266	190	175
Ac-ft	26,710	55,470	37,160	27,210	25,010	267,400	463,900	152,800	55,680	29,630	29,750	15,390
Cfsm	0.07	0.15	0.10	0.07	0.07	0.70	1.26	0.40	0.15	0.08	0.08	0.04
In.	0.08	0.17	0.11	0.08	0.08	0.81	1.41	0.46	0.17	0.09	0.09	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	384	407	305	201	224	1,004	3,000	1,716	1,399	1,162	583	341
Max	3,675	3,797	1,572	1,083	1,029	5,363	22,320	7,315	5,088	7,853	7,084	2,613
(WY)	(1996)	(1996)	(1996)	(2006)	(2006)	(1994)	(1997)	(1986)	(1984)	(1993)	(1993)	(1986)
Min	0.76	1.61	2.35	1.57	1.06	5.06	7.82	3.13	1.40	1.89	0.60	0.57
(WY)	(1934)	(1935)	(1935)	(1934)	(1937)	(1934)	(1934)	(1934)	(1934)	(1933)	(1933)	(1933)

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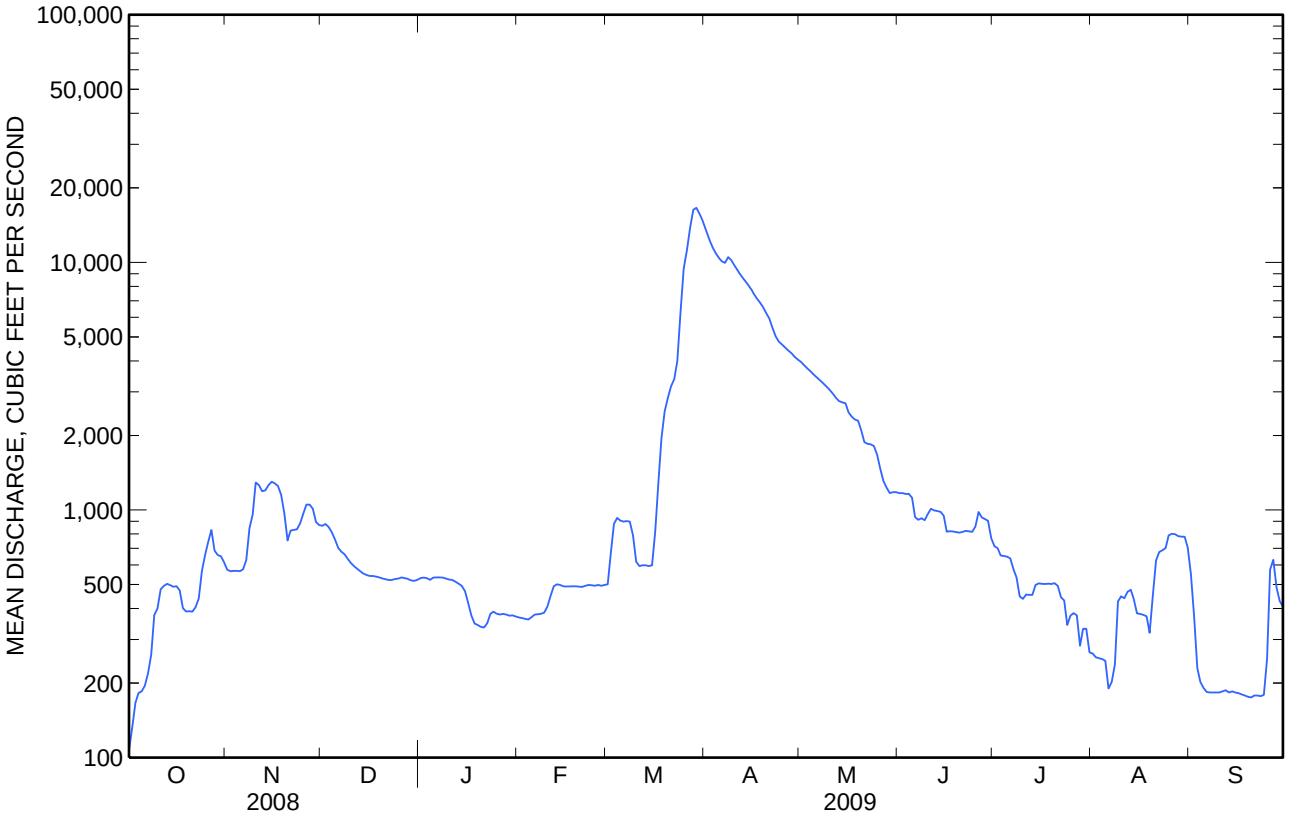
SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1909 - 2009	
Annual total	477,486		598,010			
Annual mean	1,305		1,638		[a]941	
Highest annual mean					3,166	1997
Lowest annual mean					4.43	1934
Highest daily mean	4,100	Jun 26	16,600	Mar 29	46,800	Apr 7, 1997
Lowest daily mean	78	Sep 24	107	Oct 1	[b]0.00	Aug 14, 1933
Annual seven-day minimum	80	Sep 24	169	Oct 1	0.00	Jul 5, 1934
Maximum peak flow			[c]16,800	Mar 29	47,500	Apr 6, 1997
Maximum peak stage			18.27	Mar 29	23.90	Apr 6, 1997
Instantaneous low flow			[d]84	Oct 1	[b]0.00	Aug 14, 1933
Annual runoff (ac-ft)	947,100		1,186,000		681,500	
Annual runoff (cfsm)	0.211		0.265		0.152	
Annual runoff (inches)	2.87		3.60		2.07	
10 percent exceeds	3,530		4,210		2,440	
50 percent exceeds	670		576		310	
90 percent exceeds	183		253		36	

[a] Median of annual-mean discharges is 700 ft³/s.

[b] Many days in 1933, 34, and 36.

[c] Affected by regulation.

[d] Due in part to regulation. Rising stage.