



Water-Data Report 2009

05294000 POMME DE TERRE RIVER AT APPLETON, MN

Minnesota Basin
Pomme De Terre Subbasin

LOCATION.--Lat 45°12'10", long 96°01'20" referenced to North American Datum of 1927, in SW ¼ NW ¼ sec.14, T.120 N., R.43 W., Swift County, MN, Hydrologic Unit 07020002, on left bank 400 ft upstream from bridge on U.S. Highway 59 and State Highway 119 at Appleton and 8 mi upstream from mouth.

DRAINAGE AREA.--905 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1931 to September 1935 (no winter records), October 1935 to September 1999, June 2003 to current year. Peak flows available for water years 2000-2002. Prior to October 1953, published as "near Appleton."

REVISED RECORDS.--WSP 1308: 1931(M), 1937(M).

GAGE.--Water-stage recorder. Datum of gage is 978.00 ft above sea level (NGVD of 1929). Prior to Dec. 22, 1952, nonrecording gage at site 4 mi upstream at datum 25.17 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow affected by lakes above station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb 14	1100	490	6.47
Mar 8	1400	420	6.24
Mar 10	2300	414	6.22
Mar 19	1500	1,810	9.09
Mar 25	0000	*3,740	*11.81
Mar 28	0100	2,900	10.61
Apr 2	1900	1,820	9.11
Apr 6	0800	1,410	8.48
Apr 10	1700	1,080	7.90
Apr 15	0800	879	7.48
Apr 20	0600	716	7.10
Apr 25	1800	595	6.78
May 2	1400	563	6.69
May 9	2000	493	6.48
May 17	1600	411	6.21

Minimum discharge, 69 ft³/s, Oct. 4, gage height, 4.36 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	73	123	e131	e107	e105	e90	2,060	569	323	229	129	101
2	72	124	e127	e106	e102	e91	1,860	564	317	224	126	98
3	72	123	e119	e105	e101	e97	1,720	559	308	218	127	96
4	71	123	e116	e102	e99	e103	1,590	551	299	215	123	94
5	72	123	e123	e100	e103	e107	1,490	543	290	211	126	92
6	77	132	e121	e104	e105	e109	1,400	531	285	206	126	90
7	101	161	e119	e104	e103	e106	1,310	519	275	206	154	87
8	115	212	e116	e102	e101	e105	1,230	506	285	202	139	87
9	108	228	e116	e104	e102	e100	1,160	494	288	195	136	98
10	103	224	e122	e104	e104	e95	1,090	483	282	189	134	94
11	104	216	e116	e104	e102	e91	1,040	468	272	185	131	92
12	114	210	e117	e103	e102	e85	1,000	456	264	182	125	99
13	123	210	e119	e100	e100	e92	965	446	256	177	120	103
14	125	215	e117	e97	e101	e121	917	438	250	181	116	101
15	127	218	e114	e96	e101	e181	869	430	244	180	112	99
16	121	219	e112	e98	e104	e262	821	421	241	174	113	98
17	120	215	e111	e101	e103	e409	785	412	237	171	139	98
18	116	187	e110	e103	e102	e556	756	402	234	168	139	98
19	114	180	e108	e104	e101	e638	730	393	232	165	164	96
20	112	147	e107	e104	e100	e792	707	385	234	159	158	94
21	110	94	e107	e104	e97	e921	682	380	233	154	148	98
22	117	e111	e106	e102	e95	e1,180	662	377	237	153	140	102
23	124	e155	e112	e100	e96	e1,700	638	366	238	153	133	109
24	132	e180	e109	e99	e97	3,230	618	361	235	150	122	109
25	130	e194	e106	e98	e100	3,460	600	354	233	146	125	118
26	131	e186	e110	e98	e95	3,140	586	353	231	143	121	113
27	132	e178	e105	e99	e93	2,960	576	355	235	142	118	110
28	136	e169	e110	e99	e91	2,750	567	353	240	141	114	105
29	128	e158	e107	e101	---	2,790	558	348	237	136	110	107
30	123	e144	e106	e99	---	2,540	566	336	234	132	108	107
31	123	---	e105	e108	---	2,280	---	329	---	131	105	---
Total	3,426	5,159	3,524	3,155	2,805	31,181	29,553	13,482	7,769	5,418	3,981	2,993
Mean	111	172	114	102	100	1,006	985	435	259	175	128	99.8
Max	136	228	131	108	105	3,460	2,060	569	323	229	164	118
Min	71	94	105	96	91	85	558	329	231	131	105	87
Ac-ft	6,800	10,230	6,990	6,260	5,560	61,850	58,620	26,740	15,410	10,750	7,900	5,940
Cfs/m	0.12	0.19	0.13	0.11	0.11	1.11	1.09	0.48	0.29	0.19	0.14	0.11

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	75.6	71.6	49.7	34.3	34.3	181	419	226	187	154	83.0	62.1
Max	550	402	182	223	180	1,006	3,087	846	772	1,382	752	331
(WY)	(1996)	(1996)	(1987)	(2006)	(2006)	(2009)	(1997)	(1969)	(2005)	(1993)	(1993)	(1986)
Min	0.00	3.52	1.00	0.00	0.00	2.04	20.9	8.09	2.17	0.45	0.10	0.05
(WY)	(1989)	(1989)	(1937)	(1937)	(1936)	(1969)	(1934)	(1934)	(1933)	(1988)	(1988)	(1988)

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SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1931 - 2009	
Annual total	71,747		112,446			
Annual mean	196		308		^a 138	
Highest annual mean					420	1997
Lowest annual mean					21.1	1977
Highest daily mean	868	Jun 14	3,460	Mar 25	6,760	Apr 6, 1997
Lowest daily mean	17	Feb 26	71	Oct 4	^b 0.00	Aug 3, 1934
Annual seven-day minimum	18	Mar 3	77	Oct 1	0.00	Feb 1, 1936
Maximum peak flow			3,740	Mar 25	^c 8,890	Apr 7, 1997
Maximum peak stage			11.81	Mar 25	^c 18.13	Apr 7, 1997
Instantaneous low flow			69	Oct 4	^b 0.00	Aug 3, 1934
Annual runoff (ac-ft)	142,300		223,000		100,300	
Annual runoff (cfsm)	0.217		0.340		0.153	
10 percent exceeds	430		626		323	
50 percent exceeds	127		127		60	
90 percent exceeds	29		98		9.1	

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

^b Many days, several years.

^c Due in part to dam failure; from highwater mark.

