Water-Data Report 2011

04286000 WINOOSKI RIVER AT MONTPELIER, VT

Richelieu Basin
Winooski Subbasin

LOCATION.--Lat 44°15′24″, long 72°35′38″ referenced to North American Datum of 1927, Washington County, Hydrologic Unit 02010003, on right bank, 0.4 mi upstream from Dog River, 0.6 mi downstream of Bailey Road bridge, 0.8 mi southwest of the Vermont State Capitol Building in Montpelier, and 1.0 mi downstream of the North Branch Winooski River.

DRAINAGE AREA.--397 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records: May 1909 to June 1914 (fragmentary), July 1914 to September 1923, August 1928 to current year.

REVISED RECORDS.--WSP 424: 1915. WSP 894: Drainage area. WSP 1437: 1912-14(M), 1915-18, 1919(M), 1920, 1921(M), 1922-23, 1929,1933, 1934(M), 1936, 1937(M), 1938, 1946(M), WDR MA-NH-RI-VT-72-1: 1969(M), 1970(P), 1971(M).

GAGE.--Water-stage recorder. Datum of gage is 499.99 ft above National Geodetic Vertical Datum of 1929. Prior to June 16, 1914, non-recording gage at site 0.9 mi upstream at different datum. June 16 to July 3, 1914, nonrecording gage at present site and datum.

COOPERATION.--Vermont Department of Environmental Conservation.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by several small power plants upstream, by Peacham Pond and, since 1926, by Mollys Falls Reservoir, combined usable capacity, 492 million ft^3, which regulated runoff from 24 mi^2, and by East Barre and Wrightsville Detention Reservoirs since 1935 (Reservoirs in Winooski River Basin above Montpelier, VT).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 57,000 ft^3/s, November 3, 1927, gage height, 27.1 ft, from rating curve extended above 14,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,600 ft^3/s, Aug. 28, gage height, 19.05 ft; minimum daily discharge, 99 ft^3/s, Aug. 6, 7.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4,920	813	1,150	e460	e230	e360	783	2,600	2,740	486	140	1,580
2	3,640	688	2,600	e760	e240	e350	790	2,330	2,300	446	122	1,390
3	1,930	614	1,780	e760	e240	e310	950	2,160	1,900	441	120	1,290
4	1,390	641	1,360	e590	e240	e310	1,000	2,700	1,600	447	114	1,180
5	1,240	1,730	967	e520	e240	e330	1,690	2,920	1,240	385	103	1,070
6	951	1,680	788	e455	e240	e1,700	1,830	2,340	934	341	99	2,250
7	953	1,080	696	e370	e235	e2,750	1,350	2,050	754	538	99	1,590
8	772	929	e640	e415	e230	e1,950	1,380	1,890	663	424	103	1,530
9	622	1,050	e550	e400	e225	e1,400	1,670	1,690	787	398	104	1,210
10	621	993	e470	e370	e220	e1,150	2,500	1,540	1,140	363	233	968
11	458	840	e520	e360	e205	e1,350	6,490	1,510	1,030	273	301	708
12	388	733	e550	e340	e215	e2,300	6,290	1,440	1,700	265	188	573
13	361	685	2,740	e350	e220	e1,850	4,770	1,260	1,670	305	150	510
14	340	644	2,360	e340	e220	e1,400	4,200	911	1,440	374	137	441
15	2,030	617	1,410	e340	e230	e1,170	3,600	2,030	992	280	349	489
16	2,920	592	1,050	e330	e230	e1,030	3,110	3,880	667	232	1,350	611
17	2,110	1,050	896	e300	e230	e970	3,370	3,180	624	216	856	486
18	1,570	1,370	807	e280	e280	e2,200	3,170	2,420	794	206	609	410
19	1,150	990	794	e310	e380	3,040	2,750	2,220	907	225	345	378
20	973	803	718	e310	e380	2,050	3,900	2,060	634	197	239	350
21	770	661	666	e280	e580	1,560	3,700	2,400	559	186	226	349
22	694	628	629	e265	e430	1,310	2,810	2,150	475	173	407	334
23	584	771	605	e260	e390	1,090	2,670	1,670	709	171	262	342
24	538	798	e580	e330	e390	966	2,610	1,430	1,080	121	205	464
25	614	620	e470	e270	e390	e880	2,610	1,160	1,350	126	188	560
26	1,010	666	e510	e270	e380	796	3,630	1,490	1,420	169	289	462
27	1,470	687	e455	e265	e370	728	4,120	9,760	1,200	214	232	404
28	1,320	565	e500	e245	e365	734	4,440	5,290	999	250	4,770	309
29	908	540	e450	e245	---	681	3,990	4,340	850	188	e6,530	548
30	789	525	e430	e245	---	656	3,160	4,730	627	148	3,000	1,710
31	923	---	e420	e240	---	732	---	3,540	---	140	2,220	---
Total	38,959	25,003	28,561	11,275	8,225	38,103	89,333	81,091	33,785	8,728	24,090	24,496
Mean	1,257	833	921	364	294	1,229	2,978	2,616	1,126	282	777	817
Max	4,920	1,730	2,740	760	580	3,040	6,490	9,760	2,740	538	6,530	2,250
Min	340	525	420	240	205	310	783	911	475	121	99	309

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	419	553	529	450	395	909	1,875	965	499	303	266	241
Max	1,533	1,563	1,504	1,269	1,475	3,442	3,275	2,616	1,785	1,245	1,352	934
(WY)	(2006)	(2006)	(1984)	(2006)	(1981)	(1936)	(1933)	(2011)	(1947)	(1973)	(2008)	(1938)
Min	74.3	152	126	109	91.6	153	555	254	131	88.5	50.5	60.1
(WY)	(1964)	(1979)	(1915)	(1940)	(1940)	(1940)	(1995)	(1921)	(1995)	(1991)	(2001)	(1921)

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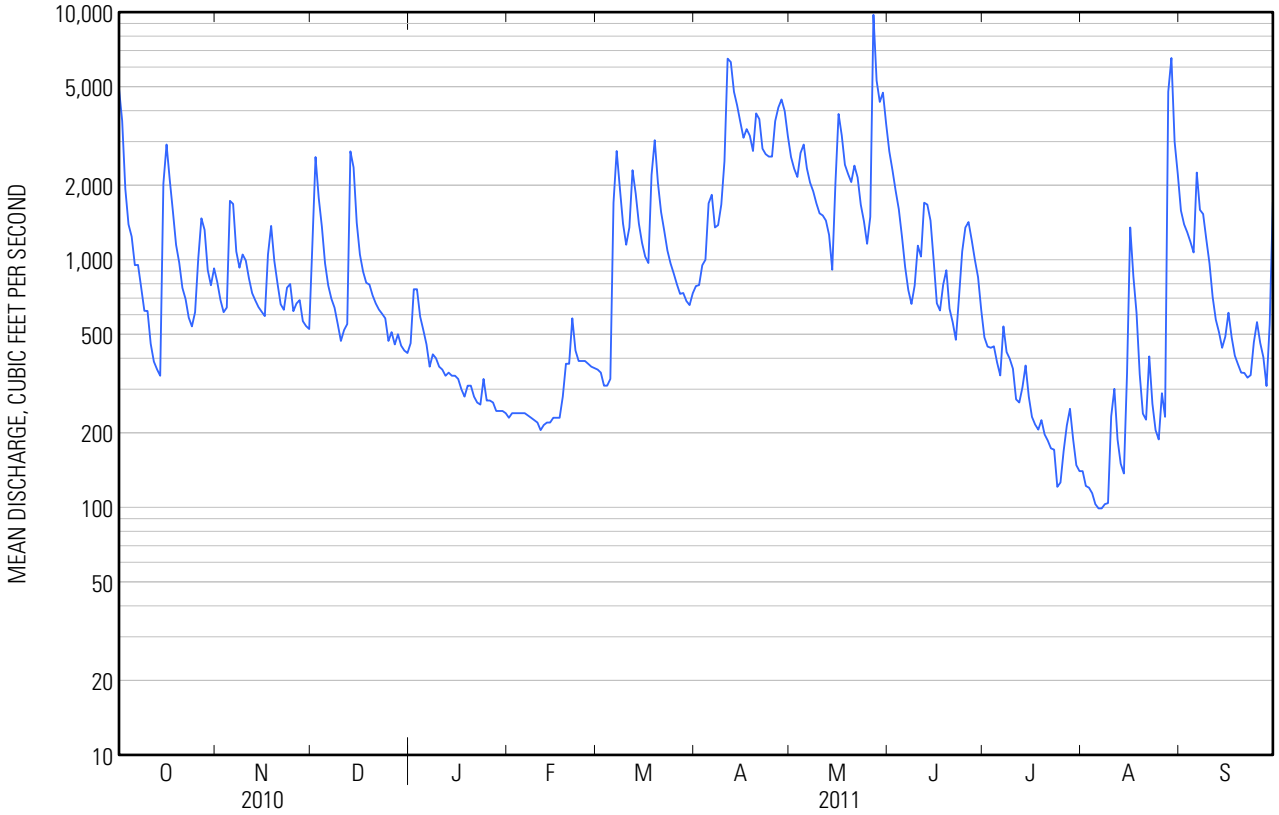
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1914 - 2011	
Annual total	260,473		411,649			
Annual mean	714		1,128		617	
Highest annual mean					1,128	2011
Lowest annual mean					270	1965
Highest daily mean	4,920	Oct 1	9,760	May 27	12,200	Mar 18, 1936
Lowest daily mean	66	Sep 8	99	Aug 6[a]	17	Sep 3, 1933
Annual seven-day minimum	77	Sep 3	106	Aug 3	41	Aug 22, 2001
Maximum peak flow			14,600	Aug 28	17,200	Apr 7, 1912
Maximum peak stage			19.05	Aug 28	19.05	Aug 28, 2011
10 percent exceeds	1,470		2,680		1,480	
50 percent exceeds	510		685		345	
90 percent exceeds	169		230		121	

[a] Also Aug 7.