Water-Data Report 2012

04290500 WINOOSKI RIVER NEAR ESSEX JUNCTION, VT

Lake Champlain-Richelieu River
Winooski River Subbasin

LOCATION.--Lat 44°28′44″, long 73°08′21″ referenced to North American Datum of 1927, Chittenden County, Hydrologic Unit 04150403, on right bank, 0.3 mi downstream from Muddy Brook, 1.5 mi downstream of State Highway 2A bridge, 1.6 mi southwest of Town Hall in Essex Junction, and 1.8 mi northeast of US 2 and State Highway 116 intersection in South Burlington.

DRAINAGE AREA.--1,044 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records: October 1928 to current year.

REVISED RECORDS.--WSP 714: 1930(M). WSP 894: Drainage area. WSP 1307: 1929(M).

GAGE.--Water-stage recorder. Elevation of gage is 185 ft above National Geodetic Vertical Datum of 1929, from topographic map; prior to October 1, 1964, datum was 1.00 ft higher.

COOPERATION.--National Streamflow Information Program.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by power plants upstream, by Peacham Pond and Mollys Falls Reservoir, combined usable capacity, 492 million ft^3, by Waterbury Reservoir (station 04288500) since 1937, and by East Barre and Wrightsville Detention Reservoirs (Reservoirs in Winooski River Basin above Montpelier) since 1935.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 113,000 ft^3/s, November 4, 1927, gage height, 51.4 ft, present datum, from floodmarks, from rating curve extended above 34,000 ft^3/s on basis of computations of flow over dam at gage heights 19.72, 24.54, and 51.4 ft, and slope-area measurements at gage height 51.4 ft, all at present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, e9,600 ft^3/s, Mar. 9, gage height, a9.78 ft; minimum daily discharge, 207 ft^3/s, Sept. 4 [e, estimated; a, ice affected].

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 04290500, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/04290500.2012.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2,870	1,300	2,770	e1,820	e1,500	1,250	1,520	1,930	1,270	747	431	246
2	3,710	1,260	1,950	e2,300	e2,280	1,100	1,540	2,760	1,090	583	403	241
3	4,800	1,250	1,590	e2,080	e1,900	1,140	1,370	2,320	1,690	517	445	231
4	3,630	1,240	1,370	e1,300	e1,490	e1,120	1,300	2,640	2,090	590	364	207
5	2,620	1,150	1,300	e1,390	e1,270	e1,030	1,300	3,020	1,910	831	334	1,070
6	2,240	1,070	1,400	e1,380	e1,220	e1,000	1,190	2,220	1,580	775	420	1,090
7	1,890	1,040	1,860	e1,390	e1,300	e1,100	1,110	1,980	1,370	728	548	668
8	1,530	1,000	1,890	e1,230	e1,120	e1,480	1,090	2,810	1,260	527	362	487
9	1,540	995	1,620	e1,120	e1,060	e7,140	1,200	7,200	1,450	478	402	536
10	1,300	971	1,430	e1,110	e1,040	e3,900	3,390	5,030	1,340	485	796	590
11	1,070	974	1,290	e1,060	e970	e2,750	3,020	4,440	1,000	387	1,450	483
12	997	1,000	1,170	e1,040	e820	2,930	2,470	3,410	803	343	1,150	462
13	980	994	1,170	e1,080	e850	4,300	2,160	2,820	918	311	1,010	320
14	1,280	945	1,230	e1,000	e910	6,730	1,710	2,510	1,030	306	695	314
15	6,100	981	1,370	e800	e920	4,830	1,670	2,520	875	341	569	296
16	4,330	975	e2,380	e660	e890	5,570	1,990	4,050	715	270	481	282
17	3,110	927	e2,450	e900	e960	5,480	1,930	3,640	680	447	453	294
18	2,880	914	e1,280	e1,130	e1,020	5,140	1,620	2,810	550	462	415	397
19	2,440	897	e1,180	e1,150	e930	6,140	1,530	2,410	525	611	409	1,750
20	2,340	738	e1,420	e1,000	e850	6,340	1,290	2,120	532	327	340	1,420
21	2,180	827	e1,350	e890	e790	5,340	1,140	1,520	575	382	478	713
22	1,770	890	e2,200	e830	e890	4,450	1,500	1,270	544	280	299	520
23	1,730	867	e2,330	e870	e1,140	3,610	5,630	1,480	488	310	289	718
24	1,600	941	e1,500	e1,090	e1,210	2,960	e5,200	1,460	409	2,550	292	812
25	1,900	864	e1,000	e1,410	e1,030	2,630	e3,500	1,180	463	1,430	277	634
26	1,870	1,150	e1,350	e1,360	e910	e2,530	e2,700	1,070	861	777	253	542
27	1,720	1,410	e1,400	e1,480	e870	2,430	2,880	939	3,080	659	251	725
28	1,580	1,940	e2,950	e2,580	e1,370	2,240	2,670	912	2,720	542	298	793
29	1,360	2,270	e2,530	e2,270	e1,300	2,140	2,140	1,020	1,740	472	406	695
30	1,300	2,590	e2,000	e1,700	---	2,030	1,820	2,420	1,340	861	395	790
31	1,380	---	e1,880	e1,280	---	1,770	---	1,770	---	691	334	---
Total	70,047	34,370	52,610	40,700	32,810	102,600	63,580	77,681	34,898	19,020	15,049	18,326
Mean	2,260	1,146	1,697	1,313	1,131	3,310	2,119	2,506	1,163	614	485	611
Max	6,100	2,590	2,950	2,580	2,280	7,140	5,630	7,200	3,080	2,550	1,450	1,750
Min	980	738	1,000	660	790	1,000	1,090	912	409	270	251	207

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,269	1,679	1,597	1,405	1,247	2,636	5,154	2,836	1,371	875	791	720
Max	4,589	4,155	4,549	4,215	4,266	9,642	9,341	7,386	5,027	3,368	3,423	3,096
(WY)	(2006)	(2004)	(1974)	(2006)	(1981)	(1936)	(2011)	(2011)	(1947)	(1973)	(2008)	(1938)
Min	245	389	378	350	337	554	1,477	846	364	297	171	231
(WY)	(1964)	(1954)	(1930)	(1931)	(1940)	(1940)	(1995)	(1965)	(1938)	(1965)	(2001)	(1963)

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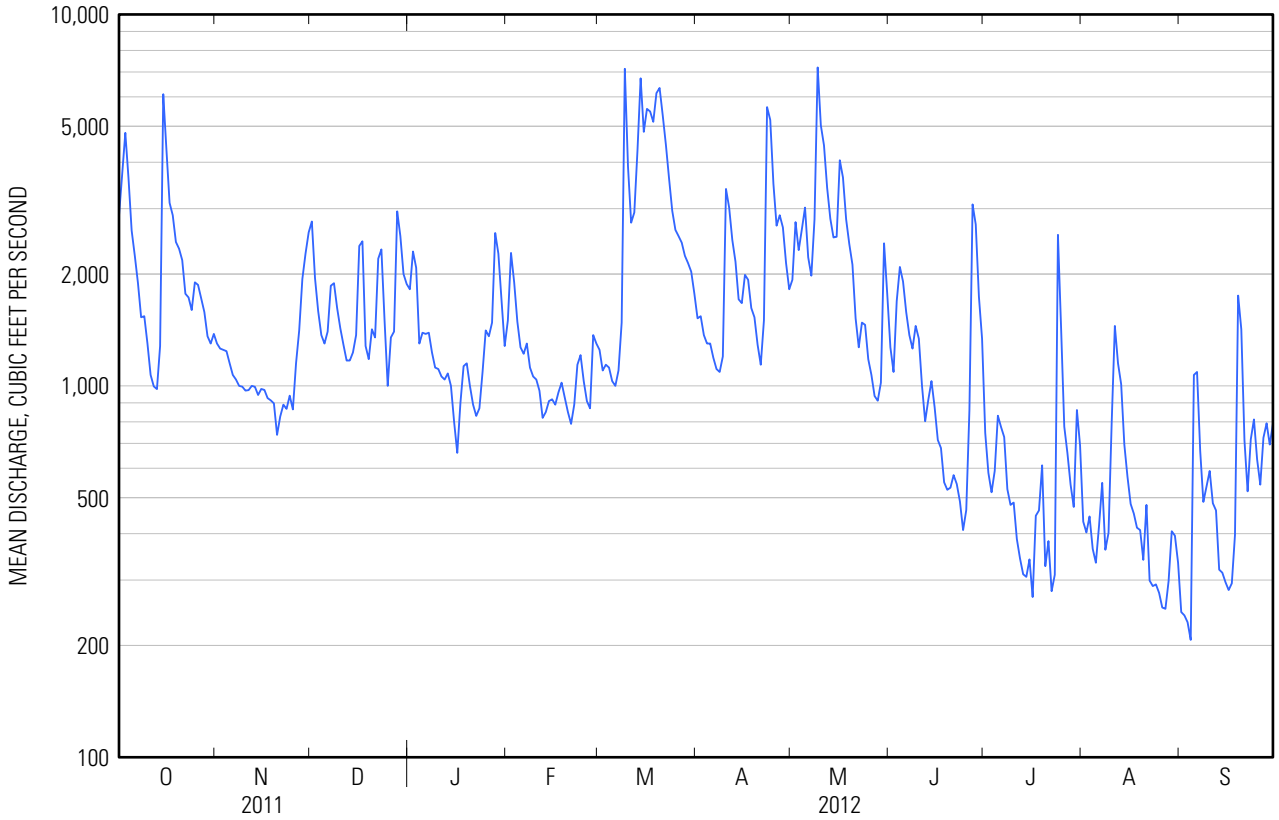
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1929 - 2012	
Annual total	1,102,131		561,691			
Annual mean	3,020		1,535		1,798	
Highest annual mean					3,380	2011
Lowest annual mean					832	1965
Highest daily mean	29,100	Aug 29	7,200	May 9	41,600	Mar 19, 1936
Lowest daily mean	280	Aug 7	207	Sep 4	24	Sep 7, 1968
Annual seven-day minimum	366	Aug 3	280	Aug 22	54	Aug 5, 1964
Maximum peak flow			[e]9,600	Mar 9	45,300	Mar 19, 1936
Maximum peak stage			[a]9.78	Mar 9	24.54	Mar 19, 1936
10 percent exceeds	6,800		2,880		4,140	
50 percent exceeds	1,530		1,200		1,050	
90 percent exceeds	748		408		367	

[e] Estimated.
[a] Ice affected.