04290500 WINOOSKI RIVER NEAR ESSEX JUNCTION, VT

Richelieu Basin
Winooski Subbasin

LOCATION.--Lat 44°28′44″, long 73°08′21″ referenced to North American Datum of 1927, Chittenden County, Hydrologic Unit 02010003, 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.--1044.00 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.--Lake Champlain Basin Program.

REMARKS.--Records good except those for estimated daily discharges, which are fair. 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, 50.4 ft, present datum, from floodmarks, from rating curve extended above 25,000 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, 19,400 ft^3/s, Oct. 29, gage height, 12.96 ft; minimum daily discharge, 218 ft^3/s, Sept. 6.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,450	4,220	2,630	1,770	e1,220	e915	4,110	5,180	1,220	385	610	356
2	3,050	3,720	13,100	2,110	e1,150	e760	4,760	4,150	1,380	404	528	271
3	1,860	3,310	6,270	1,860	e1,120	e790	5,810	3,570	1,650	375	502	244
4	1,330	2,850	4,120	1,710	e1,160	e860	5,650	3,100	1,480	418	430	245
5	1,650	2,180	3,460	1,770	e1,180	e825	4,600	2,690	1,980	542	440	232
6	1,460	1,910	2,610	9,360	e1,160	e790	3,800	2,350	2,090	661	463	218
7	1,110	1,850	2,340	10,000	e1,140	e760	3,240	2,190	1,410	527	653	230
8	950	1,750	2,340	6,420	e1,110	e750	2,920	2,040	1,080	825	585	289
9	832	2,280	1,700	7,250	e1,200	e820	2,730	2,050	1,030	1,800	597	233
10	869	2,510	1,770	4,730	e1,110	e720	2,520	2,080	833	6,020	603	366
11	905	1,950	1,770	3,160	e1,100	e770	2,430	2,040	895	4,390	612	393
12	798	2,340	1,950	2,830	e1,140	e850	2,630	1,940	867	10,400	448	624
13	1,470	2,550	1,750	2,940	e1,100	e1,000	2,700	1,730	795	5,260	427	617
14	1,340	3,350	2,150	2,780	e1,130	e1,530	2,890	1,380	744	3,640	565	336
15	1,110	5,700	2,050	2,390	e1,200	8,030	3,240	1,140	693	2,580	457	426
16	1,040	3,850	2,160	e1,820	e1,240	10,200	7,390	2,300	633	2,320	386	812
17	1,090	5,580	2,250	e1,420	e1,270	4,600	11,500	6,820	561	1,930	426	617
18	2,000	4,740	2,000	e1,400	e1,170	e2,670	8,510	4,500	586	1,570	557	587
19	3,100	3,420	1,790	e1,620	e1,080	e2,400	9,290	3,410	534	1,970	532	526
20	5,380	2,880	1,640	e1,700	e1,110	e2,250	9,630	2,880	614	5,910	381	484
21	14,200	2,550	1,590	e1,480	e1,140	e2,130	9,680	2,560	818	4,170	436	385
22	6,370	2,060	1,480	e1,520	e1,120	e2,240	9,910	2,430	710	2,560	375	364
23	5,260	1,880	2,230	e1,550	e990	5,860	11,000	1,990	764	2,000	375	327
24	5,320	1,990	4,120	e1,410	e950	7,610	14,500	1,560	723	1,520	429	275
25	4,790	1,510	3,040	e1,250	e960	5,670	10,200	1,350	641	1,170	309	261
26	4,370	1,390	2,850	e1,140	e1,000	5,500	6,910	1,230	625	1,040	378	255
27	3,210	1,600	3,070	e1,180	e920	7,620	5,830	1,090	532	955	432	258
28	5,670	1,400	2,450	e1,250	e820	9,330	5,550	1,130	437	764	359	413
29	15,300	1,360	1,970	e1,150	---	6,920	5,400	1,170	509	930	376	571
30	6,860	1,330	1,440	e1,070	---	5,080	5,530	980	375	893	284	418
31	4,860	---	1,630	e1,160	---	4,570	---	974	---	643	387	---
Total	109,004	80,010	85,720	83,200	30,990	104,820	184,860	74,004	27,209	68,572	14,342	11,633
Mean	3,516	2,667	2,765	2,684	1,107	3,381	6,162	2,387	907	2,212	463	388
Max	15,300	5,700	13,100	10,000	1,270	10,200	14,500	6,820	2,090	10,400	653	812
Min	798	1,330	1,440	1,070	820	720	2,430	974	375	375	284	218

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,220	1,659	1,562	1,385	1,242	2,584	5,141	2,807	1,352	832	739	711
Max	4,589	4,155	4,549	4,215	4,266	9,642	9,256	6,826	5,027	3,368	3,284	3,096
(WY)	(2006)	(2004)	(1974)	(2006)	(1981)	(1936)	(1933)	(1972)	(1947)	(1973)	(1976)	(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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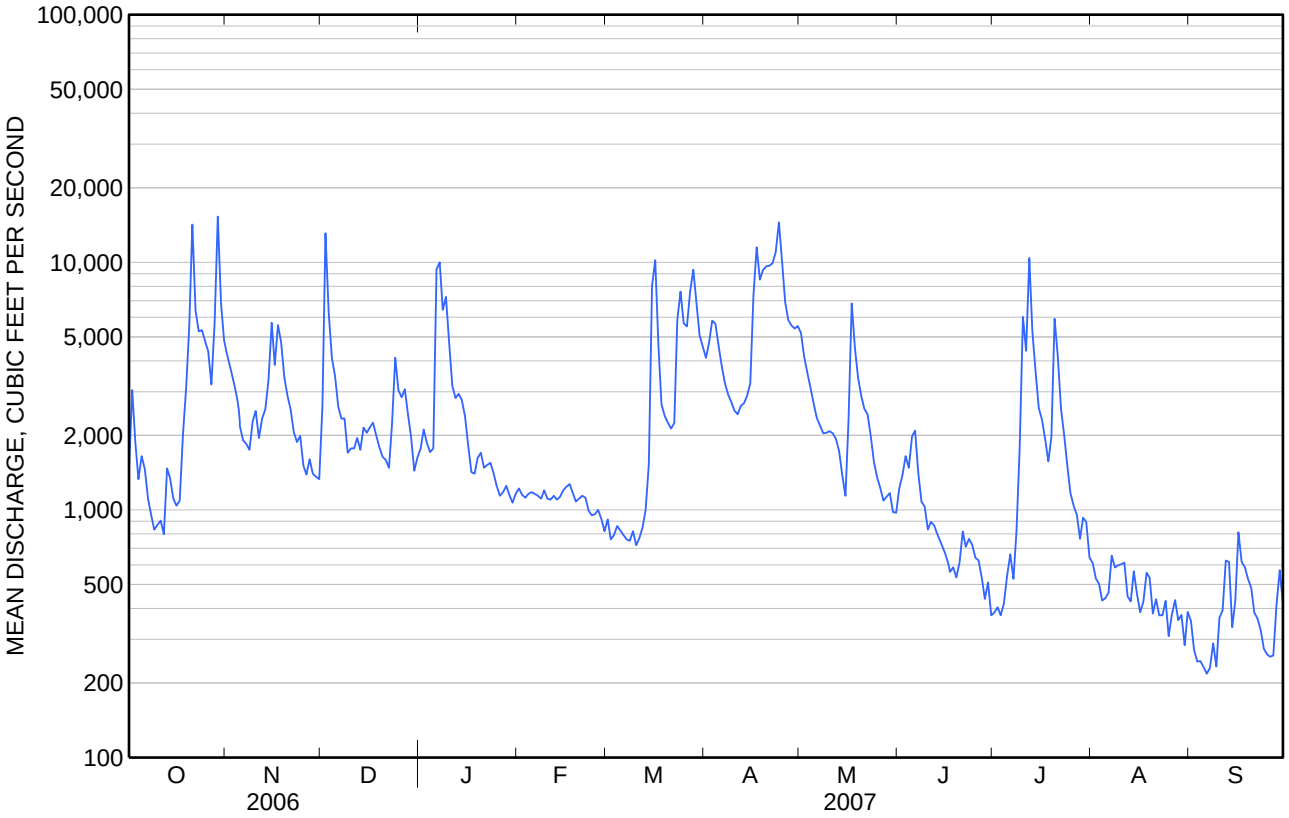
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1929 - 2007	
Annual total	1,002,135		874,364			
Annual mean	2,746		2,396		1,769	
Highest annual mean					2,917	2006
Lowest annual mean					832	1965
Highest daily mean	23,700	May 20	15,300	Oct 29	41,600	Mar 19, 1936
Lowest daily mean	363	Sep 21	218	Sep 6	24	Sep 7, 1968
Annual seven-day minimum	415	Sep 21	242	Sep 3	54	Aug 5, 1964
Maximum peak flow			19,400	Oct 29	45,300	Mar 19, 1936
Maximum peak stage			12.96	Oct 29	24.54	Mar 19, 1936
10 percent exceeds	5,560		5,670		4,090	
50 percent exceeds	1,990		1,480		1,010	
90 percent exceeds	788		423		360