Water-Data Report 2011

01151500 OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT

Upper Connecticut Basin
Black-Ottauquechee Subbasin

LOCATION.--Lat 43°36′09″, long 72°21′17″ referenced to North American Datum of 1927, Windsor County, Hydrologic Unit 01080106, on left bank, 100 ft upstream from US 5 bridge, 0.3 mi downstream from North Hartland Dam, 0.7 mi north of Depot Road and US 5 intersection in North Hartland, 1.2 mi upstream from mouth, and 3.7 mi southwest of Courthouse in White River Junction.

DRAINAGE AREA.--221 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records: October 1930 to current year.

GAGE.--Water-stage recorder. Datum of gage is 336.77 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

COOPERATION.--U.S. Army Corps of Engineers, New England District.

REMARKS.--Records good. Flow regulated by power plants upstream and by North Hartland Reservoir since March 1961; greater regulation by power plants at North Hartland Reservoir since July 1985. Small seasonal storage in reservoir at Plymouth.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft^3/s, September 21, 1938, gage height, 17.68 ft, from rating curve extended above 6,200 ft^3/s on basis of computation of flow over dam at gage heights 15.58 ft, 17.68 ft, and 21.5 ft; minimum, 0.2 ft^3/s, July 6, 1984, during hydroelectric construction; minimum daily discharge, 3.8 ft^3/s, July 3, 1933. Maximum discharge since construction of North Hartland Dam in March 1961, 6,170 ft^3/s, March 17, 1977, gage height, 8.67 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1760, 21.5 ft in November 1927, from floodmarks, discharge 30,400 ft^3/s, by computation of peak flow over dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,430 ft^3/s, Aug. 31, gage height, 7.71 ft; minimum daily discharge, 21 ft^3/s, Aug. 6.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 01151500, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/01151500.2011.pdf

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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	757	489	667	376	112	168	581	1,710	337	303	106	4,040
2	1,470	371	2,590	574	e215	215	586	2,230	246	231	106	3,800
3	2,010	470	1,920	667	153	219	656	1,600	344	213	78	3,530
4	1,400	464	982	288	185	211	702	1,300	212	228	79	3,100
5	306	1,400	867	362	173	213	892	1,520	244	171	107	2,380
6	282	1,060	750	290	185	376	901	1,100	224	171	21	2,620
7	931	830	563	325	177	1,720	920	945	220	298	80	2,810
8	770	713	478	300	149	1,150	907	844	177	182	138	3,180
9	410	732	449	325	209	767	1,130	751	179	434	80	3,150
10	329	669	293	273	139	685	1,490	680	436	272	343	1,800
11	289	617	388	221	185	773	1,150	585	183	199	177	907
12	283	509	556	279	145	1,750	294	546	397	144	137	841
13	246	474	2,740	255	159	1,490	300	603	359	97	79	697
14	245	437	2,400	282	160	1,000	1,860	424	586	116	80	599
15	1,670	410	1,020	e240	230	920	3,600	660	359	153	395	510
16	2,920	475	964	244	147	830	3,820	1,840	280	111	1,360	553
17	2,120	844	739	174	250	789	3,690	1,160	241	107	733	418
18	1,130	1,100	661	254	144	1,340	4,000	1,060	258	108	309	417
19	852	816	679	192	513	2,170	3,950	1,570	241	166	242	358
20	634	638	523	268	181	1,980	3,280	1,510	206	106	274	352
21	551	446	491	246	292	1,640	2,780	1,350	176	107	152	344
22	607	540	496	223	185	1,030	2,540	1,100	171	107	1,820	497
23	426	509	496	205	238	942	2,120	927	636	35	639	711
24	393	581	426	240	219	803	1,650	877	557	81	481	652
25	467	436	355	109	219	760	1,690	756	469	78	272	706
26	758	437	254	221	212	591	2,940	601	424	78	313	537
27	1,230	568	306	223	213	503	3,410	638	358	105	293	388
28	1,120	365	290	212	219	644	2,410	574	283	103	304	390
29	921	443	389	216	---	575	1,210	443	357	77	593	829
30	645	473	369	112	---	507	1,350	407	207	591	2,210	2,360
31	616	---	313	224	---	577	---	404	---	135	4,060	---
Total	26,788	18,316	24,414	8,420	5,608	27,338	56,809	30,715	9,367	5,307	16,061	43,476
Mean	864	611	788	272	200	882	1,894	991	312	171	518	1,449
Max	2,920	1,400	2,740	667	513	2,170	4,000	2,230	636	591	4,060	4,040
Min	245	365	254	109	112	168	294	404	171	35	21	344

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	246	366	373	321	284	642	1,375	663	305	179	137	147
Max	1,060	976	1,076	977	1,157	2,570	2,587	1,676	1,010	1,131	759	1,449
(WY)	(1988)	(2006)	(2004)	(2006)	(1981)	(1936)	(1969)	(1940)	(2006)	(1973)	(1976)	(2011)
Min	33.3	70.5	72.2	56.2	55.4	84.0	346	201	70.3	34.8	28.5	29.7
(WY)	(1965)	(1965)	(1948)	(1948)	(1940)	(1940)	(1995)	(1941)	(1965)	(1965)	(1965)	(1967)

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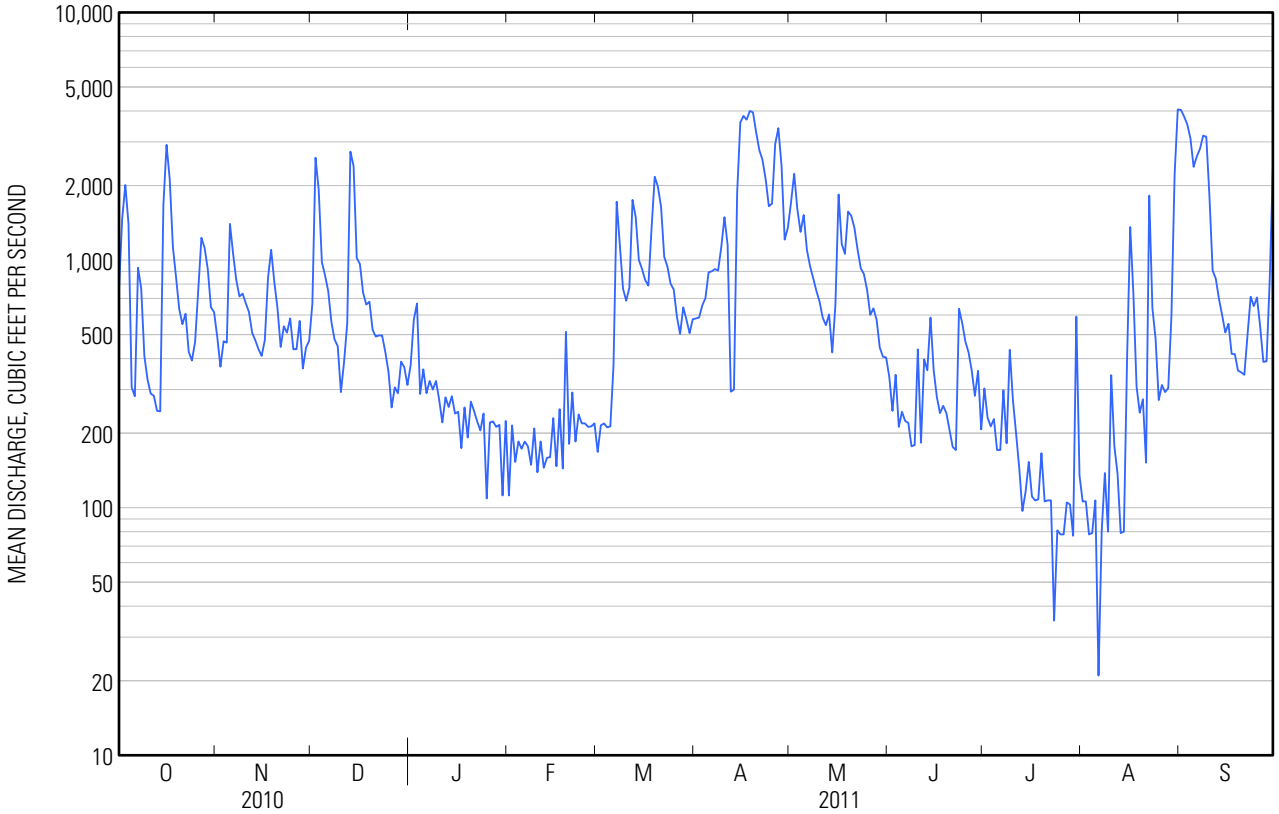
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1931 - 2011	
Annual total	190,177		272,619			
Annual mean	521		747		419	
Highest annual mean					747	2011
Lowest annual mean					173	1965
Highest daily mean	3,090	Apr 3	4,060	Aug 31	13,300	Mar 18, 1936
Lowest daily mean	27	Aug 7[a]	21	Aug 6	3.8	Jul 3, 1933
Annual seven-day minimum	35	Sep 23	80	Jul 23	14	Sep 25, 1967
Maximum peak flow			4,430	Aug 31	[b]24,400	Sep 21, 1938
Maximum peak stage			7.71	Aug 31	17.68	Sep 21, 1938
10 percent exceeds	1,150		1,830		962	
50 percent exceeds	344		449		218	
90 percent exceeds	84		148		57	

[a] Also Aug 8, 15, 21, 22, 29, and Sep 3-6, 11, 12, and 18, 2010.
[b] From rating curve extended above 6,200 ft³/s as explained above.