Water-Data Report 2011

01161000 ASHUELOT RIVER AT HINSDALE, NH

Lower Connecticut Basin
Middle Connecticut Subbasin

LOCATION.--Lat 42°47′09″, long 72°29′12″ referenced to North American Datum of 1927, Cheshire County, NH, Hydrologic Unit 01080201, on left bank, 40 ft upstream from State Highway 63S bridge in Hinsdale, 200 ft south of State Highway 63S and 119W intersection in Hinsdale, 0.2 mi downstream from dam, and 1.3 mi upstream from mouth.

DRAINAGE AREA.--420 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records: March 1907 to December 1911, July 1914 to current year.

REVISED RECORDS.--WSP 661: Drainage area. WSP 781: 1907-10, 1914-34. WSP 1301: 1915(M), 1917-19(M), 1921-33(M). WSP 1701: 1920.

GAGE.--Water-stage recorder. Datum of gage is 201.32 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to September 29, 1933, nonrecording gage on State Highway 63S bridge at same datum.

COOPERATION.--New Hampshire Department of Environmental Services.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Surry Mountain Lake 33 mi upstream since 1942, and by Otter Brook Lake 29 mi upstream on Otter Brook since 1958. Regulation by small hydro plants upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,600 ft^3/s, March 19, 1936, by computation of peak flow over dam; maximum gage height, 20.2 ft, March 19, 1936, from floodmarks (backwater from the Connecticut River); minimum daily discharge, 12 ft^3/s, September 15, 1929. Maximum discharge since at least 1859, that of March 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,050 ft^3/s, Mar. 8, gage height, 7.60 ft; minimum daily discharge, 107 ft^3/s, Aug..

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 01161000, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/01161000.2011.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	396	747	685	476	e291	e489	1,040	1,150	438	758	126	1,790
2	960	619	1,310	491	e297	e517	1,160	1,090	516	625	163	1,640
3	887	520	1,590	547	e294	e552	1,180	954	435	509	154	1,500
4	737	508	1,390	e485	e285	e525	1,180	833	353	454	136	1,390
5	475	904	1,180	e490	e288	e507	1,410	846	300	426	122	1,620
6	356	1,250	998	e470	e310	e656	1,880	825	271	393	111	4,070
7	411	1,190	878	e475	e338	e2,830	2,070	843	247	372	115	4,550
8	412	1,150	e762	e423	e344	e4,790	1,890	852	227	341	164	4,290
9	358	1,380	e580	e393	e337	4,170	1,730	797	246	311	167	3,560
10	294	1,390	e536	e398	e320	3,250	1,710	689	356	276	160	2,970
11	244	1,240	e498	e384	e314	3,080	1,760	596	492	245	147	2,450
12	210	1,090	e528	e371	e312	3,650	1,930	545	863	220	131	2,100
13	180	922	e1,650	e416	e311	3,880	2,120	498	870	199	118	1,960
14	155	796	e2,150	e581	e343	3,640	2,260	460	737	198	107	1,860
15	476	712	e1,840	e650	e352	3,310	2,160	544	644	193	156	1,800
16	1,470	634	e1,500	e585	e383	3,190	1,990	1,370	604	179	541	1,660
17	1,580	794	e1,330	e607	e366	3,450	2,200	1,610	536	166	773	1,340
18	1,380	1,200	e960	e572	e408	3,690	2,470	1,470	540	155	622	1,190
19	1,170	1,220	e850	e561	e448	4,150	2,170	1,420	493	155	465	1,080
20	1,060	1,120	e774	e527	e473	3,930	1,820	1,370	390	153	374	955
21	997	984	e690	e433	e491	3,430	1,530	1,200	322	142	308	703
22	914	845	e620	e420	e465	3,080	1,290	1,200	332	128	352	588
23	716	760	e623	e415	e468	2,830	1,250	1,130	1,030	119	387	759
24	527	692	e584	e395	e462	2,590	1,560	1,090	1,680	112	318	1,260
25	430	620	e543	e380	e455	2,340	1,580	1,050	1,910	115	260	1,430
26	407	634	e530	e360	e450	2,070	1,420	981	1,810	156	248	1,140
27	522	744	e412	e347	e447	1,860	1,340	841	1,530	165	327	919
28	979	728	e540	e306	e452	1,550	1,380	726	1,240	150	1,410	774
29	1,130	632	e610	e299	---	1,180	1,420	629	1,090	134	2,790	986
30	1,010	599	552	e289	---	1,020	1,300	554	931	139	2,230	2,260
31	878	---	507	e287	---	979	---	486	---	136	1,880	---
Total	21,721	26,624	28,200	13,833	10,504	77,185	50,200	28,649	21,433	7,824	15,362	54,594
Mean	701	887	910	446	375	2,490	1,673	924	714	252	496	1,820
Max	1,580	1,390	2,150	650	491	4,790	2,470	1,610	1,910	758	2,790	4,550
Min	155	508	412	287	285	489	1,040	460	227	112	107	588

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	390	628	696	630	613	1,256	1,879	986	531	293	242	263
Max	3,088	2,248	2,209	2,139	2,016	4,392	3,723	2,175	2,075	1,214	1,098	2,394
(WY)	(2006)	(1928)	(1997)	(2006)	(1984)	(1936)	(1960)	(1945)	(1984)	(2009)	(1990)	(1938)
Min	49.2	55.4	113	84.0	113	273	597	335	96.9	60.8	50.5	37.7
(WY)	(1965)	(1965)	(1915)	(1981)	(1980)	(1940)	(1985)	(1985)	(1964)	(1965)	(1966)	(2010)

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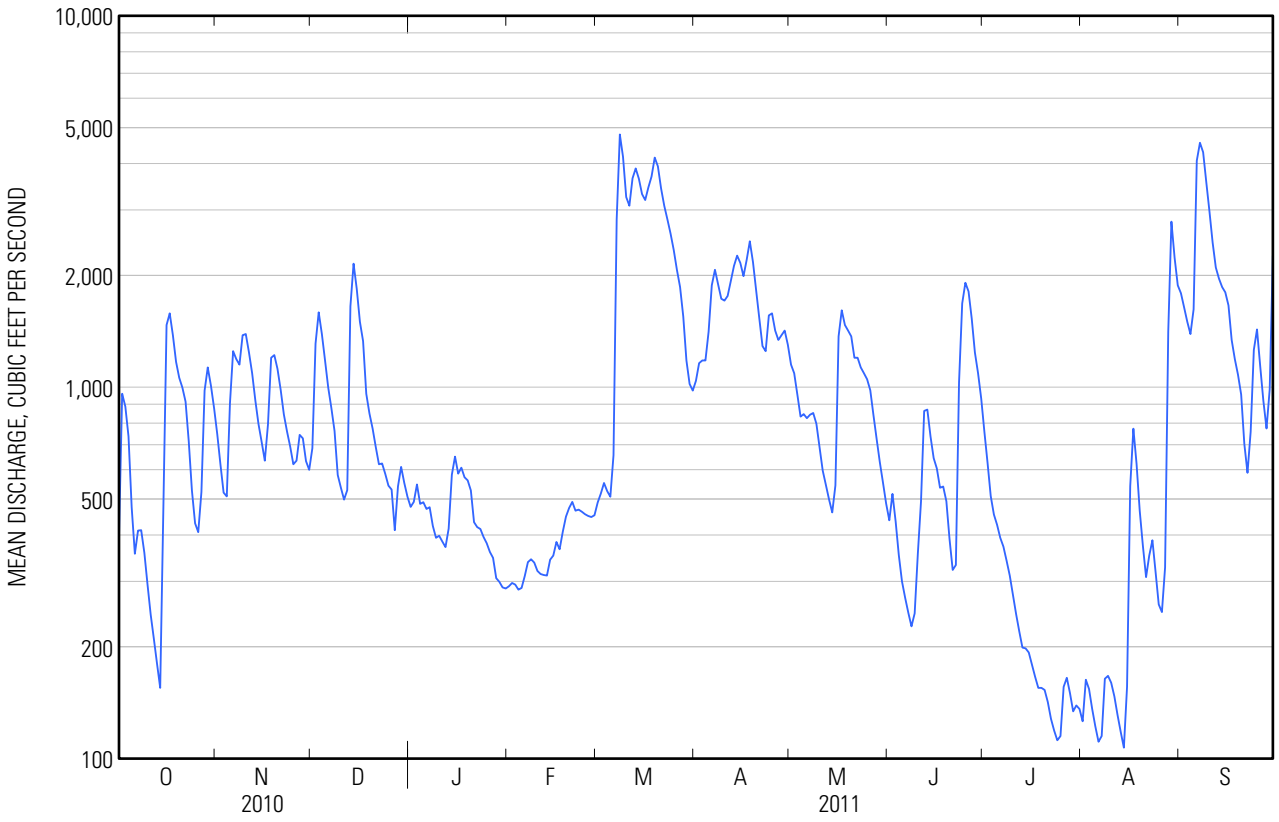
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1907 - 2011	
Annual total	276,099		356,129			
Annual mean	756		976		700	
Highest annual mean					1,287	2006
Lowest annual mean					216	1965
Highest daily mean	4,430	Mar 31	[e]4,790	Mar 8	16,500	Mar 19, 1936
Lowest daily mean	29	Sep 24	107	Aug 14	12	Sep 15, 1929
Annual seven-day minimum	30	Sep 21	132	Jul 19	30	Sep 21, 2010
Maximum peak flow			5,050	Mar 8	[a]16,600	Mar 19, 1936
Maximum peak stage			[b]7.95	Mar 8	[c]20.20	Mar 19, 1936
10 percent exceeds	2,060		2,080		1,750	
50 percent exceeds	495		634		392	
90 percent exceeds	52		206		99	

[a] By computation of peak flow over dam as explained above.
[b] Ice jam. From peak indicator clip.
[c] From flood marks as explained above.