Water-Data Report 2012

01157000 ASHUELOT RIVER NEAR GILSUM, NH

Lower Connecticut Basin
Middle Connecticut Subbasin

LOCATION.--Lat 43°02′21″, long 72°16′14″ referenced to North American Datum of 1927, Cheshire County, NH, Hydrologic Unit 01080201, on right bank, 50 ft downstream from White Brook, 60 ft upstream from stone-arch bridge just off Keene-Newport Road, 0.7 miles downstream from Gilsum and at mile 43.4.

DRAINAGE AREA.--71.1 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records: August 1922 to September 1980, July 2009 to current year.

Water-quality records: Water year 1955.

REVISED RECORDS.--WSP 661: Drainage area. WSP 781: 1934(M). WSP 1231: 1923-27(M), 1928, 1929-30(M), 1931, 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 772.86 ft above National Geodetic Vertical Datum of 1929, (levels by Corps of Engineers). Prior to October 1, 1964, datum was 1.00 ft higher.

COOPERATION.--New Hampshire Department of Environmental Services.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by reservoir upstream. Prior to 1938, diurnal fluctuation caused by powerplant upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,220 ft^3/s, Sept. 21, 1938, gage height, 12.24 ft in gage well, present datum, from rating curve extended above 2,000 ft^3/s on basis of float measurements at gage heights 11.66 ft and 11.72 ft and slope-area measurement at gage height 12.24 ft, all at present datum; maximum gage height, 13.80 ft, present datum, Mar. 19, 1936; minimum discharge, about 1 ft^3/s, Oct. 6, 1922, July 10, 1923, and Nov. 14, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1859, 10,200 ft^3/s, Oct. 9, 2005, gage height, 17.98 ft, from floodmarks, on basis of slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 8	0915	1,400	6.73
May 29	1915	*5,060	*11.26

Minimum discharge, 1.5 ft^3/s, Sept. 1, 2, gage height, 1.83 ft.

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 01157000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/01157000.2012.pdf

01157000 ASHUELOT RIVER NEAR GILSUM, NH—Continued

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

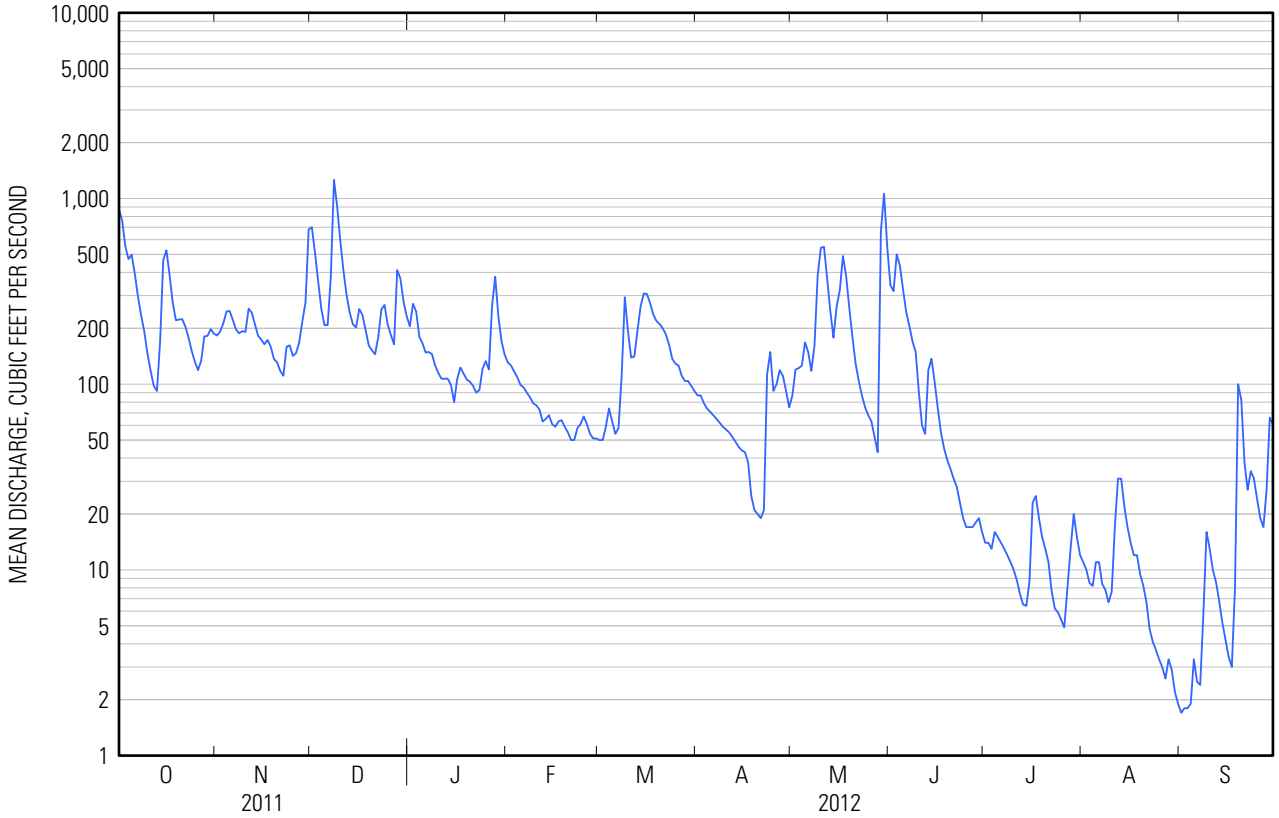
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	875	183	700	205	131	e50	87	87	342	14	11	1.7
2	760	192	510	271	126	e50	87	120	317	14	10	1.8
3	552	213	358	246	e117	59	79	122	500	13	8.5	1.8
4	472	246	254	180	e109	74	74	126	435	16	8.2	1.9
5	498	248	208	e166	e99	63	71	168	324	15	11	3.3
6	393	222	208	e148	e96	e54	68	149	245	14	11	2.5
7	296	197	377	e149	90	e58	65	118	206	13	8.4	2.4
8	235	188	1,260	e145	e85	e111	62	162	170	12	7.8	5.8
9	192	193	905	e126	e79	294	59	385	149	11	6.7	16
10	146	191	592	115	e77	193	57	543	91	10	7.6	13
11	118	255	408	107	73	139	55	549	60	8.8	17	10
12	98	243	301	107	e63	141	52	372	54	7.4	31	8.6
13	92	210	242	107	e65	194	49	247	119	6.5	31	6.8
14	169	182	210	99	e68	263	46	178	137	6.4	22	5.2
15	465	174	202	80	61	308	44	262	103	8.7	17	4.2
16	526	164	254	107	59	306	43	321	74	23	14	3.4
17	387	173	236	e123	63	273	38	490	55	25	12	3.0
18	275	159	196	e114	64	237	25	382	45	19	12	8.0
19	221	137	e162	e106	59	219	21	258	39	15	9.5	100
20	223	131	e152	e103	55	211	20	179	35	13	8.2	82
21	224	118	145	e98	e50	200	19	129	31	11	6.7	38
22	204	111	179	e90	50	185	21	104	28	7.7	4.8	27
23	178	159	253	e93	58	163	113	87	23	6.2	4.1	34
24	151	162	267	e121	e61	137	149	75	19	5.9	3.7	31
25	132	142	e209	e133	e67	129	92	68	17	5.4	3.3	24
26	119	147	184	e120	61	126	100	63	17	4.9	3.0	19
27	134	168	e164	e263	54	111	119	52	17	8.0	2.6	17
28	181	218	411	e379	51	104	111	43	18	13	3.3	27
29	182	276	371	232	51	104	92	668	19	20	2.9	66
30	198	682	e279	170	---	98	75	1,060	16	15	2.2	61
31	187	---	232	144	---	92	---	550	---	12	1.9	---
Total	8,883	6,084	10,429	4,647	2,142	4,746	1,993	8,117	3,705	373.9	302.4	625.4
Mean	287	203	336	150	73.9	153	66.4	262	124	12.1	9.75	20.8
Max	875	682	1,260	379	131	308	149	1,060	500	25	31	100
Min	92	111	145	80	50	50	19	43	16	4.9	1.9	1.7
Cfsm	4.03	2.85	4.73	2.11	1.04	2.15	0.93	3.68	1.74	0.17	0.14	0.29
In.	4.65	3.18	5.46	2.43	1.12	2.48	1.04	4.25	1.94	0.20	0.16	0.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	69.4	122	125	107	86.8	222	412	192	85.0	40.1	33.7	44.2
Max	358	425	424	247	253	803	833	464	251	208	188	448
(WY)	(1978)	(1928)	(1974)	(1949)	(1925)	(1936)	(1969)	(1940)	(1945)	(1935)	(2011)	(1938)
Min	3.70	6.70	15.7	14.3	11.8	29.2	66.4	50.6	9.64	4.39	3.17	2.73
(WY)	(1965)	(1965)	(1930)	(1931)	(1931)	(1940)	(2012)	(2010)	(1964)	(1965)	(1965)	(1964)

01157000 ASHUELOT RIVER NEAR GILSUM, NH—Continued

SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1922 - 2012	
Annual total	77,685		52,047.7			
Annual mean	213		142		128	
Highest annual mean					191	1960
Lowest annual mean					39.8	1965
Highest daily mean	1,910	Aug 29	1,260	Dec 8	4,140	Sep 21, 1938
Lowest daily mean	11	Aug 6	1.7	Sep 1	1.3	Sep 6, 2010 [a]
Annual seven-day minimum	14	Jul 23	2.0	Aug 29	1.4	Sep 9, 2010
Maximum peak flow			5,060	May 29	[b] 5,220	Sep 21, 1938
Maximum peak stage			[c] 11.26	May 29	13.80	Mar 19, 1936
Instantaneous low flow			1.5	Sep 1 [d]	[e] 1.0	Oct 6, 1922 [f]
Annual runoff (cfsm)	2.99		2.00		1.80	
Annual runoff (inches)	40.65		27.23		24.44	
10 percent exceeds	511		311		320	
50 percent exceeds	142		100		58	
90 percent exceeds	24		8.0		11	

[a] Also September 7, 11, and 15, 2010.
[b] From rating curve extended above 2,000 ft³/s as explained above.
[c] From peak indicator clip.
[d] Also September 2.
[e] About.
[f] Also July 10, 1923 and November 14, 1952.