Water-Data Report 2011

01095505 NASHUA RIVER, 0.4 MILES UPSTREAM FROM RT 110 AT CLINTON, MA

MERRIMACK RIVER BASIN
NASHUA RIVER SUBBASIN

LOCATION.--Lat 42°25′45″, long 71°40′49″ referenced to North American Datum of 1983, Worcester County, MA, Hydrologic Unit 01070004, on right bank at private bridge, about 450 ft upstream from Clinton Waste Water Treatment Plant, 0.4 mi upstream from Rt 110, and 3.2 mi downstream from Wachusett Reservoir Dam at Clinton.

DRAINAGE AREA.--125 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 2007 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is 230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

COOPERATION.--Massachusetts Department of Conservation and Recreation, Division of Water-Supply Protection.

REMARKS.--Records fair except those for discharges below 10 cfs, and those for estimated daily discharge, which are poor. Flows are regulated by controlled releases from Wachusett Reservoir.

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 01095505, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/01095505.2011.pdf

01095505 NASHUA RIVER, 0.4 MILES UPSTREAM FROM RT 110 AT CLINTON, MA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

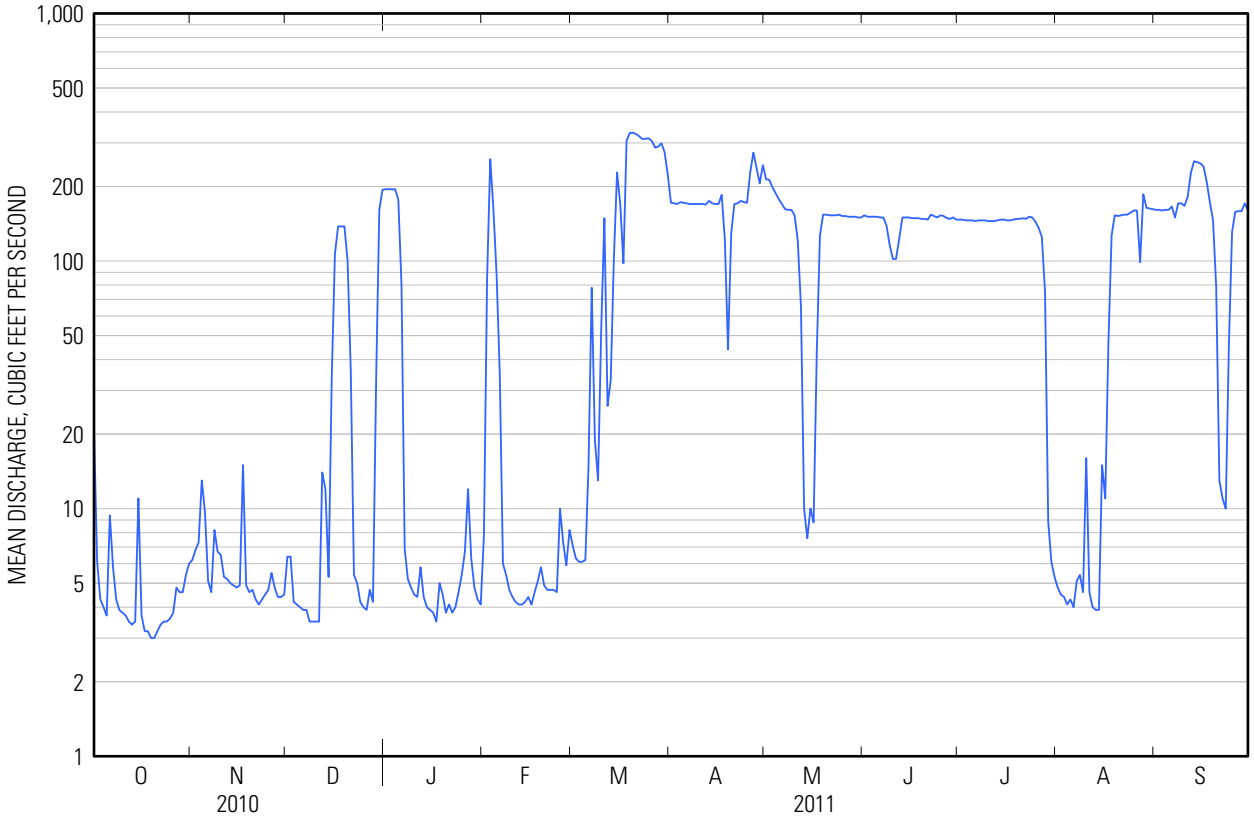
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	21	6.2	6.4	195	7.8	7.1	172	214	153	147	4.8	161
2	6.1	6.8	6.4	195	85	6.3	171	213	151	147	4.5	161
3	4.3	7.3	4.2	195	258	6.1	170	199	151	146	4.4	160
4	4.0	13	4.1	195	161	6.1	173	188	151	146	4.1	161
5	3.7	9.7	4.0	177	88	6.2	172	178	151	146	4.3	161
6	9.4	5.1	3.9	80	35	15	171	170	150	145	4.0	166
7	5.8	4.6	3.9	6.9	6.0	78	170	162	150	146	5.1	150
8	4.3	8.2	3.5	5.2	5.4	19	170	161	139	146	5.4	171
9	3.9	6.7	3.5	4.8	4.7	13	170	161	116	146	4.6	171
10	3.8	6.5	3.5	4.5	4.4	53	170	153	102	145	16	167
11	3.7	5.3	3.5	4.4	4.2	149	170	121	102	145	4.6	182
12	3.5	5.2	14	5.8	4.1	26	169	66	123	145	4.0	227
13	3.4	5.0	12	4.4	4.1	33	175	10	150	146	3.9	253
14	3.5	4.9	5.3	4.0	4.2	103	171	7.6	150	147	3.9	251
15	11	4.8	34	3.9	4.4	228	170	10	150	147	15	248
16	3.7	4.9	107	3.8	4.1	170	170	8.8	149	146	11	241
17	3.2	15	138	3.5	4.6	98	185	43	149	146	47	209
18	3.2	4.9	138	5.0	5.1	306	122	127	149	147	127	173
19	3.0	4.6	138	4.5	5.8	329	44	154	148	148	153	146
20	3.0	4.7	100	3.8	4.9	330	129	154	148	148	152	78
21	3.2	4.3	36	4.1	4.7	326	170	153	147	149	153	13
22	3.4	4.1	5.4	e3.8	4.7	319	171	153	154	148	154	11
23	3.5	4.3	5.0	e4.0	4.7	311	175	153	152	151	154	10
24	3.5	4.5	4.2	e4.6	4.6	312	173	154	150	150	157	46
25	3.6	4.7	4.0	e5.4	10	313	172	152	153	144	160	131
26	3.8	5.5	3.9	6.7	7.3	305	228	152	152	136	160	158
27	4.8	4.8	4.7	12	5.9	287	274	151	149	125	99	159
28	4.6	4.4	4.2	6.3	8.2	290	238	151	148	75	186	159
29	4.6	4.4	33	4.8	---	299	206	151	150	8.9	164	171
30	5.4	4.5	161	4.3	---	275	244	150	147	6.1	163	160
31	6.0	---	194	4.1	---	223	---	150	---	5.3	162	---
Total	153.9	178.9	1,188.6	1,161.6	750.9	5,241.8	5,265	4,170.4	4,334	4,023.3	2,290.6	4,655
Mean	4.96	5.96	38.3	37.5	26.8	169	176	135	144	130	73.9	155
Max	21	15	194	195	258	330	274	214	154	151	186	253
Min	3.0	4.1	3.5	3.5	4.1	6.1	44	7.6	102	5.3	3.9	10
Ac-ft	305	355	2,360	2,300	1,490	10,400	10,440	8,270	8,600	7,980	4,540	9,230
Cfsm	0.04	0.05	0.31	0.30	0.21	1.35	1.40	1.08	1.16	1.04	0.59	1.24
In.	0.05	0.05	0.35	0.35	0.22	1.56	1.57	1.24	1.29	1.20	0.68	1.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2007 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	44.3	31.6	31.6	53.1	80.0	259	207	81.7	132	149	121	85.6
Max	161	84.8	74.5	143	144	638	503	135	196	335	207	165
(WY)	(2010)	(2010)	(2009)	(2009)	(2008)	(2010)	(2010)	(2011)	(2010)	(2009)	(2009)	(2009)
Min	4.63	5.96	6.43	4.93	16.5	7.55	7.67	36.0	6.05	90.4	66.3	19.9
(WY)	(2008)	(2011)	(2008)	(2010)	(2010)	(2009)	(2009)	(2008)	(2008)	(2007)	(2010)	(2007)

01095505 NASHUA RIVER, 0.4 MILES UPSTREAM FROM RT 110 AT CLINTON, MA—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 2007 - 2011	
Annual total	50,179.0		33,414.0			
Annual mean	137		91.5		109	
Highest annual mean					155	2010
Lowest annual mean					75.4	2008
Highest daily mean	2,910	Mar 16	330	Mar 20	2,910	Mar 16, 2010
Lowest daily mean	3.0	Oct 19	3.0	Oct 19	3.0	Oct 19, 2010
Annual seven-day minimum	3.2	Oct 17	3.2	Oct 17	3.2	Oct 17, 2010
Maximum peak flow			338	Mar 19	3,080	Mar 16, 2010
Maximum peak stage			4.10	Mar 19	10.37	Mar 16, 2010
Instantaneous low flow			2.7	Oct 19[a]	2.1	Sep 21, 2010
Annual runoff (ac-ft)	99,530		66,280		79,140	
Annual runoff (cfsm)	1.10		0.732		0.874	
Annual runoff (inches)	14.93		9.94		11.87	
10 percent exceeds	395		187		216	
50 percent exceeds	8.3		98		68	
90 percent exceeds	3.7		4.0		4.6	

[a] Also occurred Oct. 20, 21, 2010.