Water-Data Report 2011

01094400 NORTH NASHUA RIVER AT FITCHBURG, MA

MERRIMACK RIVER BASIN
NASHUA RIVER SUBBASIN

LOCATION.--Lat 42°34′34″, long 71°47′19″ referenced to North American Datum of 1927, Worcester County, MA, Hydrologic Unit 01070004, on right bank 400 ft upstream from Fifth Street Bridge at Fitchburg and 1.8 mi upstream from Baker Brook.

DRAINAGE AREA.--64.2 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORDS.--WDR MA-RI-84-1; WDR MA-RI-03-1; Drainage area: WDR US-2007; Daily discharges and historical statistics.

GAGE.--Data-collection platform with satellite telemetry. Elevation of gage is 394.13 ft above National Geodetic Vertical Datum of 1929.

COOPERATION.--Massachusetts Department of Conservation and Recreation, Office of Water Resources; and Massachusetts Department of Environmental Protection, Office of Watershed Management.

REMARKS.--Records fair except those for discharges greater than 1,000 cfs and those for estimated daily discharges, which are poor. Flow regulated by mills and reservoirs upstream. Flow affected by diversions for municipal use.

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 01094400, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/01094400.2011.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	174	103	178	54	43	195	178	131	45	65	19	189
2	100	93	403	85	e75	140	195	118	53	59	17	131
3	43	49	239	92	e75	113	211	110	42	53	16	102
4	28	93	181	e74	e58	96	228	119	37	48	18	79
5	22	226	149	e63	59	94	281	132	35	46	e21	67
6	120	170	132	e57	97	469	249	115	34	38	e20	110
7	135	123	120	e53	73	2,510	209	103	31	33	e22	459
8	74	162	e107	47	68	1,180	183	109	30	29	e104	1,030
9	54	186	99	46	57	680	166	101	47	33	39	669
10	38	170	e97	e47	50	477	152	89	59	27	110	377
11	54	136	e97	e43	43	928	146	71	54	24	52	248
12	41	115	300	e47	47	866	135	63	81	23	33	187
13	31	106	702	e46	44	669	186	58	67	22	26	136
14	25	98	427	e42	49	539	186	56	57	27	24	117
15	247	90	e294	e53	57	428	144	145	47	23	105	105
16	216	110	e214	e48	46	542	129	303	40	19	167	94
17	146	345	e151	39	53	666	679	262	44	16	96	81
18	105	258	e107	54	107	703	436	245	47	19	70	72
19	81	196	e88	106	167	703	303	246	35	16	53	62
20	66	167	77	73	111	531	270	240	27	14	44	58
21	57	145	62	67	93	436	223	221	24	15	41	59
22	51	129	58	e56	e86	390	180	190	99	13	46	100
23	43	106	60	e46	e74	340	220	179	327	14	35	229
24	41	89	57	e38	e66	285	251	182	241	14	31	409
25	40	72	54	66	142	248	208	125	213	24	87	249
26	53	99	e49	55	169	219	187	99	269	27	142	173
27	70	96	e54	e58	121	195	182	78	174	22	150	127
28	88	81	e57	57	159	177	178	70	126	19	1,110	102
29	115	73	e57	51	---	163	184	65	110	17	925	377
30	113	68	e54	45	---	155	152	55	81	20	429	359
31	109	---	51	38	---	151	---	47	---	19	266	---
Total	2,580	3,954	4,775	1,746	2,289	15,288	6,631	4,127	2,576	838	4,318	6,557
Mean	83.2	132	154	56.3	81.8	493	221	133	85.9	27.0	139	219
Max	247	345	702	106	169	2,510	679	303	327	65	1,110	1,030
Min	22	49	49	38	43	94	129	47	24	13	16	58
Cfsm	1.30	2.05	2.40	0.88	1.27	7.68	3.44	2.07	1.34	0.42	2.17	3.40
In.	1.49	2.29	2.77	1.01	1.33	8.86	3.84	2.39	1.49	0.49	2.50	3.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	83.7	117	146	134	139	245	249	145	103	52.1	47.4	47.2
Max	376	258	347	306	363	727	600	277	368	216	139	219
(WY)	(2006)	(2007)	(1997)	(2006)	(2008)	(2010)	(1987)	(1984)	(1982)	(2009)	(2011)	(2011)
Min	15.1	14.2	35.5	24.6	34.6	84.1	84.1	53.6	16.0	12.9	8.63	8.33
(WY)	(2002)	(2002)	(2002)	(1981)	(1980)	(1989)	(1985)	(1999)	(1999)	(1999)	(1999)	(1995)

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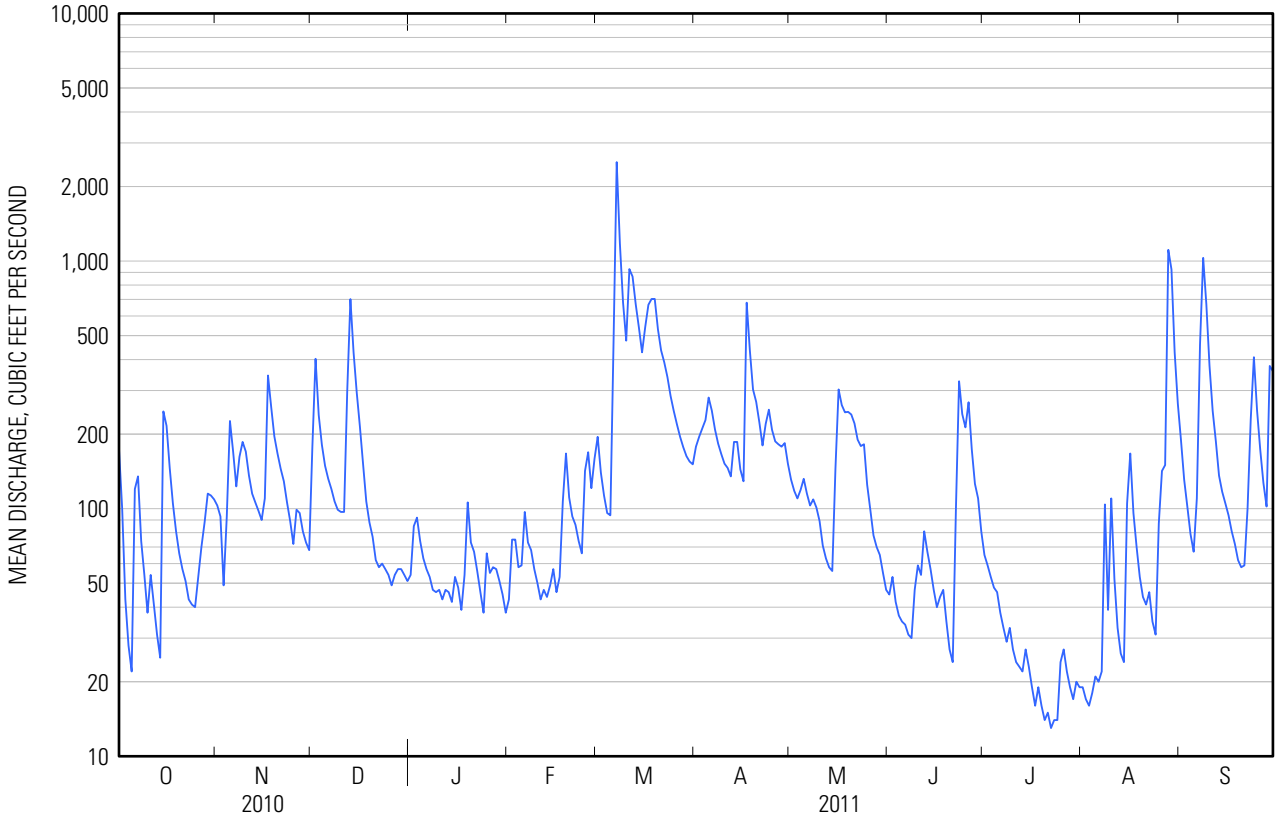
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1973 - 2011	
Annual total	56,852.1		55,679			
Annual mean	156		153		126	
Highest annual mean					199	2006
Lowest annual mean					54.7	2002
Highest daily mean	3,070	Mar 15	2,510	Mar 7	3,070	Mar 15, 2010
Lowest daily mean	3.6	Sep 12	13	Jul 22	2.5	Sep 3, 2001
Annual seven-day minimum	5.0	Sep 21	15	Jul 18	4.3	Aug 31, 1995
Maximum peak flow			3,290	Mar 7	[a]3,930	Apr 16, 2007
Maximum peak stage			8.02	Mar 7	[b]9.25	Apr 5, 1987
Instantaneous low flow			4.7	Jul 22	1.5	Sep 11, 1995
Annual runoff (cfsm)	2.43		2.38		1.96	
Annual runoff (inches)	32.94		32.26		26.57	
10 percent exceeds	346		303		265	
50 percent exceeds	71		94		80	
90 percent exceeds	11		29		21	

[a] Peak stage associated with peak flow, 8.59 ft.
[b] Backwater from landslide.