Water-Data Report 2008

01096503 NISSITISSIT RIVER AT PEPPERELL, MA

MERRIMACK RIVER BASIN
NASHUA RIVER SUBBASIN

LOCATION.--Lat 42°40′19″, long 71°34′39″ referenced to North American Datum of 1927, Middlesex County, MA, Hydrologic Unit 01070004, on left downstream wingwall of Mill Street bridge and 0.5 mi upstream from mouth at Nashua River at Pepperell.

DRAINAGE AREA.--59.6 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 2006 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.

COOPERATION.--Massachusetts Executive Office of Energy and Environmental Affairs.

REMARKS.--Records good except those for estimated daily discharge, which are fair.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4.1	20	34	e65	71	137	248	298	30	40	80	26
2	4.0	18	32	e59	178	134	451	199	32	37	66	23
3	3.9	17	32	e58	213	127	505	170	30	48	63	22
4	4.4	24	e34	e60	171	151	395	171	28	62	66	21
5	4.5	22	e27	e60	171	458	484	174	27	59	58	19
6	4.0	30	e24	e60	287	673	464	153	34	49	72	24
7	3.8	43	e23	52	586	458	369	131	36	40	126	841
8	5.8	39	26	52	531	507	320	113	34	33	134	881
9	9.4	33	25	83	316	1,100	290	102	29	27	125	302
10	9.4	29	e26	148	239	807	264	97	25	26	110	229
11	9.2	26	e25	194	201	449	250	90	22	23	139	174
12	26	24	27	267	204	347	254	83	19	20	156	126
13	22	24	30	231	221	298	276	81	16	18	223	102
14	21	25	42	181	763	260	232	71	17	16	191	106
15	18	25	e36	153	804	289	187	69	18	18	129	138
16	15	38	54	e132	439	356	160	64	21	17	125	121
17	12	40	75	e118	300	319	143	79	27	15	106	96
18	11	35	65	e113	323	278	128	78	28	14	91	83
19	13	29	52	e107	517	267	117	69	25	11	77	66
20	20	27	50	e103	426	439	108	66	23	14	62	57
21	22	29	47	e96	287	531	100	57	22	40	55	53
22	19	29	43	e91	234	381	92	52	19	74	48	52
23	17	28	40	82	215	301	88	50	28	74	47	49
24	22	27	53	e76	197	262	92	46	105	173	39	44
25	14	23	58	e72	172	240	80	43	109	485	36	43
26	13	23	e56	e67	157	228	78	42	71	306	37	53
27	20	40	52	e62	190	248	71	38	54	185	33	163
28	32	49	51	e62	176	295	88	37	41	336	31	248
29	30	45	57	e61	157	323	310	36	37	313	29	216
30	27	39	66	62	---	261	476	32	42	193	28	151
31	24	---	69	70	---	231	---	29	---	116	29	---
Total	460.5	900	1,331	3,097	8,746	11,155	7,120	2,820	1,049	2,882	2,611	4,529
Mean	14.9	30.0	42.9	99.9	302	360	237	91.0	35.0	93.0	84.2	151
Max	32	49	75	267	804	1,100	505	298	109	485	223	881
Min	3.8	17	23	52	71	127	71	29	16	11	28	19
Cfsm	0.25	0.50	0.72	1.68	5.06	6.04	3.98	1.53	0.59	1.56	1.41	2.53
In.	0.29	0.56	0.83	1.93	5.46	6.96	4.44	1.76	0.65	1.80	1.63	2.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2006 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	34.7	104	68.2	109	174	263	343	179	108	59.8	37.7	59.2
Max	54.6	179	93.4	119	302	360	450	336	240	93.0	84.2	151
(WY)	(2007)	(2007)	(2007)	(2007)	(2008)	(2008)	(2007)	(2006)	(2006)	(2008)	(2008)	(2008)
Min	14.9	30.0	42.9	99.9	41.8	167	237	91.0	35.0	26.0	11.1	10.1
(WY)	(2008)	(2008)	(2008)	(2008)	(2007)	(2007)	(2008)	(2008)	(2008)	(2007)	(2007)	(2007)

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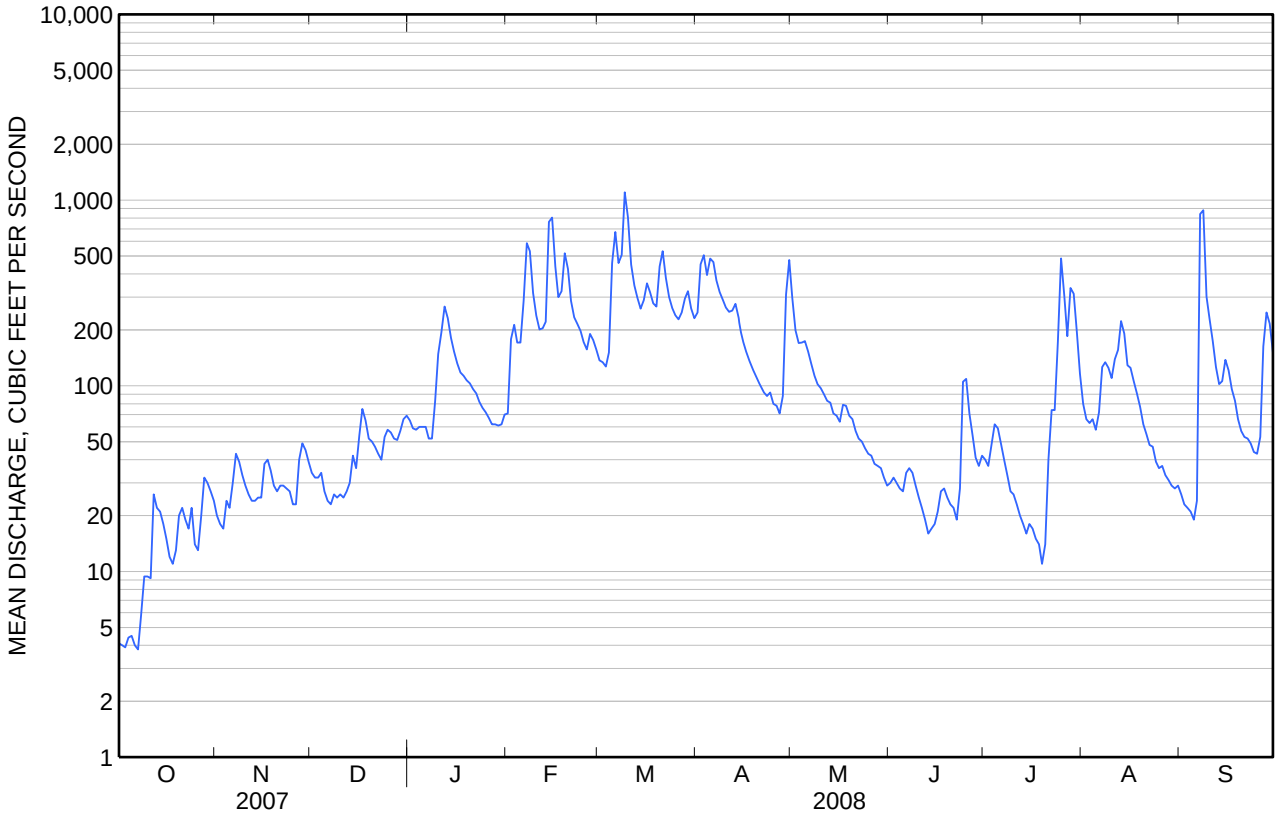
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 2006 - 2008	
Annual total	32,602.6		46,700.5			
Annual mean	89.3		128		118	
Highest annual mean					128	2008
Lowest annual mean					109	2007
Highest daily mean	2,840	Apr 17	1,100	Mar 9	2,840	Apr 17, 2007
Lowest daily mean	3.4	Sep 6	3.8	Oct 7	3.4	Sep 6, 2007
Annual seven-day minimum	4.1	Oct 1	4.1	Oct 1	4.1	Oct 1, 2007
Maximum peak flow			1,550	Sep 7	3,700	Apr 16, 2007
Maximum peak stage			5.48	Sep 7	8.29	Apr 16, 2007
Instantaneous low flow			3.5	Oct 7	2.9	Aug 18, 2006
Annual runoff (cfsm)	1.50		2.14		1.99	
Annual runoff (inches)	20.35		29.15		27.00	
10 percent exceeds	187		311		267	
50 percent exceeds	39		62		63	
90 percent exceeds	8.3		20		14