

**APPENDIX A
SUPPLEMENTAL DATA**

Appendix A-1 Compilation of Streamflow Measurements Collected During Previous Studies

Location	Town	River Mile	Flow Rate (cfs)															
			8/29/69	10/21/69	7/24/73	8/10/73	8/14/73	8/16/73	8/17/73	8/20/73	8/21/73	9/11/73	9/17/73	9/21/73	6/4/79	6/5/79	6/6/79	6/7/79
Outfall of Mill Road	Westborough	31.8												24.7				
Maynard Street	Westborough	32.1		0.1		40.3				7.9		1.5		29.1	10.0	9.3	8.2	7.6
Route 9	Westborough	31.3	0.7	3.5		40.5	29.0							21.8				
Route 135	Westborough	29.7		8.0		54.3								43.9				
Brigham Stret	Northborough	28.3												31.5				
Route 20	Northborough	27.1		13.0		49.8						11.7		23.6				
Hudson Street	Northborough	26.1		15.0		58.7								23.7				
Boundary Street	Marlborough	24.7	5.9					93.9		38.5				33.9		74.0	76.0	63.0
Robin Hill Road	Marlborough	24.2						94.9						29.3	110.0			
Bigelow Road	Berlin	22.2										22.2		35.6				
Route 495	Marlborough	20.8												59.3				
Chapin Road	Hudson	20.0		27.0										64.3				
Washington Street	Hudson	18.7				87.7								86.0				
Forest Avenue	Hudson	17.9		30.0												144.0	152.0	115.0
Cox Street	Hudson	16.6	4.0	34.0	78.3			111.9					9.1	54.3				
Gleasondale	Stow	14.6		40.0		90.5		147.0					24.1	73.7				181.0
Boon Road	Stow	12.0		45.0									43.3	114.5				
Route 62/117	Maynard	9.2		52.0				167.0	167.1									
Route 27/USGS	Maynard	7.9	15.0	54.0	132.0	111.0	104.0	149.0	160.0	104.0	93.0	36.4	25.5	129.5	193.0	186.0	179.0	162.0
Route 62	Acton	6.5									125.8							
Route 62	Concord	6.2											28.8	184.0			250.0	
Route 62	Concord	4.7								193.0				135.0				
Main Street	Concord	3.3		64.0										182.0				
Route 2A	Concord	2.5				112.0		218.0				81.0		228.0		302.0	292.0	326.0

Appendix A-1 Compilation of Streamflow Measurements Collected During Previous Studies (continued)

Tributary Name	River Mile	MADEP Dye Studies			Water Resources Data for Mass., 1990				Water Resources Data for Mass., 1991				Water Resources Data for Mass., 1992		
		7/24/1973 Flow (cfs)	8/14/1973 Flow (cfs)	9/21/1973 Flow (cfs)	7/11/1990 Flow (cfs)	8/3/1990 Flow (cfs)	8/30/1990 Flow (cfs)	9/7/1990 Flow (cfs)	7/10/1991 Flow (cfs)	7/11/1991 Flow (cfs)	7/18/1991 Flow (cfs)	9/12/1991 Flow (cfs)	7/28/1992 Flow (cfs)	8/24/1992 Flow (cfs)	9/17/1992 Flow (cfs)
Hop Brook	30.2	-----	4.0	3.4	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cold Horbor Brook	26.8	-----	9.9	8.7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Stirrup Brook	25.2	-----	3.7	3.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Milham Reservoir	24.3	-----	4.0	2.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
North Brook	23.0	-----	9.8	4.9	1.64	0.83	4.29	1.86	-----	2.55	0.64	1.96	7.47	11.2	3.86
Hog Brook	18.9	-----	23.0	3.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Mill Brook	18.4	-----	1.2	3.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fort Meadow Brook	13.4	-----	1.7	15.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Boon's Pond Outlet	12.5	3.0		1.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Elizabeth Brook	10.0	-----	18.4	5.7	4.28	4.74	8.08	3.58	2.47	2.28	-----	2.77	5.3	9.99	0
Taylor Brook	9.3	-----	1.8	2.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Second Division Brook	4.5	-----	0.6	4.7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Nashoba Brook	3.0	30.0	7.9	20.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Spencer Brook	1.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Appendix A-2 Compilation of Time of Travel Measurements Collected During Previous Studies

ENSR Location	Town	ENSR RM	MADEP Locations			December 11, 1968			August 18-29, 1969			October 9-15 1969			October 21-23, 1969			March 20, 1980		
			MADEP Station	MADEP RM	MADEP Location	Flow (cfs)	delta T (hr)	Vel (ft/sec)	Flow (cfs)	delta T (hr)	Vel (ft/sec)	Flow (cfs)	delta T (hr)	Vel (ft/sec)	Flow (cfs)	delta T (hr)	Vel (ft/sec)	Flow (cfs)	delta T (hr)	Vel (ft/sec)
Maynard Street	Westborough	30.7	2A												0.1	0.0	Start	4.9	0.0	Start
Above Wesborough WWTP	Westborough	30.3																		
Route 9	Westborough	29.8	3A						0.7	0.0	Start				3.5	9.0	0.15		2.8	0.47
Route 135	Westborough	28.9	4A							14.3	0.09				8.0	15.0	0.22		5.7	0.46
School Street	Northborough	28.0																	7.7	0.64
			5A	26.08	Rt. 20 East Main St. Northborough - above dam					48.8	0.12				13.0	32.0	0.24		11.8	0.69
River Street	Northborough	25.8																	12.1	1.58
Allen Street	Northborough	25.2	6A							64.8	0.08				15.0	38.0	0.22			
Below Allen Street Imp.	Northborough	25.1																	14.5	0.43
Boundary Street	Marlborough	23.9	7A						5.9	71.8	0.27				18.5	48.0	0.19	82.8	16.3	0.98
Robin Hill Road	Marlborough	23.4																		
Bigelow Road	Bolton	21.5																	19.0	1.30
Chapin Road	Hudson	19.4	8A							140.3	0.10				27.0	76.0	0.24			
Hudson Imp.	Hudson	18.0																		
Route 85	Hudson	17.9	9A							183.4	0.05				30.0	85.0	0.24		0.0	Start
				17.19	Forest Street													314.7	0.6	1.80
Cox Street	Hudson	15.9	10A						4.0	209.8	0.11				34.0	98.0	0.23		2.6	0.93
Gleasondale	Stow	14.2																		
Below Gleasondale	Stow	13.9	11A							267.6	0.05		0.0	Start	40.0	110.0	0.24			
			12A	11.91	Outlet Boons Pond; Stow										45.0	128.0	0.16			
Boon Road	Stow	11.4																		
White Pond Road	Maynard	9.2																		
Ben Smith	Maynard	8.8																		
Route 117/62	Maynard	8.6	13A			115.0	0.0	Start					118.8	0.07	52.0	150.0	0.22			
USGS/Route 27	Maynard	7.4	14A			126.0			23.0			69.1	121.3	0.70	54.0	153.0	0.59	452.0		
Powdermill	Acton	6.3																		
Below Powdermill	Acton	6.1	15A				8.3	0.44					139.2	0.11						
Damon Mill	Concord	4.4																		
Route 62	Concord	3.1	16A			160.0	12.3	1.12					142.2	1.47	64.0	174.0	0.30			
Route 2	Concord	2.4																		
			17A	0.71	Off Lowell Road @ Confluence with Dakins Brook								153.8	0.39	82.0	188.0	0.25			

Appendix A-3 Summary of Assabet River Water Quality Laboratory Analysis Measurements Collected on July 23, 1999

Sample Location		Phosphorus		Nitrogen			Oxygen Demand		Solids		Bacteria
Rivermile	Description	Total-P mg/L	Ortho-P mg/L	Nitrates mg/L	Ammonia mg/L	TKN mg/L	BOD-5 mg/L	BOD-30 mg/L	TSS mg/L	Set. Solids mg/L	Fecal Col. per 100ml
30.7	Maynard St. Westborough	0.04	0.03	0.57	0.015 *	0.40	0.5 *	18.4	8	0.05 *	550
30.3	Above Westborough WWTP	0.48	0.44	6.3	0.12	0.63	4	13.2	2	0.05 *	600
29.8	Rt. 9 Westborough	0.89	0.82	7.5	0.10	0.55	2.9	17.5	9	0.05 *	450
28.9	Rt. 135 Westborough	0.73	0.69	6.8	0.11	0.99	3.9	16.9	3	0.05 *	650
28.0	School St. Northborough	0.68	0.65	6.4	0.09	0.52	3.6	21.4	7	0.05 *	800
25.8	River St. Northborough	0.64	0.60	6.4	0.04	0.50	2.3	19.7	5	0.05 *	950
25.6	Allen St. Impoundment										
25.1	Below Allen St. Impoundment	0.58	0.51	6	0.03	0.54	1.6	21.9	2	0.1	650
23.9	Boundary St. Marlborough	0.44	0.41	5.7	0.015 *	0.33	2.2	17.5	0.5 *	0.05 *	350
23.4	Robin Hill Rd. Marlborough**	0.39	0.285	5.35	0.06	0.63	4.1	17.65	8	0.1	275
21.5	Bigelow Rd. Berlin	0.31	0.23	5	0.07	0.87	3.4	18.6	11	0.05 *	200
19.4	Chapin Rd. Hudson	0.26	0.19	5.3	0.06	0.53	2.8	17.9	6	0.05 *	50
18.3	Hudson Center Impoundment										
17.9	Rt. 85 Hudson	0.28	0.13	3.8	0.13	1.2	2	21.4	3	0.05 *	150
15.9	Cox St. Hudson	0.15	0.11	3	0.03	0.44	2.6	16.5	0.5 *	0.05 *	400
14.2	Gleasondale Impoundment										
13.9	Below Gleasondale Dam, Stow	0.32	0.23	3.9	0.06	0.72	1.9	17.4	4	0.05 *	400
11.4	Boon Road, Stow	0.30	0.28	3	0.05	0.64	2.4	19	8	0.05 *	150
9.2	White Pond Road, Maynard**	0.28	0.235	0.52	0.045	0.76	0.5 *	23.25	6.5	0.05 *	25 *
8.8	Ben Smith Impoundment										
8.6	Rt. 117/62 Maynard	0.3	0.26	0.34	0.15	1.4	4	23.2	12	0.05 *	50
7.4	USGS Gauge, Maynard	0.19	0.18	0.21	0.03	0.65	2.4	17.3	13	0.05 *	650
6.3	Powder Mill Impoundment										
6.1	Below Powder Mill Dam	0.27	0.21	0.58	0.09	0.81	2.4	18	8	0.05 *	450
4.4	Damonmill, Concord	0.19	0.17	0.5	0.015 *	0.87	2.4	16.4	9	0.05 *	50
3.1	Rt. 62, Concord	0.17	0.15	0.61	0.03	0.98	2.3	17.8	7	0.05 *	150
2.4	Rt. 2 Bridge, Concord	0.23	0.15	0.7	0.05	0.95	4.6	17	6	0.05 *	150

Notes:

1. * Indicates non-detect. Value is one-half the detection limit.
2. ** Indicates duplicate sample. Value is average of sample and duplicate.
3. Bold horizontal line indicates approximate impoundment locations.