Technical Memorandum

TM 33-6

DEERFIELD RIVER WATERSHED 2005
DWM WATER QUALITY MONITORING DATA

July 2012

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Massachusetts Department of Environmental Protection
Division of Watershed Management
DWM Control Number CN 223.2

COMMONWEALTH OF MASSACHUSETTS
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Introduction

The watershed assessment process in Massachusetts is carried out on a 5-year cycle. In Year One, the Massachusetts Department of Environmental Protection (MassDEP), Division of Watershed Management (DWM) coordinates with watershed groups, gathers background information and begins to formulate sampling needs for streams, rivers, ponds and lakes in pre-determined watersheds. During Year Two of the cycle, sampling sites and parameters are finalized and sampling is conducted. In Year Three, the finalized data are used for assessment reporting to comply with Section 305b of the Clean Water Act (CWA). Implementation of specific projects or programs to address water quality problems, and post-project evaluation are conducted in Year Four and Year Five, respectively.

As part of the DWM Year Two monitoring in 2005, the Division of Watershed Management's Monitoring Program conducted biological monitoring and habitat assessments at 15 stations, nutrient sampling at eight stations, and bacteria sampling at 32 stations. In 2005 the DWM also began deploying multi-probe units in streams to gather continuous dissolved oxygen and temperature data. In the Deerfield watershed, units were deployed at ten stations. This technical memorandum is designed to present final DWM-generated water quality monitoring data for use in watershed assessment reports and for reporting data to outside groups. The biological and habitat assessment data will be presented in a separate technical memorandum.

Project Objectives

The main objectives of monitoring in the Deerfield River Watershed were to a) increase the number of 1st through 3rd order streams assessed in the Deerfield River Watershed by sampling four brooks that were not assessed in previous years; b) evaluate any water quality degradation by conducting biological monitoring at stations that were previously monitored in 1988, 1995, and 2000 and assessed as supporting the *Aquatic Life Use*; c) restore degraded water quality by identifying sources of bacterial contamination through a dry weather source tracking study in three watersheds; and d) evaluate the effectiveness of agricultural best management practices aimed at controlling non-point source pollution via sampling nutrient concentrations and total suspended solids concentrations. Additionally, the Deerfield River Watershed 2005 Survey aimed to provide quality-assured fecal coliform and *E. coli* data for the purpose of assessing P*rimary* and *Secondary Contact Recreational* uses in rivers/streams.

Sampling design, data quality objectives, as well as quality assurance for this project may be found in: *Quality Assurance Program Plan Surface Water Monitoring & Assessment MADEP-Division of Watershed Management 2005-2009 CN 225.0 (*MassDEP 2005a) and *Deerfield River Watershed Sampling and Analysis Plan 2005* (MassDEP 2005b).

Sampling Plan

Between May and September wade-in grab samples were collected monthly (n=5) from 32 stations (Table 1) and sent to Berkshire EnviroLabs in Lee, MA, where they were analyzed for *E. coli* and fecal coliform bacteria. Additional information pertaining to station location (including detailed station maps), rationale, objectives, and sampling methods is available in *Deerfield River Watershed Sampling and Analysis Plan 2005* (MassDEP 2005b). Eight of these 32 stations were also sampled for nutrients (total phosphorus, ammonia-nitrogen, and total nitrogen) and total suspended solids. Analysis occurred at the Department's William X. Wall Experiment Station in Lawrence, MA. In addition, *in- situ* parameters (dissolved oxygen (DO), percent DO saturation, pH, conductivity, temperature, and total dissolved solids) were measured using multiprobe units.

Multi-probe units equipped with dissolved oxygen and temperature probes (DO/T) were deployed on three occasions (June, July, August) at ten stations in the Deerfield River Watershed (Table 1). The units were deployed on a Friday and retrieved on Monday, providing 48 hours of continuous monitoring data.

Optic Stowaway temperature data loggers were deployed at four locations: South River, upstream from Emmets Road, Ashfield; South River, upstream from Baptist Corner Road, Ashfield; Dragon Brook, upstream from the confluence with the Deerfield River, Shelburne; and Bear River, upstream from the

confluence with the Deerfield River, Shelburne (Table 1). The units were deployed around the 18th of July and retrieved around the 21st of September. Upon download it was determined that the units had stopped logging on 8 September.

Clark Brook and Clesson Brook were to be sampled upstream from their confluence in the Buckland Recreation Facility off Route 112 in Buckland, MA. On the first DO/T deployment it was discovered that a small channel ran between the two brooks upstream from the sampling locations. This channel allowed Clesson Brook water to flow into Clark Brook. Therefore, for nutrient and bacteria analysis Clesson Brook was sampled upstream from the Route 112 bridge and Clark Brook was sampled downstream from Route 112. Both locations were upstream from the channel and the confluence. The DO/T unit in Clesson Brook was deployed between the channel and the confluence. The Clark Brook unit was deployed ~ 40 feet upstream from the channel and ~150 feet upstream from the confluence.

Quality Assurance and Quality Control

Quality assurance and quality control procedures used in sample and measurement were consistent with the prevailing DWM protocols that are described in the CN 1.21 - *Sample Collection Techniques for DWM Surface Water Quality Monitoring* (MassDEP 2009), CN 4.2 - *Water Quality Multi-probe Instrument Use* (MassDEP 2004a) and CN 4.4 - *Multi-probe Deployments for Unattended Logging* (MassDEP 2004b).

The DWM quality assurance and database management staff reviewed lab data reports and all multi-probe data. The data were validated and finalized per data validation procedures outlined in CN 56.15 - *DWM Water Quality Data Validation Process (Summary)* (MassDEP 2012a). All water sample data were validated by reviewing QC sample results, analytical holding time compliance, QC sample frequency and related ancillary data/documentation (at a minimum). A complete summary of review process for all 2005 DWM data is provided in the CN 280.0 – *DATA VALIDATION REPORT for Year 2005 Project Data* (MassDEP 2012b). Appendix 1 of this technical memorandum contains definitions for all data qualifiers.

Field and Analytical Methods

Procedures used for water sampling and sample handling are described in the CN 1.21 - *Sample Collection Techniques for DWM Surface Water Quality Monitoring* (MassDEP 2009). WES supplied all sample bottles and field preservatives, which were prepared according to the WES *Laboratory Quality Assurance Plan and Standard Operating Procedures* (MassDEP 2001). Procedures for multiprobe calibration and deployment are described in CN 4.2 - *Water Quality Multi-probe Instrument Use* (MassDEP 2004a) and CN 4.4 - *Multi-probe Deployments for Unattended Logging* (MassDEP 2004b).

Concurrent with the collection of water quality samples, site characteristics and sampling conditions were recorded on DWM field sheets. Riparian vegetation, observed uses, potential pollution sources, the presence/absence of objectionable deposits (trash, debris and scum), the extent of periphyton/algae/aquatic plant growth within the sampling reach, and sampling conditions were all noted at each station.

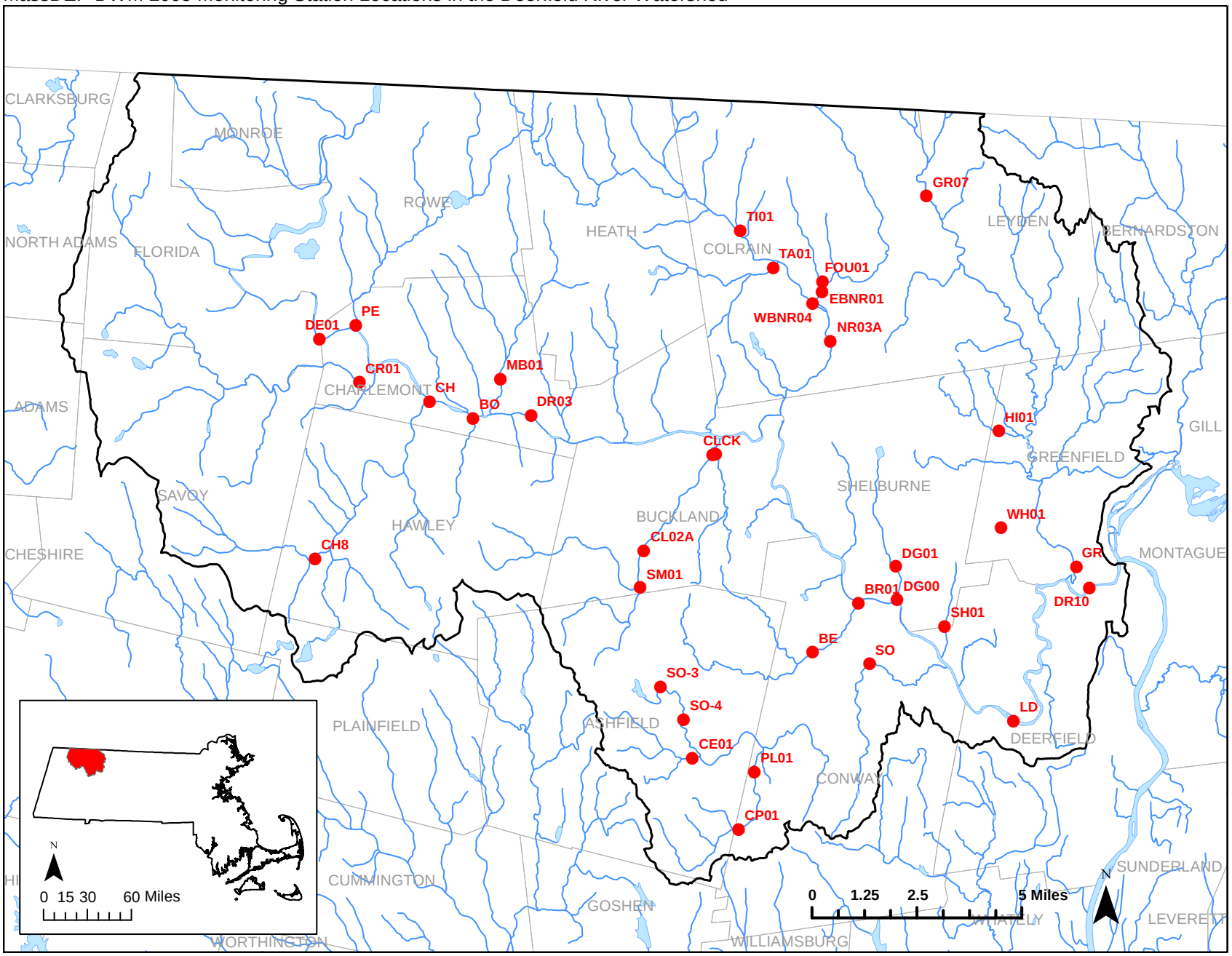
Table 1. MassDEP DWM 2005 Deerfield River Watershed Sampling Station Descriptions and Sampling Parameters.

Station ID	Unique ID	Segment	Waterbody	Site Description	Latitude	Longitude	Parameter
DE01	W1353	MA33-01	Deerfield River	[approximately 850 feet downstream of River Road/Zoar Road (the Florida Bridge), Florida/Charlemont]	42.65099	-72.9532	Bacteria
DR03	W0761	MA33-02	Deerfield River	[at USGS gage #01168500, south of Mohawk Trail (Route 2) between Heath Road and Burrington Road, Charlemont]	42.62574	-72.854	Bacteria
LD	W0002	MA33-03	Deerfield River	[approximately 200 feet upstream of the south bound lane of Route 91, Deerfield]	42.52281	-72.6266	Bacteria
DR10	W0757	MA33-04	Deerfield River	[Route 5-10 bridge, Deerfield (southern side of river)]	42.56931	-72.592	Bacteria
CR01	W1354	MA33-05	Cold River	[approximately 300 feet downstream of Cold River Road (Mohawk State Forest entrance road), Charlemont]	42.63626	-72.9344	Bacteria
NR03A	W1352	MA33-06	North River	[approximately 300 feet downstream of Route 112, Colrain]	42.65302	-72.7143	Bacteria
SO-3	W0014	MA33-07	South River	[Baptist Corner Road, Ashfield]	42.53307	-72.7916	Temperature Probe
SO-4	W0013	MA33-07	South River	[Emmets Road, Ashfield]	42.52188	-72.7805	Bacteria, DO/T probe, Temperature probe
SO	W0008	MA33-08	South River	[at USGS Gage #01169900 near Reeds Bridge Road, Conway]	42.54185	-72.694	Bacteria
CH	W0040	MA33-11	Chickley River	[Tower Road, Charlemont]	42.6301	-72.9014	Bacteria, Nutrients, Multi-probe
PE	W0044	MA33-12	Pelham Brook	[Zoar Road, Charlemont]	42.65591	-72.9365	Bacteria
BO	W0035	MA33-13	Bozrah Brook	[upstream at South River Road (upstream from pipe/swale discharge), Charlemont]	42.62455	-72.8808	Bacteria, DO/T probe
MB01	W1356	MA33-14	Mill Brook	[approximately 5/10 mile upstream of Route 8A and approximately 4/10 mile downstream of Mountain Road, Charlemont]	42.63816	-72.8683	Bacteria
CL02A	W1359	MA33-15	Clesson Brook	[Upper Street, Buckland]	42.57995	-72.8	Bacteria
CL	W0026	MA33-15	Clesson Brook	[Route 112, Buckland]	42.61319	-72.7688	Bacteria, Nutrients, Multi-probe, DO/T probe
CK	W0029	MA33-16	Clark Brook	[Route 112, Buckland]	42.61343	-72.7675	Bacteria, Nutrients, Multi-probe, DO/T probe
BE	W0017	MA33-17	Bear River	[approximately 250 feet upstream of Shelburne Falls Road (above unnamed tributary), Conway]	42.54575	-72.721	Bacteria
BR01	W1358	MA33-17	Bear River	[approximately 150 feet from confluence with Deerfield River, Conway]	42.5628	-72.6997	Temperature Probe
EBNR01	W1347	MA33-19	East Branch North River	["Lyonsville Road", Colrain (site of old Arthur Smith Covered Bridge, no road crossing here)]	42.66989	-72.7189	Bacteria, Nutrients, Multi-probe
DG01	W1364	MA33-20	Dragon Brook	[Bassett Road, Shelburne]	42.57553	-72.6827	Bacteria
DG00	W1357	MA33-20	Dragon Brook	[approximately 250 feet from confluence with Deerfield River, Shelburne]	42.56419	-72.6817	Temperature Probe

Table 1. MassDEP DWM 2005 Deerfield River Watershed Sampling Station Descriptions and Sampling Parameters.

Station ID	Unique ID	Segment	Waterbody	Site Description	Latitude	Longitude	Parameter
HI01	W1346	MA33-21	Hinsdale Brook	[Green River Road, Greenfield (downstrean of storm water swale and discharge pipes)]	42.62278	-72.6354	Bacteria
SH01	W1363	MA33-22	Shingle Brook	[Hawks Road, Shelburne]	42.55526	-72.6592	Bacteria, DO/T probe
TI01	W1350	MA33-24	Tissdell Brook	[Adamsville Road, Colrain]	42.69065	-72.7574	Bacteria
FOU01	W1351	MA33-25	Foundry Brook	[Foundry Village Road, Colrain]	42.67371	-72.7188	Bacteria, DO/T probe
SM01	W1360	MA33-26	Smith Brook	[approximately 300 feet upstream of Ashfield Road (Route 112), Buckland]	42.56699	-72.8015	Bacteria
WBNR04	W1348	MA33-27	West Branch North River	[Adamsville Road, Colrain]	42.6659	-72.723	Bacteria, Nutrients, Multi-probe
GR07	W0007	MA33-28	Green River	[at USGS Gage #01170100 approximately 1/2 mile upstream of West Leyden Road, Colrain]	42.70341	-72.6706	Bacteria
GR	W0005	MA33-30	Green River	[footbridge east off Petty Plain Road, Greenfield]	42.57626	-72.5984	Bacteria
TA01	W1349	MA33-31	Taylor Brook	[most downstream crossing of Heath Road (approximately 2/10 mile from confluence with West Branch North River), Colrain]	42.67814	-72.7418	Bacteria
CP01	W1362	MA33-44	Chapel Brook	[approximately 300 feet upstream of Main Poland Road, Conway]	42.48417	-72.7542	Bacteria, Nutrients, Multiprobe, DO/T probe
CE01	W1325	MA33-46	Creamery Brook	[Williamsburg Road, Ashfield]	42.50847	-72.7759	Bacteria, Nutrients, Multiprobe, DO/T probe
PL01	W1361	MA33-74	Poland Brook	[the most upstream North Poland Road crossing (near Bullitt Road), Conway]	42.50408	-72.747	Bacteria, Nutrients, Multiprobe, DO/T probe
WH01	W1345	MA33-95	Wheeler Brook	[south off Shelburne Road (approximately 800 feet west of Route 2), Greenfield]	42.58945	-72.6336	Bacteria, DO/T probe
CH8	W1355	#N/A	Chickley River	[most downstream crossing of Savoy Road, Hawley]	42.5754	-72.9536	Bacteria

Figure 1. MassDEP DWM 2005 Monitoring Station Locations in the Deerfield River Watershed



Survey Conditions

Precipitation and stream discharge data were analyzed to estimate hydrological conditions during the 2005 water quality surveys in Deerfield River Watershed. Precipitation data collected during the survey period in 2005 were downloaded from the National Oceanic and Atmospheric Administration (NOAA), National Climatic Data Center (NCDC) for one station in Ashfield, MA, and one station in North Adams, MA (NOAA 2008). The precipitation totals on the water quality survey date and the five days prior to the survey date were extracted from the record (Table 2). Based on field sheets, precipitation data, and discharge data, some of the rain events on or before the survey dates were significantly localized so watershed-wide wet weather determinations are difficult to determine.

Table 2. The precipitation totals (inches) on the water quality survey date and the five days prior to the survey date in North Adams and Ashfield (NOAA 2008).

		Precipitation					
Survey Date	**Weather Station**	Survey Date	1 Day Prior	2 Days Prior	3 Days Prior	4 Days Prior	5 Days Prior
05/17/05	North Adams	0.00	0.17	0.24	T	0.00	0.02
	Ashfield	0.00	0.06	0.09	0.00	0.00	0.00
06/07/05	North Adams	0.00	0.40	0.00	0.00	0.00	0.00
	Ashfield	0.36	0.00	0.00	0.00	0.00	0.00
07/19/05	North Adams	0.14	0.02	0.21	0.00	0.00	1.20
	Ashfield	2.40	0.03	0.00	0.00	0.08	0.00
08/16/05	North Adams	0.07	0.28	0.64	0.17	0.06	0.00
	Ashfield	0.21	1.89	0.04	0.00	0.00	0.00
09/21/05	North Adams	0.00	0.20	0.00	T	T	0.02
	Ashfield	0.13	0.00	0.00	0.00	0.08	0.36
T = Trace Precipitation							

Stream discharge data for four real-time United States Geological Survey (USGS) stream gage stations (Table 3) and their 7Q10 were downloaded from the USGS (USGS 2008) (USGS 2012). The entire period of record was downloaded for the four USGS gage stations so that a flow duration curve could be calculated for each station. The flow duration curves and the flow conditions on the water quality survey dates are illustrated in Figure 2. The instantaneous discharge records for the Deerfield River stations were used for the flow duration curves to better represent the conditions due to "hydro-peaking" from the dams on the river.

Table 3. USGS gage stations used to estimate the hydrological conditions in the Deerfield River watershed during the water surveys and the 7Q10 at each gage (USGS 2008) (USGS 2012).

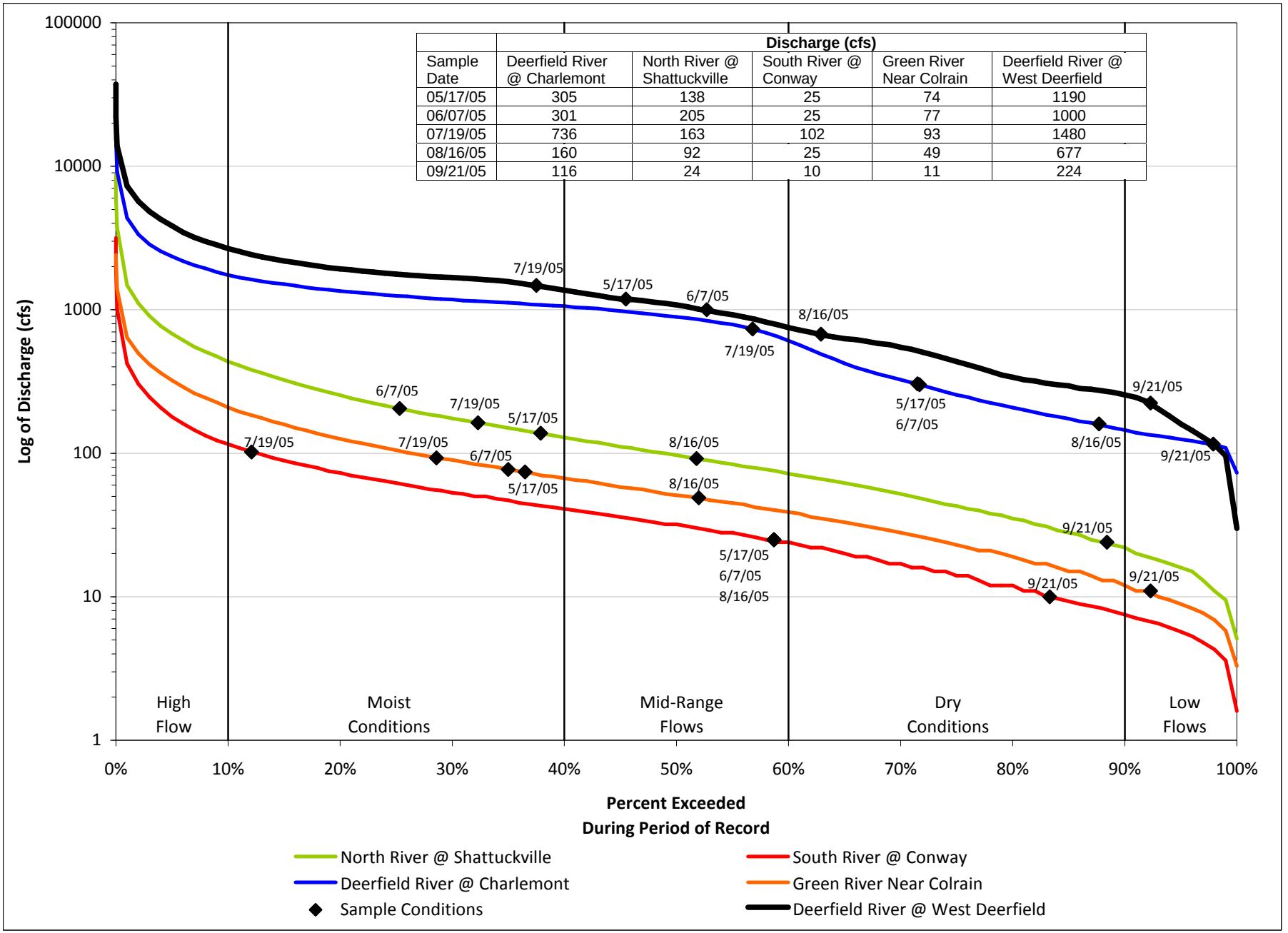
Station Name	**Location**	**Data Type**	**Period of Record**	**7Q10 (cfs)**
01168500 Deerfield River At Charlemont, MA[1]	Lat 42° 37'33" Long 72° 51'20"	Instantaneous Discharge	Oct 1990 to Sept 2006	66.4
01170000 Deerfield River Near West Deerfield, MA[1]	Lat 42° 32'09" Long 72° 39'14"	Instantaneous Discharge	Oct 1990 to Sept 2006	95.6
01169000 North River At Shattuckville, MA[2]	Lat 42° 38'18" Long 72° 43'32"	Daily Mean Discharge	Oct 1939 to Nov 2008	8.5
01169900 South River Near Conway, MA	Lat 42°32'31" Long 72°41'39"	Daily Mean Discharge	June 1966 to Nov 2008	3.3
01170100 Green River Near Colrain, MA	Lat 42° 42'12" Long 72° 40'16"	Daily Mean Discharge	Oct 1967 to Nov 2008	4.8

[1]Flow regulated in the Deerfield River since 1913 by Somerset Reservoir, since 1924 by Harriman Reservoir, and by several power plants upstream.
[2] Diurnal fluctuation at times caused by mill upstream; because storage capacity is small, daily flows are

not affected appreciably. Prior to 1950, greater regulation by mill.

Figure 2. Flow duration curves for four USGS gage stations in the Deerfield River watershed with the discharge on the water quality survey dates displayed in a table and plotted on the graph (USGS 2008).

	Discharge (cfs)				
Sample Date	Deerfield River @ Charlemont	North River @ Shattuckville	South River @ Conway	Green River Near Colrain	Deerfield River @ West Deerfield
05/17/05	305	138	25	74	1190
06/07/05	301	205	25	77	1000
07/19/05	736	163	102	93	1480
08/16/05	160	92	25	49	677
09/21/05	116	24	10	11	224



Station Observations

Station observations were recorded on field sheets for each survey by a DWM investigator. Station observations are described below in Table 4 for each DWM sampling event (MassDEP 2005c).

Table 4. 2005 Field observations from MassDEP DWM surveys.

Site	Unique ID	Date	Odor	Water Clarity	Color	Aquatic Plants	Periphyton	Floating Scum	Obj. Deposits
LD	W0002	5/17/2005	None	Clear	Clear	None	Sparse	No	No
LD	W0002	6/7/2005	None	Slightly Turbid	Brownish	None	Sparse	Foam	No
LD	W0002	7/19/2005	None	Highly Turbid	Brownish	Unobs	Unobs	No	No
LD	W0002	8/16/2005	None	Slightly Turbid	Clear	Sparse	Unobs	No	No
LD	W0002	9/21/2005	None	Clear	Greenish	None	None	No	Trash
PL01	W1361	5/17/2005	None	Clear	Clear	None	Sparse	No	No
PL01	W1361	6/7/2005	None	Clear	Clear	None	None	No	No
PL01	W1361	6/8/2005	None	Clear	Clear	None	None	No	No
PL01	W1361	7/19/2005	None	Moderately Turbid	Brownish	None	None	No	No
PL01	W1361	7/20/2005	None	Clear	Light Yellow	None	Sparse	Foam	No
PL01	W1361	8/16/2005	None	Clear	Clear	Sparse	Sparse	No	No
PL01	W1361	8/17/2005	None	Clear	Clear	None	Moderate	No	No
PL01	W1361	9/20/2005	None	Clear	Brownish	None	None	No	No
PL01	W1361	9/21/2005	None	Clear	Tan	None	None	No	No
CP01	W1362	5/17/2005	None	Clear	Clear	None	Dense	No	No
CP01	W1362	6/7/2005	None	Clear	Clear	None	None	No	No
CP01	W1362	6/8/2005	None	Clear	Clear	None	Moderate	No	No
CP01	W1362	7/19/2005	None	Clear	Brownish	None	None	No	No
CP01	W1362	7/20/2005	None	Clear	Brownish	None	Moderate	No	No
CP01	W1362	8/16/2005	None	Clear	Clear	None	Moderate	No	No
CP01	W1362	8/17/2005	None	Clear	Clear	None	Dense	Foam	No
CP01	W1362	9/20/2005	None	Clear	Clear	None	Dense	No	No
CP01	W1362	9/21/2005	None	Clear	Clear	None	None	No	No
CE01	W1325	5/17/2005	None	Clear	Clear	None	Moderate	No	No
CE01	W1325	6/7/2005	None	Clear	Clear	None	Dense	No	No
CE01	W1325	6/8/2005	None	Clear	Clear	None	Moderate	No	No

Table 4. 2005 Field observations from MassDEP DWM surveys.

Site	Unique ID	Date	Odor	Water Clarity	Color	Aquatic Plants	Periphyton	Floating Scum	Obj. Deposits
CE01	W1325	7/19/2005	None	Clear	Brownish	None	None	No	No
CE01	W1325	7/20/2005	None	Clear	Clear	None	None	No	No
CE01	W1325	8/16/2005	None	Clear	Clear	None	Moderate	No	No
CE01	W1325	8/17/2005	None	Clear	Clear	None	Dense	No	No
CE01	W1325	9/20/2005	None	Clear	Clear	None	Moderate	No	No
CE01	W1325	9/21/2005	None	Clear	Clear	None	None	No	No
SO-4	W0013	5/17/2005	None	Clear	Clear	None	Very Dense	No	No
SO-4	W0013	6/7/2005	None	Clear	Clear	None	Dense	No	No
SO-4	W0013	7/19/2005		Slightly Turbid	Brownish	None	None	No	No
SO-4	W0013	8/16/2005	None	Clear	Clear	Moderate	Sparse	No	No
SO-4	W0013	9/21/2005	None	Clear	Clear	None	None	No	No
BE	W0017	5/17/2005	None	Clear	Clear	None	Sparse	No	No
BE	W0017	6/7/2005	None	Clear	Clear	None	Sparse	No	No
BE	W0017	7/19/2005	None	Slightly Turbid	Brownish	None	None	No	Trash
BE	W0017	8/16/2005	None	Clear	Clear	None	Sparse	No	No
BE	W0017	9/21/2005	None	Clear	Clear	None	None	No	No
SO	W0008	5/17/2005	None	Clear	Clear	None	Moderate	No	No
SO	W0008	6/7/2005	None	Clear	Clear	None	Sparse	No	No
SO	W0008	7/19/2005		Highly Turbid	Brownish	Unobs	Sparse	No	No
SO	W0008	8/16/2005	None	Clear	Clear	Moderate	Sparse	No	No
SO	W0008	9/21/2005	None	Clear	Clear	None	None	No	No
SH01	W1363	5/17/2005	None	Clear	Clear	None	Sparse	No	No
SH01	W1363	6/7/2005	None	Clear	Clear	None	None	No	No
SH01	W1363	7/19/2005	None	Clear	Clear	None	None	No	No
SH01	W1363	8/16/2005	None	Clear	Clear	None	None	No	No
SH01	W1363	9/21/2005	None	Clear	Clear	None	None	No	No
DG01	W1364	5/17/2005	None	Clear	Clear	None	Sparse	No	No
DG01	W1364	6/7/2005	None	Clear	Clear	None	Sparse	No	No
DG01	W1364	7/19/2005	None	Slightly Turbid	Brownish	None	None	No	No

Table 4. 2005 Field observations from MassDEP DWM surveys.

Site	Unique ID	Date	Odor	Water Clarity	Color	Aquatic Plants	Periphyton	Floating Scum	Obj. Deposits
DG01	W1364	8/16/2005	None	Clear	Clear	None	None	No	No
DG01	W1364	9/21/2005	None	Clear	Clear	None	None	No	No
DE01	W1353	5/17/2005	None	Clear	Clear	None	None	No	No
DE01	W1353	6/7/2005	None	Clear	Clear	None	None	No	No
DE01	W1353	7/19/2005	None	Clear	Clear	None	Dense	No	No
DE01	W1353	8/16/2005	None	Clear	Clear	None	Moderate	No	No
DE01	W1353	9/21/2005	None	Clear	Clear	None	Dense	No	No
PE	W0044	5/17/2005	None	Clear	Clear	None	None	No	No
PE	W0044	6/7/2005	None	Clear	Clear	None	None	No	No
PE	W0044	7/19/2005	None	Clear	Clear	None	None	No	No
PE	W0044	8/16/2005	None	Clear	Clear	None	None	No	No
PE	W0044	9/21/2005	None	Clear	Clear	None	Sparse	No	No
CR01	W1354	5/17/2005	None	Clear	Clear	None	Sparse	No	No
CR01	W1354	6/7/2005	None	Clear	Clear	None	None	No	No
CR01	W1354	7/19/2005	None	Clear	Clear	None	Moderate	No	No
CR01	W1354	8/16/2005	None	Clear	Clear	None	Sparse	No	No
CR01	W1354	9/21/2005	None	Clear		None	Dense	No	No
CH	W0040	5/17/2005	None	Clear	Clear	None	Sparse	No	No
CH	W0040	6/7/2005	None	Clear	Clear	None	None	No	No
CH	W0040	6/8/2005	None	Clear	Clear	None	Moderate	No	No
CH	W0040	7/19/2005	None	Clear	Clear	None	None	No	No
CH	W0040	7/20/2005	None	Clear	Clear	None	None	No	No
CH	W0040	8/16/2005	None	Clear	Clear	None	None	No	No
CH	W0040	8/17/2005	None	Clear	Clear	None	Dense	No	No
CH	W0040	9/20/2005	None	Clear	Clear	None	Moderate	No	No
CH	W0040	9/21/2005	None	Clear	Clear	None	Moderate	No	No
CH08	W1355	5/17/2005	None	Clear	Clear	None	None	No	No
CH08	W1355	6/7/2005	None	Clear	Clear	None	Sparse	No	No
CH08	W1355	7/19/2005	None	Clear	Clear	None	None	No	No

Table 4. 2005 Field observations from MassDEP DWM surveys.

Site	Unique ID	Date	Odor	Water Clarity	Color	Aquatic Plants	Periphyton	Floating Scum	Obj. Deposits
CH08	W1355	8/16/2005	None	Clear	Clear	None	Sparse	No	No
CH08	W1355	9/21/2005	None	Clear	Clear	None	Moderate	No	No
BO	W0035	5/17/2005	None	Clear	Clear	None	None	No	Trash
BO	W0035	6/7/2005	None	Clear	Clear	None	Sparse	No	No
BO	W0035	7/19/2005	None	Clear	Clear	None	Moderate	Oil Sheen	No
BO	W0035	8/16/2005	None	Clear	Clear	None	Dense	No	No
BO	W0035	9/21/2005	None	Clear	Clear	None	Very Dense	No	No
MB01	W1356	5/17/2005	None	Clear	Clear	None	None	No	No
MB01	W1356	6/7/2005	None	Clear	Clear	None	None	No	No
MB01	W1356	7/19/2005	None	Clear	Clear	None	None	No	No
MB01	W1356	8/16/2005	None	Clear	Clear	None	None	No	No
MB01	W1356	9/21/2005	None	Clear	Clear	None	Moderate	No	No
DR03	W0761	5/17/2005	None	Clear	Clear	None	Sparse	No	No
DR03	W0761	6/7/2005	None	Clear	Clear	None	None	No	No
DR03	W0761	7/19/2005	None	Clear	Brownish	None	Moderate	No	No
DR03	W0761	8/16/2005	None	Clear	Clear	None	None	No	No
DR03	W0761	9/21/2005	None	Clear	Clear	None	Sparse	No	No
CK	W0029	5/17/2005	None	Clear	Clear	None	None	No	Trash
CK	W0029	6/7/2005	None	Clear	Clear	None	Sparse	No	No
CK	W0029	6/8/2005	None	Clear	Clear	None	Sparse	No	No
CK	W0029	7/19/2005	None	Clear	Clear	None	None	No	No
CK	W0029	7/20/2005	None	Clear	Clear	None	None	No	No
CK	W0029	8/16/2005	None	Clear	Clear	None	None	No	No
CK	W0029	8/17/2005	None	Clear	Clear	None	None	No	No
CK	W0029	9/20/2005	None	Clear	Clear	None	None	No	No
CK	W0029	9/21/2005	None	Clear	Clear	None	Sparse	No	No
CL	W0026	5/17/2005	None	Clear	Clear	None	None	No	No
CL	W0026	6/7/2005	None	Clear	Clear	None	Moderate	No	No
CL	W0026	6/8/2005	None	Clear	Clear	None	Moderate	No	No

Table 4. 2005 Field observations from MassDEP DWM surveys.

Site	Unique ID	Date	Odor	Water Clarity	Color	Aquatic Plants	Periphyton	Floating Scum	Obj. Deposits
CL	W0026	7/19/2005	None	Clear	Clear	None	Moderate	No	No
CL	W0026	7/20/2005	None	Clear	Clear	None	Sparse	No	No
CL	W0026	8/16/2005	None	Clear	Clear	None	Dense	No	No
CL	W0026	8/17/2005	None	Clear	Clear	None	Dense	No	No
CL	W0026	9/20/2005	None	Clear	Clear	None	Moderate	No	No
CL	W0026	9/21/2005	None	Clear	Clear	None	Moderate	No	No
CL02A	W1359	5/17/2005	None	Clear	Clear	None	None	No	No
CL02A	W1359	6/7/2005	None	Clear	Clear	None	Sparse	No	No
CL02A	W1359	7/19/2005	None	Clear	Clear	None	None	No	No
CL02A	W1359	8/16/2005	None	Clear	Clear	None	Dense	No	No
CL02A	W1359	9/21/2005	None	Clear	Clear	None	Moderate	No	No
SM01	W1360	5/17/2005	None	Clear	Clear	None	None	No	Trash
SM01	W1360	6/7/2005	None	Clear	Clear	None	Sparse	No	No
SM01	W1360	7/19/2005	None	Clear	Clear	None	Sparse	No	No
SM01	W1360	8/16/2005	None	Clear	Clear	None	None	No	No
SM01	W1360	9/21/2005	None	Clear	Clear	None	Moderate	No	No
DR10	W0757	5/17/2005		Clear		None	None	No	No
DR10	W0757	6/7/2005	None	Slightly Turbid	Tan	None	None	No	No
DR10	W0757	7/19/2005	None	Moderately Turbid	Greyish	None	None	No	No
DR10	W0757	8/16/2005	None	Clear	Clear	Sparse	Sparse	No	No
DR10	W0757	9/21/2005	None	Clear	Clear	None	None	No	No
GR	W0005	5/17/2005	None	Clear	Greenish	None	Sparse	No	No
GR	W0005	6/7/2005	Musty	Highly Turbid	Dark Tan	None	None	No	No
GR	W0005	7/19/2005	None	Highly Turbid	Greyish	Unobs	Unobs	No	No
GR	W0005	8/16/2005	None	Highly Turbid	Brownish	None	None	No	Trash
GR	W0005	9/21/2005	None	Moderately Turbid	Clear	None	None	No	No
WH01	W1345	5/17/2005	None	Clear	Clear	None	None	No	No
WH01	W1345	6/7/2005	None	Clear	Clear	None	None	No	Trash
WH01	W1345	7/19/2005	None	Clear	Clear	None	None	No	No

Table 4. 2005 Field observations from MassDEP DWM surveys.

Site	Unique ID	Date	Odor	Water Clarity	Color	Aquatic Plants	Periphyton	Floating Scum	Obj. Deposits
WH01	W1345	8/16/2005	None	Clear	Clear	None	None	No	No
WH01	W1345	9/21/2005	None	Clear	Clear	None	Sparse	No	No
HI01	W1346	5/17/2005	None	Clear	Clear	None	Sparse	No	No
HI01	W1346	6/7/2005	None	Clear	Clear	None	Sparse	No	No
HI01	W1346	7/19/2005	None	Highly Turbid	Greyish	None	Unobs	No	No
HI01	W1346	8/16/2005	None	Clear	Clear	None	Sparse	No	No
HI01	W1346	9/21/2005	None	Clear	Clear	None		No	No
GR07	W0007	5/17/2005	None	Clear	Clear	None	Sparse	No	No
GR07	W0007	6/7/2005	None	Clear	Clear	None	Sparse	No	No
GR07	W0007	7/19/2005	None	Slightly Turbid	Clear	None	Moderate	No	No
GR07	W0007	8/16/2005	None	Clear	Clear	None	None	No	No
GR07	W0007	9/21/2005	None	Clear	Clear	None	Moderate	No	No
FOU01	W1351	5/17/2005	None	Clear	Clear	None	Sparse	No	No
FOU01	W1351	6/7/2005	None	Clear	Clear	None	None	No	No
FOU01	W1351	7/19/2005	None	Clear	Clear	None	Moderate	No	No
FOU01	W1351	8/16/2005	None	Clear	Clear	None	None	No	No
FOU01	W1351	9/21/2005	None	Clear	Clear	None	Sparse	No	No
TI01	W1350	5/17/2005	None	Clear	Clear	None	Sparse	No	No
TI01	W1350	6/7/2005	None	Clear	Clear	None	None	No	No
TI01	W1350	7/19/2005	None	Clear	Clear	None	Moderate	No	No
TI01	W1350	8/16/2005	None	Clear	Clear	None	Sparse	No	No
TI01	W1350	9/21/2005	None	Clear	Clear	None	Moderate	No	No
TA01	W1349	5/17/2005	None	Clear	Clear	None	None	No	No
TA01	W1349	6/7/2005	None	Clear	Clear	None	None	No	No
TA01	W1349	7/19/2005	None	Slightly Turbid	Clear	None	None	No	No
TA01	W1349	8/16/2005	None	Clear	Clear	None	None	No	No
TA01	W1349	9/21/2005	None	Clear	Clear	None	Moderate	No	No
WBNR04	W1348	5/17/2005	None	Clear	Clear	None	None	No	No
WBNR04	W1348	6/7/2005	None	Clear	Clear	None	None	No	No

Table 4. 2005 Field observations from MassDEP DWM surveys.

Site	Unique ID	Date	Odor	Water Clarity	Color	Aquatic Plants	Periphyton	Floating Scum	Obj. Deposits
WBNR04	W1348	6/8/2005	None	Clear	Clear	None	Moderate	No	No
WBNR04	W1348	7/19/2005	None	Clear	Clear	None	Sparse	No	No
WBNR04	W1348	7/20/2005	None	Clear	Clear	None	None	No	No
WBNR04	W1348	8/16/2005	None	Clear	Clear	None	None	No	No
WBNR04	W1348	8/17/2005	None	Clear	Clear	None	None	No	No
WBNR04	W1348	9/20/2005	None	Clear	Clear	None	Dense	No	No
WBNR04	W1348	9/21/2005	None	Clear	Clear	None	Moderate	No	No
NR03A	W1352	5/17/2005	None	Clear	Reddish	None	Sparse	No	No
NR03A	W1352	6/7/2005	None	Clear	Clear	None	None	No	No
NR03A	W1352	7/19/2005	None	Clear	Clear	None	None	No	No
NR03A	W1352	8/16/2005	None	Clear	Clear	None	None	No	Grass Clippings
NR03A	W1352	9/21/2005	None	Clear	Clear	None	Dense	No	No
EBNR01	W1347	5/17/2005	None	Clear	Clear	None	None	No	No
EBNR01	W1347	6/7/2005	None	Clear	Clear	None	None	No	No
EBNR01	W1347	6/8/2005	None	Clear	Clear	None	Moderate	Foam	No
EBNR01	W1347	7/19/2005	None	Clear	Clear	None	None	No	No
EBNR01	W1347	7/20/2005	None	Clear	Brownish	None	Sparse	No	No
EBNR01	W1347	8/16/2005	None	Clear	Clear	None	None	No	No
EBNR01	W1347	8/17/2005	None	Clear	Clear	None	None	No	No
EBNR01	W1347	9/20/2005	None	Clear	Clear	None	None	No	No
EBNR01	W1347	9/21/2005	None	Clear	Clear	None	Dense	No	No

Water Quality Data

All MassDEP DWM water quality data are managed and maintained in the Water Quality Data Access Database. Tables 5 – 8 below are 2005 data exports for the Deerfield River Watershed. The procedures used to accept, accept with qualification or censor data are based on the DWM SOP for data validation and usability (MassDEP 2012a) and are in addition to separate quality assurance activities and laboratory validation steps undertaken by the WES. Data qualifier explanations are listed in Appendix 1.

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
BE	W0017	5/17/2005	1110	33-0343		E. Coli	CFU/100ml	14	no	--
BE	W0017	6/7/2005	1120	33-0432		E. Coli	CFU/100ml	52	no	--
BE	W0017	7/19/2005	1055	33-0592		E. Coli	CFU/100ml	1414	no	--
BE	W0017	8/16/2005	1106	33-0656		E. Coli	CFU/100ml	291	no	--
BE	W0017	9/21/2005	1100	33-0744		E. Coli	CFU/100ml	33	no	e
BE	W0017	5/17/2005	1110	33-0343		Fecal Coliforms	CFU/100ml	20	no	--
BE	W0017	6/7/2005	1120	33-0432		Fecal Coliforms	CFU/100ml	80	no	--
BE	W0017	7/19/2005	1055	33-0592		Fecal Coliforms	CFU/100ml	2500	no	--
BE	W0017	8/16/2005	1106	33-0656		Fecal Coliforms	CFU/100ml	350	no	--
BE	W0017	9/21/2005	1100	33-0744		Fecal Coliforms	CFU/100ml	30	no	e
BO	W0035	5/17/2005	1130	33-0329		E. Coli	CFU/100ml	4	no	--
BO	W0035	6/7/2005	1130	33-0418		E. Coli	CFU/100ml	201	no	--
BO	W0035	7/19/2005	1140	33-0580		E. Coli	CFU/100ml	79	no	--
BO	W0035	8/16/2005	1104	33-0682		E. Coli	CFU/100ml	411	no	--
BO	W0035	9/21/2005	1125	33-0732		E. Coli	CFU/100ml	73	no	--
BO	W0035	5/17/2005	1130	33-0329		Fecal Coliforms	CFU/100ml	<10	no	--
BO	W0035	6/7/2005	1130	33-0418		Fecal Coliforms	CFU/100ml	280	no	--
BO	W0035	7/19/2005	1140	33-0580		Fecal Coliforms	CFU/100ml	90	no	--
BO	W0035	8/16/2005	1104	33-0682		Fecal Coliforms	CFU/100ml	460	no	--
BO	W0035	9/21/2005	1125	33-0732		Fecal Coliforms	CFU/100ml	110	no	--
CB01	W1413	6/7/2005	1125	33-0411		E. Coli	CFU/100ml	2	no	--
CB01	W1413	6/7/2005	1125	33-0411		Fecal Coliforms	CFU/100ml	10	no	--
CE01	W1325	5/17/2005	1040	33-0341		Ammonia-N	mg/L	<0.02	no	--
CE01	W1325	6/8/2005	1405	33-0395		Ammonia-N	mg/L	<0.02	no	--
CE01	W1325	7/20/2005	1308	33-0457		Ammonia-N	mg/L	<0.02	no	--
CE01	W1325	8/17/2005	1205	33-0699	33-0700	Ammonia-N	mg/L	<0.02	no	--
CE01	W1325	8/17/2005	1205	33-0700	33-0699	Ammonia-N	mg/L	<0.02	no	--
CE01	W1325	9/20/2005	1115	33-0717	33-0718	Ammonia-N	mg/L	<0.02	no	--
CE01	W1325	9/20/2005	1115	33-0718	33-0717	Ammonia-N	mg/L	<0.02	no	--
CE01	W1325	5/17/2005	1040	33-0341		Total Nitrogen	mg/L	0.65	no	h
CE01	W1325	6/8/2005	1405	33-0395		Total Nitrogen	mg/L	0.44	no	--
CE01	W1325	7/20/2005	1308	33-0457		Total Nitrogen	mg/L	0.42	no	--
CE01	W1325	8/17/2005	1205	33-0699	33-0700	Total Nitrogen	mg/L	0.54	no	--
CE01	W1325	8/17/2005	1205	33-0700	33-0699	Total Nitrogen	mg/L	0.54	no	--
CE01	W1325	9/20/2005	1115	33-0717	33-0718	Total Nitrogen	mg/L	0.68	no	--
CE01	W1325	9/20/2005	1115	33-0718	33-0717	Total Nitrogen	mg/L	0.67	no	--
CE01	W1325	5/17/2005	1040	33-0341		Total Phosphorus	mg/L	0.006	no	--

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
CE01	W1325	6/8/2005	1405	33-0395		Total Phosphorus	mg/L	0.007	no	--
CE01	W1325	7/20/2005	1308	33-0457		Total Phosphorus	mg/L	0.012	no	--
CE01	W1325	8/17/2005	1205	33-0699	33-0700	Total Phosphorus	mg/L	0.010	no	--
CE01	W1325	8/17/2005	1205	33-0700	33-0699	Total Phosphorus	mg/L	0.010	no	--
CE01	W1325	9/20/2005	1115	33-0717	33-0718	Total Phosphorus	mg/L	0.012	no	--
CE01	W1325	9/20/2005	1115	33-0718	33-0717	Total Phosphorus	mg/L	0.011	no	--
CE01	W1325	5/17/2005	1040	33-0341		E. Coli	CFU/100ml	6	no	--
CE01	W1325	6/7/2005	1045	33-0430		E. Coli	CFU/100ml	22	no	e
CE01	W1325	7/19/2005	1025	33-0590		E. Coli	CFU/100ml	461	no	--
CE01	W1325	8/16/2005	1023	33-0654		E. Coli	CFU/100ml	155	no	e
CE01	W1325	9/21/2005	1020	33-0742		E. Coli	CFU/100ml	11	no	--
CE01	W1325	5/17/2005	1040	33-0341		Fecal Coliforms	CFU/100ml	10	no	--
CE01	W1325	6/7/2005	1045	33-0430		Fecal Coliforms	CFU/100ml	20	no	e
CE01	W1325	7/19/2005	1025	33-0590		Fecal Coliforms	CFU/100ml	500	no	--
CE01	W1325	8/16/2005	1023	33-0654		Fecal Coliforms	CFU/100ml	140	no	e
CE01	W1325	9/21/2005	1020	33-0742		Fecal Coliforms	CFU/100ml	30	no	--
CE01	W1325	5/17/2005	1040	33-0341		Turbidity	NTU	<0.5	no	--
CE01	W1325	6/8/2005	1405	33-0395		Turbidity	NTU	<0.5	no	--
CE01	W1325	7/20/2005	1308	33-0457		Turbidity	NTU	0.5	no	--
CE01	W1325	8/17/2005	1205	33-0699	33-0700	Turbidity	NTU	<0.5	no	--
CE01	W1325	8/17/2005	1205	33-0700	33-0699	Turbidity	NTU	<0.5	no	--
CE01	W1325	9/20/2005	1115	33-0717	33-0718	Turbidity	NTU	<0.5	no	--
CE01	W1325	9/20/2005	1115	33-0718	33-0717	Turbidity	NTU	<0.5	no	--
CE01	W1325	5/17/2005	1040	33-0341		Apparent color	PCU	<15	no	--
CE01	W1325	6/8/2005	1405	33-0395		Apparent color	PCU	<15	no	--
CE01	W1325	7/20/2005	1308	33-0457		Apparent color	PCU	<15	no	--
CE01	W1325	8/17/2005	1205	33-0699	33-0700	Apparent color	PCU	<15	no	--
CE01	W1325	8/17/2005	1205	33-0700	33-0699	Apparent color	PCU	<15	no	--
CE01	W1325	9/20/2005	1115	33-0717	33-0718	Apparent color	PCU	<15	no	--
CE01	W1325	9/20/2005	1115	33-0718	33-0717	Apparent color	PCU	<15	no	--
CE01	W1325	5/17/2005	1040	33-0341		True Color	PCU	<15	no	--
CE01	W1325	6/8/2005	1405	33-0395		True Color	PCU	**	--	--
CE01	W1325	7/20/2005	1308	33-0457		True Color	PCU	**	--	--
CE01	W1325	8/17/2005	1205	33-0699	33-0700	True Color	PCU	**	--	--
CE01	W1325	8/17/2005	1205	33-0700	33-0699	True Color	PCU	**	--	--
CE01	W1325	9/20/2005	1115	33-0717	33-0718	True Color	PCU	**	--	--
CE01	W1325	9/20/2005	1115	33-0718	33-0717	True Color	PCU	**	--	--
CE01	W1325	5/17/2005	1040	33-0341		Suspended Solids	mg/L	<1.0	no	--
CE01	W1325	6/8/2005	1405	33-0395		Suspended Solids	mg/L	<1.0	no	--
CE01	W1325	7/20/2005	1308	33-0457		Suspended Solids	mg/L	<1.0	no	--
CE01	W1325	8/17/2005	1205	33-0699	33-0700	Suspended Solids	mg/L	<1.0	no	--
CE01	W1325	8/17/2005	1205	33-0700	33-0699	Suspended Solids	mg/L	<1.0	no	--
CE01	W1325	9/20/2005	1115	33-0717	33-0718	Suspended Solids	mg/L	<1.0	no	--
CE01	W1325	9/20/2005	1115	33-0718	33-0717	Suspended Solids	mg/L	<1.0	no	--
CH	W0040	5/17/2005	1035	33-0325	33-0326	Ammonia-N	mg/L	<0.02	no	--

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
CH	W0040	5/17/2005	1040	33-0326	33-0325	Ammonia-N	mg/L	<0.02	no	--
CH	W0040	6/8/2005	1317	33-0394		Ammonia-N	mg/L	<0.02	no	--
CH	W0040	7/20/2005	1043	33-0456		Ammonia-N	mg/L	<0.02	no	--
CH	W0040	8/17/2005	1020	33-0697		Ammonia-N	mg/L	<0.02	no	--
CH	W0040	9/20/2005	950	33-0715		Ammonia-N	mg/L	<0.02	no	--
CH	W0040	5/17/2005	1035	33-0325	33-0326	Total Nitrogen	mg/L	0.060	no	--
CH	W0040	5/17/2005	1040	33-0326	33-0325	Total Nitrogen	mg/L	0.060	no	h
CH	W0040	6/8/2005	1317	33-0394		Total Nitrogen	mg/L	0.048	no	--
CH	W0040	7/20/2005	1043	33-0456		Total Nitrogen	mg/L	0.20	no	--
CH	W0040	8/17/2005	1020	33-0697		Total Nitrogen	mg/L	0.17	no	--
CH	W0040	9/20/2005	950	33-0715		Total Nitrogen	mg/L	0.076	no	--
CH	W0040	5/17/2005	1035	33-0325	33-0326	Total Phosphorus	mg/L	<0.005	no	--
CH	W0040	5/17/2005	1040	33-0326	33-0325	Total Phosphorus	mg/L	<0.005	no	--
CH	W0040	6/8/2005	1317	33-0394		Total Phosphorus	mg/L	<0.005	no	--
CH	W0040	7/20/2005	1043	33-0456		Total Phosphorus	mg/L	0.008	no	--
CH	W0040	8/17/2005	1020	33-0697		Total Phosphorus	mg/L	0.005	no	--
CH	W0040	9/20/2005	950	33-0715		Total Phosphorus	mg/L	<0.005	no	--
CH	W0040	5/17/2005	1035	33-0325	33-0326	E. Coli	CFU/100ml	20	no	--
CH	W0040	5/17/2005	1040	33-0326	33-0325	E. Coli	CFU/100ml	12	no	--
CH	W0040	6/7/2005	1048	33-0416		E. Coli	CFU/100ml	1733	no	--
CH	W0040	7/19/2005	1055	33-0578		E. Coli	CFU/100ml	166	no	--
CH	W0040	8/16/2005	1023	33-0680		E. Coli	CFU/100ml	135	no	e
CH	W0040	9/21/2005	1037	33-0730		E. Coli	CFU/100ml	13	no	--
CH	W0040	5/17/2005	1035	33-0325	33-0326	Fecal Coliforms	CFU/100ml	20	no	--
CH	W0040	5/17/2005	1040	33-0326	33-0325	Fecal Coliforms	CFU/100ml	20	no	--
CH	W0040	6/7/2005	1048	33-0416		Fecal Coliforms	CFU/100ml	2200	no	--
CH	W0040	7/19/2005	1055	33-0578		Fecal Coliforms	CFU/100ml	190	no	--
CH	W0040	8/16/2005	1023	33-0680		Fecal Coliforms	CFU/100ml	120	no	e
CH	W0040	9/21/2005	1037	33-0730		Fecal Coliforms	CFU/100ml	20	no	--
CH	W0040	5/17/2005	1035	33-0325	33-0326	Turbidity	NTU	<0.5	no	--
CH	W0040	5/17/2005	1040	33-0326	33-0325	Turbidity	NTU	<0.5	no	--
CH	W0040	6/8/2005	1317	33-0394		Turbidity	NTU	0.8	no	--
CH	W0040	7/20/2005	1043	33-0456		Turbidity	NTU	<0.5	no	--
CH	W0040	8/17/2005	1020	33-0697		Turbidity	NTU	<0.5	no	--
CH	W0040	9/20/2005	950	33-0715		Turbidity	NTU	<0.5	no	--
CH	W0040	5/17/2005	1035	33-0325	33-0326	Apparent color	PCU	<15	no	--
CH	W0040	5/17/2005	1040	33-0326	33-0325	Apparent color	PCU	18	no	--
CH	W0040	6/8/2005	1317	33-0394		Apparent color	PCU	18	no	--
CH	W0040	7/20/2005	1043	33-0456		Apparent color	PCU	<15	no	--
CH	W0040	8/17/2005	1020	33-0697		Apparent color	PCU	<15	no	--
CH	W0040	9/20/2005	950	33-0715		Apparent color	PCU	<15	no	--
CH	W0040	5/17/2005	1035	33-0325	33-0326	True Color	PCU	<15	no	--
CH	W0040	5/17/2005	1040	33-0326	33-0325	True Color	PCU	15	no	--
CH	W0040	6/8/2005	1317	33-0394		True Color	PCU	<15	no	--
CH	W0040	7/20/2005	1043	33-0456		True Color	PCU	**	--	--

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
CH	W0040	8/17/2005	1020	33-0697		True Color	PCU	**	--	--
CH	W0040	9/20/2005	950	33-0715		True Color	PCU	**	--	--
CH	W0040	5/17/2005	1035	33-0325	33-0326	Suspended Solids	mg/L	<1.0	no	--
CH	W0040	5/17/2005	1040	33-0326	33-0325	Suspended Solids	mg/L	<1.0	no	--
CH	W0040	6/8/2005	1317	33-0394		Suspended Solids	mg/L	1.2	no	--
CH	W0040	7/20/2005	1043	33-0456		Suspended Solids	mg/L	<1.0	no	--
CH	W0040	8/17/2005	1020	33-0697		Suspended Solids	mg/L	<1.0	no	--
CH	W0040	9/20/2005	950	33-0715		Suspended Solids	mg/L	<1.0	no	--
CH8	W1355	5/17/2005	1100	33-0328		E. Coli	CFU/100ml	1	no	--
CH8	W1355	6/7/2005	1108	33-0417		E. Coli	CFU/100ml	65	no	--
CH8	W1355	7/19/2005	1115	33-0579		E. Coli	CFU/100ml	7	no	--
CH8	W1355	8/16/2005	1043	33-0681		E. Coli	CFU/100ml	33	no	--
CH8	W1355	9/21/2005	1102	33-0731		E. Coli	CFU/100ml	15	no	--
CH8	W1355	5/17/2005	1100	33-0328		Fecal Coliforms	CFU/100ml	<10	no	--
CH8	W1355	6/7/2005	1108	33-0417		Fecal Coliforms	CFU/100ml	80	no	--
CH8	W1355	7/19/2005	1115	33-0579		Fecal Coliforms	CFU/100ml	10	no	--
CH8	W1355	8/16/2005	1043	33-0681		Fecal Coliforms	CFU/100ml	50	no	--
CH8	W1355	9/21/2005	1102	33-0731		Fecal Coliforms	CFU/100ml	30	no	--
CK	W0029	5/17/2005	1215	33-0333		Ammonia-N	mg/L	<0.02	no	--
CK	W0029	6/8/2005	1150	33-0393		Ammonia-N	mg/L	<0.02	no	--
CK	W0029	7/20/2005	1134	33-0455		Ammonia-N	mg/L	<0.02	no	--
CK	W0029	8/17/2005	1114	33-0695		Ammonia-N	mg/L	<0.02	no	--
CK	W0029	9/20/2005	1040	33-0713		Ammonia-N	mg/L	<0.02	no	--
CK	W0029	5/17/2005	1215	33-0333		Total Nitrogen	mg/L	0.10	no	--
CK	W0029	6/8/2005	1150	33-0393		Total Nitrogen	mg/L	0.11	no	--
CK	W0029	7/20/2005	1134	33-0455		Total Nitrogen	mg/L	0.27	no	--
CK	W0029	8/17/2005	1114	33-0695		Total Nitrogen	mg/L	0.17	no	--
CK	W0029	9/20/2005	1040	33-0713		Total Nitrogen	mg/L	0.11	no	--
CK	W0029	5/17/2005	1215	33-0333		Total Phosphorus	mg/L	<0.005	no	--
CK	W0029	6/8/2005	1150	33-0393		Total Phosphorus	mg/L	0.007	no	--
CK	W0029	7/20/2005	1134	33-0455		Total Phosphorus	mg/L	0.006	no	--
CK	W0029	8/17/2005	1114	33-0695		Total Phosphorus	mg/L	0.006	no	--
CK	W0029	9/20/2005	1040	33-0713		Total Phosphorus	mg/L	0.005	no	--
CK	W0029	5/17/2005	1215	33-0333		E. Coli	CFU/100ml	1	no	--
CK	W0029	6/7/2005	1231	33-0422		E. Coli	CFU/100ml	46	no	--
CK	W0029	7/19/2005	1242	33-0584		E. Coli	CFU/100ml	71	no	--
CK	W0029	8/16/2005	1157	33-0688		E. Coli	CFU/100ml	58	no	e
CK	W0029	9/21/2005	1237	33-0738		E. Coli	CFU/100ml	19	no	--
CK	W0029	5/17/2005	1215	33-0333		Fecal Coliforms	CFU/100ml	10	no	--
CK	W0029	6/7/2005	1231	33-0422		Fecal Coliforms	CFU/100ml	50	no	--
CK	W0029	7/19/2005	1242	33-0584		Fecal Coliforms	CFU/100ml	140	no	--
CK	W0029	8/16/2005	1157	33-0688		Fecal Coliforms	CFU/100ml	50	no	e
CK	W0029	9/21/2005	1237	33-0738		Fecal Coliforms	CFU/100ml	30	no	--
CK	W0029	5/17/2005	1215	33-0333		Turbidity	NTU	0.5	no	--
CK	W0029	6/8/2005	1150	33-0393		Turbidity	NTU	<0.5	no	--

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
CK	W0029	7/20/2005	1134	33-0455		Turbidity	NTU	<0.5	no	--
CK	W0029	8/17/2005	1114	33-0695		Turbidity	NTU	<0.5	no	--
CK	W0029	9/20/2005	1040	33-0713		Turbidity	NTU	<0.5	no	--
CK	W0029	5/17/2005	1215	33-0333		Apparent color	PCU	<15	no	--
CK	W0029	6/8/2005	1150	33-0393		Apparent color	PCU	17	no	--
CK	W0029	7/20/2005	1134	33-0455		Apparent color	PCU	<15	no	--
CK	W0029	8/17/2005	1114	33-0695		Apparent color	PCU	<15	no	--
CK	W0029	9/20/2005	1040	33-0713		Apparent color	PCU	<15	no	--
CK	W0029	5/17/2005	1215	33-0333		True Color	PCU	<15	no	--
CK	W0029	6/8/2005	1150	33-0393		True Color	PCU	<15	no	--
CK	W0029	7/20/2005	1134	33-0455		True Color	PCU	**	--	--
CK	W0029	8/17/2005	1114	33-0695		True Color	PCU	**	--	--
CK	W0029	9/20/2005	1040	33-0713		True Color	PCU	**	--	--
CK	W0029	5/17/2005	1215	33-0333		Suspended Solids	mg/L	<1.0	no	--
CK	W0029	6/8/2005	1150	33-0393		Suspended Solids	mg/L	<1.0	no	--
CK	W0029	7/20/2005	1134	33-0455		Suspended Solids	mg/L	<1.0	no	--
CK	W0029	8/17/2005	1114	33-0695		Suspended Solids	mg/L	<1.0	no	--
CK	W0029	9/20/2005	1040	33-0713		Suspended Solids	mg/L	<1.0	no	--
CL	W0026	5/17/2005	1225	33-0332		Ammonia-N	mg/L	<0.02	no	--
CL	W0026	6/8/2005	1120	33-0390	33-0391	Ammonia-N	mg/L	<0.02	no	--
CL	W0026	6/8/2005	1120	33-0391	33-0390	Ammonia-N	mg/L	<0.02	no	--
CL	W0026	7/20/2005	1125	33-0452	33-0453	Ammonia-N	mg/L	<0.02	no	m
CL	W0026	7/20/2005	1125	33-0453	33-0452	Ammonia-N	mg/L	<0.02	no	m
CL	W0026	8/17/2005	1056	33-0693		Ammonia-N	mg/L	<0.02	no	--
CL	W0026	9/20/2005	1023	33-0711		Ammonia-N	mg/L	<0.02	no	--
CL	W0026	5/17/2005	1225	33-0332		Total Nitrogen	mg/L	0.36	no	--
CL	W0026	6/8/2005	1120	33-0390	33-0391	Total Nitrogen	mg/L	0.33	no	--
CL	W0026	6/8/2005	1120	33-0391	33-0390	Total Nitrogen	mg/L	0.30	no	--
CL	W0026	7/20/2005	1125	33-0452	33-0453	Total Nitrogen	mg/L	0.48	no	m
CL	W0026	7/20/2005	1125	33-0453	33-0452	Total Nitrogen	mg/L	0.48	no	m
CL	W0026	8/17/2005	1056	33-0693		Total Nitrogen	mg/L	0.52	no	--
CL	W0026	9/20/2005	1023	33-0711		Total Nitrogen	mg/L	0.46	no	--
CL	W0026	5/17/2005	1225	33-0332		Total Phosphorus	mg/L	0.006	no	--
CL	W0026	6/8/2005	1120	33-0390	33-0391	Total Phosphorus	mg/L	0.008	no	--
CL	W0026	6/8/2005	1120	33-0391	33-0390	Total Phosphorus	mg/L	0.007	no	--
CL	W0026	7/20/2005	1125	33-0452	33-0453	Total Phosphorus	mg/L	<0.005	no	m
CL	W0026	7/20/2005	1125	33-0453	33-0452	Total Phosphorus	mg/L	0.007	no	m
CL	W0026	8/17/2005	1056	33-0693		Total Phosphorus	mg/L	0.007	no	--
CL	W0026	9/20/2005	1023	33-0711		Total Phosphorus	mg/L	<0.005	no	--
CL	W0026	5/17/2005	1225	33-0332		E. Coli	CFU/100ml	5	no	--
CL	W0026	6/7/2005	1228	33-0421		E. Coli	CFU/100ml	201	no	--
CL	W0026	7/19/2005	1240	33-0583		E. Coli	CFU/100ml	120	no	--
CL	W0026	8/16/2005	1149	33-0687		E. Coli	CFU/100ml	173	no	--
CL	W0026	9/21/2005	1225	33-0737		E. Coli	CFU/100ml	20	no	--
CL	W0026	5/17/2005	1225	33-0332		Fecal Coliforms	CFU/100ml	<10	no	--

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
CL	W0026	6/7/2005	1228	33-0421		Fecal Coliforms	CFU/100ml	250	no	--
CL	W0026	7/19/2005	1240	33-0583		Fecal Coliforms	CFU/100ml	160	no	--
CL	W0026	8/16/2005	1149	33-0687		Fecal Coliforms	CFU/100ml	230	no	--
CL	W0026	9/21/2005	1225	33-0737		Fecal Coliforms	CFU/100ml	30	no	--
CL	W0026	5/17/2005	1225	33-0332		Turbidity	NTU	<0.5	no	--
CL	W0026	6/8/2005	1120	33-0390	33-0391	Turbidity	NTU	1.0	no	--
CL	W0026	6/8/2005	1120	33-0391	33-0390	Turbidity	NTU	1.1	no	--
CL	W0026	7/20/2005	1125	33-0452	33-0453	Turbidity	NTU	<0.5	no	m
CL	W0026	7/20/2005	1125	33-0453	33-0452	Turbidity	NTU	0.9	no	m
CL	W0026	8/17/2005	1056	33-0693		Turbidity	NTU	<0.5	no	--
CL	W0026	9/20/2005	1023	33-0711		Turbidity	NTU	<0.5	no	--
CL	W0026	5/17/2005	1225	33-0332		Apparent color	PCU	<15	no	--
CL	W0026	6/8/2005	1120	33-0390	33-0391	Apparent color	PCU	<15	no	--
CL	W0026	6/8/2005	1120	33-0391	33-0390	Apparent color	PCU	<15	no	--
CL	W0026	7/20/2005	1125	33-0452	33-0453	Apparent color	PCU	<15	no	m
CL	W0026	7/20/2005	1125	33-0453	33-0452	Apparent color	PCU	<15	no	m
CL	W0026	8/17/2005	1056	33-0693		Apparent color	PCU	<15	no	--
CL	W0026	9/20/2005	1023	33-0711		Apparent color	PCU	<15	no	--
CL	W0026	5/17/2005	1225	33-0332		True Color	PCU	<15	no	--
CL	W0026	6/8/2005	1120	33-0390	33-0391	True Color	PCU	**	--	--
CL	W0026	6/8/2005	1120	33-0391	33-0390	True Color	PCU	**	--	--
CL	W0026	7/20/2005	1125	33-0452	33-0453	True Color	PCU	**	--	--
CL	W0026	7/20/2005	1125	33-0453	33-0452	True Color	PCU	**	--	--
CL	W0026	8/17/2005	1056	33-0693		True Color	PCU	**	--	--
CL	W0026	9/20/2005	1023	33-0711		True Color	PCU	**	--	--
CL	W0026	5/17/2005	1225	33-0332		Suspended Solids	mg/L	<1.0	no	--
CL	W0026	6/8/2005	1120	33-0390	33-0391	Suspended Solids	mg/L	1.8	no	--
CL	W0026	6/8/2005	1120	33-0391	33-0390	Suspended Solids	mg/L	1.8	no	--
CL	W0026	7/20/2005	1125	33-0452	33-0453	Suspended Solids	mg/L	<1.0	no	m
CL	W0026	7/20/2005	1125	33-0453	33-0452	Suspended Solids	mg/L	<1.0	no	m
CL	W0026	8/17/2005	1056	33-0693		Suspended Solids	mg/L	<1.0	no	--
CL	W0026	9/20/2005	1023	33-0711		Suspended Solids	mg/L	<1.0	no	--
CL02A	W1359	5/17/2005	1250	33-0334		E. Coli	CFU/100ml	6	no	--
CL02A	W1359	6/7/2005	1210	33-0423		E. Coli	CFU/100ml	64	no	--
CL02A	W1359	7/19/2005	1220	33-0582		E. Coli	CFU/100ml	115	no	--
CL02A	W1359	8/16/2005	1122	33-0686		E. Coli	CFU/100ml	119	no	--
CL02A	W1359	9/21/2005	1155	33-0733		E. Coli	CFU/100ml	38	no	--
CL02A	W1359	5/17/2005	1250	33-0334		Fecal Coliforms	CFU/100ml	10	no	--
CL02A	W1359	6/7/2005	1210	33-0423		Fecal Coliforms	CFU/100ml	80	no	--
CL02A	W1359	7/19/2005	1220	33-0582		Fecal Coliforms	CFU/100ml	140	no	--
CL02A	W1359	8/16/2005	1122	33-0686		Fecal Coliforms	CFU/100ml	180	no	--
CL02A	W1359	9/21/2005	1155	33-0733		Fecal Coliforms	CFU/100ml	40	no	--
CP01	W1362	5/17/2005	1020	33-0340		Ammonia-N	mg/L	<0.02	no	--
CP01	W1362	6/8/2005	1430	33-0396		Ammonia-N	mg/L	<0.02	no	--
CP01	W1362	7/20/2005	1355	33-0458		Ammonia-N	mg/L	<0.02	no	--

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
CP01	W1362	8/17/2005	1228	33-0703		Ammonia-N	mg/L	<0.02	no	--
CP01	W1362	9/20/2005	1145	33-0721		Ammonia-N	mg/L	<0.02	no	--
CP01	W1362	5/17/2005	1020	33-0340		Total Nitrogen	mg/L	0.12	no	--
CP01	W1362	6/8/2005	1430	33-0396		Total Nitrogen	mg/L	0.28	no	--
CP01	W1362	7/20/2005	1355	33-0458		Total Nitrogen	mg/L	0.25	no	--
CP01	W1362	8/17/2005	1228	33-0703		Total Nitrogen	mg/L	0.22	no	--
CP01	W1362	9/20/2005	1145	33-0721		Total Nitrogen	mg/L	0.21	no	--
CP01	W1362	5/17/2005	1020	33-0340		Total Phosphorus	mg/L	0.007	no	--
CP01	W1362	6/8/2005	1430	33-0396		Total Phosphorus	mg/L	0.013	no	--
CP01	W1362	7/20/2005	1355	33-0458		Total Phosphorus	mg/L	0.015	no	--
CP01	W1362	8/17/2005	1228	33-0703		Total Phosphorus	mg/L	0.009	no	--
CP01	W1362	9/20/2005	1145	33-0721		Total Phosphorus	mg/L	0.007	no	--
CP01	W1362	5/17/2005	1020	33-0340		E. Coli	CFU/100ml	<1	no	--
CP01	W1362	6/7/2005	1008	33-0429		E. Coli	CFU/100ml	6	no	--
CP01	W1362	7/19/2005	1005	33-0589		E. Coli	CFU/100ml	1120	no	e
CP01	W1362	8/16/2005	956	33-0653		E. Coli	CFU/100ml	76	no	--
CP01	W1362	9/21/2005	1005	33-0740		E. Coli	CFU/100ml	23	no	e
CP01	W1362	5/17/2005	1020	33-0340		Fecal Coliforms	CFU/100ml	10	no	--
CP01	W1362	6/7/2005	1008	33-0429		Fecal Coliforms	CFU/100ml	<10	no	--
CP01	W1362	7/19/2005	1005	33-0589		Fecal Coliforms	CFU/100ml	1100	no	e
CP01	W1362	8/16/2005	956	33-0653		Fecal Coliforms	CFU/100ml	120	no	--
CP01	W1362	9/21/2005	1005	33-0740		Fecal Coliforms	CFU/100ml	10	no	e
CP01	W1362	5/17/2005	1020	33-0340		Turbidity	NTU	0.7	no	--
CP01	W1362	6/8/2005	1430	33-0396		Turbidity	NTU	0.7	no	--
CP01	W1362	7/20/2005	1355	33-0458		Turbidity	NTU	1.0	no	--
CP01	W1362	8/17/2005	1228	33-0703		Turbidity	NTU	1.0	no	--
CP01	W1362	9/20/2005	1145	33-0721		Turbidity	NTU	<0.5	no	--
CP01	W1362	5/17/2005	1020	33-0340		Apparent color	PCU	17	no	--
CP01	W1362	6/8/2005	1430	33-0396		Apparent color	PCU	25	no	--
CP01	W1362	7/20/2005	1355	33-0458		Apparent color	PCU	45	no	--
CP01	W1362	8/17/2005	1228	33-0703		Apparent color	PCU	35	no	--
CP01	W1362	9/20/2005	1145	33-0721		Apparent color	PCU	20	no	--
CP01	W1362	5/17/2005	1020	33-0340		True Color	PCU	<15	no	--
CP01	W1362	6/8/2005	1430	33-0396		True Color	PCU	22	no	--
CP01	W1362	7/20/2005	1355	33-0458		True Color	PCU	40	no	--
CP01	W1362	8/17/2005	1228	33-0703		True Color	PCU	25	no	--
CP01	W1362	9/20/2005	1145	33-0721		True Color	PCU	16	no	--
CP01	W1362	5/17/2005	1020	33-0340		Suspended Solids	mg/L	<1.0	no	--
CP01	W1362	6/8/2005	1430	33-0396		Suspended Solids	mg/L	1.1	no	--
CP01	W1362	7/20/2005	1355	33-0458		Suspended Solids	mg/L	<1.0	no	--
CP01	W1362	8/17/2005	1228	33-0703		Suspended Solids	mg/L	<1.0	no	--
CP01	W1362	9/20/2005	1145	33-0721		Suspended Solids	mg/L	<1.0	no	--
CR01	W1354	5/17/2005	1015	33-0324		E. Coli	CFU/100ml	<1	no	--
CR01	W1354	6/7/2005	1035	33-0415		E. Coli	CFU/100ml	69	no	--
CR01	W1354	7/19/2005	1040	33-0577		E. Coli	CFU/100ml	23	no	e

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
CR01	W1354	8/16/2005	1010	33-0679		E. Coli	CFU/100ml	82	no	--
CR01	W1354	9/21/2005	1015	33-0729		E. Coli	CFU/100ml	11	no	e
CR01	W1354	5/17/2005	1015	33-0324		Fecal Coliforms	CFU/100ml	<10	no	--
CR01	W1354	6/7/2005	1035	33-0415		Fecal Coliforms	CFU/100ml	80	no	--
CR01	W1354	7/19/2005	1040	33-0577		Fecal Coliforms	CFU/100ml	20	no	e
CR01	W1354	8/16/2005	1010	33-0679		Fecal Coliforms	CFU/100ml	100	no	--
CR01	W1354	9/21/2005	1015	33-0729		Fecal Coliforms	CFU/100ml	<10	no	e
DE01	W1353	5/17/2005	945	33-0322		E. Coli	CFU/100ml	5	no	--
DE01	W1353	6/7/2005	1010	33-0420		E. Coli	CFU/100ml	28	no	--
DE01	W1353	7/19/2005	1011	33-0575		E. Coli	CFU/100ml	10	no	--
DE01	W1353	8/16/2005	950	33-0677		E. Coli	CFU/100ml	15	no	e
DE01	W1353	9/21/2005	945	33-0727		E. Coli	CFU/100ml	20	no	--
DE01	W1353	5/17/2005	945	33-0322		Fecal Coliforms	CFU/100ml	20	no	--
DE01	W1353	6/7/2005	1010	33-0420		Fecal Coliforms	CFU/100ml	40	no	--
DE01	W1353	7/19/2005	1011	33-0575		Fecal Coliforms	CFU/100ml	30	no	--
DE01	W1353	8/16/2005	950	33-0677		Fecal Coliforms	CFU/100ml	10	no	e
DE01	W1353	9/21/2005	945	33-0727		Fecal Coliforms	CFU/100ml	30	no	--
DG01	W1364	5/17/2005	1200	33-0346		E. Coli	CFU/100ml	4	no	--
DG01	W1364	6/7/2005	1235	33-0437		E. Coli	CFU/100ml	157	no	--
DG01	W1364	7/19/2005	1200	33-0597		E. Coli	CFU/100ml	326	no	--
DG01	W1364	8/16/2005	1215	33-0661		E. Coli	CFU/100ml	1300	no	--
DG01	W1364	9/21/2005	1155	33-0749		E. Coli	CFU/100ml	33	no	--
DG01	W1364	5/17/2005	1200	33-0346		Fecal Coliforms	CFU/100ml	10	no	--
DG01	W1364	6/7/2005	1235	33-0437		Fecal Coliforms	CFU/100ml	170	no	--
DG01	W1364	7/19/2005	1200	33-0597		Fecal Coliforms	CFU/100ml	370	no	--
DG01	W1364	8/16/2005	1215	33-0661		Fecal Coliforms	CFU/100ml	1600	no	--
DG01	W1364	9/21/2005	1155	33-0749		Fecal Coliforms	CFU/100ml	40	no	--
DR03	W0761	5/17/2005	1150	33-0331		E. Coli	CFU/100ml	2	no	--
DR03	W0761	6/7/2005	930	33-0413		E. Coli	CFU/100ml	272	no	--
DR03	W0761	7/19/2005	935	33-0573		E. Coli	CFU/100ml	32	no	e
DR03	W0761	8/16/2005	921	33-0675		E. Coli	CFU/100ml	108	no	--
DR03	W0761	9/21/2005	905	33-0725		E. Coli	CFU/100ml	40	no	--
DR03	W0761	5/17/2005	1150	33-0331		Fecal Coliforms	CFU/100ml	<10	no	--
DR03	W0761	6/7/2005	930	33-0413		Fecal Coliforms	CFU/100ml	310	no	--
DR03	W0761	7/19/2005	935	33-0573		Fecal Coliforms	CFU/100ml	30	no	e
DR03	W0761	8/16/2005	921	33-0675		Fecal Coliforms	CFU/100ml	130	no	--
DR03	W0761	9/21/2005	905	33-0725		Fecal Coliforms	CFU/100ml	70	no	--
DR10	W0757	5/17/2005	915	33-0309		E. Coli	CFU/100ml	40	no	--
DR10	W0757	6/7/2005	918	33-0398		E. Coli	CFU/100ml	777	no	--
DR10	W0757	7/19/2005	916	33-0598		E. Coli	CFU/100ml	2909	no	--
DR10	W0757	8/16/2005	910	33-0662		E. Coli	CFU/100ml	387	no	--
DR10	W0757	9/21/2005	918	33-0750		E. Coli	CFU/100ml	132	no	--
DR10	W0757	5/17/2005	915	33-0309		Fecal Coliforms	CFU/100ml	60	no	--
DR10	W0757	6/7/2005	918	33-0398		Fecal Coliforms	CFU/100ml	840	no	--
DR10	W0757	7/19/2005	916	33-0598		Fecal Coliforms	CFU/100ml	3600	no	--

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
DR10	W0757	8/16/2005	910	33-0662		Fecal Coliforms	CFU/100ml	450	no	--
DR10	W0757	9/21/2005	918	33-0750		Fecal Coliforms	CFU/100ml	150	no	--
EBNR01	W1347	5/17/2005	1203	33-0314	33-0315	Ammonia-N	mg/L	<0.02	no	--
EBNR01	W1347	5/17/2005	1203	33-0315	33-0314	Ammonia-N	mg/L	<0.02	no	--
EBNR01	W1347	6/8/2005	1040	33-0389		Ammonia-N	mg/L	<0.02	no	--
EBNR01	W1347	7/20/2005	940	33-0451		Ammonia-N	mg/L	<0.02	no	--
EBNR01	W1347	8/17/2005	940	33-0691		Ammonia-N	mg/L	<0.02	no	--
EBNR01	W1347	9/20/2005	855	33-0709		Ammonia-N	mg/L	<0.02	no	--
EBNR01	W1347	5/17/2005	1203	33-0314	33-0315	Total Nitrogen	mg/L	0.19	no	--
EBNR01	W1347	5/17/2005	1203	33-0315	33-0314	Total Nitrogen	mg/L	0.18	no	--
EBNR01	W1347	6/8/2005	1040	33-0389		Total Nitrogen	mg/L	0.22	no	--
EBNR01	W1347	7/20/2005	940	33-0451		Total Nitrogen	mg/L	0.31	no	--
EBNR01	W1347	8/17/2005	940	33-0691		Total Nitrogen	mg/L	0.38	no	--
EBNR01	W1347	9/20/2005	855	33-0709		Total Nitrogen	mg/L	0.27	no	--
EBNR01	W1347	5/17/2005	1203	33-0314	33-0315	Total Phosphorus	mg/L	0.008	no	--
EBNR01	W1347	5/17/2005	1203	33-0315	33-0314	Total Phosphorus	mg/L	0.005	no	--
EBNR01	W1347	6/8/2005	1040	33-0389		Total Phosphorus	mg/L	0.011	no	--
EBNR01	W1347	7/20/2005	940	33-0451		Total Phosphorus	mg/L	0.007	no	--
EBNR01	W1347	8/17/2005	940	33-0691		Total Phosphorus	mg/L	0.011	no	--
EBNR01	W1347	9/20/2005	855	33-0709		Total Phosphorus	mg/L	<0.005	no	--
EBNR01	W1347	5/17/2005	1203	33-0314	33-0315	E. coli	CFU/100ml	28	no	--
EBNR01	W1347	5/17/2005	1203	33-0315	33-0314	E. Coli	CFU/100ml	21	no	--
EBNR01	W1347	6/7/2005	1100	33-0403	33-0404	E. Coli	CFU/100ml	201	no	e
EBNR01	W1347	6/7/2005	1100	33-0404	33-0403	E. Coli	CFU/100ml	179	no	--
EBNR01	W1347	7/19/2005	1045	33-0603	33-0604	E. Coli	CFU/100ml	548	no	--
EBNR01	W1347	7/19/2005	1045	33-0604	33-0603	E. Coli	CFU/100ml	411	no	--
EBNR01	W1347	8/16/2005	1050	33-0667	33-0668	E. Coli	CFU/100ml	411	no	--
EBNR01	W1347	8/16/2005	1045	33-0668	33-0667	E. Coli	CFU/100ml	461	no	--
EBNR01	W1347	9/21/2005	1047	33-0755	33-0756	E. Coli	CFU/100ml	167	no	--
EBNR01	W1347	9/21/2005	1047	33-0756	33-0755	E. Coli	CFU/100ml	88	no	--
EBNR01	W1347	5/17/2005	1203	33-0314	33-0315	Fecal coliforms	CFU/100ml	30	no	--
EBNR01	W1347	5/17/2005	1203	33-0315	33-0314	Fecal Coliforms	CFU/100ml	40	no	--
EBNR01	W1347	6/7/2005	1100	33-0403	33-0404	Fecal Coliforms	CFU/100ml	200	no	e
EBNR01	W1347	6/7/2005	1100	33-0404	33-0403	Fecal Coliforms	CFU/100ml	210	no	--
EBNR01	W1347	7/19/2005	1045	33-0603	33-0604	Fecal Coliforms	CFU/100ml	630	no	--
EBNR01	W1347	7/19/2005	1045	33-0604	33-0603	Fecal Coliforms	CFU/100ml	510	no	--
EBNR01	W1347	8/16/2005	1050	33-0667	33-0668	Fecal Coliforms	CFU/100ml	470	no	--
EBNR01	W1347	8/16/2005	1045	33-0668	33-0667	Fecal Coliforms	CFU/100ml	510	no	--
EBNR01	W1347	9/21/2005	1047	33-0755	33-0756	Fecal Coliforms	CFU/100ml	210	no	--
EBNR01	W1347	9/21/2005	1047	33-0756	33-0755	Fecal Coliforms	CFU/100ml	100	no	--
EBNR01	W1347	5/17/2005	1203	33-0314	33-0315	Turbidity	NTU	<0.5	no	--
EBNR01	W1347	5/17/2005	1203	33-0315	33-0314	Turbidity	NTU	<0.5	no	--
EBNR01	W1347	6/8/2005	1040	33-0389		Turbidity	NTU	0.5	no	--
EBNR01	W1347	7/20/2005	940	33-0451		Turbidity	NTU	1.0	no	--
EBNR01	W1347	8/17/2005	940	33-0691		Turbidity	NTU	0.8	no	--

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Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
EBNR01	W1347	9/20/2005	855	33-0709		Turbidity	NTU	<0.5	no	--
EBNR01	W1347	5/17/2005	1203	33-0314	33-0315	apparent color	PCU	<15	no	--
EBNR01	W1347	5/17/2005	1203	33-0315	33-0314	Apparent color	PCU	<15	no	--
EBNR01	W1347	6/8/2005	1040	33-0389		Apparent color	PCU	22	no	--
EBNR01	W1347	7/20/2005	940	33-0451		Apparent color	PCU	20	no	--
EBNR01	W1347	8/17/2005	940	33-0691		Apparent color	PCU	20	no	--
EBNR01	W1347	9/20/2005	855	33-0709		Apparent color	PCU	<15	no	--
EBNR01	W1347	5/17/2005	1203	33-0314	33-0315	true color	PCU	<15	no	--
EBNR01	W1347	5/17/2005	1203	33-0315	33-0314	True Color	PCU	<15	no	--
EBNR01	W1347	6/8/2005	1040	33-0389		True Color	PCU	<15	no	--
EBNR01	W1347	7/20/2005	940	33-0451		True Color	PCU	<15	no	--
EBNR01	W1347	8/17/2005	940	33-0691		True Color	PCU	20	no	--
EBNR01	W1347	9/20/2005	855	33-0709		True Color	PCU	**	--	--
EBNR01	W1347	5/17/2005	1203	33-0314	33-0315	Suspended Solids	mg/L	<1.0	no	--
EBNR01	W1347	5/17/2005	1203	33-0315	33-0314	Suspended Solids	mg/L	<1.0	no	--
EBNR01	W1347	6/8/2005	1040	33-0389		Suspended Solids	mg/L	1.5	no	--
EBNR01	W1347	7/20/2005	940	33-0451		Suspended Solids	mg/L	1.2	no	--
EBNR01	W1347	8/17/2005	940	33-0691		Suspended Solids	mg/L	<1.0	no	--
EBNR01	W1347	9/20/2005	855	33-0709		Suspended Solids	mg/L	<1.0	no	--
FOU01	W1351	5/17/2005	1050	33-0320		E. Coli	CFU/100ml	<1	no	--
FOU01	W1351	6/7/2005	1205	33-0409		E. Coli	CFU/100ml	45	no	--
FOU01	W1351	7/19/2005	1134	33-0609		E. Coli	CFU/100ml	24	no	--
FOU01	W1351	8/16/2005	1145	33-0673		E. Coli	CFU/100ml	25	no	--
FOU01	W1351	9/21/2005	1129	33-0761		E. Coli	CFU/100ml	33	no	--
FOU01	W1351	5/17/2005	1050	33-0320		Fecal Coliforms	CFU/100ml	<10	no	--
FOU01	W1351	6/7/2005	1205	33-0409		Fecal Coliforms	CFU/100ml	60	no	--
FOU01	W1351	7/19/2005	1134	33-0609		Fecal Coliforms	CFU/100ml	90	no	--
FOU01	W1351	8/16/2005	1145	33-0673		Fecal Coliforms	CFU/100ml	60	no	--
FOU01	W1351	9/21/2005	1129	33-0761		Fecal Coliforms	CFU/100ml	40	no	--
GR	W0005	5/17/2005	932	33-0310		E. Coli	CFU/100ml	49	no	--
GR	W0005	6/7/2005	930	33-0399		E. Coli	CFU/100ml	1414	no	--
GR	W0005	7/19/2005	929	33-0599		E. Coli	CFU/100ml	2481	no	--
GR	W0005	8/16/2005	925	33-0663		E. Coli	CFU/100ml	770	no	--
GR	W0005	9/21/2005	930	33-0751		E. Coli	CFU/100ml	2755	no	--
GR	W0005	5/17/2005	932	33-0310		Fecal Coliforms	CFU/100ml	70	no	--
GR	W0005	6/7/2005	930	33-0399		Fecal Coliforms	CFU/100ml	1800	no	--
GR	W0005	7/19/2005	929	33-0599		Fecal Coliforms	CFU/100ml	3300	no	--
GR	W0005	8/16/2005	925	33-0663		Fecal Coliforms	CFU/100ml	860	no	--
GR	W0005	9/21/2005	930	33-0751		Fecal Coliforms	CFU/100ml	3300	no	--
GR07	W0007	5/17/2005	1028	33-0313		E. Coli	CFU/100ml	2	no	--
GR07	W0007	6/7/2005	1045	33-0402		E. Coli	CFU/100ml	32	no	--
GR07	W0007	7/19/2005	1026	33-0602		E. Coli	CFU/100ml	108	no	--
GR07	W0007	8/16/2005	1025	33-0666		E. Coli	CFU/100ml	157	no	--
GR07	W0007	9/21/2005	1031	33-0754		E. Coli	CFU/100ml	2	no	--
GR07	W0007	5/17/2005	1028	33-0313		Fecal Coliforms	CFU/100ml	<10	no	--

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
GR07	W0007	6/7/2005	1045	33-0402		Fecal Coliforms	CFU/100ml	40	no	--
GR07	W0007	7/19/2005	1026	33-0602		Fecal Coliforms	CFU/100ml	140	no	--
GR07	W0007	8/16/2005	1025	33-0666		Fecal Coliforms	CFU/100ml	160	no	--
GR07	W0007	9/21/2005	1031	33-0754		Fecal Coliforms	CFU/100ml	10	no	--
HI01	W1346	5/17/2005	1003	33-0312		E. Coli	CFU/100ml	93	no	--
HI01	W1346	6/7/2005	1015	33-0401		E. Coli	CFU/100ml	291	no	--
HI01	W1346	7/19/2005	956	33-0601		E. Coli	CFU/100ml	921	no	--
HI01	W1346	8/16/2005	1002	33-0665		E. Coli	CFU/100ml	210	no	e
HI01	W1346	9/21/2005	1004	33-0753		E. Coli	CFU/100ml	10	no	--
HI01	W1346	5/17/2005	1003	33-0312		Fecal Coliforms	CFU/100ml	110	no	--
HI01	W1346	6/7/2005	1015	33-0401		Fecal Coliforms	CFU/100ml	350	no	--
HI01	W1346	7/19/2005	956	33-0601		Fecal Coliforms	CFU/100ml	1100	no	--
HI01	W1346	8/16/2005	1002	33-0665		Fecal Coliforms	CFU/100ml	200	no	e
HI01	W1346	9/21/2005	1004	33-0753		Fecal Coliforms	CFU/100ml	10	no	--
LD	W0002	5/17/2005	930	33-0336		E. Coli	CFU/100ml	37	no	--
LD	W0002	6/7/2005	915	33-0427		E. Coli	CFU/100ml	435	no	--
LD	W0002	7/19/2005	928	33-0587		E. Coli	CFU/100ml	2046	no	--
LD	W0002	8/16/2005	904	33-0651		E. Coli	CFU/100ml	770	no	--
LD	W0002	9/21/2005	928	33-0739		E. Coli	CFU/100ml	9	no	--
LD	W0002	5/17/2005	930	33-0336		Fecal Coliforms	CFU/100ml	50	no	--
LD	W0002	6/7/2005	915	33-0427		Fecal Coliforms	CFU/100ml	520	no	--
LD	W0002	7/19/2005	928	33-0587		Fecal Coliforms	CFU/100ml	2800	no	--
LD	W0002	8/16/2005	904	33-0651		Fecal Coliforms	CFU/100ml	790	no	--
LD	W0002	9/21/2005	928	33-0739		Fecal Coliforms	CFU/100ml	10	no	--
MB01	W1356	5/17/2005	1140	33-0330		E. Coli	CFU/100ml	1	no	--
MB01	W1356	6/7/2005	945	33-0419		E. Coli	CFU/100ml	107	no	e
MB01	W1356	7/19/2005	950	33-0574		E. Coli	CFU/100ml	113	no	--
MB01	W1356	8/16/2005	931	33-0676		E. Coli	CFU/100ml	25	no	--
MB01	W1356	9/21/2005	922	33-0726		E. Coli	CFU/100ml	10	no	e
MB01	W1356	5/17/2005	1140	33-0330		Fecal Coliforms	CFU/100ml	<10	no	--
MB01	W1356	6/7/2005	945	33-0419		Fecal Coliforms	CFU/100ml	100	no	e
MB01	W1356	7/19/2005	950	33-0574		Fecal Coliforms	CFU/100ml	160	no	--
MB01	W1356	8/16/2005	931	33-0676		Fecal Coliforms	CFU/100ml	30	no	--
MB01	W1356	9/21/2005	922	33-0726		Fecal Coliforms	CFU/100ml	<10	no	e
NR03A	W1352	5/17/2005	1151	33-0321		E. Coli	CFU/100ml	26	no	--
NR03A	W1352	6/7/2005	1215	33-0410		E. Coli	CFU/100ml	248	no	--
NR03A	W1352	7/19/2005	1201	33-0610		E. Coli	CFU/100ml	448	no	--
NR03A	W1352	8/16/2005	1155	33-0674		E. Coli	CFU/100ml	770	no	--
NR03A	W1352	9/21/2005	1147	33-0762		E. Coli	CFU/100ml	181	no	--
NR03A	W1352	5/17/2005	1151	33-0321		Fecal Coliforms	CFU/100ml	30	no	--
NR03A	W1352	6/7/2005	1215	33-0410		Fecal Coliforms	CFU/100ml	310	no	--
NR03A	W1352	7/19/2005	1201	33-0610		Fecal Coliforms	CFU/100ml	610	no	--
NR03A	W1352	8/16/2005	1155	33-0674		Fecal Coliforms	CFU/100ml	840	no	--
NR03A	W1352	9/21/2005	1147	33-0762		Fecal Coliforms	CFU/100ml	210	no	--
PE	W0044	5/17/2005	1000	33-0323		E. Coli	CFU/100ml	<1	no	--

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Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
PE	W0044	6/7/2005	1018	33-0414		E. Coli	CFU/100ml	46	no	e
PE	W0044	7/19/2005	1025	33-0576		E. Coli	CFU/100ml	<1	no	--
PE	W0044	8/16/2005	957	33-0678		E. Coli	CFU/100ml	25	no	--
PE	W0044	9/21/2005	1000	33-0728		E. Coli	CFU/100ml	2	no	--
PE	W0044	5/17/2005	1000	33-0323		Fecal Coliforms	CFU/100ml	<10	no	--
PE	W0044	6/7/2005	1018	33-0414		Fecal Coliforms	CFU/100ml	40	no	e
PE	W0044	7/19/2005	1025	33-0576		Fecal Coliforms	CFU/100ml	<10	no	--
PE	W0044	8/16/2005	957	33-0678		Fecal Coliforms	CFU/100ml	40	no	--
PE	W0044	9/21/2005	1000	33-0728		Fecal Coliforms	CFU/100ml	<10	no	--
PL01	W1361	5/17/2005	1003	33-0337	33-0338	Ammonia-N	mg/L	<0.02	no	--
PL01	W1361	5/17/2005	1003	33-0338	33-0337	Ammonia-N	mg/L	<0.02	no	--
PL01	W1361	6/8/2005	1500	33-0397		Ammonia-N	mg/L	<0.02	no	--
PL01	W1361	7/20/2005	1335	33-0459		Ammonia-N	mg/L	0.03	no	--
PL01	W1361	8/17/2005	1250	33-0705		Ammonia-N	mg/L	<0.02	no	--
PL01	W1361	9/20/2005	1205	33-0723		Ammonia-N	mg/L	0.02	no	--
PL01	W1361	5/17/2005	1003	33-0337	33-0338	Total Nitrogen	mg/L	0.11	no	--
PL01	W1361	5/17/2005	1003	33-0338	33-0337	Total Nitrogen	mg/L	0.11	no	--
PL01	W1361	6/8/2005	1500	33-0397		Total Nitrogen	mg/L	0.24	no	--
PL01	W1361	7/20/2005	1335	33-0459		Total Nitrogen	mg/L	0.27	no	--
PL01	W1361	8/17/2005	1250	33-0705		Total Nitrogen	mg/L	0.20	no	--
PL01	W1361	9/20/2005	1205	33-0723		Total Nitrogen	mg/L	0.18	no	--
PL01	W1361	5/17/2005	1003	33-0337	33-0338	Total Phosphorus	mg/L	0.009	no	--
PL01	W1361	5/17/2005	1003	33-0338	33-0337	Total Phosphorus	mg/L	0.009	no	--
PL01	W1361	6/8/2005	1500	33-0397		Total Phosphorus	mg/L	0.009	no	--
PL01	W1361	7/20/2005	1335	33-0459		Total Phosphorus	mg/L	0.021	no	--
PL01	W1361	8/17/2005	1250	33-0705		Total Phosphorus	mg/L	0.007	no	--
PL01	W1361	9/20/2005	1205	33-0723		Total Phosphorus	mg/L	0.008	no	--
PL01	W1361	5/17/2005	1003	33-0337	33-0338	E. Coli	CFU/100ml	7	no	--
PL01	W1361	5/17/2005	1003	33-0338	33-0337	E. Coli	CFU/100ml	11	no	e
PL01	W1361	6/7/2005	955	33-0428		E. Coli	CFU/100ml	87	no	--
PL01	W1361	7/19/2005	953	33-0588		E. Coli	CFU/100ml	1414	no	--
PL01	W1361	8/16/2005	940	33-0652		E. Coli	CFU/100ml	185	no	--
PL01	W1361	9/21/2005	955	33-0741		E. Coli	CFU/100ml	18	no	--
PL01	W1361	5/17/2005	1003	33-0337	33-0338	Fecal Coliforms	CFU/100ml	<10	no	--
PL01	W1361	5/17/2005	1003	33-0338	33-0337	Fecal Coliforms	CFU/100ml	10	no	e
PL01	W1361	6/7/2005	955	33-0428		Fecal Coliforms	CFU/100ml	100	no	--
PL01	W1361	7/19/2005	953	33-0588		Fecal Coliforms	CFU/100ml	1500	no	--
PL01	W1361	8/16/2005	940	33-0652		Fecal Coliforms	CFU/100ml	190	no	--
PL01	W1361	9/21/2005	955	33-0741		Fecal Coliforms	CFU/100ml	20	no	--
PL01	W1361	5/17/2005	1003	33-0337	33-0338	Turbidity	NTU	1.2	no	--
PL01	W1361	5/17/2005	1003	33-0338	33-0337	Turbidity	NTU	1.1	no	--
PL01	W1361	6/8/2005	1500	33-0397		Turbidity	NTU	0.8	no	--
PL01	W1361	7/20/2005	1335	33-0459		Turbidity	NTU	3.4	no	--
PL01	W1361	8/17/2005	1250	33-0705		Turbidity	NTU	0.7	no	--
PL01	W1361	9/20/2005	1205	33-0723		Turbidity	NTU	0.6	no	--

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
PL01	W1361	5/17/2005	1003	33-0337	33-0338	Apparent color	PCU	21	no	--
PL01	W1361	5/17/2005	1003	33-0338	33-0337	Apparent color	PCU	15	no	--
PL01	W1361	6/8/2005	1500	33-0397		Apparent color	PCU	25	no	--
PL01	W1361	7/20/2005	1335	33-0459		Apparent color	PCU	35	no	--
PL01	W1361	8/17/2005	1250	33-0705		Apparent color	PCU	20	no	--
PL01	W1361	9/20/2005	1205	33-0723		Apparent color	PCU	22	no	--
PL01	W1361	5/17/2005	1003	33-0337	33-0338	True Color	PCU	15	no	--
PL01	W1361	5/17/2005	1003	33-0338	33-0337	True Color	PCU	<15	no	--
PL01	W1361	6/8/2005	1500	33-0397		True Color	PCU	20	no	--
PL01	W1361	7/20/2005	1335	33-0459		True Color	PCU	30	no	--
PL01	W1361	8/17/2005	1250	33-0705		True Color	PCU	16	no	--
PL01	W1361	9/20/2005	1205	33-0723		True Color	PCU	16	no	--
PL01	W1361	5/17/2005	1003	33-0337	33-0338	Suspended Solids	mg/L	1.2	no	--
PL01	W1361	5/17/2005	1003	33-0338	33-0337	Suspended Solids	mg/L	<1.0	no	--
PL01	W1361	6/8/2005	1500	33-0397		Suspended Solids	mg/L	1.1	no	--
PL01	W1361	7/20/2005	1335	33-0459		Suspended Solids	mg/L	3.5	no	--
PL01	W1361	8/17/2005	1250	33-0705		Suspended Solids	mg/L	<1.0	no	--
PL01	W1361	9/20/2005	1205	33-0723		Suspended Solids	mg/L	<1.0	no	--
SH01	W1363	5/17/2005	1140	33-0345		E. Coli	CFU/100ml	4	no	--
SH01	W1363	6/7/2005	1215	33-0436		E. Coli	CFU/100ml	55	no	--
SH01	W1363	7/19/2005	1135	33-0596		E. Coli	CFU/100ml	387	no	--
SH01	W1363	8/16/2005	1151	33-0660		E. Coli	CFU/100ml	816	no	--
SH01	W1363	9/21/2005	1135	33-0748		E. Coli	CFU/100ml	198	no	--
SH01	W1363	5/17/2005	1140	33-0345		Fecal Coliforms	CFU/100ml	20	no	--
SH01	W1363	6/7/2005	1215	33-0436		Fecal Coliforms	CFU/100ml	100	no	--
SH01	W1363	7/19/2005	1135	33-0596		Fecal Coliforms	CFU/100ml	420	no	--
SH01	W1363	8/16/2005	1151	33-0660		Fecal Coliforms	CFU/100ml	1500	no	--
SH01	W1363	9/21/2005	1135	33-0748		Fecal Coliforms	CFU/100ml	230	no	--
SM01	W1360	5/17/2005	1305	33-0335		E. Coli	CFU/100ml	11	no	e
SM01	W1360	6/7/2005	1155	33-0424	33-0425	E. Coli	CFU/100ml	55	no	--
SM01	W1360	6/7/2005	1155	33-0425	33-0424	E. Coli	CFU/100ml	54	no	e
SM01	W1360	7/19/2005	1208	33-0581	33-0585	E. Coli	CFU/100ml	102	no	--
SM01	W1360	7/19/2005	1206	33-0585	33-0581	E. Coli	CFU/100ml	108	no	--
SM01	W1360	8/16/2005	1132	33-0683	33-0684	E. Coli	CFU/100ml	162	no	--
SM01	W1360	8/16/2005	1132	33-0684	33-0683	E. Coli	CFU/100ml	172	no	--
SM01	W1360	9/21/2005	1205	33-0734	33-0735	E. Coli	CFU/100ml	44	no	e
SM01	W1360	9/21/2005	1207	33-0735	33-0734	E. Coli	CFU/100ml	47	no	--
SM01	W1360	5/17/2005	1305	33-0335		Fecal Coliforms	CFU/100ml	10	no	e
SM01	W1360	6/7/2005	1155	33-0424	33-0425	Fecal Coliforms	CFU/100ml	90	no	--
SM01	W1360	6/7/2005	1155	33-0425	33-0424	Fecal Coliforms	CFU/100ml	50	no	e
SM01	W1360	7/19/2005	1208	33-0581	33-0585	Fecal Coliforms	CFU/100ml	110	no	--
SM01	W1360	7/19/2005	1206	33-0585	33-0581	Fecal Coliforms	CFU/100ml	200	no	--
SM01	W1360	8/16/2005	1132	33-0683	33-0684	Fecal Coliforms	CFU/100ml	180	no	--
SM01	W1360	8/16/2005	1132	33-0684	33-0683	Fecal Coliforms	CFU/100ml	190	no	--
SM01	W1360	9/21/2005	1205	33-0734	33-0735	Fecal Coliforms	CFU/100ml	40	no	e

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
SM01	W1360	9/21/2005	1207	33-0735	33-0734	Fecal Coliforms	CFU/100ml	60	no	--
SO	W0008	5/17/2005	1125	33-0344		E. Coli	CFU/100ml	16	no	--
SO	W0008	6/7/2005	1148	33-0433	33-0434	E. Coli	CFU/100ml	107	no	--
SO	W0008	6/7/2005	1145	33-0434	33-0433	E. Coli	CFU/100ml	194	no	--
SO	W0008	7/19/2005	1110	33-0593	33-0594	E. Coli	CFU/100ml	1300	no	--
SO	W0008	7/19/2005	1115	33-0594	33-0593	E. Coli	CFU/100ml	1120	no	--
SO	W0008	8/16/2005	1127	33-0657	33-0658	E. Coli	CFU/100ml	435	no	--
SO	W0008	8/16/2005	1127	33-0658	33-0657	E. Coli	CFU/100ml	365	no	--
SO	W0008	9/21/2005	1115	33-0745	33-0746	E. Coli	CFU/100ml	127	no	--
SO	W0008	9/21/2005	1120	33-0746	33-0745	E. Coli	CFU/100ml	161	no	--
SO	W0008	5/17/2005	1125	33-0344		Fecal Coliforms	CFU/100ml	30	no	--
SO	W0008	6/7/2005	1148	33-0433	33-0434	Fecal Coliforms	CFU/100ml	140	no	--
SO	W0008	6/7/2005	1145	33-0434	33-0433	Fecal Coliforms	CFU/100ml	260	no	--
SO	W0008	7/19/2005	1110	33-0593	33-0594	Fecal Coliforms	CFU/100ml	1600	no	--
SO	W0008	7/19/2005	1115	33-0594	33-0593	Fecal Coliforms	CFU/100ml	1300	no	--
SO	W0008	8/16/2005	1127	33-0657	33-0658	Fecal Coliforms	CFU/100ml	560	no	--
SO	W0008	8/16/2005	1127	33-0658	33-0657	Fecal Coliforms	CFU/100ml	400	no	--
SO	W0008	9/21/2005	1115	33-0745	33-0746	Fecal Coliforms	CFU/100ml	170	no	--
SO	W0008	9/21/2005	1120	33-0746	33-0745	Fecal Coliforms	CFU/100ml	200	no	--
SO-4	W0013	5/17/2005	1050	33-0342		E. Coli	CFU/100ml	17	no	e
SO-4	W0013	6/7/2005	1055	33-0431		E. Coli	CFU/100ml	133	no	--
SO-4	W0013	7/19/2005	1030	33-0591		E. Coli	CFU/100ml	649	no	--
SO-4	W0013	8/16/2005	1038	33-0655		E. Coli	CFU/100ml	153	no	--
SO-4	W0013	9/21/2005	1030	33-0743		E. Coli	CFU/100ml	77	no	--
SO-4	W0013	5/17/2005	1050	33-0342		Fecal Coliforms	CFU/100ml	10	no	e
SO-4	W0013	6/7/2005	1055	33-0431		Fecal Coliforms	CFU/100ml	150	no	--
SO-4	W0013	7/19/2005	1030	33-0591		Fecal Coliforms	CFU/100ml	800	no	--
SO-4	W0013	8/16/2005	1038	33-0655		Fecal Coliforms	CFU/100ml	210	no	--
SO-4	W0013	9/21/2005	1030	33-0743		Fecal Coliforms	CFU/100ml	100	no	--
TA01	W1349	5/17/2005	1115	33-0318		E. Coli	CFU/100ml	5	no	--
TA01	W1349	6/7/2005	1140	33-0407		E. Coli	CFU/100ml	41	no	--
TA01	W1349	7/19/2005	1107	33-0607		E. Coli	CFU/100ml	140	no	--
TA01	W1349	8/16/2005	1115	33-0671		E. Coli	CFU/100ml	32	no	--
TA01	W1349	9/21/2005	1108	33-0759		E. Coli	CFU/100ml	19	no	--
TA01	W1349	5/17/2005	1115	33-0318		Fecal Coliforms	CFU/100ml	10	no	--
TA01	W1349	6/7/2005	1140	33-0407		Fecal Coliforms	CFU/100ml	60	no	--
TA01	W1349	7/19/2005	1107	33-0607		Fecal Coliforms	CFU/100ml	150	no	--
TA01	W1349	8/16/2005	1115	33-0671		Fecal Coliforms	CFU/100ml	40	no	--
TA01	W1349	9/21/2005	1108	33-0759		Fecal Coliforms	CFU/100ml	20	no	--
TI01	W1350	5/17/2005	1102	33-0319		E. Coli	CFU/100ml	1	no	--
TI01	W1350	6/7/2005	1150	33-0408		E. Coli	CFU/100ml	6	no	--
TI01	W1350	7/19/2005	1120	33-0608		E. Coli	CFU/100ml	24	no	e
TI01	W1350	8/16/2005	1125	33-0672		E. Coli	CFU/100ml	23	no	e
TI01	W1350	9/21/2005	1119	33-0760		E. Coli	CFU/100ml	9	no	--
TI01	W1350	5/17/2005	1102	33-0319		Fecal Coliforms	CFU/100ml	10	no	--

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
TI01	W1350	6/7/2005	1150	33-0408		Fecal Coliforms	CFU/100ml	20	no	--
TI01	W1350	7/19/2005	1120	33-0608		Fecal Coliforms	CFU/100ml	20	no	e
TI01	W1350	8/16/2005	1125	33-0672		Fecal Coliforms	CFU/100ml	20	no	e
TI01	W1350	9/21/2005	1119	33-0760		Fecal Coliforms	CFU/100ml	<10	no	--
WBNR04	W1348	5/17/2005	1126	33-0317		Ammonia-N	mg/L	<0.02	no	--
WBNR04	W1348	6/8/2005	1010	33-0388		Ammonia-N	mg/L	<0.02	no	--
WBNR04	W1348	7/20/2005	1005	33-0450		Ammonia-N	mg/L	0.02	no	--
WBNR04	W1348	8/17/2005	921	33-0689		Ammonia-N	mg/L	<0.02	no	--
WBNR04	W1348	9/20/2005	915	33-0707		Ammonia-N	mg/L	<0.02	no	--
WBNR04	W1348	5/17/2005	1126	33-0317		Total Nitrogen	mg/L	0.20	no	--
WBNR04	W1348	6/8/2005	1010	33-0388		Total Nitrogen	mg/L	0.15	no	--
WBNR04	W1348	7/20/2005	1005	33-0450		Total Nitrogen	mg/L	0.33	no	--
WBNR04	W1348	8/17/2005	921	33-0689		Total Nitrogen	mg/L	0.32	no	--
WBNR04	W1348	9/20/2005	915	33-0707		Total Nitrogen	mg/L	0.20	no	--
WBNR04	W1348	5/17/2005	1126	33-0317		Total Phosphorus	mg/L	<0.005	no	--
WBNR04	W1348	6/8/2005	1010	33-0388		Total Phosphorus	mg/L	0.008	no	--
WBNR04	W1348	7/20/2005	1005	33-0450		Total Phosphorus	mg/L	0.007	no	--
WBNR04	W1348	8/17/2005	921	33-0689		Total Phosphorus	mg/L	0.008	no	--
WBNR04	W1348	9/20/2005	915	33-0707		Total Phosphorus	mg/L	<0.005	no	--
WBNR04	W1348	5/17/2005	1126	33-0317		E. Coli	CFU/100ml	3	no	--
WBNR04	W1348	6/7/2005	1120	33-0406		E. Coli	CFU/100ml	102	no	--
WBNR04	W1348	7/19/2005	1057	33-0606		E. Coli	CFU/100ml	225	no	--
WBNR04	W1348	8/16/2005	1100	33-0670		E. Coli	CFU/100ml	71	no	--
WBNR04	W1348	9/21/2005	1100	33-0758		E. Coli	CFU/100ml	3	no	--
WBNR04	W1348	5/17/2005	1126	33-0317		Fecal Coliforms	CFU/100ml	<10	no	--
WBNR04	W1348	6/7/2005	1120	33-0406		Fecal Coliforms	CFU/100ml	120	no	--
WBNR04	W1348	7/19/2005	1057	33-0606		Fecal Coliforms	CFU/100ml	310	no	--
WBNR04	W1348	8/16/2005	1100	33-0670		Fecal Coliforms	CFU/100ml	130	no	--
WBNR04	W1348	9/21/2005	1100	33-0758		Fecal Coliforms	CFU/100ml	<10	no	--
WBNR04	W1348	5/17/2005	1126	33-0317		Turbidity	NTU	0.6	no	--
WBNR04	W1348	6/8/2005	1010	33-0388		Turbidity	NTU	<0.5	no	--
WBNR04	W1348	7/20/2005	1005	33-0450		Turbidity	NTU	1.4	no	--
WBNR04	W1348	8/17/2005	921	33-0689		Turbidity	NTU	0.7	no	--
WBNR04	W1348	9/20/2005	915	33-0707		Turbidity	NTU	<0.5	no	--
WBNR04	W1348	5/17/2005	1126	33-0317		Apparent color	PCU	<15	no	--
WBNR04	W1348	6/8/2005	1010	33-0388		Apparent color	PCU	18	no	--
WBNR04	W1348	7/20/2005	1005	33-0450		Apparent color	PCU	<15	no	--
WBNR04	W1348	8/17/2005	921	33-0689		Apparent color	PCU	<15	no	--
WBNR04	W1348	9/20/2005	915	33-0707		Apparent color	PCU	<15	no	--
WBNR04	W1348	5/17/2005	1126	33-0317		True Color	PCU	<15	no	--
WBNR04	W1348	6/8/2005	1010	33-0388		True Color	PCU	<15	no	--
WBNR04	W1348	7/20/2005	1005	33-0450		True Color	PCU	**	--	--
WBNR04	W1348	8/17/2005	921	33-0689		True Color	PCU	**	--	--
WBNR04	W1348	9/20/2005	915	33-0707		True Color	PCU	**	--	--
WBNR04	W1348	5/17/2005	1126	33-0317		Suspended Solids	mg/L	<1.0	no	--

Table 5. 2005 MassDEP DWM Deerfield watershed water quality data

Station ID	Unique ID	Date	Time	OWMID	QA/QC	Analyte	Units	Result	Censor	Qualifier
WBNR04	W1348	6/8/2005	1010	33-0388		Suspended Solids	mg/L	1.4	no	--
WBNR04	W1348	7/20/2005	1005	33-0450		Suspended Solids	mg/L	1.7	no	--
WBNR04	W1348	8/17/2005	921	33-0689		Suspended Solids	mg/L	<1.0	no	--
WBNR04	W1348	9/20/2005	915	33-0707		Suspended Solids	mg/L	1.1	no	--
WBNR04-SD	W1412	5/17/2005	1126	33-0347		E. Coli	CFU/100ml	<1	no	--
WBNR04-SD	W1412	5/17/2005	1126	33-0347		Fecal Coliforms	CFU/100ml	<10	no	--
WH01	W1345	5/17/2005	947	33-0311		E. Coli	CFU/100ml	1	no	--
WH01	W1345	6/7/2005	1000	33-0400		E. Coli	CFU/100ml	15	no	--
WH01	W1345	7/19/2005	945	33-0600		E. Coli	CFU/100ml	150	no	--
WH01	W1345	8/16/2005	945	33-0664		E. Coli	CFU/100ml	186	no	--
WH01	W1345	9/21/2005	951	33-0752		E. Coli	CFU/100ml	2	no	--
WH01	W1345	5/17/2005	947	33-0311		Fecal Coliforms	CFU/100ml	<10	no	--
WH01	W1345	6/7/2005	1000	33-0400		Fecal Coliforms	CFU/100ml	40	no	--
WH01	W1345	7/19/2005	945	33-0600		Fecal Coliforms	CFU/100ml	180	no	--
WH01	W1345	8/16/2005	945	33-0664		Fecal Coliforms	CFU/100ml	210	no	--
WH01	W1345	9/21/2005	951	33-0752		Fecal Coliforms	CFU/100ml	<10	no	--

*see Appendix 1 for a complete list of data qualifiers

Table 6. Geometric mean of E. coli results for each sampling station.

Station ID	Unique ID	Sample Count	Geometric Mean (CFU/100 ml)
BE	W0017	5	100
BO	W0035	5	72
CE01	W1325	5	40
CH	W0040	5	100
CH8	W1355	5	12
CK	W0029	5	20
CL	W0026	5	53
CL02A	W1359	5	46
CP01	W1362	5	26
CR01	W1354	5	17
DE01	W1353	5	13
DG01	W1364	5	97
DR03	W0761	5	38
DR10	W0757	5	341
EBNR01	W1347	5	184
FOU01	W1351	5	15
GR	W0005	5	817
GR07	W0007	5	19
HI01	W1346	5	139
LD	W0002	5	187
MB01	W1356	5	20
NR03A	W1352	5	209
PE	W0044	5	5
PL01	W1361	5	78
SH01	W1363	5	107
SM01	W1360	5	54
SO	W0008	5	165
SO-4	W0013	5	112
TA01	W1349	5	28
TI01	W1350	5	8
WBNR04	W1348	5	27
WH01	W1345	5	15

Table 7. 2005 MassDEP DWM Deerfield watershed attended probe data

Station ID	Unique ID	Date	Time	OWMID	Sample Depth (m)	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (uS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Saturation (%)	Saturation Qualifiers
BO	W0035	6/6/05	12:07 PM	33-0377	0.1	14.2	--	7.4	--	70	--	45	--	10.5	i	103	i
BO	W0035	7/15/05	11:58 AM	33-0568	0.1	18.3	--	7.3	--	83	--	53	--	9.0	i	97	i
BO	W0035	7/18/05	12:15 PM	33-0569	0.1	18.7	--	7.2	--	85	--	54	--	8.6	i	94	i
BO	W0035	8/12/05	11:30 AM	33-0630	**	18.5	--	7.3	--	89	--	57	--	8.4	--	91	--
BO	W0035	8/15/05	12:01 PM	33-0631	0.1	18.3	--	7.3	--	92	--	59	--	8.3	i	89	i
CE01	W1325	5/5/05	11:41 AM	33-0305	0.4	8.1	--	7.1	--	130	--	85	--	12.4	--	105	--
CE01	W1325	5/11/05	12:16 PM	33-0308	**	13.3	--	--	--	--	--	--	--	##	i, u	##	i, u
CE01	W1325	6/3/05	11:10 AM	33-0355	**	13.1	--	--	--	--	--	--	--	10.5	--	101	--
CE01	W1325	6/6/05	10:25 AM	33-0356	0.2	13.9	--	7.4	--	153	--	98	--	10.0	i	98	i
CE01	W1325	6/8/05	2:08 PM	33-0385	0.3	16.7	--	7.6	--	154	--	100	--	9.8	--	101	--
CE01	W1325	7/15/05	10:17 AM	33-0547	0.2	17.7	--	7.6	--	164	--	105	--	9.1	i	97	i
CE01	W1325	7/18/05	10:09 AM	33-0548	0.2	18.5	--	7.7	--	167	--	107	--	8.9	i	96	i
CE01	W1325	7/20/05	1:12 PM	33-0447	0.2	18.9	--	7.6	--	145	--	94	--	9.1	--	98	--
CE01	W1325	8/12/05	10:03 AM	33-0618	0.1	18.2	--	7.9	--	173	--	111	--	9.4	--	101	--
CE01	W1325	8/15/05	10:33 AM	33-0619	0.3	18.6	--	7.5	--	150	--	96	--	8.4	i	91	i
CE01	W1325	8/17/05	12:03 PM	33-0702	0.2	17.8	--	7.8	--	166	--	108	--	9.5	--	100	--
CE01	W1325	9/20/05	11:12 AM	33-0720	0.1	15.5	--	7.8	--	187	--	121	--	10.0	--	100	--
CH	W0040	6/8/05	1:21 PM	33-0384	0.1	18.6	--	7.7	--	50	--	32	--	10.0	--	107	--
CH	W0040	7/20/05	10:45 AM	33-0446	0.1	19.3	--	7.8	--	58	--	38	--	9.6	--	104	--
CH	W0040	8/17/05	10:24 AM	33-0698	0.1	17.8	--	7.8	--	61	--	40	--	9.8	--	104	--
CH	W0040	9/20/05	9:48 AM	33-0716	0.1	14.9	--	7.7	--	69	--	45	--	10.5	--	104	--
CK	W0029	6/3/05	12:33 PM	33-0370	**	14.2	--	--	--	--	--	--	--	10.1	--	99	--
CK	W0029	6/6/05	11:31 AM	33-0371	0.2	15.2	--	7.7	--	111	--	71	--	9.9	i	100	i
CK	W0029	6/8/05	11:57 AM	33-0383	0.3	15.9	--	7.7	--	104	--	67	--	10.2	--	103	--
CK	W0029	7/15/05	11:09 AM	33-0562	0.3	19.0	--	7.9	--	179	--	115	--	9.3	i	102	i
CK	W0029	7/18/05	11:45 AM	33-0563	0.3	20.4	--	7.6	--	114	--	73	--	8.1	i	91	i
CK	W0029	7/20/05	11:25 AM	33-0445	0.1	19.4	--	7.7	--	141	--	92	--	9.2	--	100	--
CK	W0029	8/12/05	10:57 AM	33-0627	0.1	19.2	--	7.7	--	125	--	80	--	7.7	--	84	--
CK	W0029	8/15/05	11:30 AM	33-0628	0.3	19.0	--	7.8	--	92	--	59	--	8.5	i	93	i
CK	W0029	8/17/05	11:18 AM	33-0696	0.1	18.0	--	7.9	--	56	--	37	--	9.5	--	100	--
CK	W0029	9/20/05	10:42 AM	33-0714	0.2	14.7	--	7.8	--	120	--	78	--	10.1	--	99	--
CL	W0026	6/3/05	12:21 PM	33-0373	**	15.6	--	--	--	--	--	--	--	10.5	u	106	u

Table 7. 2005 MassDEP DWM Deerfield watershed attended probe data

Station ID	Unique ID	Date	Time	OWMID	Sample Depth (m)	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (uS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Saturation (%)	Saturation Qualifiers
CL	W0026	6/6/05	11:16 AM	33-0374	0.4	14.5	--	7.9	--	160	--	102	--	10.5	i	105	i
CL	W0026	6/8/05	11:30 AM	33-0382	0.3	16.1	--	7.8	--	151	--	98	--	10.6	--	108	--
CL	W0026	7/15/05	11:23 AM	33-0565	0.3	19.3	--	7.8	--	112	--	72	--	8.5	i	93	i
CL	W0026	7/18/05	11:30 AM	33-0566	0.4	19.1	--	7.6	--	177	--	114	--	8.3	i	91	i
CL	W0026	7/20/05	11:34 AM	33-0444	0.1	19.6	--	8.0	--	183	--	119	--	9.9	--	108	--
CL	W0026	8/12/05	10:44 AM	33-0624	0.2	19.6	--	7.9	--	207	--	133	--	8.6	--	95	--
CL	W0026	8/15/05	11:16 AM	33-0625	0.3	18.9	--	7.7	--	133	--	85	--	8.3	i	91	i
CL	W0026	8/17/05	11:01 AM	33-0694	0.5	17.6	--	7.8	--	188	--	122	--	9.8	--	102	--
CL	W0026	9/20/05	10:23 AM	33-0712	0.4	15.1	--	7.8	--	210	--	137	--	10.4	--	104	--
CP01	W1362	5/5/05	11:02 AM	33-0304	0.1	7.2	--	6.8	--	60	--	39	--	12.6	--	104	--
CP01	W1362	5/11/05	11:46 AM	33-0307	**	13.5	--	--	--	--	--	--	--	##	i, u	##	i, u
CP01	W1362	6/3/05	10:43 AM	33-0352	**	14.1	--	--	--	--	--	--	--	9.8	--	96	--
CP01	W1362	6/6/05	10:00 AM	33-0353	0.2	15.8	--	7.3	--	68	--	44	--	9.0	i	92	i
CP01	W1362	6/8/05	2:37 PM	33-0386	0.1	18.1	--	7.5	--	70	--	46	--	9.4	--	100	--
CP01	W1362	7/15/05	9:50 AM	33-0544	0.1	18.6	--	7.4	--	71	--	45	--	8.6	i	94	i
CP01	W1362	7/18/05	9:45 AM	33-0545	0.1	19.6	--	7.4	--	73	--	47	--	8.3	i	92	i
CP01	W1362	7/20/05	1:58 PM	33-0448	0.3	20.1	--	7.5	--	54	--	35	--	9.1	--	100	--
CP01	W1362	8/12/05	9:41 AM	33-0615	**	18.4	--	7.4	--	81	--	52	--	8.6	--	93	--
CP01	W1362	8/15/05	10:10 AM	33-0616	0.2	19.7	--	7.5	--	68	--	44	--	8.6	i	95	i
CP01	W1362	8/17/05	12:33 PM	33-0704	0.2	18.1	--	7.6	--	75	--	49	--	9.3	--	99	--
CP01	W1362	9/20/05	11:42 AM	33-0722	0.2	15.6	--	7.6	--	85	--	55	--	9.9	--	99	--
EBNR01	W1347	6/8/05	10:46 AM	33-0381	0.4	16.8	--	7.7	--	83	--	54	--	10.3	--	106	--
EBNR01	W1347	7/20/05	9:43 AM	33-0443	0.4	19.1	--	7.9	--	105	--	68	--	9.7	--	105	--
EBNR01	W1347	8/17/05	9:45 AM	33-0692	0.4	18.8	--	7.8	--	97	--	63	--	9.6	--	103	--
EBNR01	W1347	9/20/05	8:52 AM	33-0710	0.3	16.2	--	7.9	--	130	--	85	--	10.1	--	103	--
FOU01	W1351	6/3/05	3:11 PM	33-0367	**	13.5	--	--	--	--	--	--	--	10.1	u	98	u
FOU01	W1351	6/6/05	1:14 PM	33-0368	0.2	13.8	--	7.8	--	123	--	79	--	10.3	i	101	i
FOU01	W1351	7/15/05	12:40 PM	33-0559	0.2	17.1	--	7.9	--	132	--	85	--	9.6	i	101	i
FOU01	W1351	7/18/05	12:57 PM	33-0560	0.2	17.6	--	7.9	--	132	--	84	--	8.7	i	92	i
FOU01	W1351	8/12/05	12:07 PM	33-0633	0.1	17.9	--	7.9	--	146	--	94	--	8.6	--	92	--
FOU01	W1351	8/15/05	12:41 PM	33-0634	0.2	17.4	--	8.0	--	144	--	92	--	8.5	i	90	i
PL01	W1361	5/5/05	10:34 AM	33-0303	0.1	6.2	--	6.8	--	65	--	42	--	12.9	--	104	--

Table 7. 2005 MassDEP DWM Deerfield watershed attended probe data

Station ID	Unique ID	Date	Time	OWMID	Sample Depth (m)	Temperature (deg. C)	Temperature Qualifiers	pH (SU)	pH Qualifiers	Specific Conductivity (uS/cm)	Specific Conductivity Qualifiers	Total Dissolved Solids (mg/l)	Total Dissolved Solids Qualifiers	Dissolved Oxygen (mg/l)	Dissolved Oxygen Qualifiers	Saturation (%)	Saturation Qualifiers
PL01	W1361	5/11/05	11:16 AM	33-0306	**	13.1	--	--	--	--	--	--	--	##	i, u	##	i, u
PL01	W1361	6/3/05	10:09 AM	33-0349	**	13.8	--	--	--	--	--	--	--	9.7	u	94	u
PL01	W1361	6/6/05	9:39 AM	33-0350	0.2	15.9	--	6.9	--	74	--	47	--	8.9	i	91	i
PL01	W1361	6/8/05	3:02 PM	33-0387	0.2	21.3	--	7.4	--	76	--	50	--	8.7	--	99	--
PL01	W1361	7/15/05	9:27 AM	33-0541	0.2	18.9	--	7.1	--	77	--	49	--	8.4	i	92	i
PL01	W1361	7/18/05	9:25 AM	33-0542	0.1	20.4	--	7.1	--	79	--	51	--	7.8	i	87	i
PL01	W1361	7/20/05	1:34 PM	33-0449	0.3	22.2	--	7.3	--	64	--	42	--	8.5	--	98	--
PL01	W1361	8/12/05	9:24 AM	33-0612	0.1	19.5	--	7.1	--	90	--	58	--	7.6	--	84	--
PL01	W1361	8/15/05	9:53 AM	33-0613	0.3	19.7	--	7.0	--	75	--	48	--	7.9	i	88	i
PL01	W1361	8/17/05	12:54 PM	33-0706	0.1	21.5	--	7.5	--	87	--	57	--	8.8	--	100	--
PL01	W1361	9/20/05	12:03 PM	33-0724	0.2	17.3	--	7.5	--	94	--	61	--	9.3	--	97	--
SH01	W1363	6/3/05	1:53 PM	33-0361	**	15.2	--	--	--	--	--	--	--	9.5	--	96	--
SH01	W1363	6/6/05	1:55 PM	33-0362	0.1	16.4	--	7.7	--	191	--	122	--	8.7	i	90	i
SH01	W1363	7/15/05	1:20 PM	33-0553	0.2	19.7	--	7.5	--	219	--	140	--	8.1	i	90	i
SH01	W1363	7/18/05	1:35 PM	33-0554	0.2	21.5	--	7.6	--	227	--	145	--	7.1	i	81	i
SH01	W1363	8/12/05	12:51 PM	33-0636	0.1	19.9	--	7.6	--	223	--	143	--	7.4	--	82	--
SH01	W1363	8/15/05	1:21 PM	33-0637	0.1	19.1	--	7.7	--	193	--	123	--	7.5	i	82	i
SO-4	W0013	6/3/05	11:34 AM	33-0358	**	14.3	--	--	--	--	--	--	--	9.7	--	96	--
SO-4	W0013	6/6/05	10:45 AM	33-0359	0.2	13.4	--	7.3	--	248	--	158	--	8.3	i	81	i
SO-4	W0013	7/15/05	10:37 AM	33-0550	0.2	15.9	--	7.2	--	252	--	161	--	8.6	i	88	i
SO-4	W0013	7/18/05	10:29 AM	33-0551	0.1	16.0	--	7.2	--	250	--	160	--	8.3	i	86	i
SO-4	W0013	8/12/05	10:19 AM	33-0621	0.2	15.6	--	7.3	--	259	--	166	--	8.2	--	83	--
SO-4	W0013	8/15/05	10:47 AM	33-0622	0.3	16.3	--	7.2	--	222	--	142	--	7.7	i	79	i
WBNR04	W1348	6/8/05	10:18 AM	33-0380	0.5	15.7	--	7.7	--	69	--	45	--	10.7	--	107	--
WBNR04	W1348	7/20/05	10:05 AM	33-0442	0.1	18.8	--	7.8	--	81	--	52	--	9.8	--	105	--
WBNR04	W1348	8/17/05	9:25 AM	33-0690	0.3	17.8	--	7.8	--	83	--	54	--	9.8	--	103	--
WBNR04	W1348	9/20/05	9:11 AM	33-0708	0.3	15.0	--	7.8	--	90	--	59	--	10.5	--	104	--
WH01	W1345	6/3/05	2:26 PM	33-0364	**	13.9	--	--	--	--	--	--	--	9.8	u	96	u
WH01	W1345	6/6/05	2:32 PM	33-0365	0.1	14.8	--	7.9	--	162	--	104	--	9.4	i	94	i
WH01	W1345	7/15/05	1:53 PM	33-0556	0.2	18.1	--	7.8	--	169	--	108	--	8.4	i	91	i
WH01	W1345	7/18/05	2:08 PM	33-0557	0.2	18.6	u	7.8	--	171	--	110	--	7.2	i	78	i

Table 8. 2005 MassDEP DWM Deerfield watershed unattended probe data

Deploy Details						Temperature					Dissolved Oxygen						
Station ID	Unique ID	Gear Type	Start Date	End Date	Observed Deployment Time (Hours)	Average (deg. C)	Max (deg. C)	Mean of the Daily Max (deg. C)	Amount of Time > 20 deg. C (Hours)	Amount of Time > 20 deg. C (%)	Average (mg/L)	Min (mg/L)	Mean of the Daily Min (mg/L)	Amount of Time < 6.0 mg/L (Hours)	Amount of Time < 6.0 mg/L (Percent)	Average (%)	Max (%)
SO-4	W0013	Data Sonde	06/03/05	06/06/05	70.5	14.3	17.5	17.5	0.0	0.0%	8.7	8.2	8.2	0.0	0.0	86	93
SO-4	W0013	Data Sonde	07/15/05	07/18/05	71.0	16.2	18.6	17.0	0.0	0.0%	8.4	8.2	8.3	0.0	0.0	87	91
SO-4	W0013	Data Sonde	08/12/05	08/15/05	72.0	17.0	19.4	19.2	0.0	0.0%	8.0	6.9	7.5	0.0	0.0	84	92
SO-4	W0013	Temp Logger	07/18/05	09/08/05	1250.3	15.7	23.2	17.2	35.2	2.8%							
SO-3	W0014	Temp Logger	07/18/05	09/08/05	1249.7	15.8	25.2	17.2	55.6	4.5%							
CL	W0026	Data Sonde	06/03/05	06/06/05	70.5	15.7	21.0	20.7	5.0	7.0%	9.8	8.8	9.0	0.0	0.0	99	110
CL	W0026	Data Sonde	07/15/05	07/18/05	72.0	19.6	24.1	20.8	20.2	28.1%	8.8	8.0	8.2	0.0	0.0	97	108
CL	W0026	Data Sonde	08/12/05	08/15/05	72.0	21.4	25.5	24.5	53.8	74.7%	8.2	7.4	7.5	0.0	0.0	93	108
CK	W0029	Data Sonde	06/03/05	06/06/05	70.5	15.3	17.3	16.8	0.0	0.0%	9.0	8.5	8.6	0.0	0.0	91	95
CK	W0029	Data Sonde	07/15/05	07/18/05	72.0	20.0	20.9	20.5	32.1	44.6%	8.5	7.6	8.0	0.0	0.0	94	98
CK	W0029	Data Sonde	08/12/05	08/15/05	72.5	20.5	22.4	22.1	55.6	76.6%	8.3	8.0	8.0	0.0	0.0	93	99
BO	W0035	Data Sonde	06/03/05	06/06/05	68.0	13.5	15.9	15.7	0.0	0.0%	9.8	9.2	9.3	0.0	0.0	95	101
BO	W0035	Data Sonde	07/15/05	07/18/05	72.0	17.9	19.5	18.5	0.0	0.0%	8.8	8.6	8.6	0.0	0.0	94	100
BO	W0035	Data Sonde	08/12/05	08/15/05	72.0	19.1	20.8	20.5	9.3	12.9%	8.3	7.8	7.9	0.0	0.0	91	97
CE01	W1325	Data Sonde	06/03/05	06/06/05	70.5	14.2	16.5	16.1	0.0	0.0%	9.5	8.7	8.8	0.0	0.0	93	102
CE01	W1325	Data Sonde	07/15/05	07/18/05	71.5	18.4	19.4	19.0	0.0	0.0%	8.7	8.3	8.3	0.0	0.0	94	101
CE01	W1325	Data Sonde	08/12/05	08/15/05	72.0	19.5	20.8	20.7	19.9	27.6%	8.4	7.5	7.5	0.0	0.0	93	113
WH01	W1345	Data Sonde	06/03/05	06/06/05	72.0	14.2	15.8	15.5	0.0	0.0%	9.4	9.0	9.1	0.0	0.0	92	94
WH01	W1345	Data Sonde	07/15/05	07/18/05	72.0	17.7	18.5	18.0	0.0	0.0%	9.0	8.8	8.9	0.0	0.0	96	97
FOU01	W1351	Data Sonde	06/03/05	06/06/05	69.5	13.1	15.1	14.9	0.0	0.0%	9.6	9.0	9.1	0.0	0.0	92	95
FOU01	W1351	Data Sonde	07/15/05	07/18/05	71.5	17.1	17.8	17.6	0.0	0.0%	9.2	9.0	9.0	0.0	0.0	96	98
FOU01	W1351	Data Sonde	08/12/05	08/15/05	72.0	18.0	19.1	19.1	0.0	0.0%	8.8	8.6	8.6	0.0	0.0	95	98
DG00	W1357	Temp Logger	07/31/05	09/08/05	932.5	18.2	22.2	19.2	167.3	17.9%							
BR01	W1358	Temp Logger	07/31/05	09/08/05	931.3	18.4	22.3	19.4	209.4	22.5%							
PL01	W1361	Data Sonde	05/05/05	05/11/05	144.0	9.7	16.8	11.8	0.0	0.0%	10.3	8.5	9.8	0.0	0.0	90	97

Table 8. 2005 MassDEP DWM Deerfield watershed unattended probe data

Deploy Details						Temperature					Dissolved Oxygen						
Station ID	Unique ID	Gear Type	Start Date	End Date	Observed Deployment Time (Hours)	Average (deg. C)	Max (deg. C)	Mean of the Daily Max (deg. C)	Amount of Time > 20 deg. C (Hours)	Amount of Time > 20 deg. C (%)	Average (mg/L)	Min (mg/L)	Mean of the Daily Min (mg/L)	Amount of Time < 6.0 mg/L (Hours)	Amount of Time < 6.0 mg/L (Percent)	Average (%)	Max (%)
PL01	W1361	Data Sonde	06/03/05	06/06/05	71.0	17.5	20.7	20.6	10.3	14.5%	8.6	7.8	7.8	0.0	0.0	90	98
PL01	W1361	Data Sonde	07/15/05	07/18/05	71.5	21.5	24.4	22.8	65.7	91.9%	7.9	7.4	7.6	0.0	0.0	91	97
PL01	W1361	Data Sonde	08/12/05	08/15/05	72.0	22.4	25.8	25.6	67.8	94.2%	7.6	7.2	7.2	0.0	0.0	89	95
CP01	W1362	Data Sonde	05/05/05	05/11/05	144.0	9.5	15.2	10.8	0.0	0.0%							
CP01	W1362	Data Sonde	06/03/05	06/06/05	71.0	16.3	18.3	17.9	0.0	0.0%	9.0	8.5	8.6	0.0	0.0	92	95
CP01	W1362	Data Sonde	07/15/05	07/18/05	71.5	19.8	20.6	20.3	21.8	30.5%	8.4	8.2	8.3	0.0	0.0	94	95
CP01	W1362	Data Sonde	08/12/05	08/15/05	72.0	20.5	22.4	21.9	49.4	68.6%	8.3	8.0	8.0	0.0	0.0	93	95
SH01	W1363	Data Sonde	06/03/05	06/06/05	71.5	14.9	18.2	17.9	0.0	0.0%	8.9	8.2	8.3	0.0	0.0	89	96
SH01	W1363	Data Sonde	07/15/05	07/18/05	72.0	19.4	21.4	20.2	14.1	19.6%	7.6	7.2	7.3	0.0	0.0	83	92
SH01	W1363	Data Sonde	08/12/05	08/15/05	72.0	20.0	22.8	22.2	31.0	43.0%	7.4	5.6	6.1	0.3	0.0	82	98

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Appendix 1: 2005 Data Symbols and Qualifiers

Excerpted from: Data Validation Report for Year 2005 Project Data (CN 280.0)

Department of Environmental Protection
Division of Watershed Management

The following data qualifiers or symbols are used in the MADEP/DWM WQD database for qualified and censored water quality and multi-probe data. Decisions regarding censoring vs. qualification for specific, problematic data are made based on a thorough review of all pertinent information related to the data.

General Symbols (applicable to all types):

" ## " = Censored data (i.e., data that has been discarded for some reason). *NOTE: Prior to 2001 data, "**" denoted either censored or missing data.*

" ** " = Missing data (i.e., data that should have been reported). See NOTE above.

" -- " = No data (i.e., data not taken/not required)

* = Analysis performed by Laboratory OTHER than DEP's Wall Experiment Station (WES)

[ ] = A result reported inside brackets has been "censored", but is shown for informational purposes (e.g., high blank results).

Multi-probe-specific Qualifiers:

" i " = inaccurate readings from Multi-probe likely; may be due to significant pre-survey calibration problems, post-survey checks outside typical acceptance ranges for the low ionic and deionized water checks, lack of calibration of the depth sensor prior to use, or to checks against laboratory analyses. Where documentation on unit pre-calibration is lacking, but SOPs at the time of sampling dictated pre-calibration prior to use, then data are considered potentially inaccurate.

Qualification Criteria for Depth (i):

General Depth Criteria: Apply to each OWMID#

- Clearly erroneous readings due to faulty depth sensor: Censor (i)
- Negative and zero depth readings: Censor (i); (likely in error)
- 0.1 m depth readings: Qualify (i); (potentially in error)
- 0.2 and greater depth readings: Accept without qualification; (likely accurate)

Specific Depth Criteria: Apply to entirety of depth data for survey date

- If zero and/or negative depth readings occur more than once per survey date, censor all negative/zero depth data, and qualify all other depth data for that survey (indicates that erroneous depth readings were not recognized in the field and that corrective action (field calibration of the depth sensor) was not taken, i.e., that all positive readings may be in error.)

" m " = method not followed; one or more protocols contained in the DWM Multi-probe SOP not followed, i.e., operator error (e.g., less than 3 readings per station (rivers) or per depth (lakes), or instrument failure not allowing method to be implemented.

" s " = field sheet recorded data were used to accept data, not data electronically recorded in the Multi-probe surveyor unit, due to operator error or equipment failure.

" u " = unstable readings, due to lack of sufficient equilibration time prior to final readings, non-representative location, highly-variable water quality conditions, etc. See Section 4.1 for acceptance criteria.

" c " = greater than calibration standard used for pre-calibration, or outside the acceptable range about the calibration standard. Typically used for conductivity (>718, 1,413, 2,760, 6,668 or 12,900 uS/cm) or turbidity (>10, 20 or 40 NTU). It can also be used for TDS and Salinity calculations based on qualified ("c") conductivity data, or that the calculation was not possible due to censored conductivity data (TDS and Salinity are calculated values and entirely based on conductivity reading). See Section 4.1 for acceptance criteria.

" r " = data not representative of actual field conditions.

" ? " = Light interference on Turbidity sensor (Hydrolab error message). Data is typically censored.

Sample-Specific Qualifiers:

" a " = accuracy as estimated at WES Lab via matrix spikes, PT sample recoveries, internal check standards and lab-fortified blanks did not meet project data quality objectives identified for program or in QAPP.

" b " = blank Contamination in lab reagent blanks and/or field blank samples (indicating possible bias high and false positives).

" d " = precision of field duplicates (as RPD) did not meet project data quality objectives identified for program or in QAPP. Batched samples may also be affected.

" e " = not theoretically possible. Specifically, used for bacteria data where colonies per unit volume for e-coli bacteria > fecal coliform bacteria, for lake Secchi and station depth data where a specific Secchi depth is greater than the reported station depth, and for other incongruous or conflicting results.

" f " = frequency of quality control duplicates did not meet data quality objectives identified for program or in QAPP.

" h " = holding time violation (usually indicating possible bias low)

" j " = 'estimated' value; used for lab-related issues where certain lab QC criteria are not met and re-testing is not possible (as identified by the WES lab only). Also used to report sample data where the sample concentration is less than the 'reporting' limit or RDL and greater than the method detection limit or MDL (mdl< x <rdl). Also used to note where values have been reported at levels less than the mdl.

“ m ” = method SOP not followed, only partially implemented or not implemented at all, due to complications with sample matrix (e.g., sediment in sample, floc formation), lab error (e.g., cross-contamination between samples), additional steps taken by the lab to deal with matrix complications, lost/unanalyzed samples, and missing data.

“ p ” = samples not preserved per SOP or analytical method requirements.

“ r ” = samples collected may not be representative of actual field conditions, including the possibility of “outlier” data and flow-limited conditions (e.g., pooled).

Misc. abbrev./symbols:

TY= tygon tubing
AF= ambient field blank
VD= van dorn bottle