Technical Memorandum

SOUTH SHORE COASTAL WATERSHEDS 2006
DWM WATER QUALITY MONITORING DATA

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Jamie Carr and Matthew Reardon
Massachusetts Department of Environmental Protection
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COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
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Kenneth L. Kimmell, Commissioner
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Bethany Card, Assistant Commissioner
DIVISION OF WATERSHED MANAGEMENT

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Introduction

The South Shore Coastal Watersheds water quality survey was conducted in 2006, as part of the Division of Watershed Management (DWM) monitoring. Consistent with the DWM's general approach to watershed monitoring to meet defined programmatic objectives, water quality surveys were conducted during the months of June, July, August, September, and October. 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. Results of biomonitoring are reported in separate memoranda.

Project Objectives

The results of the 2006 South Coastal water quality monitoring are factored into regulatory actions taken by MassDEP and the US EPA, are incorporated into DWM's water quality assessment reports, and are used to update Sections 305(b) and 303(d) reporting elements of the Clean Water Act. Additionally, these data are used in the development of Total Maximum Daily Loads (TMDLs) to address waters not attaining water quality standards and to aid in the development of National Pollutant Discharge Elimination System (NPDES) permits.

The specific objectives of the 2006 South Shore Coastal Watersheds monitoring were as follows:

- Provide biological and habitat data to document the status of benthic and fish communities over time (trend monitoring).

- Provide biological, habitat, and dissolved oxygen, temperature, and chemical data to DWM's Environmental Monitoring and Assessment Program to be used in making *Aquatic Life* and *Aesthetics* use assessments required by Section 305(b) of the Clean Water Act; provide data for other informational needs of Massachusetts regulatory agencies.

- Provide quality assured fecal coliform and *E. coli* bacteria data for the purpose of assessing *Primary* and *Secondary Contact Recreation* uses.

Sampling Plan

Information pertaining to station location, rationale and objectives is available in *South Coastal Watershed: Sampling and Analysis Plan 2006 (*Carr 2006). For a description of the DWM's general approach to watershed monitoring, see the *MADEP, DWM QAPP for Surface Water Monitoring and Assessment, 2005-2009* (MassDEP 2005a).

Samples for total phosphorus, total nitrogen, ammonia-nitrogen, total suspended solids (TSS), color, turbidity, bacteria counts (fecal coliform and *E. coli*) as well as dissolved oxygen and other field measurements were obtained from a total of seventeen (17) stations. Water quality surveys (grab samples and *in-situ* measurements) were conducted on the following dates: June 20th, June 21st (the first survey was split into two days: one for bacteria-only conducted June 20th, and one for all other parameters conducted the next day on June 21st, subsequent surveys were collected concurrently on one day), July 6th, August 2nd, September 6th, and October 11th. Additionally, continuous temperature and dissolved oxygen monitoring with unattended metered probes was carried out for a minimum duration of 24 hours at 17 sites. Total unattended probe deployment duration varied by sampling station. The maximum deployment duration of unattended probes across all sampling stations was 121 hours. Two to five separate deployments of unattended probes were conducted over the sampling season depending on the sampling station. Table 1 and Figure 1 provide details and locations of the 2006 sampling sites.

Table 1. MassDEP DWM 2006 South Shore Coastal Watersheds sampling station descriptions and sampling matrix

River/Stream	Station	Monitoring Site Description (sample type*)
French Stream	FS101	Below Rockland WWTP, Rockland (1,2,3,4)
French Stream	FS102	Summer Street Bridge, Rockland, MA (1,2,3,4,5,7)
Drinkwater River	DW101	Circuit Street Bridge, Hanover, MA (1,2,3,4,5)
Indian Head River	IH102A	Cross/State Street, Hanover/Hanson, MA (1,2,3,4,5)
Iron Mine Brook	IM101	Broadway Road Hanover, MA (1,2,3,4,5,7)
North River	NR103	Route 53 Bridge, Hanover/Pembroke, MA (1,2,3,4)
Third Herring Brook	TH02	River Street crossing, Norwell/Hanover, MA (1,2,3,4,5)
First Herring Brook	FH02	Grove Street crossing, Scituate, MA (1,2,3,4,5)
Herring River	HR01	New Driftway Road Bridge, Scituate, MA (1,2,3,4,5)
South River	SR102A	Route 3A (Main Street) Bridge, Marshfield, MA (1,2,3,4,5,7)
South River	SR103	Temple Street Crossing, Duxbury, MA (1,2,3,4)
Green Harbor River	GH01	Upstream side of Route 101 Bridge, Marshfield, MA (1,2,3,4)
Jones River	JR102A	Downstream of Elm Street Bridge, Kingston, MA (1,2,3,4,5,7)
Eel River	ER02	Downstream Russell Mills Road, Plymouth, MA (1,2,3,4,5,6)
Eel River	ER01	At Nature Conservancy driveway off Long Pond Road, below reclaimed bogs, Plymouth (1,2,3,4,6)
Eel River	ER015	At old dam upstream of inlet to Russell Mill Pond, Plymouth (5,6,7)
Unnamed Tributary to Eel River	ER04A	Downstream Clifford Road Bridge, Plymouth, MA (1,2,3,4,6)
Unnamed Tributary to Eel River	ER06	At dirt road crossing within Pine Hills development South of Sandwich Road, Plymouth (5,6,7)
Town Brook	TB01	Downstream of Spring Street, Plymouth, MA (1,2,3,4,5)
Second Herring Brook	SH02	Downstream of Norris Reservation Walking path, off of Dover Street, Norwell, MA (5)

*1 – attended multi-probe (DO, temperature, pH, conductance), 2 – nutrients,color,turbidity, 3 – bacteria samples, 4 – unattended continuous dissolved oxygen and temperature, 5 – Rapid Bioassessment Protocol (RBP) III and habitat assessment (reported in a separate memoranda), 6 – fish population (reported in a separate memoranda). 7 – periphyton (reported in a separate memoranda)

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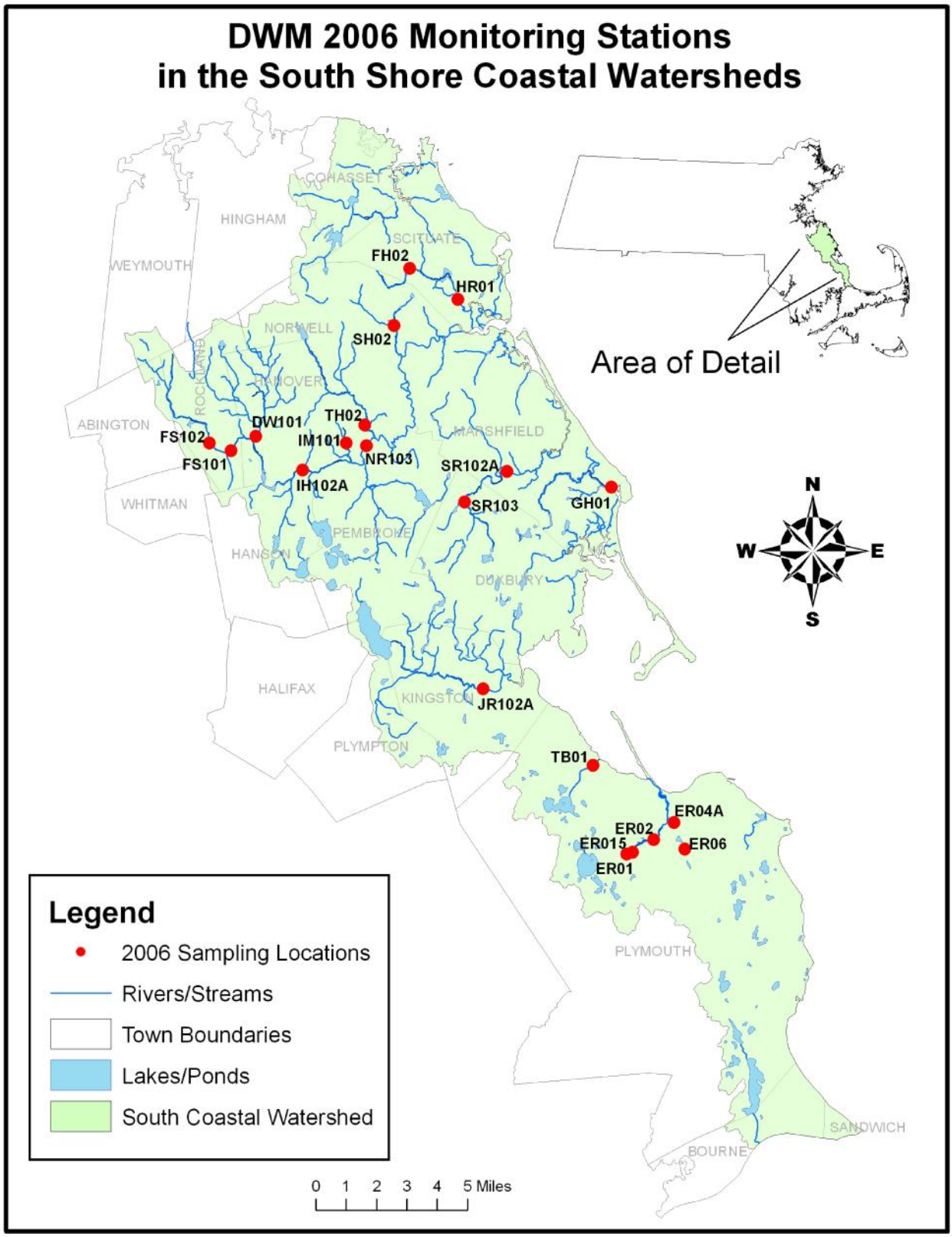
Figure 1. MassDEP, DWM 2006 Monitoring Station Locations in the South Shore Coastal Watersheds



Field and Analytical Methods

Procedures used for water sampling and sample handling are described in the *Sample Collection Techniques for DWM Surface Water Quality Monitoring SOP* (MassDEP 2004a). The Wall Experiment Station(WES) in Lawrence, MA 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 multi-probe calibration and deployment are described in *Water Quality Multi-probe Data Collection* (MassDEP 2005b) and *Multi-probe Deployments for Unattended Logging* (MassDEP 2004b).

Wade-in grab samples were collected and sent to Wall Experiment Station (WES) in Lawrence, MA where they were analyzed for low-level total phosphorus (TP), total nitrogen (TN), ammonia as nitrogen (NH_3-N) and total suspended solids (TSS). *E. coli* and fecal coliform bacteria samples were analyzed at Envirotech Laboratories Inc. in Sandwich, MA. Apparent color, true color and turbidity were analyzed at the DWM laboratory in Worcester, MA. *In- situ* parameters were measured using a multi-probe included dissolved oxygen, percent saturation, pH, conductivity, temperature, and total dissolved solids.

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 2).

Quality Assurance and Quality Control

Monitoring data collected from the South Shore Coastal Watersheds have met the specific programmatic data quality objectives (DQOs) outlined in the applicable quality assurance project plan (MassDEP 2005). Quality assurance for watershed monitoring by the DWM is provided to ensure implementation of an effective and efficient sampling design, and to provide data to meet specific data quality objectives. For all water quality surveys, quality control samples (field blanks and duplicates) were taken at a minimum of one each per analyte per crew per survey.

DWM quality assurance and database management staff reviewed laboratory data reports and all multi-probe data. The data were validated and finalized per appropriate data validation procedures as outlined in *DWM Water Quality Data Validation Process (Summary)* (MassDEP 2012a). Detailed data validation procedures for laboratory data, attended multi-probe data and unattended multi-probe data were conducted using appropriate procedures (MassDEP 2012b, MassDEP 2012c, MassDEP 2012d). A complete summary of the review process for all 2006 DWM data is provided in the *Water Quality Data Validation Report for Year 2006 Project Data* (MassDEP 2007). Appendix 1 of this technical memorandum contains definitions for all data qualifiers (MassDEP 2007).

Station Observations

Station observations were recorded on field sheets for each survey by a DWM investigator. Station observations are described below in Table 2 for each DWM sampling event (MassDEP 2006).

Table 2. 2006 Field observations from MassDEP DWM surveys

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
DW101	6/20/2006	None	Clear	Unobservable	Unobservable	No	No	
DW101	6/21/2006	None	Clear	Unobservable	Unobservable	No	No	
DW101	7/6/2006	None	Clear	Unobservable	Blank	No	No	
DW101	8/2/2006	None	Slightly Turbid	Unobservable	Unobservable	No	No	
DW101	9/6/2006	None	Slightly Turbid	Unobservable	Unobservable	No	No	
DW101	10/11/2006	None	Slightly Turbid	Unobservable	Unobservable	No	No	

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
ER01	6/20/2006	None	Clear	None	Sparse	Yes	No	Scum: Pollen/dust blankets
ER01	6/21/2006	None	Clear	Sparse	None	No	No	
ER01	7/6/2006	None	Clear	None	Moderate	Yes	No	Scum: Foam. Pollen/dust blankets.
ER01	8/2/2006	None	Clear	Sparse	Sparse	Yes	No	Scum: Foam
ER01	9/6/2006	None	Clear	None	None	No	No	
ER01	10/11/2006	None	Clear	Sparse	None	No	No	

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
ER02	6/20/2006	Fishy, Musty	Moderately Turbid	Unobservable	Unobservable	Yes	No	Scum: Pollen/dust blankets
ER02	6/21/2006	None	Moderately Turbid	None	None	No	No	
ER02	7/6/2006	None	Slightly Turbid	None	Moderate	Yes	Yes	Scum: Foam. Pollen/dust blankets. Obj. Deposits: Trash. Rusty bike on bank, old tire.
ER02	8/2/2006	None	Slightly Turbid	None	None	Yes	Yes	Scum: Foam. Obj. Deposits: Trash
ER02	9/6/2006	None	Slightly Turbid	None	None	No	Yes	Obj. Deposits: Trash. Some on both banks.
ER02	10/11/2006	None	Slightly Turbid	None	Sparse	Yes	Yes	Plants: Some trash on LHB. Scum: Natural foam

Table 2 (continued). 2006 Field observations from MassDEP DWM surveys

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
ER04A	6/20/2006	None	Clear	Moderate	None	Yes	No	Scum: Pollen/dust blankets
ER04A	6/21/2006	None	Clear	Moderate	None	No	Yes	Obj. Deposits: Trash. Can, sack.
ER04A	7/6/2006	None	Clear	Dense	None	Yes	No	Scum: Foam. A few small flecks.
ER04A	8/2/2006	None	Clear	Dense	Moderate	No	No	
ER04A	9/6/2006	None	Slightly Turbid	Very Dense	Sparse	Yes	No	Scum: pollen/dust blankets, algal mats around emerging vegetation
ER04A	10/11/2006	None	Slightly Turbid	Very Dense	Moderate	Yes	No	Plants: Rushes and sedges. Scum: Natural foam

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
FH02	6/20/2006	Musty (basement)	Slightly Turbid	None	None	Yes	No	Scum: Foam
FH02	6/21/2006	None	Clear	Dense	None	No	No	
FH02	7/6/2006	None	Slightly Turbid	None	None	No	No	
FH02	8/2/2006	None	Clear	Blank	Blank	No	No	
FH02	9/6/2006	None	Clear	None	None	No	No	
FH02	10/11/2006	None	Slightly Turbid	None	None	No	No	

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
FS101	6/20/2006	Effluent (treated), chlorine	Slightly Turbid	Sparse	None	No	No	
FS101	6/21/2006	Effluent (treated)	Clear	Moderate	Unobservable	No	No	
FS101	7/6/2006	Sulfide (rotten egg)	Clear	Sparse	Blank	No	No	
FS101	8/2/2006	Effluent (treated)	Clear	Blank	Unobservable	No	No	
FS101	9/6/2006	None	Slightly Turbid	Sparse	Unobservable	No	No	
FS101	10/11/2006	Effluent (treated)	Slightly Turbid	Unobservable	Unobservable	No	No	

Table 2 (continued). 2006 Field observations from MassDEP DWM surveys

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
FS102	6/20/2006	None	Clear	Sparse	None	No	Yes	Obj. Deposits: Trash. Urban trash present.
FS102	6/21/2006	None	Clear	Moderate	Moderate	No	No	
FS102	7/6/2006	None	Clear	Sparse	Blank	No	Yes	Obj. Deposits: Trash. Little bit.
FS102	8/2/2006	None	Clear	Sparse	Moderate	No	Yes	Obj. Deposits: Trash. Some trash, also some lawn clippings
FS102	9/6/2006	None	Slightly Turbid	Sparse	Unobservable	No	Yes	Obj. Deposits: Trash
FS102	10/11/2006	Musty (basement)	Highly turbid/murky	None	Moderate	No	Yes	Comment: Extremely Turbid- gives an odd greenish/brownish color and opacity to water

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
GH01	6/20/2006	Rotting Vegetables	Highly turbid/murky	Sparse	Blank	Yes	No	Scum: Oily sheens adjacent to road
GH01	6/21/2006	Rotting Vegetables	Unobservable	Unobservable	Unobservable	No	Yes	Obj. Deposits: Trash. Fishing line
GH01	7/6/2006	Rotting Vegetables	Unobservable	Sparse	Unobservable	Yes	Unobservable	Scum: Oily sheen
GH01	8/2/2006	Blank	Blank	Blank	Blank	Blank	Blank	Comment: Original field sheet lost
GH01	9/6/2006	Blank	Blank	Sparse	Unobservable	Yes	No	Scum: Foam
GH01	10/11/2006	Rotting Vegetables	Slightly Turbid	Sparse	Unobservable	No	No	

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
HR01	6/20/2006	None	Clear	None	Dense	Yes	No	Scum: Natural Foam
HR01	6/21/2006	None	Clear	None	Moderate	No	No	
HR01	7/6/2006	None	Slightly Turbid	None	Very Dense	No	No	Scum: Film on rocks
HR01	8/2/2006	Blank	Blank	Blank	Blank	Blank	Blank	Comment: Original field sheet lost
HR01	9/6/2006	None	Slightly Turbid	Sparse	Unobservable	No	No	
HR01	10/11/2006	None	Clear	None	Sparse	No	No	

Table 2 (continued). 2006 Field observations from MassDEP DWM surveys

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
IH102A	6/20/2006	Fishy, Musty	Clear	Moderate	None	Yes	No	Scum: Foam
IH102A	6/21/2006	Effluent (treated)	Clear	Dense	Sparse	Yes	No	Scum: Foam. Minimal amount, likely natural.
IH102A	7/6/2006	Effluent (treated)	Slightly Turbid	Unobservable	Unobservable	Yes	No	Scum: Foam
IH102A	8/2/2006	Effluent (treated)	Slightly Turbid	Moderate	Sparse	Yes	No	Scum: Foam
IH102A	9/6/2006	Musty (basement)	Slightly Turbid	Blank	Unobservable	Yes	Yes	Scum: Some foam in eddies. Obj. Deposits: Some trash.
IH102A	10/11/2006	Effluent (treated)	Clear	None	None	Yes	Yes	Scum: Small amounts of foam in eddies Obj. Deposits: Some trash from partying.

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
IM101	6/20/2006	None	Clear	None	None	No	No	
IM101	6/21/2006	None	Slightly Turbid	None	Sparse	No	No	
IM101	7/6/2006	None	Clear	None	Blank	No	No	
IM101	8/2/2006	None	Clear	Blank	Blank	No	No	
IM101	9/6/2006	None	Clear	None	Moderate	No	No	
IM101	10/11/2006	None	Clear	None	Sparse	No	No	

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
JR102A	6/20/2006	None	Slightly Turbid	Moderate	Moderate	Yes	No	Scum: Pollen/dust blankets.
JR102A	6/21/2006	None	Moderately Turbid	Very Dense	None	Yes	No	Scum: Foam
JR102A	7/6/2006	Musty (basement)	Moderately Turbid	Very Dense	Unobservable	Yes	No	Plants: Submerged grasses. Scum: Foam.
JR102A	8/2/2006	None	Clear	Very Dense	None	Yes	No	Plants: Millfoil, grassy strands. Scum: Pollen/dust blankets
JR102A	9/6/2006	None	Clear	Very Dense	Dense	Yes	No	Plants: Millfoil, potamogeton? Scum: A little yellow foam
JR102A	10/11/2006	None	Clear	Very Dense	Dense	Yes	No	Plants: millfoil, long grassy plants. Scum: Natural foam

Table 2 (continued). 2006 Field observations from MassDEP DWM surveys

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
NR103	6/20/2006	None	Slightly Turbid	Unobservable	Unobservable	No	No	
NR103	6/21/2006	Musty (basement)	Slightly Turbid	Sparse	Sparse	No	No	
NR103	7/6/2006	None	Slightly Turbid	Sparse	Unobservable	No	No	
NR103	8/2/2006	Blank	Slightly Turbid	Blank	Blank	No	No	
NR103	9/6/2006	None	Slightly Turbid	Sparse	Unobservable	No	No	
NR103	10/11/2006	None	Clear	Sparse	Moderate	No	No	

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
SR102A	6/20/2006	None	Clear	None	Moderate	Yes	No	Scum: Foam
SR102A	6/21/2006	None	Slightly Turbid	Moderate	Moderate	Yes	Yes	Scum: Foam
SR102A	7/6/2006	None	Clear	Sparse	Sparse	Yes	No	Scum: Foam
SR102A	8/2/2006	Musty (basement)	Clear	Sparse	Moderate	Yes	No	Scum: Foam
SR102A	9/6/2006	Blank	Clear	Sparse	None	No	No	
SR102A	10/11/2006	None	Slightly Turbid	Sparse	Sparse	No	No	

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
SR103	6/20/2006	None	Clear	Sparse	Sparse	Yes	No	Scum: Foam
SR103	6/21/2006	None	Moderately Turbid	Blank	Sparse	Yes	Yes	Scum: Foam. Obj. Deposits: Trash. Fishing lines and buoys.
SR103	7/6/2006	Rotting Vegetables	Moderately Turbid	Sparse	Sparse	Yes	No	Scum: Foam
SR103	8/2/2006	Blank	Blank	Blank	Blank	Blank	Blank	Comment: Original field sheet lost
SR103	9/6/2006	None	Clear	Sparse	Unobservable	No	No	
SR103	10/11/2006	Sulfide (rotten egg)	Slightly Turbid	Unobservable	Unobservable	Yes	No	Scum: Oily Sheen noted upstream of low head dam. Foam just downstream of dam.

Table 2 (continued). 2006 Field observations from MassDEP DWM surveys

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
TB01	6/20/2006	None	Clear	Very Dense	Moderate	Yes	Yes	Plants: Millfoil, pickerel weed, potamogeton, Najas? Scum: pollen/dust blankets. Obj. Deposits: Trash. glass bottle, old plastic bits
TB01	6/21/2006	None	Clear	Dense	None	No	No	
TB01	7/6/2006	None	Clear	Very Dense	Unobservable	No	No	Plants: Millfoil, potamogeton sp., other pond species
TB01	8/2/2006	None	Slightly Turbid	Very Dense	None	Yes	No	Scum: Dirty foam build up on surface clinging to plants, pollen dust blankets
TB01	9/6/2006	None	Slightly Turbid	Very Dense	None	Yes	No	Plants: Millfoil, potamogeton. Scum: Foam
TB01	10/11/2006	None	Slightly Turbid	Very Dense	None	Yes	No	Plants: Millfoil, potamogetons, other submerged plants. Scum: Natural foam

Site	Date	Odor	Water Clarity	Aquatic Plants	Periphyton	Floating Scum	Objectionable Deposits	Comments
TH02	6/20/2006	None	Clear	Sparse	None	No	No	
TH02	6/21/2006	None	Slightly Turbid	Moderate	Sparse	No	No	
TH02	7/6/2006	None	Clear	Unobservable	Blank	No	No	
TH02	8/2/2006	None	Slightly Turbid	Blank	Blank	Yes	No	Scum: Foam
TH02	9/6/2006	None	Slightly Turbid	Sparse	Moderate	No	No	
TH02	10/11/2006	None	Slightly Turbid	None	Sparse	No	Yes	Obj. Deposits: Someone dumped a bike in the stream off of the bridge.

Sampling Issues and Coordinator Notes

Some field sheet observations are qualitative and subject to the interpretation of individual sampling crew members; particularly observations of light trash and foam noted on many field sheets. These observations, though accurate, are literal interpretations of the field sheet categories and are not indicative of levels of objectionable deposits or foam severe enough to impair the Aesthetics uses for the majority of these waters.

At station DW101, Drinkwater River, the water color was generally so dark that substrate, plant, and periphyton fields were usually recorded as "unobservable" (Table 2). Station HR01, Herring River, appeared to be a completely freshwater station during spring reconnaissance and during initial surveys. However, a salt water influence was indicated at the sampling location by high conductivity readings observed in the later surveys. Station GH01, Green Harbor River, proved difficult to sample due to the tide gates immediately below the station and the increased water velocity that sometimes occurred at that location.

Survey Conditions

Stream discharge and precipitation information were collected and analyzed to determine hydrologic conditions leading up to and during the water quality sampling events. Precipitation data collected during the survey period in 2006 were downloaded from the National Oceanic and Atmospheric Administration (NOAA), National Climatic Data Center (NCDC) for the Plymouth: Plymouth Municipal Airport weather station (NOAA 2012a). The precipitation totals on the water quality survey dates and the five days prior to the survey dates were extracted from the records. In addition, the Plymouth weather station's monthly precipitation totals for 2006 and the monthly average of total precipitation for the period 1981 to 2010 were downloaded to determine if precipitation amounts in 2006 were above or below normal (NOAA 2012b) (Table 3).

Stream discharge data from the Indian Head River at Hanover stream gage (01105730) and the Jones River stream gage (01105870) in Kingston were downloaded from the USGS (Table 4) (USGS 2012a). In addition, the 7Q10 for each gage station was calculated using USGS StreamStats (Table 4). The entire period of record for each USGS gage station was downloaded and the average daily discharge values on the water quality survey dates and the five days prior to the survey dates were extracted from these records. The percent of time that the average daily discharge on the extracted dates was equaled or exceeded during the entire period of record for the gage was calculated to put the discharge value into historical perspective. These percent exceeded values as well as the actual precipitation and discharge data are summarized and presented in Table 5. Additionally, this review was used to determine whether the data were representative of "wet" or "dry weather" sampling conditions (see Table 6).

Table 3. Total monthly precipitation in 2006 and monthly average precipitation total for 1981 to 2010 at Plymouth Municipal Airport weather station (NOAA 2012a).

Month	2006 Precipitation (in)	Monthly Average Precipitation (1981-2010) (in.)	2006 Precipitation as Percent of Monthly Average Precipitation (1981-2010)
January	6.83	3.69	185%
February	1.47	3.6	41%
March	0.38	5.25	7%
April	2.22	4.64	48%
May	7.86	3.69	213%
June	11.48	3.95	291%
July	1.62	3.49	46%
August	6.34	3.79	167%
September	2.22	3.92	57%
October	5.02	4.08	123%
November	6.61	4.66	142%
December	2.47	4.39	56%

Table 4. USGS gage stations used to estimate the hydrological conditions in the South Shore Coastal Watersheds during the 2006 DWM water quality surveys and the estimated 7Q10 flows for each gage. (USGS 2012a) (USGS 2012b).

Station Name	Latitude, Longitude	Period of Record	7Q10 (cfs)	Remarks
01105730 Indian Head River At Hanover, MA	42°06'02",70°49'23"	1966 to Present	1.66	Some regulation by mills and by Wampatuck, Indian Head, Maquan, and other ponds upstream.
1105870 Jones River at Kingston, MA	41°59'27",70°44'03"	August 1966 to present	4.02	Flow regulated by pond upstream. Flow affected at times by wastage from Silver Lake. Surface flow may be affected by ground water that enters from or moves into adjacent basins. Occasional backwater from tidal surge.

Table 5: Precipitation and discharge-The precipitation totals (inches) and daily average discharge (cubic feet per second) on the water quality survey dates and the five days prior to the survey dates as well as the discharge as the percent of the period of record exceeded by a given discharge . Percent exceeded is percent of time that the discharge was equaled or exceeded during the period of record for the stream gage. Shaded dates indicate the deployment of multi-probes and large bold dates indicate collection of water samples (USGS 2012a) (NOAA 2012b).

	Precipitation (in)	**Discharge (cfs) (% exceeded)**	**Discharge (cfs) (% exceeded)**
Date	Plymouth Municipal Airport	01105730 Indian Head River at Hanover, MA	1105870 Jones River at Kingston, MA
5/10/2006	0.1	154 (11%)	72 (12%)
5/11/2006	0.02	141 (13%)	68 (14%)
5/12/2006	0.33	96 (22%)	60 (17%)
5/13/2006	2.4	234 (6%)	94 (8%)
5/14/2006	0.91	721 (3%)	207 (4%)
5/15/2006	0.15	789 (3%)	221 (3%)
5/16/2006	0.98	541 (4%)	209 (3%)
5/17/2006	0	358 (4%)	196 (4%)
6/11/2006	0.01	305 (5%)	185 (4%)
6/12/2006	0	216 (7%)	156 (4%)
6/13/2006	0	158 (11%)	130 (5%)
6/14/2006	0	127 (15%)	112 (6%)
6/15/2006	0.44	132 (14%)	111 (6%)
6/16/2006	0	132 (14%)	111 (6%)
6/17/2006	0.08	99 (21%)	104 (7%)
6/18/2006	0	83 (26%)	96 (8%)
6/19/2006	0	68 (33%)	88 (9%)
6/20/2006	0.13	59 (39%)	82 (10%)
6/21/2006	0.01	56 (41%)	74 (12%)
7/1/2006	0	289 (5%)	107 (6%)
7/2/2006	0	173 (9%)	99 (7%)
7/3/2006	0	121 (16%)	92 (8%)
7/4/2006	T	111 (18%)	85 (10%)
7/5/2006	0.09	124 (15%)	78 (11%)
7/6/2006	0.33	101 (20%)	74 (12%)
7/23/2006	T	66 (34%)	39 (32%)
7/24/2006	0	49 (46%)	40 (31%)
7/25/2006	0.01	39 (55%)	37 (35%)
7/26/2006	0	34 (60%)	33 (40%)
7/27/2006	0	31 (63%)	30 (45%)
7/28/2006	0.03	29 (65%)	29 (46%)
7/29/2006	0.02	27 (67%)	29 (46%)
7/30/2006	0	25 (69%)	28 (48%)
7/31/2006	0	22 (73%)	27 (50%)
8/1/2006	0	21 (74%)	26 (52%)
8/2/2006	0.04	19 (76%)	25 (53%)

	Precipitation (in)	Discharge (cfs) (% exceeded)	Discharge (cfs) (% exceeded)
Date	Plymouth Municipal Airport	01105730 Indian Head River at Hanover, MA	1105870 Jones River at Kingston, MA
8/31/2006	0	34 (60%)	30 (45%)
9/1/2006	0	28 (66%)	27 (50%)
9/2/2006	0.01	25 (69%)	25 (53%)
9/3/2006	0.17	25 (69%)	24 (55%)
9/4/2006	0	26 (68%)	25 (53%)
9/5/2006	0.09	25 (69%)	25 (53%)
9/6/2006	0.11	28 (66%)	25 (53%)
9/22/2006	0	25 (69%)	18 (68%)
9/23/2006	0.02	20 (75%)	16 (73%)
9/24/2006	0.07	18 (77%)	14 (79%)
9/25/2006	0	17 (78%)	16 (73%)
9/26/2006	0.01	16 (80%)	15 (76%)
9/27/2006	0	14 (82%)	14 (79%)
10/6/2006	0	16 (80%)	14 (79%)
10/7/2006	0	14 (82%)	14 (79%)
10/8/2006	0	13 (84%)	12 (84%)
10/9/2006	0.01	12 (85%)	12 (84%)
10/10/2006	0.01	12 (85%)	11 (87%)
10/11/2006	0.54	11 (87%)	11 (87%)

It is the practice of DWM to define a "wet-weather" sample as one that was collected at a location that received at least 0.5 inches of rainfall within the 72 hours antecedent to sample collection as evidenced by a corresponding increase in streamflow condition. All water quality sampling dates were determined to be considered "dry weather samples". Table 6 details the determination of wet or dry weather conditions for water quality sampling dates.

Table 6: 2006 wet-weather sample determination

Sample Collection Date	72 hour antecedent precipitation* (in)	Water Quality Station
6/20/2006	0.08	**No** samples considered to be "wet-weather" samples
6/21/2006	0.13	**No** samples considered to be "wet-weather" samples
7/6/2006	0.09	**No** samples considered to be "wet-weather" samples
8/2/2006	0	**No** samples considered to be "wet-weather" samples
9/6/2006	0.26	**No** samples considered to be "wet-weather" samples
10/11/2066	0.02	**No** samples considered to be "wet-weather" samples

* note antecedent precipitation was 72 hours antecedent to the day of sampling (not including day of sampling).

Water Quality Data

All MassDEP DWM water quality data are managed and maintained in the Water Quality Data Access Database. Tables 7, 8, 9 and 10 below are 2006 data for the South Shore Coastal River Watersheds. Table 8 presents the geometric mean of the *E. coli* samples. 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 WES. Data qualifiers are listed in Appendix 1.

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W0338	ER01	6/20/2006	10:00	94-0316		*E. coli*	CFU/100mL	20	e
W0338	ER01	6/20/2006	10:00	94-0316		Fecal Coliforms	CFU/100mL	15	e
W0898	FS102	6/20/2006	10:17	94-0308		*E. coli*	CFU/100mL	380	
W0898	FS102	6/20/2006	10:17	94-0308		Fecal Coliforms	CFU/100mL	390	
W1510	FH02	6/20/2006	10:20	94-0300		*E. coli*	CFU/100mL	120	
W1510	FH02	6/20/2006	10:20	94-0300		Fecal Coliforms	CFU/100mL	130	
W0339	ER02	6/20/2006	10:25	94-0317		*E. coli*	CFU/100mL	<5	
W0339	ER02	6/20/2006	10:25	94-0317		Fecal Coliforms	CFU/100mL	<5	
W1511	HR01	6/20/2006	10:38	94-0301		*E. coli*	CFU/100mL	100	
W1511	HR01	6/20/2006	10:38	94-0301		Enterococci	CFU/100mL	110	
W1511	HR01	6/20/2006	10:38	94-0301		Fecal Coliforms	CFU/100mL	560	
W0333	ER04A	6/20/2006	10:40	94-0318		*E. coli*	CFU/100mL	60	
W0333	ER04A	6/20/2006	10:40	94-0318		Fecal Coliforms	CFU/100mL	100	
W0897	FS101	6/20/2006	10:44	94-0309		*E. coli*	CFU/100mL	120	
W0897	FS101	6/20/2006	10:44	94-0309		Fecal Coliforms	CFU/100mL	180	
W1539	SR102A	6/20/2006	11:02	94-0302		*E. coli*	CFU/100mL	110	
W1539	SR102A	6/20/2006	11:02	94-0302		Enterococci	CFU/100mL	75	
W1539	SR102A	6/20/2006	11:02	94-0302		Fecal Coliforms	CFU/100mL	190	
W0895	DW101	6/20/2006	11:04	94-0310		*E. coli*	CFU/100mL	150	
W0895	DW101	6/20/2006	11:04	94-0310		Fecal Coliforms	CFU/100mL	320	
W1512	TB01	6/20/2006	11:10	94-0319		*E. coli*	CFU/100mL	45	
W1512	TB01	6/20/2006	11:10	94-0319		Fecal Coliforms	CFU/100mL	130	
W1528	IH102A	6/20/2006	11:20	94-0311		*E. coli*	CFU/100mL	80	
W1528	IH102A	6/20/2006	11:20	94-0311		Fecal Coliforms	CFU/100mL	150	
W0337	GH01	6/20/2006	11:28	94-0303		*E. coli*	CFU/100mL	60	
W0337	GH01	6/20/2006	11:28	94-0303		Enterococci	CFU/100mL	10	
W0337	GH01	6/20/2006	11:28	94-0303		Fecal Coliforms	CFU/100mL	60	
W0910	IM101	6/20/2006	11:38	94-0312		*E. coli*	CFU/100mL	150	
W0910	IM101	6/20/2006	11:38	94-0312		Fecal Coliforms	CFU/100mL	290	
W1524	JR102A	6/20/2006	11:45	94-0320	94-0321	*E. coli*	CFU/100mL	70	
W1524	JR102A	6/20/2006	11:45	94-0320	94-0321	Fecal Coliforms	CFU/100mL	95	
W1509	TH02	6/20/2006	11:50	94-0313	94-0314	*E. coli*	CFU/100mL	110	
W1509	TH02	6/20/2006	11:50	94-0313	94-0314	Fecal Coliforms	CFU/100mL	190	
W0921	SR103	6/20/2006	11:55	94-0304		*E. coli*	CFU/100mL	45	
W0921	SR103	6/20/2006	11:55	94-0304		Fecal Coliforms	CFU/100mL	70	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W0917	NR103	6/20/2006	12:21	94-0305	94-0306	*E. coli*	CFU/100mL	35	
W0917	NR103	6/20/2006	12:21	94-0305	94-0306	Fecal Coliforms	CFU/100mL	55	
W0338	ER01	6/21/2006	9:55	94-0343		Turbidity	NTU	0.6	
W0338	ER01	6/21/2006	9:55	94-0343		True color	PCU	<15	
W0338	ER01	6/21/2006	9:55	94-0343		Apparent color	PCU	<15	
W0338	ER01	6/21/2006	9:55	94-0343		Ammonia-N	mg/L	<0.02	
W0338	ER01	6/21/2006	9:55	94-0343		Total Nitrogen	mg/L	0.42	
W0338	ER01	6/21/2006	9:55	94-0343		Total Phosphorus	mg/L	0.032	
W0338	ER01	6/21/2006	9:55	94-0343		Suspended Solids	mg/L	3.1	
W0898	FS102	6/21/2006	10:02	94-0323		Turbidity	NTU	1.6	
W0898	FS102	6/21/2006	10:02	94-0323		True color	PCU	75	
W0898	FS102	6/21/2006	10:02	94-0323		Apparent color	PCU	110	
W0898	FS102	6/21/2006	10:02	94-0323		Ammonia-N	mg/L	0.04	
W0898	FS102	6/21/2006	10:02	94-0323		Total Nitrogen	mg/L	1.0	
W0898	FS102	6/21/2006	10:02	94-0323		Total Phosphorus	mg/L	0.024	
W0898	FS102	6/21/2006	10:02	94-0323		Suspended Solids	mg/L	1.4	
W0339	ER02	6/21/2006	10:23	94-0345		Turbidity	NTU	2.3	
W0339	ER02	6/21/2006	10:23	94-0345		True color	PCU	<15	
W0339	ER02	6/21/2006	10:23	94-0345		Apparent color	PCU	24	
W0339	ER02	6/21/2006	10:23	94-0345		Ammonia-N	mg/L	<0.02	
W0339	ER02	6/21/2006	10:23	94-0345		Total Nitrogen	mg/L	0.24	
W0339	ER02	6/21/2006	10:23	94-0345		Total Phosphorus	mg/L	0.022	
W0339	ER02	6/21/2006	10:23	94-0345		Suspended Solids	mg/L	6.4	
W0897	FS101	6/21/2006	10:45	94-0324		Turbidity	NTU	3.1	
W0897	FS101	6/21/2006	10:45	94-0324		True color	PCU	70	
W0897	FS101	6/21/2006	10:45	94-0324		Apparent color	PCU	110	
W0897	FS101	6/21/2006	10:45	94-0324		Ammonia-N	mg/L	0.09	
W0897	FS101	6/21/2006	10:45	94-0324		Total Nitrogen	mg/L	3.3	
W0897	FS101	6/21/2006	10:45	94-0324		Total Phosphorus	mg/L	0.097	
W0897	FS101	6/21/2006	10:45	94-0324		Suspended Solids	mg/L	2.6	
W0333	ER04A	6/21/2006	10:50	94-0347		Turbidity	NTU	2.8	
W0333	ER04A	6/21/2006	10:50	94-0347		True color	PCU	27	
W0333	ER04A	6/21/2006	10:50	94-0347		Apparent color	PCU	29	
W0333	ER04A	6/21/2006	10:50	94-0347		Ammonia-N	mg/L	0.03	
W0333	ER04A	6/21/2006	10:50	94-0347		Total Nitrogen	mg/L	0.20	
W0333	ER04A	6/21/2006	10:50	94-0347		Total Phosphorus	mg/L	0.041	
W0333	ER04A	6/21/2006	10:50	94-0347		Suspended Solids	mg/L	2.2	
W0895	DW101	6/21/2006	11:23	94-0325		Turbidity	NTU	5.8	
W0895	DW101	6/21/2006	11:23	94-0325		True color	PCU	140	
W0895	DW101	6/21/2006	11:23	94-0325		Apparent color	PCU	140	
W0895	DW101	6/21/2006	11:23	94-0325		Ammonia-N	mg/L	0.12	
W0895	DW101	6/21/2006	11:23	94-0325		Total Nitrogen	mg/L	1.5	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W0895	DW101	6/21/2006	11:23	94-0325		Total Phosphorus	mg/L	0.075	
W0895	DW101	6/21/2006	11:23	94-0325		Suspended Solids	mg/L	6.3	
W1512	TB01	6/21/2006	11:24	94-0349		Turbidity	NTU	1.8	
W1512	TB01	6/21/2006	11:24	94-0349		True color	PCU	17	
W1512	TB01	6/21/2006	11:24	94-0349		Apparent color	PCU	25	
W1512	TB01	6/21/2006	11:24	94-0349		Ammonia-N	mg/L	0.10	
W1512	TB01	6/21/2006	11:24	94-0349		Total Nitrogen	mg/L	0.99	
W1512	TB01	6/21/2006	11:24	94-0349		Total Phosphorus	mg/L	0.033	
W1512	TB01	6/21/2006	11:24	94-0349		Suspended Solids	mg/L	1.7	
W1528	IH102A	6/21/2006	11:48	94-0326		Turbidity	NTU	4.3	
W1528	IH102A	6/21/2006	11:48	94-0326		True color	PCU	75	
W1528	IH102A	6/21/2006	11:48	94-0326		Apparent color	PCU	120	
W1528	IH102A	6/21/2006	11:48	94-0326		Ammonia-N	mg/L	0.07	
W1528	IH102A	6/21/2006	11:48	94-0326		Total Nitrogen	mg/L	1.8	
W1528	IH102A	6/21/2006	11:48	94-0326		Total Phosphorus	mg/L	0.085	
W1528	IH102A	6/21/2006	11:48	94-0326		Suspended Solids	mg/L	4.2	
W1524	JR102A	6/21/2006	12:08	94-0351		Turbidity	NTU	3.8	
W1524	JR102A	6/21/2006	12:08	94-0351		True color	PCU	60	
W1524	JR102A	6/21/2006	12:08	94-0351		Apparent color	PCU	68	
W1524	JR102A	6/21/2006	12:08	94-0351		Ammonia-N	mg/L	0.06	
W1524	JR102A	6/21/2006	12:08	94-0351		Total Nitrogen	mg/L	0.71	
W1524	JR102A	6/21/2006	12:08	94-0351		Total Phosphorus	mg/L	0.059	
W1524	JR102A	6/21/2006	12:08	94-0351		Suspended Solids	mg/L	3.9	
W0910	IM101	6/21/2006	12:15	94-0327		Turbidity	NTU	5.2	
W0910	IM101	6/21/2006	12:15	94-0327		True color	PCU	110	
W0910	IM101	6/21/2006	12:15	94-0327		Apparent color	PCU	200	
W0910	IM101	6/21/2006	12:15	94-0327		Ammonia-N	mg/L	0.08	
W0910	IM101	6/21/2006	12:15	94-0327		Total Nitrogen	mg/L	1.4	
W0910	IM101	6/21/2006	12:15	94-0327		Total Phosphorus	mg/L	0.030	
W0910	IM101	6/21/2006	12:15	94-0327		Suspended Solids	mg/L	4.1	
W0917	NR103	6/21/2006	12:45	94-0328		Turbidity	NTU	2.7	
W0917	NR103	6/21/2006	12:45	94-0328		True color	PCU	75	
W0917	NR103	6/21/2006	12:45	94-0328		Apparent color	PCU	110	
W0917	NR103	6/21/2006	12:45	94-0328		Ammonia-N	mg/L	0.07	
W0917	NR103	6/21/2006	12:45	94-0328		Total Nitrogen	mg/L	1.2	
W0917	NR103	6/21/2006	12:45	94-0328		Total Phosphorus	mg/L	0.065	
W0917	NR103	6/21/2006	12:45	94-0328		Suspended Solids	mg/L	2.6	
W0337	GH01	6/21/2006	12:46	94-0353		Turbidity	NTU	12.0	
W0337	GH01	6/21/2006	12:46	94-0353		True color	PCU	60	
W0337	GH01	6/21/2006	12:46	94-0353		Apparent color	PCU	120	
W0337	GH01	6/21/2006	12:46	94-0353		Ammonia-N	mg/L	0.26	
W0337	GH01	6/21/2006	12:46	94-0353		Total Nitrogen	mg/L	0.34	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W0337	GH01	6/21/2006	12:46	94-0353		Total Phosphorus	mg/L	0.10	
W0337	GH01	6/21/2006	12:46	94-0353		Suspended Solids	mg/L	26	
W1539	SR102A	6/21/2006	13:31	94-0355		Turbidity	NTU	3.3	
W1539	SR102A	6/21/2006	13:31	94-0355		True color	PCU	90	
W1539	SR102A	6/21/2006	13:31	94-0355		Apparent color	PCU	110	
W1539	SR102A	6/21/2006	13:31	94-0355		Ammonia-N	mg/L	0.09	
W1539	SR102A	6/21/2006	13:31	94-0355		Total Nitrogen	mg/L	0.87	
W1539	SR102A	6/21/2006	13:31	94-0355		Total Phosphorus	mg/L	0.091	
W1539	SR102A	6/21/2006	13:31	94-0355		Suspended Solids	mg/L	4.0	
W1509	TH02	6/21/2006	13:40	94-0329		Turbidity	NTU	4.9	
W1509	TH02	6/21/2006	13:40	94-0329		True color	PCU	170	
W1509	TH02	6/21/2006	13:40	94-0329		Apparent color	PCU	210	
W1509	TH02	6/21/2006	13:40	94-0329		Ammonia-N	mg/L	0.20	
W1509	TH02	6/21/2006	13:40	94-0329		Total Nitrogen	mg/L	1.4	
W1509	TH02	6/21/2006	13:40	94-0329		Total Phosphorus	mg/L	0.070	
W1509	TH02	6/21/2006	13:40	94-0329		Suspended Solids	mg/L	7.7	
W0921	SR103	6/21/2006	14:04	94-0357	94-0358	Ammonia-N	mg/L	0.02	
W0921	SR103	6/21/2006	14:04	94-0357	94-0358	Apparent color	PCU	##	d
W0921	SR103	6/21/2006	14:04	94-0357	94-0358	Suspended Solids	mg/L	4.7	
W0921	SR103	6/21/2006	14:04	94-0357	94-0358	Total Nitrogen	mg/L	0.63	
W0921	SR103	6/21/2006	14:04	94-0357	94-0358	Total Phosphorus	mg/L	0.064	
W0921	SR103	6/21/2006	14:04	94-0357	94-0358	True color	PCU	80	
W0921	SR103	6/21/2006	14:04	94-0357	94-0358	Turbidity	NTU	2.6	
W1511	HR01	6/21/2006	14:10	94-0330		Turbidity	NTU	2.7	
W1511	HR01	6/21/2006	14:10	94-0330		True color	PCU	100	
W1511	HR01	6/21/2006	14:10	94-0330		Apparent color	PCU	180	
W1511	HR01	6/21/2006	14:10	94-0330		Ammonia-N	mg/L	0.05	
W1511	HR01	6/21/2006	14:10	94-0330		Total Nitrogen	mg/L	0.94	
W1511	HR01	6/21/2006	14:10	94-0330		Total Phosphorus	mg/L	0.064	
W1511	HR01	6/21/2006	14:10	94-0330		Suspended Solids	mg/L	3.2	
W1510	FH02	6/21/2006	14:45	94-0331	94-0332	Ammonia-N	mg/L	0.09	
W1510	FH02	6/21/2006	14:45	94-0331	94-0332	Apparent color	PCU	280	
W1510	FH02	6/21/2006	14:45	94-0331	94-0332	Suspended Solids	mg/L	1.1	
W1510	FH02	6/21/2006	14:45	94-0331	94-0332	Total Nitrogen	mg/L	1.2	
W1510	FH02	6/21/2006	14:45	94-0331	94-0332	Total Phosphorus	mg/L	0.061	
W1510	FH02	6/21/2006	14:45	94-0331	94-0332	True color	PCU	##	d
W1510	FH02	6/21/2006	14:45	94-0331	94-0332	Turbidity	NTU	0.9	
W0338	ER01	7/6/2006	10:00	94-0488	94-0489	Ammonia-N	mg/L	<0.02	
W0338	ER01	7/6/2006	10:00	94-0488	94-0489	Apparent color	PCU	<15	
W0338	ER01	7/6/2006	10:00	94-0488	94-0489	*E. coli*	CFU/100mL	35	
W0338	ER01	7/6/2006	10:00	94-0488	94-0489	Fecal Coliforms	CFU/100mL	65	
W0338	ER01	7/6/2006	10:00	94-0488	94-0489	Suspended Solids	mg/L	1.9	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W0338	ER01	7/6/2006	10:00	94-0488	94-0489	Total Nitrogen	mg/L	0.45	
W0338	ER01	7/6/2006	10:00	94-0488	94-0489	Total Phosphorus	mg/L	0.040	
W0338	ER01	7/6/2006	10:00	94-0488	94-0489	True color	PCU	<15	
W0338	ER01	7/6/2006	10:00	94-0488	94-0489	Turbidity	NTU	1.2	d
W0898	FS102	7/6/2006	10:06	94-0474		Turbidity	NTU	2.7	
W0898	FS102	7/6/2006	10:06	94-0474		True color	PCU	95	
W0898	FS102	7/6/2006	10:06	94-0474		Apparent color	PCU	90	
W0898	FS102	7/6/2006	10:06	94-0474		*E. coli*	CFU/100mL	440	
W0898	FS102	7/6/2006	10:06	94-0474		Fecal Coliforms	CFU/100mL	1100	
W0898	FS102	7/6/2006	10:06	94-0474		Ammonia-N	mg/L	0.08	
W0898	FS102	7/6/2006	10:06	94-0474		Total Nitrogen	mg/L	1.1	
W0898	FS102	7/6/2006	10:06	94-0474		Total Phosphorus	mg/L	0.041	
W0898	FS102	7/6/2006	10:06	94-0474		Suspended Solids	mg/L	1.8	
W1510	FH02	7/6/2006	10:20	94-0460		Turbidity	NTU	1.6	
W1510	FH02	7/6/2006	10:20	94-0460		True color	PCU	300	
W1510	FH02	7/6/2006	10:20	94-0460		Apparent color	PCU	340	
W1510	FH02	7/6/2006	10:20	94-0460		*E. coli*	CFU/100mL	130	
W1510	FH02	7/6/2006	10:20	94-0460		Fecal Coliforms	CFU/100mL	320	
W1510	FH02	7/6/2006	10:20	94-0460		Ammonia-N	mg/L	0.09	
W1510	FH02	7/6/2006	10:20	94-0460		Total Nitrogen	mg/L	1.4	
W1510	FH02	7/6/2006	10:20	94-0460		Total Phosphorus	mg/L	0.090	
W1510	FH02	7/6/2006	10:20	94-0460		Suspended Solids	mg/L	1.7	
W0339	ER02	7/6/2006	10:35	94-0492		Turbidity	NTU	3.6	
W0339	ER02	7/6/2006	10:35	94-0492		True color	PCU	<15	
W0339	ER02	7/6/2006	10:35	94-0492		Apparent color	PCU	17	
W0339	ER02	7/6/2006	10:35	94-0492		*E. coli*	CFU/100mL	<5	
W0339	ER02	7/6/2006	10:35	94-0492		Fecal Coliforms	CFU/100mL	<5	
W0339	ER02	7/6/2006	10:35	94-0492		Ammonia-N	mg/L	<0.02	
W0339	ER02	7/6/2006	10:35	94-0492		Total Nitrogen	mg/L	0.38	
W0339	ER02	7/6/2006	10:35	94-0492		Total Phosphorus	mg/L	0.044	
W0339	ER02	7/6/2006	10:35	94-0492		Suspended Solids	mg/L	7.1	
W0897	FS101	7/6/2006	10:40	94-0476		Turbidity	NTU	3.5	
W0897	FS101	7/6/2006	10:40	94-0476		True color	PCU	100	
W0897	FS101	7/6/2006	10:40	94-0476		Apparent color	PCU	130	
W0897	FS101	7/6/2006	10:40	94-0476		*E. coli*	CFU/100mL	390	
W0897	FS101	7/6/2006	10:40	94-0476		Fecal Coliforms	CFU/100mL	1200	
W0897	FS101	7/6/2006	10:40	94-0476		Ammonia-N	mg/L	0.13	
W0897	FS101	7/6/2006	10:40	94-0476		Total Nitrogen	mg/L	2.7	
W0897	FS101	7/6/2006	10:40	94-0476		Total Phosphorus	mg/L	0.11	
W0897	FS101	7/6/2006	10:40	94-0476		Suspended Solids	mg/L	2.8	
W1511	HR01	7/6/2006	10:49	94-0462		Turbidity	NTU	3.5	
W1511	HR01	7/6/2006	10:49	94-0462		True color	PCU	170	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W1511	HR01	7/6/2006	10:49	94-0462		Apparent color	PCU	240	
W1511	HR01	7/6/2006	10:49	94-0462		*E. coli*	CFU/100mL	130	
W1511	HR01	7/6/2006	10:49	94-0462		Enterococci	CFU/100mL	180	
W1511	HR01	7/6/2006	10:49	94-0462		Fecal Coliforms	CFU/100mL	280	
W1511	HR01	7/6/2006	10:49	94-0462		Ammonia-N	mg/L	0.09	
W1511	HR01	7/6/2006	10:49	94-0462		Total Nitrogen	mg/L	1.1	
W1511	HR01	7/6/2006	10:49	94-0462		Total Phosphorus	mg/L	0.074	
W1511	HR01	7/6/2006	10:49	94-0462		Suspended Solids	mg/L	2.8	
W0333	ER04A	7/6/2006	11:05	94-0494		Turbidity	NTU	2.6	
W0333	ER04A	7/6/2006	11:05	94-0494		True color	PCU	24	
W0333	ER04A	7/6/2006	11:05	94-0494		Apparent color	PCU	28	
W0333	ER04A	7/6/2006	11:05	94-0494		*E. coli*	CFU/100mL	120	
W0333	ER04A	7/6/2006	11:05	94-0494		Fecal Coliforms	CFU/100mL	190	
W0333	ER04A	7/6/2006	11:05	94-0494		Ammonia-N	mg/L	<0.02	
W0333	ER04A	7/6/2006	11:05	94-0494		Total Nitrogen	mg/L	0.22	
W0333	ER04A	7/6/2006	11:05	94-0494		Total Phosphorus	mg/L	0.054	
W0333	ER04A	7/6/2006	11:05	94-0494		Suspended Solids	mg/L	1.6	
W0895	DW101	7/6/2006	11:18	94-0478		Turbidity	NTU	6.4	
W0895	DW101	7/6/2006	11:18	94-0478		True color	PCU	280	
W0895	DW101	7/6/2006	11:18	94-0478		Apparent color	PCU	360	
W0895	DW101	7/6/2006	11:18	94-0478		*E. coli*	CFU/100mL	600	
W0895	DW101	7/6/2006	11:18	94-0478		Fecal Coliforms	CFU/100mL	900	
W0895	DW101	7/6/2006	11:18	94-0478		Ammonia-N	mg/L	0.15	
W0895	DW101	7/6/2006	11:18	94-0478		Total Nitrogen	mg/L	1.7	
W0895	DW101	7/6/2006	11:18	94-0478		Total Phosphorus	mg/L	0.12	
W0895	DW101	7/6/2006	11:18	94-0478		Suspended Solids	mg/L	6.4	
W1512	TB01	7/6/2006	11:40	94-0496		Turbidity	NTU	2.6	
W1512	TB01	7/6/2006	11:40	94-0496		True color	PCU	<15	
W1512	TB01	7/6/2006	11:40	94-0496		Apparent color	PCU	16	
W1512	TB01	7/6/2006	11:40	94-0496		*E. coli*	CFU/100mL	380	
W1512	TB01	7/6/2006	11:40	94-0496		Fecal Coliforms	CFU/100mL	800	
W1512	TB01	7/6/2006	11:40	94-0496		Ammonia-N	mg/L	0.08	
W1512	TB01	7/6/2006	11:40	94-0496		Total Nitrogen	mg/L	0.84	
W1512	TB01	7/6/2006	11:40	94-0496		Total Phosphorus	mg/L	0.047	
W1512	TB01	7/6/2006	11:40	94-0496		Suspended Solids	mg/L	3.1	
W1539	SR102A	7/6/2006	11:42	94-0464		Turbidity	NTU	4.7	
W1539	SR102A	7/6/2006	11:42	94-0464		True color	PCU	160	
W1539	SR102A	7/6/2006	11:42	94-0464		Apparent color	PCU	210	
W1539	SR102A	7/6/2006	11:42	94-0464		*E. coli*	CFU/100mL	180	
W1539	SR102A	7/6/2006	11:42	94-0464		Enterococci	CFU/100mL	180	
W1539	SR102A	7/6/2006	11:42	94-0464		Fecal Coliforms	CFU/100mL	210	
W1539	SR102A	7/6/2006	11:42	94-0464		Ammonia-N	mg/L	0.13	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W1539	SR102A	7/6/2006	11:42	94-0464		Total Nitrogen	mg/L	0.89	
W1539	SR102A	7/6/2006	11:42	94-0464		Total Phosphorus	mg/L	0.10	
W1539	SR102A	7/6/2006	11:42	94-0464		Suspended Solids	mg/L	5.2	
W1528	IH102A	7/6/2006	11:48	94-0480		Turbidity	NTU	4.7	
W1528	IH102A	7/6/2006	11:48	94-0480		True color	PCU	230	
W1528	IH102A	7/6/2006	11:48	94-0480		Apparent color	PCU	240	
W1528	IH102A	7/6/2006	11:48	94-0480		*E. coli*	CFU/100mL	250	
W1528	IH102A	7/6/2006	11:48	94-0480		Fecal Coliforms	CFU/100mL	310	
W1528	IH102A	7/6/2006	11:48	94-0480		Ammonia-N	mg/L	0.13	
W1528	IH102A	7/6/2006	11:48	94-0480		Total Nitrogen	mg/L	1.7	
W1528	IH102A	7/6/2006	11:48	94-0480		Total Phosphorus	mg/L	0.12	
W1528	IH102A	7/6/2006	11:48	94-0480		Suspended Solids	mg/L	4.2	
W0910	IM101	7/6/2006	12:10	94-0482		Turbidity	NTU	10.5	
W0910	IM101	7/6/2006	12:10	94-0482		True color	PCU	260	
W0910	IM101	7/6/2006	12:10	94-0482		Apparent color	PCU	280	
W0910	IM101	7/6/2006	12:10	94-0482		*E. coli*	CFU/100mL	260	
W0910	IM101	7/6/2006	12:10	94-0482		Fecal Coliforms	CFU/100mL	390	
W0910	IM101	7/6/2006	12:10	94-0482		Ammonia-N	mg/L	0.10	
W0910	IM101	7/6/2006	12:10	94-0482		Total Nitrogen	mg/L	1.4	
W0910	IM101	7/6/2006	12:10	94-0482		Total Phosphorus	mg/L	0.062	
W0910	IM101	7/6/2006	12:10	94-0482		Suspended Solids	mg/L	6.7	
W0337	GH01	7/6/2006	12:13	94-0466		Turbidity	NTU	35.5	t
W0337	GH01	7/6/2006	12:13	94-0466		True color	PCU	250	t
W0337	GH01	7/6/2006	12:13	94-0466		Apparent color	PCU	340	t
W0337	GH01	7/6/2006	12:13	94-0466		*E. coli*	CFU/100mL	150	t
W0337	GH01	7/6/2006	12:13	94-0466		Enterococci	CFU/100mL	110	t
W0337	GH01	7/6/2006	12:13	94-0466		Fecal Coliforms	CFU/100mL	280	t
W0337	GH01	7/6/2006	12:13	94-0466		Ammonia-N	mg/L	0.48	t
W0337	GH01	7/6/2006	12:13	94-0466		Total Nitrogen	mg/L	2.0	t
W0337	GH01	7/6/2006	12:13	94-0466		Total Phosphorus	mg/L	0.13	t
W0337	GH01	7/6/2006	12:13	94-0466		Suspended Solids	mg/L	23	t
W1509	TH02	7/6/2006	12:36	94-0484	94-0485	Ammonia-N	mg/L	0.22	r
W1509	TH02	7/6/2006	12:36	94-0484	94-0485	Apparent color	PCU	320	r
W1509	TH02	7/6/2006	12:36	94-0484	94-0485	*E. coli*	CFU/100mL	180	r
W1509	TH02	7/6/2006	12:36	94-0484	94-0485	Fecal Coliforms	CFU/100mL	280	r
W1509	TH02	7/6/2006	12:36	94-0484	94-0485	Suspended Solids	mg/L	6.7	r
W1509	TH02	7/6/2006	12:36	94-0484	94-0485	Total Nitrogen	mg/L	1.9	r
W1509	TH02	7/6/2006	12:36	94-0484	94-0485	Total Phosphorus	mg/L	0.092	r
W1509	TH02	7/6/2006	12:36	94-0484	94-0485	True color	PCU	280	d, r
W1509	TH02	7/6/2006	12:36	94-0484	94-0485	Turbidity	NTU	6.7	r
W1524	JR102A	7/6/2006	12:40	94-0498		Turbidity	NTU	4.9	
W1524	JR102A	7/6/2006	12:40	94-0498		True color	PCU	85	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W1524	JR102A	7/6/2006	12:40	94-0498		Apparent color	PCU	110	
W1524	JR102A	7/6/2006	12:40	94-0498		*E. coli*	CFU/100mL	330	
W1524	JR102A	7/6/2006	12:40	94-0498		Fecal Coliforms	CFU/100mL	740	
W1524	JR102A	7/6/2006	12:40	94-0498		Ammonia-N	mg/L	0.08	
W1524	JR102A	7/6/2006	12:40	94-0498		Total Nitrogen	mg/L	0.82	
W1524	JR102A	7/6/2006	12:40	94-0498		Total Phosphorus	mg/L	0.069	
W1524	JR102A	7/6/2006	12:40	94-0498		Suspended Solids	mg/L	3.8	
W0921	SR103	7/6/2006	12:55	94-0468	94-0469	Ammonia-N	mg/L	0.07	
W0921	SR103	7/6/2006	12:55	94-0468	94-0469	Apparent color	PCU	210	d
W0921	SR103	7/6/2006	12:55	94-0468	94-0469	*E. coli*	CFU/100mL	40	
W0921	SR103	7/6/2006	12:55	94-0468	94-0469	Fecal Coliforms	CFU/100mL	80	
W0921	SR103	7/6/2006	12:55	94-0468	94-0469	Suspended Solids	mg/L	6.4	
W0921	SR103	7/6/2006	12:55	94-0468	94-0469	Total Nitrogen	mg/L	0.74	
W0921	SR103	7/6/2006	12:55	94-0468	94-0469	Total Phosphorus	mg/L	0.091	
W0921	SR103	7/6/2006	12:55	94-0468	94-0469	True color	PCU	130	
W0921	SR103	7/6/2006	12:55	94-0468	94-0469	Turbidity	NTU	8.0	
W0917	NR103	7/6/2006	13:35	94-0472		Turbidity	NTU	3.7	
W0917	NR103	7/6/2006	13:35	94-0472		True color	PCU	190	
W0917	NR103	7/6/2006	13:35	94-0472		Apparent color	PCU	200	
W0917	NR103	7/6/2006	13:35	94-0472		*E. coli*	CFU/100mL	80	
W0917	NR103	7/6/2006	13:35	94-0472		Fecal Coliforms	CFU/100mL	160	
W0917	NR103	7/6/2006	13:35	94-0472		Ammonia-N	mg/L	0.12	
W0917	NR103	7/6/2006	13:35	94-0472		Total Nitrogen	mg/L	1.4	
W0917	NR103	7/6/2006	13:35	94-0472		Total Phosphorus	mg/L	0.092	
W0917	NR103	7/6/2006	13:35	94-0472		Suspended Solids	mg/L	2.5	
W0898	FS102	8/2/2006	9:49	94-0573		Turbidity	NTU	1.6	
W0898	FS102	8/2/2006	9:49	94-0573		True color	PCU	50	
W0898	FS102	8/2/2006	9:49	94-0573		Apparent color	PCU	60	
W0898	FS102	8/2/2006	9:49	94-0573		*E. coli*	CFU/100mL	310	
W0898	FS102	8/2/2006	9:49	94-0573		Fecal Coliforms	CFU/100mL	390	
W0898	FS102	8/2/2006	9:49	94-0573		Ammonia-N	mg/L	0.04	
W0898	FS102	8/2/2006	9:49	94-0573		Total Nitrogen	mg/L	0.86	
W0898	FS102	8/2/2006	9:49	94-0573		Total Phosphorus	mg/L	0.022	
W0898	FS102	8/2/2006	9:49	94-0573		Suspended Solids	mg/L	<1.0	
W0338	ER01	8/2/2006	9:50	94-0586	94-0587	Ammonia-N	mg/L	<0.02	
W0338	ER01	8/2/2006	9:50	94-0586	94-0587	Apparent color	PCU	18	
W0338	ER01	8/2/2006	9:50	94-0586	94-0587	*E. coli*	CFU/100mL	70	
W0338	ER01	8/2/2006	9:50	94-0586	94-0587	Fecal Coliforms	CFU/100mL	110	
W0338	ER01	8/2/2006	9:50	94-0586	94-0587	Suspended Solids	mg/L	1.9	
W0338	ER01	8/2/2006	9:50	94-0586	94-0587	Total Nitrogen	mg/L	0.35	
W0338	ER01	8/2/2006	9:50	94-0586	94-0587	Total Phosphorus	mg/L	0.037	
W0338	ER01	8/2/2006	9:50	94-0586	94-0587	True color	PCU	16	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W0338	ER01	8/2/2006	9:50	94-0586	94-0587	Turbidity	NTU	0.8	b
W1510	FH02	8/2/2006	10:00	94-0559		Turbidity	NTU	2.5	
W1510	FH02	8/2/2006	10:00	94-0559		True color	PCU	320	
W1510	FH02	8/2/2006	10:00	94-0559		Apparent color	PCU	340	
W1510	FH02	8/2/2006	10:00	94-0559		*E. coli*	CFU/100mL	40	
W1510	FH02	8/2/2006	10:00	94-0559		Fecal Coliforms	CFU/100mL	45	
W1510	FH02	8/2/2006	10:00	94-0559		Ammonia-N	mg/L	0.14	
W1510	FH02	8/2/2006	10:00	94-0559		Total Nitrogen	mg/L	3.3	r
W1510	FH02	8/2/2006	10:00	94-0559		Total Phosphorus	mg/L	0.37	r
W1510	FH02	8/2/2006	10:00	94-0559		Suspended Solids	mg/L	37	r
W1511	HR01	8/2/2006	10:17	94-0560		Turbidity	NTU	4.4	
W1511	HR01	8/2/2006	10:17	94-0560		True color	PCU	50	
W1511	HR01	8/2/2006	10:17	94-0560		Apparent color	PCU	65	
W1511	HR01	8/2/2006	10:17	94-0560		*E. coli*	CFU/100mL	140	
W1511	HR01	8/2/2006	10:17	94-0560		Enterococci	CFU/100mL	290	
W1511	HR01	8/2/2006	10:17	94-0560		Fecal Coliforms	CFU/100mL	140	
W1511	HR01	8/2/2006	10:17	94-0560		Ammonia-N	mg/L	0.08	
W1511	HR01	8/2/2006	10:17	94-0560		Total Nitrogen	mg/L	1.0	
W1511	HR01	8/2/2006	10:17	94-0560		Total Phosphorus	mg/L	0.073	
W1511	HR01	8/2/2006	10:17	94-0560		Suspended Solids	mg/L	3.5	
W0897	FS101	8/2/2006	10:27	94-0574		Turbidity	NTU	6.1	
W0897	FS101	8/2/2006	10:27	94-0574		True color	PCU	150	
W0897	FS101	8/2/2006	10:27	94-0574		Apparent color	PCU	200	
W0897	FS101	8/2/2006	10:27	94-0574		*E. coli*	CFU/100mL	700	
W0897	FS101	8/2/2006	10:27	94-0574		Fecal Coliforms	CFU/100mL	1300	
W0897	FS101	8/2/2006	10:27	94-0574		Ammonia-N	mg/L	0.10	
W0897	FS101	8/2/2006	10:27	94-0574		Total Nitrogen	mg/L	6.3	
W0897	FS101	8/2/2006	10:27	94-0574		Total Phosphorus	mg/L	0.20	
W0897	FS101	8/2/2006	10:27	94-0574		Suspended Solids	mg/L	4.0	
W0339	ER02	8/2/2006	10:30	94-0589		Turbidity	NTU	0.8	b
W0339	ER02	8/2/2006	10:30	94-0589		True color	PCU	<15	
W0339	ER02	8/2/2006	10:30	94-0589		Apparent color	PCU	<15	
W0339	ER02	8/2/2006	10:30	94-0589		*E. coli*	CFU/100mL	<5	
W0339	ER02	8/2/2006	10:30	94-0589		Fecal Coliforms	CFU/100mL	<5	
W0339	ER02	8/2/2006	10:30	94-0589		Ammonia-N	mg/L	<0.02	
W0339	ER02	8/2/2006	10:30	94-0589		Total Nitrogen	mg/L	0.15	
W0339	ER02	8/2/2006	10:30	94-0589		Total Phosphorus	mg/L	0.018	
W0339	ER02	8/2/2006	10:30	94-0589		Suspended Solids	mg/L	1.1	
W0333	ER04A	8/2/2006	10:55	94-0590		Turbidity	NTU	1.8	b
W0333	ER04A	8/2/2006	10:55	94-0590		True color	PCU	19	
W0333	ER04A	8/2/2006	10:55	94-0590		Apparent color	PCU	26	
W0333	ER04A	8/2/2006	10:55	94-0590		*E. coli*	CFU/100mL	180	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W0333	ER04A	8/2/2006	10:55	94-0590		Fecal Coliforms	CFU/100mL	290	
W0333	ER04A	8/2/2006	10:55	94-0590		Ammonia-N	mg/L	<0.02	
W0333	ER04A	8/2/2006	10:55	94-0590		Total Nitrogen	mg/L	0.16	
W0333	ER04A	8/2/2006	10:55	94-0590		Total Phosphorus	mg/L	0.032	
W0333	ER04A	8/2/2006	10:55	94-0590		Suspended Solids	mg/L	1.3	
W0895	DW101	8/2/2006	11:21	94-0575		Turbidity	NTU	8.4	
W0895	DW101	8/2/2006	11:21	94-0575		True color	PCU	150	
W0895	DW101	8/2/2006	11:21	94-0575		Apparent color	PCU	160	
W0895	DW101	8/2/2006	11:21	94-0575		Hardness	mg/L	44	
W0895	DW101	8/2/2006	11:21	94-0575		*E. coli*	CFU/100mL	540	
W0895	DW101	8/2/2006	11:21	94-0575		Fecal Coliforms	CFU/100mL	1000	
W0895	DW101	8/2/2006	11:21	94-0575		Ammonia-N	mg/L	0.08	
W0895	DW101	8/2/2006	11:21	94-0575		Total Nitrogen	mg/L	1.7	
W0895	DW101	8/2/2006	11:21	94-0575		Total Phosphorus	mg/L	0.11	
W0895	DW101	8/2/2006	11:21	94-0575		Suspended Solids	mg/L	2.8	
W1512	TB01	8/2/2006	11:35	94-0591		Turbidity	NTU	3.3	b
W1512	TB01	8/2/2006	11:35	94-0591		True color	PCU	<15	
W1512	TB01	8/2/2006	11:35	94-0591		Apparent color	PCU	21	
W1512	TB01	8/2/2006	11:35	94-0591		*E. coli*	CFU/100mL	35	
W1512	TB01	8/2/2006	11:35	94-0591		Fecal Coliforms	CFU/100mL	65	
W1512	TB01	8/2/2006	11:35	94-0591		Ammonia-N	mg/L	0.04	
W1512	TB01	8/2/2006	11:35	94-0591		Total Nitrogen	mg/L	0.57	
W1512	TB01	8/2/2006	11:35	94-0591		Total Phosphorus	mg/L	0.041	
W1512	TB01	8/2/2006	11:35	94-0591		Suspended Solids	mg/L	3.3	
W0337	GH01	8/2/2006	11:40	94-0562		Turbidity	NTU	5.8	t
W0337	GH01	8/2/2006	11:40	94-0562		True color	PCU	21	t
W0337	GH01	8/2/2006	11:40	94-0562		Apparent color	PCU	29	t
W0337	GH01	8/2/2006	11:40	94-0562		*E. coli*	CFU/100mL	85	t
W0337	GH01	8/2/2006	11:40	94-0562		Enterococci	CFU/100mL	25	t
W0337	GH01	8/2/2006	11:40	94-0562		Fecal Coliforms	CFU/100mL	90	t
W0337	GH01	8/2/2006	11:40	94-0562		Ammonia-N	mg/L	<0.02	t
W0337	GH01	8/2/2006	11:40	94-0562		Total Nitrogen	mg/L	<0.040	t
W0337	GH01	8/2/2006	11:40	94-0562		Total Phosphorus	mg/L	0.044	t
W0337	GH01	8/2/2006	11:40	94-0562		Suspended Solids	mg/L	11	t
W1528	IH102A	8/2/2006	11:44	94-0576		Turbidity	NTU	4.9	
W1528	IH102A	8/2/2006	11:44	94-0576		True color	PCU	100	
W1528	IH102A	8/2/2006	11:44	94-0576		Apparent color	PCU	130	
W1528	IH102A	8/2/2006	11:44	94-0576		Hardness	mg/L	45	
W1528	IH102A	8/2/2006	11:44	94-0576		*E. coli*	CFU/100mL	200	
W1528	IH102A	8/2/2006	11:44	94-0576		Fecal Coliforms	CFU/100mL	340	
W1528	IH102A	8/2/2006	11:44	94-0576		Ammonia-N	mg/L	0.04	
W1528	IH102A	8/2/2006	11:44	94-0576		Total Nitrogen	mg/L	2.0	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W1528	IH102A	8/2/2006	11:44	94-0576		Total Phosphorus	mg/L	0.11	
W1528	IH102A	8/2/2006	11:44	94-0576		Suspended Solids	mg/L	3.1	
W0910	IM101	8/2/2006	12:08	94-0577		Turbidity	NTU	4.1	
W0910	IM101	8/2/2006	12:08	94-0577		True color	PCU	80	
W0910	IM101	8/2/2006	12:08	94-0577		Apparent color	PCU	55	
W0910	IM101	8/2/2006	12:08	94-0577		Hardness	mg/L	83	
W0910	IM101	8/2/2006	12:08	94-0577		*E. coli*	CFU/100mL	230	
W0910	IM101	8/2/2006	12:08	94-0577		Fecal Coliforms	CFU/100mL	760	
W0910	IM101	8/2/2006	12:08	94-0577		Ammonia-N	mg/L	0.04	
W0910	IM101	8/2/2006	12:08	94-0577		Total Nitrogen	mg/L	1.5	
W0910	IM101	8/2/2006	12:08	94-0577		Total Phosphorus	mg/L	0.020	
W0910	IM101	8/2/2006	12:08	94-0577		Suspended Solids	mg/L	1.3	
W1524	JR102A	8/2/2006	12:18	94-0592		Turbidity	NTU	5.3	b
W1524	JR102A	8/2/2006	12:18	94-0592		True color	PCU	49	
W1524	JR102A	8/2/2006	12:18	94-0592		Apparent color	PCU	70	
W1524	JR102A	8/2/2006	12:18	94-0592		*E. coli*	CFU/100mL	75	
W1524	JR102A	8/2/2006	12:18	94-0592		Fecal Coliforms	CFU/100mL	290	
W1524	JR102A	8/2/2006	12:18	94-0592		Ammonia-N	mg/L	0.02	
W1524	JR102A	8/2/2006	12:18	94-0592		Total Nitrogen	mg/L	0.76	
W1524	JR102A	8/2/2006	12:18	94-0592		Total Phosphorus	mg/L	0.043	
W1524	JR102A	8/2/2006	12:18	94-0592		Suspended Solids	mg/L	1.6	
W0921	SR103	8/2/2006	12:25	94-0563	94-0564	Ammonia-N	mg/L	0.03	
W0921	SR103	8/2/2006	12:25	94-0563	94-0564	Apparent color	PCU	100	d
W0921	SR103	8/2/2006	12:25	94-0563	94-0564	*E. coli*	CFU/100mL	130	
W0921	SR103	8/2/2006	12:25	94-0563	94-0564	Fecal Coliforms	CFU/100mL	170	
W0921	SR103	8/2/2006	12:25	94-0563	94-0564	Suspended Solids	mg/L	8.6	
W0921	SR103	8/2/2006	12:25	94-0563	94-0564	Total Nitrogen	mg/L	0.61	
W0921	SR103	8/2/2006	12:25	94-0563	94-0564	Total Phosphorus	mg/L	0.070	
W0921	SR103	8/2/2006	12:25	94-0563	94-0564	True color	PCU	60	
W0921	SR103	8/2/2006	12:25	94-0563	94-0564	Turbidity	NTU	5.6	
W1509	TH02	8/2/2006	12:28	94-0578	94-0579	Ammonia-N	mg/L	0.10	
W1509	TH02	8/2/2006	12:28	94-0578	94-0579	Apparent color	PCU	200	
W1509	TH02	8/2/2006	12:28	94-0578	94-0579	*E. coli*	CFU/100mL	250	
W1509	TH02	8/2/2006	12:28	94-0578	94-0579	Fecal Coliforms	CFU/100mL	500	
W1509	TH02	8/2/2006	12:28	94-0578	94-0579	Hardness	mg/L	38	
W1509	TH02	8/2/2006	12:28	94-0578	94-0579	Suspended Solids	mg/L	##	d
W1509	TH02	8/2/2006	12:28	94-0578	94-0579	Total Nitrogen	mg/L	1.5	
W1509	TH02	8/2/2006	12:28	94-0578	94-0579	Total Phosphorus	mg/L	0.069	
W1509	TH02	8/2/2006	12:28	94-0578	94-0579	True color	PCU	150	
W1509	TH02	8/2/2006	12:28	94-0578	94-0579	Turbidity	NTU	8.2	
W0917	NR103	8/2/2006	12:59	94-0566		Turbidity	NTU	4.3	
W0917	NR103	8/2/2006	12:59	94-0566		True color	PCU	80	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W0917	NR103	8/2/2006	12:59	94-0566		Apparent color	PCU	90	
W0917	NR103	8/2/2006	12:59	94-0566		*E. coli*	CFU/100mL	45	
W0917	NR103	8/2/2006	12:59	94-0566		Fecal Coliforms	CFU/100mL	170	
W0917	NR103	8/2/2006	12:59	94-0566		Ammonia-N	mg/L	0.06	
W0917	NR103	8/2/2006	12:59	94-0566		Total Nitrogen	mg/L	1.2	
W0917	NR103	8/2/2006	12:59	94-0566		Total Phosphorus	mg/L	0.069	
W0917	NR103	8/2/2006	12:59	94-0566		Suspended Solids	mg/L	1.5	
W1539	SR102A	8/2/2006	**	94-0561		Turbidity	NTU	3.2	
W1539	SR102A	8/2/2006	**	94-0561		True color	PCU	70	
W1539	SR102A	8/2/2006	**	94-0561		Apparent color	PCU	90	
W1539	SR102A	8/2/2006	**	94-0561		*E. coli*	CFU/100mL	70	
W1539	SR102A	8/2/2006	**	94-0561		Enterococci	CFU/100mL	160	
W1539	SR102A	8/2/2006	**	94-0561		Fecal Coliforms	CFU/100mL	130	
W1539	SR102A	8/2/2006	**	94-0561		Ammonia-N	mg/L	0.03	
W1539	SR102A	8/2/2006	**	94-0561		Total Nitrogen	mg/L	0.63	
W1539	SR102A	8/2/2006	**	94-0561		Total Phosphorus	mg/L	0.071	
W1539	SR102A	8/2/2006	**	94-0561		Suspended Solids	mg/L	1.6	
W0898	FS102	9/6/2006	10:14	94-0673		Turbidity	NTU	6.9	
W0898	FS102	9/6/2006	10:14	94-0673		True color	PCU	80	
W0898	FS102	9/6/2006	10:14	94-0673		Apparent color	PCU	90	
W0898	FS102	9/6/2006	10:14	94-0673		*E. coli*	CFU/100mL	860	
W0898	FS102	9/6/2006	10:14	94-0673		Fecal Coliforms	CFU/100mL	1300	
W0898	FS102	9/6/2006	10:14	94-0673		Ammonia-N	mg/L	<0.02	
W0898	FS102	9/6/2006	10:14	94-0673		Total Nitrogen	mg/L	0.84	
W0898	FS102	9/6/2006	10:14	94-0673		Total Phosphorus	mg/L	0.030	
W0898	FS102	9/6/2006	10:14	94-0673		Suspended Solids	mg/L	4.5	
W0338	ER01	9/6/2006	10:15	94-0681	94-0682	Ammonia-N	mg/L	<0.02	
W0338	ER01	9/6/2006	10:15	94-0681	94-0682	Apparent color	PCU	31	d
W0338	ER01	9/6/2006	10:15	94-0681	94-0682	*E. coli*	CFU/100mL	75	
W0338	ER01	9/6/2006	10:15	94-0681	94-0682	Fecal Coliforms	CFU/100mL	85	
W0338	ER01	9/6/2006	10:15	94-0681	94-0682	Suspended Solids	mg/L	3.6	
W0338	ER01	9/6/2006	10:15	94-0681	94-0682	Total Nitrogen	mg/L	0.32	
W0338	ER01	9/6/2006	10:15	94-0681	94-0682	Total Phosphorus	mg/L	0.038	
W0338	ER01	9/6/2006	10:15	94-0681	94-0682	True color	PCU	24	
W0338	ER01	9/6/2006	10:15	94-0681	94-0682	Turbidity	NTU	1.1	
W1510	FH02	9/6/2006	10:20	94-0665		Turbidity	NTU	1.3	
W1510	FH02	9/6/2006	10:20	94-0665		True color	PCU	280	
W1510	FH02	9/6/2006	10:20	94-0665		Apparent color	PCU	320	
W1510	FH02	9/6/2006	10:20	94-0665		*E. coli*	CFU/100mL	400	
W1510	FH02	9/6/2006	10:20	94-0665		Fecal Coliforms	CFU/100mL	480	
W1510	FH02	9/6/2006	10:20	94-0665		Ammonia-N	mg/L	0.06	
W1510	FH02	9/6/2006	10:20	94-0665		Total Nitrogen	mg/L	1.0	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W1510	FH02	9/6/2006	10:20	94-0665		Total Phosphorus	mg/L	0.063	
W1510	FH02	9/6/2006	10:20	94-0665		Suspended Solids	mg/L	8.0	
W0339	ER02	9/6/2006	10:42	94-0684		Turbidity	NTU	3.0	
W0339	ER02	9/6/2006	10:42	94-0684		True color	PCU	17	
W0339	ER02	9/6/2006	10:42	94-0684		Apparent color	PCU	22	
W0339	ER02	9/6/2006	10:42	94-0684		*E. coli*	CFU/100mL	<5	
W0339	ER02	9/6/2006	10:42	94-0684		Fecal Coliforms	CFU/100mL	<5	
W0339	ER02	9/6/2006	10:42	94-0684		Ammonia-N	mg/L	<0.02	
W0339	ER02	9/6/2006	10:42	94-0684		Total Nitrogen	mg/L	0.29	
W0339	ER02	9/6/2006	10:42	94-0684		Total Phosphorus	mg/L	0.030	
W0339	ER02	9/6/2006	10:42	94-0684		Suspended Solids	mg/L	4.4	
W0897	FS101	9/6/2006	10:46	94-0674		Turbidity	NTU	4.1	
W0897	FS101	9/6/2006	10:46	94-0674		True color	PCU	55	
W0897	FS101	9/6/2006	10:46	94-0674		Apparent color	PCU	65	
W0897	FS101	9/6/2006	10:46	94-0674		*E. coli*	CFU/100mL	1200	
W0897	FS101	9/6/2006	10:46	94-0674		Fecal Coliforms	CFU/100mL	1600	
W0897	FS101	9/6/2006	10:46	94-0674		Ammonia-N	mg/L	0.06	
W0897	FS101	9/6/2006	10:46	94-0674		Total Nitrogen	mg/L	7.9	
W0897	FS101	9/6/2006	10:46	94-0674		Total Phosphorus	mg/L	0.17	
W0897	FS101	9/6/2006	10:46	94-0674		Suspended Solids	mg/L	2.4	
W1511	HR01	9/6/2006	10:50	94-0666		Turbidity	NTU	4.6	t
W1511	HR01	9/6/2006	10:50	94-0666		True color	PCU	24	t
W1511	HR01	9/6/2006	10:50	94-0666		Apparent color	PCU	31	t
W1511	HR01	9/6/2006	10:50	94-0666		*E. coli*	CFU/100mL	720	t
W1511	HR01	9/6/2006	10:50	94-0666		Enterococci	CFU/100mL	840	t
W1511	HR01	9/6/2006	10:50	94-0666		Fecal Coliforms	CFU/100mL	1500	t
W1511	HR01	9/6/2006	10:50	94-0666		Ammonia-N	mg/L	**	
W1511	HR01	9/6/2006	10:50	94-0666		Total Nitrogen	mg/L	**	
W1511	HR01	9/6/2006	10:50	94-0666		Total Phosphorus	mg/L	0.048	t
W1511	HR01	9/6/2006	10:50	94-0666		Suspended Solids	mg/L	5.8	t
W0333	ER04A	9/6/2006	11:05	94-0685		Turbidity	NTU	1.4	
W0333	ER04A	9/6/2006	11:05	94-0685		True color	PCU	19	
W0333	ER04A	9/6/2006	11:05	94-0685		Apparent color	PCU	27	
W0333	ER04A	9/6/2006	11:05	94-0685		*E. coli*	CFU/100mL	150	
W0333	ER04A	9/6/2006	11:05	94-0685		Fecal Coliforms	CFU/100mL	220	
W0333	ER04A	9/6/2006	11:05	94-0685		Ammonia-N	mg/L	<0.02	
W0333	ER04A	9/6/2006	11:05	94-0685		Total Nitrogen	mg/L	0.14	
W0333	ER04A	9/6/2006	11:05	94-0685		Total Phosphorus	mg/L	0.021	
W0333	ER04A	9/6/2006	11:05	94-0685		Suspended Solids	mg/L	<1.0	
W1539	SR102A	9/6/2006	11:20	94-0667		Turbidity	NTU	2.5	
W1539	SR102A	9/6/2006	11:20	94-0667		True color	PCU	70	
W1539	SR102A	9/6/2006	11:20	94-0667		Apparent color	PCU	90	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W1539	SR102A	9/6/2006	11:20	94-0667		*E. coli*	CFU/100mL	160	
W1539	SR102A	9/6/2006	11:20	94-0667		Enterococci	CFU/100mL	75	
W1539	SR102A	9/6/2006	11:20	94-0667		Fecal Coliforms	CFU/100mL	240	
W1539	SR102A	9/6/2006	11:20	94-0667		Ammonia-N	mg/L	0.02	
W1539	SR102A	9/6/2006	11:20	94-0667		Total Nitrogen	mg/L	0.63	
W1539	SR102A	9/6/2006	11:20	94-0667		Total Phosphorus	mg/L	0.052	
W1539	SR102A	9/6/2006	11:20	94-0667		Suspended Solids	mg/L	1.5	
W0895	DW101	9/6/2006	11:23	94-0675		Turbidity	NTU	5.1	
W0895	DW101	9/6/2006	11:23	94-0675		True color	PCU	210	
W0895	DW101	9/6/2006	11:23	94-0675		Apparent color	PCU	230	
W0895	DW101	9/6/2006	11:23	94-0675		*E. coli*	CFU/100mL	1400	
W0895	DW101	9/6/2006	11:23	94-0675		Fecal Coliforms	CFU/100mL	1400	
W0895	DW101	9/6/2006	11:23	94-0675		Ammonia-N	mg/L	0.07	
W0895	DW101	9/6/2006	11:23	94-0675		Total Nitrogen	mg/L	1.3	
W0895	DW101	9/6/2006	11:23	94-0675		Total Phosphorus	mg/L	0.078	
W0895	DW101	9/6/2006	11:23	94-0675		Suspended Solids	mg/L	3.8	
W1512	TB01	9/6/2006	11:45	94-0686		Turbidity	NTU	4.0	
W1512	TB01	9/6/2006	11:45	94-0686		True color	PCU	<15	
W1512	TB01	9/6/2006	11:45	94-0686		Apparent color	PCU	38	
W1512	TB01	9/6/2006	11:45	94-0686		*E. coli*	CFU/100mL	65	
W1512	TB01	9/6/2006	11:45	94-0686		Fecal Coliforms	CFU/100mL	65	
W1512	TB01	9/6/2006	11:45	94-0686		Ammonia-N	mg/L	0.05	
W1512	TB01	9/6/2006	11:45	94-0686		Total Nitrogen	mg/L	0.78	
W1512	TB01	9/6/2006	11:45	94-0686		Total Phosphorus	mg/L	0.045	
W1512	TB01	9/6/2006	11:45	94-0686		Suspended Solids	mg/L	4.0	
W1528	IH102A	9/6/2006	11:51	94-0676		Turbidity	NTU	3.3	
W1528	IH102A	9/6/2006	11:51	94-0676		True color	PCU	110	
W1528	IH102A	9/6/2006	11:51	94-0676		Apparent color	PCU	130	
W1528	IH102A	9/6/2006	11:51	94-0676		*E. coli*	CFU/100mL	220	
W1528	IH102A	9/6/2006	11:51	94-0676		Fecal Coliforms	CFU/100mL	230	
W1528	IH102A	9/6/2006	11:51	94-0676		Ammonia-N	mg/L	0.08	
W1528	IH102A	9/6/2006	11:51	94-0676		Total Nitrogen	mg/L	2.0	
W1528	IH102A	9/6/2006	11:51	94-0676		Total Phosphorus	mg/L	0.067	
W1528	IH102A	9/6/2006	11:51	94-0676		Suspended Solids	mg/L	2.3	
W0910	IM101	9/6/2006	12:13	94-0677		Turbidity	NTU	4.3	
W0910	IM101	9/6/2006	12:13	94-0677		True color	PCU	40	
W0910	IM101	9/6/2006	12:13	94-0677		Apparent color	PCU	65	
W0910	IM101	9/6/2006	12:13	94-0677		*E. coli*	CFU/100mL	410	
W0910	IM101	9/6/2006	12:13	94-0677		Fecal Coliforms	CFU/100mL	500	
W0910	IM101	9/6/2006	12:13	94-0677		Ammonia-N	mg/L	0.04	
W0910	IM101	9/6/2006	12:13	94-0677		Total Nitrogen	mg/L	0.97	
W0910	IM101	9/6/2006	12:13	94-0677		Total Phosphorus	mg/L	0.026	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W0910	IM101	9/6/2006	12:13	94-0677		Suspended Solids	mg/L	1.6	
W1524	JR102A	9/6/2006	12:15	94-0687		Turbidity	NTU	3.5	
W1524	JR102A	9/6/2006	12:15	94-0687		True color	PCU	41	
W1524	JR102A	9/6/2006	12:15	94-0687		Apparent color	PCU	60	
W1524	JR102A	9/6/2006	12:15	94-0687		*E. coli*	CFU/100mL	190	
W1524	JR102A	9/6/2006	12:15	94-0687		Fecal Coliforms	CFU/100mL	260	
W1524	JR102A	9/6/2006	12:15	94-0687		Ammonia-N	mg/L	<0.02	
W1524	JR102A	9/6/2006	12:15	94-0687		Total Nitrogen	mg/L	0.69	
W1524	JR102A	9/6/2006	12:15	94-0687		Total Phosphorus	mg/L	0.027	
W1524	JR102A	9/6/2006	12:15	94-0687		Suspended Solids	mg/L	1.1	
W0921	SR103	9/6/2006	12:25	94-0669	94-0670	Ammonia-N	mg/L	0.02	
W0921	SR103	9/6/2006	12:25	94-0669	94-0670	Apparent color	PCU	90	
W0921	SR103	9/6/2006	12:25	94-0669	94-0670	*E. coli*	CFU/100mL	110	
W0921	SR103	9/6/2006	12:25	94-0669	94-0670	Fecal Coliforms	CFU/100mL	150	
W0921	SR103	9/6/2006	12:25	94-0669	94-0670	Suspended Solids	mg/L	2.4	
W0921	SR103	9/6/2006	12:25	94-0669	94-0670	Total Nitrogen	mg/L	0.46	
W0921	SR103	9/6/2006	12:25	94-0669	94-0670	Total Phosphorus	mg/L	0.043	
W0921	SR103	9/6/2006	12:25	94-0669	94-0670	True color	PCU	75	
W0921	SR103	9/6/2006	12:25	94-0669	94-0670	Turbidity	NTU	2.4	
W0917	NR103	9/6/2006	13:05	94-0672		Turbidity	NTU	2.6	t
W0917	NR103	9/6/2006	13:05	94-0672		True color	PCU	80	t
W0917	NR103	9/6/2006	13:05	94-0672		Apparent color	PCU	85	t
W0917	NR103	9/6/2006	13:05	94-0672		*E. coli*	CFU/100mL	1200	t
W0917	NR103	9/6/2006	13:05	94-0672		Fecal Coliforms	CFU/100mL	1500	t
W0917	NR103	9/6/2006	13:05	94-0672		Ammonia-N	mg/L	0.02	t
W0917	NR103	9/6/2006	13:05	94-0672		Total Nitrogen	mg/L	1.0	t
W0917	NR103	9/6/2006	13:05	94-0672		Total Phosphorus	mg/L	0.045	t
W0917	NR103	9/6/2006	13:05	94-0672		Suspended Solids	mg/L	2.9	t
W1509	TH02	9/6/2006	13:39	94-0678	94-0679	Ammonia-N	mg/L	0.10	
W1509	TH02	9/6/2006	13:39	94-0678	94-0679	Apparent color	PCU	240	
W1509	TH02	9/6/2006	13:39	94-0678	94-0679	*E. coli*	CFU/100mL	320	e
W1509	TH02	9/6/2006	13:39	94-0678	94-0679	Fecal Coliforms	CFU/100mL	300	e
W1509	TH02	9/6/2006	13:39	94-0678	94-0679	Suspended Solids	mg/L	4.8	
W1509	TH02	9/6/2006	13:39	94-0678	94-0679	Total Nitrogen	mg/L	1.2	
W1509	TH02	9/6/2006	13:39	94-0678	94-0679	Total Phosphorus	mg/L	0.058	
W1509	TH02	9/6/2006	13:39	94-0678	94-0679	True color	PCU	220	
W1509	TH02	9/6/2006	13:39	94-0678	94-0679	Turbidity	NTU	6.2	
W0338	ER01	10/11/2006	9:52	94-0736	94-0737	Ammonia-N	mg/L	<0.02	
W0338	ER01	10/11/2006	9:52	94-0736	94-0737	*E. coli*	CFU/100mL	20	e
W0338	ER01	10/11/2006	9:52	94-0736	94-0737	Fecal Coliforms	CFU/100mL	10	e
W0338	ER01	10/11/2006	9:52	94-0736	94-0737	Suspended Solids	mg/L	2.0	
W0338	ER01	10/11/2006	9:52	94-0736	94-0737	Total Nitrogen	mg/L	0.40	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W0338	ER01	10/11/2006	9:52	94-0736	94-0737	Total Phosphorus	mg/L	0.034	
W0898	FS102	10/11/2006	9:58	94-0728		*E. coli*	CFU/100mL	45	
W0898	FS102	10/11/2006	9:58	94-0728		Fecal Coliforms	CFU/100mL	90	
W0898	FS102	10/11/2006	9:58	94-0728		Ammonia-N	mg/L	0.02	
W0898	FS102	10/11/2006	9:58	94-0728		Total Nitrogen	mg/L	1.2	
W0898	FS102	10/11/2006	9:58	94-0728		Total Phosphorus	mg/L	0.031	
W0898	FS102	10/11/2006	9:58	94-0728		Suspended Solids	mg/L	11	
W1510	FH02	10/11/2006	10:09	94-0720		*E. coli*	CFU/100mL	10	
W1510	FH02	10/11/2006	10:09	94-0720		Fecal Coliforms	CFU/100mL	15	
W1510	FH02	10/11/2006	10:09	94-0720		Ammonia-N	mg/L	<0.02	
W1510	FH02	10/11/2006	10:09	94-0720		Total Nitrogen	mg/L	0.80	
W1510	FH02	10/11/2006	10:09	94-0720		Total Phosphorus	mg/L	0.043	
W1510	FH02	10/11/2006	10:09	94-0720		Suspended Solids	mg/L	1.1	
W0339	ER02	10/11/2006	10:15	94-0739		*E. coli*	CFU/100mL	<5	
W0339	ER02	10/11/2006	10:15	94-0739		Fecal Coliforms	CFU/100mL	<5	
W0339	ER02	10/11/2006	10:15	94-0739		Ammonia-N	mg/L	<0.02	
W0339	ER02	10/11/2006	10:15	94-0739		Total Nitrogen	mg/L	0.72	
W0339	ER02	10/11/2006	10:15	94-0739		Total Phosphorus	mg/L	0.070	
W0339	ER02	10/11/2006	10:15	94-0739		Suspended Solids	mg/L	10	
W1511	HR01	10/11/2006	10:29	94-0721		*E. coli*	CFU/100mL	75	
W1511	HR01	10/11/2006	10:29	94-0721		Enterococci	CFU/100mL	40	
W1511	HR01	10/11/2006	10:29	94-0721		Fecal Coliforms	CFU/100mL	120	
W1511	HR01	10/11/2006	10:29	94-0721		Ammonia-N	mg/L	0.09	
W1511	HR01	10/11/2006	10:29	94-0721		Total Nitrogen	mg/L	0.58	
W1511	HR01	10/11/2006	10:29	94-0721		Total Phosphorus	mg/L	0.034	
W1511	HR01	10/11/2006	10:29	94-0721		Suspended Solids	mg/L	2.4	
W0333	ER04A	10/11/2006	10:35	94-0740		*E. coli*	CFU/100mL	15	
W0333	ER04A	10/11/2006	10:35	94-0740		Fecal Coliforms	CFU/100mL	20	
W0333	ER04A	10/11/2006	10:35	94-0740		Ammonia-N	mg/L	<0.02	
W0333	ER04A	10/11/2006	10:35	94-0740		Total Nitrogen	mg/L	0.14	
W0333	ER04A	10/11/2006	10:35	94-0740		Total Phosphorus	mg/L	0.023	
W0333	ER04A	10/11/2006	10:35	94-0740		Suspended Solids	mg/L	1.1	
W0897	FS101	10/11/2006	10:42	94-0729		*E. coli*	CFU/100mL	50	
W0897	FS101	10/11/2006	10:42	94-0729		Fecal Coliforms	CFU/100mL	130	
W0897	FS101	10/11/2006	10:42	94-0729		Ammonia-N	mg/L	0.05	
W0897	FS101	10/11/2006	10:42	94-0729		Total Nitrogen	mg/L	9.9	
W0897	FS101	10/11/2006	10:42	94-0729		Total Phosphorus	mg/L	0.21	
W0897	FS101	10/11/2006	10:42	94-0729		Suspended Solids	mg/L	2.3	
W1539	SR102A	10/11/2006	10:55	94-0722		*E. coli*	CFU/100mL	180	
W1539	SR102A	10/11/2006	10:55	94-0722		Enterococci	CFU/100mL	85	
W1539	SR102A	10/11/2006	10:55	94-0722		Fecal Coliforms	CFU/100mL	180	
W1539	SR102A	10/11/2006	10:55	94-0722		Ammonia-N	mg/L	<0.02	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W1539	SR102A	10/11/2006	10:55	94-0722		Total Nitrogen	mg/L	0.78	
W1539	SR102A	10/11/2006	10:55	94-0722		Total Phosphorus	mg/L	0.079	
W1539	SR102A	10/11/2006	10:55	94-0722		Suspended Solids	mg/L	6.2	
W1512	TB01	10/11/2006	11:00	94-0741		*E. coli*	CFU/100mL	150	
W1512	TB01	10/11/2006	11:00	94-0741		Fecal Coliforms	CFU/100mL	170	
W1512	TB01	10/11/2006	11:00	94-0741		Ammonia-N	mg/L	0.06	
W1512	TB01	10/11/2006	11:00	94-0741		Total Nitrogen	mg/L	0.95	
W1512	TB01	10/11/2006	11:00	94-0741		Total Phosphorus	mg/L	0.038	
W1512	TB01	10/11/2006	11:00	94-0741		Suspended Solids	mg/L	2.9	
W0337	GH01	10/11/2006	11:18	94-0723		*E. coli*	CFU/100mL	10	t
W0337	GH01	10/11/2006	11:18	94-0723		Enterococci	CFU/100mL	<5	t
W0337	GH01	10/11/2006	11:18	94-0723		Fecal Coliforms	CFU/100mL	10	t
W0337	GH01	10/11/2006	11:18	94-0723		Ammonia-N	mg/L	**	
W0337	GH01	10/11/2006	11:18	94-0723		Total Nitrogen	mg/L	**	
W0337	GH01	10/11/2006	11:18	94-0723		Total Phosphorus	mg/L	0.054	t
W0337	GH01	10/11/2006	11:18	94-0723		Suspended Solids	mg/L	10	t
W0895	DW101	10/11/2006	11:20	94-0730		*E. coli*	CFU/100mL	>1600	
W0895	DW101	10/11/2006	11:20	94-0730		Fecal Coliforms	CFU/100mL	>1600	
W0895	DW101	10/11/2006	11:20	94-0730		Ammonia-N	mg/L	<0.02	
W0895	DW101	10/11/2006	11:20	94-0730		Total Nitrogen	mg/L	1.2	
W0895	DW101	10/11/2006	11:20	94-0730		Total Phosphorus	mg/L	0.041	
W0895	DW101	10/11/2006	11:20	94-0730		Suspended Solids	mg/L	1.4	
W1524	JR102A	10/11/2006	11:30	94-0742		*E. coli*	CFU/100mL	20	
W1524	JR102A	10/11/2006	11:30	94-0742		Fecal Coliforms	CFU/100mL	25	
W1524	JR102A	10/11/2006	11:30	94-0742		Ammonia-N	mg/L	<0.02	
W1524	JR102A	10/11/2006	11:30	94-0742		Total Nitrogen	mg/L	0.74	
W1524	JR102A	10/11/2006	11:30	94-0742		Total Phosphorus	mg/L	0.021	
W1524	JR102A	10/11/2006	11:30	94-0742		Suspended Solids	mg/L	<1.0	
W1528	IH102A	10/11/2006	11:41	94-0731		*E. coli*	CFU/100mL	75	
W1528	IH102A	10/11/2006	11:41	94-0731		Fecal Coliforms	CFU/100mL	150	
W1528	IH102A	10/11/2006	11:41	94-0731		Ammonia-N	mg/L	0.05	
W1528	IH102A	10/11/2006	11:41	94-0731		Total Nitrogen	mg/L	2.5	
W1528	IH102A	10/11/2006	11:41	94-0731		Total Phosphorus	mg/L	0.043	
W1528	IH102A	10/11/2006	11:41	94-0731		Suspended Solids	mg/L	1.1	
W0921	SR103	10/11/2006	11:46	94-0724	94-0725	Ammonia-N	mg/L	<0.02	
W0921	SR103	10/11/2006	11:46	94-0724	94-0725	*E. coli*	CFU/100mL	120	
W0921	SR103	10/11/2006	11:46	94-0724	94-0725	Fecal Coliforms	CFU/100mL	210	
W0921	SR103	10/11/2006	11:46	94-0724	94-0725	Suspended Solids	mg/L	22	
W0921	SR103	10/11/2006	11:46	94-0724	94-0725	Total Nitrogen	mg/L	1.2	
W0921	SR103	10/11/2006	11:46	94-0724	94-0725	Total Phosphorus	mg/L	0.22	
W0910	IM101	10/11/2006	11:59	94-0732		*E. coli*	CFU/100mL	5	
W0910	IM101	10/11/2006	11:59	94-0732		Fecal Coliforms	CFU/100mL	20	

Table 7. 2006 MassDEP South Shore Coastal Watersheds water quality data

Unique ID	Station ID	Date	Time	OWMID	Duplicate	Analyte	Units	Result	Qualifier*
W0910	IM101	10/11/2006	11:59	94-0732		Ammonia-N	mg/L	<0.02	
W0910	IM101	10/11/2006	11:59	94-0732		Total Nitrogen	mg/L	1.2	
W0910	IM101	10/11/2006	11:59	94-0732		Total Phosphorus	mg/L	0.008	
W0910	IM101	10/11/2006	11:59	94-0732		Suspended Solids	mg/L	<1.0	
W0917	NR103	10/11/2006	12:12	94-0727		*E. coli*	CFU/100mL	85	e
W0917	NR103	10/11/2006	12:12	94-0727		Fecal Coliforms	CFU/100mL	80	e
W0917	NR103	10/11/2006	12:12	94-0727		Ammonia-N	mg/L	<0.02	
W0917	NR103	10/11/2006	12:12	94-0727		Total Nitrogen	mg/L	0.83	
W0917	NR103	10/11/2006	12:12	94-0727		Total Phosphorus	mg/L	0.027	
W0917	NR103	10/11/2006	12:12	94-0727		Suspended Solids	mg/L	1.4	
W1509	TH02	10/11/2006	12:24	94-0733	94-0734	Ammonia-N	mg/L	0.05	
W1509	TH02	10/11/2006	12:24	94-0733	94-0734	*E. coli*	CFU/100mL	20	e
W1509	TH02	10/11/2006	12:24	94-0733	94-0734	Fecal Coliforms	CFU/100mL	10	e
W1509	TH02	10/11/2006	12:24	94-0733	94-0734	Suspended Solids	mg/L	2.0	
W1509	TH02	10/11/2006	12:24	94-0733	94-0734	Total Nitrogen	mg/L	1.1	
W1509	TH02	10/11/2006	12:24	94-0733	94-0734	Total Phosphorus	mg/L	0.033	

*see Appendix 1 for a complete list of data qualifiers

Table 8. 2006 MassDEP South Shore Coastal Watersheds *E. coli* geometric means of samples

Unique ID	Station ID	Waterbody	Geomean (CFU/100 mL)
W0895	DW101	Drinkwater River	642
W0338	ER01	Eel River	37
W0339	ER02	Eel River	2
W0333	ER04A	Unnamed Tributary	78
W0895	FH02	Drinkwater River	76
W0895	FS101	Drinkwater River	288
W0895	FS102	Drinkwater River	289
W0895	GH01	Drinkwater River	53
W0895	HR01	Drinkwater River	158
W1528	IH102A	Indian Head River	146
W0897	IM101	French Stream	113
W1524	JR102A	Jones River	92
W0917	NR103	North River	105
W1539	SR102A	South River	132
W0895	SR103	Drinkwater River	79
W1512	TB01	Town Brook	90
W1509	TH02	Third Herring Brook	126

Table 9: 2006 MassDEP South Shore Coastal Watersheds *in-situ* attended multi-probe data

Station ID	Unique ID	Waterbody	OWMID	Date	Time	Sample Depth (meters)	Depth Qualifiers*	Temperature (deg. C)	Temperature Qualifiers*	pH (SU)	pH Qualifiers*	Specifiic 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*
DW101	W0895	Drinkwater River	94-0387	6/16/2006	11:03 AM	0.7		15.2		--		--		--		7.2		73	
DW101	W0895	Drinkwater River	94-0388	6/19/2006	10:46 AM	0.1		18.4		--		--		--		7.1		77	
DW101	W0895	Drinkwater River	94-0336	6/21/2006	11:28 AM	0.5		18.1		6.3		344		220		7.3		78	
DW101	W0895	Drinkwater River	94-0479	7/6/2006	11:31 AM	0.7		18.8		6.2		289		185		5.9		64	
DW101	W0895	Drinkwater River	94-0507	7/28/2006	11:53 AM	0.5		22.1		--		--		--		6.3	i	73	i
DW101	W0895	Drinkwater River	94-0508	7/31/2006	10:50 AM	0.6		20.3		--		--		--		6.4		72	
DW101	W0895	Drinkwater River	94-0569	8/2/2006	11:30 AM	0.4		23.2		6.4		368		235		4.4		52	
DW101	W0895	Drinkwater River	94-0621	9/1/2006	12:11 PM	0.4		15.9		--		--		--		8.1		83	
DW101	W0895	Drinkwater River	94-0622	9/5/2006	11:20 AM	0.3		16.2		--		--		--		7.8		80	
DW101	W0895	Drinkwater River	94-0605	9/6/2006	11:30 AM	0.5	i, s	16.8		6.4		321		206		6.8		72	
DW101	W0895	Drinkwater River	94-0711	10/11/2006	11:27 AM	0.3		12.3		6.5		395		253		6.8		65	
ER01	W0338	Eel River	94-0362	5/15/2006	9:39 AM	--		11.5		--		--		--		9.0		83	
ER01	W0338	Eel River	94-0363	5/17/2006	9:53 AM	--		13.6		--		--		--		9.9		98	
ER01	W0338	Eel River	94-0423	6/19/2006	2:35 PM	0.1		20.8		--		--		--		10.1		##	
ER01	W0338	Eel River	94-0424	6/21/2006	9:19 AM	0.2		14.1		--		--		--		9.4		92	
ER01	W0338	Eel River	94-0344	6/21/2006	10:08 AM	0.2		15.3		6.1		83		54		10.6		##	
ER01	W0338	Eel River	94-0491	7/6/2006	10:07 AM	0.2		14.3		6.1		80		52		10.0		97	
ER01	W0338	Eel River	94-0543	7/31/2006	1:04 PM	0.1		18.4		--		--		--		11.0		##	
ER01	W0338	Eel River	94-0581	8/2/2006	10:04 AM	0.1		18.3		6.1		61		40		10.0		##	
ER01	W0338	Eel River	94-0544	8/2/2006	11:38 AM	0.2		20.0		--		--		--		10.1		##	
ER01	W0338	Eel River	94-0657	9/5/2006	1:59 PM	0.1		16.2		--		--		--		11.3		##	
ER01	W0338	Eel River	94-0658	9/6/2006	9:51 AM	0.2		15.5		--		--		--		7.7		79	
ER01	W0338	Eel River	94-0609	9/6/2006	10:19 AM	0.4		15.6		6.0		81		53		8.9		89	
ER01	W0338	Eel River	94-0701	9/22/2006	11:30 AM	0.1		13.2		--		--		--		10.5		##	
ER01	W0338	Eel River	94-0702	9/27/2006	12:15 PM	0.1		13.7		--		--		--		10.8		##	
ER01	W0338	Eel River	94-0715	10/11/2006	9:55 AM	0.1		12.3		5.9		81		53		9.0		84	

Table 9 (continued): 2006 MassDEP South Shore Coastal Watersheds *in-situ* attended multi-probe data

Station ID	Unique ID	Waterbody	OWMID	Date	Time	Sample Depth (meters)	Depth Qualifiers*	Temperature (deg. C)	Temperature Qualifiers*	pH (SU)	pH Qualifiers*	Specifiic 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*
ER02	W0339	Eel River	94-0427	6/21/2006	9:42 AM	0.2		22.2		--		--		--		8.4		98	
ER02	W0339	Eel River	94-0346	6/21/2006	10:34 AM	0.2		22.7		7.2		97		63		9.2		##	
ER02	W0339	Eel River	94-0493	7/6/2006	10:43 AM	0.2		21.5		7.1		98		64		9.2		##	
ER02	W0339	Eel River	94-0546	7/31/2006	1:23 PM	0.3		22.9	u	--		--		--		8.1		96	
ER02	W0339	Eel River	94-0582	8/2/2006	10:35 AM	0.2		26.1		7.1		98		63		8.1		##	
ER02	W0339	Eel River	94-0547	8/2/2006	12:19 PM	0.3		##	u	--		--		--		7.8	i	98	i
ER02	W0339	Eel River	94-0660	9/5/2006	2:18 PM	0.2		18.6		--		--		--		9.1		99	
ER02	W0339	Eel River	94-0661	9/6/2006	10:19 AM	0.1		18.2		--		--		--		9.3		##	
ER02	W0339	Eel River	94-0610	9/6/2006	10:46 AM	0.2		18.3		6.9		98		64		9.8		##	
ER02	W0339	Eel River	94-0716	10/11/2006	10:18 AM	0.1		13.9		6.6		105		68		10.6		##	
ER04A	W0333	Unnamed Tributary	94-0429	6/19/2006	3:31 PM	0.1		26.6		--		--		--		8.2		##	
ER04A	W0333	Unnamed Tributary	94-0430	6/21/2006	10:03 AM	0.2		21.9		--		--		--		7.3		84	
ER04A	W0333	Unnamed Tributary	94-0348	6/21/2006	10:57 AM	0.3		22.5		6.4		94		61		8.0		92	
ER04A	W0333	Unnamed Tributary	94-0495	7/6/2006	11:13 AM	0.1		21.2		6.4		93		60		7.6		86	
ER04A	W0333	Unnamed Tributary	94-0549	7/31/2006	1:48 PM	0.2		25.3		--		--		--		8.3		##	
ER04A	W0333	Unnamed Tributary	94-0583	8/2/2006	11:07 AM	0.3		26.2		6.5		60		39		7.8		96	
ER04A	W0333	Unnamed Tributary	94-0550	8/2/2006	11:59 AM	0.2		27.1		--		--		--		7.7		99	
ER04A	W0333	Unnamed Tributary	94-0663	9/5/2006	2:39 PM	0.2		19.8		--		--		--		9.6		##	
ER04A	W0333	Unnamed Tributary	94-0664	9/6/2006	10:46 AM	0.4		18.1		--		--		--		7.6		82	
ER04A	W0333	Unnamed Tributary	94-0611	9/6/2006	11:12 AM	0.1		18.3		6.4		96		63		8.7		92	
ER04A	W0333	Unnamed Tributary	94-0717	10/11/2006	10:35 AM	0.0	i	14.0		6.5		93		61		9.7		94	
FH02	W1510	First Herring Brook	94-0405	6/16/2006	3:10 PM	0.3		17.0		--		--		--		6.4		67	
FH02	W1510	First Herring Brook	94-0406	6/19/2006	10:23 AM	0.2		17.9		--		--		--		6.6		70	
FH02	W1510	First Herring Brook	94-0342	6/21/2006	2:52 PM	0.2		19.4		5.2		134		86		6.2		68	
FH02	W1510	First Herring Brook	94-0461	7/6/2006	10:29 AM	0.2		18.3		5.8		139		90		6.6		70	
FH02	W1510	First Herring Brook	94-0525	7/28/2006	3:14 PM	0.1		23.6		--		--		--		4.7	i	56	i
FH02	W1510	First Herring Brook	94-0526	7/31/2006	9:48 AM	0.1		19.4		--		--		--		5.3		59	

Table 9 (continued): 2006 MassDEP South Shore Coastal Watersheds *in-situ* attended multi-probe data

Station ID	Unique ID	Waterbody	OWMID	Date	Time	Sample Depth (meters)	Depth Qualifiers*	Temperature (deg. C)	Temperature Qualifiers*	pH (SU)	pH Qualifiers*	Specifiic 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*
FH02	W1510	First Herring Brook	94-0554	8/2/2006	10:11 AM	0.1		22.2		5.7		156		101		4.3		49	
FH02	W1510	First Herring Brook	94-0639	9/1/2006	10:18 AM	0.1		15.0		--		--		--		7.2		71	
FH02	W1510	First Herring Brook	94-0597	9/6/2006	10:29 AM	0.1		16.5		5.9		177		115		7.3		74	
FH02	W1510	First Herring Brook	94-0640	9/6/2006	3:49 PM	0.2		17.5		--		--		--		6.8		73	
FH02	W1510	First Herring Brook	94-0689	9/22/2006	9:14 AM	0.1		11.7		--		--		--		7.4		69	
FH02	W1510	First Herring Brook	94-0690	9/27/2006	9:51 AM	0.0	i	11.6		--		--		--		7.0		65	
FH02	W1510	First Herring Brook	94-0703	10/11/2006	10:15 AM	##	i	12.1		5.9		181		118		4.9		46	
FS101	W0897	French Stream	94-0335	6/21/2006	10:52 AM	0.3		21.0		6.7		441	u	282	u	7.1		81	
FS101	W0897	French Stream	94-0477	7/6/2006	10:58 AM	0.4		20.1		6.7		385	u	246	u	##	u	##	u
FS101	W0897	French Stream	94-0568	8/2/2006	10:55 AM	0.0	i	26.8		7.2		675	u	432	u	##	u	##	u
FS101	W0897	French Stream	94-0604	9/6/2006	10:57 AM	0.4		20.6		7.0		722	c	462	c	7.3	u	83	u
FS101	W0897	French Stream	94-0710	10/11/2006	10:56 AM	0.0	i	16.6		7.1		728	c	466	c	6.8	u	71	u
FS101A	W1612	French Stream	94-0384	6/16/2006	10:31 AM	0.5		16.8		--		--		--		7.9		83	
FS101A	W1612	French Stream	94-0385	6/19/2006	10:17 AM	0.1		19.0	u	--		--		--		7.9		86	
FS101A	W1612	French Stream	94-0504	7/28/2006	11:15 AM	0.1		22.7		--		--		--		7.9	i	93	i
FS101A	W1612	French Stream	94-0505	7/31/2006	10:21 AM	0.2		21.8		--		--		--		8.0		93	
FS101A	W1612	French Stream	94-0618	9/1/2006	11:41 AM	0.2		20.4		--		--		--		8.4		94	
FS101A	W1612	French Stream	94-0619	9/5/2006	10:57 AM	0.1		20.0		--		--		--		8.2		92	
FS102	W0898	French Stream	94-0381	6/16/2006	9:37 AM	0.4		18.1		--		--		--		8.2		88	
FS102	W0898	French Stream	94-0382	6/19/2006	9:47 AM	0.1		22.0		--		--		--		8.0		93	
FS102	W0898	French Stream	94-0334	6/21/2006	10:16 AM	0.2		22.1		6.7		258		165		7.8		90	
FS102	W0898	French Stream	94-0475	7/6/2006	10:13 AM	0.1		21.4		6.5		219		140		7.6		87	
FS102	W0898	French Stream	94-0501	7/28/2006	10:28 AM	0.2		25.5		--		--		--		6.9	i	85	i
FS102	W0898	French Stream	94-0502	7/31/2006	9:50 AM	0.2		24.1		--		--		--		7.0		84	
FS102	W0898	French Stream	94-0567	8/2/2006	9:55 AM	##	i	26.5		6.7		284		182		6.2		78	
FS102	W0898	French Stream	94-0615	9/1/2006	11:08 AM	0.2		19.4		--		--		--		8.2		89	
FS102	W0898	French Stream	94-0616	9/5/2006	10:36 AM	0.1		18.6		--		--		--		8.1		87	

Table 9 (continued): 2006 MassDEP South Shore Coastal Watersheds *in-situ* attended multi-probe data

Station ID	Unique ID	Waterbody	OWMID	Date	Time	Sample Depth (meters)	Depth Qualifiers*	Temperature (deg. C)	Temperature Qualifiers*	pH (SU)	pH Qualifiers*	Specifiic 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*
FS102	W0898	French Stream	94-0603	9/6/2006	10:17 AM	0.1		19.3		6.7		241		154		8.0		88	
FS102	W0898	French Stream	94-0709	10/11/2006	10:07 AM	0.0	i	13.9		6.6		292		187		8.6		84	
GH01	W0337	Green Harbor River	94-0414	6/19/2006	1:37 PM	0.1	t	28.0	u, t	--		--		--		4.9	u, t	67	u, t
GH01	W0337	Green Harbor River	94-0415	6/21/2006	11:57 AM	1.0	t	14.7	t	--		--		--		8.1	t	97	t
GH01	W0337	Green Harbor River	94-0467	7/6/2006	12:28 PM	1.1	t	##	u, t	##	u, i, t	##	u, i, c, t	##	u, i, c, t	##	u, i, t	##	u, i, t
GH01	W0337	Green Harbor River	94-0534	7/31/2006	**	**		**		**		**		**		**		**	
GH01	W0337	Green Harbor River	94-0556	8/2/2006	11:54 AM	0.5	t	25.6	t	7.7	t	####	c, t	### #	c, t	7.6	t	##	t
GH01	W0337	Green Harbor River	94-0535	8/2/2006	**	**		**		**		**		**		**		**	
GH01	W0337	Green Harbor River	94-0600	9/6/2006	**	**		**		**		**		**		**		**	
GH01	W0337	Green Harbor River	94-0706	10/11/2006	11:24 AM	0.1	t	14.2	t	7.9	t	##	c, t	##	c, t	7.8	t	92	t
HR01	W1511	Herring River	94-0402	6/16/2006	2:41 PM	0.5		22.6		--		--		--		7.1		83	
HR01	W1511	Herring River	94-0403	6/19/2006	10:50 AM	0.1		24.3		--		--		--		7.7		93	
HR01	W1511	Herring River	94-0341	6/21/2006	2:19 PM	0.1		25.8		6.6		187		120		7.3		91	
HR01	W1511	Herring River	94-0463	7/6/2006	11:00 AM	0.2		23.2		6.6		165		107		7.5		88	
HR01	W1511	Herring River	94-0522	7/28/2006	2:47 PM	0.7	t	24.4	t	--		--		--		10.6	i, t	##	i, t
HR01	W1511	Herring River	94-0523	7/31/2006	10:08 AM	0.1		23.0		--		--		--		8.8		##	
HR01	W1511	Herring River	94-0553	8/2/2006	10:38 AM	0.2		25.7		6.9		570		371		8.7		##	
HR01	W1511	Herring River	94-0636	9/1/2006	9:55 AM	0.1		18.3		--		--		--		9.5		##	
HR01	W1511	Herring River	94-0598	9/6/2006	10:55 AM	0.8	t	18.5	t	7.0	t	##	c, t	##	c, t	5.8	t	70	t
HR01	W1511	Herring River	94-0637	9/6/2006	3:22 PM	0.1	t	18.6	t	--		--		--		8.7	t	95	t
HR01	W1511	Herring River	94-0692	9/22/2006	9:32 AM	0.1		15.1		--		--		--		9.4		95	
HR01	W1511	Herring River	94-0693	9/27/2006	10:18 AM	0.0	i	15.3		--		--		--		10.1		##	
HR01	W1511	Herring River	94-0704	10/11/2006	10:34 AM	##	i	14.9		6.6		963	u, c	626	u, c	10.7		##	
IH102A	W1528	Indian Head River	94-0390	6/16/2006	11:44 AM	0.6		18.3		--		--		--		8.1		87	
IH102A	W1528	Indian Head River	94-0391	6/19/2006	11:10 AM	0.2		21.9		--		--		--		7.6		88	
IH102A	W1528	Indian Head River	94-0337	6/21/2006	11:56 AM	0.3		22.4		6.6		319		204		7.7		90	

Table 9 (continued): 2006 MassDEP South Shore Coastal Watersheds *in-situ* attended multi-probe data

Station ID	Unique ID	Waterbody	OWMID	Date	Time	Sample Depth (meters)	Depth Qualifiers*	Temperature (deg. C)	Temperature Qualifiers*	pH (SU)	pH Qualifiers*	Specifiic 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*
IH102A	W1528	Indian Head River	94-0481	7/6/2006	11:55 AM	0.2		21.7		6.4		252		161		7.2		84	
IH102A	W1528	Indian Head River	94-0510	7/28/2006	12:18 PM	0.3		25.6		--		--		--		6.7	i	83	i
IH102A	W1528	Indian Head River	94-0511	7/31/2006	11:15 AM	0.3		24.6		--		--		--		6.5		80	
IH102A	W1528	Indian Head River	94-0570	8/2/2006	11:51 AM	0.3		27.3		6.8		371		238		6.4		83	
IH102A	W1528	Indian Head River	94-0624	9/1/2006	12:38 PM	0.3		19.1		--		--		--		8.2		88	
IH102A	W1528	Indian Head River	94-0625	9/5/2006	11:52 AM	0.4		18.6		--		--		--		7.8		85	
IH102A	W1528	Indian Head River	94-0606	9/6/2006	12:00 PM	0.2		19.0		6.7		349		223		7.5		83	
IH102A	W1528	Indian Head River	94-0712	10/11/2006	11:48 AM	0.3		14.1		6.8		414		265		8.1		80	
IM101	W0910	Iron Mine Brook	94-0393	6/16/2006	12:17 PM	0.3		15.6		--		--		--		8.0		81	
IM101	W0910	Iron Mine Brook	94-0394	6/19/2006	11:46 AM	0.2		17.8		--		--		--		8.2		88	
IM101	W0910	Iron Mine Brook	94-0338	6/21/2006	12:24 PM	0.2		17.2		6.8		490		313		8.5		90	
IM101	W0910	Iron Mine Brook	94-0483	7/6/2006	12:19 PM	0.2		18.1		6.6		365		234		7.1		76	
IM101	W0910	Iron Mine Brook	94-0513	7/28/2006	12:42 PM	0.1		20.9		--		--		--		7.8	i	89	i
IM101	W0910	Iron Mine Brook	94-0514	7/31/2006	10:57 AM	0.2		18.1		--		--		--		8.6		92	
IM101	W0910	Iron Mine Brook	94-0571	8/2/2006	12:15 PM	0.1		21.5		7.2		657		420		6.7		77	
IM101	W0910	Iron Mine Brook	94-0627	9/1/2006	1:20 PM	0.1		15.4		--		--		--		9.3		93	
IM101	W0910	Iron Mine Brook	94-0628	9/5/2006	12:15 PM	0.1		15.3		--		--		--		9.2		93	
IM101	W0910	Iron Mine Brook	94-0607	9/6/2006	12:23 PM	0.1		16.3		7.1		552		353		8.2		85	
IM101	W0910	Iron Mine Brook	94-0713	10/11/2006	12:07 PM	0.1		11.7		7.0		691		442		8.8		82	
JR102A	W1524	Jones River	94-0417	6/19/2006	2:21 PM	0.1		24.0		--		--		--		8.0		97	
JR102A	W1524	Jones River	94-0418	6/21/2006	11:06 AM	0.3		21.7		--		--		--		8.0		92	
JR102A	W1524	Jones River	94-0352	6/21/2006	12:18 PM	0.4		22.1		6.6		154		100		8.7		##	
JR102A	W1524	Jones River	94-0499	7/6/2006	12:51 PM	0.4		21.9		6.5		155		101		8.1		92	
JR102A	W1524	Jones River	94-0537	7/31/2006	2:25 PM	0.1		23.8		--		--		--		7.9		96	
JR102A	W1524	Jones River	94-0538	8/2/2006	10:42 AM	0.1		24.8		--		--		--		7.7		94	
JR102A	W1524	Jones River	94-0585	8/2/2006	12:30 PM	0.2		25.7		6.8		169		110		8.0		98	
JR102A	W1524	Jones River	94-0651	9/5/2006	12:54 PM	0.1		17.9		--		--		--		8.8		94	

Table 9 (continued): 2006 MassDEP South Shore Coastal Watersheds *in-situ* attended multi-probe data

Station ID	Unique ID	Waterbody	OWMID	Date	Time	Sample Depth (meters)	Depth Qualifiers*	Temperature (deg. C)	Temperature Qualifiers*	pH (SU)	pH Qualifiers*	Specifiic 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*
JR102A	W1524	Jones River	94-0652	9/6/2006	12:04 PM	0.1		17.9		--		--		--		8.9		96	
JR102A	W1524	Jones River	94-0613	9/6/2006	12:18 PM	0.1		17.9		6.7		77	u	50	u	9.5		##	
JR102A	W1524	Jones River	94-0719	10/11/2006	11:34 AM	0.1		13.6		6.7		213		138		10.5		##	
NR103	W0917	North River	94-0396	6/16/2006	12:53 PM	1.0		19.4		--		--		--		5.8		64	
NR103	W0917	North River	94-0397	6/19/2006	12:08 PM	0.4		24.0		--		--		--		5.5		67	
NR103	W0917	North River	94-0339	6/21/2006	12:54 PM	0.4		23.8		6.3		274		176		4.6		55	
NR103	W0917	North River	94-0473	7/6/2006	1:48 PM	0.7		22.6		6.5		230		150		6.1		71	
NR103	W0917	North River	94-0516	7/28/2006	1:41 PM	0.6		26.8		--		--		--		5.1	i	64	i
NR103	W0917	North River	94-0517	7/31/2006	11:16 AM	0.5		25.1		--		--		--		4.3		54	
NR103	W0917	North River	94-0558	8/2/2006	1:06 PM	0.6		28.6		6.6		323		210		5.2		67	
NR103	W0917	North River	94-0630	9/1/2006	2:09 PM	0.2		19.6		--		--		--		7.7		84	
NR103	W0917	North River	94-0602	9/6/2006	1:08 PM	0.7	t	19.2	t	6.5	t	531	u, t	345	u, t	6.3	t	68	t
NR103	W0917	North River	94-0631	9/6/2006	2:32 PM	0.3		19.6		--		--		--		5.9		65	
NR103	W0917	North River	94-0695	9/22/2006	10:03 AM	0.3		15.1		--		--		--		6.6		66	
NR103	W0917	North River	94-0696	9/27/2006	11:03 AM	0.2		15.7		--		--		--		7.0		71	
NR103	W0917	North River	94-0708	10/11/2006	12:18 PM	0.0	i	13.6		6.5		662		431		6.6		64	
SR102A	W1539	South River	94-0365	5/15/2006	12:43 PM	--		10.3		--		--		--		9.9		90	
SR102A	W1539	South River	94-0366	5/17/2006	10:43 AM	--		11.7		--		--		--		9.3	u	88	u
SR102A	W1539	South River	94-0408	6/19/2006	12:12 PM	0.2		23.9		--		--		--		7.3		88	
SR102A	W1539	South River	94-0409	6/21/2006	12:31 PM	0.3		23.0		--		--		--		7.4		87	
SR102A	W1539	South River	94-0356	6/21/2006	1:41 PM	0.4		23.1		6.5		186		121		8.0		93	
SR102A	W1539	South River	94-0465	7/6/2006	11:55 AM	0.1		22.2		6.4		180		117		7.5		86	
SR102A	W1539	South River	94-0531	7/31/2006	1:01 PM	0.2		25.1		--		--		--		7.1		88	
SR102A	W1539	South River	94-0532	8/2/2006	9:36 AM	0.2		25.2		--		--		--		6.7		83	
SR102A	W1539	South River	94-0555	8/2/2006	11:12 AM	0.2		25.9		6.6		236		154		7.2		88	
SR102A	W1539	South River	94-0645	9/1/2006	3:13 PM	0.3		19.1		--		--		--		8.5		92	
SR102A	W1539	South River	94-0599	9/6/2006	11:25 AM	0.1		18.4		6.5		228		148		8.5		90	

Table 9 (continued): 2006 MassDEP South Shore Coastal Watersheds *in-situ* attended multi-probe data

Station ID	Unique ID	Waterbody	OWMID	Date	Time	Sample Depth (meters)	Depth Qualifiers*	Temperature (deg. C)	Temperature Qualifiers*	pH (SU)	pH Qualifiers*	Specifiic 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*
SR102A	W1539	South River	94-0646	9/6/2006	1:31 PM	0.3		19.0		--		--		--		8.1		88	
SR102A	W1539	South River	94-0705	10/11/2006	11:01 AM	0.1		14.2		6.4		225		146		9.1		89	
SR103	W0921	South River	94-0368	5/15/2006	1:16 PM	--		10.6		--		--		--		6.7		60	
SR103	W0921	South River	94-0369	5/17/2006	11:11 AM	--		12.5		--		--		--		6.0		58	
SR103	W0921	South River	94-0411	6/19/2006	12:50 PM	0.7		25.3		--		--		--		5.1		63	
SR103	W0921	South River	94-0412	6/21/2006	1:13 PM	0.9		24.6		--		--		--		5.2	u	64	u
SR103	W0921	South River	94-0360	6/21/2006	2:15 PM	0.4		25.1		6.2		178		116		5.6		68	
SR103	W0921	South River	94-0471	7/6/2006	1:09 PM	0.3		22.9		6.0		178		115		2.9		34	
SR103	W0921	South River	94-0528	7/31/2006	12:33 PM	0.8		24.6		--		--		--		3.4	u	41	u
SR103	W0921	South River	94-0529	8/2/2006	10:05 AM	0.7		26.2		--		--		--		2.7		34	
SR103	W0921	South River	94-0557	8/2/2006	12:34 PM	0.2		27.6		6.2		214		139		3.1		39	
SR103	W0921	South River	94-0642	9/1/2006	2:44 PM	0.5		19.1		--		--		--		5.6		61	
SR103	W0921	South River	94-0601	9/6/2006	12:30 PM	0.2		19.0		6.0		200		130		4.9		53	
SR103	W0921	South River	94-0643	9/6/2006	1:55 PM	0.4		19.5		--		--		--		4.9		55	
SR103	W0921	South River	94-0698	9/22/2006	10:55 AM	0.2		15.8		--		--		--		4.5		45	
SR103	W0921	South River	94-0699	9/27/2006	11:35 AM	0.1		15.6		--		--		--		3.2		32	
SR103	W0921	South River	94-0707	10/11/2006	11:49 AM	0.2		13.0		6.3		259		168		2.5		24	
TB01	W1512	Town Brook	94-0420	6/19/2006	1:49 PM	0.6		24.6		--		--		--		8.4		##	
TB01	W1512	Town Brook	94-0421	6/21/2006	10:32 AM	0.6		22.5		--		--		--		8.4		99	
TB01	W1512	Town Brook	94-0350	6/21/2006	11:34 AM	0.2		22.9		6.8		146		95		9.1		##	
TB01	W1512	Town Brook	94-0497	7/6/2006	11:49 AM	0.3		22.8		6.8		140		91		8.8		##	
TB01	W1512	Town Brook	94-0540	7/31/2006	12:41 PM	0.4		24.5		--		--		--		8.3		##	
TB01	W1512	Town Brook	94-0541	8/2/2006	11:16 AM	0.3		26.8		--		--		--		7.6		97	
TB01	W1512	Town Brook	94-0584	8/2/2006	11:45 AM	0.3		27.0		6.8		146		95		8.2		##	
TB01	W1512	Town Brook	94-0654	9/5/2006	1:35 PM	0.2		19.1		--		--		--		9.1		##	
TB01	W1512	Town Brook	94-0655	9/6/2006	11:20 AM	0.5		19.3		--		--		--		9.0		99	
TB01	W1512	Town Brook	94-0612	9/6/2006	11:41 AM	0.2		19.2		6.7		157		102		9.6		##	

Table 9 (continued): 2006 MassDEP South Shore Coastal Watersheds *in-situ* attended multi-probe data

Station ID	Unique ID	Waterbody	OWMID	Date	Time	Sample Depth (meters)	Depth Qualifiers*	Temperature (deg. C)	Temperature Qualifiers*	pH (SU)	pH Qualifiers*	Specifiic 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*
TB01	W1512	Town Brook	94-0718	10/11/2006	11:03 AM	0.1		14.8		6.7		168		109		10.5		##	
TH02	W1509	Third Herring Brook	94-0399	6/16/2006	2:06 PM	0.7		18.6		--		--		--		7.6		83	
TH02	W1509	Third Herring Brook	94-0400	6/19/2006	11:19 AM	0.3		21.1		--		--		--		7.7		88	
TH02	W1509	Third Herring Brook	94-0340	6/21/2006	1:48 PM	0.3		22.2		6.6		283		181		7.5		87	
TH02	W1509	Third Herring Brook	94-0487	7/6/2006	12:45 PM	0.3		21.0		6.4		250		160		7.0		80	
TH02	W1509	Third Herring Brook	94-0519	7/28/2006	2:12 PM	0.3		25.2		--		--		--		6.8	i	84	i
TH02	W1509	Third Herring Brook	94-0520	7/31/2006	10:36 AM	0.2		22.4		--		--		--		7.1		84	
TH02	W1509	Third Herring Brook	94-0572	8/2/2006	12:38 PM	0.2		25.3		6.8		353		226		6.0		74	
TH02	W1509	Third Herring Brook	94-0633	9/1/2006	1:42 PM	0.1		18.2		--		--		--		8.5		91	
TH02	W1509	Third Herring Brook	94-0608	9/6/2006	12:46 PM	0.2		17.8		6.7		328		210		8.0		86	
TH02	W1509	Third Herring Brook	94-0634	9/6/2006	2:54 PM	0.1		18.5		--		--		--		8.3		90	
TH02	W1509	Third Herring Brook	94-0714	10/11/2006	12:27 PM	0.2		13.0		6.8		380		243		8.5		82	

*see Appendix 1 for a complete list of data qualifiers

Table 10. 2006 MassDEP South Shore Coastal Watersheds summary of unattended probe temperature data

For purposes of summarizing the unattended probe data in this technical memorandum, selected statistics for each station and dates of visit are shown. While the data used to calculate the statistics may have been qualified for various reasons (representativeness, inaccuracy, method not followed, etc.), these data are generally considered acceptable for statistical purposes. Censored data were not used in these calculations. For more detailed information about qualified data points for a given station visit, refer to the final data files that have undergone quality assurance/quality control review (available from MassDEP upon request). ("-- " = No data (i.e., data not taken/not required))

Unique ID	Station ID	Water Body	OWMID	Start Date	Temperature Deployment Duration (Hours)	Average (deg. C)	Maximum (deg. C)	Mean of the Daily Maximum (deg. C)	Amount of Time > 20 deg. C (Hours)	Percentage of Time > 20 deg. C (%)	Average Daily Amount of Time > 20 deg. C (Hours)	Amount of Time > 28.3 deg. C (Hours)	Average Daily Amount of Time > 28.3 deg. C (Hours)
W0895	DW101	Drinkwater River	94-0386	6/16/2006	71.3	17.9	20.2	19.5	4.1	6%	2.1	0.0	0.0
W0895	DW101	Drinkwater River	94-0506	7/28/2006	70.8	22.3	23.8	23.3	67.1	95%	24.0	0.0	0.0
W0895	DW101	Drinkwater River	94-0620	9/01/2006	95.0	16.5	17.8	17.1	0.0	0%	0.0	0.0	0.0
W0338	ER01	Eel River	94-0361	--	--	--	--	--	--		--	--	--
W0338	ER01	Eel River	94-0422	6/19/2006	42.5	15.7	21.0	21.0	5.3	13%	3.1	0.0	0.0
W0338	ER01	Eel River	94-0542	7/31/2006	46.5	18.8	22.1	22.1	10.8	23%	9.7	0.0	0.0
W0338	ER01	Eel River	94-0656	9/05/2006	19.8	15.9	16.5	--	0.0	0%	--	0.0	--
W0338	ER01	Eel River	94-0700	9/22/2006	120.5	14.6	17.1	16.1	0.0	0%	0.0	0.0	0.0
W0339	ER02	Eel River	94-0425	6/19/2006	42.5	22.9	25.0	24.9	42.4	100%	24.0	0.0	0.0
W0339	ER02	Eel River	94-0545	7/31/2006	46.8	24.6	26.5	26.5	46.6	100%	24.0	0.0	0.0
W0339	ER02	Eel River	94-0659	9/05/2006	19.8	18.1	18.6	--	0.0	0%	--	0.0	--
W0333	ER04A	Unnamed Tributary	94-0428	6/19/2006	42.5	23.8	27.0	26.7	42.4	100%	24.0	0.0	0.0
W0333	ER04A	Unnamed Tributary	94-0548	7/31/2006	46.0	25.9	28.8	28.8	45.9	100%	24.0	3.7	3.7
W0333	ER04A	Unnamed Tributary	94-0662	9/05/2006	19.8	19.0	20.1	--	3.1	16%	--	0.0	--
W1510	FH02	First Herring Brook	94-0370	6/16/2006	67.0	17.4	19.3	18.7	0.0	0%	0.0	0.0	0.0
W1510	FH02	First Herring Brook	94-0524	7/28/2006	66.3	22.1	24.3	23.6	60.4	91%	24.0	0.0	0.0
W1510	FH02	First Herring Brook	94-0638	9/01/2006	125.3	16.5	18.0	17.1	0.0	0%	0.0	0.0	0.0
W1510	FH02	First Herring Brook	94-0688	9/22/2006	120.5	14.6	17.9	16.3	0.0	0%	0.0	0.0	0.0
W1612	FS101A	French Stream	94-0383	6/16/2006	71.5	18.8	21.2	20.7	12.0	17%	5.4	0.0	0.0
W1612	FS101A	French Stream	94-0503	7/28/2006	71.0	22.1	23.2	22.8	71.0	100%	24.0	0.0	0.0
W1612	FS101A	French Stream	94-0617	9/01/2006	95.0	19.8	21.1	20.4	34.6	36%	7.7	0.0	0.0
W0898	FS102	French Stream	94-0380	6/16/2006	72.0	21.9	27.1	25.8	54.5	76%	17.1	0.0	0.0
W0898	FS102	French Stream	94-0500	7/28/2006	71.3	26.0	28.5	27.9	71.3	100%	24.0	3.8	1.9

Table 10 (continued). 2006 MassDEP South Shore Coastal Watersheds summary of unattended temperature probe data

Unique ID	Station ID	Water Body	OWMID	Start Date	Temperature Deployment Duration (Hours)	Average (deg. C)	Maximum (deg. C)	Mean of the Daily Maximum (deg. C)	Amount of Time > 20 deg. C (Hours)	Percentage of Time > 20 deg. C (%)	Average Daily Amount of Time > 20 deg. C (Hours)	Amount of Time > 28.3 deg. C (Hours)	Average Daily Amount of Time > 28.3 deg. C (Hours)
W0898	FS102	French Stream	94-0614	9/01/2006	95.3	18.7	20.6	19.3	11.1	12%	2.3	0.0	0.0
W0337	GH01	Green Harbor River	94-0533	--	--	--	--	--	--		--	--	--
W0337	GH01	Green Harbor River	94-0413	6/19/2006	0.0	--	--	--	--		--	--	--
W1511	HR01	Herring River	94-0401	6/16/2006	62.0	23.0	25.8	--	60.7	98%	--	0.0	--
W1511	HR01	Herring River	94-0521	7/28/2006	0.0	--	--	--	--		--	--	--
W1511	HR01	Herring River	94-0635	9/01/2006	0.0	--	--	--	--		--	--	--
W1511	HR01	Herring River	94-0691	9/22/2006	120.5	16.4	19.1	18.4	0.0	0%	0.0	0.0	0.0
W1528	IH102A	Indian Head River	94-0389	6/16/2006	71.3	21.1	25.2	24.0	50.8	71%	15.7	0.0	0.0
W1528	IH102A	Indian Head River	94-0509	7/28/2006	70.5	26.1	27.7	27.6	70.5	100%	24.0	0.0	0.0
W1528	IH102A	Indian Head River	94-0623	9/01/2006	95.0	18.6	20.0	19.0	0.0	0%	0.0	0.0	0.0
W0910	IM101	Iron Mine Brook	94-0392	6/16/2006	71.3	17.1	20.3	19.8	3.4	5%	1.7	0.0	0.0
W0910	IM101	Iron Mine Brook	94-0512	7/28/2006	70.0	20.3	22.4	21.6	42.2	60%	15.5	0.0	0.0
W0910	IM101	Iron Mine Brook	94-0626	9/01/2006	94.5	15.8	17.2	16.5	0.0	0%	0.0	0.0	0.0
W1524	JR102A	Jones River	94-0416	6/19/2006	44.5	22.6	24.5	23.9	44.5	100%	24.0	0.0	0.0
W1524	JR102A	Jones River	94-0536	7/31/2006	44.0	23.8	25.2	25.2	44.0	100%	24.0	0.0	0.0
W1524	JR102A	Jones River	94-0650	9/05/2006	23.0	17.8	18.2	--	0.0	0%	--	0.0	--
W0917	NR103	North River	94-0395	6/16/2006	71.0	21.7	24.6	23.6	59.0	83%	18.5	0.0	0.0
W0917	NR103	North River	94-0515	7/28/2006	69.3	27.0	28.5	28.5	69.2	100%	24.0	3.9	2.0
W0917	NR103	North River	94-0629	9/01/2006	120.0	18.8	20.5	19.6	12.8	11%	1.5	0.0	0.0
W0917	NR103	North River	94-0694	9/22/2006	120.8	17.2	18.9	18.2	0.0	0%	0.0	0.0	0.0
W1539	SR102A	South River	94-0364	5/15/2006	45.8	10.8	11.6	11.2	0.0	0%	0.0	0.0	0.0
W1539	SR102A	South River	94-0407	6/19/2006	48.3	23.7	25.8	25.7	48.3	100%	24.0	0.0	0.0
W1539	SR102A	South River	94-0530	7/31/2006	44.3	25.2	27.1	27.1	44.2	100%	24.0	0.0	0.0
W1539	SR102A	South River	94-0644	9/01/2006	118.0	18.2	19.6	18.8	0.0	0%	0.0	0.0	0.0
W0921	SR103	South River	94-0367	5/15/2006	45.8	11.1	12.5	11.7	0.0	0%	0.0	0.0	0.0
W0921	SR103	South River	94-0410	6/19/2006	48.0	24.3	27.1	26.9	48.0	100%	24.0	0.0	0.0
W0921	SR103	South River	94-0527	7/31/2006	45.3	25.9	27.5	27.5	45.2	100%	24.0	0.0	0.0
W0921	SR103	South River	94-0641	9/01/2006	119.0	18.4	20.9	19.3	8.6	7%	2.1	0.0	0.0
W0921	SR103	South River	94-0697	9/22/2006	120.5	16.6	18.7	17.6	0.0	0%	0.0	0.0	0.0
W1512	TB01	Town Brook	94-0419	6/19/2006	44.5	23.4	25.2	24.6	44.4	100%	24.0	0.0	0.0
W1512	TB01	Town Brook	94-0539	7/31/2006	46.5	25.6	27.0	27.0	46.4	100%	24.0	0.0	0.0
W1512	TB01	Town Brook	94-0653	9/05/2006	21.5	19.3	19.6	--	0.0	0%	--	0.0	--

Table 10 (continued). 2006 MassDEP South Shore Coastal Watersheds summary of unattended temperature probe data

Unique ID	Station ID	Water Body	OWMID	Start Date	Temperature Deployment Duration (Hours)	Average (deg. C)	Maximum (deg. C)	Mean of the Daily Maximum (deg. C)	Amount of Time > 20 deg. C (Hours)	Percentage of Time > 20 deg. C (%)	Average Daily Amount of Time > 20 deg. C (Hours)	Amount of Time > 28.3 deg. C (Hours)	Average Daily Amount of Time > 28.3 deg. C (Hours)
W1509	TH02	Third Herring Brook	94-0398	6/16/2006	68.8	19.6	21.7	21.1	29.9	44%	9.4	0.0	0.0
W1509	TH02	Third Herring Brook	94-0518	7/28/2006	68.3	24.3	27.3	26.9	68.3	100%	24.0	0.0	0.0
W1509	TH02	Third Herring Brook	94-0632	9/01/2006	121.0	17.4	19.9	18.2	0.0	0%	0.0	0.0	0.0

Table 11. 2006 MassDEP South Shore Coastal Watersheds summary of unattended probe dissolved oxygen data

For purposes of summarizing the unattended probe data in this technical memorandum, selected statistics for each station and dates of visit are shown. While the data used to calculate the statistics may have been qualified for various reasons (representativeness, inaccuracy, method not followed, etc.), these data are generally considered acceptable for statistical purposes. Censored data were not used in these calculations. For more detailed information about qualified data points for a given station visit, refer to the final data files that have undergone quality assurance/quality control review (available from MassDEP upon request). ("-- " = No data (i.e., data not taken/not required))

Station ID	Unique ID	Water Body	OWMID	Start Date	Deployment Duration (Hours)	Average Dissolved Oxygen(mg/L)	Minimum Dissolved Oxygen (mg/L)	Amount of Time < 3.0 mg/L (Hours)	Amount of Time < 5.0 mg/L (Hours)	Percentage of Time < 5.0 mg/L(%)	Amount of Time < 6.0 mg/L (Hours)	Average Daily Amount of Time < 3.0 mg/L (Hours)	Average Daily Amount of Time < 5.0 mg/L (Hours)	Average Daily Amount of Time < 6.0 mg/L (Hours)	Average Saturation (%)	Minimum Saturation (%)	Maximum Saturation (%)
W0895	DW101	Drinkwater River	94-0386	06/16/2006	71.3	7.1	6.6	0.0	0.0	0%	0.0	0.0	0.0	0.0	76	74	79
W0895	DW101	Drinkwater River	94-0506	07/28/2006	70.8	6.3	5.9	0.0	0.0	0%	1.6	0.0	0.0	0.4	74	69	78
W0895	DW101	Drinkwater River	94-0620	09/01/2006	95.0	7.8	7.4	0.0	0.0	0%	0.0	0.0	0.0	0.0	80	77	85
W0338	ER01	Eel River	94-0361	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W0338	ER01	Eel River	94-0422	06/19/2006	42.5	7.9	6.5	0.0	0.0	0%	0.0	0.0	0.0	0.0	82	63	113
W0338	ER01	Eel River	94-0542	07/31/2006	46.5	7.8	5.3	0.0	0.0	0%	14.6	0.0	0.0	7.2	85	56	121
W0338	ER01	Eel River	94-0656	09/05/2006	19.8	7.1	5.1	0.0	0.0	0%	8.6	--	--	--	73	51	117
W0338	ER01	Eel River	94-0700	09/22/2006	120.5	7.3	5.0	0.0	0.0	0%	42.4	0.0	0.0	9.4	73	50	122
W0339	ER02	Eel River	94-0425	06/19/2006	42.5	8.5	8.1	0.0	0.0	0%	0.0	0.0	0.0	0.0	100	99	102
W0339	ER02	Eel River	94-0545	07/31/2006	46.8	8.0	7.5	0.0	0.0	0%	0.0	0.0	0.0	0.0	97	93	102
W0339	ER02	Eel River	94-0659	09/05/2006	19.8	8.9	8.8	0.0	0.0	0%	0.0	--	--	--	95	94	97
W0333	ER04A	Unnamed Tributary	94-0428	06/19/2006	42.5	7.2	6.3	0.0	0.0	0%	0.0	0.0	0.0	0.0	87	72	101
W0333	ER04A	Unnamed Tributary	94-0548	07/31/2006	46.0	7.5	5.6	0.0	0.0	0%	3.9	0.0	0.0	0.0	94	69	114
W0333	ER04A	Unnamed Tributary	94-0662	09/05/2006	19.8	8.1	6.3	0.0	0.0	0%	0.0	--	--	--	88	66	108
W1510	FH02	First Herring Brook	94-0370	06/16/2006	67.0	6.7	6.3	0.0	0.0	0%	0.0	0.0	0.0	0.0	71	68	74

Table 10 (continued). 2006 MassDEP South Shore Coastal Watersheds summary of unattended probe dissolved oxygen data

Station ID	Unique ID	Water Body	OWMID	Start Date	Deployment Duration (Hours)	Average Dissolved Oxygen(mg/L)	Minimum Dissolved Oxygen (mg/L)	Amount of Time < 3.0 mg/L (Hours)	Amount of Time < 5.0 mg/L (Hours)	Percentage of Time < 5.0 mg/L(%)	Amount of Time < 6.0 mg/L (Hours)	Average Daily Amount of Time < 3.0 mg/L (Hours)	Average Daily Amount of Time < 5.0 mg/L (Hours)	Average Daily Amount of Time < 6.0 mg/L (Hours)	Average Saturation (%)	Minimum Saturation (%)	Maximum Saturation (%)
W1510	FH02	First Herring Brook	94-0524	07/28/2006	66.3	4.7	4.5	0.0	62.9	95%	66.2	0.0	24.0	24.0	55	53	58
W1510	FH02	First Herring Brook	94-0638	09/01/2006	125.3	6.7	6.3	0.0	0.0	0%	0.0	0.0	0.0	0.0	68	66	73
W1510	FH02	First Herring Brook	94-0688	09/22/2006	120.5	6.7	6.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	66	62	73
W1612	FS101A	French Stream	94-0383	06/16/2006	71.3	7.5	6.7	0.0	0.0	0%	0.0	0.0	0.0	0.0	81	74	90
W1612	FS101A	French Stream	94-0503	07/28/2006	71.0	7.5	6.5	0.0	0.0	0%	0.0	0.0	0.0	0.0	87	76	96
W1612	FS101A	French Stream	94-0617	09/01/2006	95.0	7.8	7.1	0.0	0.0	0%	0.0	0.0	0.0	0.0	86	77	94
W0898	FS102	French Stream	94-0380	06/16/2006	72.0	8.0	7.2	0.0	0.0	0%	0.0	0.0	0.0	0.0	92	89	97
W0898	FS102	French Stream	94-0500	07/28/2006	71.3	6.9	5.8	0.0	0.0	0%	1.2	0.0	0.0	0.0	86	73	92
W0898	FS102	French Stream	94-0614	09/01/2006	95.3	7.9	7.3	0.0	0.0	0%	0.0	0.0	0.0	0.0	85	80	93
W0337	GH01	Green Harbor River	94-0533	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W0337	GH01	Green Harbor River	94-0413	06/19/2006	0.0	--	--	--	--	--	--	--	--	--	--	--	--
W1511	HR01	Herring River	94-0401	06/16/2006	0.0	--	--	--	--	--	--	--	--	--	--	--	--
W1511	HR01	Herring River	94-0521	07/28/2006	0.0	--	--	--	--	--	--	--	--	--	--	--	--
W1511	HR01	Herring River	94-0635	09/01/2006	0.0	--	--	--	--	--	--	--	--	--	--	--	--
W1511	HR01	Herring River	94-0691	09/22/2006	0.0	--	--	--	--	--	--	--	--	--	--	--	--
W1528	IH102A	Indian Head River	94-0389	06/16/2006	71.3	7.7	6.9	0.0	0.0	0%	0.0	0.0	0.0	0.0	87	83	92
W1528	IH102A	Indian Head River	94-0509	07/28/2006	70.5	6.4	6.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	80	75	87
W1528	IH102A	Indian Head River	94-0623	09/01/2006	95.0	7.7	7.4	0.0	0.0	0%	0.0	0.0	0.0	0.0	83	80	89

Table 10 (continued). 2006 MassDEP South Shore Coastal Watersheds summary of unattended probe dissolved oxygen data

Station ID	Unique ID	Water Body	OWMID	Start Date	Deployment Duration (Hours)	Average Dissolved Oxygen(mg/L)	Minimum Dissolved Oxygen (mg/L)	Amount of Time < 3.0 mg/L (Hours)	Amount of Time < 5.0 mg/L (Hours)	Percentage of Time < 5.0 mg/L(%)	Amount of Time < 6.0 mg/L (Hours)	Average Daily Amount of Time < 3.0 mg/L (Hours)	Average Daily Amount of Time < 5.0 mg/L (Hours)	Average Daily Amount of Time < 6.0 mg/L (Hours)	Average Saturation (%)	Minimum Saturation (%)	Maximum Saturation (%)
W0910	IM101	Iron Mine Brook	94-0392	06/16/2006	71.3	7.9	7.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	83	77	88
W0910	IM101	Iron Mine Brook	94-0512	07/28/2006	70.0	7.9	7.0	0.0	0.0	0%	0.0	0.0	0.0	0.0	88	80	93
W0910	IM101	Iron Mine Brook	94-0626	09/01/2006	94.5	9.0	8.5	0.0	0.0	0%	0.0	0.0	0.0	0.0	91	87	96
W1524	JR102A	Jones River	94-0416	06/19/2006	44.5	7.6	7.3	0.0	0.0	0%	0.0	0.0	0.0	0.0	89	85	96
W1524	JR102A	Jones River	94-0536	07/31/2006	44.0	7.5	7.1	0.0	0.0	0%	0.0	0.0	0.0	0.0	91	85	98
W1524	JR102A	Jones River	94-0650	09/05/2006	23.0	8.6	8.3	0.0	0.0	0%	0.0	--	--	--	91	87	97
W0917	NR103	North River	94-0395	06/16/2006	71.0	5.4	4.3	0.0	17.3	24%	63.0	0.0	4.8	21.7	63	50	75
W0917	NR103	North River	94-0515	07/28/2006	69.3	4.5	3.9	0.0	62.0	90%	69.2	0.0	22.5	24.0	58	48	70
W0917	NR103	North River	94-0629	09/01/2006	120.0	6.5	5.1	0.0	0.0	0%	20.1	0.0	0.0	2.4	70	55	90
W0917	NR103	North River	94-0694	09/22/2006	120.8	6.8	5.6	0.0	0.0	0%	6.5	0.0	0.0	1.6	71	59	87
W1539	SR102A	South River	94-0364	05/15/2006	45.8	8.8	8.5	0.0	0.0	0%	0.0	0.0	0.0	0.0	80	77	83
W1539	SR102A	South River	94-0407	06/19/2006	48.3	7.2	6.9	0.0	0.0	0%	0.0	0.0	0.0	0.0	86	85	90
W1539	SR102A	South River	94-0530	07/31/2006	44.3	6.7	6.4	0.0	0.0	0%	0.0	0.0	0.0	0.0	83	79	88
W1539	SR102A	South River	94-0644	09/01/2006	118.0	8.1	7.6	0.0	0.0	0%	0.0	0.0	0.0	0.0	87	82	93
W0921	SR103	South River	94-0367	05/15/2006	0.0	--	--	--	--	--	--	--	--	--	--	--	--
W0921	SR103	South River	94-0410	06/19/2006	48.0	3.4	1.8	23.6	37.7	79%	46.3	12.8	20.6	24.0	42	21	77
W0921	SR103	South River	94-0527	07/31/2006	45.3	3.2	2.6	16.8	45.2	100%	45.2	8.2	24.0	24.0	40	32	48
W0921	SR103	South River	94-0641	09/01/2006	118.8	4.9	3.7	0.0	66.7	56%	107.8	0.0	13.6	23.5	52	39	70
W0921	SR103	South River	94-0697	09/22/2006	120.5	3.9	2.4	37.0	107.2	89%	120.5	7.6	22.4	24.0	40	25	58
W1512	TB01	Town Brook	94-0419	06/19/2006	44.5	7.5	7.2	0.0	0.0	0%	0.0	0.0	0.0	0.0	90	87	95
W1512	TB01	Town Brook	94-0539	07/31/2006	46.5	7.5	7.1	0.0	0.0	0%	0.0	0.0	0.0	0.0	94	89	100
W1512	TB01	Town Brook	94-0653	09/05/2006	21.5	8.5	8.4	0.0	0.0	0%	0.0	--	--	--	93	91	97

Table 10 (continued). 2006 MassDEP South Shore Coastal Watersheds summary of unattended probe dissolved oxygen data

Station ID	Unique ID	Water Body	OWMID	Start Date	Deployment Duration (Hours)	Average Dissolved Oxygen(mg/L)	Minimum Dissolved Oxygen (mg/L)	Amount of Time < 3.0 mg/L (Hours)	Amount of Time < 5.0 mg/L (Hours)	Percentage of Time < 5.0 mg/L(%)	Amount of Time < 6.0 mg/L (Hours)	Average Daily Amount of Time < 3.0 mg/L (Hours)	Average Daily Amount of Time < 5.0 mg/L (Hours)	Average Daily Amount of Time < 6.0 mg/L (Hours)	Average Saturation (%)	Minimum Saturation (%)	Maximum Saturation (%)
W1509	TH02	Third Herring Brook	94-0398	06/16/2006	68.5	7.7	7.3	0.0	0.0	0%	0.0	0.0	0.0	0.0	85	84	87
W1509	TH02	Third Herring Brook	94-0518	07/28/2006	68.3	6.8	6.3	0.0	0.0	0%	0.0	0.0	0.0	0.0	82	80	85
W1509	TH02	Third Herring Brook	94-0632	09/01/2006	121.0	8.4	7.8	0.0	0.0	0%	0.0	0.0	0.0	0.0	88	85	93

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Appendix 1: 2006 Data Symbols and Qualifiers

Excerpted from: Water Quality Data Validation Report for Year 2006 Project Data (CN 300.0)

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).

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

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

" ^^ " = No data due to no water

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.

" 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.

" t " = tidal conditions

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).

" t " = tidal conditions