APPENDIX A

Technical Memorandum

TM-82-9

CONCORD WATERSHED 2001
DWM WATER QUALITY MONITORING DATA

February 2005

DWM Control Number CN 130.0

Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Ellen Roy Herzfelder, Secretary
Massachusetts Department of Environmental Protection
Robert W. Golledge, Jr., Commissioner
Bureau of Resource Protection
Cynthia Giles, Assistant Commissioner
Division of Watershed Management
Glenn Haas, Director

EXHIBIT 15

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INTRODUCTION AND PROJECT OBJECTIVES

The DWM 2001 water quality monitoring plan for the Concord watershed was developed by DWM in consultation with the former EOEA SuAsCo (Sudbury, Assabet, and Concord) Watershed Team, a coalition of governmental and non-governmental groups. Because of a separate data collection effort for the Assabet River by a consultant (ENSR, Inc.) during the years 1999 and 2000, and a projected similar effort for the Concord River in 2002-2003, the DWM 2001 watershed survey was confined to the Sudbury River. The monitoring strategy was guided primarily by the recommendations in the unpublished 1996 DWM water quality assessment report (MA DEP, 1996) and suggestions by members of the EOEA SuAsCo Watershed Team. Priority monitoring needs addressed by DWM included sampling for water chemistry, bacteria, macroinvertebrate biomonitoring, fish population studies, and fish toxics monitoring. This technical memorandum presents the DWM riverine water quality sampling component of the survey. Results of the other monitoring efforts mentioned above are described in separate DWM memoranda or reports. Additional water quality, bacterial, and biological data, especially for the Assabet River, are available from ENSR, Inc. (ENSR, 2001) and from the Organization for the Assabet River (OAR, 2001).

The 1996 DWM SuAsCo assessment report (MA DEP, 1996) identified several segments that lacked sufficient water quality data for evaluation and also flagged several sites with potential water quality problems that needed more water chemistry data for adequate assessment. Several sites were also identified for sampling in order to maintain an historical database to evaluate long-term trends. To address some of these water quality sampling needs, DWM conducted three water quality sampling surveys from July through September 2001 for water quality data and three surveys for bacteria data. The three water quality sampling surveys were pre-dawn surveys intended to capture dissolved oxygen minimums. Two of the bacteria surveys were conducted separately from the water quality surveys while the third one (September 11) was conducted as part of a water quality survey.

Samples were analyzed in the field using *Hydrolab® Series 3 Multiprobes* for dissolved oxygen and percent saturation of dissolved oxygen, temperature, pH, conductivity, and total dissolved solids. Samples for alkalinity, nutrients, hardness, turbidity, total suspended solids and bacteria (*E. coli* and fecal coliforms) were collected for analysis at the state's analytical laboratory, the Wall Experiment Station (WES).

QUALITY ASSURANCE AND QUALITY CONTROL

A QAPP (MA DEP 2001d) was written for the 2001 Green Basins water quality sampling surveys in 2001. Procedures used were consistent with the prevailing DWM sampling protocols that are described in the *Grab Collection Techniques for DWM Water Quality Sampling, Standard Operating Procedure* (MA DEP 2001a). While no field audits were performed during the Sudbury River surveys in 2001, basket-drop and wade-in grab samples were assumed to be representative and to have been taken consistent with DWM SOPs (except as noted). For all water quality surveys, quality control samples (field blanks and sample splits) were taken at a minimum of one each per analyte per crew per survey. All water quality and bacteria samples were delivered to the WES laboratory for analysis.

DWM quality assurance and database management staff reviewed lab data reports and all Hydrolab® multi-probe data. The data were validated and finalized per data validation procedures outlined in the DWM Data Validation SOP (MA DEP, 2001c). In general, all water sample data were validated by reviewing QC sample results, analytical holding time compliance, QC sample frequency and related ancillary data/documentation (at a minimum). A complete summary of censoring and qualification decisions for all 2001 DWM data is provided in the DWM 2001 Data Validation Report (MA DEP, 2003).

Appendix A1 of this technical memorandum contains data censoring/qualification decisions for the 2001 Sudbury River data. Definitions for the data qualifiers are included in Appendix A2. This information was excerpted from the DWM 2001 Data Validation Report (MA DEP, 2003).

The samples collected on September 11 were delivered to WES laboratory in the early morning but extraordinary events precluded their expeditious handling and analysis for some of the analytes,

especially the bacteria samples; additionally, some significant field sampling errors occurred requiring eventual censoring or qualification of some of the data. In the case of the bacteria data, due to the emergency closing of WES because of the September 11 World Trade Center attack, all data was censored due to holding time violations. A number of water quality samples had noticeable amounts of solids which, given the less than 7Q10 flow, could only have come from a disturbance of the stream bottom while sampling. See Appendix A3 for a copy of an email detailing the laboratory handling of these samples. The subsequent QA/QC review resulted in censoring of the data for 82-0119 and the qualification (r) of 82-0111. See Sections 5.3 (1) and 5.2.2 in Appendix A1 of this memo for further details.

FIELD AND ANALYTICAL METHODS

DWM personnel performed *in-situ* water quality measurements at 15 stations for dissolved oxygen and dissolved oxygen percent saturation, temperature, pH, conductivity, and TDS with a *Hydrolab® Series 3 Multiprobe.* Water quality samples were collected for alkalinity, turbidity, nutrients, hardness, and total suspended solids for WES laboratory analysis at 14 stations (Table A1 and Figure A1) on July 10, July 31, and September 11, 2001. Fecal coliform and E. coli samples were collected at 22 stations on July 18 and July 30 during bacteria-only surveys, and on September 11 along with the *in-situ* and collected water samples mentioned in the preceding sentence. One station (SU13) sampled on July 10 was dropped for safety reasons and replaced with a nearby station (SU12) for the July 31 and September 10 surveys. Each survey crew also took a minimum of one ambient field blank and one field split sample during each survey for quality control purposes.

Procedures used for water sampling and sample handling are described in the *Grab Collection Techniques for DWM Water Quality Sampling, Standard Operating Procedure* (MA DEP, 2001a) and *Hydrolab® Series 3 and 4 Multiprobes SOP (2001-02)* (MA DEP 2001b). The Wall Experiment Station (WES), the Department's analytical laboratory, supplied all sample bottles and field preservatives, which were prepared according to the WES *Laboratory Quality Assurance Plan and Standard Operating Procedures* (MA DEP 2001). Samples were transported on ice to WES where they were analyzed according to the WES's Standard Operating Procedures (MA DEP 2001). The specific methods employed for each analyte are presented in Table A2.

Table A1. 2001 DEP-DWM Sudbury River Watershed survey. Location of sites sampled for water quality analysis on July 10, July 18, July 30, July 31, and September 11, 2001.

STREAM	SAMPLE TYPE*	STATION (UNIQUE ID)	DESCRIPTOR (upstream side unless otherwise indicated)
Sudbury River	1, 2, 3	SU01 (W0832)	downstream Fruit Street, Hopkinton/Westborough
Sudbury River	1, 2	SU02 (W0834)	Cedar Street, Hopkinton/Southborough
Sudbury River	1, 2, 3	SU03 (W0835)	Rt. 85 (Cordaville Road) bridge, Hopkinton/Southborough
Sudbury River	1, 2, 3	SU04 (W0840)	downstream Winter Street, Framingham
Sudbury River	1	SU04A (W0838)	Rt 135 near Chestnut St, Ashland
Sudbury River	1, 2, 3	SU07 (W0696)	Danforth Street, Framingham
Sudbury River	1, 2, 3	SU09 (W0850)	Pelham Island Road bridge, Wayland
Sudbury River	1, 2, 3	SU11 (W0848)	Rt. 27 bridge, Wayland
Sudbury River	1, 2, 3	SU12 (W0847)	Sherman Bridge Road bridge, Wayland/Sudbury
Sudbury River	2, 3	SU13 (W0855)	Rt. 117 bridge, Concord/Lincoln (only sampled once)
Sudbury River	1, 2, 3	SU15 (W0844)	downstream Nashawtuc Road bridge, Concord
Whitehall Brook	1, 2, 3	WH01 (W0833)	Fruit Street, Hopkinton
Indian Brook	1	IB01 (W0853)	Cross St, Ashland
Indian Brook	1	IB01A (W0836)	downstream Indian Brook Rd, Ashland
Cold Spring Brook	1	CS01 (W0837)	Chestnut St, Ashland
Eames Brook	1	EP01 (W0839)	downstream of footpath @ end of Sherwin Terrace, Framingham
Unnamed tributary**	1, 2, 3	CB01 (W0841)	Outlet Lake Cochituate off foot bridge, Framingham
Unnamed tributary**	1, 2, 3	CB02 (W0842)	School St/Rt 126, Saxonville

STREAM	SAMPLE TYPE*	STATION (UNIQUE ID)	DESCRIPTOR (upstream side unless otherwise indicated)
Pine Brook	1	PI01 (W0851)	Pine Brook Rd, Wayland
Wash (Hop) Brook	1, 2, 3	WB01 (W0849)	Landham Road, Sudbury
Pantry Brook	1	PB01 (W0846)	Concord Rd, Sudbury
Mill Brook	1	MB01 (W0845)	Lowell Road, Concord
Assabet River	1, 2, 3	AS01 (W0843)	downstream Rt. 2 bridge, Concord

* 1 – bacteria samples
  2 – *In-situ* Hydrolab® monitoring
  3 – Physico/Chemical samples

** Locally known as "Cochituate Brook"

Table A2. WES/DWM Analytical Methods & MDLs for 2001 Water Quality Analytes

	EPA Method*	SM Methods**	Other Methods	MDLs	RDLs
In-Situ Water Quality Analytes					
Hydrolab® Multiprobe Series 3			DWM SOP (CN 4.0)	NA	NA
Water Quality Analytes					
Total Phosphorus		SM 4500-P-E		0.005, 0.01 and 0.010 mg/l	0.010 mg/l
Alkalinity		SM 2320 B		2 and 2.0 mg/l	2 mg/l
Hardness	EPA 200.7	SM 2340 B		0.66 mg/l	0.66 mg/l
TSS		SM 2540 D		1.0 mg/l	1.0 mg/l
NH3-N	EPA 350.1			0.02, 0.020 and 0.10 mg/l	0.02, 0.020 mg/l
NO3-NO2-N	EPA 353.1			0.02, 0.020 and 0.10 mg/l	0.02, 0.020 mg/l
Turbidity	EPA 180.1			0.10 NTU	0.10 NTU
Fecal Coliform		SM 9222D		Not defined; usu. 5 and 10 cfu/100ml	NI
E. coli		SM 9213D		Not defined; usu. 5 and 10 cfu/100ml	NI

* = "Methods for Chemical Analysis of Water and Wastes", Environmental Protection Agency, Environmental Monitoring Systems Laboratory – Cincinnati (EMSL-CI), EPA-600/4-79-020, Revised March 1983 and 1979 where applicable.
** = Standard Methods, Examination of Water and Wastewater, 20th edition
NA = Not Applicable
NI = No Information

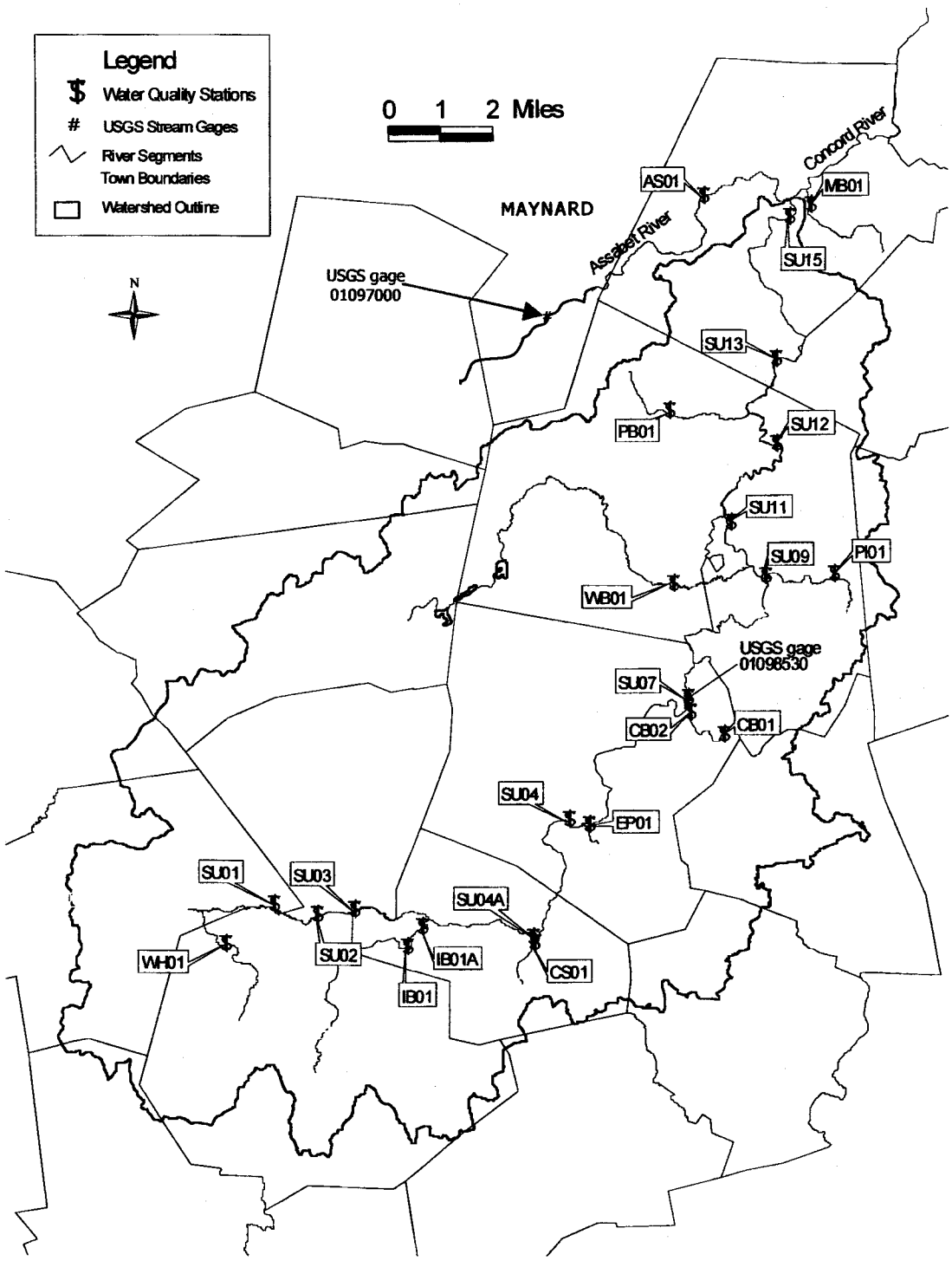


Figure A1. Location of 2001 DEP/DWM water quality sampling stations and USGS gaging stations in the Sudbury River Watershed.

SURVEY CONDITIONS

Conditions prior to each survey were characterized by analyzing precipitation and streamflow data. Rainfall data from four Department of Conservation And Recreation (DCR, formerly DEM), Office of Water Resources precipitation stations in Maynard, Concord, and Marlborough (Marler, 2004) and two NOAA/National Weather Service precipitation stations in Worcester and Natick (NOAA) were reviewed for the five days prior to and on the sampling dates (Table A3). While four of these stations are on the periphery of the Sudbury watershed, their data should be indicative of conditions for the watershed. However, examination of the data does indicate the localized nature of many of the precipitation events recorded.

Streamflow data (Tables A4 – A5) used to estimate hydrological conditions for the water quality sampling events were obtained from two USGS stream gages, one on the Sudbury River (No. 01098530 in Saxonville) and one on the Assabet River (No. 01097000 in Maynard) as reported in the USGS 2001 water year compilations (Socolow *et al*, 2002). Seasonal flow data in graphics form is presented in Figures A2 and A3. Locations of the gages are illustrated in Figure A1. Streamflow statistics for these gages are available from USGS (Socolow *et al.* 2002). Streamflow conditions were also compared in relation to the 7-day, 10-year (7Q10) low flow estimates. The 7Q10 for the Sudbury River (6.2 cfs) was calculated using the USEPA DFLOW3 program (USEPA) and the existing data record from the Saxonville gage (Socolow *et al* 2002). The 7Q10 for the Assabet River at Maynard is generally, but not universally, agreed upon to be 15.1 cfs. Using DFLOW3 and the flow record from the Maynard gage from 1985 to date gives a value of 12.1 cfs. Because of the major impact of the three POTWs upstream of the gage, there is an open discussion on the accepted value but DWM has consistently used the 15.1 cfs as the 7Q10 flow.

Survey conditions are described below for each DWM sampling event:

July 10, 2001: This water quality survey was conducted after all 5 preceding days showed significant precipitation at most of the recording stations. The hydrograph for the Saxonville gaging station clearly shows that the Sudbury was on the receding limb of a storm peak and survey field conditions confirmed that stream depths were high. The 120 cfs flow at the Saxonville gaging station for July 10 was higher than the July 2001 monthly average of 85.7 cfs for this station and for the July period-of-record (POR) average flow of 74.0 cfs. Flow was very much higher than the 7Q10 of 6.2 cfs for the Sudbury at the Saxonville gage. The data for this date's survey should not be considered representative of dry conditions.

Station SU13 (unique id W0855) was sampled only on July 10 whereupon it was deemed too dangerous to sample (as it required climbing onto an unsafe bridge structure) during ensuing surveys. All subsequent surveys substituted station SU12 (unique id W0847).

July 18, 2001: This bacteria-only survey was conducted at a flow (47.0 cfs) below both the 2001 monthly average (85.7 cfs) and the July POR flow (74.0 cfs) for the Saxonville gage. While there was recordable precipitation at a number of the recording stations the Saxonville hydrograph did not show any increase in flow which may have been due to scattered showers rather than regional rainfall. Based on the hydrograph, the data for this date's survey is possibly representative of dry conditions.

July 30, 2001: This bacteria-only survey was conducted at a flow (7.4 cfs) just above the 7Q10 flow of 6.2 cfs at the Saxonville gage. While a number of the precipitation stations recorded rain 3 or more days prior to the sampling date, both the general extended dry period prior to July 30 and a hydrograph minimally responsive to the precipitation indicates that this date's survey is most likely representative of not only dry but also 7Q10 conditions.

July 31, 2001: This water quality survey, as was the July 30 survey above, was conducted during and following essentially dry weather. Flow at the Saxonville gage was 7.0 cfs, just slightly above the 6.2 cfs 7Q10 flow. The sampling date was preceded by 3 days of no recorded rainfall and the rainfall recorded in Maynard was probably local with no effect on the Sudbury River. Data collected during this survey are interpreted as being representative of both dry weather and 7Q10 conditions.

September 11, 2001: Data collected during this survey are being interpreted as representative of dry weather and below 7Q10 conditions. Flow at the Saxonville gage was 4.3 cfs. Unfortunately, some of the data had to be censored or qualified due to field sampling errors and/or to holding time issues. See discussion under "Quality Assurance and Quality Control".

Table A3: Estimated Sudbury River Basin 2001 Precipitation Data Summary based on DCR (DEM) and NOAA data[1]

(reported in inches of rainfall)

Survey Dates	5 Days Prior					4 Days Prior					3 Days Prior					2 Days Prior					1 Days Prior					Survey Date				
	Wor	Nat	May	Con	Mar	Wor	Nat	May	Con	Mar	Wor	Nat	May	Con	Mar	Wor	Nat	May	Con	Mar	Wor	Nat	May	Con	Mar	Wor	Nat	May	Con	Mar
July 10 WQS[2]	0.29	0.12	0.12	0.43	0.23	0.01	0.32	0.65	0.0	0.0	0.0	0.0	0.00	0.07	0.12	0.21	0.08	0.1	T*	0.03	0.24	0.0	T*	T*	0.0	0.3	0.0	0.00	0.11	0.77
July 18 bacteria[3]	0.0	T	0.01	0.0	0.0	0.0	0.0	0.0	0.02	0.02	0.0	0.01	0.19	0.0	0.0	0.0	0.0	0.0	0.17	0.18	0.26	0.02	0.21	0.29	0.0	0.0	0.24	0.25	0.02	0.0
July 30 bacteria	0.0	0.0	0.0	0.12	0.1	0.23	0.01	0.05	0.56	0.33	0.0	0.26	0.47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
July 31 WQS	0.23	0.01	0.05	0.56	0.33	0.0	0.26	0.47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T*	0.0	0.0	T*	0.0
Sept 11 WQS & bacteria	0.0	n/a	0.0	0.0	0.0	0.0	n/a	0.0	0.0	0.0	0.0	n/a	0.0	0.0	0.0	0.0	n/a	0.0	0.0	0.0	0.03	n/a	0.0	0.0	0.0	0.0	n/a	0.26	0.0	0.0

[1] DEM Office of Water Resources precipitation stations: May = Maynard, Con = Concord, Mar = Marlborough; NOAA precipitation station: Wor (Worcester)
NOAA/NCDC stations: Nat = Natick (n/a = Natick daily data not available September), Wor = Worcester

[2] WQS = Water Quality Survey

[3] bacteria = bacteria survey

T* = trace

Table A4
USGS Flow Data Summary
Sudbury River at Danforth Street, Saxonville, MA
Discharge in Cubic Feet per Second (cfs)
USGS Gage # 01098530

Survey Dates 2001	5 Days Prior	4 Days Prior	3 Days Prior	2 Days Prior	1 Day Prior	Survey Date	Monthly Mean 2001	POR* Mean
10 July	176	173	141	133	127	120	85.7	74.0
18 July bacteria	105	97	92	88	86	47	–	–
30 July bacteria	9.2	13	13	8.7	7.6	7.4	–	–
31 July	13	13	8.7	7.6	7.4	7.0	–	–
11 Sept	4.7	4.6	4.5	4.4	4.5	4.3	8.78	60.4

7Q10 @ USGS, Gage 01098530 = 6.2 cfs (from DFLOW3 (USEPA) and period of record)
*Period of Record: 1980 - 2001 (mean annual discharge = 196 cfs)

Table A5
USGS Flow Data Summary
Assabet River at Maynard, MA
Discharge in Cubic Feet per Second (cfs)
USGS Gage # 01097000

Survey Dates 2001	5 Days Prior	4 Days Prior	3 Days Prior	2 Days Prior	1 Day Prior	Survey Date	Monthly Mean 2001	POR* Mean
10 July	133	155	126	102	92	88	85.1	73.0
18 July bacteria	94	77	66	59	64	69	–	–
30 July bacteria	32	39	41	36	33	28	–	–
31 July	39	41	36	33	28	25	–	–
11 Sept	4.1	5.6	6.0	8.5	9.8	9.8	17.8	62.8

7Q10 @ USGS, Gage 01097000 = 15.1 cfs,
*Period of Record: 1941 - 2001 (mean annual discharge = 190 cfs)

Figure A2

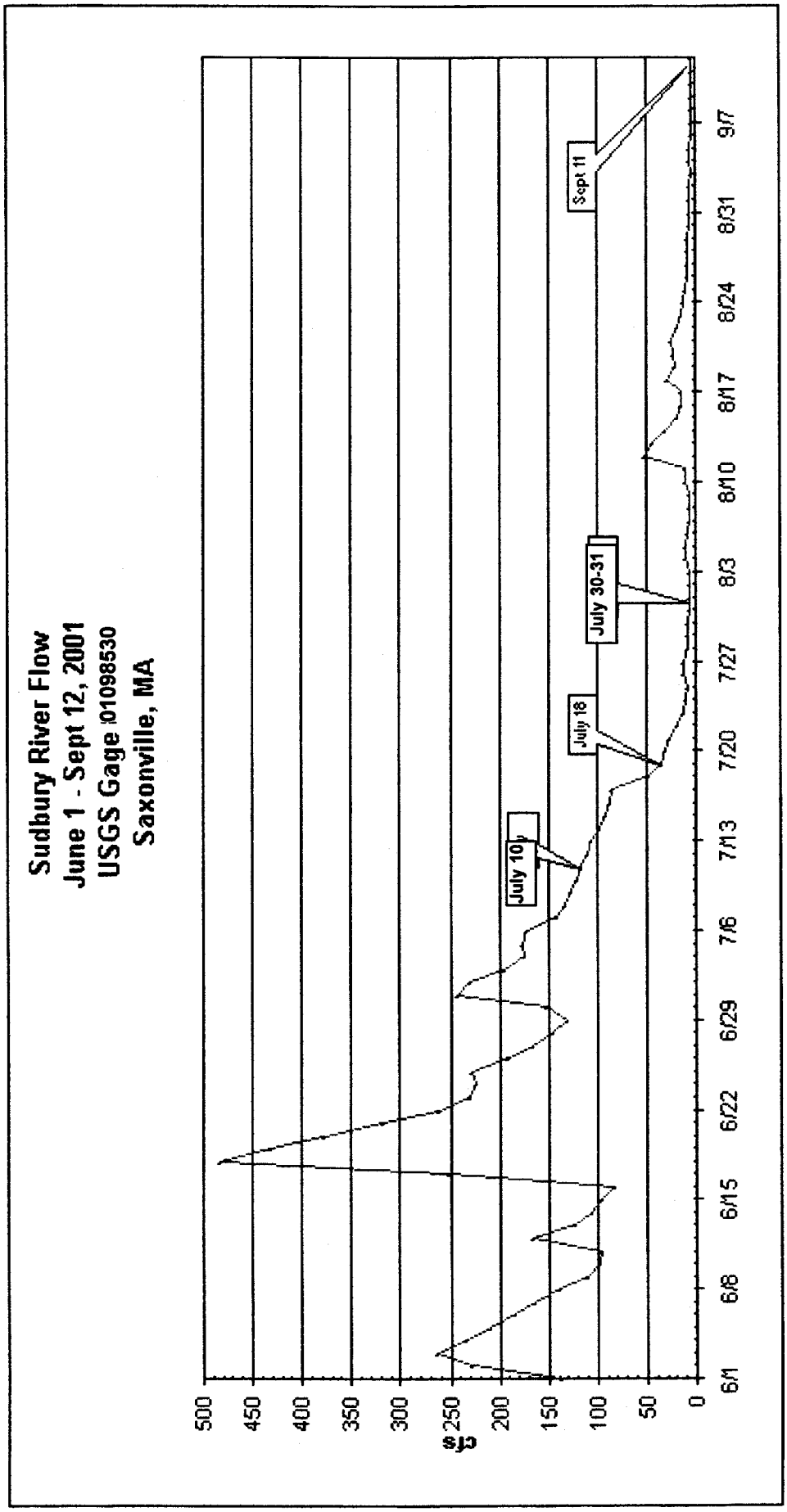
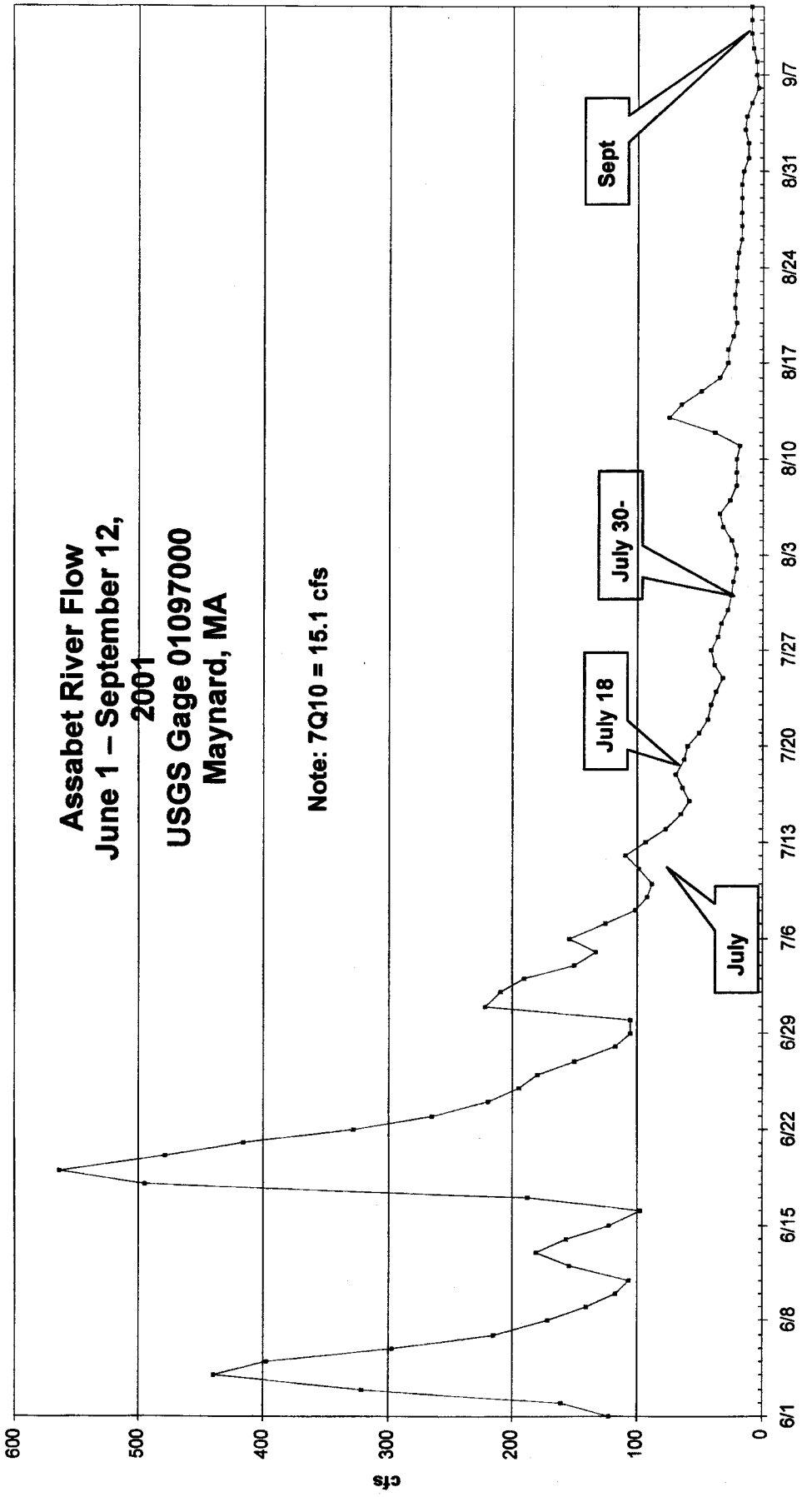

Sudbury River Flow
June 1 - Sept 12, 2001
USGS Gage #01098530
Saxonville, MA
cfs
500
450
400
350
300
250
200
150
100
50
0
6/1
6/8
6/15
6/22
6/29
7/6
7/13
7/20
7/27
8/3
8/10
8/17
8/24
8/31
9/7
July 10
July 18
July 30-31
Sept 11

Figure A3


Assabet River Flow
June 1 – September 12, 2001
USGS Gage 01097000
Maynard, MA
Note: 7Q10 = 15.1 cfs
cfs
600
500
400
300
200
100
0
6/1
6/8
6/15
6/22
6/29
7/6
7/13
7/20
7/27
8/3
8/10
8/17
8/24
8/31
9/7
July
July 18
July 30-
Sept

WATER QUALITY DATA

Raw data files, field sheets, lab reports and chain of custody (COC) records are stored in open files at the Division of Watershed Management (DWM) in Worcester. All DEP DWM water quality data are managed and maintained in the *Water Quality Data Access Database*. Data exports for publishing are provided by DWM's database manager.

Text highlighted with gray shading are additions by Brian Friedmann to the data export .

Table A6. 2001 MA DEP Sudbury River Watershed *in-situ* Hydrolab® Data.
Temperature, pH, Conductivity, Total Dissolved Solids (TDS), Dissolved Oxygen (DO), Dissolved Oxygen Percent Saturation (SAT) (Data qualifiers listed in Appendix A2)

Sudbury (2001) (QC Status: 4) Exported: 5/27/2004 2:33:13 PM

Unnamed Tributary ("Cochituate Brook")
Unique_ID: W0841 Station: CB01, Mile Point: 1.3
Description: unnamed tributary to Sudbury River, outlet Lake Cochituate, Framingham

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(µS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0024	04:45	0.4	24.8	7.6cu	396	253	8.5	101
7/31/2001	82-0104	05:32	0.1i	21.1	7.4cu	400	256	7.3u	80u
9/11/2001	82-0131	05:58	0.1i	22.3u	8.1cu	409	262	8.7u	98u

Unnamed Tributary ("Cochituate Brook")
Unique_ID: W0842 Station: CB02, Mile Point: 0.2
Description: unnamed tributary to Sudbury River, at School Street/Route 126, Framingham

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0025	05:15	0.4	23.9	7.1c	441	282	6.9	81
7/31/2001	82-0105	05:58	0.1i	18.1	7.1cu	820c	525	6.0	62
9/11/2001	82-0132	06:24	0.2	20.7	7.1c	863c	552c	6.1	67

ASSABET RIVER (Saris: 8246775)
Unique_ID: W0843 Station: AS01, Mile Point: 2.4
Description: at Route 2/2A bridge, Concord

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0010	03:14	##i	23.2u	6.9c	385	246	7.0	81
7/31/2001	82-0090	03:31	0.5	20.4u	7.0cu	506	324	6.7	72
9/11/2001	82-0110	03:08	0.4	23.0	7.0cu	628	402	5.2u	60u

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0832 Station: SU01, Mile Point: 31.2
Description: at Fruit Street, Hopkinton/Westborough

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0019	02:46	0.3	22.2	6.2	464	297	2.8u	32u
7/31/2001	82-0099	03:19	0.1i	18.7	6.3	397	254	5.0u	52u
9/11/2001	82-0122	02:54	0.2	21.0u	6.4	500	320	4.0	44

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0834 Station: SU02, Mile Point: 30
Description: at Cedar Street, Hopkinton/Southborough (locality of Southville)

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0021	03:26	0.3	21.2	6.5u	486	311	6.0	67
7/31/2001	82-0101	04:03	0.1i	19.1	6.6	351	225	6.7	71
9/11/2001	82-0124	03:38	0.1i	21.0	6.5	547	350	4.9	54

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0835 Station: SU03, Mile Point: 29.3
Description: at Route 85 (Cordaville Street/River Street) Hopkinton/Southborough (locality of Cordaville)

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0022	03:45	0.2	21.3	6.7u	486	311	7.8u	87u
7/31/2001	82-0102	04:26	0.1i	20.0	6.9u	437	280	8.2	88
9/11/2001	82-0125	03:57	0.2	21.9	6.7	531	340	6.4u	72u

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0840 Station: SU04, Mile Point: 21.9
Description: at Winter Street, Framingham

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0023	04:17	0.4	23.8	7.0cu	383	245	8.3	97
7/31/2001	82-0103	04:58	0.2	22.8u	7.0cu	401	256	7.6	86
9/11/2001	82-0130	05:22	0.1i	22.4	6.8	433	277	5.2u	59u

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0696 Station: SU07, Mile Point: 16.5
Description: just upstream/south of Danforth Street, Framingham

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0018	05:33	0.4	23.3	7.0cu	416	266	7.9	92
7/31/2001	82-0098	06:21	0.1i	19.7	7.0c	547	350	6.8	73
9/11/2001	82-0121	06:55	0.1i	20.9	6.9c	625	400	5.3	58

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0850 Station: SU09, Mile Point: 12.1
Description: at Pelham Island Road, Wayland

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0017	06:30	0.4	23.4u	6.7	416	266	5.8u	67u
7/31/2001	82-0097	05:56	0.5	21.4u	7.2cu	500u	320	7.6	83
9/11/2001	82-0119	05:55	0.6	22.1	7.0cu	489u	313u	6.4	72

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0848 Station: SU11, Mile Point: 10.5
Description: at Route 27, Wayland

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0013	06:00	##i	23.7	6.7	413	265	5.3u	62u
7/31/2001	82-0093	05:04	0.5	21.7	7.0cu	443	283	6.3u	70u
9/11/2001	82-0115	04:55	0.6	23.8	7.2cu	521	334	7.2u	83u

SUDBURY RIVER (Saris: 8247650) ***{not sampled on 7/10; see SU13 for explanation – BFF}***
Unique_ID: W0847 Station: SU12, Mile Point: 7.5
Description: at Shermans Bridge Road/Lincoln Road, Wayland/Sudbury

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/31/2001	82-0092	04:37	0.5	23.4	7.1c	465	298	7.2	82
9/11/2001	82-0114	04:28	0.9	24.2	7.2cu	522	334	7.5u	88u

SUDBURY RIVER (Saris: 8247650) ***{Sampled only once on 7/10; deemed too dangerous; substituted SU12 for ensuing surveys – BFF}***
Unique_ID: W0855 Station: SU13, Mile Point: 5
Description: Route 117, Concord/Lincoln

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0012	05:11	0.2	23.6	6.5	400	256	3.6	42

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0844 Station: SU15, Mile Point: 0.5
Description: at Nashawtuc Road, Concord

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0011	04:15	##i	23.4	6.5	385	246	4.4	51
7/31/2001	82-0091	03:58	0.5	25.2	7.1cu	410	262	7.3	86
9/11/2001	82-0111	03:31	0.9	25.0	7.1cu	444	284	7.2u	85u

WASH BROOK (Saris: 8247800)
Unique_ID: W0849 Station: WB01, Mile Point: 2.4
Description: at Landham Road, Sudbury

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0014	06:40	##i	21.4	6.7	386	247	3.4	38
7/31/2001	82-0094	05:29	0.5	18.3	7.0cu	457	292	4.7	49
9/11/2001	82-0116	05:22	0.4	21.2	7.1cu	507	324	3.2u	35u

WHITEHALL BROOK (Saris: 8248425)
Unique_ID: W0833 Station: WH01, Mile Point: 1
Description: at Fruit Street, Hopkinton

Date	OWMID	Time	Depth	Temp	pH	Cond@ 25C	TDS	DO	SAT
		(24hr)	(m)	(C)	(SU)	(uS/cm)	(mg/l)	(mg/l)	(%)
7/10/2001	SU-0020	03:06	0.5	19.9	6.1	306	196	2.4u	26u
7/31/2001	82-0100	03:41	0.1i	17.7u	6.2	203	130	3.9	40
9/11/2001	82-0123	03:15	0.1i	20.0	6.3	220	141	2.3u	25u

Table A7. 2001 MA DEP Sudbury River Watershed Instream Physico/Chemical and Bacteria Data. Alkalinity, Hardness, Total Suspended Solids (TSS), Turbidity, Ammonia Nitrogen, Nitrate-Nitrite Nitrogen, Total Phosphorus, E. coli, Fecal coliform (Data qualifiers listed in Appendix A2)

Sudbury (2001) (QC Status: 4) Exported: 5/27/2004 2:46:09 PM

Unnamed Tributary ("Cochituate Brook")
Unique_ID: W0841 Station: CB01, Mile Point: 1.3
Description: unnamed tributary to Sudbury River, outlet Lake Cochituate, Framingham

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0024	–	04:40	–			0.90	23	50	<0.02	0.16	0.014	1.8
7/18/2001	82-0051	–	06:35	–	22e	27e							
7/30/2001	82-0081	–	06:15	–	30	10							
7/31/2001	82-0104	–	05:25	–			1.6	28	56	<0.02	<0.06	0.015	1.9
9/11/2001	82-0131	–	05:55	–	##h	##h	1.2	31	49	<0.02	<0.06	0.015	1.8

Unnamed Tributary ("Cochituate Brook")
Unique_ID: W0842 Station: CB02, Mile Point: 0.2
Description: unnamed tributary to Sudbury River, at School Street/Route 126, Framingham

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0026	SU-0025	**	–			1.3	27	56	<0.02	0.17	0.023	3.0
7/10/2001	SU-0025	SU-0026	05:10	–			1.3	26	55	<0.02	0.18	0.023	2.9
7/18/2001	82-0053	82-0052	**	–	180d	140							
7/18/2001	82-0052	82-0053	06:40	–	95d	85							
7/30/2001	82-0083	82-0082	**	–	150	55							
7/30/2001	82-0082	82-0083	06:25	–	230	85							
7/31/2001	82-0106	82-0105	**	–			1.4	55	109	<0.02	0.52	0.025	1.0
7/31/2001	82-0105	82-0106	05:50	–			1.4	41	108	<0.02	0.52	0.025	1.3
9/11/2001	82-0132	82-0133	**	–	##h	##dh	1.9	55	104	<0.02	0.46	0.032	1.5
9/11/2001	82-0133	82-0132	**	–	##h	##dh	2.1	54	104	<0.02	0.45	0.032	1.5

MILL BROOK (Saris: 8246750)
Unique_ID: W0845 Station: MB01, Mile Point: 0.4
Description: at Lowell Road, Concord

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/18/2001	82-0032	–	05:32	–	300	50							
7/30/2001	82-0062	–	05:30	–	70	30							
9/11/2001	82-0112	–	03:48	–	##h	##h							

ASSABET RIVER (Saris: 8246775)
Unique_ID: W0843 Station: AS01, Mile Point: 2.4
Description: at Route 2/2A bridge, Concord

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0010	–	03:30	–			2.9	22	52	<0.02	0.81	0.16	4.2
7/18/2001	82-0030	–	**	–	400	130							
7/30/2001	82-0060	–	05:00	–	250	120							
7/31/2001	82-0090	–	03:31	–			1.3	33	70	<0.02	0.77	0.099	2.3
9/11/2001	82-0110	–	03:08	–	##h	##h	0.08	53	78	<0.02	1.5	0.074	1.5

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0832 Station: SU01, Mile Point: 31.2
Description: at Fruit Street, Hopkinton/Westborough

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0019	–	02:45	–			3.3	20	50	<0.02	0.07	0.076	3.6
7/18/2001	82-0042	–	04:40	–	75	**							
7/30/2001	82-0072	–	04:45	–	380	240							
7/31/2001	82-0099	–	03:15	–			4.0	14	47	<0.02	0.14	0.061	3.2
9/11/2001	82-0122	–	02:50	–	##h	##h	3.5	21	59	<0.02	0.19	0.033	2.2

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0834 Station: SU02, Mile Point: 30
Description: at Cedar Street, Hopkinton/Southborough (locality of Southville)

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0021	–	03:27	–			4.5	19	51	<0.02	0.12	0.082	3.9
7/18/2001	82-0044	–	05:00	–	35	35							
7/30/2001	82-0074	–	05:00	–	390	270							
7/31/2001	82-0101	–	03:55	–			4.4	12	41	<0.02	0.16	0.065	1.7
9/11/2001	82-0124	–	03:35	–	##h	##h	3.9	19	59	<0.02	0.24	0.047	1.5

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0835 Station: SU03, Mile Point: 29.3
Description: at Route 85 (Cordaville Street/River Street) Hopkinton/Southborough (locality of Cordaville)

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0022	–	03:45	–			3.8	20	51	<0.02	0.21	0.068	1.9
7/18/2001	82-0045	–	05:07	–	55	15							
7/30/2001	82-0075	–	05:12	–	150	110							
7/31/2001	82-0102	–	04:15	–			5.0	17	50	<0.02	0.22	0.073	1.9
9/11/2001	82-0125	–	03:50	–	##h	##h	2.0	22	56	<0.02	0.30	0.034	<1.0

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0838 Station: SU04A, Mile Point: 25.1
Description: at the Route 135 crossing upstream of Cold Spring Brook confluence, Ashland

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/18/2001	82-0048	–	05:45	–	520	130							
7/30/2001	82-0078	–	05:40	–	660	170							
9/11/2001	82-0128	–	**	–	##h	##h							

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0840 Station: SU04, Mile Point: 21.9
Description: at Winter Street, Framingham

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0023	–	04:15	–			1.5	17	46	<0.02	0.17	0.036	<1.0
7/18/2001	82-0050	–	06:10	–	**	20							
7/30/2001	82-0080	–	06:03	–	100	12							
7/31/2001	82-0103	–	04:50	–			1.9	20	48	<0.02	0.06	0.032	2.4
9/11/2001	82-0130	–	**	–	##h	##h	1.9	21	43	<0.02	<0.06	0.029	2.2

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0696 Station: SU07, Mile Point: 16.5
Description: just upstream/south of Danforth Street, Framingham

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0018	–	05:30	–			2.5	19	50	<0.02	0.23	0.042	1.7
7/18/2001	82-0041	–	06:55	–	140	30							
7/30/2001	82-0071	–	06:35	–	40	17							
7/31/2001	82-0098	–	06:15	–			1.2	32	69	<0.02	0.17	0.022	1.6
9/11/2001	82-0121	–	06:40	–	##h	##h	0.75	35	70	<0.02	0.23	0.015	<1.0

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0850 Station: SU09, Mile Point: 12.1
Description: at Pelham Island Road, Wayland

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0017	–	06:30	–			4.6	24	55	<0.02	0.23	0.064	6.7
7/18/2001	82-0039	–	07:10	–	130	60							
7/30/2001	82-0069	–	06:55	–	52	15							
7/31/2001	82-0097	–	05:56	–			5.3	36	82	<0.02	0.20	0.060	9.6
9/11/2001	82-0119	–	05:55	–	##h	##h	##r	##r	##r	##r	##r	##r	##r

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0848 Station: SU11, Mile Point: 10.5
Description: at Route 27, Wayland

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0013	–	05:55	–			##m	##m	##m	<0.02	0.21	0.089	##m
7/18/2001	82-0035	–	06:40	–	95	54							
7/30/2001	82-0065	–	06:20	–	75	5							
7/31/2001	82-0093	–	05:04	–			3.9	36	77	<0.02	0.38	0.080	8.2
9/11/2001	82-0115	–	04:55	–	##h	##h	1.7	52	82	<0.02	0.31	0.034	11

SUDBURY RIVER (Saris: 8247650) ***(not sampled on 7/10; see SU13 for explanation – BFF)***
Unique_ID: W0847 Station: SU12, Mile Point: 7.5
Description: at Shermans Bridge Road/Lincoln Road, Wayland/Sudbury

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/18/2001	82-0034	–	06:15	–	55	10							
7/30/2001	82-0064	–	06:00	–	85	40							
7/31/2001	82-0092	–	04:37	–			4.6	35	75	<0.02	0.22	0.083	8.6
9/11/2001	82-0114	–	04:33	–	##h	##h	2.0	45	80	<0.02	0.12	0.020	6.1

SUDBURY RIVER (Saris: 8247650) ***(Sampled only once on 7/10; deemed too dangerous; substituted SU12 for ensuing surveys – BFF)***
Unique_ID: W0855 Station: SU13, Mile Point: 5
Description: Route 117, Concord/Lincoln

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0012	–	05:15	–			3.1	27	55	<0.02	0.15	0.091	6.1

SUDBURY RIVER (Saris: 8247650)
Unique_ID: W0844 Station: SU15, Mile Point: 0.5
Description: at Nashawtuc Road, Concord

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0011	–	04:00	–			2.6	24	53	0.08	0.13	0.084	6.0
7/18/2001	82-0031	–	05:15	–	60	30							
7/30/2001	82-0061	–	05:15	–	75	30							
7/31/2001	82-0091	–	03:58	–			4.0	33	66	<0.02	<0.06	0.080	9.8
9/11/2001	82-0111	–	03:34	–	##h	##h	2.8r	49r	65r	<0.02r	<0.06r	0.055r	8.0r

PANTRY BROOK (Saris: 8247700)
Unique_ID: W0846 Station: PB01, Mile Point: 1.8
Description: at Concord Road, Sudbury

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/18/2001	82-0033	–	05:55	–	580	140							
7/30/2001	82-0063	–	05:50	–	1600	710							
9/11/2001	82-0113	–	04:12	–	##h	##h							

WASH BROOK (Saris: 8247800)
Unique_ID: W0849 Station: WB01, Mile Point: 2.4
Description: at Landham Road, Sudbury

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0015	SU-0014	**	--			2.5	44	66	<0.02	0.63	0.16	2.9
7/10/2001	SU-0014	SU-0015	06:45	--			2.5	40	67	<0.02	0.62	0.16	3.6
7/18/2001	82-0037	82-0036	**	--	210	5							
7/18/2001	82-0036	82-0037	06:55	--	140	<5							
7/30/2001	82-0067	82-0066	**	--	230	85							
7/30/2001	82-0066	82-0067	06:35	--	220	70							
7/31/2001	82-0095	82-0094	**	--			1.6	54	77	<0.02	0.54	0.14	2.9
7/31/2001	82-0094	82-0095	05:29	--			1.6	65	78	<0.02	0.56	0.13	2.8
9/11/2001	82-0117	82-0116	**	--	##h	##h	0.80	68	78	<0.02	2.1	0.14	2.0
9/11/2001	82-0116	82-0117	05:20	--	##h	##h	0.80	68	79	<0.02	2.3	0.13	2.0

PINE BROOK (Saris: 8247950)
Unique_ID: W0851 Station: PI01, Mile Point: 1.7
Description: at Pine Brook Road, Wayland

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/18/2001	82-0055	--	07:23	--	140	25							
7/18/2001	82-0040	--	07:40	--	190	160							
7/30/2001	82-0070	--	07:05	--	5	<5							
9/11/2001	82-0120	--	06:19	--	##h	##h							

EAMES BROOK (Saris: 8248125)
Unique_ID: W0839 Station: EP01, Mile Point: 0.1
Description: downstream/northwest of footpath at end of Sherwin Terrace, Framingham

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/18/2001	82-0049	--	06:00	--	140	<5							
7/30/2001	82-0079	--	05:53	--	240	15							
9/11/2001	82-0129	--	**	--	##h	##h							

COLD SPRING BROOK (Saris: 8248375)
Unique_ID: W0837 Station: CS01, Mile Point: 0.03
Description: at Chestnut Street, Ashland

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/18/2001	82-0047	--	05:38	--	130	<5							
7/30/2001	82-0077	--	05:35	--	120	55							
9/11/2001	82-0127	--	04:20	--	##h	##h							

INDIAN BROOK (Saris: 8248400)
Unique_ID: W0853 Station: IB01, Mile Point: 1
Description: at Cross Street, Ashland

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/18/2001	82-0046	--	05:20	--	75	70							

INDIAN BROOK (Saris: 8248400)
Unique_ID: W0836 Station: IB01A, Mile Point: 0.4
Description: Indian Brook Road culvert, Ashland (housing development not shown on 1987 USGS Framingham quad-see street atlas)

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/30/2001	82-0076	--	05:23	--	30	25							
9/11/2001	82-0126	--	04:10	--	##h	##h							

WHITEHALL BROOK (Saris: 8248425)
Unique_ID: W0833 Station: WH01, Mile Point: 1
Description: at Fruit Street, Hopkinton

Date	OWMID	QAQC	Time	Depth	FECAL	ECOLI1	TURB	ALK	HARD	NH3-N	NO3-NO2-N	TP	SSOLIDS
			(24hr)	(m)	CFU/100ml	CFU/100ml	NTU	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
7/10/2001	SU-0020	–	03:03	–			5.3	20	38	<0.02	<0.06	0.11	6.7
7/18/2001	82-0043	–	04:50	–	150	120							
7/30/2001	82-0073	–	**	–	130	80							
7/31/2001	82-0100	–	03:35	–			1.9	12	32	<0.02	0.30	0.050	2.7
9/11/2001	82-0123	–	03:10	–	##h	##h	2.0	21	36	<0.02	0.13	0.045	3.1

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