Summary of CSO Receiving Water Quality Monitoring in Upper Mystic River/Alewife Brook and Charles River, 2023

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Cover Photo

Charles River from MWRA Station 005, taken by Kiley Hanlon, Harbor Sampling Intern.

Summary of CSO Receiving Water Quality Monitoring in Upper Mystic River/Alewife Brook and Charles River, 2023

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1 Introduction

This report summarizes data collected as part of the Massachusetts Water Resources Authority (MWRA) combined sewer overflow (CSO) receiving water monitoring program, and is produced in accordance with the variances from water quality standards for CSO discharges to the Lower Charles River/Charles Basin and the Alewife Brook/Upper Mystic River Basin.

The Massachusetts Department of Environmental Protection (MADEP) issued initial variances for the Lower Charles River/Charles Basin and the Alewife Brook/Upper Mystic Basin in October 1998 and March 1999, respectively, and extended both variances several times through August 2019. On August 30, 2019, MADEP issued new variances for both regions with a five-year term, running until August 31, 2024.[1] EPA Region 1 approved these variances on May 31, 2020. The 2019 variances are similar to the previous variances with regard to water quality monitoring and reporting conditions. This monitoring summary is submitted pursuant to the variance conditions and provides an assessment of water quality in 2023 in the Charles River, Upper Mystic River, and Alewife Brook, which has benefitted from some of the 35 CSO projects in MWRA's Long-Term CSO Control Plan (LTCP).

In December 2021, MWRA submitted the *Task 6 Post Construction Monitoring Program and Performance Assessment Report* [2] to the United States Environmental Protection Agency (EPA) and the MADEP, documenting the results of the four-year study to measure the performance of the MWRA's Long-Term CSO Control Plan (LTCP). This was originally the final court scheduled milestone in the Boston Harbor Case (U.S. v. M.D.C, et al., No. 85-0489-RGS). The LTCP consisted of 35 CSO control projects, the last of which was completed and brought into operation in December 2015. At the time of the 2021 Assessment Report, 70 of the 86 CSO outfalls active at the start of the program achieved, or were materially achieving, LTCP goals.

In February 2022, all court parties agreed to an extension through December 2024 to complete projects and investigations relative to sixteen outfalls not meeting LTCP goals. Since then, three of these outfalls have been confirmed to be meeting LTCP goals. Seven have projects in design or construction, and work is expected to bring these seven into compliance with the LTCP goals. The remaining six outfalls present significant challenges and alternatives analysis evaluations have been conducted. Developments on these evaluations are discussed in MWRA's most recent annual report on CSO discharges (AECOM 2024). [3]

The four-year performance assessment also included the development of receiving water quality models for bacterial indicators in the regions covered in this report. The models were used to evaluate bacterial water

[1] Sanitary Sewer Overflows & Combined Sewer Overflows. https://www.mass.gov/guides/sanitary-sewer-systems-combined-sewer-overflows#-2019-charles-river-basin-and-alewife/upper-mystic-river-final-combined-sewer-overflow-variances-

[2] Final CSO Post Construction Monitoring Program and Performance Assessment Report. https://www.mwra.com/cso/pcmapa.html

[3] CSO Annual Report April 30, 2024: CSO Discharge Estimates and Rainfall Analyses for Calendar Year. 2023. https://www.mwra.com/cso/pcmpa-reports/043024-annualcso.pdf

quality impacts due to remaining CSOs in a Typical Year[4] and under alternative CSO control scenarios, as well as the water quality impacts of upstream/baseline conditions and stormwater flows. The receiving water quality models demonstrated that the current level of CSO control does not preclude the Alewife Brook/Upper Mystic or Lower Charles River from the attainment of water quality standards. Under a model scenario where CSOs are the only source of bacteria to these regions, the Alewife Brook met standards 99.6% of the time, the Upper Mystic River 97.9% of the time, and the Charles River 99.9% of the time in a Typical Year (AECOM 2021a, 2021b). Details on the development of these models and the results of their simulations are available at MWRA's Technical Reports page. [5]

The five-year variances issued on August 30, 2019 give MWRA and the Cities of Cambridge and Somerville more time to complete additional CSO control planning, including the evaluation and potential implementation of additional CSO reduction measures for the Lower Charles/Charles Basin and the Alewife Brook/Upper Mystic River Basin.

Variance conditions require MWRA and the municipalities with CSOs discharging to variance waters (Cambridge and Somerville[6]) to continue to implement the Nine Minimum Controls of EPA's National CSO Control Policy, and require them to report estimated CSO discharge frequencies and volumes from their respective outfalls to these receiving waters on an annual basis. MWRA is also required to submit an annual report on results for its water quality monitoring program to MADEP and EPA assessing the impacts of CSO discharges. This report is submitted pursuant to the latter requirement.

The variances also include the requirement of rapid notification of the public within four hours of a CSO discharge,[7] and evaluating additional CSO control measures. Additionally, MWRA (and the municipalities) began issuing enhanced notifications starting in July 2022, as required by the new regulations under 314 CMR 16.00: *Notification Requirements to Promote Public Awareness of Sewage Pollution*[8]. This includes required notifications within two hours instead of four, for all CSOs, not just those within the variance waters, as well as notifications for certain sanitary sewer overflows (SSOs) and for blending events. Notifications go out through subscriber-based systems as well as to local boards of health and to media outlets, including ones who serve environmental justice populations within the impacted municipalities.

[4] Typical Year rainfall was developed by MWRA in 1992 using a 40-year rainfall record and was approved by EPA and DEP as a basis for measuring the performance of CSO control alternatives and the water quality impacts of remaining CSO discharges. Level of CSO control in the Typical Year is a key performance objective of the LTCP.

[5] MWRA Technical Reports. https://www.mwra.com/harbor/enquad/trlist.html

[6] Boston and Chelsea also have community CSOs, but they do not discharge into waters covered by the CSO variances.

[7] MWRA reports CSO discharges from MWRA-permitted outfalls via a subscriber-based system. To subscribe to the notifications, see https://www.mwra.com/harbor/html/cso_reporting.htm.

[8] Full regulations for 314 CMR 16.00: https://www.mass.gov/regulations/314-CMR-1600-notification-requirements-to-promote-public-awareness-of-sewage-pollution#current-regulations

These regulations also required installation of additional signage at public access points, substantial updates to the notification web pages and a Public Notification Plan[9].

Since the beginning of MWRA's CSO control planning efforts in the late 1980s, MWRA and the CSO communities have eliminated[10] CSO discharges at 41 of the 86 discharge locations addressed in the LTCP. MWRA and the CSO communities have also greatly reduced CSO discharges at the 45 locations that remain. Along the Charles River, ten CSO outfalls were closed (including two that are closed pending additional evaluations by the City of Cambridge) and eight untreated and one treated CSO outfall remain active. Along the Alewife Brook, seven CSO outfalls were closed and six CSO outfalls remain active. Along the Upper Mystic River (Mystic Basin), two CSO outfalls were closed and one treated CSO outfall remains active.[11]

Since the early 1990s, major MWRA system improvements, such as the upgrade of the Deer Island Treatment Plant and related transport systems and the completed CSO projects, have reduced the frequency and volume of CSO discharges and have increased the percentage of discharges receiving treatment. The LTCP reduced region-wide CSO discharge volume in a Typical Year from 3.3 billion gallons in 1988 to 0.4 billion gallons, an 88% reduction, with 96% of the remaining discharge volume receiving treatment at MWRA's four CSO treatment facilities. Figure 1-1 shows the estimated Typical Year CSO volume reduction system-wide since 1988, and Figure 1-2 shows the CSO volume reduction by receiving water. The estimated annual discharge volumes in Figure 1-1 are from Typical Year model runs utilizing MWRA's collection system model. MWRA updates the collection system model each year with new information about the system, including completed MWRA and community system improvements. For purposes of this report, receiving water quality data for the past 5 years (2019-2023) is considered representative of current conditions.

[9] MWRA Final Notification Plan: https://www.mwra.com/harbor/pdf/final_cso_notif_plan.pdf

[10] Outfalls to South Boston beaches designed for 25-year storm level of control

[11] SOM007A/MWR205A is jointly permitted to Somerville and MWRA and can discharge Somerville Marginal CSO Facility flows to the Mystic River during higher tides. The Somerville Marginal facility primarily discharges at outfall MWR205 below the Amelia Earhart Dam in marine waters (not subject to the variance) when not restricted by the tide

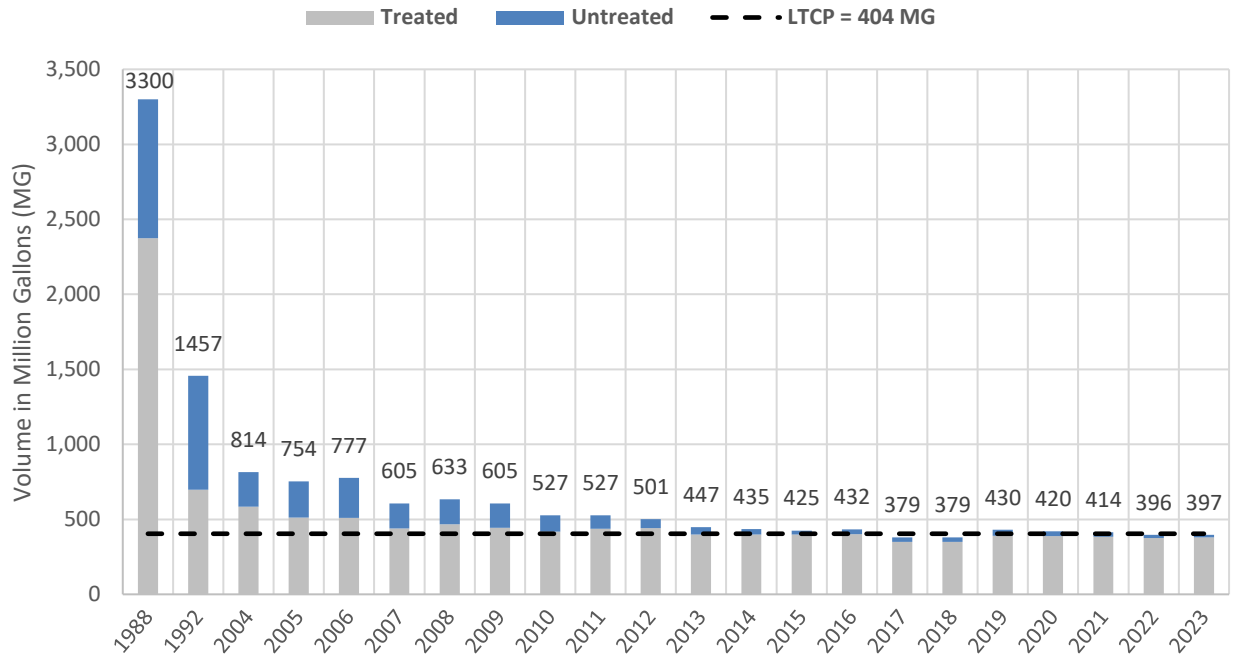

Figure 1-1. Estimated Treated, Untreated and Total CSO Volume in the Typical Year, 1988-2023.

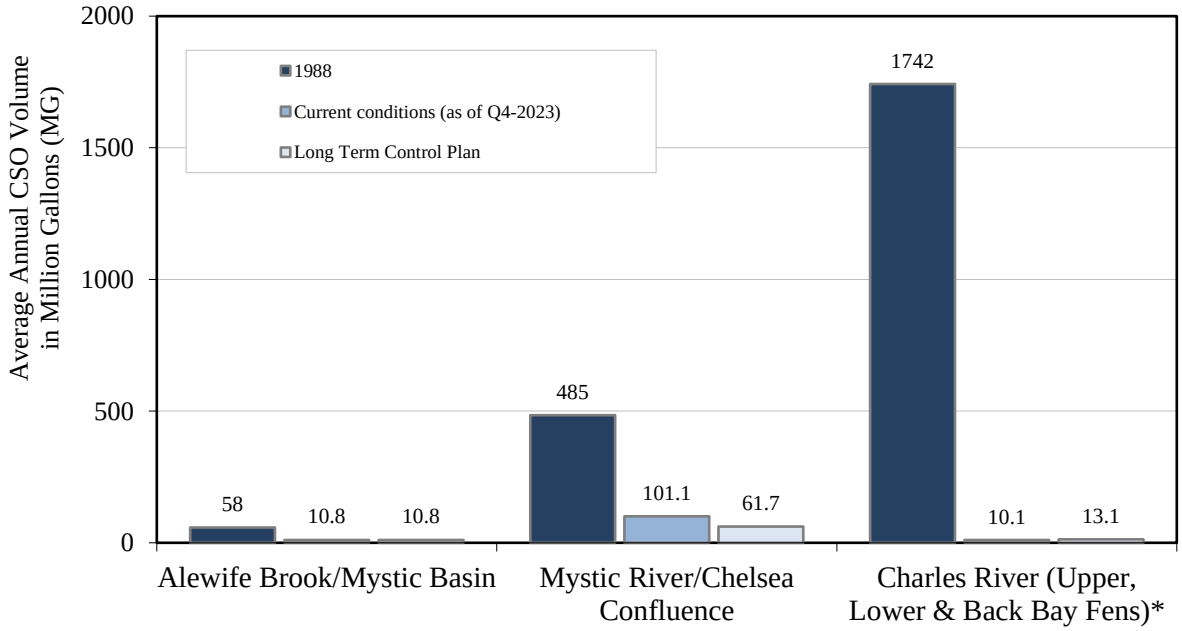

Figure 1-2. CSO Typical Year Discharge Volume Estimates for 1988, Current, and Approved Long Term Control Plan

* Back Bay Fens (Muddy River) is tributary to the Charles Basin but is not a variance water. Source: Updated from AECOM (2024)

Rainfall volumes for calendar year 2023 at various gauge locations in the MWRA service area and comparison to MWRA's approved Typical Year appear in Table 1-1. The table summarizes the frequency of rain events in 2023 within selected ranges of rainfall volume. In 2023, metropolitan Boston experienced above average rainfall totals despite a similar number of total storm events. The total rainfall volume was much higher than the Typical Year, and several inches higher than the official average annual rainfall for Boston (43.5 inches[12]). At Boston's Logan Airport gauge, 20.33 inches of rain were recorded during the peak summer months (June – August), the second highest total all time for that period.

In 2023, the number of small storms (less than 0.5 inches) was lower than the Typical Year at most gauges. A higher number of larger storms (greater than 0.5 inches) drove the higher annual rainfall totals at these gauges. There were more storms in the 0.5 – 1.0" and 1.0 – 2.0" categories in 2023 than the Typical Year.

Table 1-2 lists the number of storms in 2023 that had high peak rainfall intensities, which can drive CSO activations. Table 1-2 compares rainfall event relative intensities to the Typical Year using 0.4 inches/hour as a reference. At all gauges, there were more storms with high peak intensities in 2023 than the Typical Year. The average total rainfall and the average peak intensity in these storms varied widely across gauges, with the Fresh Pond gauge exhibiting much higher averages than the Typical Year. Refer to Tables 3-3 and Table 4-3 for CSO discharge estimates for the Charles and Mystic, respectively.

Table 1-1. Comparison of rain event frequency by rainfall volume, 2023 rainfall vs. Typical Year.

	Total Rainfall (in.)	Total Number of Storms	Number of storms, by rainfall volume				
			<0.25 inches	0.25 – 0.5 inches	0.5 – 1.0 inches	1.0 – 2.0 inches	≥2.0 inches
Typical Year	46.80	93	49	14	16	8	6
2023 Chelsea Creek Headworks (MWRA)	52.42	95	44	13	21	13	4
2023 Ward St. Headworks (MWRA)	57.16	93	43	11	20	13	6
2023 BWSC* Charlestown	52.84	89	37	16	20	9	7
2023 BWSC* Allston	57.92	95	46	11	19	11	8
2023 USGS† Fresh Pond	52.60	92	47	11	18	8	8

*Boston Water and Sewer Commission
†U.S. Geological Survey
Source: AECOM (2024)

[12] NOAA National Centers for Environmental information, Climate at a Glance: City Time Series, published June 2022, retrieved on June 2, 2023 from https://www.ncdc.noaa.gov/cag/

Table 1-2. Number of rain events with peak intensity >0.4 inches/hour, 2023 vs. Typical Year.

	Number of storms (peak hourly intensity > 0.4 in/hr)	Average total rainfall in these storms (inches)	Average peak hourly intensity in these storms (inches/hour)
Typical Year	9	1.56	0.63
2023 Chelsea Creek Headworks (MWRA)	10	1.4	0.67
2023 Ward St. Headworks (MWRA)	15	1.76	0.69
2023 Columbus Park Headworks (MWRA)	12	1.37	0.69
2023 Fresh Pond (USGS)	14	1.91	0.78

1.1 Overview of the monitoring program

MWRA's CSO receiving water quality monitoring program was established in 1989, with most sampling locations monitored since 1991. All harbor and tributary areas affected by CSOs in Boston, Chelsea, Cambridge, and Somerville are included in the monitoring program. For most sampling locations included in this report, which presents sampling results for the Lower Charles River/Charles Basin and the Alewife Brook/Upper Mystic River only, at least 20 samples have been collected each year. Due to the global COVID-19 pandemic right before the beginning of the 2020 field sampling season, MWRA made a number of temporary changes to the program to align with employee safety protocols recommended by the Centers for Disease Control (CDC) and the Commonwealth of Massachusetts. Some of these temporary changes impacted sampling intermittently between 2020 and 2022, and are discussed further in previous versions of this report.

1.2 Organization and purpose of the report

The purpose of the report is to summarize 2023 water quality in the Charles River and Alewife Brook/Upper Mystic River. The report compares sampling results to water quality standards, shows spatial and temporal variations in water quality, and differences between wet and dry weather. For some bacterial and physical parameters, data from the previous five monitoring years are analyzed and compared with the 2023 data.

Chapter 2 presents the materials and methods used in monitoring. Chapters 3 and 4 discuss the results of the CSO receiving water quality monitoring program in the Charles River and Alewife Brook/Upper Mystic River, respectively. Water quality parameters measured for each region include: bacterial indicators (*E. coli*, *Enterococcus*, and fecal coliform), water clarity (Secchi depth, total suspended solids), nutrients (phosphate, ammonium, nitrate/nitrite), and chlorophyll.

As noted in the previous report, receiving water quality results in the report that include data from before 2020 reflect the changes in the monitoring program made by MWRA in 2016-2019; in short, a switch to

more storm-based sampling with the addition of weekend sampling to close temporal data gaps. This storm-based sampling was discontinued in 2020 due to COVID-19 safety concerns for the additional staff needed, and with the completion of calibration of the water quality models noted above. The storm-based sampling provided critical data for the calibration of the models. However, for tables and figures in this report that include pre-2020 data – especially ones that do not aggregate data by rainfall condition – considerably more post-storm, wet weather data was gathered in 2018 and 2019 than previously. For example, Tables 3-4 and 4-4, which break down visits to the sampling stations in the Charles River and Mystic River/Alewife Brook by rainfall condition, reflects this wet weather bias for the period before 2020. Finally, where the data are aggregated by rainfall condition, most rain data come from more local rain gauges rather than the Logan Airport gauge. This provides more spatially relevant rainfall data, rather than using a single rain gauge that can be several miles distant from some of the sampling locations.

2 Materials and Methods

2.1 Field and laboratory methods

2.1.1 Selection of sampling locations

Some sampling locations were selected for their proximity to CSO discharges and others were selected to provide representative water quality measurements for a given area. Typically, all samples were collected by boat, but beginning in 2017, existing stations that were also accessible from the shore were identified so sampling could continue in inclement, non-boating weather. Complete lists of stations for the Charles River and the Alewife Brook/Mystic River, including maps and descriptions, appear in Figure 3-1 and Table 3-1 (Charles) and Figure 4-1 and Table 4-1 (Alewife/Mystic).

2.1.2 Sampling schedules

At least 20 visits were made to each station last year under two separate monitoring projects. In 2023, eutrophication monitoring was conducted biweekly year-round at a subset of river locations. Nutrients, chlorophyll, total suspended solids (TSS), bacteria, and physical parameters were collected as part of this program. CSO receiving water monitoring included bacteria sampling and physical parameter measurements collected roughly between March and October.

2.1.3 Sample collection

At all locations, water samples were collected near the surface (approximately 0.1 meters below surface). These surface samples were collected by grab into rinsed sample containers. Bottom samples were collected at locations with a water depth greater than 3 meters, using a Kemmerer sampler or alpha bottle at 0.5 meter above the sediment surface. Separate sampling containers were used for bacteria, and nutrient/TSS analyses.

2.1.4 Field measurements

Field measurements were made with different instruments over the course of the monitoring program. Table 2-1 lists the instruments used and the variables measured.

Table 2-1. Field measurements.

Variable	Instruments used
Temperature, conductivity/salinity, dissolved oxygen, turbidity, pH	Hydrolab Datasonde 4 (1997 - 2008) Hydrolab Datasonde 5 (2006 - 2008) YSI 600XL for temperature, conductivity, dissolved oxygen (1999 – 2013) YSI6600, YSI6820 (2009 – March 2019) YSI EXO2, EXO3 (April 2019 – present)
Secchi Depth	Wildco 8-inch limnological Secchi disk (upstream of dams) Wildco 8-inch oceanographic Secchi disk (marine waters)

2.1.5 Rainfall measurements and conditions

Most analyses use 15-minute rainfall data from rain gauges throughout the region, which may be closer in proximity to CSO outfalls and/or monitoring locations: Ward Street and Somerville Marginal (MWRA); Allston and East Boston (BWSC); and Fresh Pond (US Geological Survey). These data are also stored in the MWRA's Environmental Monitoring and Mapping System (EMMS) database. Daily rainfall measurements were also taken from the National Weather Service (NWS) rain gauge located at Logan Airport in East Boston, as this was considered the most representative location for the entire monitoring area, and data is available for the entire monitoring period. Results from this gauge are reported in one-day intervals. Data are downloaded from the NWS website and stored in the EMMS database.

For a number of figures in Chapters 3 and 4, rainfall conditions are used to separate bacteria results into different "bins" based on antecedent rainfall. Two different sets of conditions are used – one with three categories (dry, damp, and wet) and one with four categories (dry, damp, light rain, and heavy rain). Dry and damp conditions are identical between the two sets, and taken together, the "light rain" and "heavy rain" conditions in the four-category system are combined in the "wet" condition in the three-category system. Data from both the local gauges and the Logan gauge can be categorized in either system.

Figure 2-1 shows the two rainfall classification systems and the different conditions graphically.

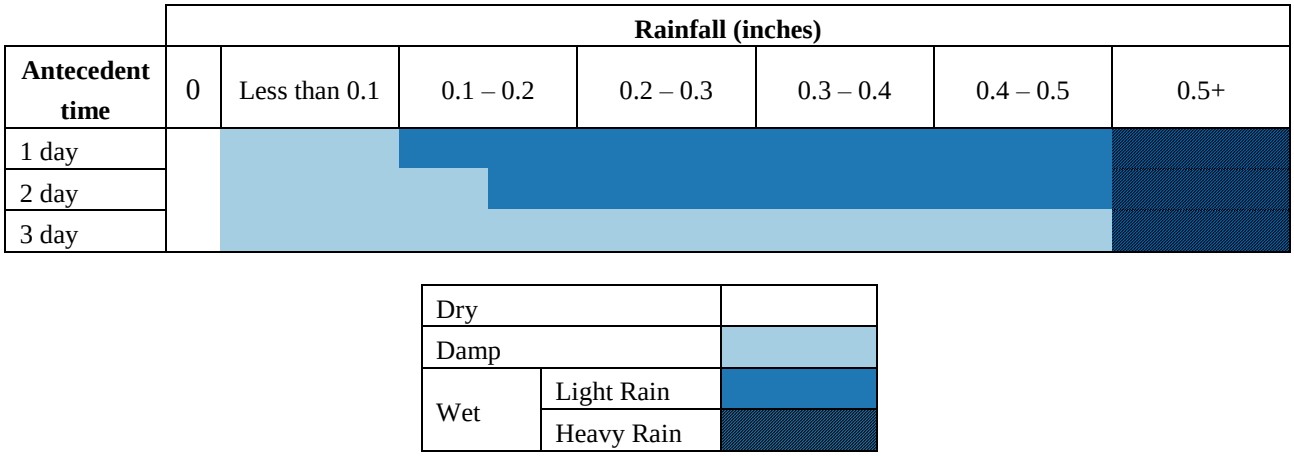

Figure 2-1. Summary and comparison of the two rainfall classification systems

2.1.6 Laboratory analyses

Samples were analyzed at the MWRA Central Laboratory. For enumeration of bacteria, chlorophyll, nutrients, and TSS, MWRA Department of Laboratory Services (DLS) Standard Operating Procedures are followed. Detailed laboratory methods with quality assurance and quality control procedures are described in the Central Laboratory Quality Management Plan (MWRA 2020) and the DLS Standard Operating Procedures (MWRA various).

Table 2-2 lists the analytes measured and methods used in the monitoring program. MWRA discontinued *E. coli* monitoring at marine locations in 2007 due to methodological concerns with the use of the Colilert method for marine samples, replacing *E. coli* with fecal coliform.

Table 2-2. Laboratory measurements.

Analyte	Method
Enterococcus	Standard Methods 9230C 2c, membrane filtration (for samples collected 1996 – 2003) EPA Method 1600 (for samples collected 1999 – 2007) Enterolert (ASTM D-6503-99; for samples collected 2007 – present)
E. coli	Modified EPA 1103.1, membrane filtration (for samples collected 2000 – 2006) Colilert-18 (Standard Methods 9223B; for freshwater samples collected 2007 - present)
Fecal coliform	Standard Methods 9222D, membrane filtration
Total suspended solids	Clesceri et al. (1998, Method 2540D), using nucleopore filters
Total phosphorus	TP and/or TDP: Solarzano and Sharp (1980a); PP: Solarzano and Sharp (1980a), Whatman GF/F
Phosphate	Murphy and Riley (1962), modified as in Clesceri et al (1998, Method 4500-P F) Skalar SAN^{plus} autoanalyzer, Whatman GF/F filters
Total Nitrogen	TN and/or TDN: Solarzano and Sharp (1980b), Whatman G/F filters; PN: Perkin Elmer CHN analyzer, Whatman GF/F
Ammonium	Fiore and O'Brien (1962), modified as in Clesceri et al. (1998, Method 4500-NH3 H), Skalar SAN^{plus} autoanalyzer, Whatman GF/F filters
Nitrate+nitrite	Bendschneider and Robinson (1952), modified as in Clesceri et al, (1998, Method 4500-NO3 F), Skalar SAN^{plus} autoanalyzer, Whatman GF/F filters
Chlorophyll *a*	Acid-corrected (Holm-Hansen et al. 1965) as described in US EPA (1992). Trilogy fluorometer, GF/F filters

2.2 Data analysis

Descriptive Analyses. Indicator bacteria counts are typically log-normally distributed, and therefore a proper measure of central tendency for these data is the geometric mean. Geometric means and their associated 95% confidence intervals were calculated for the measurements made at each station over the sampling period.

Many results are plotted as percentile box plots, as shown in Figure 2-2. These plots present a frequency distribution of a group of measurements. Each box comprises measurements from a single sampling location. Values are shown in Figure 2-2 for the 10th, 25th, 50th, 75th, and 90th percentiles. Open circles at the top and bottom represent maximum and minimum measurements.

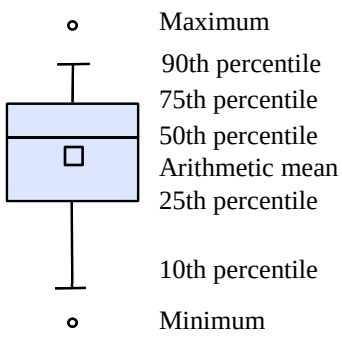

Figure 2-2. Percentile distributions indicated on percentile box plots

Box plots display the range and central tendencies of the data and allow for easy comparison of the results among stations. The 50th percentile (median) is equivalent to the geometric mean, assuming the data are log-normally distributed.

2.3 Water Quality Standards used in this report

Standards are shown in Table 2-3, and include standards and guidelines from the Massachusetts Department of Environmental Protection (MADEP) and the Environmental Protection Agency (EPA). The MADEP standard for Class B/SB waters (fishable and swimmable) are based on *E. coli* and/or *Enterococcus* counts for freshwater, and *Enterococcus* counts for marine waters, following an EPA recommendation for *Enterococcus* in marine waters (USEPA 2012). These standards, specified in 314 CMR 4.00[13], were updated and approved by EPA in January 2022. There are no public bathing beaches in the Charles or Upper Mystic/Alewife Brook, but the primary contact recreation (i.e., swimming) standards can still serve as a useful benchmark. MADEP uses a Secchi depth guideline to assess water clarity as an approximation for signs of eutrophication.

2.4 Map resources used in this report

Monitoring station and CSO outfall datalayers are produced from MWRA geographic data. The map baselayer is a combination of the following MassGIS datalayers: Dams, Hydrography, Municipalities, MassDEP Wetlands, MassDOT Roads, Ocean Mask, and Protected and Recreational Open Space.

[13] Massachusetts Surface Water Quality Standards. 314 CMR 4.00. https://www.mass.gov/regulations/314-CMR-4-the-massachusetts-surface-water-quality-standards

Table 2-3. Massachusetts water quality standards for Class B and Class SB waters.[1]

Designated Use	Parameter	Standard
Inland waters (Class B) warm water fishery Massachusetts waters, MADEP	Dissolved Oxygen	≥ 5.0 mg/L
	Temperature	≤ 28.3ºC (83ºF)
	pH	6.5 to 8.3 S.U.
Coastal/marine waters (Class SB) Massachusetts waters, MADEP	Dissolved Oxygen	≥ 5.0 mg/L
	Temperature	< 26.7ºC (80ºF)
	pH	6.5 to 8.5 S.U.
Marine and freshwater primary contact recreation (designated swimming area), MADEP	*Enterococcus*	Statistical Threshold Value (STV): 130 counts/100 mL; Geometric mean: 35 counts/100 mL
Freshwater primary contact recreation (designated swimming area), MADEP	*E. coli*	Statistical Threshold Value (STV): 410 counts/100 mL; Geometric mean: 126 counts/100 mL
Former standard, primary contact recreation, MADEP (pre-2007)	Fecal coliform	Geometric mean: ≤ 200 counts/100 mL, no more than 10% of samples above 400 counts/100 mL
Primary contact recreation, aesthetics/transparency	Secchi disk depth	≥ 1.2 meters (4 feet)

[1] All receiving water areas discussed in this report are Class B according to MADEP standards current as of January 2022 (except for Mystic River mouth downstream of the Amelia Earhart Dam, which is $SB_{CSO.}$ SB_{CSO} has the same water quality standards as SB except for an allowance for CSO discharges).

From MADEP 2022:

Inland Water Class B: Those Inland Waters so designated pursuant to 314 CMR 4.06; including, without limitation, certain wetlands designated in 314 CMR 4.06(2), certain other waters designated in 314 CMR 4.06(5), and certain qualified waters designated in 314 CMR 4.06(6)(b). These waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06(1)(d)6. and (6)(b) as a "Treated Water Supply" these waters shall be suitable as a source of public water supply with appropriate treatment. Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value.

Coastal and Marine Class SB: Those Coastal and Marine Waters so designated pursuant to 314 CMR 4.06; including, without limitation, 314 CMR 4.06(2) and certain surface waters designated in 314 CMR 4.06(6)(b). These waters are designated as a habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. In certain waters, habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated for shellfishing in 314 CMR 4.06(6)(b), these waters shall be suitable for shellfish harvesting with depuration (Restricted and Conditionally Restricted Shellfish Areas). These waters shall have consistently good aesthetic value.

3 Charles River

3.1 Sampling area

MWRA's sampling area in the Charles River (Figure 3-1) includes the river segment from the Watertown Dam in Watertown downstream to the Charles River Dam in Boston, near the river mouth. This area, the "Charles River Basin" for the purposes of this report, is freshwater and designated Class B with a variance for Combined Sewer Overflows by MADEP (with the variance currently extending to August 31, 2024). The river segment is approximately 8.6 miles long. The Charles River Dam and locks limit river flow and tidal exchange at the river mouth.

MWRA monitoring locations are primarily located midstream, bracketing CSO outfalls. Boat-accessible locations were also selected near to or downstream of outfalls: at the Stony Brook outlet and CSO (MWR023), the Faneuil Brook outlet and CSO that has since been closed (BOS032, closed in 1997), and downstream of the Cottage Farm CSO treatment facility outfall diffusers (MWR201). Results for stations 006 and 206 are combined in Figures 3-2, 3-5, 3-6, 3-9, 3-10 and Table 3-6.

For purposes of this report, MWRA's monitoring area in the Charles River Basin is divided into three smaller reaches: Upper Basin, Mid-Basin, and Lower Basin. Sampling locations and CSOs appear in Figure 3-1 with labeled landmarks that delineate the reach boundaries. Table 3-1 describes the reaches, and the sampling locations and CSOs within each reach.

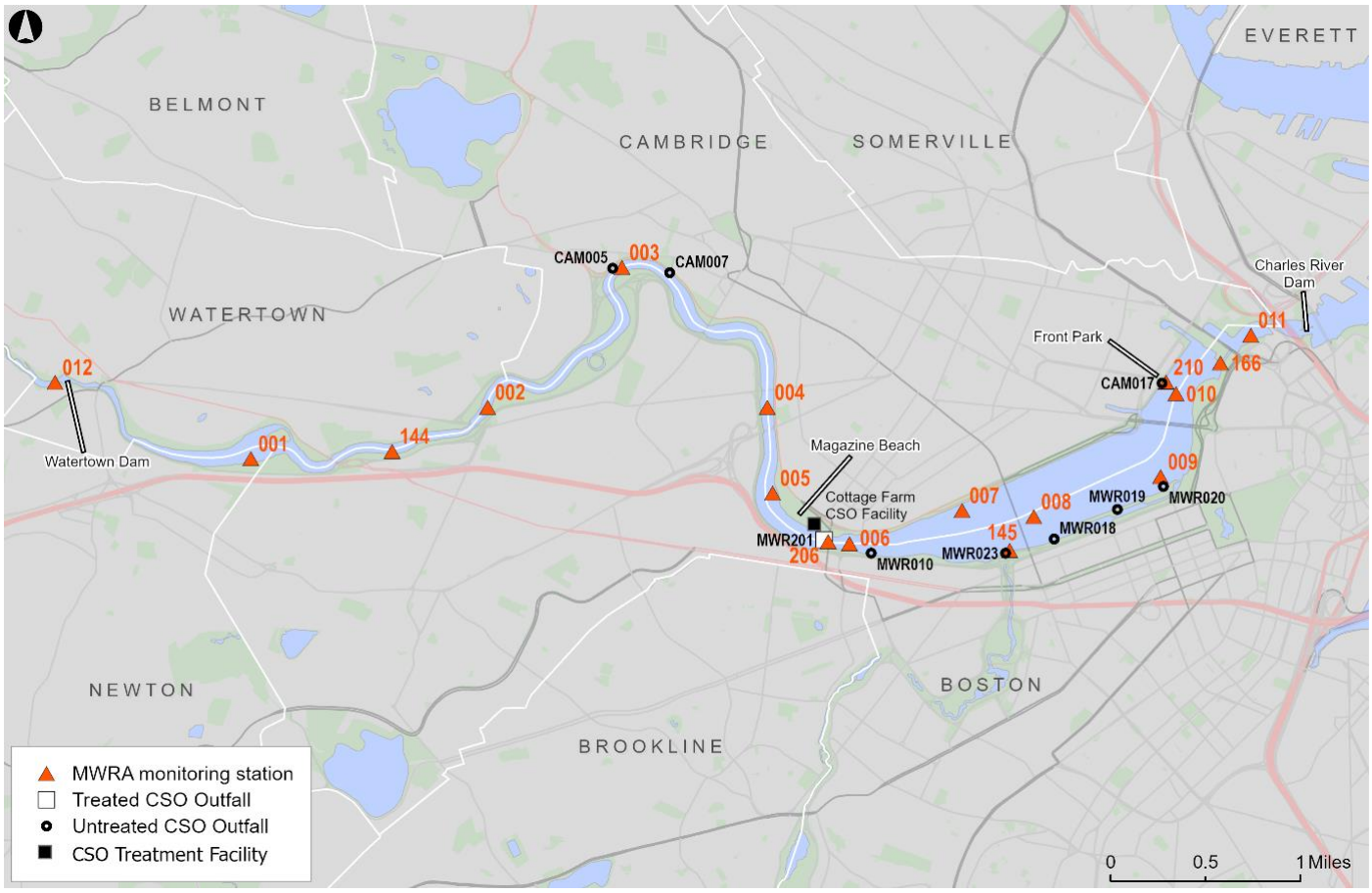

Figure 3-1. Map of MWRA Charles River monitoring stations.

Table 3-1. MWRA monitoring locations, Charles River Basin.

Reach (MADEP Classification)	Description of Reach	Sampling station	Location Description
Upper Basin (Class B/Variance, warm water fishery)	Watertown Dam in Watertown, downstream to Magazine Beach (near BU Bridge) in Cambridge	†*012, Watertown	Watertown Dam at footbridge (upstream of all CSOs)
		*001, Newton	Downstream of Newton Yacht Club (upstream of all CSOs)
		144, Allston	Faneuil Brook outlet (at BOS032, closed 11/97)
		*002, Allston	Downstream of Beacon St. Bridge (downstream of BOS033, closed 10/96)
		*003, Cambridge	Downstream of Eliot Bridge, Cambridge side (at CAM005)
		004, Cambridge/Allston	Between River St. and Western Ave. bridges
		†*005, Cambridge	Off of Magazine Beach
Mid-Basin (Class B/Variance, warm water fishery)	Magazine Beach (near BU Bridge) in Cambridge to Front Park (at CAM017) in Cambridge	006, Cambridge/Boston	BU Bridge, downstream side (downstream of MWR201)
		‡206, Cambridge/Boston	Mid-channel, sampled on the upstream side of the BU Bridge
		*007, Cambridge	MIT Boathouse, Cambridge side
		*145, Boston	Stony Brook outlet, Boston side (at MWR023)
		008, Cambridge/Boston	Mass. Ave Bridge, downstream side (downstream of MWR023, MWR018)
		*009, Cambridge/Boston	Longfellow Bridge, upstream side (downstream of MWR021, closed 3/00)
		010, Boston	Longfellow Bridge, downstream side (downstream of MWR022, closed 3/00)
		*210, Cambridge	Dock SE off Cambridge Pkwy/Bike Path, across from Front Park (at CAM017)
Lower Basin (Class B/Variance, warm water fishery)	Front Park (at CAM017) in Cambridge to Charles River Dam in Boston	†166, Boston	Science Museum, upstream of old dam (downstream of all lower basin CSOs)
		*011, Boston	Between Science Museum and Charles River Dam (downstream of all Charles CSOs)

Sampling locations are midstream unless otherwise noted.
* indicates sampling location is also a shoreline sampling location.
† indicates a sampling location sampled for nutrients, TSS, chlorophyll in eutrophication monitoring project.
‡ Station 206 sampled as a substitute for 006 during unsafe boating conditions; not sampled in 2023.

3.2 Pollution sources

Known pollution sources to the Charles River Basin are shown in Table 3-2 and consist primarily of stormwater, dry weather inputs, upstream inputs, and CSOs. The CSO sources include nine outfalls, eight untreated and one treated. The treated outfall is the discharge point for MWRA's Cottage Farm CSO treatment facility. Located immediately upstream of the BU Bridge, the Cottage Farm facility treats (with screening, chlorination, and dechlorination) CSO flow before discharge and is the only source of treated CSO discharge to the river.[14] With increases in sewer system capacity and removal of large volumes of stormwater from the sewer system with sewer separation projects, the number of activations at Cottage Farm has decreased over the last two decades. In the late 1990s, more than 20 activations annually were common. There were eight activations at Cottage Farm in 2023 due to the frequency of intense, high volume rain events (Tables 1-1, 1-2). The Stony Brook/Muddy River outlet near Kenmore Square is a source of contaminated brook flow and stormwater flows to the basin area, as well as infrequent CSO discharges. CSO discharge volumes to the Stony Brook were greatly reduced in 2006 with completion of sewer separation by the Boston Water and Sewer Commission (BWSC).

Sanitary sewer overflows (SSOs) can also occur in rare circumstances like extreme rain events, sewer breaks, or sewer obstructions, but are not typical in a given year. SSOs are unintentional discharges of wastewater to the environment prior to reaching a treatment facility. SSOs from the MWRA system are reported on the MWRA website. In 2023 there were three SSOs that reached the Charles River.[15]

Table 3-3 shows the MWRA and community metering results for CSOs affecting the Charles River Basin for 2023. There were a total of 36 CSO activations in 2023 in the Charles River Basin.

The receiving water monitoring program is designed to capture water quality in all weather conditions. Table 3-4 summarizes the proportion of samples collected in dry, damp, and wet weather. In support of the receiving water models described in Chapter 1, MWRA intensively sampled storm events from 2017 through 2019. A large portion of the samples in this time period were collected in wet weather conditions, and this wet weather bias will skew water quality impacts seen in any presentation of an overall data set that includes 2017 – 2019 data (i.e., Table 3-5). The addition of shoreline sampling locations increased the number of sampling events, as sampling could be performed in weather conditions that previously were unsafe for boat-based sampling.

[14] MWRA's Prison Point CSO facility, located near the Charles River mouth, has its discharge point on the Boston Harbor side of the Charles River Dam

[15] MWRA Sanitary Sewer Overflow (SSO) Reporting page. http://www.mwra.com/harbor/html/sso_reporting.htm

Table 3-2. Charles River Basin pollution sources in 2023.

Source	Upper Basin	Mid-Basin	Lower Basin
CSOs (untreated)	2 active, 4 closed CAM005[1] CAM007[1] CAM009 closed 11/07[2] CAM011 closed 11/07[2] BOS032 closed 11/97 BOS033 closed 10/96	6 active, 3 closed MWR010 MWR018[1] MWR019[1] MWR020[1] MWR023[1] CAM017[1] BOS042 closed 5/96 MWR021 closed 3/00 MWR022 closed 3/00	3 closed BOS049 closed 7/10 BOS028 closed prior to 1997 SOM010 closed prior to 1996
CSO treatment facility (settling and detention; screened, chlorinated and dechlorinated CSO discharge)	No	Cottage Farm (MWR201) Activated 8 times in 2023	No
Storm drains	Yes	Yes	Yes
Upstream inputs	Yes	Yes	Yes
Dry weather inputs	Yes	Yes	Yes
Tributary brook or stream flow	Yes	Yes	Yes
Sanitary Sewer Overflows (SSOs)[3]	No	Yes[4]	No

[1]Activated in 2023
[2] Pending continuing hydraulic evaluations by City of Cambridge.
[3] From MWRA-owned system.
[4] Two SSO events on Storrow Dr., Boston; One SSO event at Bradeen Street, Roslindale reached the Stony Brook Conduit, which ultimately reaches the Charles River Mid-Basin.

Table 3-3. Charles River Basin CSO activations, results of meter data and facility records for 2023 system conditions and 2023 rainfall.

CSO Outfall	Activation Frequency	Total Discharge Duration (hr)	Total Discharge Volume (million gallons)
Upper Charles (Upper Basin)			
CAM005[1]	9	7.17	0.87
CAM007[1]	2	2.5	1.25
TOTAL	**11**		**2.12**
Lower Charles (Mid-Basin)			
CAM017[1]	4	4	5.36
MWR010[2]	0	0	0
MWR018[2]	3	2.93	0.56
MWR019[2]	2	1.09	0.19
MWR020[2]	2	0.91	0.13
MWR201 (Cottage Farm Facility)[3]	8	19.28	61.83
MWR023 (Stony Brook)[4]	6	4.99	1.13
TOTAL	**25**		**69.2**

[1] Results from City of Cambridge meter and model data (City of Cambridge 2023 CSO NPDES Annual Report, 2024).
[2] Metered data are estimates of outfall discharge calculated using data from sensors, taking into account physical configurations and constraints. (AECOM 2024)
[3] Treated discharge. Activation frequency and volume are from MWRA facility records.
[4] Estimated discharge volume from CSO regulators discharging to the Stony Brook, which also conveys a large amount of stormwater, ultimately to the Charles River through MWR023.

Table 3-4. Charles River station visits by rainfall condition.

Sampling period	Dry[1]	Damp[1]	Wet[1]	Total
2018-2022	24% 705 station visits	27% 804 station visits	49% 1463 station visits	100% 2972 station visits
2023	30% 111 station visits	33% 121 station visits	37% 139 station visits	100% 371 station visits

[1] See Section 2.1.5 for descriptions of rainfall conditions.
[2] 2018-2019 samples tended to be collected in wet conditions with increased focus on sampling following large storms.
[3] 2021 samples tended to be collected in wetter conditions than the previous five years.

3.3 Summary of water quality, 2019-2023

A summary of water quality results collected during the last five years is shown in Table 3-5.

Table 3-5. Summary of water quality, Charles River Basin, 2019-2023.

Parameter		MADEP Water Quality Guideline or Standard	Upper Basin				Mid-Basin				Lower Basin			
			Mean ± SD	% meeting guideline	Range	n	Mean ± SD	% meeting guideline	Range	n	Mean ± SD	% meeting guideline	Range	n
Surface Temperature (°C)[1]	Summer	≤ 28.3	21.7±3.5	100	12.1-27.8	475	22.1±3.1	100	9.3-27.3	427	22.1±3.4	100	13-27.8	105
	Winter		6.2±2.9	100	1.2-10.9	57	8.2±1	100	6.7-10.4	28	4.4±2.4	100	1.2-9.1	24
Bottom water dissolved oxygen (mg/L)[1]	Summer	≥ 5.0	7±1.7	90.7	0.2-10.4	343	4±3	44.1	0.1-10	410	6.2±2.3	73.7	1-11.2	95
	Winter	≥ 5.0	12.1±1.2	100	10.8-14.8	31	9.5±3.9	82.1	0.4-12.5	28	12.8±0.8	100	11.4-14.3	21
pH[2] (S.U.)		6.5-8.3	7.2±0.3	99.8	6.5-8.5	1250	7.1±0.4	98.9	6.6-8.5	1224	7.1±0.5	98.3	6.1-8.4	352
Water clarity	Total Suspended Solids (mg/L)	NS	4.5±5.2	-	0.2-47.3	200	-	-			3.6±3.1	-	0.2-30.3	125
	Secchi depth (m)[3]	≥1.2	0.9±0.3	-	0.2-2	584	1.1±0.3	-	0.5-2	798	1.3±0.3	-	0.6-2.5	144
	Turbidity (NTU)	NS	5.1±4.4	-	0.1-48.6	1039	4.6±4.1	-	0-42.8	1160	3.4±3.2	-	0.2-39.5	252

For footnotes, see following page.

Table 3-5. Summary of water quality, Charles River Basin, 2019-2023, continued.

Parameter		MA DEP Water Quality Guideline or Standard	Upper Basin				Mid- Basin				Lower Basin			
			Mean ± SD (95% CI)	% meeting guideline	Range	n	Mean ± SD (95% CI)	% meeting guideline	Range	n	Mean ± SD (95% CI)	% meeting guideline	Range	n
Bacteria (col/100mL)[4]	*E. coli*	126 / 410[5]	211 (194-230)	71.5	0-24200	1127	84 (76-92)	84.6	0-15500	1444	80 (69-93)	87.8	0-24200	392
	Enterococcus	35/ 130[5,6]	45 (39-51)	72.9	0-24200	1120	14 (12-15)	85.1	0-19900	1433	13 (11-16)	85.1	0-1670	389
Nutrients (µmol/L)	Phosphate	NS	0.6±0.5	-	0.1-3.3	201	ND	-	ND		0.6±0.4	-	0-1.6	125
	Ammonium	NS	3.6±2.5	-	0.1-15.4	201	ND	-	ND		4.7±3.7	-	0-16.7	125
	Nitrate+nitrite	NS	37.4±15	-	0.3-79.8	201	ND	-	ND		36.5±19.3	-	0.1-74.2	125
Algae (µg/L)	Chlorophyll	NS	4.7±5.9	-	0.1-46.5	201	ND	-	ND		8.4±9.5	-	0.1-51.3	125

NS: no applicable numerical standard or guideline. ND: no data. n: number of samples

[1] Summer (June-October), Winter (January-March).

[2] Median and standard error of the median are shown for pH, rather than arithmetic mean and standard deviation.

[3] Secchi guideline of ≥1.2 meters provides general benchmark for evaluating signs of eutrophication.

[4] For bacterial data, 95% confidence intervals (CI) are provided in lieu of standard deviations. "Mean" = geometric mean for bacteria data.

[5] First number is the all samples geometric mean limit - compare to the "Mean±SD" column (i.e., the Mean in that column is the geometric mean of all stations in that region for the specified indicator bacteria); the second number is the statistical threshold value - compare to the "% meeting guideline" column (i.e., the "% meeting guideline" column is the percentage of samples meeting the statistical threshold value). The "Range" column gives the range of single sample results.

[6] Either *E. coli* or *Enterococcus* are acceptable indicators for EPA or MADEP to assess suitability for swimming in freshwater.

3.4 Water quality results, 2023

This section provides an analysis of water quality parameters measured in the Charles River Basin during the 2023 monitoring year.

3.4.1 Physical measurements

Temperature. Summer (June to October) water temperatures for 2023 are shown for each sampling location in the top graph in Figure 3-2. Surface temperatures are relatively consistent upstream to downstream. Bottom-water temperatures are lower in the deeper waters downstream near the Longfellow Bridge, particularly stations 009 and 010, where water depth exceeds 6 meters (20 to 23 feet). Station 166 is collected in a shallow location in the basin near the Science Museum, where differences in surface and bottom temperatures are small or nonexistent. Locations upstream of station 004 (upstream of the Eliot Bridge in Cambridge) are relatively shallow, with depths ranging from 1 to 3 meters.

Dissolved Oxygen. The spatial trend in summer dissolved oxygen (DO) is shown in the center graph of Figure 3-2. All mean surface water DO measurements met the State standard of ≥5.0 mg/L. Mean bottom water DO measurements were predominantly ≥5.0 mg/L in the Charles with bottom DO means at some Mid Basin locations (007, 009, and 010) below the minimum standard. Stratification, due to saltwater intrusion through the river locks and cooler bottom temperatures, results in extremely low bottom water dissolved oxygen in the lower basin area near the Longfellow Bridge. This pattern is seen in past years as well.

Water clarity. Water clarity is indicated by Secchi disk depth. Summer Secchi readings are shown for individual sampling locations in Figure 3-2. Stations 012 and 166 are not sampled by boat, so no secchi measurements are taken. In 2023, all locations in the Charles Basin had average Secchi depths below the minimum MADPH beach guideline of 1.2 meters.

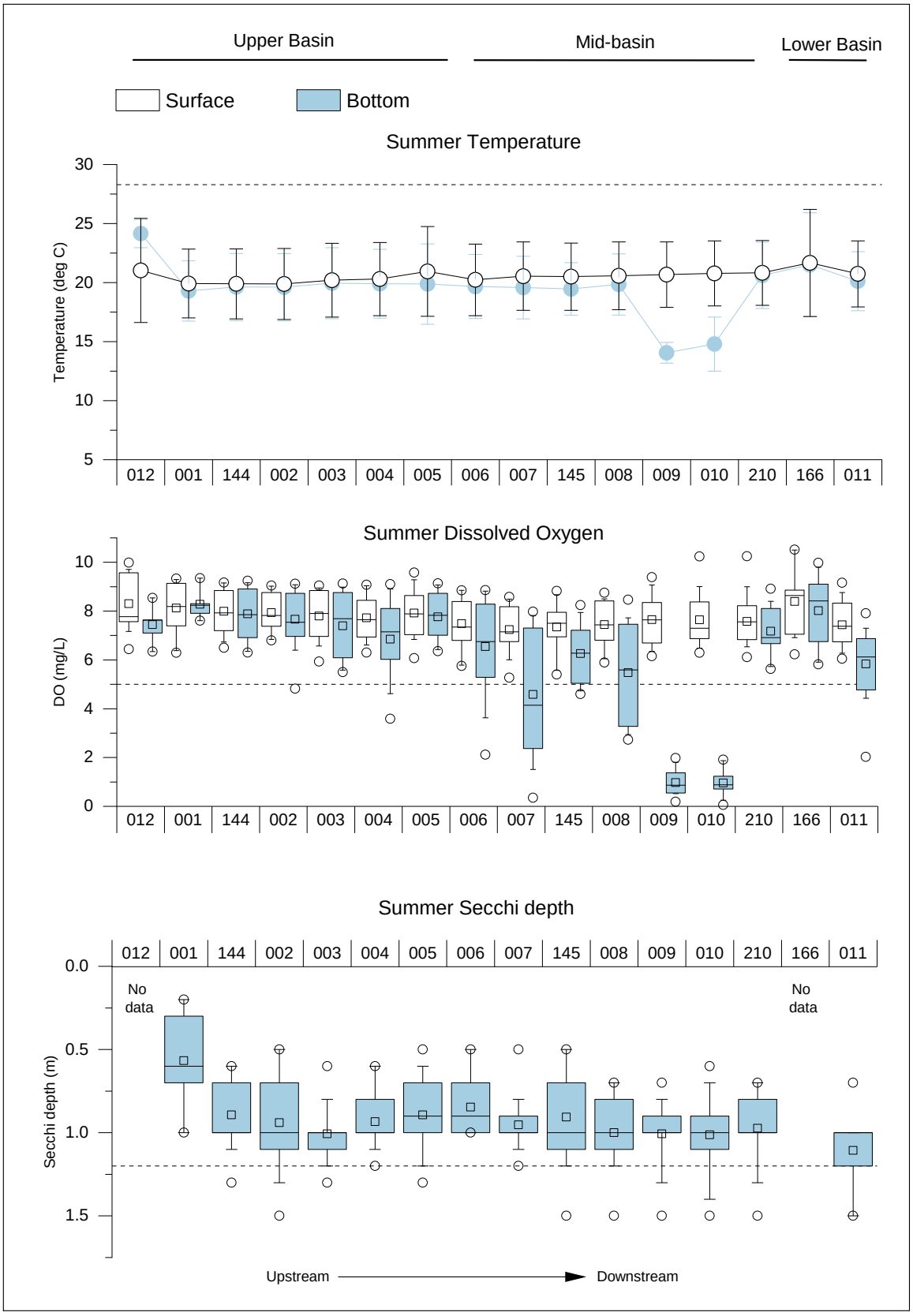

Figure 3-2. Summer (June-October) temperature, dissolved oxygen and Secchi depth, Charles River Basin, 2023. Dashed lines are State standards or guidelines (maximum for temperature, minima for DO and Secchi). Secchi plot has reversed y-axis to visualize depth below the water surface. No secchi data are available for stations 012 or 166, which are not sampled by boat.

3.4.2 Nutrients, TSS and chlorophyll

Monthly means for total nitrogen, ammonium, nitrate/nitrite, total phosphorus, phosphate, total suspended solids (TSS), and chlorophyll *a* at three locations in the Charles River Basin are shown in Figures 3-3 through 3-5. Stations 012 (Fig 3-3) and 166 (Fig 3-5) bracket the Charles River Basin, with station 005 (Fig 3-4) roughly halfway between them. 2023 averages are plotted with the average of the previous five years (2018 – 2022) for stations 012 and 166; at station 005, 2023 averages are compared to the previous two years (2021 – 2022) averages.

Seasonal patterns for the 2023 monitoring year closely mirrored the five-year averages from 2018 to 2022 for most parameters. However, total phosphorus and phosphate concentrations at all three locations were generally above the past two or five-year averages during the wetter than normal summer. As demonstrated by the chlorophyll-a figures, these elevated phosphate and total phosphorus concentrations did not precede significant algae blooms in the Charles River. Additionally, the sampling program captured spikes in total suspended solids (TSS) during heavy rains at station 012 in August and at station 005 in October.

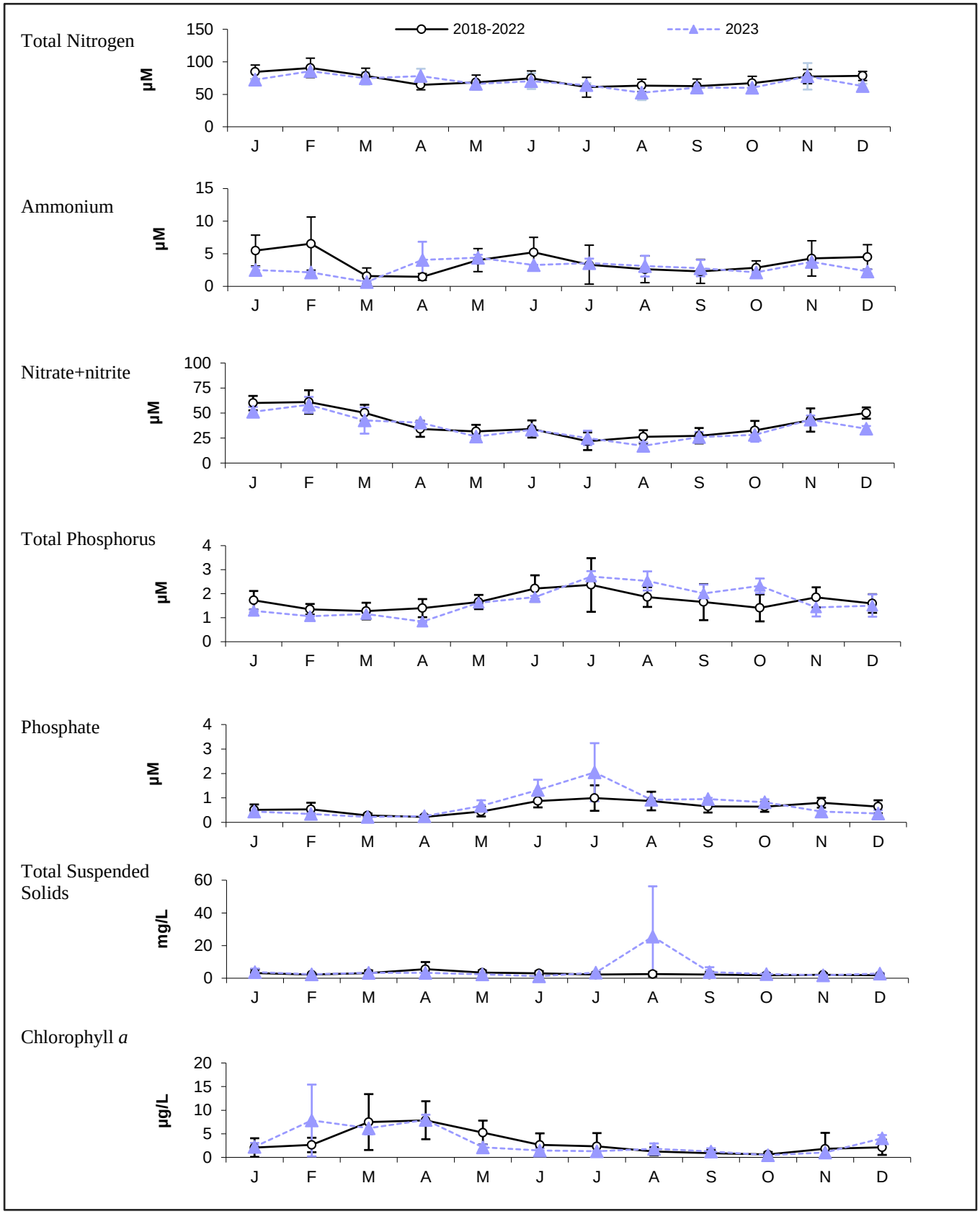

Figure 3-3. Monthly average nutrients, TSS and Chlorophyll 2018 – 2022 and 2023, Station 012, Watertown Dam.

Error bars are ± 1 SD. Note different scales than Figures 3-4, 3-5 for most parameters.

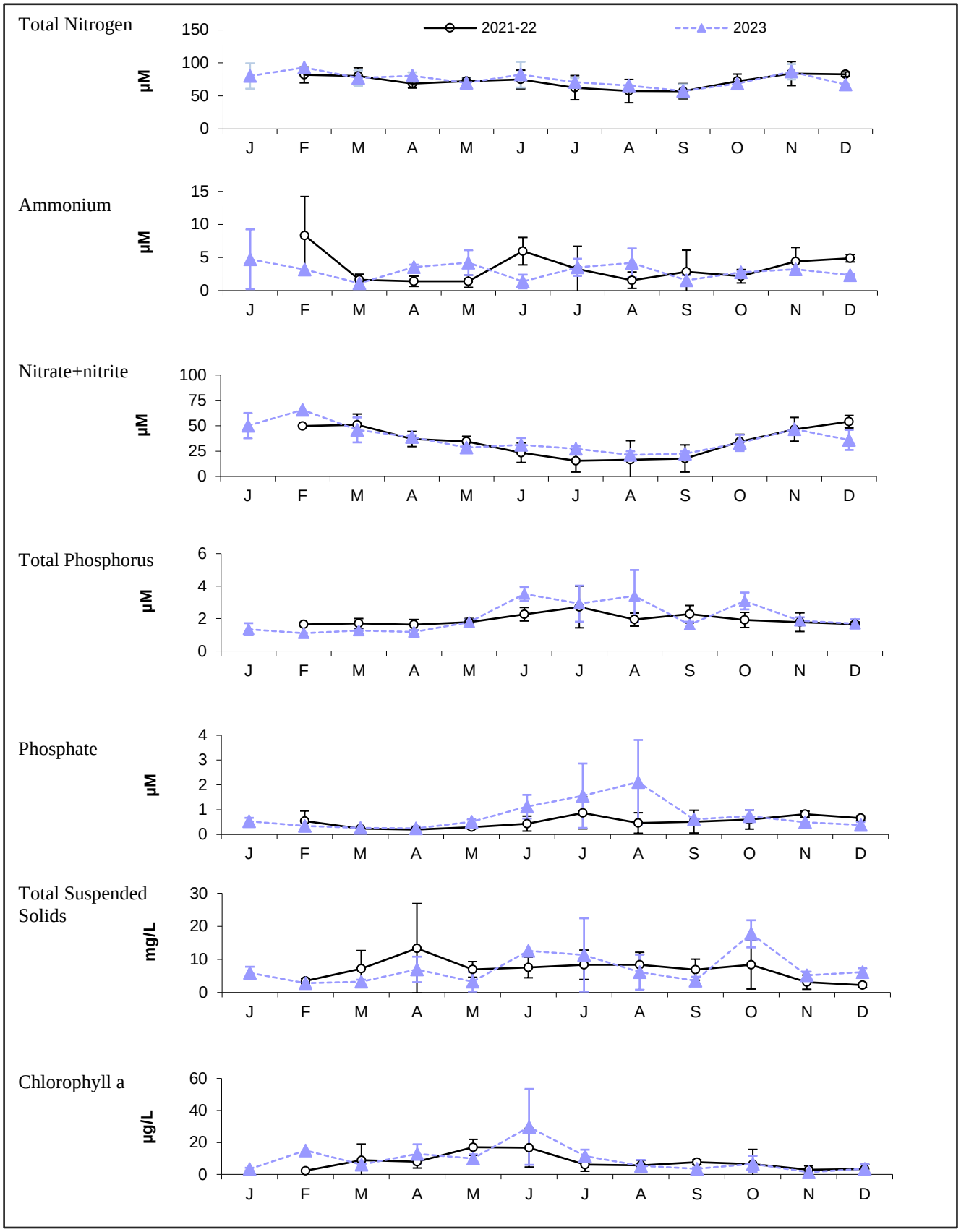

Figure 3-4. Monthly average nutrients, TSS and Chlorophyll 2021 – 2022 and 2023, Station 005, Magazine Beach.

Error bars are ± 1 SD. Note different scales than Figures 3-3, 3-5 for most parameters.
Collection and analysis of these parameters at station 005 began in 2021. January measurements were not possible during 2021-2022 due to icing of the river

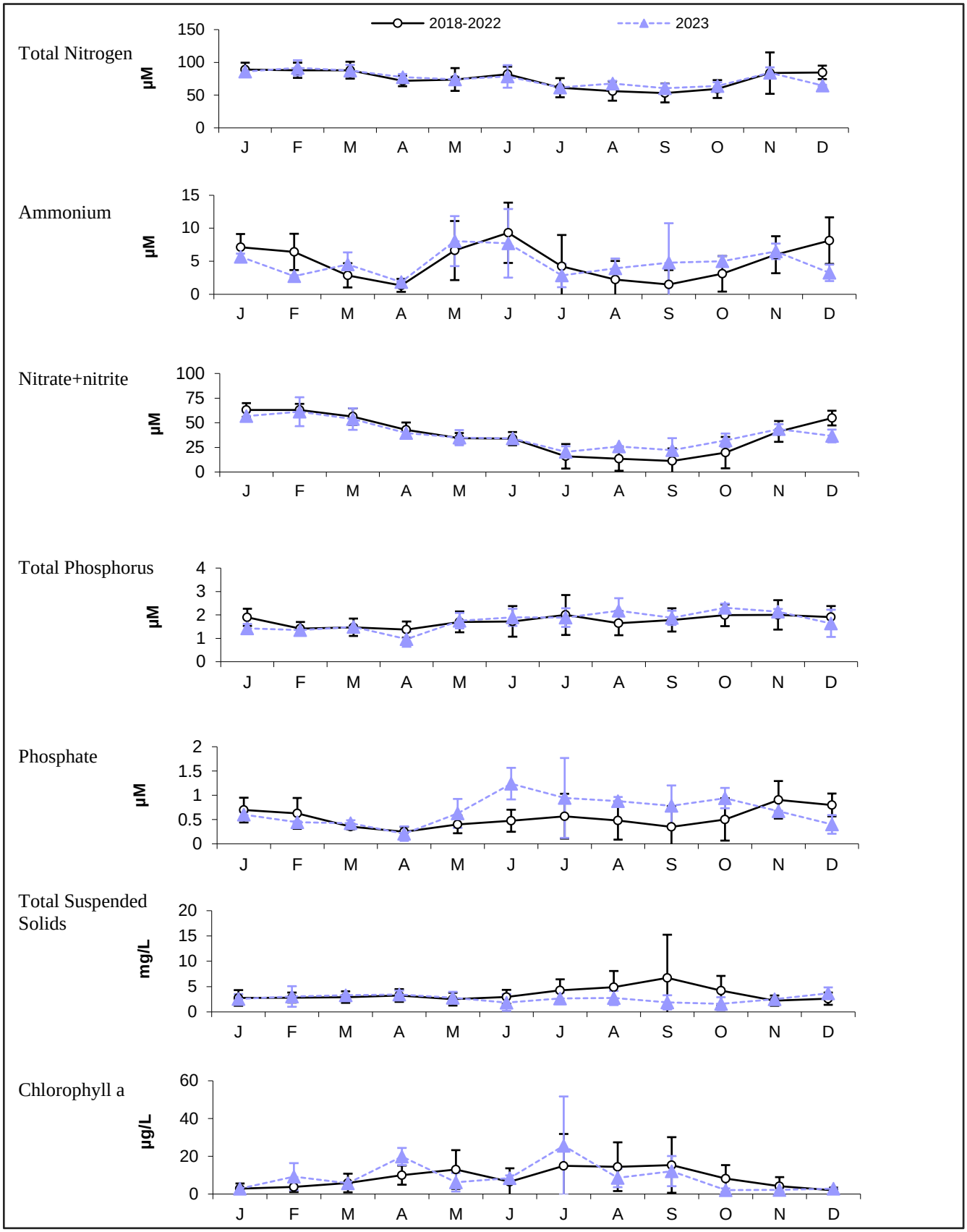

Figure 3-5. Monthly average nutrients, TSS and Chlorophyll 2018 – 2022 and 2023, Station 166, Science Museum.

Error bars are ± 1 SD. Note different scales than Figures 3-3, 3-4 for most parameters.

3.4.3 Bacterial water quality

Figure 3-6 shows the 2023 bacterial water quality at each location sampled in the Charles for dry, damp, and wet weather. The rainfall categories are derived from rainfall measured at four local rain gauges: MWRA's Ward Street, BWSC's Allston and Charlestown, and USGS's Fresh Pond gauges. Each sampling location is paired with the closest rain gauge. As shown in Table 3-4, 2023 sampling in the Charles Basin was balanced between dry, damp and wet conditions. Data collected from 2018-2022 was biased toward wet weather.

The top and bottom graphs in Figure 3-6 show percentile plots of *Enterococcus* and *E. coli* counts arranged from upstream to downstream locations for 2023 respectively (note log scale). In 2023, *Enterococcus* and *E. coli* counts followed the historic spatial trend with more elevated bacteria counts upstream relative to downstream locations. Stations upstream of 009 had a higher prevalence of high bacteria counts in all weather conditions compared to downstream stations, though this trend is less pronounced for *Enterococcus*. For *Enterococcus*, the majority of the samples in the Mid and Lower Basins were below the statistical threshold value even in wet weather All Charles Basin stations except 002 and 003 met standards in dry and damp conditions for both *Enterococcus* and *E.coli*.

As shown in Table 3-4, samples collected in this region in 2023 were evenly spread between dry, damp and wet weather conditions. Geometric means for each location under all rain conditions for 2018 – 2022, and 2023 appear in Table 3-6. If the 95% confidence intervals for the two periods overlap, this generally indicates no statistically significant difference between the two geometric means. For both indicators, 2023 geometric means were higher than the previous 5 years at nearly all locations. Geometric means in 2023 were similar to other wetter than average years, including 2021 and 2019. Stations downstream of 005 excluding station 006 had surface *Enterococcus* annual geometric means below the DEP standard while geometric means only met the standard at stations 210 and 166 for surface *E. coli*.

Figure 3-7 shows the impact of rainfall on *Enterococcus* counts in the three Charles River Basin reaches (upper figure), along with results for individual locations near CSO outfalls (lower figure). Here, wet weather is broken down further into light and heavy rain conditions. The upper figure shows that for 2023, bacterial concentrations in the Upper Basin – where there are no CSO discharges - were routinely higher than Mid-Basin and Lower Basin stations under all weather conditions. The 2023 geometric means, approximated by the line within the box, were below the state standard in dry conditions, and exceeded in damp, light and heavy rain in the Upper Basin. The lower figure shows that stations upstream of the Longfellow Bridge had elevated *Enterococcus* levels in most conditions relative to others downstream.

The change in *Enterococcus* concentrations since 1989 in the Upper Charles Basin (upstream of most CSO influences) and the lower Charles (including the Mid- and Lower-Basin locations) appear in Figures 3-8 and Figure 3-9. Results are grouped by phases of the LTCP improvements with the last period (2014-2023) following the completion of all LTCP-related projects in the Charles to date. These figures show change over time in both regions, with significant improvement in water quality from the initial phase to the latest phase. Looking at the current phase, the Upper Basin shows improvement in both dry and wet conditions and meets the geometric mean swimming standard in dry and damp weather. However, there are instances of exceedances during heavy rain conditions, as well as individual high counts seen across all conditions. The most pronounced improvement is in the Middle and Lower Charles Basins, which met the geometric mean swimming standard in all conditions except heavy rainfall.

Mapped 2023 compliance rates with State statistical threshold values by rainfall condition are shown in Figures 3-10 (*Enterococcus*) and 3-11 (*E. coli*). Compliance rates greater than 90% (darkest blue) meet this standard, though sample sizes broken down by weather condition are small (<10). For *Enterococcus,* nearly all stations met standards in dry weather, and several met in damp weather. Compliance rates ranged from 40-100% in wet weather, exhibiting the same upstream to downstream improvement in water quality discussed above. Only the upper stations of the Upper Basin between the Watertown Dam and Beacon Street Bridge presented low compliance rates during wet weather for Enterococcus. Compliance rates were generally lower for *E.coli.* All stations except three met 70 percent or greater compliance for dry weather. In Damp weather, there is a decrease in compliance for the Upper and Mid Basin stations. As stated in previous reports, stations at the widest portion of the river have exhibited high compliance rates in wet weather, even those immediately downstream of untreated CSOs (stations 009 and 210).

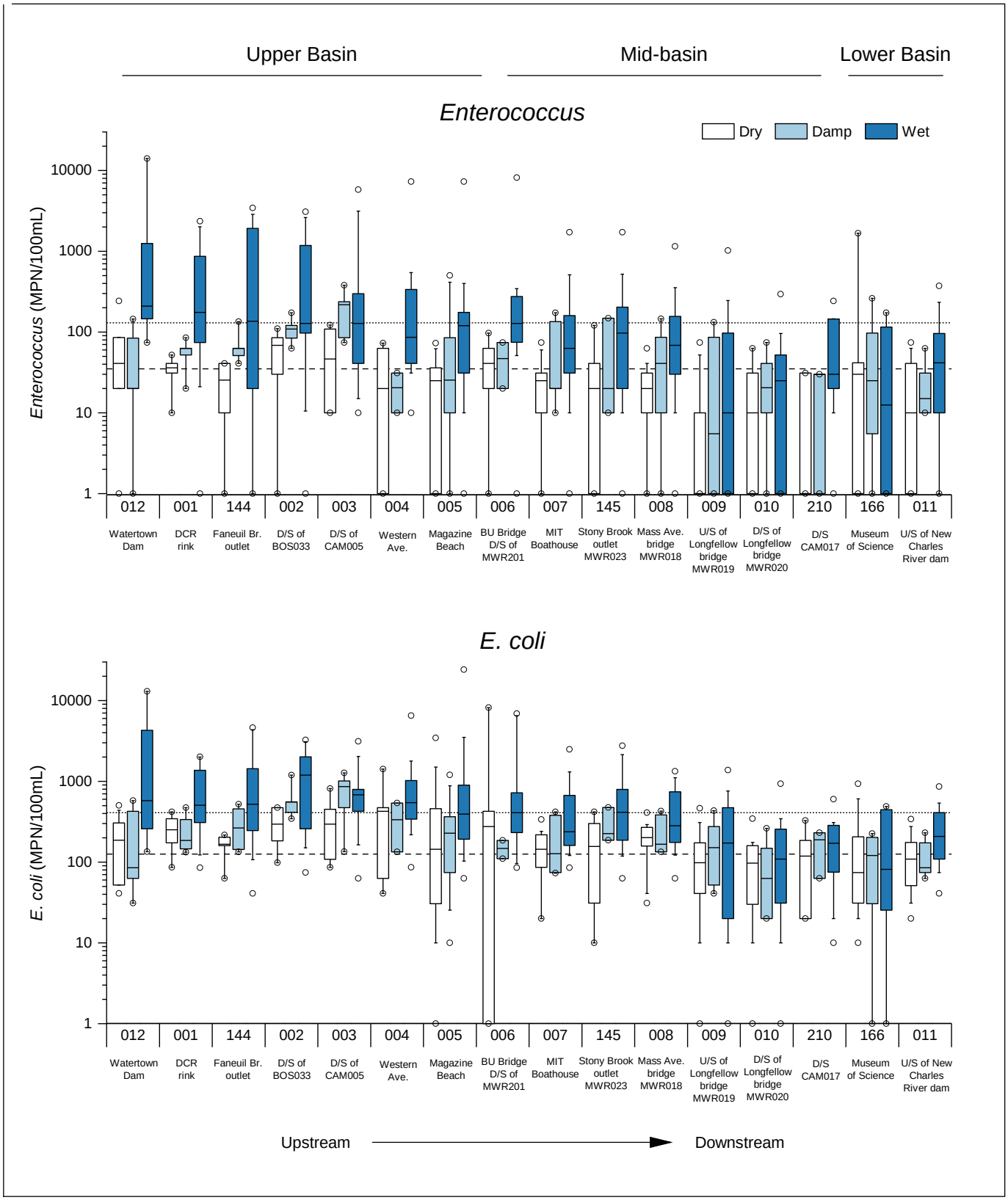

Figure 3-6. Indicator bacteria concentrations, Charles River Basin, 2023.
Dashed lines show MADEP Enterococcus and E. coli geometric mean standards, dotted lines show statistical threshold values. See Section 2.1.5 for definitions of rainfall conditions. "D/S" and "U/S": downstream and upstream, respectively. Station 006 includes samples from nearby station 206.

Table 3-6. Geometric mean indicator bacteria, Charles River Basin, 2018 – 2022 and 2023.

Stations designated for shoreline sampling (weekends or unsafe boating conditions) are shaded.

Station	Location	Surface or Bottom	Number of samples		*Enterococcus* (95% CI) [1] MPN/100 mL DEP limit: 35 MPN/100 mL		*E. coli* (95% CI) [1] MPN/100 mL DEP limit: 126 MPN/100 mL	
			2018 – 22	2023	2018 – 22	2023	2018 – 22	2023
012	Newton/Watertown, footbridge upstream of Watertown Dam	S	197	26	58 (44-75)	67 (31-144)	184 (155-218)	264 (151-461)
001	Newton, near Nonantum Rd., rear of DCR skating rink	S	201	21	72 (55-95)	78 (36-166)	301 (249-364)	338 (229-499)
144	Brighton, downstream of N. Beacon St. bridge, Faneuil Brook outlet, BOS032 (closed 1999)	S	128	21	41 (28-61)	57 (20-157)	268 (214-335)	333 (199-559)
002	Allston, downstream of Arsenal Street bridge, BOS033	S	202	21	57 (43-75)	89 (38-206)	254 (211-304)	524 (337-814)
003	Allston/Cambridge, midstream, near Mt. Auburn Street, between CAM005 and CAM007	S	202	21	38 (28-51)	94 (49-180)	238 (197-289)	450 (298-680)
004	Allston/Cambridge, midstream, between River Street and Western Avenue bridges	S	128	20	19 (13-29)	50 (20-122)	115 (86-154)	397 (231-683)
005	Cambridge, near Magazine Beach, upstream of Cottage Farm	S	292	45	42 (32-54)	31 (17-56)	200 (170-235)	241 (145-401)
006[2]	Cambridge/Boston, midstream, downstream of Cottage Farm, BU bridge	S	166	21	31 (22-43)	66 (29-149)	148 (119-184)	244 (92-647)
007	Cambridge, near Memorial Dr., MIT Boathouse	S	201	21	26 (19-35)	33 (17-62)	148 (119-183)	193 (129-289)
		B	128	21	30 (21-44)	43 (20-91)	138 (103-183)	212 (134-335)
145	Boston (Charlesgate), Muddy River/Stony Brook outlet	S	202	21	39 (29-54)	30 (12-74)	270 (216-338)	251 (146-432)
008	Cambridge/Boston, midstream, downstream of Harvard Bridge	S	128	21	15 (10-23)	24 (10-57)	94 (67-133)	239 (166-344)
		B	128	21	21 (14-32)	41 (22-76)	139 (100-192)	238 (170-331)
009	Cambridge/Boston, midstream, upstream of Longfellow Bridge near Community Sailing	S	202	21	12 (8-16)	9 (3-22)	94 (72-124)	166 (107-255)
		B	128	21	2 (1-3)	4 (1-13)	22 (16-31)	43 (17-107)
010	Boston, downstream of Longfellow Bridge, MWR022	S	128	21	6 (4-8)	15 (6-34)	39 (28-55)	148 (96-229)
		B	128	21	7 (5-10)	9 (4-19)	23 (17-31)	30 (14-62)
210	Cambridge, Cambridge Pkwy (at CAM017)	S	202	21	11 (8-14)	13 (5-31)	78 (61-99)	113 (71-178)
166	Boston, old Charles River dam, rear of Science Museum	S	123	25	9 (6-13)	15 (6-39)	76 (57-100)	68 (35-132)
011	Boston, upstream of Charles River Dam and I-93, near Nashua St.	S	202	21	17 (13-23)	12 (4-30)	119 (94-150)	136 (95-194)
		B	128	21	20 (14-27)	24 (12-45)	69 (54-89)	153 (104-225)

[1] The MADEP limits are geometric means for both *Enterococcus* and *E. coli*.

[2] Includes samples taken at both 006 and 206.

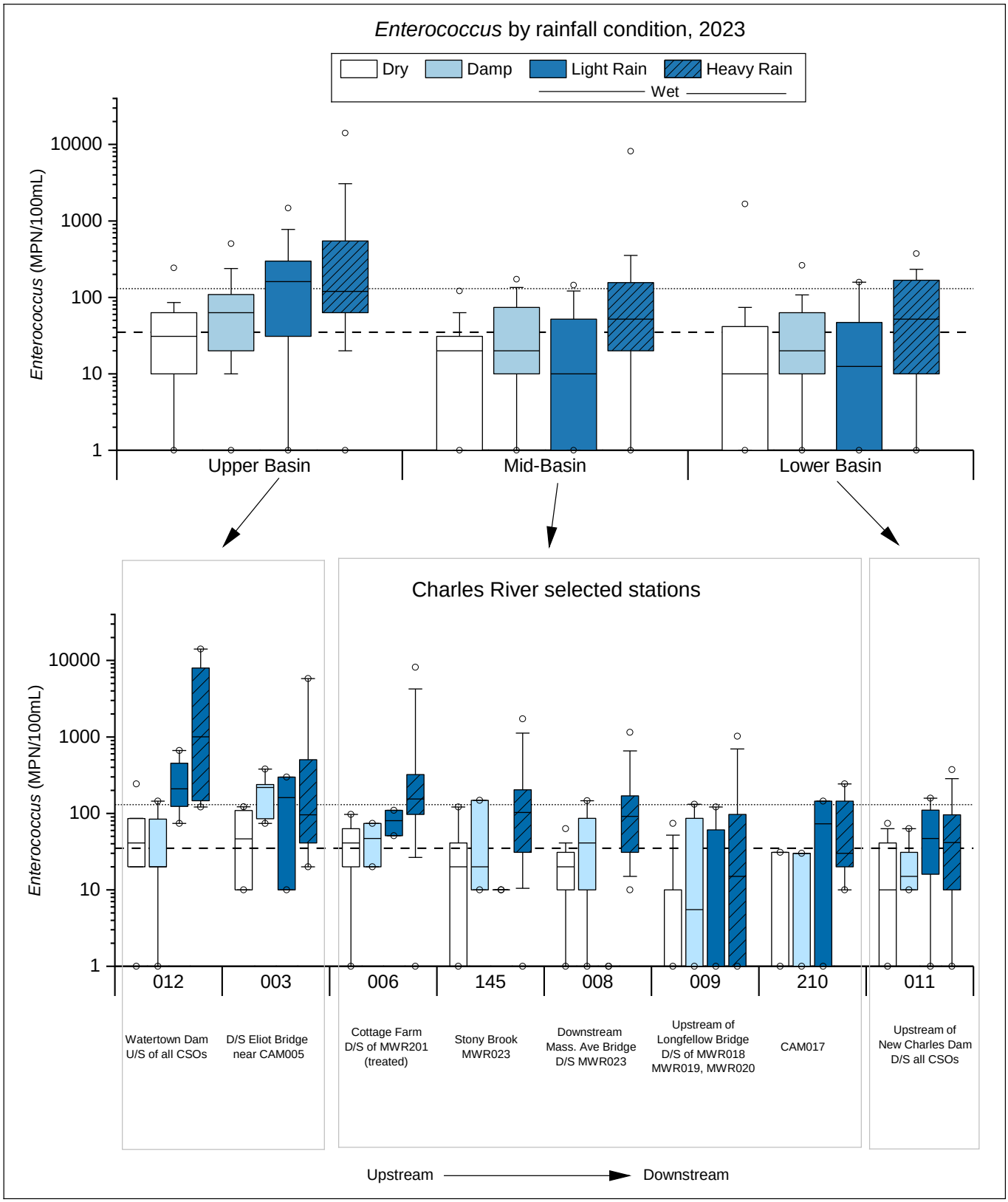

Figure 3-7. *Enterococcus* by rainfall condition, Charles River Basin, 2023.
Dashed line shows State geometric mean standard (35 MPN/100mL), dotted line shows statistical threshold value (130 MPN/100mL). Rainfall is from the nearest rainfall gauge. See Section 2.1.5 for definitions of rainfall conditions. "D/S": downstream. Station 006 includes samples from nearby station 206.

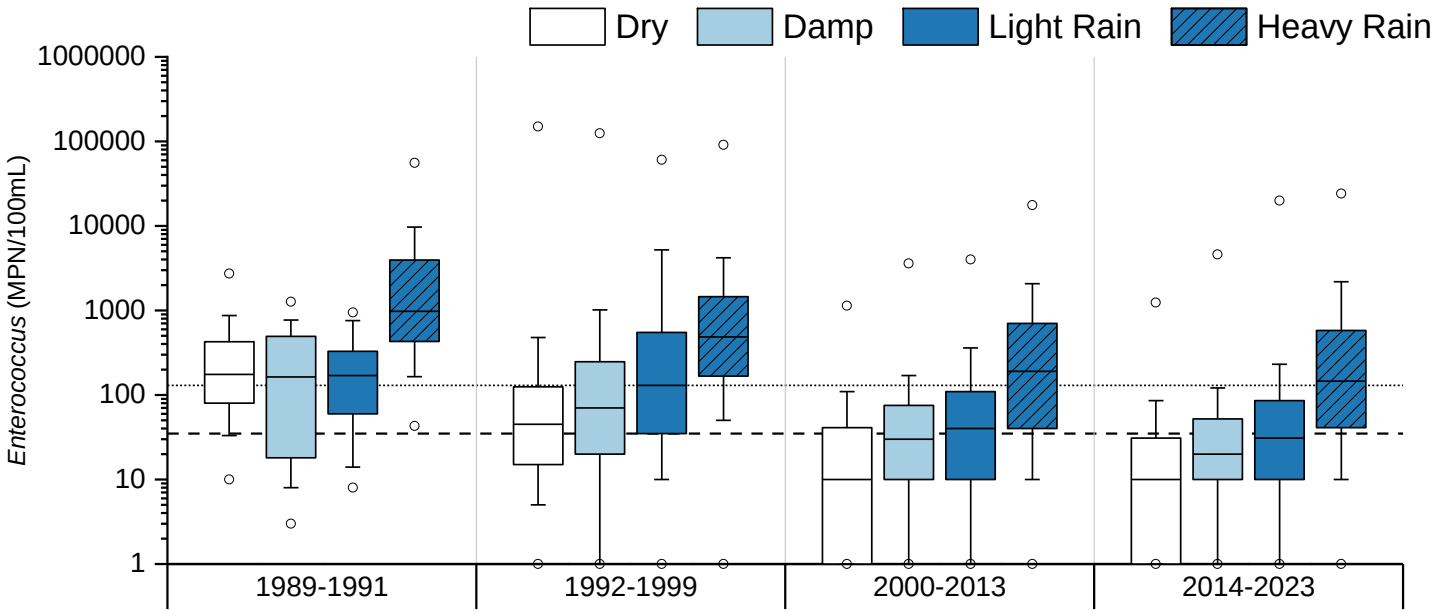

Figure 3-8. *Enterococcus* over time, Upper Charles Basin (upstream of most CSOs) by phase of Long Term CSO Plan and rainfall condition.

Dashed line shows State geometric mean standard (35 MPN/100mL), dotted line shows statistical threshold value (130 MPN/100mL). Data includes results for stations 012, 001, 144, 002, 004, and 005. Rainfall is NOAA rainfall from Logan airport. See Section 2.1.5 for definitions of rainfall conditions.

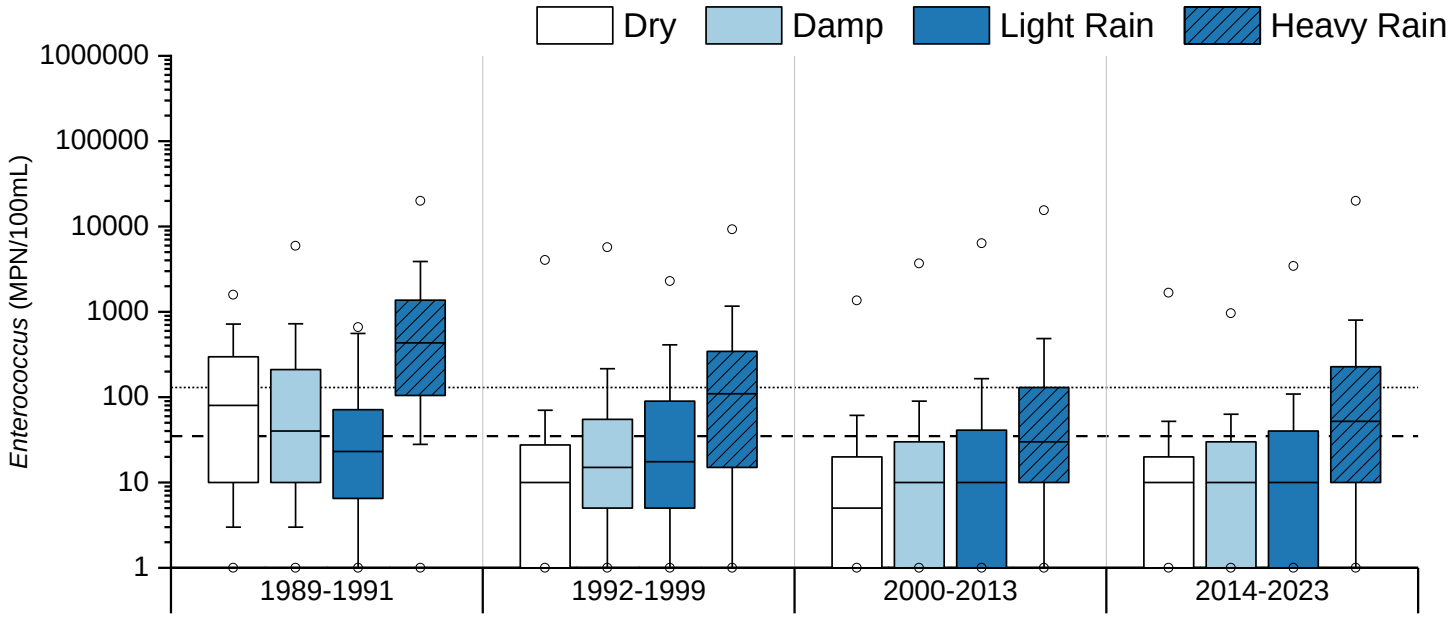

Figure 3-9. *Enterococcus* over time, Lower and Middle Charles Basin by phase of Long Term CSO Plan and rainfall condition.

Dashed line shows State geometric mean standard (35 MPN/100mL), dotted line shows statistical threshold value (130 MPN/100mL). Data includes results for all stations from 006 (BU Bridge) downstream. Rainfall is NOAA rainfall from Logan airport. See Section 2.1.5 for definitions of rainfall conditions.

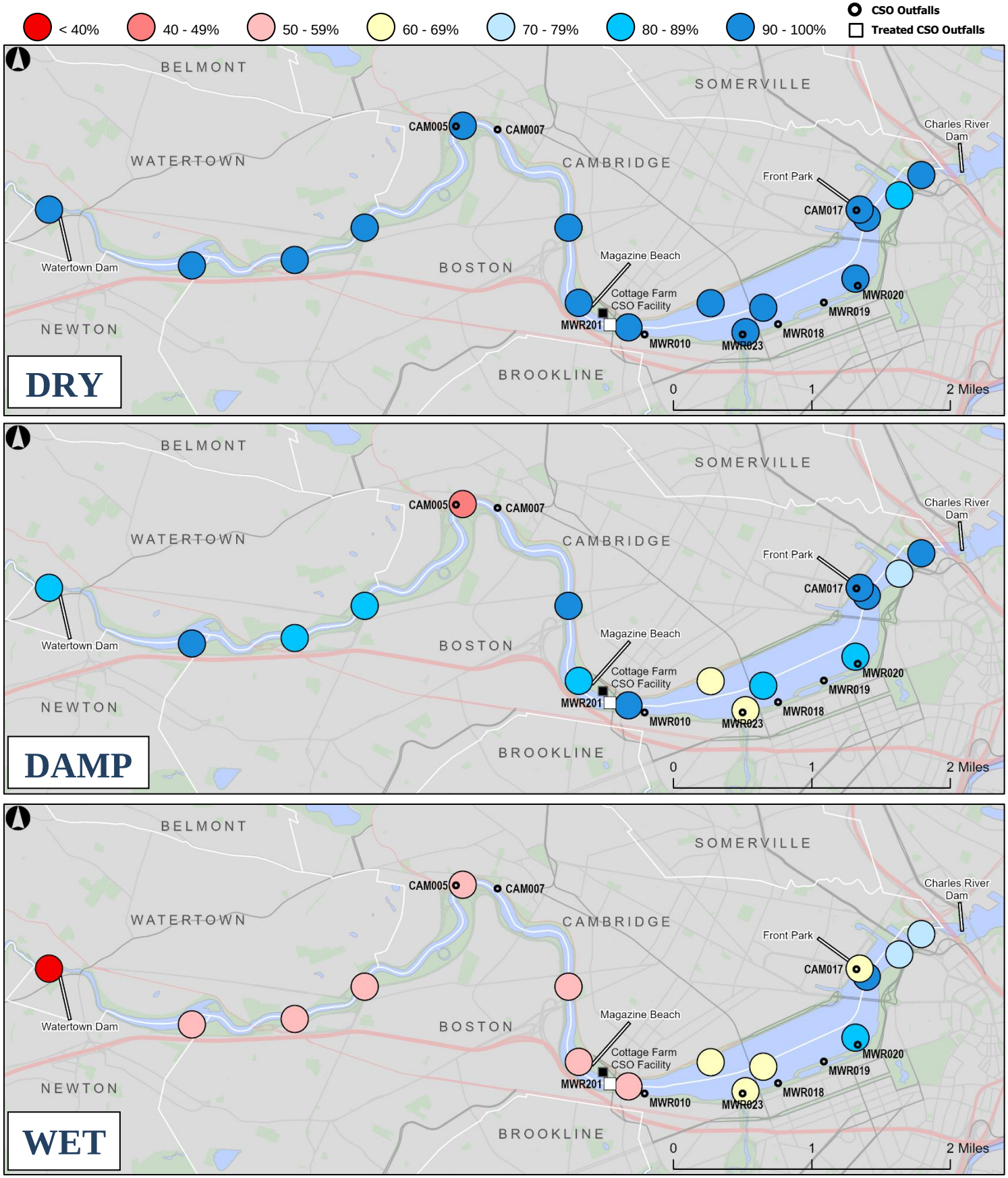

Figure 3-10. Charles River *Enterococcus* percent compliance by weather condition, 2023.

Compliance with 130 MPN/100mL statistical threshold value. Rainfall is from nearest rain gauge to station. See Section 2.1.5 for definitions of rainfall conditions. Dots are the monitoring locations pictured in Figure 3-1 and listed in Table 3-1.

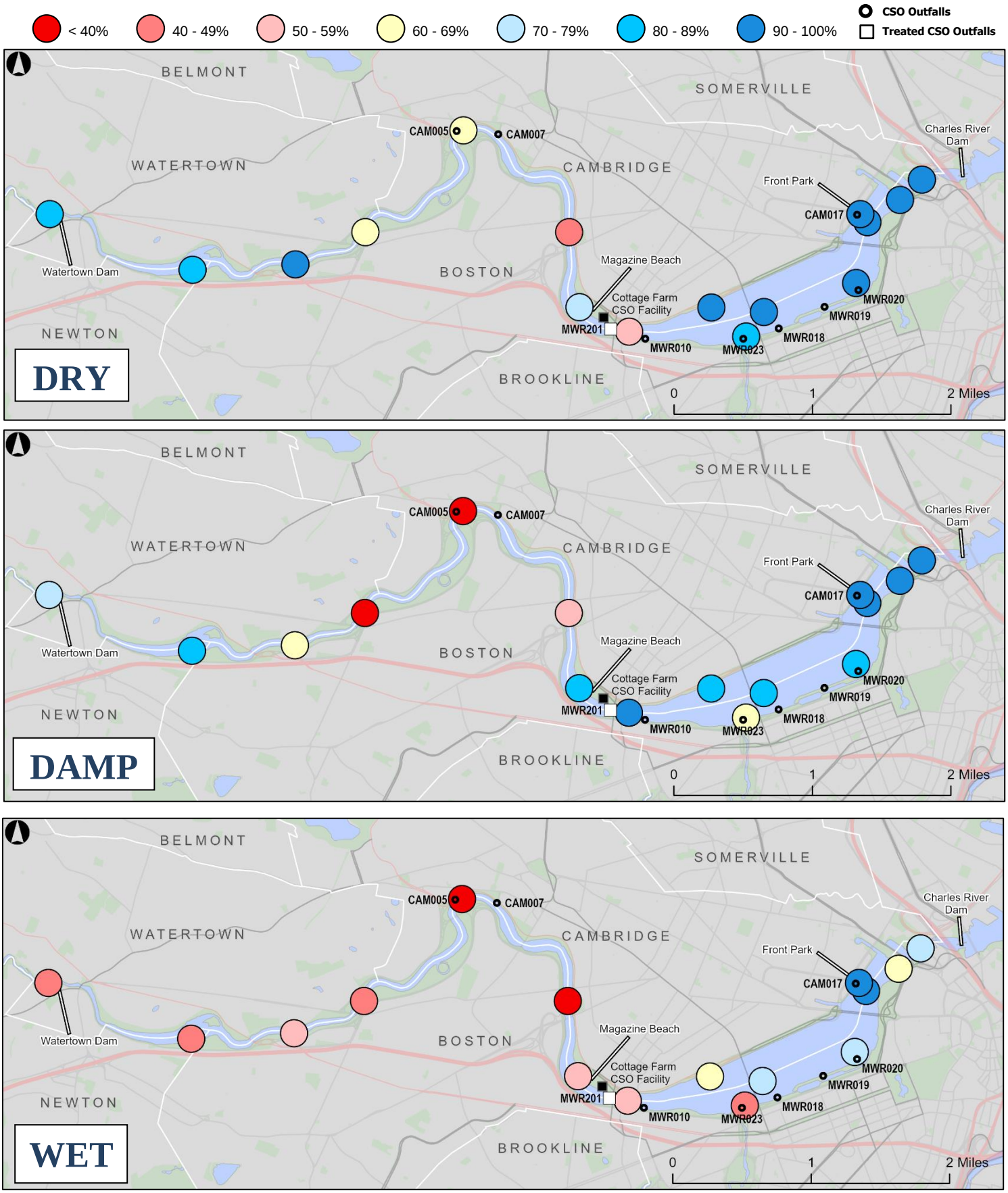

Figure 3-11. Charles River *E. coli* percent compliance by weather condition, 2023.

Compliance with 410 MPN/100mL statistical threshold value. Rainfall is from nearest rain gauge to station. See Section 2.1.5 for definitions of rainfall conditions. Dots are the monitoring locations pictured in Figure 3-1 and listed in Table 3-1.

3.5 Summary of Charles River Water Quality

Spatial differences of 2023 bacterial water quality in the Charles Basin were most pronounced in wet conditions, where fewer samples met standards in much of the Upper Basin and more samples meeting standards further downstream. Annual geometric means were generally above state standards and were distributed similarly to other recent years with above average rainfall (2019[16], 2021[17]). Most stations routinely met *Enterococcus* and *E. coli* standards in dry and damp conditions with exceedances occurring in much of the Upper Basin. Chapter 5 provides a detailed analysis of bacteria concentrations following storms of various sizes, and the time it takes for bacteria counts to return to baseline.

As shown in Figure 3-8 and 3-9, *Enterococcus* counts have generally decreased in all regions of the Charles River, in all weather conditions, through the progression of MWRA's Long Term CSO Plan. In the 2014-2023 period, after completion of construction projects in the study area, the geometric mean of *Enterococcus* in all regions meets state standards in all but heavy rain.

Surface water dissolved oxygen met standards at all stations in the Charles River. Bottom-water dissolved oxygen met standards in the Upper Charles Basin, but were below minimum standards in the deeper waters of the Mid-Basin and near the Charles River Dam. Any saltier harbor water that is trapped within the Charles after entering through the dam's locks settles into deeper parts of the river basin and contributes to stratification, which limits exchange with more oxygenated surface waters.

2023 nutrients, TSS and chlorophyll data matched long-term averages overall. Total phosphorus and phosphate concentrations trended above historic averages during the summer likely due to the historically high rainfall totals in this period, but no significant algae or cyanobacteria bloom was observed in the Lower Basin.

[16] Summary of CSO Receiving Water Quality Monitoring in Upper Mystic River/Alewife Brook and Charles River, 2019. http://www.mwra.com/harbor/enquad/pdf/2020-05.pdf

[17] Summary of CSO Receiving Water Quality Monitoring in Upper Mystic River/Alewife Brook and Charles River, 2021. http://www.mwra.com/harbor/enquad/pdf/2022-09.pdf

4 Mystic River and Alewife Brook

4.1 Sampling area

Monitoring results of the Mystic River and tributaries are divided into four reaches. Sampling locations and CSOs appear in Figure 4-1 with labeled landmarks that delineate the reach boundaries. Table 4-1 describes the reaches and the sampling locations within each reach.

In 2017, stations 277 and 276 were added to support the CSO performance assessment described in Chapter 1. In 2021, nutrient sampling was added to station 177 in the lower Mystic River basin.

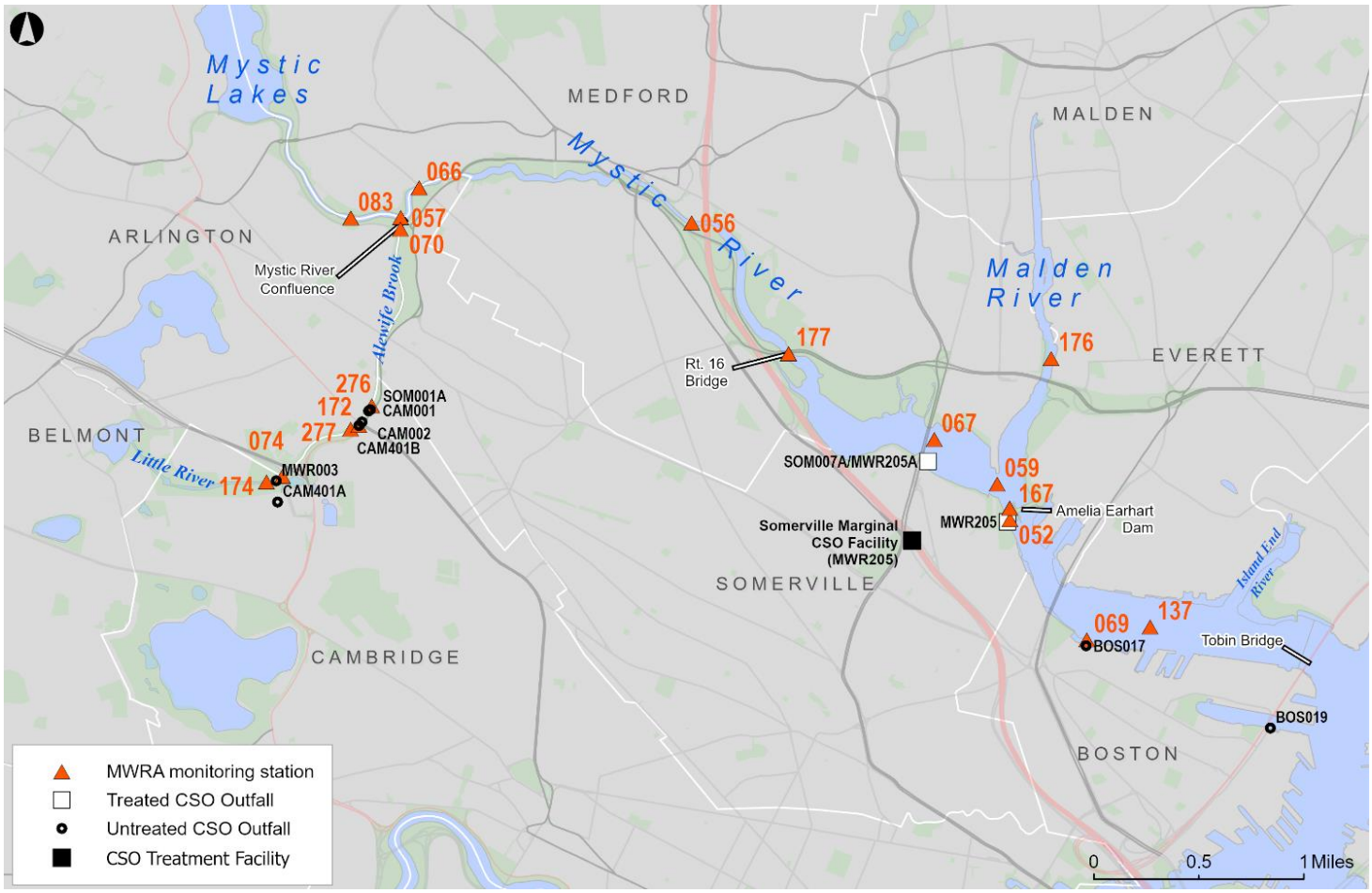

Figure 4-1. Map of Mystic River sampling locations.

4.2 Pollution sources

Known pollution sources to the Mystic River/Alewife Brook are shown in Table 4-2 and consist primarily of stormwater, upstream inputs, and CSOs. Upstream of the Amelia Earhart Dam, there are seven CSO outfalls located in Cambridge and Somerville. This includes six active CSO outfalls in Alewife Brook, and one treated CSO outfall in the Lower Mystic basin (Somerville Marginal CSO, MWR205A/SOM007A). MWR205A/SOM007A discharges screened, chlorinated, and dechlorinated flow from the Somerville Marginal CSO Treatment Facility during an activation occurring at high tide. At low tide, the Somerville Marginal facility discharges screened, chlorinated, and dechlorinated flow downstream of the Amelia Earhart dam from CSO outfall MWR205. MWR205 is the only source of treated CSO discharge to the Mystic River below the Amelia Earhart dam, although there is an untreated outfall (BOS017) as well. This area downstream of the dam is not in the variance area for the Alewife Brook/Upper Mystic River. In 2023, CAM401A was the most frequent CSO discharge to Alewife Brook, discharging twenty times. Somerville Marginal Relief Outfall SOM007A/MWR205A, the only CSO in the freshwater portion of the Mystic River, had fifteen activations in 2023.

Sanitary sewer overflows (SSOs) can also occur in rare circumstances like extreme rain events, sewer breaks, or sewer obstructions, but are not typical in a given year. SSOs are unintentional discharges of wastewater to the environment prior to reaching a treatment facility. SSOs from the MWRA system are reported on the MWRA website; there were none that reached Mystic/Alewife waters in 2023.[18]

Table 4-3 shows the MWRA, Cambridge, and Somerville meter results for CSOs affecting the Mystic River and Alewife Brook in calendar year 2023. Measured CSO volumes and activation frequency are available for the Somerville Marginal CSO facility. Table 4-4 summarizes the proportion of samples collected in dry, damp, and wet weather. As mentioned in Chapter 3.2, this monitoring program is designed to capture water quality in all weather conditions from March through October.

[18] MWRA Sanitary Sewer Overflow (SSO) Reporting page. http://www.mwra.com/harbor/html/sso_reporting.htm

Table 4-1. MWRA monitoring locations, Mystic River and Alewife Brook.

Reach	Description of Reach	Sampling station	Location Description
Alewife Brook (Class B/Variance, warm water fishery)	Tributary to Mystic River. From confluence at Little River in Cambridge/Arlington to confluence with Mystic River in Arlington/Somerville	*174, Cambridge/Arlington	Little River, upstream of Rt. 2 and off ramp to Alewife T station. Upstream of all CSOs
		*074, Cambridge/Arlington	Downstream of CAM401A, MWR003
		*277, Cambridge/Arlington	Upstream of CAM401B
		*172, Cambridge/Arlington	Downstream of CAM401B
		*276, Cambridge/Arlington	Downstream of SOM001A
		*070, Arlington/Somerville	Mystic Valley Parkway bridge. Downstream of all Alewife CSOs
Upper Mystic River (Class B/Variance, warm water fishery)	Downstream of Lower Mystic Lake in Arlington/Medford to Route 16 bridge in Medford	†*083, Arlington/Medford	Upstream of confluence of Mystic River and Alewife Brook
		*057, Medford	Confluence of Mystic River and Alewife Brook
		†066, Medford	Boston Ave bridge, downstream side
		*056, Medford	Upstream of I-93 bridge, near Medford Square off ramp
Lower Mystic River basin (Class B/Variance, warm water fishery)	Route 16 bridge in Medford to Amelia Earhart Dam in Somerville/Everett, including the Malden River	†177, Medford	Downstream of Rt. 16 bridge
		*067, Medford	Rt. 28 bridge, downstream side, near Somerville Marginal MWR205A outfall
		*176, Medford/Everett	Malden River, upstream of Rt. 16 bridge
		059, Somerville/Everett	Confluence of Mystic and Malden Rivers
		†*167, Somerville/Everett	Amelia Earhart Dam, upstream side
Mystic River mouth (Class SB_{CSO}, marine)	Downstream of Amelia Earhart Dam in Somerville/Everett to Tobin Bridge, Chelsea R. confluence in Chelsea/East Boston	052, Somerville	Downstream of Amelia Earhart dam, near Somerville Marginal CSO facility outfall (MWR205)
		069, Charlestown	Rear of Schrafft's Center at BOS017 outfall
		†137, Charlestown/Everett	Upstream of Tobin Bridge near confluence of Mystic, Chelsea Rivers and upper inner harbor

Sampling locations are midstream unless otherwise noted.
* indicates sampling location is also a shoreline sampling location.
† indicates a sampling location sampled for nutrients, TSS, chlorophyll in eutrophication monitoring project.
[x] indicates inactive station, not sampled during the report year.

Table 4-2. Mystic River/Alewife Brook pollution sources in 2023.

Source	Alewife Brook	Upper Mystic River	Lower Mystic Basin	Mystic River mouth
CSOs (untreated)	6 active, 7 closed CAM401A[1] MWR003[1] CAM001 CAM002 CAM401B[1] SOM001A[1] CAM004 closed 12/15 CAM400 closed 3/11 SOM001 closed 12/96 SOM002 closed 1994 SOM002A closed 8/95 SOM003 closed 8/95 SOM004 closed 12/95	2 closed SOM006 closed 12/96 SOM007 closed 12/96	No	1 active BOS017
CSO treatment facility (screened, chlorinated and dechlorinated CSO discharge)	No	No	Somerville Marginal (MWR205A/SOM007A[1], high tide only) Activated 15 times in 2023	Somerville Marginal (MWR205[1]) Activated 32 times in 2023
Storm drains	Yes	Yes	Yes	Yes
Upstream inputs (elevated bacteria counts upstream)	Yes	Yes	Yes	Yes
Dry weather inputs (elevated bacteria counts in dry weather)	Yes	Yes	Yes	Yes
Tributary brook or stream flow	Yes	Yes	Yes	Yes
Sanitary Sewer Overflows (SSOs)[2]	No	No	No	No

[1] Activated in 2023
[2] From MWRA-owned system.

Table 4-3. Mystic River/Alewife Brook CSO activations, results of meter data and facility records for 2023 system conditions and 2023 rainfall.[1]

CSO Outfall	Activation Frequency	Total Discharge Duration (hr)	Total Discharge Volume (Million Gallons)
Alewife Brook			
CAM001[1]	0	0.00	0.00
CAM002[1]	0	0.00	0.00
MWR003[2]	2	2.20	1.30
CAM401A[1]	20	33.42	20.52
CAM401B[1]	7	5.75	1.00
SOM001A[3]	12	6.42	7.02
TOTAL	**39**		**29.84**
Upper Mystic River (Lower Mystic River Basin, freshwater outfall)			
SOM007A/MWR205A (Somerville Marginal, high tide discharge only) [4]	15	29.91	43.56
TOTAL	**15**		**43.56**
Mystic/Chelsea Confluence (Mystic River mouth, marine outfalls)			
MWR205 (Somerville Marginal Facility) [4]	32	99.33	130.58
BOS017[2]	4	4.58	0.60
TOTAL	**36**		**130.95**

[1] Results from City of Cambridge meter and model data. (City of Cambridge 2023 CSO NPDES Annual Report, 2024)
[2] Metered data are estimates of outfall discharge calculated using data from sensors, taking into account physical configurations and constraints. (AECOM 2024)
[3] Results from City of Somerville meter data (City of Somerville 2024).
[4] Treated discharge. Activation frequency and MWR205 volume are from MWRA facility records. SOM007A/MWR205A volume estimate is calculated using data from a sensor at the outfall, and includes stormwater that enters the conduit downstream of the facility as well as treated CSO.

Table 4-4. Mystic River/Alewife Brook station visits by rainfall condition.

Sampling period	Dry[1]	Damp[1]	Wet[1]	Total
2018 – 2022 [2]	25% 859 station visits	27% 927 station visits	47% 1585 station visits	100% 3371 station visits
2023	34% 136 station visits	32% 130 station visits	34% 139 station visits	100% 405 station visits

[1] See Section 2.1.5 for descriptions of rainfall conditions.
[2] 2018-2019 samples tended to be collected in wetter conditions with increased focus on sampling following large storms.

4.3 Summary of water quality, 2019-2023

A summary of water quality results collected from the last five years is shown in Table 4-5.

Table 4-5. Summary of water quality, Mystic River/Alewife Brook, 2019 – 2023.

Parameter		Water Quality Guideline or Standard	Alewife Brook				Upper Mystic				Lower Mystic Basin				Malden River				Mystic Mouth			
			Mean ± SD	% meeting guideline	Range	n	Mean ± SD	% meeting guideline	Range	n	Mean ± SD	% meeting guideline	Range	n	Mean ± SD	% meeting guideline	Range	n	Mean ± SD	% meeting guideline	Range	n
Surface Temperature (°C)[1]	Summer	≤ 28.3	19.3± 3.7	100	10.9-25.9	389	21.5± 4.1	100	13-27.7	305	21.5± 4.3	100	12-27.6	231	21.5± 4.5	100	11.7-27.3	72	19± 2.1	100	13.6-24.4	141
	Winter		6.6± 1.6	100	4.2-8.2	15	4.1± 1.8	100	1.5-8.2	47	4.6± 2.1	100	1.2-8.9	41	6.7± 3	100	3.8-9.8	3	4± 1.4	100	1.6-6.2	29
Bottom water dissolved oxygen (mg/L)[1]	Summer	≥ 5.0	3.2± 0.5	-	2.5-3.8	7	5.4± 2	61.6	0.2-8.9	151	6.2± 3	67.7	0.1-15.2	158	6.6± 2.9	74.5	1.2-15.3	51	6.3± 1.8	78.5	1.5-11.4	130
	Winter	≥ 5.0		-		-	11.6± 0.6	100	10.2-12.6	14	11± 1.7	100	5.8-13.7	27	9.8± 2.6	100	6.9-11.5	3	10.4± 0.6	100	8.6-11.4	28
pH[2] (S.U.)		6.5-8.3 (8.5 marine)	6.8± 0.3	99.8	6.5-7.9	550	7.3± 0.4	96.8	6.5-8.7	710	7.3± 0.7	85.9	6.6-9.4	630	7.4± 0.7	83.6	6.3-9.3	165	7.7± 0.2	100	7.1-8.2	437
Water clarity	Total Suspended Solids (mg/L)	NS		-		-	3.6± 2.3	-	0.2-20.4	251	6.3± 7.2	-	1.1-74.6	195	ND	-	ND	-	4± 3.8	-	0.8-25.1	182
	Secchi depth (m)[3]	≥1.2		-		-	1.1± 0.4	-	0.4-2.2	121	0.9± 0.3	-	0.2-2.6	222	0.8± 0.3	-	0-1.6	100	2.3± 0.9	-	0.6-5.5	241
	Turbidity (NTU)	NS	8.3± 7.8	-	0.1-42.4	195	3.8± 2.9	-	0-17.2	449	5.1± 3.5	-	0.4-25.1	413	6.2± 4.1	-	0.1-26.5	139	3.6± 5.2	-	0-93.4	405

For footnotes, see following page.

Table 4-5. Summary of water quality, Mystic River/Alewife Brook, 2019 - 2023, continued.

Parameter		Water Quality Guideline or Standard	Alewife Brook				Upper Mystic				Lower Mystic Basin				Malden River				Mystic Mouth			
			Mean ± SD (95% CI)	% meeting guideline	Range	n	Mean ± SD (95% CI)	% meeting guideline	Range	n	Mean ± SD (95% CI)	% meeting guideline	Range	n	Mean ± SD (95% CI)	% meeting guideline	Range	n	Mean ± SD (95% CI)	% meeting guideline	Range	n
Bacteria (counts/100mL)[4]	Fecal coliform	200 / 400[5]	ND	-	ND		ND	-	ND		ND	-	ND		ND	-	ND		21 (17-26)	89.1	0-53700	534
	E. coli	126 / 410[5,6]	739 (672-812)	40.7	0-1990000	1043	147 (132-163)	81.9	0-72700	733	118 (102-136)	79.9	0-24200	566	184 (138-246)	70.2	0-44100	161	ND	-	ND	
	Enterococcus	35/ 130[5]	237 (213-263)	34.6	0-201000	1044	51 (44-58)	70.1	0-24200	733	13 (11-16)	85.4	0-19900	567	25 (17-36)	77.6	0-14100	161	4 (3-5)	91.8	0-6130	536
Nutrients (µmol/L)	Phosphate	NS	ND	-	ND		0.5±0.4	-	0-3.7	251	0.7± 1.3	-	0-11.1	195	ND	-	ND		0.8± 0.4	-	0.1-2.5	227
	Ammonium	NS	ND	-	ND		11.3±8.3	-	0.1-29.5	252	8.9±7	-	0-26.3	195	ND	-	ND		3.7±2.8	-	0-12.7	227
	Nitrate+nitrite	NS	ND	-	ND		48.3±22.7	-	1.5-128	252	37.7± 23.4	-	0-75.9	195	ND	-	ND		7.1±7	-	0-34.1	227
Algae (µg/L)	Chlorophyll *a*	NS	ND	-	ND		6.6±6.1	-	0.7-55.3	252	15.5± 21.5	-	0.9-156	195	ND	-	ND		2.7±3.6	-	0.1-23	227

NS: no applicable numerical standard or guideline. ND: no data. n: number of samples.

[1] Summer (June-October), Winter (January-March).

[2] Median and standard error of the median are shown for pH, rather than arithmetic mean and standard deviation.

[3] Secchi guideline of ≥1.2 meters provides general benchmark for evaluating signs of eutrophication.

[4] For bacterial data, 95% confidence intervals (CI) are provided rather than standard deviations

[5] First number is the all samples geometric mean limit - compare to the "Mean±SD" column (i.e., the Mean in that column is the geometric mean of all stations in that region for the specified indicator bacteria); the second number is the statistical threshold value - compare to the "% meeting guideline" column (i.e., the "% meeting guideline" column is the percentage of samples meeting the statistical threshold value). The "Range" column gives the range of single sample results.

[6] Either *E. coli* or *Enterococcus* are acceptable indicators for EPA or MADEP to assess suitability for swimming in freshwater.

4.4 Water quality results, 2023

This section reports spatial trends for water quality parameters measured in the Mystic River/Alewife Brook in 2023.

4.4.1 Physical measurements

Temperature. Summer (June to October) mean temperatures for 2023 are shown for each sampling location in the uppermost graph of Figure 4-2. Surface and bottom temperatures are similar along the main stem of the Mystic, except on the marine side of the dam, where water depth is greater and harbor temperatures are lower. The Mystic River has a much shallower depth than the Charles River, and exhibits generally warmer bottom temperatures. All stations in this region met water quality standards for temperature in 2023.

Dissolved Oxygen. Summer dissolved oxygen (DO) is shown in the center graph of Figure 4-2. Median and average dissolved oxygen concentrations met the State standard of ≥ 5.0 mg/L at all locations and depths in the Mystic and Malden Rivers. DO in Alewife Brook is typically lower than the Mystic and is often below the State standard. Alewife Brook median and average DO concentrations were below the State standard at all stations in 2023.

Water clarity. Water clarity is indicated by Secchi disk depth. Summer Secchi readings are shown for each sampling location in the bottom graph of Figure 4-2. Water clarity for all but the Mystic River mouth is generally low, with all stations upstream of the Dam (excluding station 056) below the MADPH beach guideline of 1.2 meters. Alewife Brook and several of the Upper Mystic locations are often clear to the bottom and too shallow to measure Secchi depth, or not possible to measure by shoreline sampling. River depth at those locations are typically 0.5 meters in Alewife Brook, and 1 meter in the Mystic River.

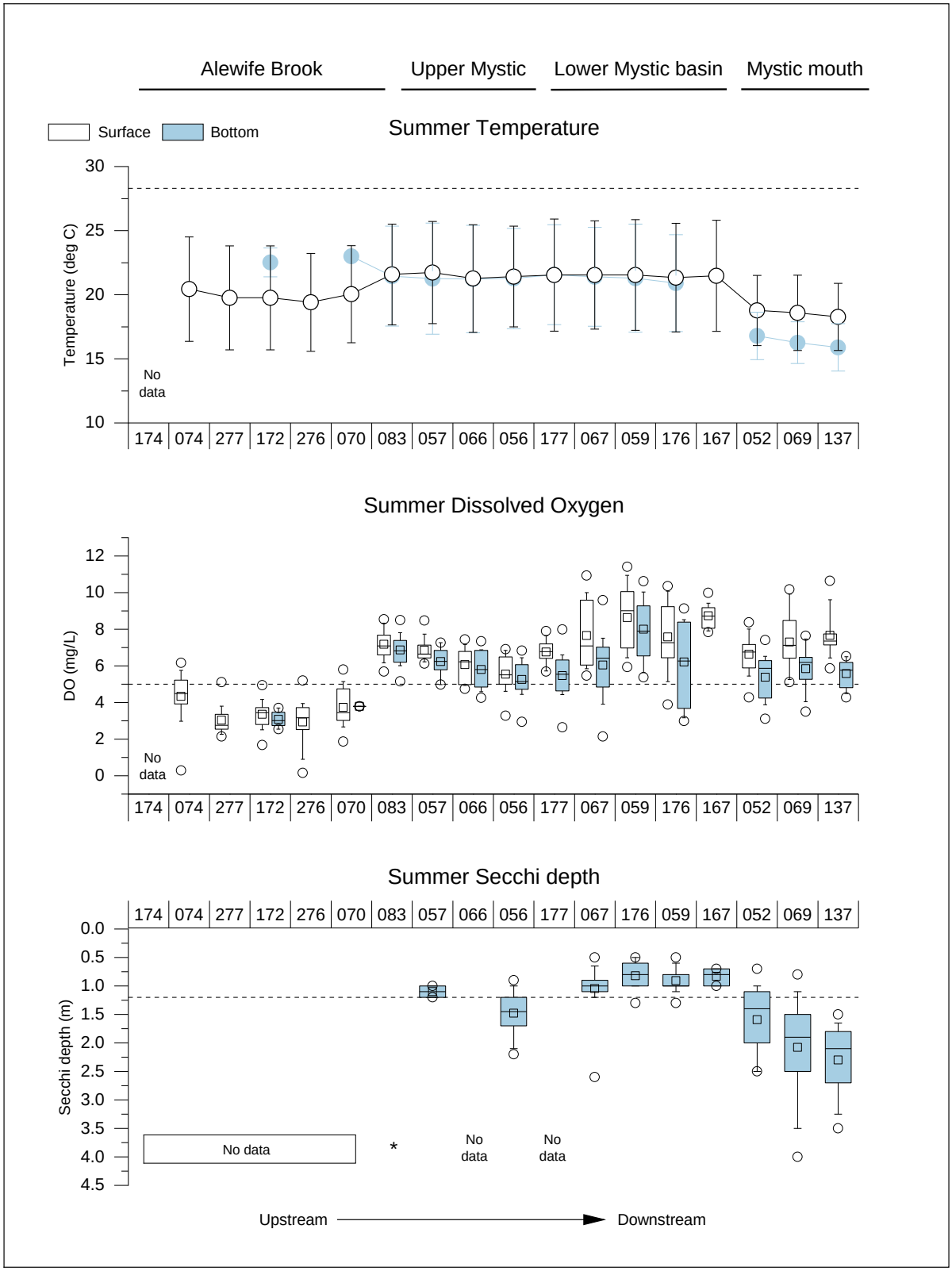

Figure 4-2. Summer (June-October) temperature, dissolved oxygen and Secchi depth, Mystic River and Alewife Brook, 2023.

Dashed lines are State standards or guideline (maximum for temperature, minima for DO and Secchi). Secchi plot has reversed y-axis to visualize depth below the water surface. Station 083 was clear to the bottom for all visits in 2023, indicated by *.

4.4.2 Nutrients, TSS and chlorophyll

Figures 4-3 through 4-7 show monthly average total nitrogen, ammonium, nitrate/nitrite, total phosphorus, phosphate, total suspended solids, and chlorophyll *a* at the Upper Mystic locations (083 upstream of Alewife Brook and 066 at Boston Ave.), Lower Mystic basin (177 downstream of Route 16 bridge and 167 at Amelia Earhart Dam) and Mystic mouth (marine station 137).

Regionally, ammonium, nitrate/nitrite, and phosphate results show relatively strong seasonal effects, as biological activity increases during the summer months and nutrients are depleted. In winter months, when biological nutrient uptake is low, ammonium concentrations in the Upper Mystic are double the concentration in the Charles Basin.

At freshwater Mystic River stations 083, 066, and 167, nutrient results in 2023 were similar to the previous five-year average (2018-2022) with some exceptions. An increase in nutrient concentrations during the wetter part of the summer was evident at Upper Mystic locations, but not as strongly in the Lower Mystic basin or Mystic Mouth. Seasonal signals are more evident in nitrogenous compounds than in total phosphorus or phosphate. Ammonia results were below the 2018-2022 average. This is the third year of monitoring nutrients at Station 177, with total phosphorus and phosphate results trending lower than the previous two years in the late summer and early fall. Station 167 saw lower than previous observed average total phosphorus, phosphate, TSS, and chlorophyll *a* results from August through November. Chlorophyll *a* April values were higher and signaled an early start to the growing season at stations upstream of 137.

At marine station 137 in the Mystic mouth, total phosphorous and phosphate results generally aligned with the seasonal pattern of the previous five years. Ammonium and nitrate/nitrite observations varied slightly from the previous five-year seasonal pattern, most notably in January and September. Monthly chlorophyll *a* levels were below average outside of a summer peak in June and July.

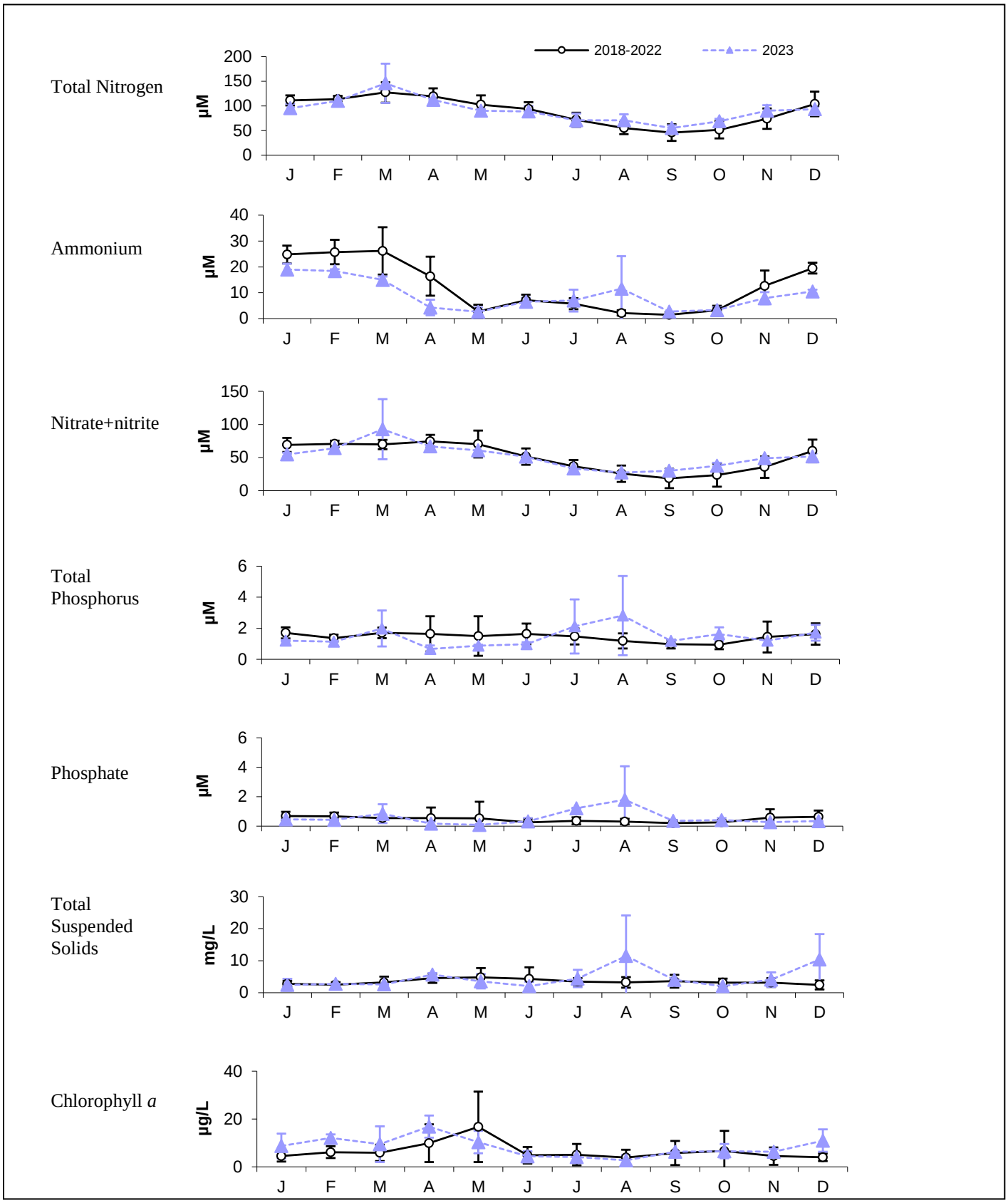

Figure 4-3. Monthly average nutrients, TSS and Chlorophyll, 2018 – 2022 and 2023, Station 083, Mystic upstream of Alewife Brook.

Error bars are ± 1 SD. Note different scales than for Figures 4-4, 4-5, 4-6 and 4-7 for most parameters.

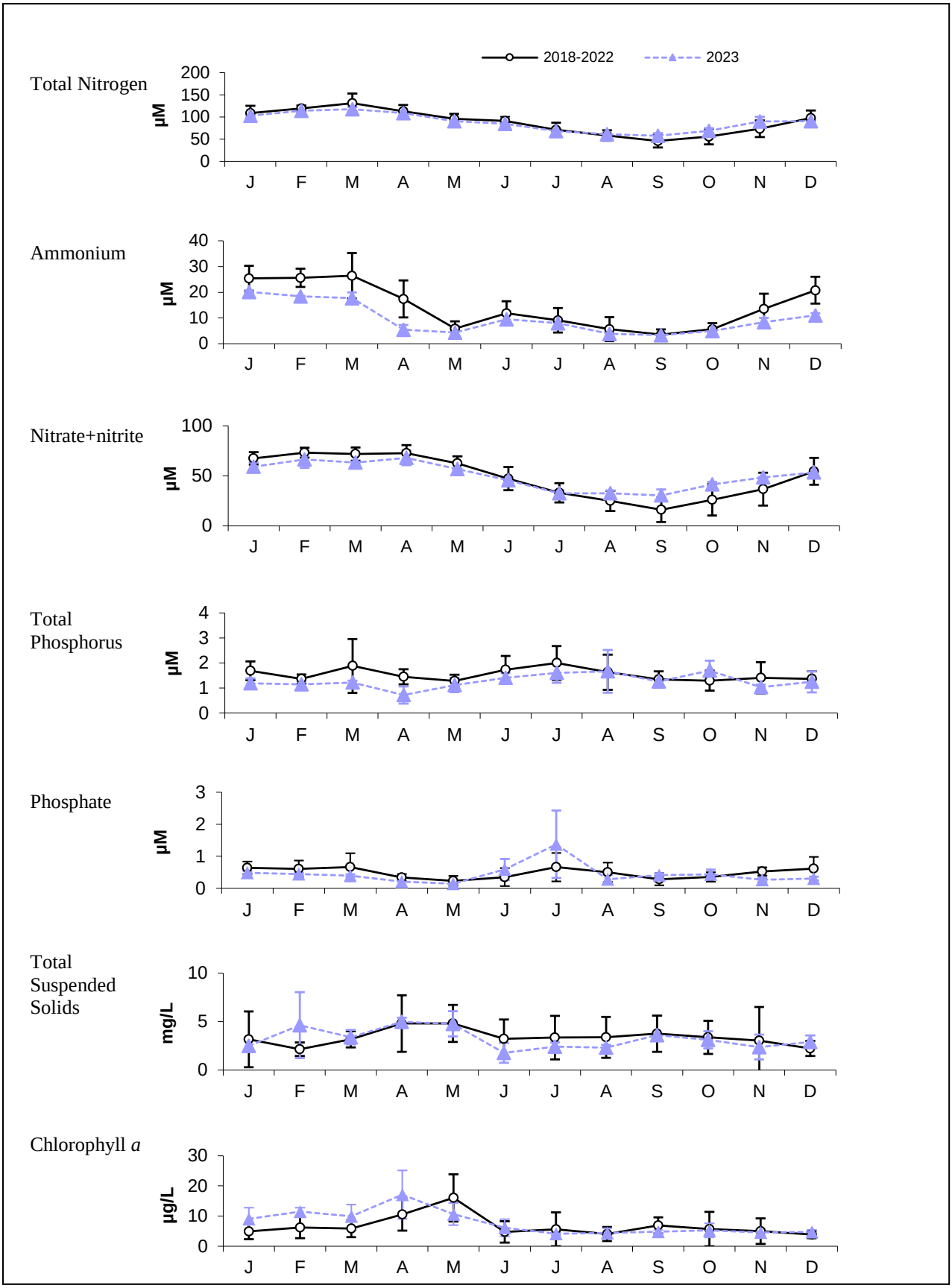

Figure 4-4. Monthly average nutrients, TSS and Chlorophyll 2018 – 2022 and 2023, Station 066, Boston Ave.

Error bars are ± 1 SD. Note different scales than Figures 4-3, 4-5, 4-6 and 4-7 for most parameters.

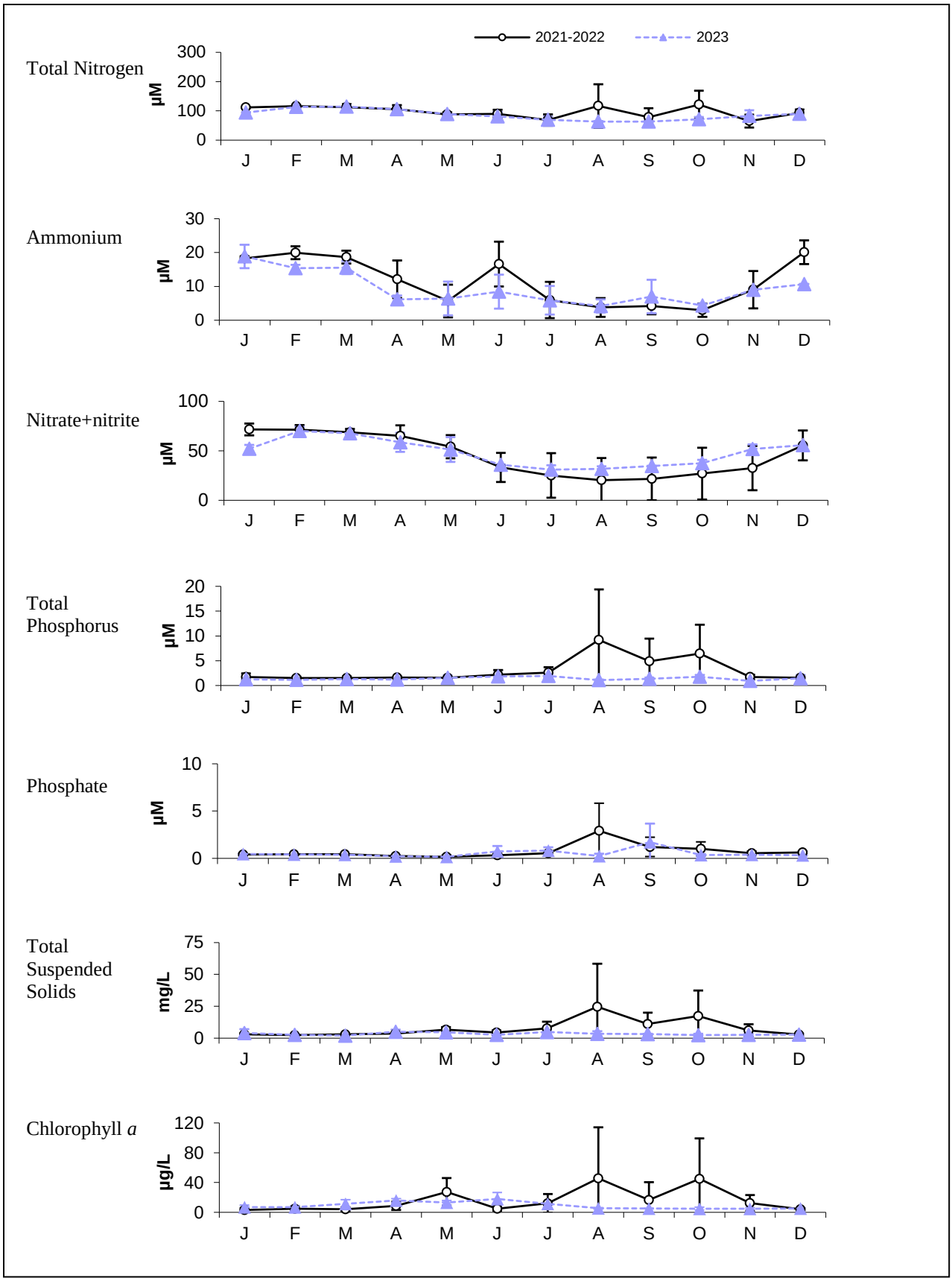

Figure 4-5. Monthly average nutrients, TSS and Chlorophyll 2018-2022 and 2023, Station 177, Route 16 Bridge.

Error bars are ± 1 SD. Note different scales than Figures 4-3, 4-4, 4-6 and 4-7 for most parameters. Collection and analysis of these parameters at station 177 began in 2021.

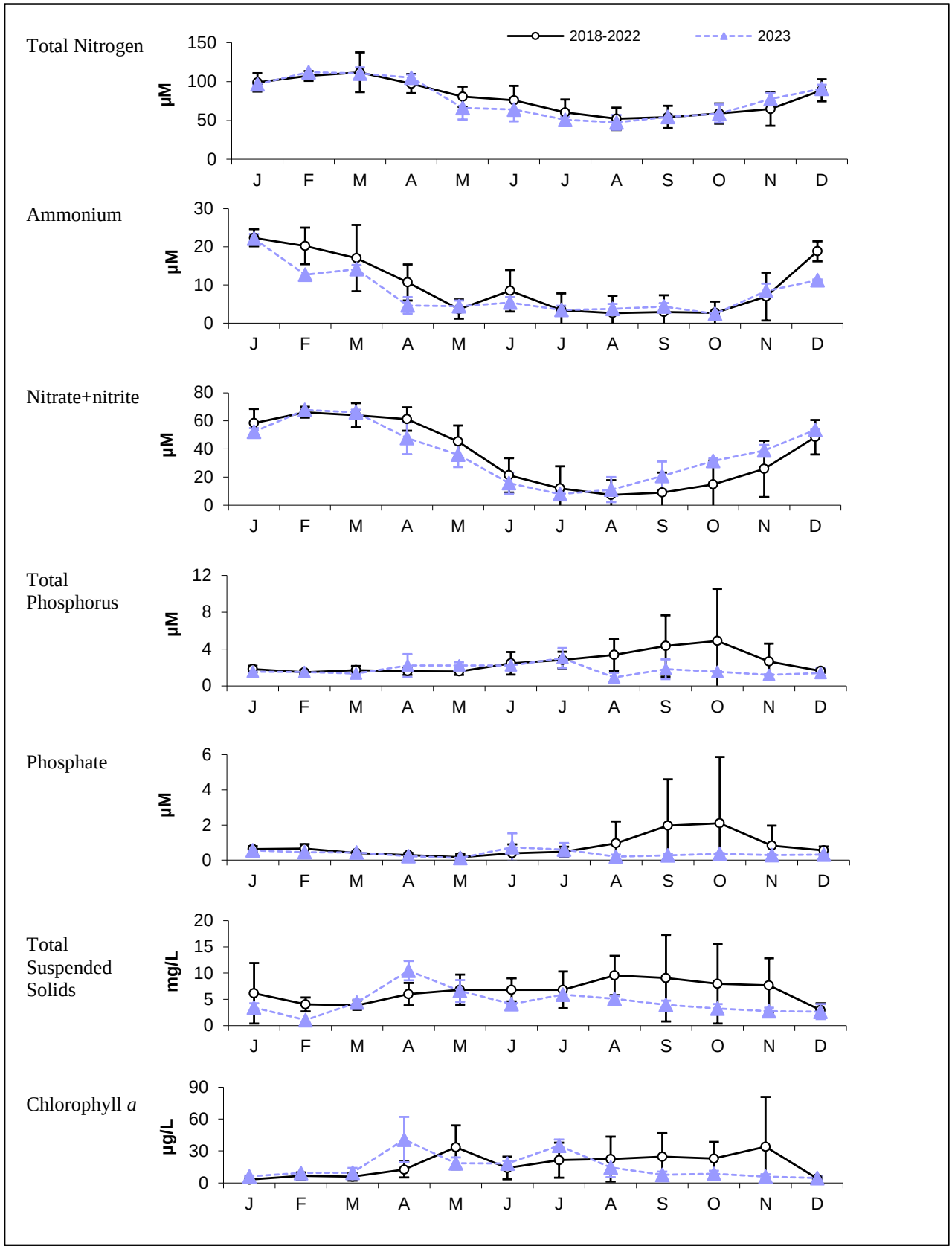

Figure 4-6. Monthly average nutrients, TSS and Chlorophyll 2018 – 2022 and 2023, Station 167, Amelia Earhart Dam (upstream/freshwater).

Error bars are ± 1 SD. Note different scales than Figures 4-3, 4-4, 4-5 and 4-7 for most parameters.

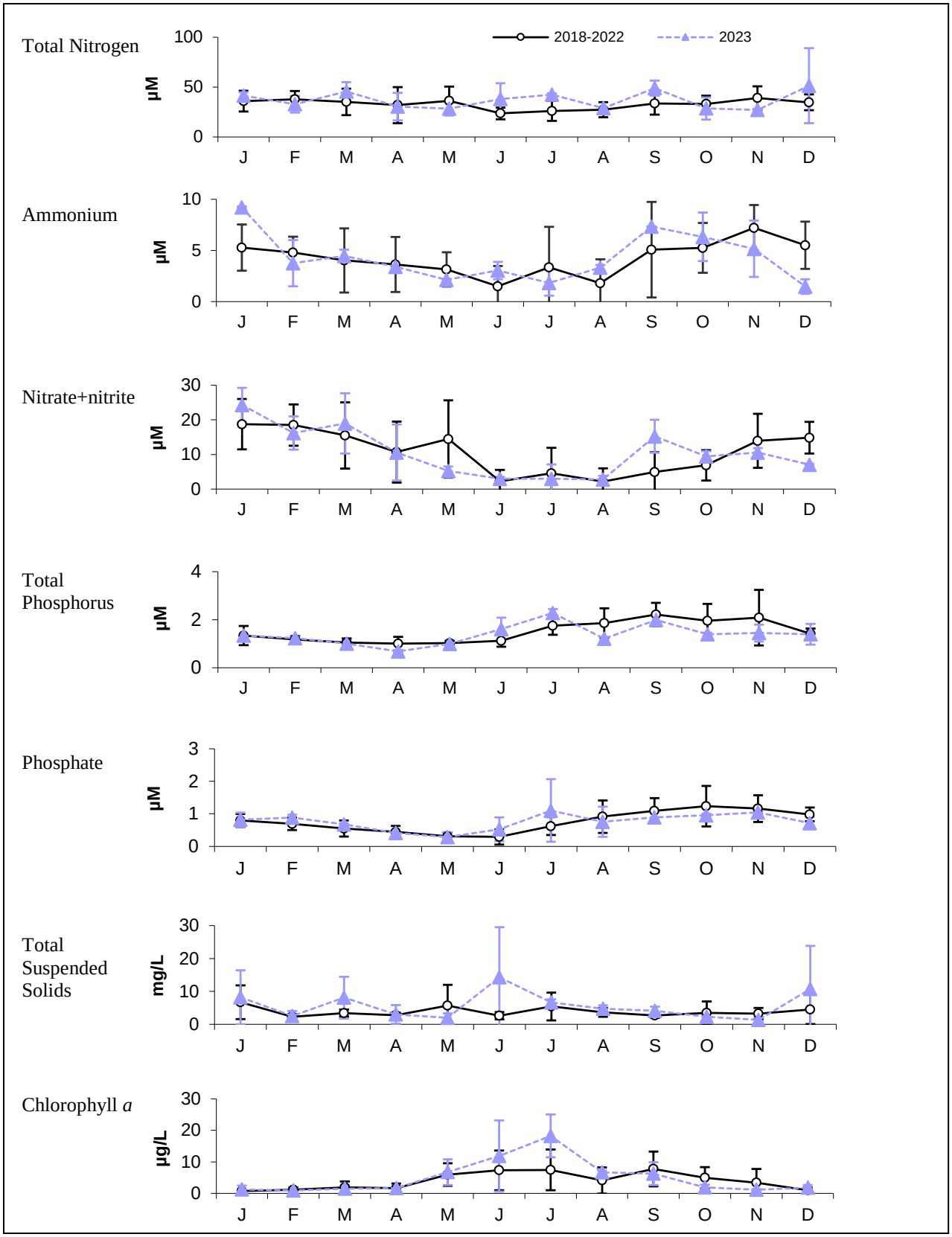

Figure 4-7. Monthly average nutrients, TSS and Chlorophyll 2018 – 2022 and 2023, Station 137, Mystic River mouth (marine).

Error bars are ± 1 SD. Note different scales than Figures 4-3, 4-4, 4-5 and 4-6 for most parameters.

4.4.3 Bacterial water quality

Figure 4-8 shows the bacterial water quality at each location sampled in the Mystic River and Alewife Brook for 2023 for dry, damp, and wet weather. The rainfall conditions are derived on a station-by-station basis from the nearest rain gauge. For this area, the three gauges in use are the BWSC East Boston gauge, the USGS Fresh Pond gauge, and the MWRA gauge at the Somerville-Marginal CSO Treatment Facility. The uppermost graph in the figure shows percentile plots of *Enterococcus* counts for each location, arranged from upstream to downstream for 2023. The center graph shows percentile plots of *E. coli*, which is monitored in the freshwater portion of the Mystic River, and fecal coliform in the bottom graph, which is monitored in the marine portion of the Mystic River in place of *E. coli*.

As shown in Figure 4-8, in 2023 nearly all geometric means (approximated by the median line in the box) in Alewife Brook exceeded *E. coli* and *Enterococcus* standards during all weather conditions. There was little difference in bacteria concentrations between station 083 upstream of Alewife Brook and station 057 at the Mystic/Alewife confluence. Upper Mystic bacteria concentrations downstream of 057 (066, 056, 177) fell between the geometric mean and statistical threshold value (STV) standards under most weather conditions. Samples taken in the Lower Mystic Basin and Mystic mouth demonstrated high compliance for both *Enterococcus* and fecal coliform in all weather conditions, with improving wet weather compliance moving downstream to the mouth.

Geometric means for each indicator for 2018 - 2022 and 2023 appear in Table 4-6 (Alewife Brook) and 4-7 (Mystic River), for all weather conditions combined. If the 95% confidence intervals for the two periods overlap, this generally indicates no statistically significant difference between the two geometric means. As shown in Table 4-4, samples collected in this region in 2023 were evenly spread between all weather conditions. Overall, 2023 geometric means in the Alewife Brook and Mystic River were lower or similar to the previous 5 years. Geometric means did not meet *Enterococcus* or *E. coli* water quality standards in Alewife Brook in 2023. Lower Mystic stations (067, 059, 176, 167) geometric means met *Enterococcus* standards. Stations 083, 057 and 066 in the Upper Mystic and station 167 in the Lower Mystic Basin met *E. coli* standards. All Mystic mouth station (052, 069, 137) geometric means met standards for both *Enterococcus* and fecal coliform. Like the Charles River, *E. coli* count ranges and geometric means are consistently higher than those for *Enterococcus* at all stations. This difference has been observed throughout this monitoring program, and is expected due their differing reactions to environmental stressors such as salinity or sunlight.

The spatial and temporal change in *Enterococcus* concentrations in Alewife Brook and the Mystic River appear in Figure 4-9 through Figure 4-11. Figure 4-9 shows the impact of rainfall on *Enterococcus* counts on the four river reaches in 2023, along with selected locations near CSO outfalls. In the Alewife, the Little River station 174 upstream of CSOs exceeds standards in all weather, suggesting persistent contamination not resulting from CSO discharges. In the Upper Mystic and Lower Mystic reaches, results were often below the statistical threshold value in all weather conditions, with more exceedances in wet weather. Station 052 below the Amelia Earhart Dam and the treated Somerville Marginal CSO facility outfall met standards in all weather conditions. It is important to note that stormwater enters the Somerville Marginal CSO facility outfall conduit before the discharge enters the Mystic River.

Therefore, results at station 052 reflect ambient conditions in the river and the potential effects of both treated CSO and untreated stormwater.

Results in Figures 4-10 (Alewife Brook) and 4-11 (remainder of the Mystic) are grouped by phases of the Long Term CSO Plan improvements and include the geometric mean counts in each rainfall condition. Figure 4-10 shows minimal changes in dry or damp *Enterococcus* counts in the Alewife, but the magnitude of exceedances decreased in wet weather, particularly in the 2016--2023 period following completion of all LTCP-related construction in this region. *Enterococcus* results in Figure 4-11 show improvement over time in the Mystic River since the early 1990s, particularly in dry and damp conditions. In the five years of data collected following LTCP project completion, results are similarly distributed to the previous LTCP phase.

2023 Mystic River compliance rates with statistical threshold values (STV) for both indicators are mapped in Figures 4-12 (*Enterococcus*) and 4-13 (*E. coli*). Dots on the figure are the monitoring locations shown in Figure 4-1 and listed in Table 4-1. Compliance rates vary highly year-to-year and between indicators. Mystic River compliance rates in wet weather were generally higher for *Enterococcus* than *E. coli*. Mystic stations near the confluence with Alewife Brook demonstrate the limited impact of Alewife Brook on the Mystic. Stations near Amelia Earhart Dam and downstream of the Somerville Marginal CSO relief outfall demonstrated higher *Enterococcus* compliance rates in wet weather than upstream stations.

2023 Alewife Brook compliance rates with statistical threshold values (STV) for both indicators are shown in Figures 4-14 (*Enterococcus*) and 4-15 (*E. coli*). The dots shown on the maps correspond to the monitoring locations shown in Figure 4-1 and listed on Table 4-1. For the Alewife stations, compliance rates were below 70% in dry and damp conditions for *E. coli*. All Alewife stations were predominantly less than 40% compliant in wet weather for both indicators. The most upstream station in the Little River demonstrated low compliance rates (<50%) across weather conditions. Like the Charles, compliance rates differ between the two indicators.

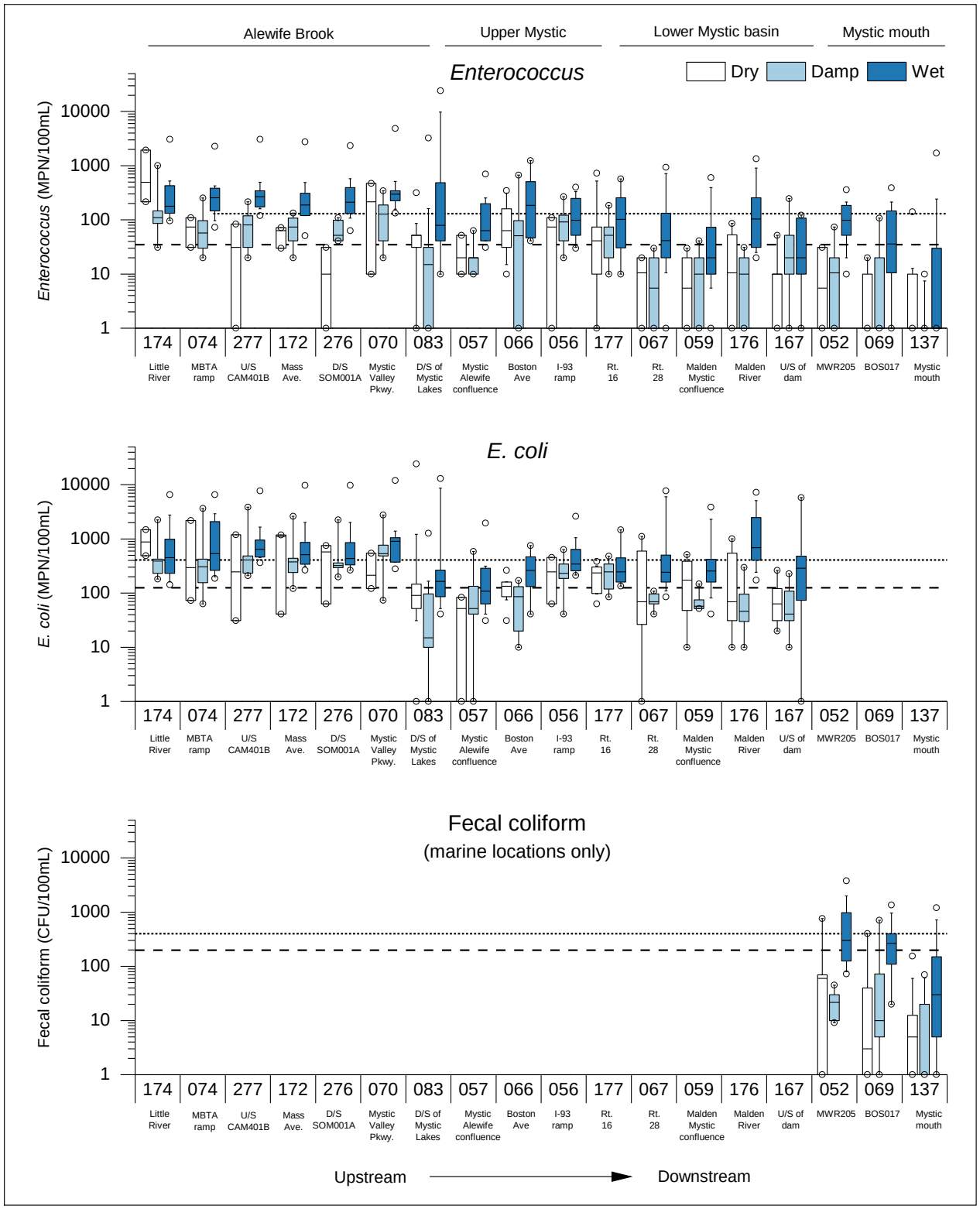

Figure 4-8. Indicator bacteria concentrations, Mystic River/Alewife Brook, 2023.
Dashed lines show MADEP *Enterococcus* and *E. coli* and the former fecal coliform geometric mean standards. Dotted lines show the statistical threshold values for *Enteroccocus and E. coli*, and the former single sample standard for fecal coliform. See Section 2.1.5 for descriptions of rainfall conditions. "D/S": downstream; "U/S": upstream.

Table 4-6. Geometric mean indicator bacteria, Alewife Brook, 2018 – 2022 and 2023.
All Alewife Brook stations are designated for shoreline sampling (including weekends), shaded.

Station	Location	Surface or Bottom	Number of samples		*Enterococcus* (95% CI) counts/100 mL DEP limit: 35 counts/100 mL		*E. coli* (95% CI) counts/100 mL DEP limit: 126 counts/100 mL	
			2018–2022	2023	2018 – 2022	2023	2018 – 2022	2023
174	Cambridge, Little River, upstream of Rt. 2 and off ramp to Alewife T station	S	197	20	214 (167-273)	234 (143-382)	591 (479-728)	566 (364-879)
074	Cambridge, Alewife Brook, at off ramp to Alewife T station	S	199	20	186 (147-236)	137 (84-223)	682 (565-822)	513 (292-900)
277	Arlington, Alewife Brook, upstream of 4 CSO outfalls near Mass. Ave bridge.	S	198	20	254 (204-318)	120 (60-241)	698 (577-846)	567 (347-926)
172	Arlington, Alewife Brook, upstream of Massachusetts Ave bridge, midchannel	S	199	20	225 (181-278)	121 (76-193)	608 (504-733)	548 (331-906)
276	Arlington, Alewife Brook, downstream of SOM001A	S	200	20	234 (189-288)	96 (47-195)	567 (472-681)	523 (330-828)
070	Arlington, Alewife Brook, off Mystic Valley Parkway bridge	S	200	20	318 (261-386)	198 (114-344)	778 (647-935)	618 (385-991)

Table 4-7. Geometric mean indicator bacteria, Mystic River, 2018 – 2022 and 2023.
Stations designated for shoreline sampling (weekends or unsafe boating conditions) are shaded.

Station	Location	Surface or Bottom	Number of samples		*Enterococcus* (95% CI) counts/100 mL DEP limit: 35 counts/100 mL		*E. coli* [1] (95% CI) counts/100 mL DEP limit: 126 counts/100 mL	
			2018 – 2022	2023	2018 – 2022	2023	2018 – 2022	2023
083	Medford, upstream of confluence of Mystic River and Alewife Brook	S	322	45	46 (37-58)	44 (22-87)	113 (97-132)	93 (50-170)
057	Medford, confluence of Mystic River and Alewife Brook	S	199	20	58 (44-77)	48 (29-78)	141 (115-172)	74 (33-164)
066	Medford, Mystic River, Boston Ave bridge	S	126	25	48 (35-65)	65 (32-131)	165 (136-201)	114 (78-166)
056	Medford, Mystic River, upstream of I-93 bridge	S	198	20	63 (48-81)	75 (42-132)	279 (236-329)	309 (210-454)
177	Medford, Downstream of Rt. 16 bridge, mid-channel	S	125	25	35 (24-50)	45 (23-86)	256 (203-323)	226 (175-291)
067	Medford, Mystic River, Rt. 28 bridge	S	198	20	10 (7-14)	14 (5-37)	96 (73-126)	157 (69-353)
059	Everett, confluence of Mystic and Malden Rivers	S	105	20	5 (3-7)	11 (5-26)	81 (55-117)	154 (88-268)
176	Malden River, upstream of Rt. 16 bridge	S	198	20	33 (24-47)	26 (10-66)	199 (149-264)	240 (106-541)
167	Medford, Mystic River, upstream side of Amelia Earhart Dam	S	210	25	15 (11-21)	13 (6-26)	86 (68-108)	77 (40-145)
052[2]	Somerville, Mystic River, near Somerville Marginal CSO facility (MWR205) – marine	S	121	20	23 (14-37)	22 (8-56)	*165 (99-274)*	*134 (55-325)*
		B	55	7	5 (3-9)	28 (7-99)	*19 (13-29)*	*44 (9-195)*
069[2]	Charlestown, near Schrafft's Center at BOS-017 outfall - marine	S	121	20	12 (7-20)	16 (5-45)	*94 (60-147)*	*103 (38-279)*
		B	46	13	2 (1-3)	2 (0-7)	*7 (4-13)*	*10 (3-28)*
137[2]	Mystic River, upstream of Tobin Bridge – marine/Inner Harbor	S	113	24	3 (2-4)	3 (1-10)	*18 (13-26)*	*22 (9-55)*
		B	112	24	1 (1-1)	1 (0-2)	*2 (1-2)*	*3 (1-5)*

[1]Results in italics are fecal coliform, not *E. coli*. Former MADEP fecal coliform geomean standard is 200 counts/100 mL.

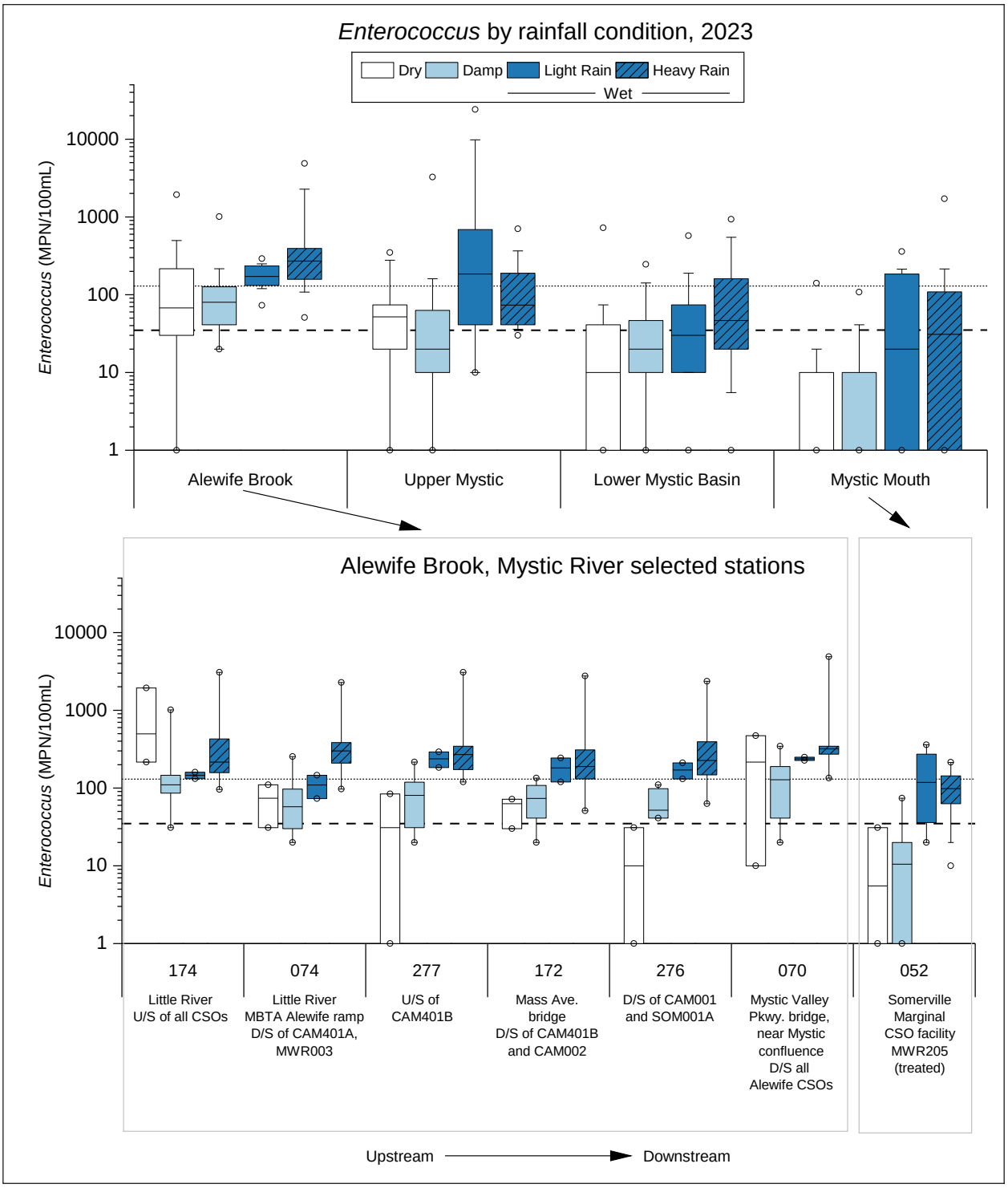

Figure 4-9. *Enterococcus* by rainfall condition, Mystic River/Alewife Brook, 2023.

Dashed lines show MADEP state geometric mean standards (35 MPN/100mL for freshwater and marine). Dotted lines show statistical threshold value (130 MPN/100mL for freshwater and marine). Rainfall is from the BWSC Charlestown or USGS Fresh Pond gauge. See Section 2.1.5 for descriptions of rainfall conditions.
"D/S": downstream; "U/S": upstream.

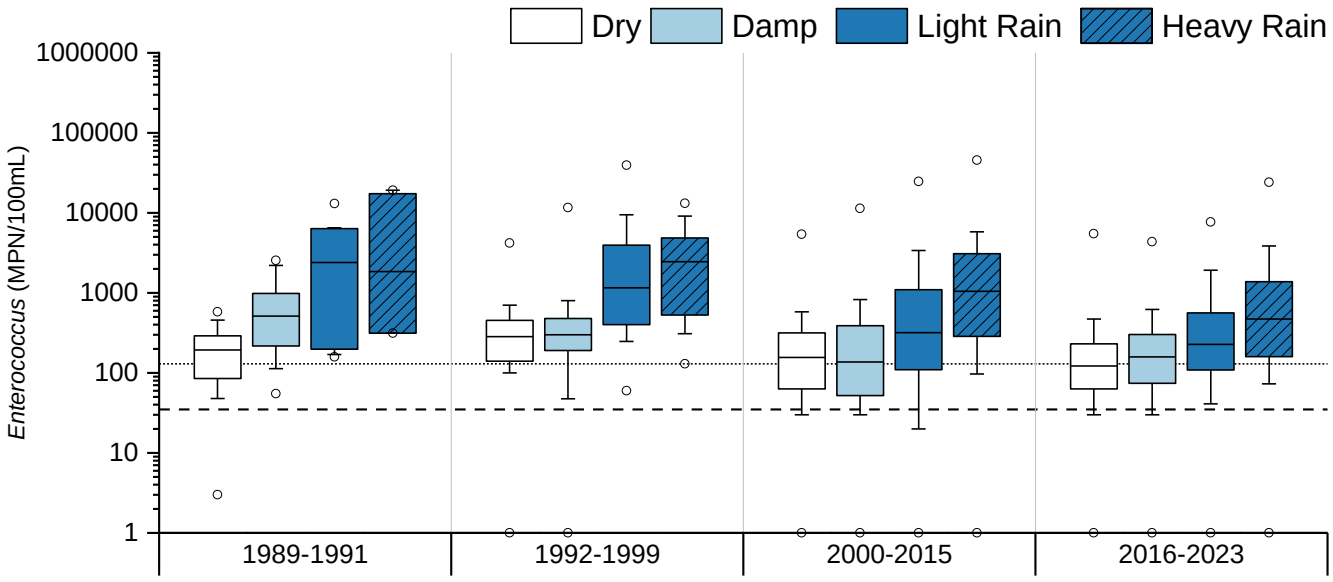

Figure 4-10. *Enterococcus* over time, Alewife Brook by phase of CSO LTCP and rainfall condition.
Dashed line shows State geometric mean standard (35 MPN/100mL), dotted line shows statistical threshold value (130 MPN/100mL). Data includes results for stations 174, 074, 277, 172, 276 and 070. Rainfall is NOAA rainfall from Logan airport. See Section 2.1.5 for descriptions of rainfall conditions.]

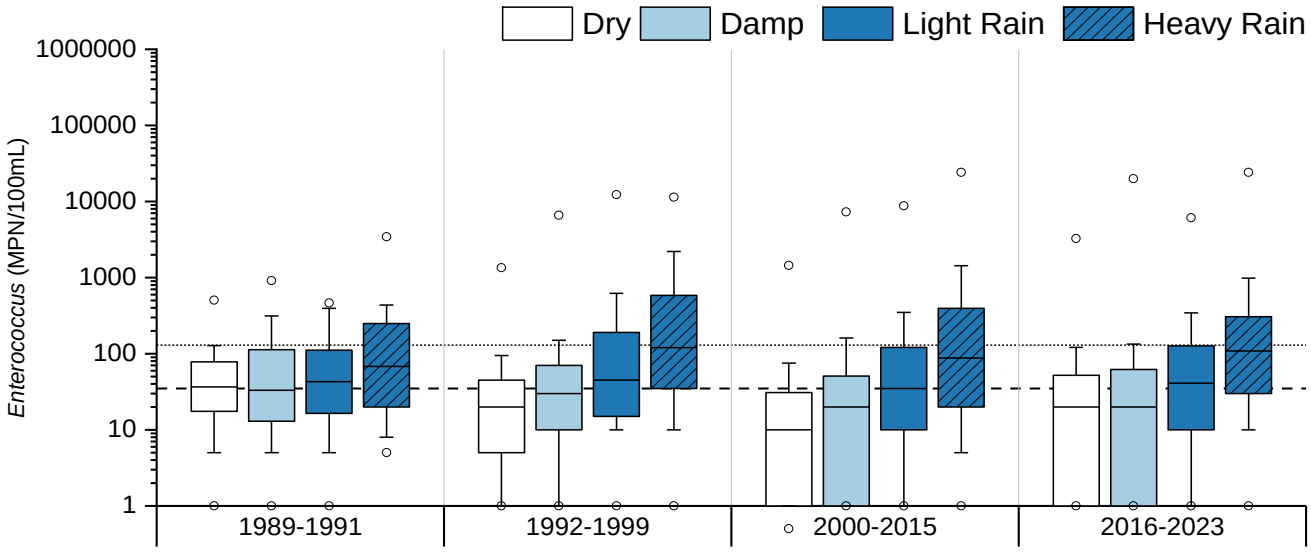

Figure 4-11. *Enterococcus* over time, Mystic River by phase of CSO LTCP and rainfall condition.

Dashed line shows State geometric mean standard (35 MPN/100mL), dotted line shows statistical threshold value (130 MPN/100mL). Data includes results for all Mystic River stations in Table 4-1 excepting Alewife Brook. Rainfall is NOAA rainfall from Logan airport. See Section 2.1.5 for descriptions of rainfall conditions.

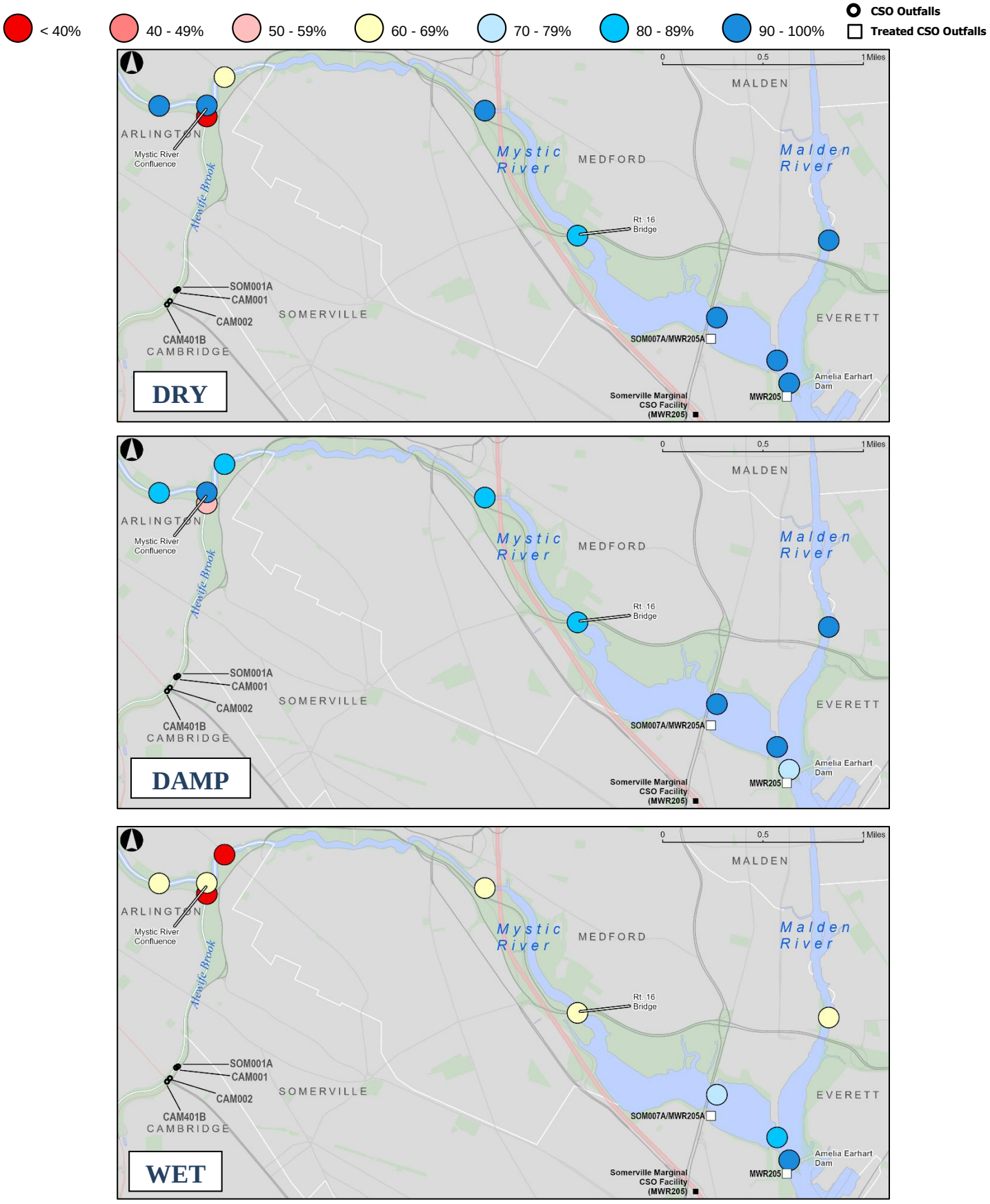

Figure 4-12. Mystic River *Enterococcus* percent compliance by weather condition, 2023.
Compliance with 130 MPN/100mL statistical threshold value. Rainfall is from nearest rain gauge to station. See Section 2.1.5 for descriptions of rainfall conditions. Alewife Brook station 070 near Mystic River confluence included for reference.

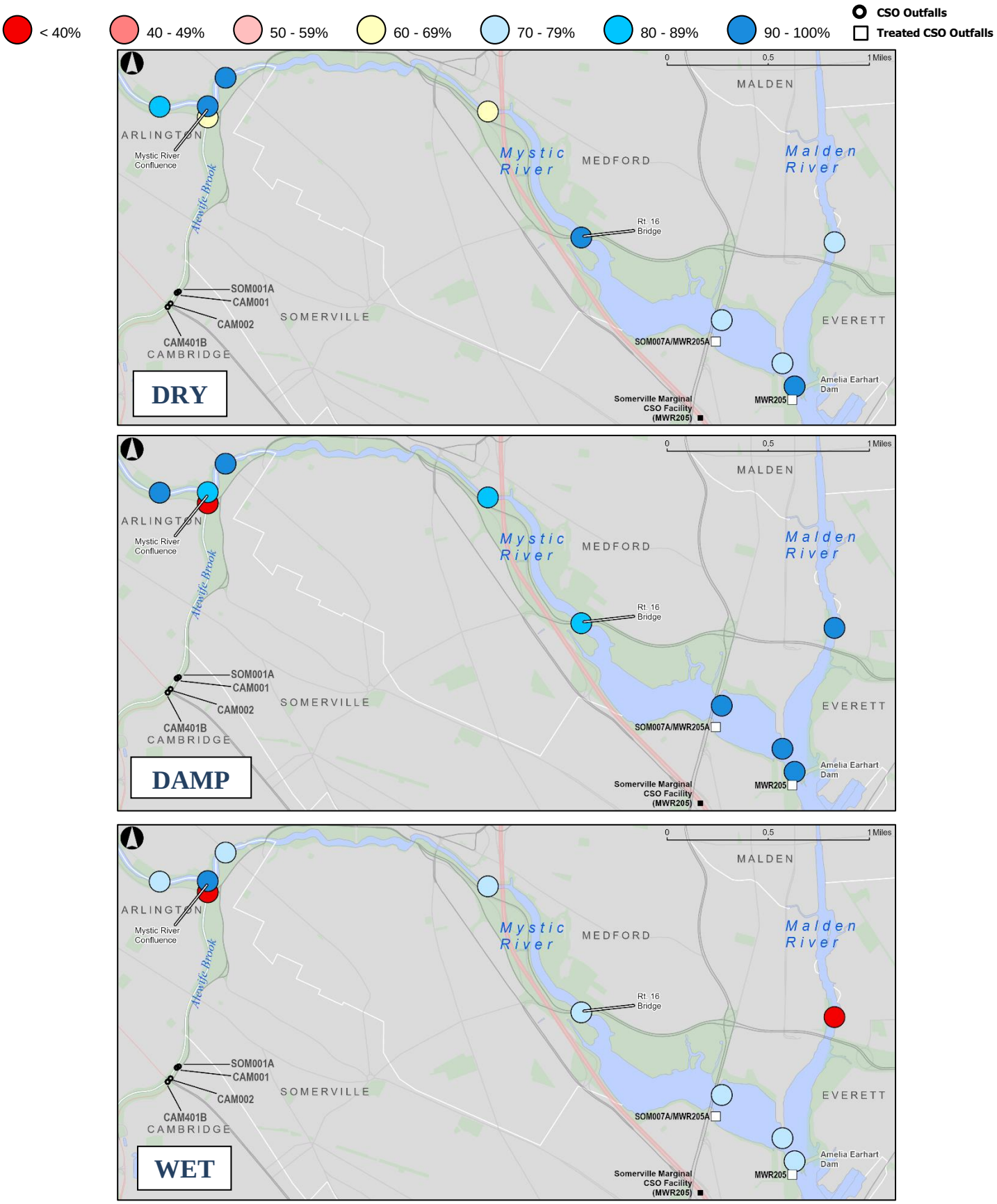

Figure 4-13. Mystic River *E. coli* percent compliance by weather condition, 2023.
Compliance with 410 MPN/100mL statistical threshold value. Rainfall is from nearest rain gauge to station. Section 2.1.5 for descriptions of rainfall conditions. Alewife Brook station 070 near Mystic River confluence included for reference.

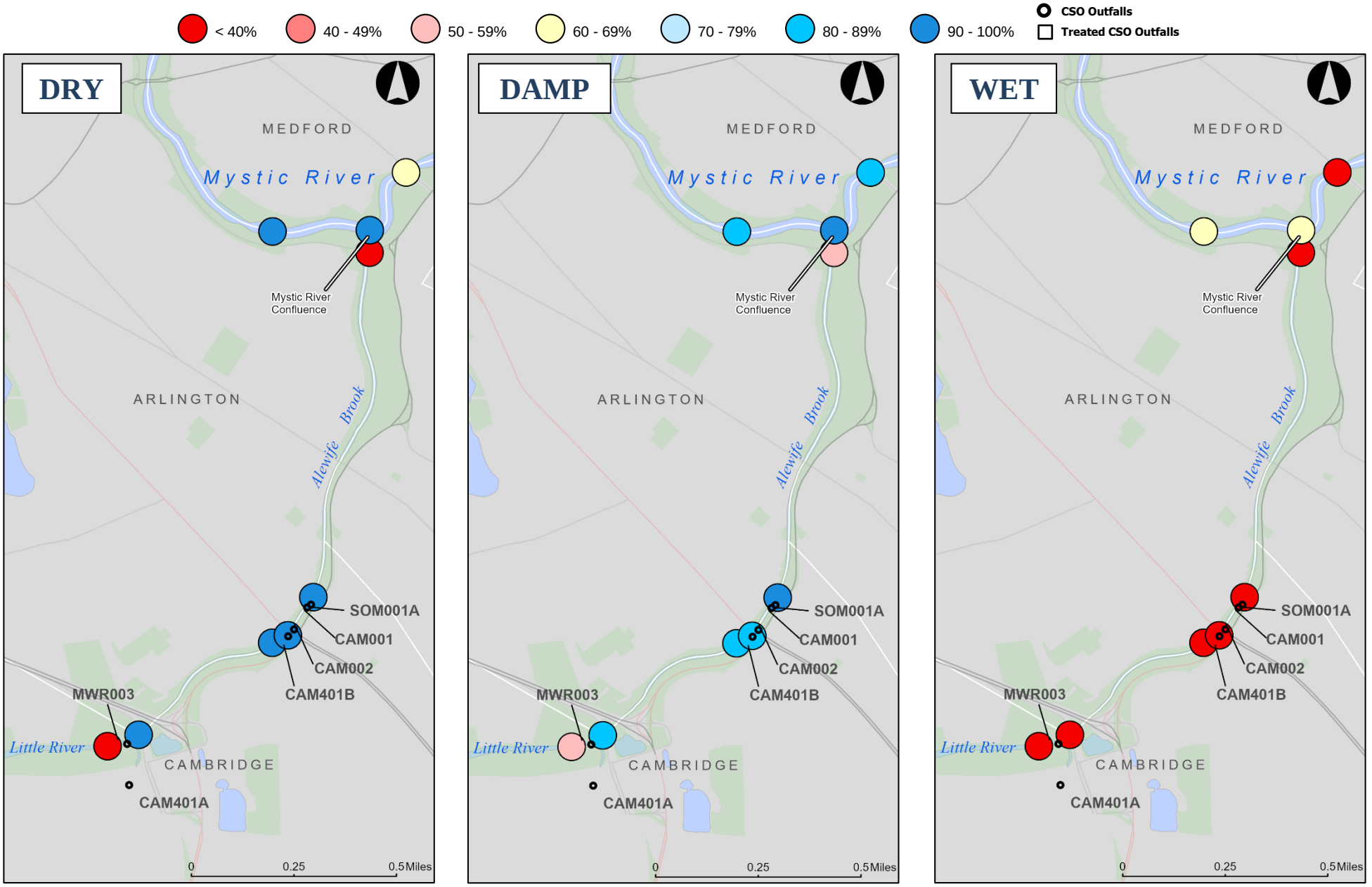

Figure 4-14. Alewife Brook *Enterococcus* percent compliance by weather condition, 2023.

Compliance with 130 MPN/100mL statistical threshold value. Rainfall is from nearest rain gauge to station. Section 2.1.5 for descriptions of rainfall conditions. Mystic River stations 083, 057, and 066 included for reference.

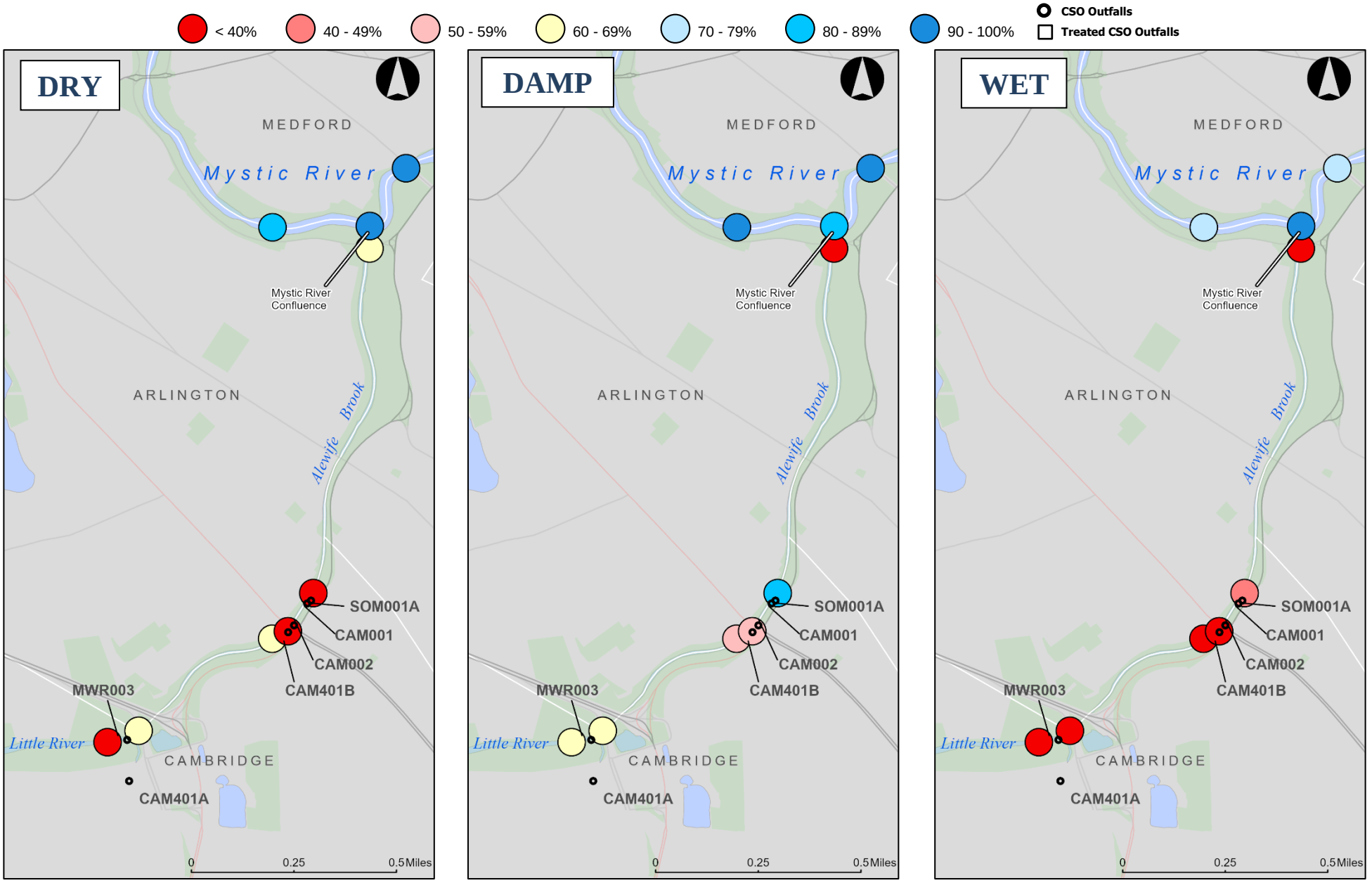

Figure 4-15. Alewife Brook *E. coli* percent compliance by weather condition, 2023.

Compliance with 410 MPN/100mL statistical threshold value. Rainfall is from nearest rain gauge to station. Section 2.1.5 for descriptions of rainfall conditions. Mystic River stations 083, 057, and 066 included for reference.

4.5 Summary of Mystic River/Alewife Brook water quality

Bacterial water quality observed in the Mystic River and Alewife Brook during the 2023 monitoring program followed historical spatial trends and response to rainfall. Bacteria concentrations in the Mystic River met standards for much of the upper and lower Mystic Basin in dry and damp weather, but did not meet standards in wet weather conditions. Marine stations in the Mystic mouth generally met standards in all weather conditions. Bacteria concentrations in Alewife Brook exceed standards in most weather conditions both upstream and downstream of CSOs in that region. Station 174, which is upstream of all CSOs, had poorer water quality in dry weather than in wet. Most locations in the Mystic River met *Enterococcus* and *E. coli* geometric mean limits in dry and damp conditions most of the time. *E. coli* geometric means were higher and generally above the state standard in the Upper Mystic and Lower Mystic basin.

Physical parameters in 2023 generally met state standards/guidelines. All Alewife Brook, Mystic and Malden River stations were below the state temperature maximum. Mean surface DO conditions met standards at all Mystic and Malden River stations. Bottom water DO concentrations were mostly above the state standard during summer months. Clarity results were generally low or visible to the bottom at shallow locations.

Nutrient levels in 2023 were similar to previous years, with monthly concentrations near long-term averages for most parameters. Chlorophyll α values peaked at an earlier point in the year (April vs. May) at stations upstream of the Mystic mouth. Otherwise, chlorophyll α values were around or below the 2018-2022 average.

5 Storm Size and Bacterial Count Analysis

From 2017 to 2020, MWRA instituted a comprehensive storm sampling program building on the routine monitoring program which has been in place since 1989. These additions supported the calibration of receiving water models for both the Charles and Mystic/Alewife regions described in Chapter 1 and submitted to EPA and MADEP in December 2021. The two primary enhancements were sampling on weekends in addition to weekdays during and after storm events to minimize data gaps, and the utilization of a subset of sampling locations that can be sampled from shore in the event of inclement weather that would prevent, for safety reasons, the usual method of sampling by boat. A given region was typically sampled for five consecutive days following a rain event, unless an additional storm in that period shifted focus to another region. Finally, storm sampling was given a high priority, so sampling in the aftermath of a storm frequently "bumped" other sampling projects into lower places in the queue.

While maintaining sampling programs in Boston Harbor, Massachusetts Bay, and the Neponset River, MWRA sampled 33 storms in the Mystic/Alewife and Charles regions from 2018 to 2019 and captured a range of storm events despite pandemic related restrictions in 2020. These storms span a wide array of rainfall patterns and CSO events. The storm counts in 2018 and 2019 were slightly above the Typical Year, facilitating a large sample size of bacteria results used in receiving water model calibration. Results presented below include samples collected from 2018 through 2023, summarizing bacteria results after storms from the past six years.

5.1 2018-2023 bacteria counts by time period and storm size

Figures 5-1 through 5-8 present boxplots of bacteria counts for both *E. coli* and *Enterococcus* in the Charles and Mystic/Alewife regions following varied storm events. Results are binned first by the total rainfall of the most recent storm at a station's nearest rain gauge, and then by the hours after the start of that storm after which the sample was collected. This allows a comparison of the magnitude and duration of wet weather impacts by region, bacterial indicator, and storm size. The bins for total rainfall are dictated by those in the Typical Year (Table 1-1), and hours after storm are in 12-hour increments up to 3 days, then by 24-hours to 5 days and beyond. Lines are drawn between the median lines of each box to emphasize the pattern of wet weather impact and recovery. Note that these are percentile plots as explained by Figure 2-1, but as the number of samples is smaller, the percentile "whiskers" have been omitted. Due to the high counts in Alewife Brook in all weather conditions, the vertical axis scales are higher for the Mystic/Alewife figures than for the Charles figures.

5.1.1 Charles River

For the Charles River, the results described above are further grouped by region. The following Figures 5-1 and 5-3 (top) contain results from stations upstream of any CSO outfalls, while the bottom Figures 5-2 and 5-4 include stations from the CAM005 CSO outfall to the Charles River Dam. These figures do not distinguish results between storms with CSO discharges and those without. Approximately 850 results are included in the upstream figures, and 2500 results in the downstream figures. Sample counts are highest in storms <0.25" and lowest in storms >2.0" due to the relative frequency of these events.

As seen in the top figures, locations upstream of CSOs show high bacteria counts from non-CSO sources in storms >0.25". Locations downstream of CSOs in the Lower Charles showed minimal contamination in storms below 0.5". Both indicator bacteria display a similar pattern relative to their respective standards. Peak concentrations tended to occur within 24 hours after the onset of rain, when stormwater and potential CSO impacts would be at their greatest. The magnitude of impact was higher in the region upstream of all CSOs, but the duration of impact appears shorter at these locations, as flows quickly move to the wider parts of the Lower Basin. As expected, the duration of impact increased with storm size, with results typically returning to baseline around 72 hours, even in the largest storms.

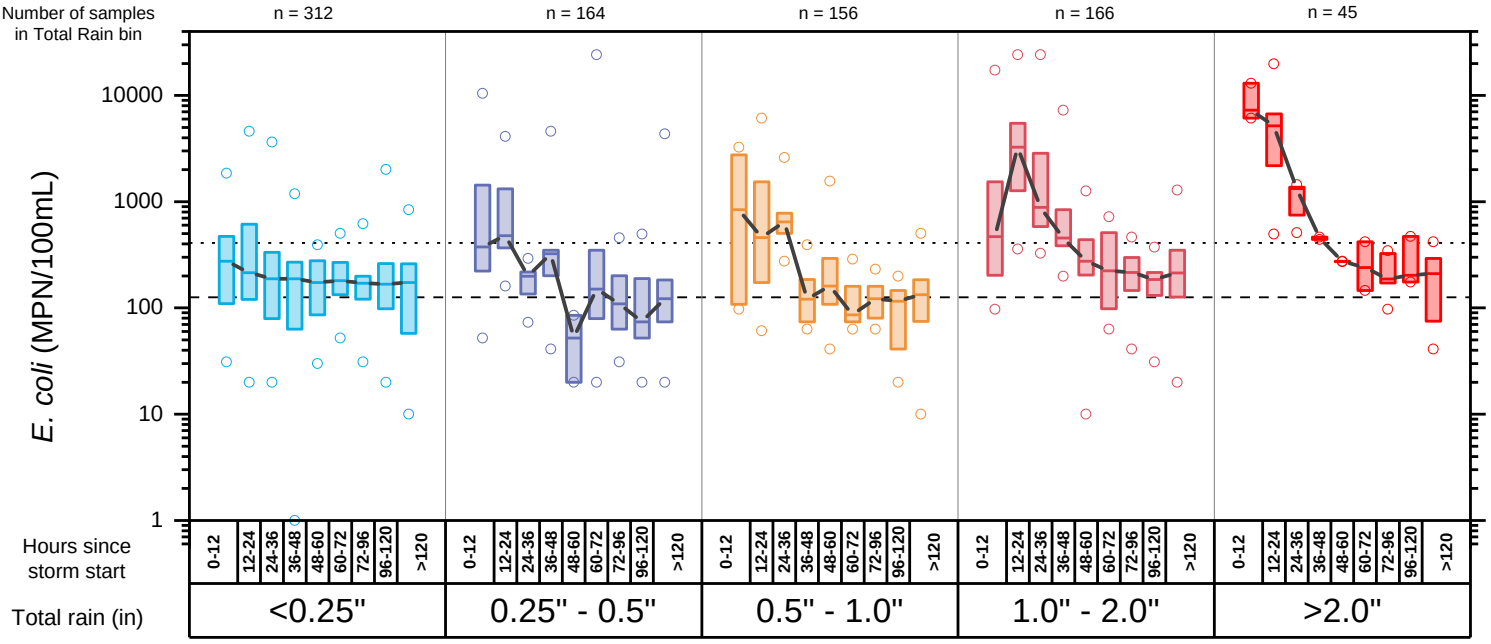

Figure 5-1. 2018-2023 *E. coli* counts at Charles River stations upstream of all CSOs by storm size and hours after start of rain.

Dashed line shows MADEP freshwater geometric mean standard of 126 MPN/100mL for *E. coli*; dotted line shows the statistical threshold value of 410 MPN/100mL. Total rain is rainfall from nearest MWRA, BWSC or USGS rain gauge to a given location. Total rain is binned to follow Typical Year rainfall categories. Hours since storm start is taken from the onset of rain to the time of sample collection. All four stations upstream of the CAM005 CSO outfall are included (012, 001, 144, 002).

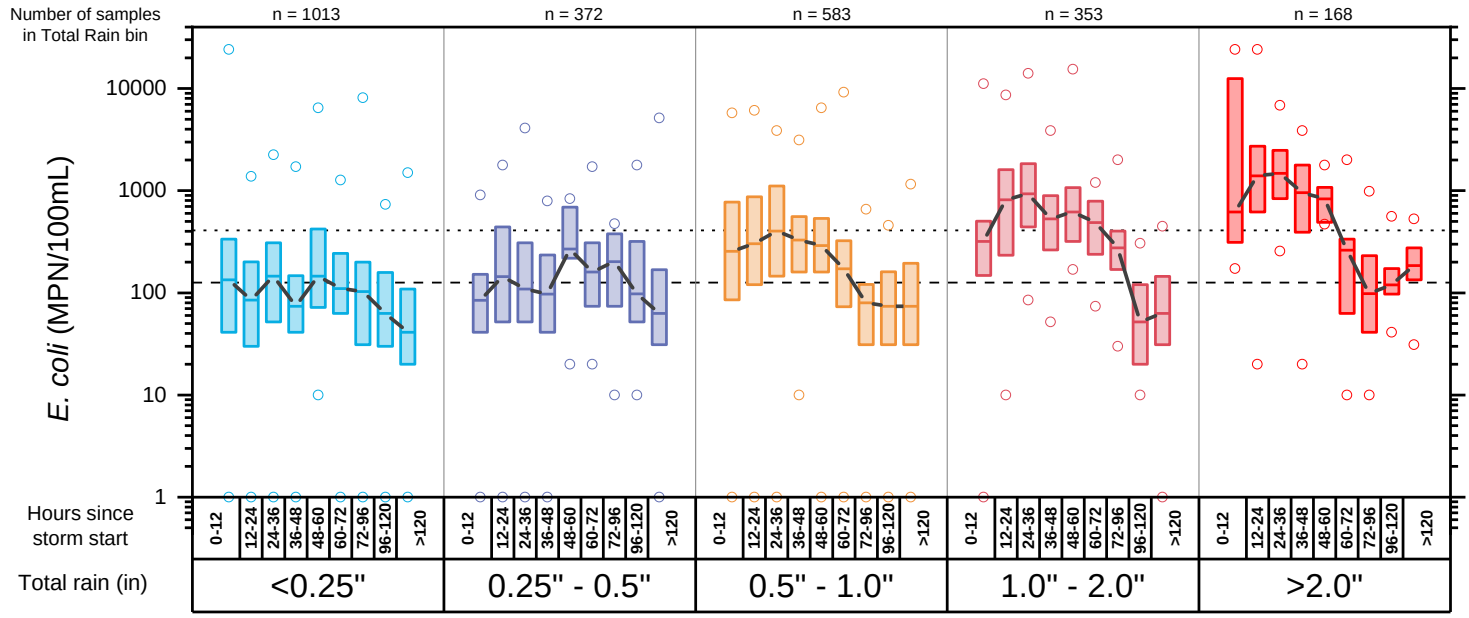

Figure 5-2. 2018-2023 *E. coli* counts at Charles River stations in reaches downstream of CSOs by storm size and hours after start of rain.

Dashed line shows MADEP freshwater geometric mean standard of 126 MPN/100mL for *E. coli*; dotted line shows the statistical threshold value of 410 MPN/100mL. Total rain is rainfall from nearest MWRA, BWSC or USGS rain gauge to a given location. Total rain is binned to follow Typical Year rainfall categories. Hours since storm start is taken from the onset of rain to the time of sample collection. All 13 stations downstream of the CAM005 outfall are included. All storms are included, both with and without CSO discharges.

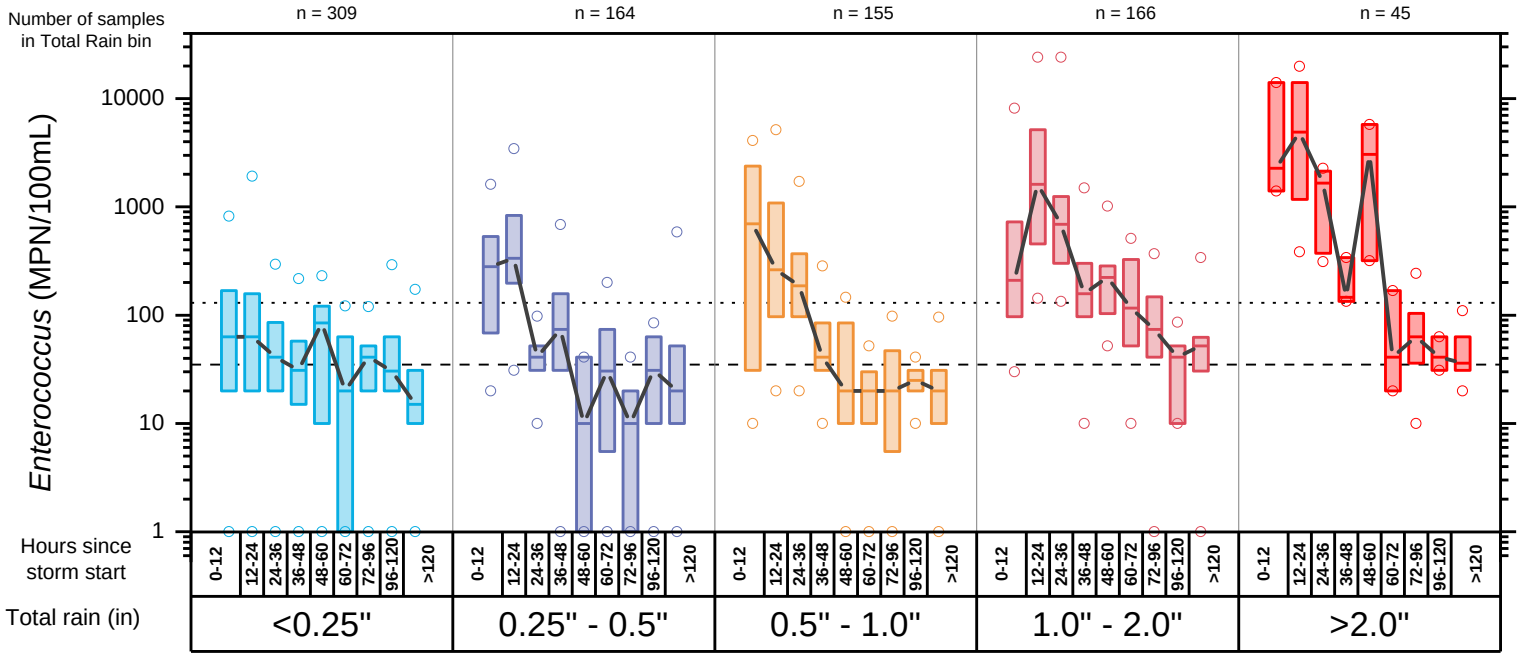

Figure 5-3. 2018-2023 *Enterococcus* counts at Charles River stations upstream of all CSOs by storm size and hours after start of rain.

Dashed line shows MADEP freshwater geometric mean standard of 35 MPN/100mL for *Enterococcus*; dotted line shows the statistical threshold value of 130 MPN/100mL. Total rain is rainfall from nearest MWRA, BWSC or USGS rain gauge to a given location. Total rain is binned to follow Typical Year rainfall categories. Hours since storm start is taken from the onset of rain to the time of sample collection. All four stations upstream of CAM005 CSO outfall are included (012, 001, 144, 002).

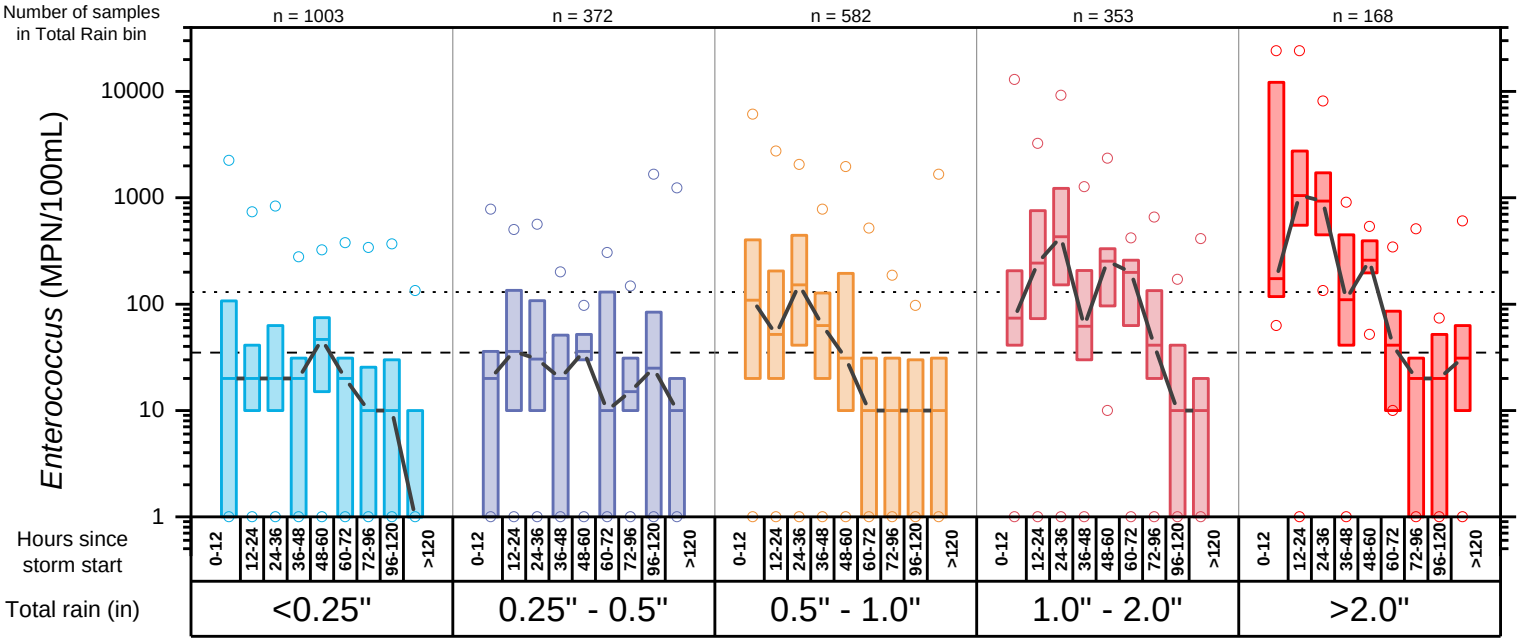

Figure 5-4. 2018-2023 *Enterococcus* counts at Charles River stations in reaches downstream of CSOs by storm size and hours after start of rain.

Dashed line shows MADEP freshwater geometric mean standard of 35 MPN/100mL for *Enterococcus*; dotted line shows the statistical threshold value of 130 MPN/100mL. Total rain is rainfall from nearest MWRA, BWSC or USGS rain gauge to a given location. Total rain is binned to follow Typical Year rainfall categories. Hours since storm start is taken from the onset of rain to the time of sample collection. All 13 stations downstream of CAM005 CSO outfall are included. All storms are included, both with and without CSO discharges.

5.1.2 Mystic River & Alewife Brook

The following Figures 5-5 and 5-7 (top) contain results from all Alewife Brook stations, while the bottom Figures 5-6 and 5-8 include all freshwater Mystic River stations. Sample counts are roughly evenly distributed between storm sizes, except for storms greater than 2.0".

The recovery patterns of bacterial water quality impact are similar between the two indicator species. As discussed in Chapter 4, stations in Alewife Brook often exceed state standards in all weather conditions, so the wet weather impacts here should be evaluated by a return to baseline conditions approximated by the >120 hour category. Alewife Brook exhibits a sharper increase and decrease in bacteria counts than the Mystic River, as flows increase dramatically in the shallow, narrow Alewife Brook during storms. The Mystic River only exhibited a sharp peak in water quality impact in storms over 1.0". As expected, the largest storms resulted in the greatest bacteria counts and duration of impact, with results still returning to baseline within 72 hours of the storm start.

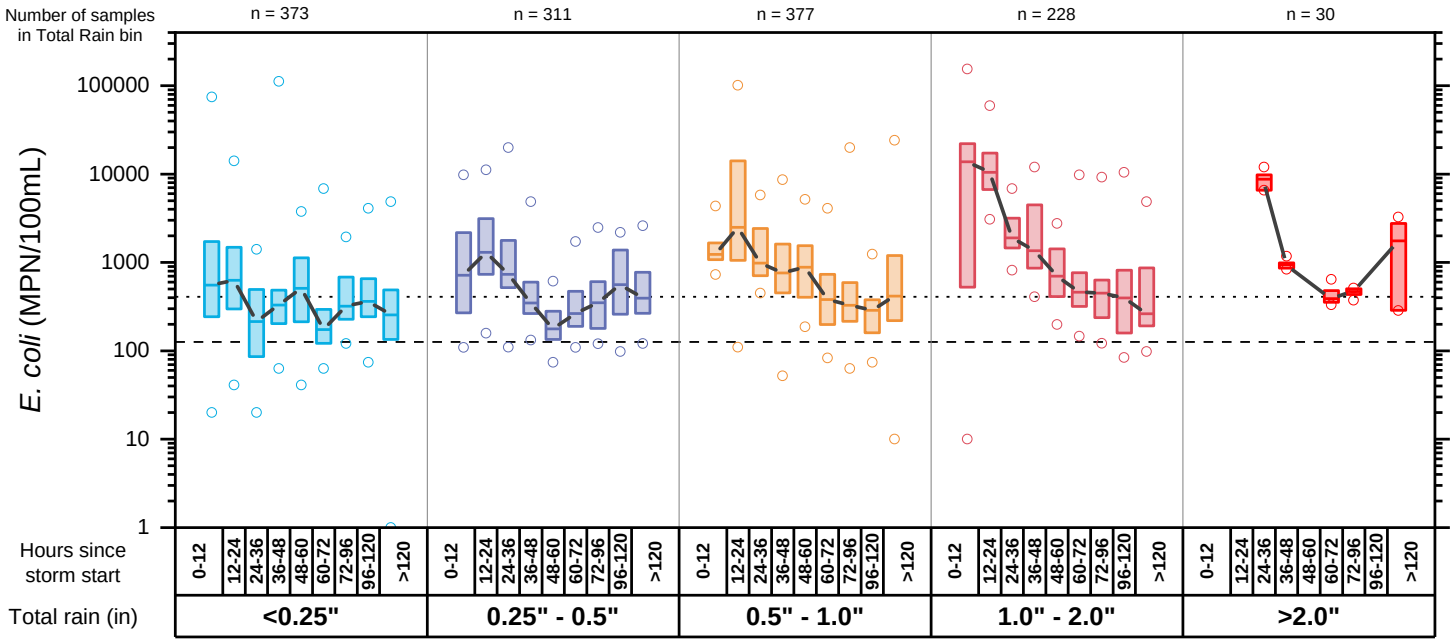

Figure 5-5. 2018-2023 *E. coli* counts in Alewife Brook by storm size and hours after start of rain.
Dashed line shows MADEP freshwater geometric mean standard of 126 MPN/100mL for *E. coli*; dotted line shows the statistical threshold value of 410 MPN/100mL. Total rain is rainfall from nearest MWRA, BWSC or USGS rain gauge to a given location. Total rain is binned to follow Typical Year rainfall categories. Hours since storm start is taken from the onset of rain to the time of sample collection.

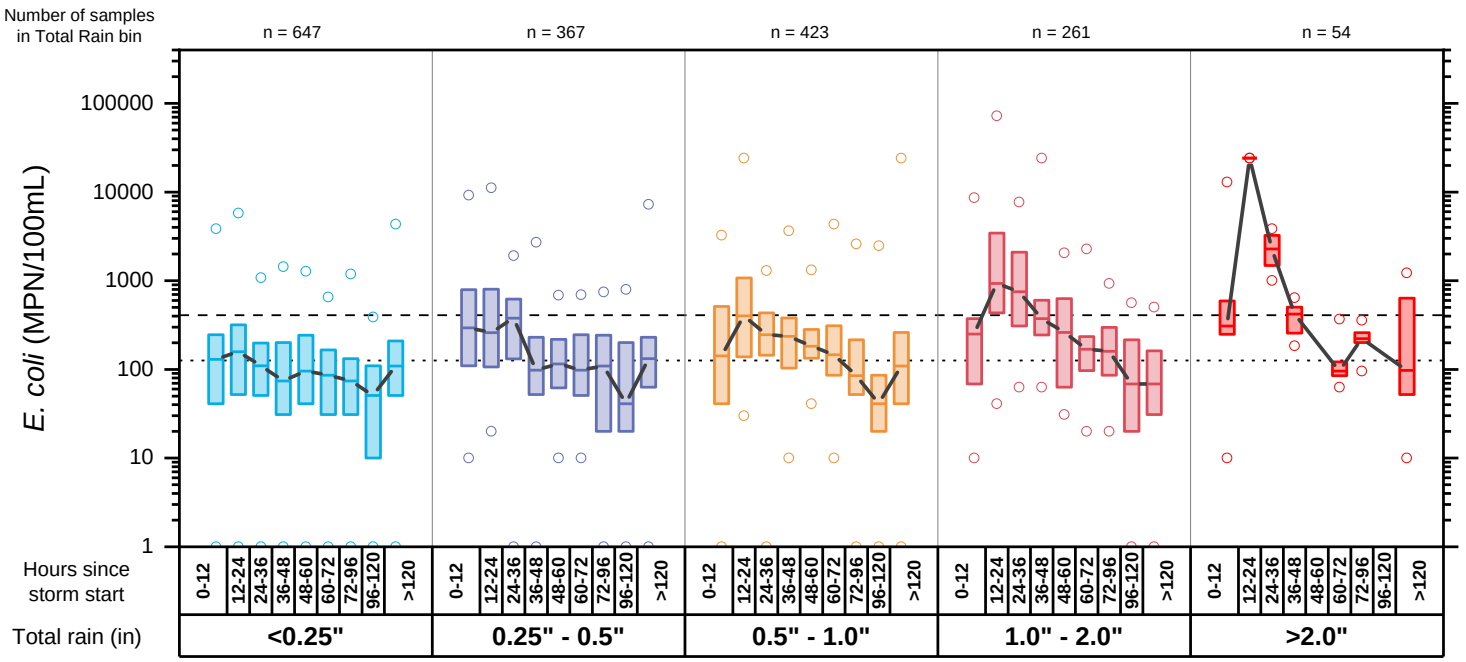

Figure 5-6. 2018-2023 *E. coli* counts in the Mystic River by storm size and hours after start of rain.
Dashed line shows MADEP freshwater geometric mean standard of 126 MPN/100mL for *E. coli*; dotted line shows the statistical threshold value of 410 MPN/100mL. Total rain is rainfall from nearest MWRA, BWSC or USGS rain gauge to a given location. Total rain is binned to follow Typical Year rainfall categories. Hours since storm start is taken from the onset of rain to the time of sample collection. Alewife Brook and Malden River stations not included.

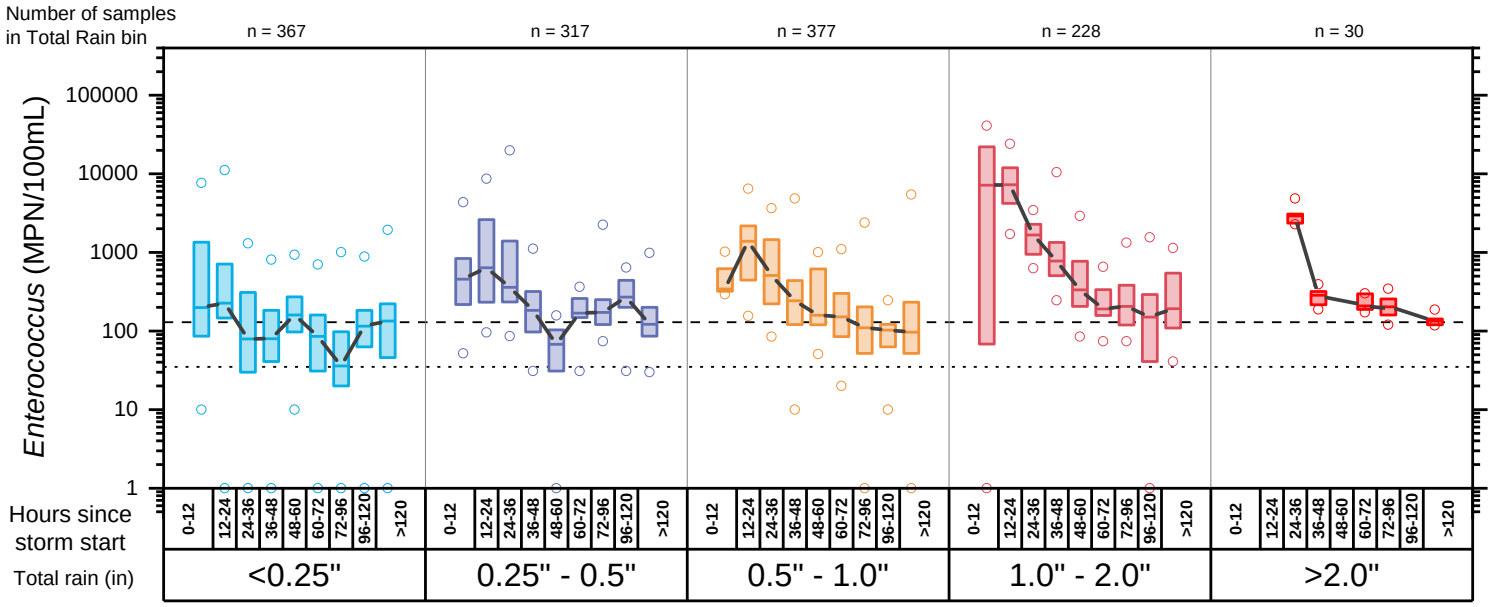

Figure 5-7. 2018-2023 *Enterococcus* counts in Alewife Brook by storm size and hours after start of rain.

Dashed line shows MADEP freshwater geometric mean standard of 35 MPN/100mL for *Enterococcus*; dotted line shows the statistical threshold value of 130 MPN/100mL. Total rain is rainfall from nearest MWRA, BWSC or USGS rain gauge to a given location. Total rain is binned to follow Typical Year rainfall categories. Hours since storm start is taken from the onset of rain to the time of sample collection.

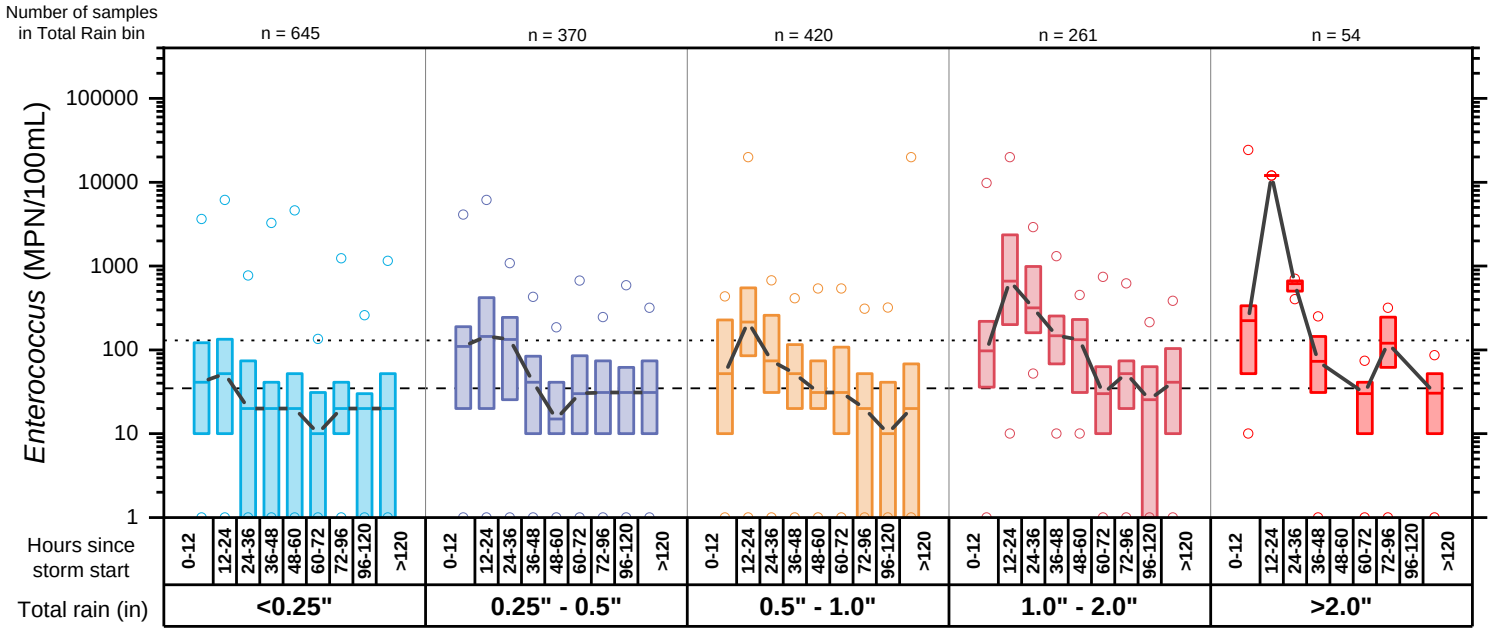

Figure 5-8. 2018-2023 *Enterococcus* counts in the Mystic River by storm size and hours after start of rain.

Dashed line shows MADEP freshwater geometric mean standard of 35 MPN/100mL for *Enterococcus*; dotted line shows the statistical threshold value of 130 MPN/100mL. Total rain is rainfall from nearest MWRA, BWSC or USGS rain gauge to a given location. Total rain is binned to follow Typical Year rainfall categories. Hours since storm start is taken from the onset of rain to the time of sample collection. Alewife Brook and Malden River stations not included.

6 References

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APPENDICES

Appendix I
Use of local rain gauge data for rainfall characterization

Appendix II
2023 raw data, laboratory analyses

Appendix III
2023 raw data, physical profile results

Appendix I: Use of Local Rain Gauge Data for Rainfall Categorization

Numerous earlier figures in this report use rainfall categories of Dry/Damp/Wet or Dry/Damp/Light Rain/Heavy Rain (e.g., Figure 3-5, etc.). In reports prior to 2016, these categories were based on daily rainfall data collected at the NOAA rain gauge at Logan Airport, which depending on the spatial characteristics of a specific storm, may or may not give an accurate picture of the total rainfall amount in a certain area. As CSO activations are heavily influenced by rainfall in the area "served" by the CSO, MADEP requested that more localized rainfall data be used by MWRA.

For this report, all rainfall conditions (with several exceptions, see below) are calculated from the rain gauge most local to the sampling station. The pairings of local rain gauges with sampling locations is below in Table I-1. These local rain gauges are maintained by MWRA, BWSC, and USGS (Figure I-1). These are the same gauges used by the MWRA's Infoworks sewer system hydraulic model. These gauges report not only rainfall depth, but also rainfall intensity, generally in 15 minute intervals. Due to the greater temporal resolution of the local rain gauges compared to the Logan gauge, antecedent rainfall can be calculated precisely 24, 48, or 72 hours (or, if needed, any arbitrary number) prior to the exact sample collection time.

The only exceptions to the use of local rain gauges are Figures 3-7, 3-8, 4-9, and 4-10, which present data dating back to 1989. As the Logan rain gauge is the only gauge available with a complete data set for the entirety of the period, for consistency the rainfall conditions on those plots are calculated using the Logan rain gauge data for 1989 to present.

Table I-1. Rain gauges nearest to MWRA sampling locations.

Charles River		Mystic River/Alewife Brook	
Sampling Location	**Nearest Rain Gauge**	**Sampling Location**	**Nearest Rain Gauge**
012	USGS Fresh Pond	174	USGS Fresh Pond
001	USGS Fresh Pond	074	USGS Fresh Pond
144	USGS Fresh Pond	277	USGS Fresh Pond
002	USGS Fresh Pond	172	USGS Fresh Pond
003	USGS Fresh Pond	276	USGS Fresh Pond
004	BWSC Allston	070	USGS Fresh Pond
005	BWSC Allston	083	USGS Fresh Pond
006	BWSC Allston	057	USGS Fresh Pond
007	MWRA Ward St.	066	USGS Fresh Pond
145	MWRA Ward St.	056	USGS Fresh Pond
008	MWRA Ward St.	177	USGS Fresh Pond
009	BWSC Charlestown	067	BWSC Charlestown
010	BWSC Charlestown	059	MWRA Somerville Marginal
210	BWSC Charlestown	176	BWSC Charlestown
166	BWSC Charlestown	167	MWRA Somerville Marginal
011	BWSC Charlestown	052	MWRA Somerville Marginal
		069	BWSC Charlestown
		137	BWSC Charlestown

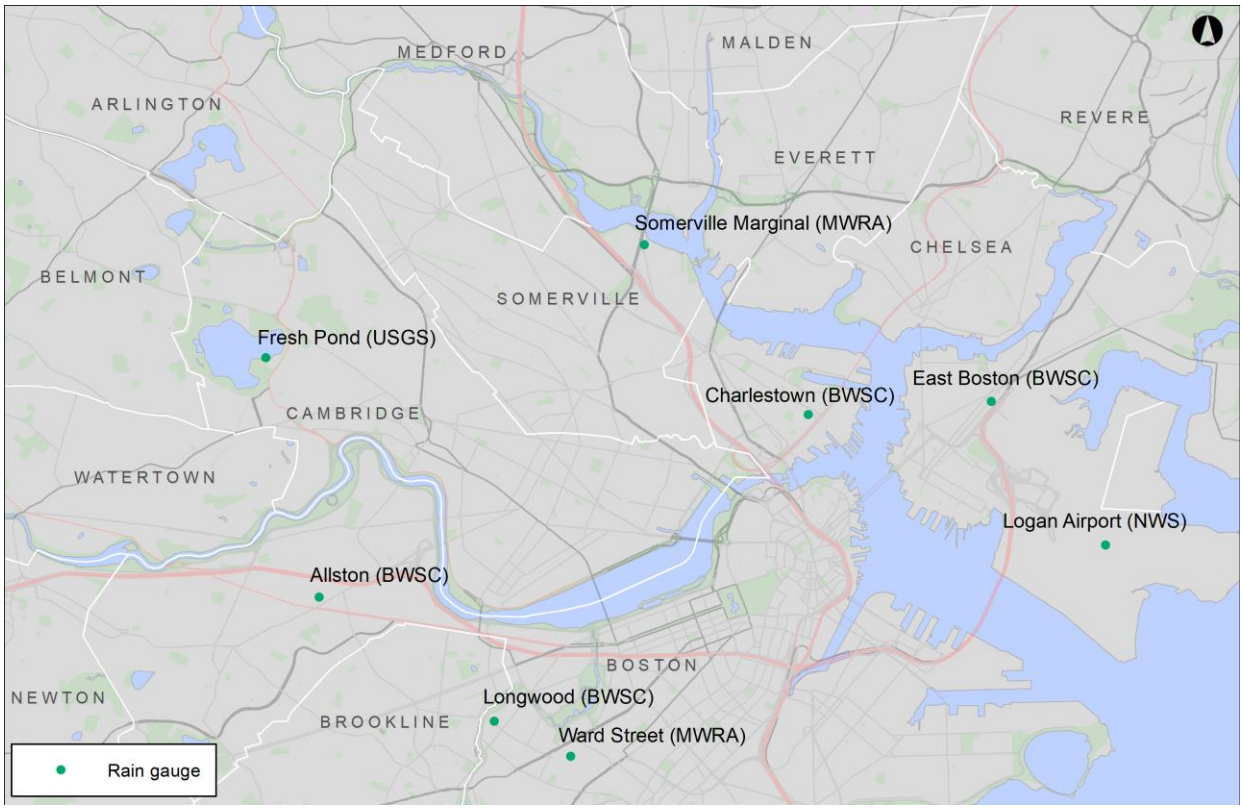

Figure I-1. Map of rain gauges utilized in this report.
Permanent rain gauges used in the analysis of water quality data in this report. This is a subset of MWRA's rain gauge network, and are the most relevant gauges for the Charles River and Alewife Brook/Upper Mystic River Variance waters.

APPENDIX II

2023 raw data for laboratory results.

Non-detected results have been converted to detection limit for all results except for bacteria, which are converted to 0.

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
CHARLES RIVER	UPPER BASIN	012	1/10/23 10:56 AM	S	0.1	0	0	0	41	52	
CHARLES RIVER	UPPER BASIN	012	1/23/23 10:44 AM	S	0.1	0.87	1.11	1.11	121	135	
CHARLES RIVER	UPPER BASIN	012	2/8/23 11:29 AM	S	0.1	0	0.04	0.04	0	63	
CHARLES RIVER	UPPER BASIN	012	2/21/23 10:46 AM	S	0.1	0.15	0.15	0.15	74	246	
CHARLES RIVER	UPPER BASIN	012	3/9/23 11:04 AM	S	0.1	0	0	0	0	264	
CHARLES RIVER	UPPER BASIN	012	3/20/23 9:04 AM	S	0.1	0	0	0	20	41	
CHARLES RIVER	UPPER BASIN	012	4/7/23 9:54 AM	S	0.1	0	0.01	0.01	20	31	
CHARLES RIVER	UPPER BASIN	012	4/18/23 10:07 AM	S	0.1	0	0.08	0.08	20	395	
CHARLES RIVER	UPPER BASIN	012	5/2/23 10:43 AM	S	0.1	0.16	0.21	2.02	171	1860	
CHARLES RIVER	UPPER BASIN	012	5/17/23 10:39 AM	S	0.1	0	0	0	31	437	
CHARLES RIVER	UPPER BASIN	012	5/31/23 10:26 AM	S	0.1	0	0	0	85.5	145.5	
CHARLES RIVER	UPPER BASIN	012	6/13/23 10:33 AM	S	0.1	0.01	0.35	0.35	173	272	
CHARLES RIVER	UPPER BASIN	012	6/26/23 9:58 AM	S	0.1	0	0.02	0.07	84	426	
CHARLES RIVER	UPPER BASIN	012	7/10/23 10:18 AM	S	0.1	0.71	0.71	0.71	663	860	
CHARLES RIVER	UPPER BASIN	012	7/25/23 10:20 AM	S	0.1	0.88	0.88	0.88	63	146	
CHARLES RIVER	UPPER BASIN	012	8/8/23 10:05 AM	S	0.1	1.33	1.33	1.33	14100	13000	
CHARLES RIVER	UPPER BASIN	012	8/24/23 9:48 AM	S	0.1	0.01	0.01	0.01	145	576	
CHARLES RIVER	UPPER BASIN	012	9/7/23 10:02 AM	S	0.1	0	0	0	86	504	
CHARLES RIVER	UPPER BASIN	012	9/18/23 10:36 AM	S	0.1	1.52	1.52	1.59	1840	6700	
CHARLES RIVER	UPPER BASIN	012	10/3/23 10:05 AM	S	0.1	0	0	0	20	305	
CHARLES RIVER	UPPER BASIN	012	10/17/23 10:30 AM	S	0.1	0	0.06	0.06	20	63	
CHARLES RIVER	UPPER BASIN	012	10/30/23 9:44 AM	S	0.1	0.43	0.62	0.62	246	292	
CHARLES RIVER	UPPER BASIN	012	11/15/23 10:58 AM	S	0.1	0	0	0	20	52	
CHARLES RIVER	UPPER BASIN	012	11/29/23 11:13 AM	S	0.1	0	0	0.4	41	85	
CHARLES RIVER	UPPER BASIN	012	12/14/23 11:34 AM	S	0.1	0	0	0	243	187	
CHARLES RIVER	UPPER BASIN	012	12/27/23 10:27 AM	S	0.1	0.02	0.02	0.02	63	292	
CHARLES RIVER	UPPER BASIN	001	4/3/23 9:58 AM	S	0.1	0	0	0.35	0	85	
CHARLES RIVER	UPPER BASIN	001	4/10/23 10:07 AM	S	0.1	0	0	0	10	86	
CHARLES RIVER	UPPER BASIN	001	4/25/23 10:29 AM	S	0.1	0	0	0.51	41	161	
CHARLES RIVER	UPPER BASIN	001	5/3/23 10:06 AM	S	0.1	0.03	0.19	0.24	85	309	
CHARLES RIVER	UPPER BASIN	001	5/19/23 10:03 AM	S	0.1	0	0	0	41	173	
CHARLES RIVER	UPPER BASIN	001	5/24/23 9:49 AM	S	0.1	0.03	0.03	0.03	52	345	
CHARLES RIVER	UPPER BASIN	001	6/7/23 10:01 AM	S	0.1	0	0	0.07	52	146	
CHARLES RIVER	UPPER BASIN	001	6/15/23 9:37 AM	S	0.1	0	0.12	0.13	2360	2010	
CHARLES RIVER	UPPER BASIN	001	6/16/23 9:45 AM	S	0.1	0	0	0.12	253	481	
CHARLES RIVER	UPPER BASIN	001	6/29/23 9:34 AM	S	0.1	0	0.53	1.08	865	1990	
CHARLES RIVER	UPPER BASIN	001	8/3/23 9:36 AM	S	0.1	0	0	0	31	175	
CHARLES RIVER	UPPER BASIN	001	9/1/23 9:23 AM	S	0.1	0	0	0.54	98	529	
CHARLES RIVER	UPPER BASIN	001	9/12/23 9:07 AM	S	0.1	0.09	0.48	0.68	776	776	
CHARLES RIVER	UPPER BASIN	001	9/15/23 9:43 AM	S	0.1	0	0	0.57	74	384	
CHARLES RIVER	UPPER BASIN	001	9/17/23 10:07 AM	S	0.1	0	0.07	0.07	20	337	
CHARLES RIVER	UPPER BASIN	001	9/19/23 9:53 AM	S	0.1	0	1.52	1.52	1660	1370	
CHARLES RIVER	UPPER BASIN	001	9/23/23 9:46 AM	S	0.1	0.12	0.12	0.12	31	419	
CHARLES RIVER	UPPER BASIN	001	9/26/23 9:51 AM	S	0.1	0	0.07	0.38	85	185	
CHARLES RIVER	UPPER BASIN	001	10/2/23 9:38 AM	S	0.1	0	0	0	63	472	
CHARLES RIVER	UPPER BASIN	001	10/4/23 9:42 AM	S	0.1	0	0	0	41	327	
CHARLES RIVER	UPPER BASIN	001	10/11/23 9:38 AM	S	0.1	0	0	0	63	132	
CHARLES RIVER	UPPER BASIN	144	4/3/23 9:49 AM	S	0.1	0	0	0.35	0	41	
CHARLES RIVER	UPPER BASIN	144	4/10/23 9:57 AM	S	0.1	0	0	0	0	63	
CHARLES RIVER	UPPER BASIN	144	4/25/23 10:21 AM	S	0.1	0	0	0.51	0	173	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
CHARLES RIVER	UPPER BASIN	144	5/3/23 9:56 AM	S	0.1	0.03	0.19	0.24	86	246	
CHARLES RIVER	UPPER BASIN	144	5/19/23 9:53 AM	S	0.1	0	0	0	20	216	
CHARLES RIVER	UPPER BASIN	144	5/24/23 9:37 AM	S	0.1	0.03	0.03	0.03	10	161	
CHARLES RIVER	UPPER BASIN	144	6/7/23 9:52 AM	S	0.1	0	0	0.07	63	265	
CHARLES RIVER	UPPER BASIN	144	6/15/23 9:26 AM	S	0.1	0	0.12	0.13	3450	4110	
CHARLES RIVER	UPPER BASIN	144	6/16/23 9:33 AM	S	0.1	0	0	0.12	187	382	
CHARLES RIVER	UPPER BASIN	144	6/29/23 9:23 AM	S	0.1	0	0.53	1.08	1920	4610	
CHARLES RIVER	UPPER BASIN	144	8/3/23 9:27 AM	S	0.1	0	0	0	41	203	
CHARLES RIVER	UPPER BASIN	144	9/1/23 9:11 AM	S	0.1	0	0	0.54	20	399	
CHARLES RIVER	UPPER BASIN	144	9/12/23 8:56 AM	S	0.1	0.09	0.48	0.68	1470	1430	
CHARLES RIVER	UPPER BASIN	144	9/15/23 9:30 AM	S	0.1	0	0	0.57	86	644	
CHARLES RIVER	UPPER BASIN	144	9/17/23 9:55 AM	S	0.1	0	0.07	0.07	51	457	
CHARLES RIVER	UPPER BASIN	144	9/19/23 9:39 AM	S	0.1	0	1.52	1.52	2280	1330	
CHARLES RIVER	UPPER BASIN	144	9/23/23 9:37 AM	S	0.1	0.12	0.12	0.12	41	171	
CHARLES RIVER	UPPER BASIN	144	9/26/23 9:42 AM	S	0.1	0	0.07	0.38	135	134	
CHARLES RIVER	UPPER BASIN	144	10/2/23 9:24 AM	S	0.1	0	0	0	63	521	
CHARLES RIVER	UPPER BASIN	144	10/4/23 9:29 AM	S	0.1	0	0	0	31	160	
CHARLES RIVER	UPPER BASIN	144	10/11/23 9:27 AM	S	0.1	0	0	0	41	143	
CHARLES RIVER	UPPER BASIN	002	4/3/23 9:42 AM	S	0.1	0	0	0.35	0	74	
CHARLES RIVER	UPPER BASIN	002	4/10/23 9:50 AM	S	0.1	0	0	0	0	98	
CHARLES RIVER	UPPER BASIN	002	4/25/23 10:14 AM	S	0.1	0	0	0.51	20	226	
CHARLES RIVER	UPPER BASIN	002	5/3/23 9:49 AM	S	0.1	0.03	0.19	0.24	98	259	
CHARLES RIVER	UPPER BASIN	002	5/19/23 9:47 AM	S	0.1	0	0	0	30	471	
CHARLES RIVER	UPPER BASIN	002	5/24/23 9:33 AM	S	0.1	0.03	0.03	0.03	74	183	
CHARLES RIVER	UPPER BASIN	002	6/7/23 9:45 AM	S	0.1	0	0	0.07	84	413	
CHARLES RIVER	UPPER BASIN	002	6/15/23 9:21 AM	S	0.1	0	0.12	0.13	3080	3260	
CHARLES RIVER	UPPER BASIN	002	6/16/23 9:28 AM	S	0.1	0	0	0.12	158	399	
CHARLES RIVER	UPPER BASIN	002	6/29/23 9:16 AM	S	0.1	0	0.53	1.08	256	2910	
CHARLES RIVER	UPPER BASIN	002	8/3/23 9:20 AM	S	0.1	0	0	0	63	472	
CHARLES RIVER	UPPER BASIN	002	9/1/23 9:03 AM	S	0.1	0	0	0.54	98	1560	
CHARLES RIVER	UPPER BASIN	002	9/12/23 8:52 AM	S	0.1	0.09	0.48	0.68	1180	2010	
CHARLES RIVER	UPPER BASIN	002	9/15/23 9:23 AM	S	0.1	0	0	0.57	97	933	
CHARLES RIVER	UPPER BASIN	002	9/17/23 9:47 AM	S	0.1	0	0.07	0.07	109	554	
CHARLES RIVER	UPPER BASIN	002	9/19/23 9:32 AM	S	0.1	0	1.52	1.52	2140	1450	
CHARLES RIVER	UPPER BASIN	002	9/23/23 9:30 AM	S	0.1	0.12	0.12	0.12	110	249	
CHARLES RIVER	UPPER BASIN	002	9/26/23 9:35 AM	S	0.1	0	0.07	0.38	173	345	
CHARLES RIVER	UPPER BASIN	002	10/2/23 9:16 AM	S	0.1	0	0	0	63	556	
CHARLES RIVER	UPPER BASIN	002	10/4/23 9:21 AM	S	0.1	0	0	0	85	341	
CHARLES RIVER	UPPER BASIN	002	10/11/23 9:22 AM	S	0.1	0	0	0	121	1190	
CHARLES RIVER	UPPER BASIN	003	4/3/23 9:28 AM	S	0.1	0	0	0.35	10	63	
CHARLES RIVER	UPPER BASIN	003	4/10/23 9:36 AM	S	0.1	0	0	0	10	86	
CHARLES RIVER	UPPER BASIN	003	4/25/23 10:00 AM	S	0.1	0	0	0.51	20	265	
CHARLES RIVER	UPPER BASIN	003	5/3/23 9:33 AM	S	0.1	0.03	0.19	0.24	160	450	
CHARLES RIVER	UPPER BASIN	003	5/19/23 9:32 AM	S	0.1	0	0	0	10	221	
CHARLES RIVER	UPPER BASIN	003	5/24/23 9:17 AM	S	0.1	0.03	0.03	0.03	20	108	
CHARLES RIVER	UPPER BASIN	003	6/7/23 9:33 AM	S	0.1	0	0	0.07	379	1270	
CHARLES RIVER	UPPER BASIN	003	6/15/23 9:06 AM	S	0.1	0	0.12	0.13	504	771	
CHARLES RIVER	UPPER BASIN	003	6/16/23 9:13 AM	S	0.1	0	0	0.12	161	794	
CHARLES RIVER	UPPER BASIN	003	6/29/23 9:00 AM	S	0.1	0	0.53	1.08	52	426	
CHARLES RIVER	UPPER BASIN	003	8/3/23 9:04 AM	S	0.1	0	0	0	73	369	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
CHARLES RIVER	UPPER BASIN	003	9/1/23 8:45 AM	S	0.1	0	0	0.54	41	605	
CHARLES RIVER	UPPER BASIN	003	9/12/23 8:38 AM	S	0.1	0.09	0.48	0.68	299	933	
CHARLES RIVER	UPPER BASIN	003	9/15/23 9:10 AM	S	0.1	0	0	0.57	96	754	
CHARLES RIVER	UPPER BASIN	003	9/17/23 9:29 AM	S	0.1	0	0.07	0.07	85	1010	
CHARLES RIVER	UPPER BASIN	003	9/19/23 9:18 AM	S	0.1	0	1.52	1.52	5790	3130	
CHARLES RIVER	UPPER BASIN	003	9/23/23 9:15 AM	S	0.1	0.12	0.12	0.12	109	452	
CHARLES RIVER	UPPER BASIN	003	9/26/23 9:22 AM	S	0.1	0	0.07	0.38	238	471	
CHARLES RIVER	UPPER BASIN	003	10/2/23 9:01 AM	S	0.1	0	0	0	218	862	
CHARLES RIVER	UPPER BASIN	003	10/4/23 9:04 AM	S	0.1	0	0	0	122	813	
CHARLES RIVER	UPPER BASIN	003	10/11/23 9:05 AM	S	0.1	0	0	0	74	135	
CHARLES RIVER	UPPER BASIN	004	4/3/23 9:15 AM	S	0.1	0	0	0.35	31	86	
CHARLES RIVER	UPPER BASIN	004	4/10/23 9:23 AM	S	0.1	0	0	0	0	41	
CHARLES RIVER	UPPER BASIN	004	4/25/23 9:46 AM	S	0.1	0	0	0.51	195	842	
CHARLES RIVER	UPPER BASIN	004	5/3/23 9:18 AM	S	0.1	0.03	0.19	0.24	546	771	
CHARLES RIVER	UPPER BASIN	004	5/19/23 9:18 AM	S	0.1	0	0	0	0	74	
CHARLES RIVER	UPPER BASIN	004	5/24/23 9:02 AM	S	0.1	0.03	0.03	0.03	20	63	
CHARLES RIVER	UPPER BASIN	004	6/7/23 9:19 AM	S	0.1	0	0	0.07	10	134	
CHARLES RIVER	UPPER BASIN	004	6/15/23 8:52 AM	S	0.1	0	0.12	0.13	41	218	
CHARLES RIVER	UPPER BASIN	004	6/29/23 8:42 AM	S	0.1	0	0.53	1.08	63	341	
CHARLES RIVER	UPPER BASIN	004	8/3/23 8:47 AM	S	0.1	0	0	0	52	426	
CHARLES RIVER	UPPER BASIN	004	9/1/23 8:31 AM	S	0.1	0	0	0.54	10	520	
CHARLES RIVER	UPPER BASIN	004	9/12/23 8:26 AM	S	0.1	0.09	0.48	0.68	336	1780	
CHARLES RIVER	UPPER BASIN	004	9/15/23 8:56 AM	S	0.1	0	0	0.57	240	1020	
CHARLES RIVER	UPPER BASIN	004	9/17/23 9:11 AM	S	0.1	0	0.07	0.07	31	537	
CHARLES RIVER	UPPER BASIN	004	9/19/23 9:03 AM	S	0.1	0	1.52	1.52	7270	6490	
CHARLES RIVER	UPPER BASIN	004	9/23/23 8:57 AM	S	0.1	0.12	0.12	0.12	73	472	
CHARLES RIVER	UPPER BASIN	004	9/26/23 9:10 AM	S	0.1	0	0.07	0.38	73	369	
CHARLES RIVER	UPPER BASIN	004	10/2/23 8:48 AM	S	0.1	0	0	0	86	546	
CHARLES RIVER	UPPER BASIN	004	10/4/23 8:47 AM	S	0.1	0	0	0	20	457	
CHARLES RIVER	UPPER BASIN	004	10/11/23 8:45 AM	S	0.1	0	0	0	63	1420	
CHARLES RIVER	UPPER BASIN	005	1/10/23 10:38 AM	S	0.1	0	0	0	20	389	
CHARLES RIVER	UPPER BASIN	005	1/23/23 10:25 AM	S	0.1	0.87	1.11	1.11	249	305	
CHARLES RIVER	UPPER BASIN	005	2/21/23 10:19 AM	S	0.1	0.15	0.15	0.15	0	173	
CHARLES RIVER	UPPER BASIN	005	3/9/23 10:44 AM	S	0.1	0	0	0	0	20	
CHARLES RIVER	UPPER BASIN	005	3/20/23 8:35 AM	S	0.1	0	0	0	0	31	
CHARLES RIVER	UPPER BASIN	005	4/3/23 9:09 AM	S	0.1	0	0	0.35	20	63	
CHARLES RIVER	UPPER BASIN	005	4/7/23 9:15 AM	S	0.1	0	0.01	0.01	10	41	
CHARLES RIVER	UPPER BASIN	005	4/10/23 9:17 AM	S	0.1	0	0	0	0	30	
CHARLES RIVER	UPPER BASIN	005	4/18/23 9:28 AM	S	0.1	0	0.08	0.08	0	10	
CHARLES RIVER	UPPER BASIN	005	4/25/23 9:39 AM	S	0.1	0	0	0.51	146	1520	
CHARLES RIVER	UPPER BASIN	005	5/2/23 10:04 AM	S	0.1	0.16	0.21	2.02	120	211	
CHARLES RIVER	UPPER BASIN	005	5/3/23 9:13 AM	S	0.1	0.03	0.19	0.24	86	749	
CHARLES RIVER	UPPER BASIN	005	5/17/23 9:59 AM	S	0.1	0	0	0	0	52	
CHARLES RIVER	UPPER BASIN	005	5/19/23 9:05 AM	S	0.1	0	0	0	10	0	
CHARLES RIVER	UPPER BASIN	005	5/24/23 8:56 AM	S	0.1	0.03	0.03	0.03	31	86	
CHARLES RIVER	UPPER BASIN	005	5/31/23 9:52 AM	S	0.1	0	0	0	0	10	
CHARLES RIVER	UPPER BASIN	005	6/7/23 9:13 AM	S	0.1	0	0	0.07	0	74	
CHARLES RIVER	UPPER BASIN	005	6/13/23 10:07 AM	S	0.1	0.01	0.35	0.35	31	148	
CHARLES RIVER	UPPER BASIN	005	6/15/23 8:46 AM	S	0.1	0	0.12	0.13	52	109	
CHARLES RIVER	UPPER BASIN	005	6/16/23 8:47 AM	S	0.1	0	0	0.12	31	97	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
CHARLES RIVER	UPPER BASIN	005	6/26/23 9:24 AM	S	0.1	0	0.02	0.07	31	122	
CHARLES RIVER	UPPER BASIN	005	6/29/23 8:36 AM	S	0.1	0	0.53	1.08	10	441	
CHARLES RIVER	UPPER BASIN	005	7/10/23 9:46 AM	S	0.1	0.71	0.71	0.71	399	1520	
CHARLES RIVER	UPPER BASIN	005	7/25/23 9:54 AM	S	0.1	0.88	0.88	0.88	41	120	
CHARLES RIVER	UPPER BASIN	005	8/3/23 8:40 AM	S	0.1	0	0	0	62	561	
CHARLES RIVER	UPPER BASIN	005	8/8/23 9:38 AM	S	0.1	1.33	1.33	1.33		24200	
CHARLES RIVER	UPPER BASIN	005	8/24/23 9:17 AM	S	0.1	0.01	0.01	0.01	85	1200	
CHARLES RIVER	UPPER BASIN	005	9/1/23 8:24 AM	S	0.1	0	0	0.54	63	345	
CHARLES RIVER	UPPER BASIN	005	9/7/23 9:41 AM	S	0.1	0	0	0	20	168	
CHARLES RIVER	UPPER BASIN	005	9/12/23 8:21 AM	S	0.1	0.09	0.48	0.68	160	886	
CHARLES RIVER	UPPER BASIN	005	9/15/23 8:49 AM	S	0.1	0	0	0.57	269	910	
CHARLES RIVER	UPPER BASIN	005	9/17/23 9:03 AM	S	0.1	0	0.07	0.07	20	364	
CHARLES RIVER	UPPER BASIN	005	9/18/23 10:04 AM	S	0.1	1.52	1.52	1.59	175	785	
CHARLES RIVER	UPPER BASIN	005	9/19/23 8:55 AM	S	0.1	0	1.52	1.52	7270	5480	
CHARLES RIVER	UPPER BASIN	005	9/23/23 8:49 AM	S	0.1	0.12	0.12	0.12	31	529	
CHARLES RIVER	UPPER BASIN	005	9/26/23 9:03 AM	S	0.1	0	0.07	0.38	121	265	
CHARLES RIVER	UPPER BASIN	005	10/2/23 8:42 AM	S	0.1	0	0	0	84	341	
CHARLES RIVER	UPPER BASIN	005	10/3/23 9:33 AM	S	0.1	0	0	0	30	341	
CHARLES RIVER	UPPER BASIN	005	10/4/23 8:39 AM	S	0.1	0	0	0	52	374	
CHARLES RIVER	UPPER BASIN	005	10/11/23 8:38 AM	S	0.1	0	0	0	73	3450	
CHARLES RIVER	UPPER BASIN	005	10/17/23 9:51 AM	S	0.1	0	0.06	0.06	10	146	
CHARLES RIVER	UPPER BASIN	005	10/30/23 9:09 AM	S	0.1	0.43	0.62	0.62	173	738	
CHARLES RIVER	UPPER BASIN	005	11/15/23 10:35 AM	S	0.1	0	0	0	30	1500	
CHARLES RIVER	UPPER BASIN	005	11/29/23 10:35 AM	S	0.1	0	0	0.4	41	309	
CHARLES RIVER	UPPER BASIN	005	12/14/23 10:59 AM	S	0.1	0	0	0	504	350	
CHARLES RIVER	UPPER BASIN	005	12/27/23 10:08 AM	S	0.1	0.02	0.02	0.02	323	565	
CHARLES RIVER	MID-BASIN	006	4/3/23 9:03 AM	S	0.1	0	0	0.35	0	85	
CHARLES RIVER	MID-BASIN	006	4/10/23 9:10 AM	S	0.1	0	0	0	0	0	
CHARLES RIVER	MID-BASIN	006	4/25/23 9:31 AM	S	0.1	0	0	0.51	134	683	
CHARLES RIVER	MID-BASIN	006	5/3/23 9:06 AM	S	0.1	0.03	0.19	0.24	97	435	
CHARLES RIVER	MID-BASIN	006	5/19/23 9:02 AM	S	0.1	0	0	0	63	0	
CHARLES RIVER	MID-BASIN	006	5/24/23 8:45 AM	S	0.1	0.03	0.03	0.03	20	63	
CHARLES RIVER	MID-BASIN	006	6/7/23 9:06 AM	S	0.1	0	0	0.07	74	110	
CHARLES RIVER	MID-BASIN	006	6/15/23 8:39 AM	S	0.1	0	0.12	0.13	175	233	
CHARLES RIVER	MID-BASIN	006	6/16/23 8:40 AM	S	0.1	0	0	0.12	51	96	
CHARLES RIVER	MID-BASIN	006	6/29/23 8:27 AM	S	0.1	0	0.53	1.08	52	278	
CHARLES RIVER	MID-BASIN	006	8/3/23 8:31 AM	S	0.1	0	0	0	20	419	
CHARLES RIVER	MID-BASIN	006	9/1/23 8:13 AM	S	0.1	0	0	0.54	228	6490	
CHARLES RIVER	MID-BASIN	006	9/12/23 8:15 AM	S	0.1	0.09	0.48	0.68	345	759	
CHARLES RIVER	MID-BASIN	006	9/15/23 8:41 AM	S	0.1	0	0	0.57	323	576	
CHARLES RIVER	MID-BASIN	006	9/17/23 8:54 AM	S	0.1	0	0.07	0.07	20	185	
CHARLES RIVER	MID-BASIN	006	9/19/23 8:48 AM	S	0.1	0	1.52	1.52	8160	6870	
CHARLES RIVER	MID-BASIN	006	9/23/23 8:41 AM	S	0.1	0.12	0.12	0.12	41	275	
CHARLES RIVER	MID-BASIN	006	9/26/23 8:56 AM	S	0.1	0	0.07	0.38	110	231	
CHARLES RIVER	MID-BASIN	006	10/2/23 8:37 AM	S	0.1	0	0	0	121	382	
CHARLES RIVER	MID-BASIN	006	10/4/23 8:29 AM	S	0.1	0	0	0	97	426	
CHARLES RIVER	MID-BASIN	006	10/11/23 8:30 AM	S	0.1	0	0	0	63	8160	
CHARLES RIVER	MID-BASIN	007	4/3/23 8:48 AM	S	0.1	0	0	0.35	0	175	
CHARLES RIVER	MID-BASIN	007	4/3/23 8:48 AM	B	4.4	0	0	0.35	31	187	
CHARLES RIVER	MID-BASIN	007	4/10/23 8:56 AM	S	0.1	0	0	0	10	161	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
CHARLES RIVER	MID-BASIN	007	4/10/23 8:56 AM	B	3.9	0	0	0	0	97	
CHARLES RIVER	MID-BASIN	007	4/25/23 9:17 AM	S	0.1	0	0	0.51	10	179	
CHARLES RIVER	MID-BASIN	007	4/25/23 9:17 AM	B	4.9	0	0	0.51	10	169	
CHARLES RIVER	MID-BASIN	007	5/3/23 8:52 AM	S	0.1	0.03	0.19	0.24	52	211	
CHARLES RIVER	MID-BASIN	007	5/3/23 8:52 AM	B	4.3	0.03	0.19	0.24	63	148	
CHARLES RIVER	MID-BASIN	007	5/19/23 8:48 AM	S	0.1	0	0	0	10	20	
CHARLES RIVER	MID-BASIN	007	5/19/23 8:48 AM	B	4.3	0	0	0	0	20	
CHARLES RIVER	MID-BASIN	007	5/24/23 8:28 AM	S	0.1	0.03	0.03	0.03	60	187	
CHARLES RIVER	MID-BASIN	007	5/24/23 8:28 AM	B	3.7	0.03	0.03	0.03	30	110	
CHARLES RIVER	MID-BASIN	007	6/7/23 8:53 AM	S	0.1	0	0	0.07	10	108	
CHARLES RIVER	MID-BASIN	007	6/7/23 8:53 AM	B	5.3	0	0	0.07	20	73	
CHARLES RIVER	MID-BASIN	007	6/15/23 8:29 AM	S	0.1	0	0.12	0.13	20	85	
CHARLES RIVER	MID-BASIN	007	6/15/23 8:29 AM	B	4.6	0	0.12	0.13	278	670	
CHARLES RIVER	MID-BASIN	007	6/16/23 8:28 AM	S	0.1	0	0	0.12	52	121	
CHARLES RIVER	MID-BASIN	007	6/16/23 8:28 AM	B	4.1	0	0	0.12	31	85	
CHARLES RIVER	MID-BASIN	007	6/29/23 8:12 AM	S	0.1	0	0.53	1.08	20	161	
CHARLES RIVER	MID-BASIN	007	6/29/23 8:12 AM	B	4.4	0	0.53	1.08	74	160	
CHARLES RIVER	MID-BASIN	007	8/3/23 8:20 AM	S	0.1	0	0	0	20	63	
CHARLES RIVER	MID-BASIN	007	8/3/23 8:20 AM	B	4.2	0	0	0	20	240	
CHARLES RIVER	MID-BASIN	007	9/1/23 7:56 AM	S	0.1	0	0	0.54	31	295	
CHARLES RIVER	MID-BASIN	007	9/1/23 7:56 AM	B	4.4	0	0	0.54	63	265	
CHARLES RIVER	MID-BASIN	007	9/12/23 8:05 AM	S	0.1	0.09	0.48	0.68	160	471	
CHARLES RIVER	MID-BASIN	007	9/12/23 8:05 AM	B	3.7	0.09	0.48	0.68	512	1310	
CHARLES RIVER	MID-BASIN	007	9/15/23 8:29 AM	S	0.1	0	0	0.57	135	855	
CHARLES RIVER	MID-BASIN	007	9/15/23 8:29 AM	B	4	0	0	0.57	132	785	
CHARLES RIVER	MID-BASIN	007	9/17/23 8:35 AM	S	0.1	0	0.07	0.07	20	146	
CHARLES RIVER	MID-BASIN	007	9/17/23 8:35 AM	B	4.5	0	0.07	0.07	20	74	
CHARLES RIVER	MID-BASIN	007	9/19/23 8:39 AM	S	0.1	0	1.52	1.52	1380	1660	
CHARLES RIVER	MID-BASIN	007	9/19/23 8:39 AM	B	3.8	0	1.52	1.52	1720	2480	
CHARLES RIVER	MID-BASIN	007	9/23/23 8:27 AM	S	0.1	0.12	0.12	0.12	10	143	
CHARLES RIVER	MID-BASIN	007	9/23/23 8:27 AM	B	5	0.12	0.12	0.12	30	233	
CHARLES RIVER	MID-BASIN	007	9/26/23 8:45 AM	S	0.1	0	0.07	0.38	173	419	
CHARLES RIVER	MID-BASIN	007	9/26/23 8:45 AM	B	4.2	0	0.07	0.38	73	295	
CHARLES RIVER	MID-BASIN	007	10/2/23 8:27 AM	S	0.1	0	0	0	135	419	
CHARLES RIVER	MID-BASIN	007	10/2/23 8:27 AM	B	4	0	0	0	173	379	
CHARLES RIVER	MID-BASIN	007	10/4/23 8:18 AM	S	0.1	0	0	0	31	336	
CHARLES RIVER	MID-BASIN	007	10/4/23 8:18 AM	B	4.8	0	0	0	74	218	
CHARLES RIVER	MID-BASIN	007	10/11/23 8:15 AM	S	0.1	0	0	0	31	86	
CHARLES RIVER	MID-BASIN	007	10/11/23 8:15 AM	B	3.8	0	0	0	31	146	
CHARLES RIVER	MID-BASIN	145	4/3/23 8:54 AM	S	0.1	0	0	0.35	41	228	
CHARLES RIVER	MID-BASIN	145	4/10/23 9:02 AM	S	0.1	0	0	0	0	199	
CHARLES RIVER	MID-BASIN	145	4/25/23 9:23 AM	S	0.1	0	0	0.51	0	119	
CHARLES RIVER	MID-BASIN	145	5/3/23 8:58 AM	S	0.1	0.03	0.19	0.24	203	573	
CHARLES RIVER	MID-BASIN	145	5/19/23 8:53 AM	S	0.1	0	0	0	0	10	
CHARLES RIVER	MID-BASIN	145	5/24/23 8:37 AM	S	0.1	0.03	0.03	0.03	20	31	
CHARLES RIVER	MID-BASIN	145	6/7/23 8:58 AM	S	0.1	0	0	0.07	10	187	
CHARLES RIVER	MID-BASIN	145	6/15/23 8:34 AM	S	0.1	0	0.12	0.13	171	399	
CHARLES RIVER	MID-BASIN	145	6/16/23 8:32 AM	S	0.1	0	0	0.12	10	63	
CHARLES RIVER	MID-BASIN	145	6/29/23 8:18 AM	S	0.1	0	0.53	1.08	31	187	
CHARLES RIVER	MID-BASIN	145	8/3/23 8:25 AM	S	0.1	0	0	0	0	109	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
CHARLES RIVER	MID-BASIN	145	9/1/23 8:04 AM	S	0.1	0	0	0.54	20	414	
CHARLES RIVER	MID-BASIN	145	9/12/23 8:10 AM	S	0.1	0.09	0.48	0.68	97	594	
CHARLES RIVER	MID-BASIN	145	9/15/23 8:35 AM	S	0.1	0	0	0.57	109	794	
CHARLES RIVER	MID-BASIN	145	9/17/23 8:41 AM	S	0.1	0	0.07	0.07	20	226	
CHARLES RIVER	MID-BASIN	145	9/19/23 8:43 AM	S	0.1	0	1.52	1.52	1720	2140	
CHARLES RIVER	MID-BASIN	145	9/23/23 8:32 AM	S	0.1	0.12	0.12	0.12	121	419	
CHARLES RIVER	MID-BASIN	145	9/26/23 8:49 AM	S	0.1	0	0.07	0.38	520	2760	
CHARLES RIVER	MID-BASIN	145	10/2/23 8:32 AM	S	0.1	0	0	0	148	474	
CHARLES RIVER	MID-BASIN	145	10/4/23 8:21 AM	S	0.1	0	0	0	41	301	
CHARLES RIVER	MID-BASIN	145	10/11/23 8:22 AM	S	0.1	0	0	0	41	156	
CHARLES RIVER	MID-BASIN	008	4/3/23 8:44 AM	S	0.1	0	0	0.35	30	218	
CHARLES RIVER	MID-BASIN	008	4/3/23 8:44 AM	B	3.6	0	0	0.35	41	199	
CHARLES RIVER	MID-BASIN	008	4/10/23 8:50 AM	S	0.1	0	0	0	20	158	
CHARLES RIVER	MID-BASIN	008	4/10/23 8:50 AM	B	4	0	0	0	41	201	
CHARLES RIVER	MID-BASIN	008	4/25/23 9:11 AM	S	0.1	0	0	0.51	31	327	
CHARLES RIVER	MID-BASIN	008	4/25/23 9:11 AM	B	3.7	0	0	0.51	31	206	
CHARLES RIVER	MID-BASIN	008	5/3/23 8:45 AM	S	0.1	0.03	0.19	0.24	183	240	
CHARLES RIVER	MID-BASIN	008	5/3/23 8:45 AM	B	4	0.03	0.19	0.24	86	203	
CHARLES RIVER	MID-BASIN	008	5/19/23 8:42 AM	S	0.1	0	0	0	0	41	
CHARLES RIVER	MID-BASIN	008	5/19/23 8:42 AM	B	4.3	0	0	0	31	31	
CHARLES RIVER	MID-BASIN	008	5/24/23 8:22 AM	S	0.1	0.03	0.03	0.03	41	269	
CHARLES RIVER	MID-BASIN	008	5/24/23 8:22 AM	B	3.6	0.03	0.03	0.03	20	233	
CHARLES RIVER	MID-BASIN	008	6/7/23 8:48 AM	S	0.1	0	0	0.07	20	134	
CHARLES RIVER	MID-BASIN	008	6/7/23 8:48 AM	B	6.4	0	0	0.07	62	173	
CHARLES RIVER	MID-BASIN	008	6/15/23 8:25 AM	S	0.1	0	0.12	0.13	155	341	
CHARLES RIVER	MID-BASIN	008	6/15/23 8:25 AM	B	3.6	0	0.12	0.13	41	135	
CHARLES RIVER	MID-BASIN	008	6/16/23 8:22 AM	S	0.1	0	0	0.12	0	148	
CHARLES RIVER	MID-BASIN	008	6/16/23 8:22 AM	B	3.6	0	0	0.12	0	122	
CHARLES RIVER	MID-BASIN	008	6/29/23 8:08 AM	S	0.1	0	0.53	1.08	20	63	
CHARLES RIVER	MID-BASIN	008	6/29/23 8:08 AM	B	3.8	0	0.53	1.08	51	110	
CHARLES RIVER	MID-BASIN	008	8/3/23 8:13 AM	S	0.1	0	0	0	0	110	
CHARLES RIVER	MID-BASIN	008	8/3/23 8:13 AM	B	4.2	0	0	0	63	292	
CHARLES RIVER	MID-BASIN	008	9/1/23 7:49 AM	S	0.1	0	0	0.54	10	175	
CHARLES RIVER	MID-BASIN	008	9/1/23 7:49 AM	B	3.9	0	0	0.54	10	354	
CHARLES RIVER	MID-BASIN	008	9/12/23 8:01 AM	S	0.1	0.09	0.48	0.68	132	1110	
CHARLES RIVER	MID-BASIN	008	9/12/23 8:01 AM	B	3.7	0.09	0.48	0.68	354	933	
CHARLES RIVER	MID-BASIN	008	9/15/23 8:24 AM	S	0.1	0	0	0.57	97	749	
CHARLES RIVER	MID-BASIN	008	9/15/23 8:24 AM	B	4	0	0	0.57	122	744	
CHARLES RIVER	MID-BASIN	008	9/17/23 8:29 AM	S	0.1	0	0.07	0.07	0	134	
CHARLES RIVER	MID-BASIN	008	9/17/23 8:29 AM	B	3.5	0	0.07	0.07	10	160	
CHARLES RIVER	MID-BASIN	008	9/19/23 8:32 AM	S	0.1	0	1.52	1.52	1150	1330	
CHARLES RIVER	MID-BASIN	008	9/19/23 8:32 AM	B	3.4	0	1.52	1.52	959	1160	
CHARLES RIVER	MID-BASIN	008	9/23/23 8:21 AM	S	0.1	0.12	0.12	0.12	10	175	
CHARLES RIVER	MID-BASIN	008	9/23/23 8:21 AM	B	6.1	0.12	0.12	0.12	10	278	
CHARLES RIVER	MID-BASIN	008	9/26/23 8:41 AM	S	0.1	0	0.07	0.38	183	402	
CHARLES RIVER	MID-BASIN	008	9/26/23 8:41 AM	B	4.2	0	0.07	0.38	156	323	
CHARLES RIVER	MID-BASIN	008	10/2/23 8:23 AM	S	0.1	0	0	0	146	428	
CHARLES RIVER	MID-BASIN	008	10/2/23 8:23 AM	B	3.9	0	0	0	86	384	
CHARLES RIVER	MID-BASIN	008	10/4/23 8:12 AM	S	0.1	0	0	0	31	410	
CHARLES RIVER	MID-BASIN	008	10/4/23 8:12 AM	B	4.1	0	0	0	20	218	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
CHARLES RIVER	MID-BASIN	008	10/11/23 8:09 AM	S	0.1	0	0	0	10	187	
CHARLES RIVER	MID-BASIN	008	10/11/23 8:09 AM	B	3.7	0	0	0	31	201	
CHARLES RIVER	MID-BASIN	009	4/3/23 8:35 AM	S	0.1	0	0	0.35	0	323	
CHARLES RIVER	MID-BASIN	009	4/3/23 8:35 AM	B	8.8	0	0	0.35	10	10	
CHARLES RIVER	MID-BASIN	009	4/10/23 8:42 AM	S	0.1	0	0	0	0	63	
CHARLES RIVER	MID-BASIN	009	4/10/23 8:42 AM	B	6.8	0	0	0	0	41	
CHARLES RIVER	MID-BASIN	009	4/25/23 9:03 AM	S	0.1	0	0	0.51	0	206	
CHARLES RIVER	MID-BASIN	009	4/25/23 9:03 AM	B	9.2	0	0	0.51	0	31	
CHARLES RIVER	MID-BASIN	009	5/3/23 8:37 AM	S	0.1	0.03	0.19	0.24	97	259	
CHARLES RIVER	MID-BASIN	009	5/3/23 8:37 AM	B	8.9	0.03	0.19	0.24	0	20	
CHARLES RIVER	MID-BASIN	009	5/19/23 8:34 AM	S	0.1	0	0	0	0	41	
CHARLES RIVER	MID-BASIN	009	5/19/23 8:34 AM	B	9.3	0	0	0	0	41	
CHARLES RIVER	MID-BASIN	009	5/24/23 8:10 AM	S	0.1	0.03	0.03	0.03	10	309	
CHARLES RIVER	MID-BASIN	009	5/24/23 8:10 AM	B	8.6	0.03	0.03	0.03	74	464	
CHARLES RIVER	MID-BASIN	009	6/7/23 8:40 AM	S	0.1	0	0	0.07	0	86	
CHARLES RIVER	MID-BASIN	009	6/7/23 8:40 AM	B	8.9	0	0	0.07	0	41	
CHARLES RIVER	MID-BASIN	009	6/15/23 8:17 AM	S	0.1	0	0.12	0.13	10	10	
CHARLES RIVER	MID-BASIN	009	6/15/23 8:17 AM	B	8.7	0	0.12	0.13	0	10	
CHARLES RIVER	MID-BASIN	009	6/16/23 8:14 AM	S	0.1	0	0	0.12	0	119	
CHARLES RIVER	MID-BASIN	009	6/16/23 8:14 AM	B	8.5	0	0	0.12	0	0	
CHARLES RIVER	MID-BASIN	009	6/29/23 8:00 AM	S	0.1	0	0.53	1.08	0	52	
CHARLES RIVER	MID-BASIN	009	6/29/23 8:00 AM	B	8.6	0	0.53	1.08	0	0	
CHARLES RIVER	MID-BASIN	009	8/3/23 8:04 AM	S	0.1	0	0	0	52	148	
CHARLES RIVER	MID-BASIN	009	8/3/23 8:04 AM	B	9.3	0	0	0	0	10	
CHARLES RIVER	MID-BASIN	009	9/1/23 7:39 AM	S	0.1	0	0	0.54	20	148	
CHARLES RIVER	MID-BASIN	009	9/1/23 7:39 AM	B	9.2	0	0	0.54	31	197	
CHARLES RIVER	MID-BASIN	009	9/12/23 7:54 AM	S	0.1	0.09	0.48	0.68	135	759	
CHARLES RIVER	MID-BASIN	009	9/12/23 7:54 AM	B	8.6	0.09	0.48	0.68	246	733	
CHARLES RIVER	MID-BASIN	009	9/15/23 8:19 AM	S	0.1	0	0	0.57	20	504	
CHARLES RIVER	MID-BASIN	009	9/15/23 8:19 AM	B	8.4	0	0	0.57	63	472	
CHARLES RIVER	MID-BASIN	009	9/17/23 8:23 AM	S	0.1	0	0.07	0.07	10	216	
CHARLES RIVER	MID-BASIN	009	9/17/23 8:23 AM	B	9	0	0.07	0.07	0	52	
CHARLES RIVER	MID-BASIN	009	9/19/23 8:23 AM	S	0.1	0	1.52	1.52	697	880	
CHARLES RIVER	MID-BASIN	009	9/19/23 8:23 AM	B	9	0	1.52	1.52	1020	1380	
CHARLES RIVER	MID-BASIN	009	9/23/23 8:13 AM	S	0.1	0.12	0.12	0.12	10	134	
CHARLES RIVER	MID-BASIN	009	9/23/23 8:13 AM	B	8.6	0.12	0.12	0.12	10	185	
CHARLES RIVER	MID-BASIN	009	9/26/23 8:35 AM	S	0.1	0	0.07	0.38	121	331	
CHARLES RIVER	MID-BASIN	009	9/26/23 8:35 AM	B	9	0	0.07	0.38	0	41	
CHARLES RIVER	MID-BASIN	009	10/2/23 8:19 AM	S	0.1	0	0	0	86	275	
CHARLES RIVER	MID-BASIN	009	10/2/23 8:19 AM	B	8.7	0	0	0	132	432	
CHARLES RIVER	MID-BASIN	009	10/4/23 8:05 AM	S	0.1	0	0	0	10	173	
CHARLES RIVER	MID-BASIN	009	10/4/23 8:05 AM	B	8.7	0	0	0	0	52	
CHARLES RIVER	MID-BASIN	009	10/11/23 7:59 AM	S	0.1	0	0	0	0	145	
CHARLES RIVER	MID-BASIN	009	10/11/23 7:59 AM	B	8.8	0	0	0	0	0	
CHARLES RIVER	MID-BASIN	010	4/3/23 8:28 AM	S	0.1	0	0	0.35	10	275	
CHARLES RIVER	MID-BASIN	010	4/3/23 8:28 AM	B	8.8	0	0	0.35	0	31	
CHARLES RIVER	MID-BASIN	010	4/10/23 8:33 AM	S	0.1	0	0	0	0	30	
CHARLES RIVER	MID-BASIN	010	4/10/23 8:33 AM	B	9.1	0	0	0	0	0	
CHARLES RIVER	MID-BASIN	010	4/25/23 8:56 AM	S	0.1	0	0	0.51	0	183	
CHARLES RIVER	MID-BASIN	010	4/25/23 8:56 AM	B	8.8	0	0	0.51	0	96	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
CHARLES RIVER	MID-BASIN	010	5/3/23 8:29 AM	S	0.1	0.03	0.19	0.24	96	256	
CHARLES RIVER	MID-BASIN	010	5/3/23 8:29 AM	B	9.1	0.03	0.19	0.24	74	108	
CHARLES RIVER	MID-BASIN	010	5/19/23 8:28 AM	S	0.1	0	0	0	0	52	
CHARLES RIVER	MID-BASIN	010	5/19/23 8:28 AM	B	9	0	0	0	0	10	
CHARLES RIVER	MID-BASIN	010	5/24/23 8:01 AM	S	0.1	0.03	0.03	0.03	30	345	
CHARLES RIVER	MID-BASIN	010	5/24/23 8:01 AM	B	9.1	0.03	0.03	0.03	20	160	
CHARLES RIVER	MID-BASIN	010	6/7/23 8:34 AM	S	0.1	0	0	0.07	31	74	
CHARLES RIVER	MID-BASIN	010	6/7/23 8:34 AM	B	8.9	0	0	0.07	0	20	
CHARLES RIVER	MID-BASIN	010	6/15/23 8:08 AM	S	0.1	0	0.12	0.13	20	31	
CHARLES RIVER	MID-BASIN	010	6/15/23 8:08 AM	B	9	0	0.12	0.13	10	31	
CHARLES RIVER	MID-BASIN	010	6/16/23 8:07 AM	S	0.1	0	0	0.12	0	74	
CHARLES RIVER	MID-BASIN	010	6/16/23 8:07 AM	B	8.6	0	0	0.12	0	10	
CHARLES RIVER	MID-BASIN	010	6/29/23 7:54 AM	S	0.1	0	0.53	1.08	10	20	
CHARLES RIVER	MID-BASIN	010	6/29/23 7:54 AM	B	9	0	0.53	1.08	0	0	
CHARLES RIVER	MID-BASIN	010	8/3/23 7:56 AM	S	0.1	0	0	0	0	97	
CHARLES RIVER	MID-BASIN	010	8/3/23 7:56 AM	B	9.4	0	0	0	63	97	
CHARLES RIVER	MID-BASIN	010	9/1/23 7:31 AM	S	0.1	0	0	0.54	31	203	
CHARLES RIVER	MID-BASIN	010	9/1/23 7:31 AM	B	9.4	0	0	0.54	20	0	
CHARLES RIVER	MID-BASIN	010	9/12/23 7:45 AM	S	0.1	0.09	0.48	0.68	246	933	
CHARLES RIVER	MID-BASIN	010	9/12/23 7:45 AM	B	8.7	0.09	0.48	0.68	30	171	
CHARLES RIVER	MID-BASIN	010	9/15/23 8:12 AM	S	0.1	0	0	0.57	52	345	
CHARLES RIVER	MID-BASIN	010	9/15/23 8:12 AM	B	8.8	0	0	0.57	31	121	
CHARLES RIVER	MID-BASIN	010	9/17/23 8:17 AM	S	0.1	0	0.07	0.07	10	148	
CHARLES RIVER	MID-BASIN	010	9/17/23 8:17 AM	B	8.9	0	0.07	0.07	10	52	
CHARLES RIVER	MID-BASIN	010	9/19/23 8:13 AM	S	0.1	0	1.52	1.52	295	836	
CHARLES RIVER	MID-BASIN	010	9/19/23 8:13 AM	B	8.9	0	1.52	1.52	31	63	
CHARLES RIVER	MID-BASIN	010	9/23/23 8:07 AM	S	0.1	0.12	0.12	0.12	63	173	
CHARLES RIVER	MID-BASIN	010	9/23/23 8:07 AM	B	9	0.12	0.12	0.12	63	74	
CHARLES RIVER	MID-BASIN	010	9/26/23 8:30 AM	S	0.1	0	0.07	0.38	85	288	
CHARLES RIVER	MID-BASIN	010	9/26/23 8:30 AM	B	9	0	0.07	0.38	52	110	
CHARLES RIVER	MID-BASIN	010	10/2/23 8:13 AM	S	0.1	0	0	0	74	262	
CHARLES RIVER	MID-BASIN	010	10/2/23 8:13 AM	B	8.8	0	0	0	41	20	
CHARLES RIVER	MID-BASIN	010	10/4/23 7:59 AM	S	0.1	0	0	0	10	122	
CHARLES RIVER	MID-BASIN	010	10/4/23 7:59 AM	B	9.1	0	0	0	10	175	
CHARLES RIVER	MID-BASIN	010	10/11/23 7:52 AM	S	0.1	0	0	0	10	122	
CHARLES RIVER	MID-BASIN	010	10/11/23 7:52 AM	B	9.1	0	0	0	31	20	
CHARLES RIVER	MID-BASIN	210	4/3/23 8:26 AM	S	0.1	0	0	0.35	10	171	
CHARLES RIVER	MID-BASIN	210	4/10/23 8:29 AM	S	0.1	0	0	0	0	20	
CHARLES RIVER	MID-BASIN	210	4/25/23 8:52 AM	S	0.1	0	0	0.51	20	285	
CHARLES RIVER	MID-BASIN	210	5/3/23 8:26 AM	S	0.1	0.03	0.19	0.24	145	213	
CHARLES RIVER	MID-BASIN	210	5/19/23 8:25 AM	S	0.1	0	0	0	0	20	
CHARLES RIVER	MID-BASIN	210	5/24/23 7:57 AM	S	0.1	0.03	0.03	0.03	31	327	
CHARLES RIVER	MID-BASIN	210	6/7/23 8:29 AM	S	0.1	0	0	0.07	0	63	
CHARLES RIVER	MID-BASIN	210	6/15/23 8:05 AM	S	0.1	0	0.12	0.13	20	20	
CHARLES RIVER	MID-BASIN	210	6/16/23 8:02 AM	S	0.1	0	0	0.12	0	96	
CHARLES RIVER	MID-BASIN	210	6/29/23 7:50 AM	S	0.1	0	0.53	1.08	20	10	
CHARLES RIVER	MID-BASIN	210	8/3/23 7:53 AM	S	0.1	0	0	0	31	119	
CHARLES RIVER	MID-BASIN	210	9/1/23 7:27 AM	S	0.1	0	0	0.54	30	75	
CHARLES RIVER	MID-BASIN	210	9/12/23 7:42 AM	S	0.1	0.09	0.48	0.68	146	601	
CHARLES RIVER	MID-BASIN	210	9/15/23 8:09 AM	S	0.1	0	0	0.57	30	135	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
CHARLES RIVER	MID-BASIN	210	9/17/23 8:14 AM	S	0.1	0	0.07	0.07	30	189	
CHARLES RIVER	MID-BASIN	210	9/19/23 8:09 AM	S	0.1	0	1.52	1.52	243	256	
CHARLES RIVER	MID-BASIN	210	9/23/23 8:03 AM	S	0.1	0.12	0.12	0.12	20	185	
CHARLES RIVER	MID-BASIN	210	9/26/23 8:26 AM	S	0.1	0	0.07	0.38	145	309	
CHARLES RIVER	MID-BASIN	210	10/2/23 8:10 AM	S	0.1	0	0	0	30	231	
CHARLES RIVER	MID-BASIN	210	10/4/23 7:55 AM	S	0.1	0	0	0	0	158	
CHARLES RIVER	MID-BASIN	210	10/11/23 7:48 AM	S	0.1	0	0	0	0	85	
CHARLES RIVER	LOWER BASIN	166	1/10/23 10:22 AM	S	0.1	0	0	0	30	158	
CHARLES RIVER	LOWER BASIN	166	1/23/23 10:00 AM	S	0.1	0.87	1.11	1.11	168	488	
CHARLES RIVER	LOWER BASIN	166	2/8/23 10:38 AM	S	0.1	0	0.04	0.04	20	146	
CHARLES RIVER	LOWER BASIN	166	2/21/23 10:00 AM	S	0.1	0.15	0.15	0.15	0	52	
CHARLES RIVER	LOWER BASIN	166	3/9/23 10:25 AM	S	0.1	0	0	0		74	
CHARLES RIVER	LOWER BASIN	166	3/20/23 8:07 AM	S	0.1	0	0	0	41.5	206	
CHARLES RIVER	LOWER BASIN	166	4/7/23 8:55 AM	S	0.1	0	0.01	0.01	0	41	
CHARLES RIVER	LOWER BASIN	166	4/18/23 9:05 AM	S	0.1	0	0.08	0.08	0	0	
CHARLES RIVER	LOWER BASIN	166	5/2/23 9:42 AM	S	0.1	0.16	0.21	2.02	63	443	
CHARLES RIVER	LOWER BASIN	166	5/17/23 9:30 AM	S	0.1	0	0	0	0	41	
CHARLES RIVER	LOWER BASIN	166	5/31/23 9:32 AM	S	0.1	0	0	0	0	31	
CHARLES RIVER	LOWER BASIN	166	6/13/23 9:49 AM	S	0.1	0.01	0.35	0.35	0	41	
CHARLES RIVER	LOWER BASIN	166	6/26/23 9:04 AM	S	0.1	0	0.02	0.07	0	0	
CHARLES RIVER	LOWER BASIN	166	7/10/23 9:29 AM	S	0.1	0.71	0.71	0.71	10	10	
CHARLES RIVER	LOWER BASIN	166	7/25/23 9:34 AM	S	0.1	0.88	0.88	0.88	31	30	
CHARLES RIVER	LOWER BASIN	166	8/8/23 9:17 AM	S	0.1	1.33	1.33	1.33	86	20	
CHARLES RIVER	LOWER BASIN	166	8/24/23 8:57 AM	S	0.1	0.01	0.01	0.01	261.5	187	
CHARLES RIVER	LOWER BASIN	166	9/7/23 9:13 AM	S	0.1	0	0	0	1670	10	
CHARLES RIVER	LOWER BASIN	166	9/18/23 9:40 AM	S	0.1	1.52	1.52	1.59	173	450	
CHARLES RIVER	LOWER BASIN	166	10/3/23 9:13 AM	S	0.1	0	0	0	10	278	
CHARLES RIVER	LOWER BASIN	166	10/17/23 9:33 AM	S	0.1	0	0.06	0.06	10	96	
CHARLES RIVER	LOWER BASIN	166	10/30/23 8:53 AM	S	0.1	0.43	0.62	0.62	15	110.5	
CHARLES RIVER	LOWER BASIN	166	11/15/23 10:17 AM	S	0.1	0	0	0	0	74	
CHARLES RIVER	LOWER BASIN	166	11/29/23 10:17 AM	S	0.1	0	0	0.4	30	218	
CHARLES RIVER	LOWER BASIN	166	12/14/23 10:38 AM	S	0.1	0	0	0	512	933	
CHARLES RIVER	LOWER BASIN	166	12/27/23 9:51 AM	S	0.1	0.02	0.02	0.02	108	226	
CHARLES RIVER	LOWER BASIN	011	4/3/23 8:19 AM	S	0.1	0	0	0.35	0	146	
CHARLES RIVER	LOWER BASIN	011	4/3/23 8:19 AM	B	6.5	0	0	0.35	10	74	
CHARLES RIVER	LOWER BASIN	011	4/10/23 8:21 AM	S	0.1	0	0	0	0	31	
CHARLES RIVER	LOWER BASIN	011	4/10/23 8:21 AM	B	5.8	0	0	0	0	51	
CHARLES RIVER	LOWER BASIN	011	4/25/23 8:46 AM	S	0.1	0	0	0.51	10	52	
CHARLES RIVER	LOWER BASIN	011	4/25/23 8:46 AM	B	6.4	0	0	0.51	0	86	
CHARLES RIVER	LOWER BASIN	011	5/3/23 8:16 AM	S	0.1	0.03	0.19	0.24	63	201	
CHARLES RIVER	LOWER BASIN	011	5/3/23 8:16 AM	B	6.6	0.03	0.19	0.24	20	216	
CHARLES RIVER	LOWER BASIN	011	5/19/23 8:19 AM	S	0.1	0	0	0	10	31	
CHARLES RIVER	LOWER BASIN	011	5/19/23 8:19 AM	B	6	0	0	0	20	20	
CHARLES RIVER	LOWER BASIN	011	5/24/23 7:47 AM	S	0.1	0.03	0.03	0.03	0	275	
CHARLES RIVER	LOWER BASIN	011	5/24/23 7:47 AM	B	3.1	0.03	0.03	0.03	10	341	
CHARLES RIVER	LOWER BASIN	011	6/7/23 8:20 AM	S	0.1	0	0	0.07	10	63	
CHARLES RIVER	LOWER BASIN	011	6/7/23 8:20 AM	B	6.3	0	0	0.07	10	74	
CHARLES RIVER	LOWER BASIN	011	6/15/23 7:56 AM	S	0.1	0	0.12	0.13	0	282	
CHARLES RIVER	LOWER BASIN	011	6/15/23 7:56 AM	B	5.3	0	0.12	0.13	10	538	
CHARLES RIVER	LOWER BASIN	011	6/16/23 7:54 AM	S	0.1	0	0	0.12	0	74	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
CHARLES RIVER	LOWER BASIN	011	6/16/23 7:54 AM	B	5.1	0	0	0.12	31	323	
CHARLES RIVER	LOWER BASIN	011	6/29/23 7:42 AM	S	0.1	0	0.53	1.08	30	109	
CHARLES RIVER	LOWER BASIN	011	6/29/23 7:42 AM	B	5.3	0	0.53	1.08	96	426	
CHARLES RIVER	LOWER BASIN	011	8/3/23 7:45 AM	S	0.1	0	0	0	74	97	
CHARLES RIVER	LOWER BASIN	011	8/3/23 7:45 AM	B	4.8	0	0	0	63	121	
CHARLES RIVER	LOWER BASIN	011	9/1/23 7:20 AM	S	0.1	0	0	0.54	52	145	
CHARLES RIVER	LOWER BASIN	011	9/1/23 7:20 AM	B	4.3	0	0	0.54	74	41	
CHARLES RIVER	LOWER BASIN	011	9/12/23 7:33 AM	S	0.1	0.09	0.48	0.68	374	860	
CHARLES RIVER	LOWER BASIN	011	9/12/23 7:33 AM	B	5.4	0.09	0.48	0.68	285	677	
CHARLES RIVER	LOWER BASIN	011	9/15/23 8:01 AM	S	0.1	0	0	0.57	31	183	
CHARLES RIVER	LOWER BASIN	011	9/15/23 8:01 AM	B	5.9	0	0	0.57	52	134	
CHARLES RIVER	LOWER BASIN	011	9/17/23 8:07 AM	S	0.1	0	0.07	0.07	31	74	
CHARLES RIVER	LOWER BASIN	011	9/17/23 8:07 AM	B	4.8	0	0.07	0.07	10	96	
CHARLES RIVER	LOWER BASIN	011	9/19/23 8:01 AM	S	0.1	0	1.52	1.52	233	410	
CHARLES RIVER	LOWER BASIN	011	9/19/23 8:01 AM	B	6	0	1.52	1.52	203	420	
CHARLES RIVER	LOWER BASIN	011	9/23/23 7:55 AM	S	0.1	0.12	0.12	0.12	52	203	
CHARLES RIVER	LOWER BASIN	011	9/23/23 7:55 AM	B	6.1	0.12	0.12	0.12	41	97	
CHARLES RIVER	LOWER BASIN	011	9/26/23 8:19 AM	S	0.1	0	0.07	0.38	158	314	
CHARLES RIVER	LOWER BASIN	011	9/26/23 8:19 AM	B	6.4	0	0.07	0.38	63	256	
CHARLES RIVER	LOWER BASIN	011	10/2/23 8:01 AM	S	0.1	0	0	0	20	173	
CHARLES RIVER	LOWER BASIN	011	10/2/23 8:01 AM	B	3.1	0	0	0	63	231	
CHARLES RIVER	LOWER BASIN	011	10/4/23 7:47 AM	S	0.1	0	0	0	0	160	
CHARLES RIVER	LOWER BASIN	011	10/4/23 7:47 AM	B	5.5	0	0	0	31	175	
CHARLES RIVER	LOWER BASIN	011	10/11/23 7:40 AM	S	0.1	0	0	0	0	85	
CHARLES RIVER	LOWER BASIN	011	10/11/23 7:40 AM	B	5.7	0	0	0	10	145	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	4/6/23 9:22 AM	S	0.1	0.01	0.01	0.01	86	2250	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	4/11/23 9:06 AM	S	0.1	0	0	0	1940	1480	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	4/27/23 9:29 AM	S	0.1	0.04	0.04	0.04	86	181	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	5/4/23 9:10 AM	S	0.1	0.01	0.04	0.2	132	373	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	5/26/23 9:24 AM	S	0.1	0	0	0.03	31	393	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	6/2/23 8:54 AM	S	0.1	0.37	0.37	0.37	216	488	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	6/8/23 8:55 AM	S	0.1	0.01	0.01	0.01	1010	389	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	7/18/23 8:42 AM	S	0.1	0	0	1.6	428	905	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	7/19/23 9:05 AM	S	0.1	0	0	0	98	472	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	7/26/23 9:12 AM	S	0.1	0	0.88	0.88	520	2760	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	7/31/23 8:35 AM	S	0.1	0	0	3.07	216	987	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	8/1/23 9:30 AM	S	0.1	0	0	0	301	413	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	8/9/23 9:05 AM	S	0.1	0	1.33	1.33	3080	6590	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	8/17/23 8:15 AM	S	0.1	0	0	0.64	158	231	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	8/21/23 8:40 AM	S	0.1	0.28	0.28	0.28	96	161	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	8/23/23 9:00 AM	S	0.1	0	0	0.28	160	143	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	9/21/23 9:54 AM	S	0.1	0	0	0	179	450	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	10/16/23 9:13 AM	S	0.1	0.06	0.06	0.06	134	231	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	10/19/23 9:37 AM	S	0.1	0	0	0	146	426	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	10/26/23 9:30 AM	S	0.1	0	0	0	496	882	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	4/6/23 9:27 AM	S	0.1	0.01	0.01	0.01	30	3650	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	4/11/23 9:16 AM	S	0.1	0	0	0	31	2190	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	4/27/23 9:38 AM	S	0.1	0.04	0.04	0.04	20	63	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	5/4/23 9:16 AM	S	0.1	0.01	0.04	0.2	146	538	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	5/26/23 9:29 AM	S	0.1	0	0	0.03	52	384	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	6/2/23 9:04 AM	S	0.1	0.37	0.37	0.37	110	295	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	6/8/23 9:03 AM	S	0.1	0.01	0.01	0.01	97	231	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	7/18/23 8:47 AM	S	0.1	0	0	1.6	383	2100	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	7/19/23 9:13 AM	S	0.1	0	0	0	187	556	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	7/26/23 9:22 AM	S	0.1	0	0.88	0.88	426	2910	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	7/31/23 8:45 AM	S	0.1	0	0	3.07	301	1180	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	8/1/23 9:36 AM	S	0.1	0	0	0	209	355	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	8/9/23 9:11 AM	S	0.1	0	1.33	1.33	2280	6590	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	8/17/23 8:25 AM	S	0.1	0	0	0.64	97	187	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	8/21/23 8:46 AM	S	0.1	0.28	0.28	0.28	345	201	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	8/23/23 9:08 AM	S	0.1	0	0	0.28	73	262	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	9/21/23 9:59 AM	S	0.1	0	0	0	256	487	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	10/16/23 9:26 AM	S	0.1	0.06	0.06	0.06	63	426	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	10/19/23 9:47 AM	S	0.1	0	0	0	253	156	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	10/26/23 9:36 AM	S	0.1	0	0	0	74	73	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	4/6/23 9:08 AM	S	0.1	0.01	0.01	0.01	20	3870	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	4/11/23 8:56 AM	S	0.1	0	0	0	0	247	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	4/27/23 9:17 AM	S	0.1	0.04	0.04	0.04	31	209	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	5/4/23 8:56 AM	S	0.1	0.01	0.04	0.2	292	644	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	5/26/23 9:10 AM	S	0.1	0	0	0.03	52	487	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	6/2/23 8:45 AM	S	0.1	0.37	0.37	0.37	84	31	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	6/8/23 8:44 AM	S	0.1	0.01	0.01	0.01	216	233	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	7/18/23 8:29 AM	S	0.1	0	0	1.6	323	657	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	7/19/23 8:57 AM	S	0.1	0	0	0	345	455	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	7/26/23 9:02 AM	S	0.1	0	0.88	0.88	496	1660	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	7/31/23 8:25 AM	S	0.1	0	0	3.07	269	959	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	8/1/23 9:16 AM	S	0.1	0	0	0	173	644	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	8/9/23 8:50 AM	S	0.1	0	1.33	1.33	3080	7700	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	8/17/23 8:07 AM	S	0.1	0	0	0.64	199	617	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	8/21/23 8:24 AM	S	0.1	0.28	0.28	0.28	120	464	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	8/23/23 8:50 AM	S	0.1	0	0	0.28	183	364	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	9/21/23 9:39 AM	S	0.1	0	0	0	160	504	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	10/16/23 9:07 AM	S	0.1	0.06	0.06	0.06	109	384	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	10/19/23 9:25 AM	S	0.1	0	0	0	119	435	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	10/26/23 9:09 AM	S	0.1	0	0	0	31	1200	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	4/6/23 9:10 AM	S	0.1	0.01	0.01	0.01	41	2610	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	4/11/23 8:59 AM	S	0.1	0	0	0	30	1110	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	4/27/23 9:20 AM	S	0.1	0.04	0.04	0.04	73	240	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	5/4/23 8:59 AM	S	0.1	0.01	0.04	0.2	243	650	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	5/26/23 9:12 AM	S	0.1	0	0	0.03	74	331	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	6/2/23 8:47 AM	S	0.1	0.37	0.37	0.37	63	41	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	6/8/23 8:47 AM	S	0.1	0.01	0.01	0.01	20	121	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	7/18/23 8:32 AM	S	0.1	0	0	1.6	309	743	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	7/19/23 8:59 AM	S	0.1	0	0	0	131	265	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	7/26/23 9:06 AM	S	0.1	0	0.88	0.88	488	2010	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	7/31/23 8:28 AM	S	0.1	0	0	3.07	189	865	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/1/23 9:19 AM	S	0.1	0	0	0	189	480	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/9/23 8:52 AM	S	0.1	0	1.33	1.33	2760	9800	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/17/23 8:04 AM	S	0.1	0	0	0.64	134	309	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/21/23 8:26 AM	S	0.1	0.28	0.28	0.28	51	399	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/23/23 8:52 AM	S	0.1	0	0	0.28	120	341	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	9/21/23 9:44 AM	S	0.1	0	0	0	120	512	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	10/16/23 9:04 AM	S	0.1	0.06	0.06	0.06	108	441	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	10/19/23 9:27 AM	S	0.1	0	0	0	134	426	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	10/26/23 9:12 AM	S	0.1	0	0	0	72	1190	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	4/6/23 8:58 AM	S	0.1	0.01	0.01	0.01	52	2250	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	4/11/23 8:49 AM	S	0.1	0	0	0	31	576	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	4/27/23 9:10 AM	S	0.1	0.04	0.04	0.04	41	359	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	5/4/23 8:49 AM	S	0.1	0.01	0.04	0.2	211	776	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	5/26/23 9:03 AM	S	0.1	0	0	0.03	52	295	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	6/2/23 8:36 AM	S	0.1	0.37	0.37	0.37	0	63	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	6/8/23 8:38 AM	S	0.1	0.01	0.01	0.01	98	199	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	7/18/23 8:22 AM	S	0.1	0	0	1.6	388	860	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	7/19/23 8:52 AM	S	0.1	0	0	0	108	379	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	7/26/23 8:56 AM	S	0.1	0	0.88	0.88	576	2010	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	7/31/23 8:19 AM	S	0.1	0	0	3.07	393	839	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	8/1/23 9:12 AM	S	0.1	0	0	0	209	332	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	8/9/23 8:42 AM	S	0.1	0	1.33	1.33	2360	9800	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	8/17/23 7:54 AM	S	0.1	0	0	0.64	148	265	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	8/21/23 8:19 AM	S	0.1	0.28	0.28	0.28	63	393	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	8/23/23 8:42 AM	S	0.1	0	0	0.28	131	265	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	9/21/23 9:29 AM	S	0.1	0	0	0	226	435	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	10/16/23 8:56 AM	S	0.1	0.06	0.06	0.06	41	323	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	10/19/23 9:14 AM	S	0.1	0	0	0	110	327	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	10/26/23 9:00 AM	S	0.1	0	0	0	10	754	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	4/6/23 8:17 AM	S	0.1	0.01	0.01	0.01	95	771	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	4/11/23 8:35 AM	S	0.1	0	0	0	10	121	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	4/27/23 9:51 AM	S	0.1	0.04	0.04	0.04	41	2760	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	5/4/23 8:37 AM	S	0.1	0.01	0.04	0.2	226	909	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	5/26/23 8:52 AM	S	0.1	0	0	0.03	20	74	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	6/2/23 8:24 AM	S	0.1	0.37	0.37	0.37	471	546	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	6/8/23 8:24 AM	S	0.1	0.01	0.01	0.01	189	487	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	7/18/23 8:02 AM	S	0.1	0	0	1.6	272	1050	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	7/19/23 8:38 AM	S	0.1	0	0	0	345	906	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	7/26/23 8:45 AM	S	0.1	0	0.88	0.88	512	1400	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	7/31/23 8:07 AM	S	0.1	0	0	3.07	318	932	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	8/1/23 9:01 AM	S	0.1	0	0	0	298	369	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	8/9/23 8:27 AM	S	0.1	0	1.33	1.33	4880	12000	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	8/17/23 7:42 AM	S	0.1	0	0	0.64	158	670	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	8/21/23 8:09 AM	S	0.1	0.28	0.28	0.28	134	281	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	8/23/23 8:31 AM	S	0.1	0	0	0.28	249	605	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	9/21/23 9:16 AM	S	0.1	0	0	0	345	373	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	10/16/23 8:44 AM	S	0.1	0.06	0.06	0.06	345	487	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	10/19/23 9:00 AM	S	0.1	0	0	0	161	581	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	10/26/23 8:45 AM	S	0.1	0	0	0	216	213	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	1/10/23 9:50 AM	S	0.1	0	0	0	10	97	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	1/23/23 9:35 AM	S	0.1	0.87	1.11	1.11	63	86	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	2/8/23 9:52 AM	S	0.1	0	0.04	0.04	20	10	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	2/21/23 9:30 AM	S	0.1	0.15	0.15	0.15	31	41	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	3/9/23 9:46 AM	S	0.1	0	0	0		24200	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
MYSTIC/ALEWIFE	UPPER MYSTIC	083	3/20/23 7:37 AM	S	0.1	0	0	0	52	146	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/6/23 8:24 AM	S	0.1	0.01	0.01	0.01	0	10	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/7/23 8:26 AM	S	0.1	0	0.01	0.01	0	0	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/11/23 8:20 AM	S	0.1	0	0	0	0	0	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/18/23 8:33 AM	S	0.1	0	0.08	0.08	0	0	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/27/23 8:45 AM	S	0.1	0.04	0.04	0.04	10	10	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/2/23 8:58 AM	S	0.1	0.16	0.21	2.02	41	86	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/4/23 8:21 AM	S	0.1	0.01	0.04	0.2	10	85	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/17/23 8:50 AM	S	0.1	0	0	0	52	121	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/26/23 10:03 AM	S	0.1	0	0	0.03	20	10	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/31/23 9:00 AM	S	0.1	0	0	0	52	52	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/2/23 9:30 AM	S	0.1	0.37	0.37	0.37	41	110	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/8/23 10:03 AM	S	0.1	0.01	0.01	0.01	31	63	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/13/23 9:20 AM	S	0.1	0.01	0.35	0.35	275	63	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/26/23 8:41 AM	S	0.1	0	0.02	0.07	63	108	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/10/23 9:02 AM	S	0.1	0.71	0.71	0.71	9800	8660	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/18/23 10:02 AM	S	0.1	0	0	1.6	189	265	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/19/23 9:47 AM	S	0.1	0	0	0	52	145	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/25/23 8:59 AM	S	0.1	0.88	0.88	0.88	52	52	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/26/23 9:33 AM	S	0.1	0	0.88	0.88	85	243	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/31/23 9:32 AM	S	0.1	0	0	3.07	73	185	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/1/23 9:35 AM	S	0.1	0	0	0	30	96	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/8/23 8:51 AM	S	0.1	1.33	1.33	1.33	24200	13000	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/9/23 8:21 AM	S	0.1	0	1.33	1.33	631	1010	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/17/23 9:37 AM	S	0.1	0	0	0.64	41	52	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/21/23 9:42 AM	S	0.1	0.28	0.28	0.28	31	97	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/23/23 9:31 AM	S	0.1	0	0	0.28	10	109	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/24/23 8:29 AM	S	0.1	0.01	0.01	0.01	0	51	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	9/7/23 8:29 AM	S	0.1	0	0	0	31	31	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	9/18/23 9:03 AM	S	0.1	1.52	1.52	1.59	487	569	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	9/21/23 10:27 AM	S	0.1	0	0	0	120	216	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/3/23 8:43 AM	S	0.1	0	0	0	74	74	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/16/23 8:29 AM	S	0.1	0.06	0.06	0.06	10	20	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/17/23 8:56 AM	S	0.1	0	0.06	0.06	10	10	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/19/23 8:45 AM	S	0.1	0	0	0	3260	1270	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/26/23 9:39 AM	S	0.1	0	0	0	31	85	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/30/23 8:26 AM	S	0.1	0.43	0.62	0.62	1160	246	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	11/15/23 9:46 AM	S	0.1	0	0	0	0	41	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	11/29/23 9:48 AM	S	0.1	0	0	0.4	161	166	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	12/14/23 9:59 AM	S	0.1	0	0	0	317	218	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	12/27/23 9:32 AM	S	0.1	0.02	0.02	0.02	86	1220	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	4/6/23 8:36 AM	S	0.1	0.01	0.01	0.01	10	0	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	4/11/23 8:26 AM	S	0.1	0	0	0	10	0	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	4/27/23 8:53 AM	S	0.1	0.04	0.04	0.04	20	134	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	5/4/23 8:28 AM	S	0.1	0.01	0.04	0.2	31	31	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	5/26/23 9:57 AM	S	0.1	0	0	0.03	20	41	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	6/2/23 9:26 AM	S	0.1	0.37	0.37	0.37	52	84	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	6/8/23 9:57 AM	S	0.1	0.01	0.01	0.01	63	63	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	7/18/23 9:56 AM	S	0.1	0	0	1.6	253	288	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	7/19/23 9:41 AM	S	0.1	0	0	0	63	109	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
MYSTIC/ALEWIFE	UPPER MYSTIC	057	7/26/23 9:28 AM	S	0.1	0	0.88	0.88	199	315	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	7/31/23 9:27 AM	S	0.1	0	0	3.07	145	256	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	8/1/23 9:29 AM	S	0.1	0	0	0	41	63	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	8/9/23 8:05 AM	S	0.1	0	1.33	1.33	703	1960	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	8/17/23 9:32 AM	S	0.1	0	0	0.64	41	41	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	8/21/23 9:36 AM	S	0.1	0.28	0.28	0.28	61	98	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	8/23/23 9:26 AM	S	0.1	0	0	0.28	41	97	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	9/21/23 10:22 AM	S	0.1	0	0	0	120	201	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	10/16/23 8:35 AM	S	0.1	0.06	0.06	0.06	10	41	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	10/19/23 8:51 AM	S	0.1	0	0	0	20	586	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	10/26/23 9:34 AM	S	0.1	0	0	0	20	52	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	1/10/23 9:43 AM	S	0.1	0	0	0	31	148	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	1/23/23 9:26 AM	S	0.1	0.87	1.11	1.11	41	120	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	2/8/23 9:43 AM	S	0.1	0	0.04	0.04	0	20	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	2/21/23 9:24 AM	S	0.1	0.15	0.15	0.15	41	41	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	3/9/23 9:38 AM	S	0.1	0	0	0		96	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	3/20/23 7:31 AM	S	0.1	0	0	0	10	96	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	4/7/23 8:19 AM	S	0.1	0	0.01	0.01	0	10	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	4/18/23 8:23 AM	S	0.1	0	0.08	0.08	10	25.5	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	5/2/23 8:49 AM	S	0.1	0.16	0.21	2.02	52	146	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	5/17/23 8:42 AM	S	0.1	0	0	0	160	161	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	5/31/23 8:52 AM	S	0.1	0	0	0	31	86	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	6/13/23 9:11 AM	S	0.1	0.01	0.35	0.35	689	624	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	6/26/23 8:29 AM	S	0.1	0	0.02	0.07	63	86	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	7/10/23 8:53 AM	S	0.1	0.71	0.71	0.71	146	269	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	7/25/23 8:50 AM	S	0.1	0.88	0.88	0.88	74	134	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	8/8/23 8:43 AM	S	0.1	1.33	1.33	1.33	327	255.5	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	8/24/23 8:22 AM	S	0.1	0.01	0.01	0.01	669	171	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	9/7/23 8:19 AM	S	0.1	0	0	0	348	139.5	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	9/18/23 8:52 AM	S	0.1	1.52	1.52	1.59	223	309	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/3/23 8:36 AM	S	0.1	0	0	0	97	160	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/17/23 8:48 AM	S	0.1	0	0.06	0.06	97	131	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/30/23 8:19 AM	S	0.1	0.43	0.62	0.62	1240	754	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	11/15/23 9:41 AM	S	0.1	0	0	0	20	31	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	11/29/23 9:41 AM	S	0.1	0	0	0.4	51	97	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	12/14/23 9:51 AM	S	0.1	0	0	0	278	262	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	12/27/23 9:23 AM	S	0.1	0.02	0.02	0.02	52	75	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	4/6/23 8:37 AM	S	0.1	0.01	0.01	0.01	20	41	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	4/11/23 9:37 AM	S	0.1	0	0	0	0	63	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	4/27/23 9:17 AM	S	0.1	0.04	0.04	0.04	41	187	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	5/4/23 8:16 AM	S	0.1	0.01	0.04	0.2	86	345	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	5/26/23 9:32 AM	S	0.1	0	0	0.03	85	278	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	6/2/23 9:01 AM	S	0.1	0.37	0.37	0.37	74	246	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	6/8/23 9:35 AM	S	0.1	0.01	0.01	0.01	269	187	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/18/23 9:27 AM	S	0.1	0	0	1.6	146	259	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/19/23 10:20 AM	S	0.1	0	0	0	31	216	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/26/23 9:04 AM	S	0.1	0	0.88	0.88	332	1050	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/31/23 9:00 AM	S	0.1	0	0	3.07	250	644	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/1/23 9:03 AM	S	0.1	0	0	0	74	369	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/9/23 9:39 AM	S	0.1	0	1.33	1.33	402	2610	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/17/23 9:08 AM	S	0.1	0	0	0.64	52	309	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/21/23 9:10 AM	S	0.1	0.28	0.28	0.28	30	292	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/23/23 8:58 AM	S	0.1	0	0	0.28	110	404	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	9/21/23 9:55 AM	S	0.1	0	0	0	98	211	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	10/16/23 8:41 AM	S	0.1	0.06	0.06	0.06	98	345	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	10/19/23 9:45 AM	S	0.1	0	0	0	122	637	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	10/26/23 9:09 AM	S	0.1	0	0	0	110	455	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	1/10/23 9:08 AM	S	0.1	0	0	0	10	98	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	1/23/23 8:55 AM	S	0.1	0.87	1.11	1.11	323	301	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	2/8/23 9:03 AM	S	0.1	0	0.04	0.04	20	246	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	2/21/23 8:41 AM	S	0.1	0.15	0.15	0.15	30	173	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	3/9/23 9:06 AM	S	0.1	0	0	0		305	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	3/20/23 6:52 AM	S	0.1	0	0	0	0	97	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	4/7/23 7:43 AM	S	0.1	0	0.01	0.01	20	282	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	4/18/23 7:59 AM	S	0.1	0	0.08	0.08	10	85	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/2/23 8:12 AM	S	0.1	0.16	0.21	2.02	120	135	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/17/23 8:02 AM	S	0.1	0	0	0	41	158	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/31/23 8:13 AM	S	0.1	0	0	0	20	63	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	6/13/23 8:31 AM	S	0.1	0.01	0.35	0.35	189	259	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	6/26/23 7:54 AM	S	0.1	0	0.02	0.07	52	119	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	7/10/23 8:06 AM	S	0.1	0.71	0.71	0.71	31	148	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	7/25/23 8:11 AM	S	0.1	0.88	0.88	0.88	0	246	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	8/8/23 8:12 AM	S	0.1	1.33	1.33	1.33	10	235	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	8/24/23 7:43 AM	S	0.1	0.01	0.01	0.01	63	240	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	9/7/23 7:54 AM	S	0.1	0	0	0	727	384	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	9/18/23 8:11 AM	S	0.1	1.52	1.52	1.59	85	591	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/3/23 7:59 AM	S	0.1	0	0	0	52	235.5	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/17/23 8:04 AM	S	0.1	0	0.06	0.06	74	345	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/30/23 7:44 AM	S	0.1	0.43	0.62	0.62	573	1470	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	11/15/23 9:05 AM	S	0.1	0	0	0	41	187	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	11/29/23 8:55 AM	S	0.1	0	0	0.4	185	480	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	12/14/23 9:11 AM	S	0.1	0	0	0	314	259	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	12/27/23 8:45 AM	S	0.1	0.02	0.02	0.02	74	317	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	4/6/23 8:52 AM	S	0.1	0.01	0.01	0.01	0	63	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	4/11/23 9:19 AM	S	0.1	0	0	0	0	0	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	4/27/23 8:59 AM	S	0.1	0.04	0.04	0.04	20	52	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	5/4/23 8:33 AM	S	0.1	0.01	0.04	0.2	74	134	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	5/26/23 9:21 AM	S	0.1	0	0	0.03	0	63	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	6/2/23 8:51 AM	S	0.1	0.37	0.37	0.37	0	1110	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	6/8/23 9:16 AM	S	0.1	0.01	0.01	0.01	30	109	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/18/23 9:08 AM	S	0.1	0	0	1.6	132	298	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/19/23 8:55 AM	S	0.1	0	0	0	20	160	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/26/23 8:43 AM	S	0.1	0	0.88	0.88	496	4360	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/31/23 8:40 AM	S	0.1	0	0	3.07	31	504	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/1/23 8:43 AM	S	0.1	0	0	0	0	85	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/9/23 9:21 AM	S	0.1	0	1.33	1.33	934	7700	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/17/23 8:48 AM	S	0.1	0	0	0.64	31	187	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/21/23 8:50 AM	S	0.1	0.28	0.28	0.28	10	75	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/23/23 8:37 AM	S	0.1	0	0	0.28	20	384	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	9/21/23 9:36 AM	S	0.1	0	0	0	52	185	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	10/16/23 8:23 AM	S	0.1	0.06	0.06	0.06	20	41	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	10/19/23 9:26 AM	S	0.1	0	0	0	0	97	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	10/26/23 8:50 AM	S	0.1	0	0	0	20	86	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	4/6/23 9:11 AM	S	0.1	0.01	0.01	0.01	0	52	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	4/11/23 9:00 AM	S	0.1	0	0	0	10	86	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	4/27/23 8:41 AM	S	0.1	0.04	0.04	0.04	0	10	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	5/4/23 8:52 AM	S	0.1	0.01	0.04	0.2	73	305	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	5/26/23 9:06 AM	S	0.1	0	0	0.03	0	52	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	6/2/23 8:37 AM	S	0.1	0.37	0.37	0.37	0	512	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	6/8/23 8:57 AM	S	0.1	0.01	0.01	0.01	10	63	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/18/23 8:46 AM	S	0.1	0	0	1.6	189	771	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/19/23 8:38 AM	S	0.1	0	0	0	41	203	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/26/23 8:28 AM	S	0.1	0	0.88	0.88	20	259	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/31/23 8:23 AM	S	0.1	0	0	3.07	0	422	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/1/23 8:25 AM	S	0.1	0	0	0	10	122	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/9/23 9:00 AM	S	0.1	0	1.33	1.33	601	3870	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/17/23 8:29 AM	S	0.1	0	0	0.64	10	160	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/21/23 8:31 AM	S	0.1	0.28	0.28	0.28	10	75	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/23/23 8:22 AM	S	0.1	0	0	0.28	10	41	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	9/21/23 9:16 AM	S	0.1	0	0	0	20	253	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	10/16/23 8:04 AM	S	0.1	0.06	0.06	0.06	41	148	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	10/19/23 9:06 AM	S	0.1	0	0	0	20	52	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	10/26/23 8:30 AM	S	0.1	0	0	0	30	262	
MYSTIC/ALEWIFE	MALDEN RIVER	176	4/6/23 9:04 AM	S	0.1	0.01	0.01	0.01	10	10	
MYSTIC/ALEWIFE	MALDEN RIVER	176	4/11/23 9:07 AM	S	0.1	0	0	0	0	10	
MYSTIC/ALEWIFE	MALDEN RIVER	176	4/27/23 8:47 AM	S	0.1	0.04	0.04	0.04	0	86	
MYSTIC/ALEWIFE	MALDEN RIVER	176	5/4/23 8:45 AM	S	0.1	0.01	0.04	0.2	465	404	
MYSTIC/ALEWIFE	MALDEN RIVER	176	5/26/23 9:11 AM	S	0.1	0	0	0.03	0	51	
MYSTIC/ALEWIFE	MALDEN RIVER	176	6/2/23 8:41 AM	S	0.1	0.37	0.37	0.37	20	52	
MYSTIC/ALEWIFE	MALDEN RIVER	176	6/8/23 9:04 AM	S	0.1	0.01	0.01	0.01	10	299	
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/18/23 8:56 AM	S	0.1	0	0	1.6	109	2910	
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/19/23 8:46 AM	S	0.1	0	0	0	30	880	
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/26/23 8:33 AM	S	0.1	0	0.88	0.88	145	2490	
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/31/23 8:27 AM	S	0.1	0	0	3.07	256	1670	
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/1/23 8:31 AM	S	0.1	0	0	0	52	464	
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/9/23 9:08 AM	S	0.1	0	1.33	1.33	1350	7270	
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/17/23 8:36 AM	S	0.1	0	0	0.64	31	313	
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/21/23 8:37 AM	S	0.1	0.28	0.28	0.28	31	96	
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/23/23 8:27 AM	S	0.1	0	0	0.28	20	173	
MYSTIC/ALEWIFE	MALDEN RIVER	176	9/21/23 9:23 AM	S	0.1	0	0	0	98	496	
MYSTIC/ALEWIFE	MALDEN RIVER	176	10/16/23 8:12 AM	S	0.1	0.06	0.06	0.06	20	30	
MYSTIC/ALEWIFE	MALDEN RIVER	176	10/19/23 9:13 AM	S	0.1	0	0	0	0	41	
MYSTIC/ALEWIFE	MALDEN RIVER	176	10/26/23 8:38 AM	S	0.1	0	0	0	86	1010	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	1/10/23 8:49 AM	S	0.1	0	0	0	10	109	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	1/23/23 8:41 AM	S	0.1	0.87	1.11	1.11	108	480	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	2/21/23 8:27 AM	S	0.1	0.15	0.15	0.15	10	109	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	3/9/23 8:49 AM	S	0.1	0	0	0	0	63	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	3/20/23 6:35 AM	S	0.1	0	0	0	10	20	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	4/7/23 7:28 AM	S	0.1	0	0.01	0.01	10	41	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	4/18/23 7:39 AM	S	0.1	0	0.08	0.08	0	0	

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	5/2/23 7:59 AM	S	0.1	0.16	0.21	2.02	122	336	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	5/17/23 7:47 AM	S	0.1	0	0	0	0	61	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	5/31/23 7:56 AM	S	0.1	0	0	0	10	189	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	6/13/23 8:11 AM	S	0.1	0.01	0.35	0.35	20	86	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	6/26/23 7:41 AM	S	0.1	0	0.02	0.07	142	158	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	7/10/23 7:51 AM	S	0.1	0.71	0.71	0.71	10	288	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	7/25/23 7:55 AM	S	0.1	0.88	0.88	0.88	52	264	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	8/8/23 8:00 AM	S	0.1	1.33	1.33	1.33	52	10	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	8/24/23 7:27 AM	S	0.1	0.01	0.01	0.01	30	31	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	9/7/23 7:41 AM	S	0.1	0	0	0	0	31	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	9/18/23 7:50 AM	S	0.1	1.52	1.52	1.59	31	5790	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	10/3/23 7:42 AM	S	0.1	0	0	0	10	20	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	10/17/23 7:51 AM	S	0.1	0	0.06	0.06	0	10	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	10/30/23 7:29 AM	S	0.1	0.43	0.62	0.62	10	74	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	11/15/23 8:44 AM	S	0.1	0	0	0	31	121	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	11/29/23 8:40 AM	S	0.1	0	0	0.4	10	97	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	12/14/23 8:55 AM	S	0.1	0	0	0	246	228	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	12/27/23 8:32 AM	S	0.1	0.02	0.02	0.02	20	41	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	4/6/23 9:20 AM	S	0.1	0.01	0.01	0.01	74		18.2
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	4/11/23 8:51 AM	S	0.1	0	0	0	10		60
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	4/27/23 8:35 AM	S	0.1	0.04	0.04	0.04	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	5/4/23 8:58 AM	S	0.1	0.01	0.04	0.2	359		755
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	5/4/23 8:58 AM	B	3.5	0.01	0.04	0.2	20		80
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	5/26/23 8:58 AM	S	0.1	0	0	0.03	0		25
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	6/2/23 8:28 AM	S	0.1	0.37	0.37	0.37	0		60
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	6/2/23 8:28 AM	B	2.7	0.37	0.37	0.37	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	6/8/23 8:46 AM	S	0.1	0.01	0.01	0.01	20		45
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/18/23 8:40 AM	S	0.1	0	0	1.6	213		980
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/19/23 8:32 AM	S	0.1	0	0	0	109		360
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/26/23 8:22 AM	S	0.1	0	0.88	0.88	185		3800
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/31/23 8:11 AM	S	0.1	0	0	3.07	214		2000
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/31/23 8:11 AM	B	2.8	0	0	3.07	143		340
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/1/23 10:31 AM	S	0.1	0	0	0	20		72.7
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/1/23 10:31 AM	B	2.9	0	0	0	98		180
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/9/23 8:54 AM	S	0.1	0	1.33	1.33	10		126
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/17/23 8:22 AM	S	0.1	0	0	0.64	107		300
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/17/23 8:22 AM	B	3	0	0	0.64	85		95
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/21/23 8:23 AM	S	0.1	0.28	0.28	0.28	97		991
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/23/23 8:12 AM	S	0.1	0	0	0.28	52		173
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	9/21/23 9:07 AM	S	0.1	0	0	0	63		209
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	10/16/23 9:07 AM	S	0.1	0.06	0.06	0.06	0		9.09
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	10/16/23 9:07 AM	B	2.7	0.06	0.06	0.06	20		10
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	10/19/23 8:57 AM	S	0.1	0	0	0	0		30
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	10/26/23 8:20 AM	S	0.1	0	0	0	31		764
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	10/26/23 8:20 AM	B	3.9	0	0	0	31		70
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/6/23 9:29 AM	S	0.1	0.01	0.01	0.01	41		72.7
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/6/23 9:29 AM	B	3	0.01	0.01	0.01	0		5
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/11/23 8:43 AM	S	0.1	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/11/23 8:43 AM	B	3	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/27/23 8:27 AM	S	0.1	0.04	0.04	0.04	0		0

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/27/23 8:27 AM	B	3.6	0.04	0.04	0.04	10		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	5/4/23 9:06 AM	S	0.1	0.01	0.04	0.2	213		455
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	5/4/23 9:06 AM	B	3.1	0.01	0.04	0.2	0		20
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	5/26/23 8:35 AM	S	0.1	0	0	0.03	0		25
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	5/26/23 8:35 AM	B	4.2	0	0	0.03	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	6/2/23 8:19 AM	S	0.1	0.37	0.37	0.37	0		30
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	6/2/23 8:19 AM	B	3.7	0.37	0.37	0.37	0		5
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	6/8/23 8:25 AM	S	0.1	0.01	0.01	0.01	108		710
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	6/8/23 8:25 AM	B	3.9	0.01	0.01	0.01	0		10
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/18/23 8:30 AM	S	0.1	0	0	1.6	183		630
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/18/23 8:30 AM	B	4.3	0	0	1.6	0		60
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/19/23 8:22 AM	S	0.1	0	0	0	86		310
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/19/23 8:22 AM	B	3.7	0	0	0	0		20
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/26/23 8:13 AM	S	0.1	0	0.88	0.88	20		270
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/26/23 8:13 AM	B	3.5	0	0.88	0.88	30		120
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/31/23 8:00 AM	S	0.1	0	0	3.07	391		1360
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/1/23 8:08 AM	S	0.1	0	0	0	108		220
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/9/23 8:45 AM	S	0.1	0	1.33	1.33	0		99.1
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/17/23 8:14 AM	S	0.1	0	0	0.64	173		260
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/17/23 8:14 AM	B	3.1	0	0	0.64	30		125
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/21/23 8:15 AM	S	0.1	0.28	0.28	0.28	41		964
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/23/23 8:03 AM	S	0.1	0	0	0.28	121		340
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	9/21/23 8:58 AM	S	0.1	0	0	0	31		280
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	10/16/23 9:16 AM	S	0.1	0.06	0.06	0.06	0		72.7
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	10/19/23 8:48 AM	S	0.1	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	10/19/23 8:48 AM	B	5.9	0	0	0	20		5
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	10/26/23 8:10 AM	S	0.1	0	0	0	10		400
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	10/26/23 8:10 AM	B	3.7	0	0	0	20		50
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/11/23 11:49 AM	S	0.1	0.01	0.01	0.01	0		5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/11/23 11:49 AM	B	12.3	0.01	0.01	0.01	10		5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/27/23 11:18 AM	S	0.1	0	0.72	1.03	242.5		150
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/27/23 11:18 AM	B	13.3	0	0.72	1.03	0		10
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/1/23 11:52 AM	S	0.1	0	0.04	0.04	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/1/23 11:52 AM	B	14.1	0	0.04	0.04	10		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/14/23 11:39 AM	S	0.1	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/14/23 11:39 AM	B	10.8	0	0	0	0		5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/3/23 11:33 AM	S	0.1	0	0.58	0.58	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/3/23 11:33 AM	B	12.3	0	0.58	0.58	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/24/23 10:11 AM	S	0.1	0	0	0	0		15
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/24/23 10:11 AM	B	12.5	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/5/23 10:40 AM	S	0.1	0	0	0	15.5		2.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/5/23 10:40 AM	B	13.2	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/13/23 10:46 AM	S	0.1	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/13/23 10:46 AM	B	10.4	0	0	0	0		5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/10/23 10:40 AM	S	0.1	0	0	0	0		20
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/10/23 10:40 AM	B	11.6	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/25/23 10:05 AM	S	0.1	0	0.03	0.03	5		5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/25/23 10:05 AM	B	11	0	0.03	0.03	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/6/23 10:26 AM	S	0.1	0	0.07	0.17	0		70
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/6/23 10:26 AM	B	12.4	0	0.07	0.17	0		0

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/22/23 10:14 AM	S	0.1	0	0	0	0		10
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/22/23 10:14 AM	B	11.3	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/11/23 10:12 AM	S	0.1	0	0.71	0.71	134.5		185
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/11/23 10:12 AM	B	11.7	0	0.71	0.71	0		10
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/20/23 10:16 AM	S	0.1	0	0	0	141		95
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/20/23 10:16 AM	B	12.2	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/14/23 10:04 AM	S	0.1	0	0.15	0.15	0		335
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/14/23 10:04 AM	B	13.1	0	0.15	0.15	0		115
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/31/23 9:52 AM	S	0.1	0	0.54	0.83	0		105
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/31/23 9:52 AM	B	13.3	0	0.54	0.83	0		5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/20/23 10:33 AM	S	0.1	0	0	1.52	31		720
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/20/23 10:33 AM	B	11.5	0	0	1.52	0		10
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/28/23 9:16 AM	S	0.1	0	0	0	0		70
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/28/23 9:16 AM	B	13	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/10/23 10:06 AM	S	0.1	0	0	0	0		52.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/10/23 10:06 AM	B	11.9	0	0	0	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/25/23 9:51 AM	S	0.1	0	0	0	0		155
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/25/23 9:51 AM	B	13.6	0	0	0	10		25
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/1/23 9:48 AM	S	0.1	0	0	0.43	10		45
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/1/23 9:48 AM	B	11.7	0	0	0.43	0		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/21/23 10:34 AM	S	0.1	0.03	0.03	0.03	10		0
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/21/23 10:34 AM	B	10.5	0.03	0.03	0.03	10		20
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/7/23 11:26 AM	S	0.1	0	0	0	0		7.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/7/23 11:26 AM	B	11	0	0	0	0		10
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/19/23 11:23 AM	S	0.1	0	1.68	2.05	1720		1210
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/19/23 11:23 AM	B	11.3	0	1.68	2.05	30		15

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample Depth (m)	Ammonium (uM)	Nitrate+nitrate (uM)	Total Nitrogen (uM)	Phosphate (uM)	Chlorophyll a (ug/L)	Phaeophytin (ug/L)	Total phosphorus (uM)	Total suspended solids (mg/L)	Particulate carbon (uM)	Particulate nitrogen (uM)	Particulate P (uM)	Total dissolved N (uM)	Total dissolved P (uM)
CHARLES RIVER	UPPER BASIN	012	1/10/23 10:56 AM	S	0.1	2.17	54.8	73.6	0.488	1.69	1.46	1.25	2.38					
CHARLES RIVER	UPPER BASIN	012	1/23/23 10:44 AM	S	0.1	2.83	47.6	71.6	0.394	2.83	2.56	1.32	5.2					
CHARLES RIVER	UPPER BASIN	012	2/8/23 11:29 AM	S	0.1	2.07	52.7	81.1	0.329	2.46	1.61	1.05	2.04					
CHARLES RIVER	UPPER BASIN	012	2/21/23 10:46 AM	S	0.1	2.21	64	89.9	0.366	13.2	4.3	1.07	2.74					
CHARLES RIVER	UPPER BASIN	012	3/9/23 11:04 AM	S	0.1	0.776	51.95	81.5	0.269	5.275	1.76	1.1	2.685					
CHARLES RIVER	UPPER BASIN	012	3/20/23 9:04 AM	S	0.1	0.61	33.3	67.8	0.178	7.09	3.17	1.19	3.81					
CHARLES RIVER	UPPER BASIN	012	4/7/23 9:54 AM	S	0.1	2.11	39.4	70	0.283	7.2	4.61	0.848	3.62					
CHARLES RIVER	UPPER BASIN	012	4/18/23 10:07 AM	S	0.1	6.01	41.5	86	0.214	8.74	6.41	0.812	2.91					
CHARLES RIVER	UPPER BASIN	012	5/2/23 10:43 AM	S	0.1	4.02	29	64.6	0.43	2.77	3.75	1.58	2.59					
CHARLES RIVER	UPPER BASIN	012	5/17/23 10:39 AM	S	0.1	4.31	24.7	62.9	0.712	1.76	4.25	1.6	2.56					
CHARLES RIVER	UPPER BASIN	012	5/31/23 10:26 AM	S	0.1	4.875	25.85	71.15	0.888	1.95	3.415	1.685	2.125					
CHARLES RIVER	UPPER BASIN	012	6/13/23 10:33 AM	S	0.1	3.23	35.7	78.8	1.03	1.8	3.09	1.81	1.56					
CHARLES RIVER	UPPER BASIN	012	6/26/23 9:58 AM	S	0.1	3.29	30.9	61.6	1.62	1.17	2.25	1.89	0.74					
CHARLES RIVER	UPPER BASIN	012	7/10/23 10:18 AM	S	0.1	4.04	30.3	66.3	1.21	1.29	2.72	2.55	3.24					
CHARLES RIVER	UPPER BASIN	012	7/25/23 10:20 AM	S	0.1	3.11	20	62.4	2.89	1.36	4.32	2.87	3.51					
CHARLES RIVER	UPPER BASIN	012	8/8/23 10:05 AM	S	0.1	4.24	14.7	44.6	0.892	2.66	8.91	2.81	47.3					
CHARLES RIVER	UPPER BASIN	012	8/24/23 9:48 AM	S	0.1	1.97	19.6	60.6	0.965	1.03	1.71	2.25	3.82					
CHARLES RIVER	UPPER BASIN	012	9/7/23 10:02 AM	S	0.1	1.91	22.3	58.8	0.914	0.807	1.29	1.75	1.57					
CHARLES RIVER	UPPER BASIN	012	9/18/23 10:36 AM	S	0.1	3.68	29.75	62	0.9915	1.73	4.035	2.265	5.85					
CHARLES RIVER	UPPER BASIN	012	10/3/23 10:05 AM	S	0.1	2.35	20.5	62	0.954	0.481	1.39	2.05	3.07					
CHARLES RIVER	UPPER BASIN	012	10/17/23 10:30 AM	S	0.1	1.89	32.4	62.9	0.714	0.248	0.677	2.27	1.53					
CHARLES RIVER	UPPER BASIN	012	10/30/23 9:44 AM	S	0.1	2.21	31.9	55.5	0.794	0.727	1.51	2.65	2.79					
CHARLES RIVER	UPPER BASIN	012	11/15/23 10:58 AM	S	0.1	3.59	46.3	63.3	0.46	0.545	0.838	1.16	1.49					
CHARLES RIVER	UPPER BASIN	012	11/29/23 11:13 AM	S	0.1	3.89	40.4	92.1	0.426	1.54	1.06	1.7	2.09					
CHARLES RIVER	UPPER BASIN	012	12/14/23 11:34 AM	S	0.1	2.09	36.2	59.9	0.461	4.54	2.9	1.83	2.59					
CHARLES RIVER	UPPER BASIN	012	12/27/23 10:27 AM	S	0.1	2.51	32.5	65.2	0.266	3.6	6.64	1.17	2.95					
CHARLES RIVER	UPPER BASIN	005	1/10/23 10:38 AM	S	0.1	1.57	41.3	66.4	0.436	3.89	3.39	1.09	4.57					
CHARLES RIVER	UPPER BASIN	005	1/23/23 10:25 AM	S	0.1	7.94	58.9	93.6	0.634	2.76	1.98	1.61	7.26					
CHARLES RIVER	UPPER BASIN	005	2/21/23 10:19 AM	S	0.1	3.18	65.7	93	0.346	15	5.22	1.11	2.83					
CHARLES RIVER	UPPER BASIN	005	3/9/23 10:44 AM	S	0.1	1.61	54.6	85.3	0.282	4.24	2.51	1.24	3.7					
CHARLES RIVER	UPPER BASIN	005	3/20/23 8:35 AM	S	0.1	0.6	37.2	68.6	0.243	7.94	5.14	1.3	2.88					
CHARLES RIVER	UPPER BASIN	005	4/3/23 9:09 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	4/7/23 9:15 AM	S	0.1	3.3	40.3	76.8	0.3	8.6	5.97	1.1	4.24					
CHARLES RIVER	UPPER BASIN	005	4/10/23 9:17 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	4/18/23 9:28 AM	S	0.1	3.81	37.4	84.2	0.189	17.1	9.23	1.26	9.71					
CHARLES RIVER	UPPER BASIN	005	4/25/23 9:39 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	5/2/23 10:04 AM	S	0.1	2.79	30.3	62.4	0.414	7.13	5.95	1.74	0.46					
CHARLES RIVER	UPPER BASIN	005	5/3/23 9:13 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	5/17/23 9:59 AM	S	0.1	6.35	26.3	72.7	0.605	10.6	9.56	1.97	6.35					
CHARLES RIVER	UPPER BASIN	005	5/19/23 9:05 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	5/24/23 8:56 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	5/31/23 9:52 AM	S	0.1	3.52	28.9	74	0.527	12.3	10.3	1.63	2.92					
CHARLES RIVER	UPPER BASIN	005	6/7/23 9:13 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	6/13/23 10:07 AM	S	0.1	2.11	36	96	0.782	12.9	13.7	3.82						
CHARLES RIVER	UPPER BASIN	005	6/15/23 8:46 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	6/16/23 8:47 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	6/26/23 9:24 AM	S	0.1	0.65	26.3	68.2	1.46	46.5	24	3.2	12.6					
CHARLES RIVER	UPPER BASIN	005	6/29/23 8:36 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	7/10/23 9:46 AM	S	0.1	2.6	29.1	66.2	0.646	14.3	11.3	2.14	3.54					
CHARLES RIVER	UPPER BASIN	005	7/25/23 9:54 AM	S	0.1	4.44	25.7	75.2	2.48	8.8	10.8	3.7	19.2					
CHARLES RIVER	UPPER BASIN	005	8/3/23 8:40 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	8/8/23 9:38 AM	S	0.1	5.73	18.9	65	3.31	7.98	6.81	4.52	9.87					
CHARLES RIVER	UPPER BASIN	005	8/24/23 9:17 AM	S	0.1	2.66	23.9	66	0.914	2.74	1.54	2.28	2.39					
CHARLES RIVER	UPPER BASIN	005	9/1/23 8:24 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	9/7/23 9:41 AM	S	0.1	1.04	21	64.5	0.631	2.96	3.63	1.76	2.81					
CHARLES RIVER	UPPER BASIN	005	9/12/23 8:21 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	9/15/23 8:49 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	9/17/23 9:03 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	9/18/23 10:04 AM	S	0.1	2.11	24.1	50.3	0.59	4.02	5.65	1.5	4.39					
CHARLES RIVER	UPPER BASIN	005	9/19/23 8:55 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	9/23/23 8:49 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	9/26/23 9:03 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	10/2/23 8:42 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	10/3/23 9:33 AM	S	0.1	2.98	24.8	69.3	1.02	3.6	5.72	2.56	15.1					
CHARLES RIVER	UPPER BASIN	005	10/4/23 8:39 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	10/11/23 8:38 AM	S	0.1													
CHARLES RIVER	UPPER BASIN	005	10/17/23 9:51 AM	S	0.1	2.77	33.7	65.4	0.645	3.62	5.42	3.08	15.7					
CHARLES RIVER	UPPER BASIN	005	10/30/23 9:09 AM	S	0.1	2.66	40.8	70.5	0.547	12.5	9.14	3.6	22.5					
CHARLES RIVER	UPPER BASIN	005	11/15/23 10:35 AM	S	0.1	3.19	45.9	78.3	0.494	1.48	2.1	2.02	5.97					
CHARLES RIVER	UPPER BASIN	005	11/29/23 10:35 AM	S	0.1	3.28	47.6	94.8	0.497	1.14	1.11	1.73	4.44					
CHARLES RIVER	UPPER BASIN	005	12/14/23 10:59 AM	S	0.1	2.46	43.1	67.6	0.467	5.45	2.98	1.88	5.36					
CHARLES RIVER	UPPER BASIN	005	12/27/23 10:08 AM	S	0.1	2.2	29.1	66.7	0.299	1.64	1.81	1.49	7.03					
CHARLES RIVER	LOWER BASIN	166	1/10/23 10:22 AM	S	0.1	5.31	59.9	82.9	0.64	2.27	2.58	1.56	1.87					
CHARLES RIVER	LOWER BASIN	166	1/23/23 10:00 AM	S	0.1	6.01	53.7	89.6	0.56	3.36	1.62	1.29	3.24					
CHARLES RIVER	LOWER BASIN	166	2/8/23 10:38 AM	S	0.1	2.84	50.8	83.5	0.427	4.11	1.7	1.29	1.61					
CHARLES RIVER	LOWER BASIN	166	2/21/23 10:00 AM	S	0.1	2.6	71.6	100	0.458	14.2	2.16	1.42	4.51					
CHARLES RIVER	LOWER BASIN	166	3/9/23 10:25 AM	S	0.1	5.81	61.5	93.8	0.381	5.38	1.78	1.44	3.37					

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample Depth (m)	Ammonium (uM)	Nitrate+nitrate (uM)	Total Nitrogen (uM)	Phosphate (uM)	Chlorophyll a (ug/L)	Phaeophytin (ug/L)	Total phosphorus (uM)	Total suspended solids (mg/L)	Particulate carbon (uM)	Particulate nitrogen (uM)	Particulate P (uM)	Total dissolved N (uM)	Total dissolved P (uM)
CHARLES RIVER	LOWER BASIN	166	3/20/23 8:07 AM	S	0.1	3.2	46	81.75	0.467	6.075	2.505	1.53	3.235					
CHARLES RIVER	LOWER BASIN	166	4/7/23 8:55 AM	S	0.1	1.94	40.9	80.9	0.313	23.1	6.37	1.19	4					
CHARLES RIVER	LOWER BASIN	166	4/18/23 9:05 AM	S	0.1	1.74	38.1	74.1	0.102	16.6	5.81	0.739	2.93					
CHARLES RIVER	LOWER BASIN	166	5/2/23 9:42 AM	S	0.1	6.03	43.7	75	0.382	11.9	4.87	1.61	1.49					
CHARLES RIVER	LOWER BASIN	166	5/17/23 9:30 AM	S	0.1	5.69	29.4	69.4	0.544	3.17	7.42	1.52	3.75					
CHARLES RIVER	LOWER BASIN	166	5/31/23 9:32 AM	S	0.1	12.4	31.6	77.4	0.961	3.61	3.96	2.14	3.21					
CHARLES RIVER	LOWER BASIN	166	6/13/23 9:49 AM	S	0.1	11.4	35.3	90.8	1.01	7.35	8.98	2.16	3.03					
CHARLES RIVER	LOWER BASIN	166	6/26/23 9:04 AM	S	0.1	4.03	33.2	66.4	1.47	9.44	6.33	1.64	0.68					
CHARLES RIVER	LOWER BASIN	166	7/10/23 9:29 AM	S	0.1	4.09	24.5	61.2	0.364	7.24	8.76	1.61	1.9					
CHARLES RIVER	LOWER BASIN	166	7/25/23 9:34 AM	S	0.1	1.6	16.2	62.4	1.53	44	16.9	2.17	3.48					
CHARLES RIVER	LOWER BASIN	166	8/8/23 9:17 AM	S	0.1	2.86	25.4	64.7	0.818	12	9.87	1.8	1.79					
CHARLES RIVER	LOWER BASIN	166	8/24/23 8:57 AM	S	0.1	4.985	26.2	70.65	0.9405	5.095	4.15	2.56	3.745					
CHARLES RIVER	LOWER BASIN	166	9/7/23 9:13 AM	S	0.1	0.553	13.5	56.2	0.49	17.8	9.07	1.66	0.91					
CHARLES RIVER	LOWER BASIN	166	9/18/23 9:40 AM	S	0.1	9	30.8	65.4	1.08	6.44	5.89	2.09	2.88					
CHARLES RIVER	LOWER BASIN	166	10/3/23 9:13 AM	S	0.1	4.6	26.4	70.4	1.17	2.88	2.79	2.12	2.81					
CHARLES RIVER	LOWER BASIN	166	10/17/23 9:33 AM	S	0.1	4.47	30.2	60.1	0.902	2.11	2.88	2.45	0.24					
CHARLES RIVER	LOWER BASIN	166	10/30/23 8:53 AM	S	0.1	5.92	39.75	61.05	0.754	1.09	1.585	2.365	1.825					
CHARLES RIVER	LOWER BASIN	166	11/15/23 10:17 AM	S	0.1	7.33	40.1	78.4	0.666	1.63	0.908	2.06	2.35					
CHARLES RIVER	LOWER BASIN	166	11/29/23 10:17 AM	S	0.1	5.68	47.2	89.9	0.681	2.78	1	2.22	2.66					
CHARLES RIVER	LOWER BASIN	166	12/14/23 10:38 AM	S	0.1	4.12	41.3	63.9	0.536	2.82	1.63	2.05	4.49					
CHARLES RIVER	LOWER BASIN	166	12/27/23 9:51 AM	S	0.1	2.37	32.1	65.4	0.263	2.82	2.03	1.23	2.86					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	1/10/23 9:50 AM	S	0.1	17.4	56.7	89.3	0.457	5	1.99	1.23	1.17					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	1/23/23 9:35 AM	S	0.1	20.6	52.9	102	0.451	12.4	2.37	1.16	3.76					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	2/8/23 9:52 AM	S	0.1	17.9	60.5	107	0.385	13.2	1.61	1.13	2.66					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	2/21/23 9:30 AM	S	0.1	18.9	68	113	0.474	11.1	3.26	1.13	2.8					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	3/9/23 9:46 AM	S	0.1	14.2	125	174	1.29	4.18	0.534	2.81	2.62					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	3/20/23 7:37 AM	S	0.1	15.9	60.8	118	0.391	14.8	1.78	1.16	2.49					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/6/23 8:24 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/7/23 8:26 AM	S	0.1	6.41	66.1	114	0.273	20.1	5.66	0.822	5.28					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/11/23 8:20 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/18/23 8:33 AM	S	0.1	2.15	67.5	111	0.063	13.6	4.33	0.502	6					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/27/23 8:45 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/2/23 8:58 AM	S	0.1	2.55	69.9	92.6	0.128	13.2	3.34	0.819	1.86					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/4/23 8:21 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/17/23 8:50 AM	S	0.1	0.9	60.6	91.2	0.0956	13	11.5	0.875	6.15					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/26/23 10:03 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/31/23 9:00 AM	S	0.1	4.47	52.4	87	0.0316	4.93	3.39	0.936	2.7					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/2/23 9:30 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/8/23 10:03 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/13/23 9:20 AM	S	0.1	5.45	49.7	96.6	0.16	5.93	3.37	1.06	3					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/26/23 8:41 AM	S	0.1	7.64	52.6	80.8	0.471	2.97	2.65	0.895	1.14					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/10/23 9:02 AM	S	0.1	9.97	33.9	80.7	1.24	4.39	6.08	3.35	6.33					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/18/23 10:02 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/19/23 9:47 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/25/23 8:59 AM	S	0.1	4.01	32.6	61.5	1.19	3.85	4.45	0.881	2.52					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/26/23 9:33 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/31/23 9:32 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/1/23 9:35 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/8/23 8:51 AM	S	0.1	20.5	26.9	79.5	3.4	1.28	3.25	4.62	20.4					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/9/23 8:21 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/17/23 9:37 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/21/23 9:42 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/23/23 9:31 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/24/23 8:29 AM	S	0.1	2.78	27.6	62.6	0.183	4.31	3.78	1.01	2.55					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	9/7/23 8:29 AM	S	0.1	2.75	27.6	59	0.299	6.16	6.24	1.24	4.15					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	9/18/23 9:03 AM	S	0.1	2.7	32	51	0.408	6.48	5.29	1.14	3.87					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	9/21/23 10:27 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/3/23 8:43 AM	S	0.1	3.29	32.5	73.6	0.459	9.78	6.84	1.28	2.4					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/16/23 8:29 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/17/23 8:56 AM	S	0.1	4.43	39	70.3	0.259	3.92	4.15	1.48	0.52					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/19/23 8:45 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/26/23 9:39 AM	S	0.1													
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/30/23 8:26 AM	S	0.1	2.24	41.3	63.4	0.503	6.09	4.67	2.12	3.28					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	11/15/23 9:46 AM	S	0.1	6.24	49.8	82.1	0.206	5.49	7.19	1.03	2.48					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	11/29/23 9:48 AM	S	0.1	9.55	48.4	98.4	0.338	7.16	4.55	1.37	5.71					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	12/14/23 9:59 AM	S	0.1	11	54.8	97.6	0.331	14.3	14.6	2.07	16					
MYSTIC/ALEWIFE	UPPER MYSTIC	083	12/27/23 9:32 AM	S	0.1	10.1	48.3	89.6	0.343	7.72	6.91	1.35	4.78					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	1/10/23 9:43 AM	S	0.1	19.8	66.5	105	0.523	6.33	2.1	1.33	2.04					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	1/23/23 9:26 AM	S	0.1	20.6	51.8	101	0.433	11.7	2.14	1.05	2.98					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	2/8/23 9:43 AM	S	0.1	18.6	63.4	111	0.416	10.5	1.98	1.23	2.23					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	2/21/23 9:24 AM	S	0.1	18.3	69.3	118	0.463	12.4	2.58	1.06	7.04					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	3/9/23 9:38 AM	S	0.1	19.3	69.3	114	0.367	7.16	1.06	1.27	2.88					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	3/20/23 7:31 AM	S	0.1	16.1	57.4	121	0.419	12.7	1.62	1.17	3.92					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	4/7/23 8:19 AM	S	0.1	6.74	68.5	112	0.311	22.8	6.53	0.965	5.27					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	4/18/23 8:23 AM	S	0.1	4.18	67.55	106	0.09435	11.4	3.965	0.478	4.655					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	5/2/23 8:49 AM	S	0.1	3.01	64.6	89.2	0.147	14.5	4.06	0.804	5.23					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	5/17/23 8:42 AM	S	0.1	2.9	55.8	90	0.141	10.2	10.8	1.2	5.78					

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample Depth (m)	Ammonium (uM)	Nitrate+nitrate (uM)	Total Nitrogen (uM)	Phosphate (uM)	Chlorophyll a (ug/L)	Phaeophytin (ug/L)	Total phosphorus (uM)	Total suspended solids (mg/L)	Particulate carbon (uM)	Particulate nitrogen (uM)	Particulate P (uM)	Total dissolved N (uM)	Total dissolved P (uM)
MYSTIC/ALEWIFE	UPPER MYSTIC	066	5/31/23 8:52 AM	S	0.1	7.16	49.7	92.6	0.121	7.17	5.87	1.36	3.29					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	6/13/23 9:11 AM	S	0.1	8.44	46.1	93.6	0.351	8.12	6.59	1.54	2.5					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	6/26/23 8:29 AM	S	0.1	10.6	44.8	76.2	0.817	4.13	3	1.28	1.04					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	7/10/23 8:53 AM	S	0.1	9.09	33.8	73.2	0.628	4.51	4	1.89	2.73					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	7/25/23 8:50 AM	S	0.1	6.87	31	63.9	2.12	3.8	4.2	1.33	2.09					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	8/8/23 8:43 AM	S	0.1	4.265	34.5	60.1	0.3715	5.52	5.08	1.065	2.09					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	8/24/23 8:22 AM	S	0.1	3.41	30.4	62.5	0.177	3.27	3.13	2.27	2.52					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	9/7/23 8:19 AM	S	0.1	3.18	28.35	62	0.3615	4.44	4.24	1.355	3.665					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	9/18/23 8:52 AM	S	0.1	3.38	32.6	54	0.446	5.18	5.01	1.18	3.52					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/3/23 8:36 AM	S	0.1	4.6	35.3	74.1	0.523	7.94	5.89	1.37	3.76					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/17/23 8:48 AM	S	0.1	6.23	47.1	69.7	0.274	3.48	3.64	1.61	2.11					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/30/23 8:19 AM	S	0.1	3.92	41.4	62.7	0.51	4.4	4.14	2.13	3.48					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	11/15/23 9:41 AM	S	0.1	7.22	50.4	83	0.217	3.82	4.48	0.966	1.47					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	11/29/23 9:41 AM	S	0.1	9.5	46.5	97.6	0.304	5.37	2.78	1.11	3.28					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	12/14/23 9:51 AM	S	0.1	11.6	53.8	92	0.345	5.21	2.73	1.55	3.38					
MYSTIC/ALEWIFE	UPPER MYSTIC	066	12/27/23 9:23 AM	S	0.1	10.45	53.05	89.75	0.2615	4.205	3.095	0.9525	2.415					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	1/10/23 9:08 AM	S	0.1	21.3	54.9	95.2	0.471	5.26	1.95	1.21	1.85					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	1/23/23 8:55 AM	S	0.1	16.4	49.5	92.8	0.453	8.89	2.3	1.29	6.13					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	2/8/23 9:03 AM	S	0.1	16.1	66.9	112	0.416	5.56	1.27	1.14	2.06					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	2/21/23 8:41 AM	S	0.1	14.7	73	114	0.428	8.53	2.96	1.11	3.11					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	3/9/23 9:06 AM	S	0.1	16.9	69.1	111	0.348	7.16	0.817	1.33	1.48					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	3/20/23 6:52 AM	S	0.1	14.2	66.5	117	0.407	15.4	2.78	1.21	2.52					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	4/7/23 7:43 AM	S	0.1	6.95	65.5	109	0.319	17.6	5.6	1.3	4.01					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	4/18/23 7:59 AM	S	0.1	5.36	51.8	102	0.109	14.3	5.2	1.01	6.25					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/2/23 8:12 AM	S	0.1	2.9	64	89.6	0.152	15	5.4	0.98	4.03					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/17/23 8:02 AM	S	0.1	4.23	50.6	89.3	0.114	14.6	13.6	1.53	5					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/31/23 8:13 AM	S	0.1	12.1	39	87.6	0.212	9.73	10.5	2.09	4.96					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	6/13/23 8:31 AM	S	0.1	12	35.9	91.3	0.337	11.9	15.5	1.9	3.93					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	6/26/23 7:54 AM	S	0.1	4.87	35.9	70.9	1.15	24.1	9.66	1.76	1.39					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	7/10/23 8:06 AM	S	0.1	8.87	34	76.5	0.563	10.5	8.29	2.21	6.02					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	7/25/23 8:11 AM	S	0.1	2.88	27.8	61.4	1.06	12.6	6.39	1.59	3.89					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	8/8/23 8:12 AM	S	0.1	5.58	33.6	61.8	0.419	5.98	4.44	0.993	2.07					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	8/24/23 7:43 AM	S	0.1	2.83	30	64.4	0.0972	4.87	2	1.16	4.91					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	9/7/23 7:54 AM	S	0.1	3.51	34.2	65.8	0.311	5.1	4.48	1.51	3.23					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	9/18/23 8:11 AM	S	0.1	10.5	34.8	61.4	3.1	5.54	4.4	1.15	3.44					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/3/23 7:59 AM	S	0.1	4.575	34.25	77.35	0.476	7.155	6.235	1.365	3.215					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/17/23 8:04 AM	S	0.1	4.71	37.5	74.1	0.286	3.37	3.13	1.69	1.53					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/30/23 7:44 AM	S	0.1	3.66	40.9	62.7	0.333	4.38	2.81	2.15	2.87					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	11/15/23 9:05 AM	S	0.1	8.62	55.1	68.7	0.335	5.79	2.28	0.536	3.23					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	11/29/23 8:55 AM	S	0.1	9.37	48.8	96.3	0.434	4.16	2.09	1.33	2.14					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	12/14/23 9:11 AM	S	0.1	10.7	55.2	86.9	0.373	5.02	2.44	1.9	2.88					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	12/27/23 8:45 AM	S	0.1	10.6	56.5	93.2	0.284	5.64	3.32	0.963	2.87					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	1/10/23 8:49 AM	S	0.1	23	54.1	96.1	0.569	5.52	2.04	1.47	2.92					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	1/23/23 8:41 AM	S	0.1	21.2	50.3	97.1	0.55	6.56	3.2	1.57	4.02					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	2/21/23 8:27 AM	S	0.1	12.7	67.8	112	0.455	9.37	3.12	1.5	1.06					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	3/9/23 8:49 AM	S	0.1	14.9	67.4	105	0.392	6.31	1.44	1.26	4					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	3/20/23 6:35 AM	S	0.1	13.4	64.8	116	0.484	12.8	3.02	1.42	4.81					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	4/7/23 7:28 AM	S	0.1	6.2	55.6	102	0.302	25.8	5.73	1.32	9.18					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	4/18/23 7:39 AM	S	0.1	3.14	39.7	108	0.139	55.8	13.6	3.09	11.8					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	5/2/23 7:59 AM	S	0.1	6.19	45.3	49.5	0.161	15.4	7.79	1.87	5.44					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	5/17/23 7:47 AM	S	0.1	3.26	35	77.7	0.14	24.8	22.9	2.28	9.01					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	5/31/23 7:56 AM	S	0.1	3.77	27.6	71	0.0591	15.1	10.2	2.53	5.35					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	6/13/23 8:11 AM	S	0.1	4.36	21	74.7	0.173	16.5	11.8	1.99	4.11					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	6/26/23 7:41 AM	S	0.1	6.4	10.3	53.3	1.3	19.9	15.1	2.46	4.06					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	7/10/23 7:51 AM	S	0.1	4.26	9.03	53.7	0.33	39.1	30.4	3.78	6.68					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	7/25/23 7:55 AM	S	0.1	2.705	6.705	48.05	0.8705	31.2	14.75	2.255	5.13					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	8/8/23 8:00 AM	S	0.1	4.69	4.79	40.8	0.285	20.9	12.8	0.521	5.47					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	8/24/23 7:27 AM	S	0.1	2.83	17.4	54.2	0.0959	8.06	6.63	1.26	4.72					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	9/7/23 7:41 AM	S	0.1	5.01	13.6	52.5	0.186	9.67	7.71	2.57	4.51					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	9/18/23 7:50 AM	S	0.1	3.73	28.1	56.8	0.35	5.53	6.2	1.04	3.39					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	10/3/23 7:42 AM	S	0.1	2.12	33.6	71.5	0.385	11.3	7.71	1.44	4.05					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	10/17/23 7:51 AM	S	0.1	2.1	30	56.2	0.394	8.84	9.42	1.54	3.33					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	10/30/23 7:29 AM	S	0.1	3.19	30.5	48.5	0.299	5.9	4.46	1.6	2.36					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	11/15/23 8:44 AM	S	0.1	7.07	41.7	72.2	0.243	7.44	2.68	1.12	2.3					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	11/29/23 8:40 AM	S	0.1	9.77	36.3	83	0.318	4.22	2.19	1.23	3.22					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	12/14/23 8:55 AM	S	0.1	11.4	53.1	87.2	0.366	3.47	2.76	1.74	3.68					
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	12/27/23 8:32 AM	S	0.1	11.1	53.8	94.5	0.282	5.65	4.3	1.02	1.67					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/11/23 11:49 AM	S	0.1	9.15	20.8		0.971	0.343	4.11		2.44	19.4	1.51	0.225	37.6	1.11
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/11/23 11:49 AM	B	12.3	2.71	9.53		1	0.548	0.651		5.44					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/27/23 11:18 AM	S	0.1	9.29	27.8		0.663	2.11	1.4		14.02	69.3	4.29	0.358	39.45	0.9765
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/27/23 11:18 AM	B	13.3	2.13	8.38		0.789	0.814	0.371		1.83					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/1/23 11:52 AM	S	0.1	5.37	19.6		0.821	0.509	0.365		1.52	20.5	1.48	0.197	37.3	0.993
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/1/23 11:52 AM	B	14.1	2.16	9.02		0.887	0.705	0.311		1.26					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/14/23 11:39 AM	S	0.1	2.17	12.8		0.945	1.38	0.444		3.59	18.5	1.87	0.174	25.1	1.09
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/14/23 11:39 AM	B	10.8	1.27	9.98		0.928	1.43	0.492		1.92					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/3/23 11:33 AM	S	0.1	4.06	12.8		0.696	0.711	0.421		3.63	23.8	3	0.31	35.7	0.782
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/3/23 11:33 AM	B	12.3	1.45	5.36		0.643	1.14	0.602		2.38					

Region	Subregion	Station	Day/Time(EST)	Surface/Bottom	Sample Depth (m)	Ammonium (uM)	Nitrate+nitrate (uM)	Total Nitrogen (uM)	Phosphate (uM)	Chlorophyll a (ug/L)	Phaeophytin (ug/L)	Total phosphorus (uM)	Total suspended solids (mg/L)	Particulate carbon (uM)	Particulate nitrogen (uM)	Particulate P (uM)	Total dissolved N (uM)	Total dissolved P (uM)
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/24/23 10:11 AM	S	0.1	4.91	25.1		0.652	2.23	0.851		12.6	32.8	3.9	0.291	48.3	0.616
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/24/23 10:11 AM	B	12.5	1.91	6.5		0.665	1.87	1.2		1.72					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/5/23 10:40 AM	S	0.1	3.535	16.3		0.4395	1.86	0.9855		4.99	30.45	3.745	0.28	36.45	0.4355
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/5/23 10:40 AM	B	13.2	2.36	1.15		0.434	0.704	0.65		2.31					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/13/23 10:46 AM	S	0.1	3.27	4.87		0.389	1.44	0.49		1.01	27.5	4.19	0.239	16.6	0.401
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/13/23 10:46 AM	B	10.4	3.46	1.78		0.493	1.12	1.41		2.39					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/10/23 10:40 AM	S	0.1	2.08	6.145		0.1855	9.6	1.92		2.95	88.85	11.8	0.6725	21.35	0.2975
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/10/23 10:40 AM	B	11.6	1.76	0.915		0.365	4.69	1.58		17.4					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/25/23 10:05 AM	S	0.1	2.195	4.4		0.3905	3.845	1.395		0.9915	34.25	4.635	0.42	19	0.602
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/25/23 10:05 AM	B	11	2.1	0.025		0.519	0.471	0.525		2					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/6/23 10:26 AM	S	0.1	3.65	2.67		0.781	3.92	1.6		3.49	47.4	5.96	0.539	21	0.735
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/6/23 10:26 AM	B	12.4	1.97	0.025		0.8	0.686	0.852		1.66					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/22/23 10:14 AM	S	0.1	2.45	3.36		0.264	19.9	6.92		25.1	150	21.7	1.35	27.5	0.597
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/22/23 10:14 AM	B	11.3	7.13	0.773		1.56	2.37	1.61		3.35					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/11/23 10:12 AM	S	0.1	0.9555	0.1355		0.4205	23.05	18.84		5.945	195	23.75	1.52	17.7	0.642
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/11/23 10:12 AM	B	11.7	4.34	0.442		1.28	1.04	2.68		3.9					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/20/23 10:16 AM	S	0.1	2.74	5.905		1.78	13.45	4.46		7.315	82.8	11.8	1.13	31.45	1.265
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/20/23 10:16 AM	B	12.2	1.78	0.503		1.22	0.715	0.862		12.1					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/14/23 10:04 AM	S	0.1	3.15	3.53		1.08	6.2	3.2		5.46	47.4	6.35	0.456	22.3	0.702
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/14/23 10:04 AM	B	13.1	4.97	0.799		1.28	2	1.94		7.66					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/31/23 9:52 AM	S	0.1	3.51	2		0.429	7.09	4.8		4.02	55.4	8.07	0.601	21.1	0.664
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/31/23 9:52 AM	B	13.3	7.87	0.025		1.04	1.82	1.5		3.38					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/20/23 10:33 AM	S	0.1	7.35	18.6		0.765	3.69	3.03		5	65.4	7.1	0.749	47.1	1.1
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/20/23 10:33 AM	B	11.5	8.4	3.01		1.17	0.515	0.842		2.26					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/28/23 9:16 AM	S	0.1	7.31	11.9		1.02	8.8	3.52		3.2	58.9	8.52	0.746	35.1	1.38
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/28/23 9:16 AM	B	13	10.9	3.29		1.58	0.536	1.05		2.03					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/10/23 10:06 AM	S	0.1	8.01	10.5		0.9885	2.47	1.735		2.925	29.85	3.83	0.3215	32.55	1.115
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/10/23 10:06 AM	B	11.9	5.4	3.71		1.04	0.787	1.1		4.13					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/25/23 9:51 AM	S	0.1	4.66	8.47		0.928	1.4	0.66		1.68	30.5	4.08	0.209	16.6	1.13
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/25/23 9:51 AM	B	13.6	4.6	4.48		0.896	0.537	0.756		4.11					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/1/23 9:48 AM	S	0.1	7.12	11.5		1.02	1.25	1.16		1.92	26.5	3.15	0.33	24.7	1.36
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/1/23 9:48 AM	B	11.7	5.16	5.5		1.15	0.527	0.695		3.02					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/21/23 10:34 AM	S	0.1	3.22	9.66		1.06	1.11	0.565		0.76	20.8	1.68	0.252	24.5	0.94
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/21/23 10:34 AM	B	10.5	2.47	7.62		1.01	1.22	0.69		2.01					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/7/23 11:26 AM	S	0.1	0.983	7.265		0.8535	1.143	1.252		1.525	21.1	2.01	0.136	22.8	0.954
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/7/23 11:26 AM	B	11	1.45	6.55		0.915	0.94	0.865		1.9					
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/19/23 11:23 AM	S	0.1	1.99	6.89		0.579	2.41	2.62		20	107	8.24	0.882	69.7	0.817
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/19/23 11:23 AM	B	11.3	1.3	4.79		0.479	1.45	1.48		3.47					

APPENDIX III

2023 raw data for physical profile results.

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
CHARLES RIVER	UPPER BASIN	012	1/10/23 10:56 AM	S	0.1	0	0	0	3.025	0.23	13.43	100	0.477		6.87	
CHARLES RIVER	UPPER BASIN	012	1/23/23 10:44 AM	S	0.1	0.87	1.11	1.11	2.797	0.31	13.35	98.8	0.636		6.97	
CHARLES RIVER	UPPER BASIN	012	1/23/23 10:44 AM	B		0.87	1.11	1.11	2.798	0.31	13.38	99.1	0.636		6.91	
CHARLES RIVER	UPPER BASIN	012	2/8/23 11:29 AM	S	0.1	0	0.04	0.04	1.629	0.25	13.55	97.1	0.526	0.74	7.29	
CHARLES RIVER	UPPER BASIN	012	2/8/23 11:29 AM	B		0	0.04	0.04	1.533	0.25	14.61	104.5	0.525	0.46	6.92	
CHARLES RIVER	UPPER BASIN	012	2/21/23 10:46 AM	S	0.1	0.15	0.15	0.15	5.693	0.28	12.48	99.7	0.583	1.61	7.08	
CHARLES RIVER	UPPER BASIN	012	2/21/23 10:46 AM	B		0.15	0.15	0.15	5.69	0.28	12.45	99.4	0.583	1.58	7.02	
CHARLES RIVER	UPPER BASIN	012	3/9/23 11:04 AM	S	0.1	0	0	0	5.157	0.34	14.29	112.6	0.699	0.77	7.45	
CHARLES RIVER	UPPER BASIN	012	3/20/23 9:04 AM	S	0.1	0	0	0	6.149	0.24	13.16	106.2	0.492	1.53	7.23	
CHARLES RIVER	UPPER BASIN	012	3/20/23 9:04 AM	B		0	0	0	6.14	0.24	13.07	105.5	0.492	1.73	7.07	
CHARLES RIVER	UPPER BASIN	012	4/7/23 9:54 AM	S	0.1	0	0.01	0.01	11.383	0.27	11.54	105.7	0.563		7.17	
CHARLES RIVER	UPPER BASIN	012	4/7/23 9:54 AM	B		0	0.01	0.01	11.367	0.28	11.53	105.6	0.565		7.12	
CHARLES RIVER	UPPER BASIN	012	4/18/23 10:07 AM	S	0.1	0	0.08	0.08	16.14	0.32	9.49	96.6	0.659		7	
CHARLES RIVER	UPPER BASIN	012	4/18/23 10:07 AM	B		0	0.08	0.08	16.136	0.32	9.44	96.1	0.66		6.96	
CHARLES RIVER	UPPER BASIN	012	5/2/23 10:43 AM	S	0.1	0.16	0.21	2.02	14.169	0.26	10.05	98	0.53	2.89	7.06	
CHARLES RIVER	UPPER BASIN	012	5/17/23 10:39 AM	S	0.1	0	0	0	18.615	0.27	8.96	96	0.549	1.8	7.1	
CHARLES RIVER	UPPER BASIN	012	5/31/23 10:26 AM	S	0.1	0	0	0	20.835	0.27	8.65	96.9	0.548		7.1	
CHARLES RIVER	UPPER BASIN	012	5/31/23 10:26 AM	B		0	0	0	20.829	0.27	8.6	96.3	0.548		7	
CHARLES RIVER	UPPER BASIN	012	6/13/23 10:33 AM	S	0.1	0.01	0.35	0.35	20.786	0.29	7.77	86.9	0.594	2.15	7.24	
CHARLES RIVER	UPPER BASIN	012	6/26/23 9:58 AM	S	0.1	0	0.02	0.07	24.361	0.29	7.17	85.9	0.601		7.17	
CHARLES RIVER	UPPER BASIN	012	6/26/23 9:58 AM	B		0	0.02	0.07	24.301	0.29	7.1	84.9	0.603		7.09	
CHARLES RIVER	UPPER BASIN	012	7/10/23 10:18 AM	S	0.1	0.71	0.71	0.71	25.508	0.29	6.44	78.7	0.609		6.9	
CHARLES RIVER	UPPER BASIN	012	7/10/23 10:18 AM	B		0.71	0.71	0.71	25.516	0.29	6.34	77.6	0.609		6.85	
CHARLES RIVER	UPPER BASIN	012	7/25/23 10:20 AM	S	0.1	0.88	0.88	0.88	25.376	0.22	7.57	92.4	0.452	2.65	7.07	
CHARLES RIVER	UPPER BASIN	012	8/8/23 10:05 AM	S	0.1	1.33	1.33	1.33	23.3	0.14	7.65	89.8	0.289	27.29	7.13	
CHARLES RIVER	UPPER BASIN	012	8/8/23 10:05 AM	B		1.33	1.33	1.33	23.298	0.14	7.63	89.5	0.287	32.75	7.06	
CHARLES RIVER	UPPER BASIN	012	8/24/23 9:48 AM	S	0.1	0.01	0.01	0.01	22.649	0.22	8.65	100.3	0.456		7.35	
CHARLES RIVER	UPPER BASIN	012	8/24/23 9:48 AM	B		0.01	0.01	0.01	22.618	0.22	8.54	99	0.457		7.22	
CHARLES RIVER	UPPER BASIN	012	9/7/23 10:02 AM	S	0.1	0	0	0	25.061	0.24	7.66	92.9	0.501		7.19	
CHARLES RIVER	UPPER BASIN	012	9/7/23 10:02 AM	B		0	0	0	25.032	0.24	7.63	92.5	0.5		7.11	
CHARLES RIVER	UPPER BASIN	012	9/18/23 10:36 AM	S	0.1	1.52	1.52	1.59	19.865	0.2	9.15	100.4	0.422		7.14	
CHARLES RIVER	UPPER BASIN	012	10/3/23 10:05 AM	S	0.1	0	0	0	16.363	0.19	9.57	97.8	0.399		7.25	
CHARLES RIVER	UPPER BASIN	012	10/17/23 10:30 AM	S	0.1	0	0.06	0.06	13.946	0.24	9.99	96.9	0.497		7.19	
CHARLES RIVER	UPPER BASIN	012	10/30/23 9:44 AM	S	0.1	0.43	0.62	0.62	14.143	0.22	9.71	94.7	0.449		7.41	
CHARLES RIVER	UPPER BASIN	012	11/15/23 10:58 AM	S	0.1	0	0	0	6.002	0.25	12.16	97.8	0.518		7.47	
CHARLES RIVER	UPPER BASIN	012	11/29/23 11:13 AM	S	0.1	0	0	0.4	3.686	0.23	13.24	100.3	0.473	0.88	7.47	
CHARLES RIVER	UPPER BASIN	012	12/14/23 11:34 AM	S	0.1	0	0	0	4.043	0.16	13.3	101.7	0.342	1.68	7.43	
CHARLES RIVER	UPPER BASIN	012	12/27/23 10:27 AM	S	0.1	0.02	0.02	0.02	4.715	0.13	12.92	100.5	0.269	1.92	7.16	
CHARLES RIVER	UPPER BASIN	012	12/27/23 10:27 AM	B		0.02	0.02	0.02	4.679	0.13	13.16	102.3	0.268	1.86	6.98	
CHARLES RIVER	UPPER BASIN	001	4/3/23 9:58 AM	S	0.1	0	0	0.35	9.612	0.29	11.6	102	0.591		7.01	
CHARLES RIVER	UPPER BASIN	001	4/10/23 10:07 AM	S	0.1	0	0	0	11.585	0.29	11.48	105.7	0.603	3.85	7.23	
CHARLES RIVER	UPPER BASIN	001	4/10/23 10:07 AM	B		0	0	0	11.436	0.29	11.47	105.2	0.602	5.5	7.16	
CHARLES RIVER	UPPER BASIN	001	4/25/23 10:29 AM	S	0.1	0	0	0.51	14.378	0.33	10.16	99.6	0.671	4	7.48	1
CHARLES RIVER	UPPER BASIN	001	4/25/23 10:29 AM	B		0	0	0.51	14.339	0.33	10.17	99.6	0.671	7.98	7.37	
CHARLES RIVER	UPPER BASIN	001	5/3/23 10:06 AM	S	0.1	0.03	0.19	0.24	13.709	0.25	9.92	95.8	0.523	3.24	7.47	0.8
CHARLES RIVER	UPPER BASIN	001	5/3/23 10:06 AM	B		0.03	0.19	0.24	13.714	0.26	9.96	96.2	0.524		7.31	
CHARLES RIVER	UPPER BASIN	001	5/19/23 10:03 AM	S	0.1	0	0	0	17.485	0.31	8.91	93.3	0.627	3.31	7.11	1
CHARLES RIVER	UPPER BASIN	001	5/19/23 10:03 AM	B		0	0	0	17.479	0.3	8.71	91.2	0.623	5.79	7.1	
CHARLES RIVER	UPPER BASIN	001	5/24/23 9:49 AM	S	0.1	0.03	0.03	0.03	18.638	0.29	7.92	84.9	0.603	2.91	7.2	
CHARLES RIVER	UPPER BASIN	001	6/7/23 10:01 AM	S	0.1	0	0	0.07	18.047	0.32	7.8	82.6	0.649	2.79	7.14	0.5
CHARLES RIVER	UPPER BASIN	001	6/7/23 10:01 AM	B		0	0	0.07	17.952	0.32	7.91	83.6	0.656	6.25	7.04	
CHARLES RIVER	UPPER BASIN	001	6/15/23 9:37 AM	S	0.1	0	0.12	0.13	21.39	0.29	7.08	80.1	0.603	5.98	7.29	
CHARLES RIVER	UPPER BASIN	001	6/16/23 9:45 AM	S	0.1	0	0	0.12	23.052	0.32	6.38	74.5	0.651	4.86	7.19	
CHARLES RIVER	UPPER BASIN	001	6/29/23 9:34 AM	S	0.1	0	0.53	1.08	24.52	0.32	6.29	75.6	0.65	10.82	7.07	0.7
CHARLES RIVER	UPPER BASIN	001	8/3/23 9:36 AM	S	0.1	0	0	0	23.025	0.21	7.82	91.3	0.446	3.39	7.15	
CHARLES RIVER	UPPER BASIN	001	8/3/23 9:36 AM	B		0	0	0	22.803	0.22	7.61	88.4	0.461	6.36	7.07	
CHARLES RIVER	UPPER BASIN	001	9/1/23 9:23 AM	S	0.1	0	0	0.54	21.091	0.24	8.23	92.6	0.498	3.79	7.29	
CHARLES RIVER	UPPER BASIN	001	9/1/23 9:23 AM	B		0	0	0.54	20.994	0.25	8.24	92.6	0.512	12.35	7.21	
CHARLES RIVER	UPPER BASIN	001	9/12/23 9:07 AM	S	0.1	0.09	0.48	0.68	23.486	0.25	7.4	87.2	0.526	3.03	7.16	
CHARLES RIVER	UPPER BASIN	001	9/15/23 9:43 AM	S	0.1	0	0	0.57	21.647	0.27	8.19	93.2	0.553	3.69	7.11	0.2
CHARLES RIVER	UPPER BASIN	001	9/17/23 10:07 AM	S	0.1	0	0.07	0.07	19.638	0.27	9.14	99.9	0.559	3.92	7.36	
CHARLES RIVER	UPPER BASIN	001	9/19/23 9:53 AM	S	0.1	0	1.52	1.52	19.284	0.19	8.63	93.7	0.392	4.57	7.19	0.7
CHARLES RIVER	UPPER BASIN	001	9/23/23 9:46 AM	S	0.1	0.12	0.12	0.12	18.202	0.2	8.1	86	0.421	3.17	7.13	1
CHARLES RIVER	UPPER BASIN	001	9/23/23 9:46 AM	B		0.12	0.12	0.12	18.21	0.21	8.3	88.2	0.439	4.52	7.1	
CHARLES RIVER	UPPER BASIN	001	9/26/23 9:51 AM	S	0.1	0	0.07	0.38	16.474	0.19	9.24	94.7	0.396	3.71	7.2	0.3
CHARLES RIVER	UPPER BASIN	001	9/26/23 9:51 AM	B		0	0.07	0.38	16.477	0.19	9.35	95.8	0.395		7.14	
CHARLES RIVER	UPPER BASIN	001	10/2/23 9:38 AM	S	0.1	0	0	0	16.118	0.2	9.33	94.8	0.421	2.43	7.23	
CHARLES RIVER	UPPER BASIN	001	10/4/23 9:42 AM	S	0.1	0	0	0	17.271	0.21	9.29	96.8	0.433	4.96	7.16	
CHARLES RIVER	UPPER BASIN	001	10/11/23 9:38 AM	S	0.1	0	0	0	15.614	0.24	8.95	90.1	0.499	2.53	6.96	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
CHARLES RIVER	UPPER BASIN	144	4/3/23 9:49 AM	S	0.1	0	0	0.35	9.148	0.3	11.19	97.3	0.606	4.31	7.06	1.5
CHARLES RIVER	UPPER BASIN	144	4/3/23 9:49 AM	B		0	0	0.35	8.779	0.3	11.16	96.2	0.607	4.82	7	
CHARLES RIVER	UPPER BASIN	144	4/10/23 9:57 AM	S	0.1	0	0	0	10.73	0.3	11.35	102.5	0.623	4.28	7.34	1
CHARLES RIVER	UPPER BASIN	144	4/10/23 9:57 AM	B		0	0	0	10.301	0.35	10.73	95.9	0.711	8.49	7.14	
CHARLES RIVER	UPPER BASIN	144	4/25/23 10:21 AM	S	0.1	0	0	0.51	14.335	0.34	9.61	94.1	0.7	3.46	7.4	1.2
CHARLES RIVER	UPPER BASIN	144	4/25/23 10:21 AM	B		0	0	0.51	13.297	0.4	9.43	90.3	0.803	5.15	7.31	
CHARLES RIVER	UPPER BASIN	144	5/3/23 9:56 AM	S	0.1	0.03	0.19	0.24	13.603	0.26	9.72	93.6	0.535	3.17	7.44	1.1
CHARLES RIVER	UPPER BASIN	144	5/3/23 9:56 AM	B		0.03	0.19	0.24	13.491	0.26	9.6	92.3	0.538	9.27	7.27	
CHARLES RIVER	UPPER BASIN	144	5/19/23 9:53 AM	S	0.1	0	0	0	17.263	0.31	8.11	84.6	0.632	3.43	7.07	1
CHARLES RIVER	UPPER BASIN	144	5/19/23 9:53 AM	B		0	0	0	16.918	0.32	7.98	82.6	0.646	4.36	7.04	
CHARLES RIVER	UPPER BASIN	144	5/24/23 9:37 AM	S	0.1	0.03	0.03	0.03	18.353	0.3	7.66	81.6	0.607	2.39	7.13	1.5
CHARLES RIVER	UPPER BASIN	144	5/24/23 9:37 AM	B		0.03	0.03	0.03	17.782	0.3	7.65	80.6	0.623	3.09	7.08	
CHARLES RIVER	UPPER BASIN	144	6/7/23 9:52 AM	S	0.1	0	0	0.07	18.276	0.32	7.56	80.5	0.663	3.41	7.14	1
CHARLES RIVER	UPPER BASIN	144	6/7/23 9:52 AM	B		0	0	0.07	18.019	0.33	7.23	76.6	0.671	6.94	7.01	
CHARLES RIVER	UPPER BASIN	144	6/15/23 9:26 AM	S	0.1	0	0.12	0.13	21.672	0.27	6.73	76.6	0.564	5.85	7.2	0.7
CHARLES RIVER	UPPER BASIN	144	6/15/23 9:26 AM	B		0	0.12	0.13	21.378	0.31	6.3	71.3	0.629	8.57	7.03	
CHARLES RIVER	UPPER BASIN	144	6/16/23 9:33 AM	S	0.1	0	0	0.12	23.172	0.31	7.2	84.4	0.641	4.22	7.33	1.1
CHARLES RIVER	UPPER BASIN	144	6/16/23 9:33 AM	B		0	0	0.12	22.589	0.33	6.91	80.2	0.678	6.46	7.16	
CHARLES RIVER	UPPER BASIN	144	6/29/23 9:23 AM	S	0.1	0	0.53	1.08	24.734	0.29	6.5	78.4	0.605	7.21	7.04	0.6
CHARLES RIVER	UPPER BASIN	144	6/29/23 9:23 AM	B		0	0.53	1.08	23.897	0.3	6.35	75.4	0.617	9.09	6.97	
CHARLES RIVER	UPPER BASIN	144	8/3/23 9:27 AM	S	0.1	0	0	0	22.552	0.21	7.5	86.8	0.436	3.13	7.13	0.6
CHARLES RIVER	UPPER BASIN	144	8/3/23 9:27 AM	B		0	0	0	22.337	0.22	7.45	85.9	0.45	4.34	7.07	
CHARLES RIVER	UPPER BASIN	144	9/1/23 9:11 AM	S	0.1	0	0	0.54	21.039	0.22	8.03	90.3	0.457	3.81	7.27	0.8
CHARLES RIVER	UPPER BASIN	144	9/1/23 9:11 AM	B		0	0	0.54	20.668	0.28	7.85	87.6	0.57	6.83	7.11	
CHARLES RIVER	UPPER BASIN	144	9/12/23 8:56 AM	S	0.1	0.09	0.48	0.68	23.595	0.25	7.05	83.2	0.511	2.89	7.08	1.3
CHARLES RIVER	UPPER BASIN	144	9/12/23 8:56 AM	B		0.09	0.48	0.68	23.318	0.26	6.86	80.5	0.531	3.99	7.03	
CHARLES RIVER	UPPER BASIN	144	9/15/23 9:30 AM	S	0.1	0	0	0.57	21.561	0.26	7.83	89	0.542	3.63	7.18	1
CHARLES RIVER	UPPER BASIN	144	9/15/23 9:30 AM	B		0	0	0.57	21.386	0.28	7.75	87.7	0.57	4.73	7.11	
CHARLES RIVER	UPPER BASIN	144	9/17/23 9:55 AM	S	0.1	0	0.07	0.07	19.363	0.26	8.79	95.5	0.535	11.69	7.41	1
CHARLES RIVER	UPPER BASIN	144	9/17/23 9:55 AM	B		0	0.07	0.07	19.161	0.26	8.91	96.5	0.538	20.96	7.17	
CHARLES RIVER	UPPER BASIN	144	9/19/23 9:39 AM	S	0.1	0	1.52	1.52	19.312	0.19	8.52	92.5	0.387	4.96	7.19	0.9
CHARLES RIVER	UPPER BASIN	144	9/19/23 9:39 AM	B		0	1.52	1.52	19.199	0.19	8.4	91	0.388	6.94	7.13	
CHARLES RIVER	UPPER BASIN	144	9/23/23 9:37 AM	S	0.1	0.12	0.12	0.12	18.185	0.21	7.93	84.2	0.441	4.08	7.1	1
CHARLES RIVER	UPPER BASIN	144	9/23/23 9:37 AM	B		0.12	0.12	0.12	18.182	0.21	8.05	85.4	0.435	13.12	7.03	
CHARLES RIVER	UPPER BASIN	144	9/26/23 9:42 AM	S	0.1	0	0.07	0.38	16.396	0.19	9.04	92.5	0.403	4.66	7.19	0.8
CHARLES RIVER	UPPER BASIN	144	9/26/23 9:42 AM	B		0	0.07	0.38	16.384	0.2	9.02	92.3	0.405	6.06	7.02	
CHARLES RIVER	UPPER BASIN	144	10/2/23 9:24 AM	S	0.1	0	0	0	15.984	0.2	9.17	93	0.418	2.35	7.21	0.6
CHARLES RIVER	UPPER BASIN	144	10/2/23 9:24 AM	B		0	0	0	15.7	0.2	9.24	93.2	0.423	4.18	7.11	
CHARLES RIVER	UPPER BASIN	144	10/4/23 9:29 AM	S	0.1	0	0	0	17.035	0.21	9.15	94.9	0.434	4.13	7.12	1
CHARLES RIVER	UPPER BASIN	144	10/4/23 9:29 AM	B		0	0	0	16.9	0.21	9.16	94.7	0.43	9.05	7.05	
CHARLES RIVER	UPPER BASIN	144	10/11/23 9:27 AM	S	0.1	0	0	0	15.495	0.24	8.84	88.8	0.497	2.28	6.89	1
CHARLES RIVER	UPPER BASIN	144	10/11/23 9:27 AM	B		0	0	0	15.215	0.24	8.86	88.4	0.49	3.26	6.88	
CHARLES RIVER	UPPER BASIN	002	4/3/23 9:42 AM	S	0.1	0	0	0.35	8.739	0.3	11.16	96	0.605	4.61	7.1	1.5
CHARLES RIVER	UPPER BASIN	002	4/3/23 9:42 AM	B		0	0	0.35	8.7	0.29	11.06	95.2	0.603	5.61	7.01	
CHARLES RIVER	UPPER BASIN	002	4/10/23 9:50 AM	S	0.1	0	0	0	10.667	0.3	11.05	99.6	0.622	4.58	7.34	1.5
CHARLES RIVER	UPPER BASIN	002	4/10/23 9:50 AM	B		0	0	0	10.344	0.3	10.74	96.1	0.624	5.59	7.19	
CHARLES RIVER	UPPER BASIN	002	4/25/23 10:14 AM	S	0.1	0	0	0.51	13.733	0.35	9.57	92.5	0.708	3.27	7.52	1
CHARLES RIVER	UPPER BASIN	002	4/25/23 10:14 AM	B		0	0	0.51	13.161	0.35	9.31	88.9	0.708	9.34	7.38	
CHARLES RIVER	UPPER BASIN	002	5/3/23 9:49 AM	S	0.1	0.03	0.19	0.24	13.32	0.26	9.55	91.5	0.535	3.51	7.44	1
CHARLES RIVER	UPPER BASIN	002	5/3/23 9:49 AM	B		0.03	0.19	0.24	13.304	0.26	9.58	91.7	0.536	3.88	7.33	
CHARLES RIVER	UPPER BASIN	002	5/19/23 9:47 AM	S	0.1	0	0	0	17.536	0.31	8.23	86.2	0.637	4.8	7.08	0.9
CHARLES RIVER	UPPER BASIN	002	5/19/23 9:47 AM	B		0	0	0	17.302	0.32	8.07	84.2	0.654	5.19	7.03	
CHARLES RIVER	UPPER BASIN	002	5/24/23 9:33 AM	S	0.1	0.03	0.03	0.03	17.928	0.3	7.43	78.4	0.614	3.52	7.07	1.5
CHARLES RIVER	UPPER BASIN	002	5/24/23 9:33 AM	B		0.03	0.03	0.03	17.726	0.3	7.44	78.2	0.611	2.99	7.05	
CHARLES RIVER	UPPER BASIN	002	6/7/23 9:45 AM	S	0.1	0	0	0.07	18.787	0.33	7.49	80.5	0.679	3.28	7.12	1
CHARLES RIVER	UPPER BASIN	002	6/7/23 9:45 AM	B		0	0	0.07	18.246	0.33	7.38	78.5	0.682	16.34	6.99	
CHARLES RIVER	UPPER BASIN	002	6/15/23 9:21 AM	S	0.1	0	0.12	0.13	21.824	0.28	6.8	77.7	0.585	7.33	7.07	0.6
CHARLES RIVER	UPPER BASIN	002	6/15/23 9:21 AM	B		0	0.12	0.13	21.686	0.32	6.45	73.4	0.655	15.5	6.92	
CHARLES RIVER	UPPER BASIN	002	6/16/23 9:28 AM	S	0.1	0	0	0.12	23.311	0.31	7.58	89	0.633	4.04	7.4	1.3
CHARLES RIVER	UPPER BASIN	002	6/16/23 9:28 AM	B		0	0	0.12	22.207	0.3	6.4	73.6	0.622	5.17	7.17	
CHARLES RIVER	UPPER BASIN	002	6/29/23 9:16 AM	S	0.1	0	0.53	1.08	24.825	0.33	6.84	82.6	0.679	2.69	7.1	1.5
CHARLES RIVER	UPPER BASIN	002	6/29/23 9:16 AM	B		0	0.53	1.08	23.873	0.37	4.82	57.2	0.758	6.29	6.84	
CHARLES RIVER	UPPER BASIN	002	8/3/23 9:20 AM	S	0.1	0	0	0	22.357	0.21	7.38	85.1	0.444	3.23	7.13	0.5
CHARLES RIVER	UPPER BASIN	002	8/3/23 9:20 AM	B		0	0	0	22.095	0.21	7.27	83.4	0.446	9.43	7.08	
CHARLES RIVER	UPPER BASIN	002	9/1/23 9:03 AM	S	0.1	0	0	0.54	20.916	0.25	7.87	88.3	0.526	3.92	7.27	0.8
CHARLES RIVER	UPPER BASIN	002	9/1/23 9:03 AM	B		0	0	0.54	20.734	0.24	7.4	82.7	0.496	10.68	7.04	
CHARLES RIVER	UPPER BASIN	002	9/12/23 8:52 AM	S	0.1	0.09	0.48	0.68	23.797	0.26	7.02	83.1	0.535	2.79	7.12	1.1
CHARLES RIVER	UPPER BASIN	002	9/12/23 8:52 AM	B		0.09	0.48	0.68	23.646	0.26	6.96	82.3	0.536	3.6	7.06	
CHARLES RIVER	UPPER BASIN	002	9/15/23 9:23 AM	S	0.1	0	0	0.57	21.455	0.25	7.66	86.8	0.526	4.04	7.18	1.1

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
CHARLES RIVER	UPPER BASIN	002	9/15/23 9:23 AM	B		0	0	0.57	21.35	0.28	7.54	85.3	0.579	6.26	7.1	
CHARLES RIVER	UPPER BASIN	002	9/17/23 9:47 AM	S	0.1	0	0.07	0.07	19.015	0.27	8.76	94.6	0.547	3.62	7.24	1.1
CHARLES RIVER	UPPER BASIN	002	9/17/23 9:47 AM	B		0	0.07	0.07	18.854	0.27	8.72	93.8	0.548	6.3	7.19	
CHARLES RIVER	UPPER BASIN	002	9/19/23 9:32 AM	S	0.1	0	1.52	1.52	19.159	0.19	8.26	89.5	0.393	5.03	7.21	1
CHARLES RIVER	UPPER BASIN	002	9/19/23 9:32 AM	B		0	1.52	1.52	19.068	0.19	8.26	89.2	0.392		7.11	
CHARLES RIVER	UPPER BASIN	002	9/23/23 9:30 AM	S	0.1	0.12	0.12	0.12	18.218	0.22	7.82	83.1	0.449	3.8	7.11	0.5
CHARLES RIVER	UPPER BASIN	002	9/23/23 9:30 AM	B		0.12	0.12	0.12	18.224	0.22	7.89	83.8	0.453		7.07	
CHARLES RIVER	UPPER BASIN	002	9/26/23 9:35 AM	S	0.1	0	0.07	0.38	16.379	0.2	8.81	90.1	0.412	7.43	7.21	0.8
CHARLES RIVER	UPPER BASIN	002	9/26/23 9:35 AM	B		0	0.07	0.38	16.38	0.2	8.97	91.7	0.41		7.04	
CHARLES RIVER	UPPER BASIN	002	10/2/23 9:16 AM	S	0.1	0	0	0	15.818	0.2	9.05	91.5	0.42	2.58	7.24	0.7
CHARLES RIVER	UPPER BASIN	002	10/2/23 9:16 AM	B		0	0	0	15.622	0.21	9.12	91.7	0.424		7.08	
CHARLES RIVER	UPPER BASIN	002	10/4/23 9:21 AM	S	0.1	0	0	0	16.847	0.21	9.02	93.2	0.44	4.57	7.14	1
CHARLES RIVER	UPPER BASIN	002	10/4/23 9:21 AM	B		0	0	0	16.765	0.21	9.08	93.6	0.434	5.17	7	
CHARLES RIVER	UPPER BASIN	002	10/11/23 9:22 AM	S	0.1	0	0	0	15.53	0.24	8.71	87.5	0.491	2.34	6.92	1.1
CHARLES RIVER	UPPER BASIN	002	10/11/23 9:22 AM	B		0	0	0	15.332	0.23	8.73	87.3	0.477	5.2	6.89	
CHARLES RIVER	UPPER BASIN	003	4/3/23 9:28 AM	S	0.1	0	0	0.35	8.944	0.3	11.01	95.3	0.608	4.68	7.08	1.5
CHARLES RIVER	UPPER BASIN	003	4/3/23 9:28 AM	B		0	0	0.35	8.82	0.3	10.88	93.9	0.607	6.72	6.99	
CHARLES RIVER	UPPER BASIN	003	4/10/23 9:36 AM	S	0.1	0	0	0	12.643	0.31	11.61	109.5	0.631	4.63	7.28	1
CHARLES RIVER	UPPER BASIN	003	4/10/23 9:36 AM	B		0	0	0	11.859	0.31	11.48	106.4	0.634		7.18	
CHARLES RIVER	UPPER BASIN	003	4/25/23 10:00 AM	S	0.1	0	0	0.51	14.416	0.34	9.82	96.4	0.694	3.45	7.56	1
CHARLES RIVER	UPPER BASIN	003	4/25/23 10:00 AM	B		0	0	0.51	13.42	0.34	9.42	90.4	0.688	9.37	7.44	
CHARLES RIVER	UPPER BASIN	003	5/3/23 9:33 AM	S	0.1	0.03	0.19	0.24	13.634	0.26	9.3	89.6	0.54	3.89	7.47	0.9
CHARLES RIVER	UPPER BASIN	003	5/3/23 9:33 AM	B		0.03	0.19	0.24	13.31	0.26	9.2	88.1	0.539	10.02	7.34	
CHARLES RIVER	UPPER BASIN	003	5/19/23 9:32 AM	S	0.1	0	0	0	17.192	0.31	8	83.3	0.64	6.16	7.07	1
CHARLES RIVER	UPPER BASIN	003	5/19/23 9:32 AM	B		0	0	0	16.674	0.32	7.65	78.7	0.646	7.22	7.01	
CHARLES RIVER	UPPER BASIN	003	5/24/23 9:17 AM	S	0.1	0.03	0.03	0.03	19.656	0.3	7.26	79.4	0.621	2.78	7.11	1.1
CHARLES RIVER	UPPER BASIN	003	5/24/23 9:17 AM	B		0.03	0.03	0.03	19.27	0.3	7.16	77.8	0.621	4.5	7.05	
CHARLES RIVER	UPPER BASIN	003	6/7/23 9:33 AM	S	0.1	0	0	0.07	18.396	0.34	7.07	75.4	0.7	3.11	7.09	1
CHARLES RIVER	UPPER BASIN	003	6/7/23 9:33 AM	B		0	0	0.07	17.93	0.34	6.51	68.8	0.687	6.88	6.95	
CHARLES RIVER	UPPER BASIN	003	6/15/23 9:06 AM	S	0.1	0	0.12	0.13	21.971	0.33	6.64	76.1	0.68	4.92	7.2	1.1
CHARLES RIVER	UPPER BASIN	003	6/15/23 9:06 AM	B		0	0.12	0.13	21.39	0.34	5.72	64.7	0.691	10.69	6.98	
CHARLES RIVER	UPPER BASIN	003	6/16/23 9:13 AM	S	0.1	0	0	0.12	22.934	0.31	6.57	76.7	0.644	4.78	7.05	1
CHARLES RIVER	UPPER BASIN	003	6/16/23 9:13 AM	B		0	0	0.12	22.108	0.32	6.09	69.9	0.648	9	7.02	
CHARLES RIVER	UPPER BASIN	003	6/29/23 9:00 AM	S	0.1	0	0.53	1.08	24.72	0.34	5.93	71.5	0.7	2.92	6.97	1.2
CHARLES RIVER	UPPER BASIN	003	6/29/23 9:00 AM	B		0	0.53	1.08	24.334	0.34	5.5	65.9	0.7	10.21	6.88	
CHARLES RIVER	UPPER BASIN	003	8/3/23 9:04 AM	S	0.1	0	0	0	23.532	0.22	7.33	86.5	0.449	3.16	7.15	1
CHARLES RIVER	UPPER BASIN	003	8/3/23 9:04 AM	B		0	0	0	23.175	0.22	7.34	85.9	0.451	4.88	7.11	
CHARLES RIVER	UPPER BASIN	003	9/1/23 8:45 AM	S	0.1	0	0	0.54	22.272	0.25	8.09	93.1	0.525	3.83	7.28	0.9
CHARLES RIVER	UPPER BASIN	003	9/1/23 8:45 AM	B		0	0	0.54	22.024	0.24	7.96	91.2	0.507	8.23	7.08	
CHARLES RIVER	UPPER BASIN	003	9/12/23 8:38 AM	S	0.1	0.09	0.48	0.68	24.177	0.27	6.96	83.1	0.559	2.93	7.08	1.3
CHARLES RIVER	UPPER BASIN	003	9/12/23 8:38 AM	B		0.09	0.48	0.68	24.052	0.27	6.82	81.3	0.558	3.71	7.09	
CHARLES RIVER	UPPER BASIN	003	9/15/23 9:10 AM	S	0.1	0	0	0.57	22.66	0.28	7.9	91.7	0.576	4.36	7.24	1
CHARLES RIVER	UPPER BASIN	003	9/15/23 9:10 AM	B		0	0	0.57	22.552	0.28	7.86	91	0.573	5.11	7.14	
CHARLES RIVER	UPPER BASIN	003	9/17/23 9:29 AM	S	0.1	0	0.07	0.07	19.569	0.27	8.92	97.4	0.559	3.82	7.23	1
CHARLES RIVER	UPPER BASIN	003	9/17/23 9:29 AM	B		0	0.07	0.07	19.288	0.28	8.76	95.1	0.57	19.26	7.16	
CHARLES RIVER	UPPER BASIN	003	9/19/23 9:18 AM	S	0.1	0	1.52	1.52	19.185	0.18	8.14	88.2	0.371	5.45	7.25	0.8
CHARLES RIVER	UPPER BASIN	003	9/19/23 9:18 AM	B		0	1.52	1.52	19.031	0.18	8.12	87.6	0.371		7.11	
CHARLES RIVER	UPPER BASIN	003	9/23/23 9:15 AM	S	0.1	0.12	0.12	0.12	18.206	0.22	7.68	81.5	0.446	4.05	7.11	1
CHARLES RIVER	UPPER BASIN	003	9/23/23 9:15 AM	B		0.12	0.12	0.12	18.218	0.2	7.69	81.7	0.411	11.31	7	
CHARLES RIVER	UPPER BASIN	003	9/26/23 9:22 AM	S	0.1	0	0.07	0.38	16.373	0.2	8.84	90.4	0.41	4.58	7.15	1
CHARLES RIVER	UPPER BASIN	003	9/26/23 9:22 AM	B		0	0.07	0.38	16.555	0.2	5.58	57.3	0.423		7.01	
CHARLES RIVER	UPPER BASIN	003	10/2/23 9:01 AM	S	0.1	0	0	0	15.768	0.2	9.05	91.4	0.424	2.69	7.29	0.6
CHARLES RIVER	UPPER BASIN	003	10/2/23 9:01 AM	B		0	0	0	15.636	0.2	9.13	92	0.423	8.23	7.24	
CHARLES RIVER	UPPER BASIN	003	10/4/23 9:04 AM	S	0.1	0	0	0	17.173	0.21	8.95	93	0.443	4.55	7.1	1.1
CHARLES RIVER	UPPER BASIN	003	10/4/23 9:04 AM	B		0	0	0	16.944	0.21	8.98	93	0.442	5.67	6.98	
CHARLES RIVER	UPPER BASIN	003	10/11/23 9:05 AM	S	0.1	0	0	0	16.16	0.24	8.84	90	0.494	2.94	6.92	1.1
CHARLES RIVER	UPPER BASIN	003	10/11/23 9:05 AM	B		0	0	0	16.044	0.25	8.83	89.7	0.509	6.05	6.9	
CHARLES RIVER	UPPER BASIN	004	4/3/23 9:15 AM	S	0.1	0	0	0.35	9.852	0.3	11.13	98.5	0.611	5.15	7.09	1.5
CHARLES RIVER	UPPER BASIN	004	4/3/23 9:15 AM	B		0	0	0.35	9.671	0.3	10.73	94.5	0.61	10.11	6.93	
CHARLES RIVER	UPPER BASIN	004	4/10/23 9:23 AM	S	0.1	0	0	0	11.034	0.31	10.95	99.6	0.629	5.14	7.22	1.5
CHARLES RIVER	UPPER BASIN	004	4/10/23 9:23 AM	B		0	0	0	10.697	0.32	2.03	18.3	0.654		6.92	
CHARLES RIVER	UPPER BASIN	004	4/25/23 9:46 AM	S	0.1	0	0	0.51	13.968	0.3	8.96	87.1	0.617	5.41	7.58	1
CHARLES RIVER	UPPER BASIN	004	4/25/23 9:46 AM	B		0	0	0.51	13.064	0.3	8.44	80.4	0.617	7.47	7.31	
CHARLES RIVER	UPPER BASIN	004	5/3/23 9:18 AM	S	0.1	0.03	0.19	0.24	13.852	0.26	9.17	88.8	0.54	4.37	7.43	0.8
CHARLES RIVER	UPPER BASIN	004	5/3/23 9:18 AM	B		0.03	0.19	0.24	13.563	0.26	8.96	86.3	0.539	9.64	7.31	
CHARLES RIVER	UPPER BASIN	004	5/19/23 9:18 AM	S	0.1	0	0	0	17.952	0.31	7.74	81.8	0.639	4.16	7.04	0.8
CHARLES RIVER	UPPER BASIN	004	5/19/23 9:18 AM	B		0	0	0	17.608	0.32	6.9	72.4	0.655	13.61	7.1	
CHARLES RIVER	UPPER BASIN	004	5/24/23 9:02 AM	S	0.1	0.03	0.03	0.03	18.742	0.29	6.85	73.5	0.596	3.24	7.05	1
CHARLES RIVER	UPPER BASIN	004	5/24/23 9:02 AM	B		0.03	0.03	0.03	18.324	0.29	6.57	69.9	0.592	6.88	7.02	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
CHARLES RIVER	UPPER BASIN	004	6/7/23 9:19 AM	S	0.1	0	0	0.07	18.146	0.33	6.61	70.1	0.683	3.23	7.08	1
CHARLES RIVER	UPPER BASIN	004	6/7/23 9:19 AM	B		0	0	0.07	17.907	0.34	6.11	64.5	0.689	19.66	6.91	
CHARLES RIVER	UPPER BASIN	004	6/15/23 8:52 AM	S	0.1	0	0.12	0.13	22.719	0.33	7.51	87.3	0.685	5.19	7.25	1
CHARLES RIVER	UPPER BASIN	004	6/15/23 8:52 AM	B		0	0.12	0.13	21.411	0.35	4.79	54.3	0.707	10.44	6.92	
CHARLES RIVER	UPPER BASIN	004	6/16/23 8:55 AM	S		0	0	0.12	23.23	0.33	6.94	81.4	0.676	4.13	7.19	1.1
CHARLES RIVER	UPPER BASIN	004	6/16/23 8:55 AM	B		0	0	0.12	20.851	0.46	3.59	40.2	0.935	7.85	6.96	
CHARLES RIVER	UPPER BASIN	004	6/29/23 8:42 AM	S	0.1	0	0.53	1.08	25.281	0.33	7.51	91.5	0.681	2.69	7.19	1
CHARLES RIVER	UPPER BASIN	004	6/29/23 8:42 AM	B		0	0.53	1.08	24.875	0.33	6.02	72.8	0.68	5.9	6.94	
CHARLES RIVER	UPPER BASIN	004	8/3/23 8:47 AM	S	0.1	0	0	0	23.172	0.21	6.94	81.3	0.44	3.44	7.09	0.6
CHARLES RIVER	UPPER BASIN	004	8/3/23 8:47 AM	B		0	0	0	22.839	0.22	6.75	78.6	0.45	6.9	7.1	
CHARLES RIVER	UPPER BASIN	004	9/1/23 8:31 AM	S	0.1	0	0	0.54	21.709	0.25	7.65	87.1	0.514	4.3	7.25	0.8
CHARLES RIVER	UPPER BASIN	004	9/1/23 8:31 AM	B		0	0	0.54	21.584	0.23	7.34	83.4	0.485	18.47	7.06	
CHARLES RIVER	UPPER BASIN	004	9/12/23 8:26 AM	S	0.1	0.09	0.48	0.68	24.151	0.26	6.3	75.2	0.549	3.27	7.04	1
CHARLES RIVER	UPPER BASIN	004	9/12/23 8:26 AM	B		0.09	0.48	0.68	24.126	0.27	6.08	72.5	0.554	3.55	7.09	
CHARLES RIVER	UPPER BASIN	004	9/15/23 8:56 AM	S	0.1	0	0	0.57	22.215	0.27	7.2	82.8	0.549	4.86	7.21	1
CHARLES RIVER	UPPER BASIN	004	9/15/23 8:56 AM	B		0	0	0.57	22.183	0.23	7.15	82.1	0.476	5.3	7.05	
CHARLES RIVER	UPPER BASIN	004	9/17/23 9:11 AM	S	0.1	0	0.07	0.07	19.659	0.27	8.1	88.6	0.557	4.13	7.28	1
CHARLES RIVER	UPPER BASIN	004	9/17/23 9:11 AM	B		0	0.07	0.07	19.412	0.27	8.11	88.3	0.562	8.63	7.12	
CHARLES RIVER	UPPER BASIN	004	9/19/23 9:03 AM	S	0.1	0	1.52	1.52	19.316	0.14	8.08	87.8	0.298	6.4	7.14	0.7
CHARLES RIVER	UPPER BASIN	004	9/19/23 9:03 AM	B		0	1.52	1.52	18.997	0.14	8.02	86.6	0.297		7.07	
CHARLES RIVER	UPPER BASIN	004	9/23/23 8:57 AM	S	0.1	0.12	0.12	0.12	18.65	0.21	7.73	82.8	0.443	3.28	7.19	1
CHARLES RIVER	UPPER BASIN	004	9/23/23 8:57 AM	B		0.12	0.12	0.12	18.631	0.23	7.76	83.1	0.466	15.84	6.98	
CHARLES RIVER	UPPER BASIN	004	9/26/23 9:10 AM	S	0.1	0	0.07	0.38	16.648	0.2	8.7	89.5	0.415	4.55	7.2	1
CHARLES RIVER	UPPER BASIN	004	9/26/23 9:10 AM	B		0	0.07	0.38	16.782	0.21	4.62	47.6	0.442		6.98	
CHARLES RIVER	UPPER BASIN	004	10/2/23 8:48 AM	S	0.1	0	0	0	16.308	0.2	9.08	92.7	0.423	2.99	7.26	1
CHARLES RIVER	UPPER BASIN	004	10/2/23 8:48 AM	B		0	0	0	16.066	0.2	9.1	92.4	0.424	10.1	7.18	
CHARLES RIVER	UPPER BASIN	004	10/4/23 8:47 AM	S	0.1	0	0	0	17.549	0.22	9.04	94.8	0.451	4.83	7.18	0.6
CHARLES RIVER	UPPER BASIN	004	10/4/23 8:47 AM	B		0	0	0	17.238	0.22	8.91	92.8	0.453	6.78	7.15	
CHARLES RIVER	UPPER BASIN	004	10/11/23 8:45 AM	S	0.1	0	0	0	15.75	0.25	8.44	85.1	0.505	2.99	6.96	1.2
CHARLES RIVER	UPPER BASIN	004	10/11/23 8:45 AM	B		0	0	0	15.634	0.22	8.42	84.7	0.452	4.69	6.95	
CHARLES RIVER	UPPER BASIN	005	1/10/23 10:38 AM	S	0.1	0	0	0	3.234	0.27	13.79	103.3	0.555		6.88	
CHARLES RIVER	UPPER BASIN	005	1/23/23 10:25 AM	S	0.1	0.87	1.11	1.11	3.184	0.38	13.26	99.2	0.778		7.07	
CHARLES RIVER	UPPER BASIN	005	2/21/23 10:19 AM	S	0.1	0.15	0.15	0.15	5.286	0.29	12.52	99	0.59	4.37	7.18	
CHARLES RIVER	UPPER BASIN	005	3/9/23 10:44 AM	S	0.1	0	0	0	7.379	0.43	14.88	124	0.873	1.49	7.51	
CHARLES RIVER	UPPER BASIN	005	3/20/23 8:35 AM	S	0.1	0	0	0	6.55	0.26	13.69	111.7	0.537	2.08	7.27	
CHARLES RIVER	UPPER BASIN	005	4/3/23 9:09 AM	S	0.1	0	0	0.35	9.306	0.3	11.09	96.8	0.609	4.72	7.07	
CHARLES RIVER	UPPER BASIN	005	4/3/23 9:09 AM	B		0	0	0.35	9.032	0.3	11	95.4	0.609	6.5	6.96	
CHARLES RIVER	UPPER BASIN	005	4/7/23 9:15 AM	S	0.1	0	0.01	0.01	11.006	0.3	10.79	98	0.61		7.19	
CHARLES RIVER	UPPER BASIN	005	4/10/23 9:17 AM	S	0.1	0	0	0	11.976	0.31	11.21	104.2	0.629	5.24	7.31	1
CHARLES RIVER	UPPER BASIN	005	4/10/23 9:17 AM	B		0	0	0	11.781	0.31	11.19	103.5	0.629	10.23	7.27	
CHARLES RIVER	UPPER BASIN	005	4/18/23 9:28 AM	S	0.1	0	0.08	0.08	16.387	0.34	8.7	89	0.692		7	
CHARLES RIVER	UPPER BASIN	005	4/25/23 9:39 AM	S	0.1	0	0	0.51	13.628	0.33	8.58	82.8	0.671	7.52	7.44	0.5
CHARLES RIVER	UPPER BASIN	005	4/25/23 9:39 AM	B		0	0	0.51	13.56	0.33	8.39	80.8	0.683	13.64	7.32	
CHARLES RIVER	UPPER BASIN	005	5/2/23 10:04 AM	S	0.1	0.16	0.21	2.02	14.692	0.25	9.72	95.9	0.518	4.1	7.06	
CHARLES RIVER	UPPER BASIN	005	5/2/23 10:04 AM	B		0.16	0.21	2.02	14.546	0.25	9.41	92.6	0.52	9.81	6.99	
CHARLES RIVER	UPPER BASIN	005	5/3/23 9:13 AM	S	0.1	0.03	0.19	0.24	14.052	0.27	9.23	89.8	0.556	3.66	7.47	0.9
CHARLES RIVER	UPPER BASIN	005	5/3/23 9:13 AM	B		0.03	0.19	0.24	13.829	0.27	9.17	88.8	0.555	7.29	7.42	
CHARLES RIVER	UPPER BASIN	005	5/17/23 9:59 AM	S	0.1	0	0	0	18.869	0.28	8.33	89.7	0.571	3.91	7.2	
CHARLES RIVER	UPPER BASIN	005	5/17/23 9:59 AM	B		0	0	0	18.971	0.28	8.03	86.6	0.573	6.83	7.09	
CHARLES RIVER	UPPER BASIN	005	5/19/23 9:05 AM	S	0.1	0	0	0	18.388	0.31	8.08	86.1	0.642	3.96	7.08	
CHARLES RIVER	UPPER BASIN	005	5/24/23 8:56 AM	S	0.1	0.03	0.03	0.03	19.001	0.28	6.83	73.7	0.579	3.31	7.15	0.9
CHARLES RIVER	UPPER BASIN	005	5/24/23 8:56 AM	B		0.03	0.03	0.03	18.955	0.28	6.75	72.9	0.577	4.39	7.08	
CHARLES RIVER	UPPER BASIN	005	5/31/23 9:52 AM	S	0.1	0	0	0	22.385	0.28	8.48	97.9	0.585		6.96	
CHARLES RIVER	UPPER BASIN	005	6/7/23 9:13 AM	S	0.1	0	0	0.07	18.276	0.35	6.43	68.5	0.718	3.6	7.07	0.5
CHARLES RIVER	UPPER BASIN	005	6/7/23 9:13 AM	B		0	0	0.07	18.309	0.34	6.42	68.4	0.697	22.91	6.93	
CHARLES RIVER	UPPER BASIN	005	6/13/23 10:07 AM	S	0.1	0.01	0.35	0.35	21.427	0.32	8.19	92.8	0.651	6.24	7.02	
CHARLES RIVER	UPPER BASIN	005	6/13/23 10:07 AM	B		0.01	0.35	0.35	21.281	0.31	7.82	88.3	0.646	18.1	6.92	
CHARLES RIVER	UPPER BASIN	005	6/15/23 8:46 AM	S	0.1	0	0.12	0.13	22.683	0.34	7.6	88.2	0.694	3.98	7.2	0.8
CHARLES RIVER	UPPER BASIN	005	6/15/23 8:46 AM	B		0	0.12	0.13	22.381	0.34	7.1	81.9	0.691	32.28	7.08	
CHARLES RIVER	UPPER BASIN	005	6/16/23 8:47 AM	S	0.1	0	0	0.12	23.135	0.34	7.04	82.5	0.697	3.65	7.24	1.2
CHARLES RIVER	UPPER BASIN	005	6/16/23 8:47 AM	B		0	0	0.12	22.278	0.35	6.36	73.3	0.713	5.25	7.12	
CHARLES RIVER	UPPER BASIN	005	6/26/23 9:24 AM	S	0.1	0	0.02	0.07	25.157	0.3	9.13	111	0.627		7.29	
CHARLES RIVER	UPPER BASIN	005	6/29/23 8:36 AM	S	0.1	0	0.53	1.08	25.301	0.33	7.9	96.3	0.672	2.6	7.15	0.8
CHARLES RIVER	UPPER BASIN	005	6/29/23 8:36 AM	B		0	0.53	1.08	25.129	0.32	7.88	95.7	0.67	6.5	7.13	
CHARLES RIVER	UPPER BASIN	005	7/10/23 9:46 AM	S	0.1	0.71	0.71	0.71	26.064	0.31	6.84	84.6	0.646		7.06	
CHARLES RIVER	UPPER BASIN	005	7/25/23 9:54 AM	S	0.1	0.88	0.88	0.88	26.417	0.23	7.04	87.6	0.476	2.62	7.07	
CHARLES RIVER	UPPER BASIN	005	7/25/23 9:54 AM	B		0.88	0.88	0.88	26.359	0.23	6.88	85.5	0.475	12.56	6.98	
CHARLES RIVER	UPPER BASIN	005	8/3/23 8:40 AM	S	0.1	0	0	0	23.286	0.21	7.02	82.4	0.434	3.04	7.13	0.7
CHARLES RIVER	UPPER BASIN	005	8/3/23 8:40 AM	B		0	0	0	23.127	0.21	7	81.9	0.432	5.67	7.09	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
CHARLES RIVER	UPPER BASIN	005	8/8/23 9:38 AM	S	0.1	1.33	1.33	1.33	24.024	0.23	7.03	83.6	0.481	6.42	7.2	
CHARLES RIVER	UPPER BASIN	005	8/24/23 9:17 AM	S	0.1	0.01	0.01	0.01	23.398	0.23	7.82	92	0.482		7.1	
CHARLES RIVER	UPPER BASIN	005	9/1/23 8:24 AM	S	0.1	0	0	0.54	21.773	0.23	7.32	83.5	0.486	4.12	7.1	1.2
CHARLES RIVER	UPPER BASIN	005	9/1/23 8:24 AM	B		0	0	0.54	21.633	0.25	7.05	80.1	0.509	10.81	7.02	
CHARLES RIVER	UPPER BASIN	005	9/7/23 9:41 AM	S	0.1	0	0	0	26.53	0.25	8.03	100.1	0.527		7.44	
CHARLES RIVER	UPPER BASIN	005	9/12/23 8:21 AM	S	0.1	0.09	0.48	0.68	24.348	0.28	6.07	72.7	0.578	3.22	7.05	
CHARLES RIVER	UPPER BASIN	005	9/15/23 8:49 AM	S	0.1	0	0	0.57	22.375	0.24	7.04	81.2	0.501	5.24	7.15	1
CHARLES RIVER	UPPER BASIN	005	9/15/23 8:49 AM	B		0	0	0.57	22.376	0.23	7.01	80.9	0.486	6.04	7.07	
CHARLES RIVER	UPPER BASIN	005	9/17/23 9:03 AM	S	0.1	0	0.07	0.07	20.108	0.26	8.27	91.3	0.541	3.81	7.32	1.3
CHARLES RIVER	UPPER BASIN	005	9/17/23 9:03 AM	B		0	0.07	0.07	20.052	0.27	8.17	90.1	0.56	3.6	7.11	
CHARLES RIVER	UPPER BASIN	005	9/18/23 10:04 AM	S	0.1	1.52	1.52	1.59	20.087	0.23	8.54	94.2	0.484		7.03	
CHARLES RIVER	UPPER BASIN	005	9/19/23 8:55 AM	S	0.1	0	1.52	1.52	19.257	0.14	7.88	85.5	0.286	6.43	7.4	0.6
CHARLES RIVER	UPPER BASIN	005	9/19/23 8:55 AM	B		0	1.52	1.52	19.256	0.13	7.84	85	0.265		7.1	
CHARLES RIVER	UPPER BASIN	005	9/23/23 8:49 AM	S	0.1	0.12	0.12	0.12	19.054	0.23	7.66	82.8	0.47	4.16	7.22	1
CHARLES RIVER	UPPER BASIN	005	9/23/23 8:49 AM	B		0.12	0.12	0.12	19.045	0.23	7.02	75.8	0.474	4.81	7.27	
CHARLES RIVER	UPPER BASIN	005	9/26/23 9:03 AM	S	0.1	0	0.07	0.38	16.692	0.2	8.64	88.9	0.415	4.42	7.2	1
CHARLES RIVER	UPPER BASIN	005	9/26/23 9:03 AM	B		0	0.07	0.38	16.701	0.2	8.73	89.9	0.416	7.83	7.14	
CHARLES RIVER	UPPER BASIN	005	10/2/23 8:42 AM	S	0.1	0	0	0	15.876	0.2	8.88	89.9	0.424	2.88	7.26	0.6
CHARLES RIVER	UPPER BASIN	005	10/2/23 8:42 AM	B		0	0	0	15.799	0.2	9.03	91.2	0.424	3.44	7.2	
CHARLES RIVER	UPPER BASIN	005	10/3/23 9:33 AM	S	0.1	0	0	0	17.04	0.21	9.28	96.2	0.432		7.28	
CHARLES RIVER	UPPER BASIN	005	10/3/23 9:33 AM	B		0	0	0	16.845	0.21	9.14	94.4	0.431		7.13	
CHARLES RIVER	UPPER BASIN	005	10/4/23 8:39 AM	S	0.1	0	0	0	17.099	0.22	8.91	92.5	0.449	4.75	7.19	0.8
CHARLES RIVER	UPPER BASIN	005	10/4/23 8:39 AM	B		0	0	0	16.822	0.22	8.89	91.7	0.453	5.72	7.03	
CHARLES RIVER	UPPER BASIN	005	10/11/23 8:38 AM	S	0.1	0	0	0	16	0.24	8.39	85.1	0.499	2.75	7.03	1
CHARLES RIVER	UPPER BASIN	005	10/11/23 8:38 AM	B		0	0	0	15.852	0.24	8.37	84.6	0.502	4.71	6.96	
CHARLES RIVER	UPPER BASIN	005	10/17/23 9:51 AM	S	0.1	0	0.06	0.06	14.597	0.25	9.58	94.3	0.517		7.53	
CHARLES RIVER	UPPER BASIN	005	10/17/23 9:51 AM	B		0	0.06	0.06	14.532	0.25	9.07	89.2	0.513		7.32	
CHARLES RIVER	UPPER BASIN	005	10/30/23 9:09 AM	S	0.1	0.43	0.62	0.62	14.616	0.25	9.44	93	0.506		7.47	
CHARLES RIVER	UPPER BASIN	005	11/15/23 10:35 AM	S	0.1	0	0	0	6.871	0.27	12.25	100.7	0.554		7.5	
CHARLES RIVER	UPPER BASIN	005	11/29/23 10:35 AM	S	0.1	0	0	0.4	3.821	0.24	13.75	104.5	0.508	4.6	7.47	
CHARLES RIVER	UPPER BASIN	005	12/14/23 10:59 AM	S	0.1	0	0	0	4.317	0.18	13.36	102.9	0.373	7.32	7.53	
CHARLES RIVER	UPPER BASIN	005	12/27/23 10:08 AM	S	0.1	0.02	0.02	0.02	5.477	0.13	12.63	100.1	0.278		7.25	
CHARLES RIVER	MID-BASIN	006	4/3/23 9:03 AM	S	0.1	0	0	0.35	9.328	0.3	10.87	94.9	0.611	4.97	7.13	1
CHARLES RIVER	MID-BASIN	006	4/3/23 9:03 AM	B		0	0	0.35	9.035	0.3	10.68	92.7	0.609	10.09	6.98	
CHARLES RIVER	MID-BASIN	006	4/10/23 9:10 AM	S	0.1	0	0	0	11.389	0.31	11.44	104.8	0.636	5.02	7.43	1.3
CHARLES RIVER	MID-BASIN	006	4/10/23 9:10 AM	B		0	0	0	10.861	0.31	11	99.7	0.639		7.24	
CHARLES RIVER	MID-BASIN	006	4/25/23 9:31 AM	S	0.1	0	0	0.51	13.546	0.36	8.87	85.4	0.733	5.05	7.57	0.7
CHARLES RIVER	MID-BASIN	006	4/25/23 9:31 AM	B		0	0	0.51	13.083	0.37	8.44	80.4	0.755	9.71	7.33	
CHARLES RIVER	MID-BASIN	006	5/3/23 9:06 AM	S	0.1	0.03	0.19	0.24	14.046	0.27	9.21	89.6	0.557	3.94	7.49	1.1
CHARLES RIVER	MID-BASIN	006	5/3/23 9:06 AM	B		0.03	0.19	0.24	13.847	0.27	9.05	87.7	0.554		7.39	
CHARLES RIVER	MID-BASIN	006	5/19/23 9:02 AM	S	0.1	0	0	0	17.659	0.31	8.05	84.6	0.637	3.8	7.25	1
CHARLES RIVER	MID-BASIN	006	5/19/23 9:02 AM	B		0	0	0	17.014	0.32	6.65	69	0.661	10.99	7.2	
CHARLES RIVER	MID-BASIN	006	5/24/23 8:45 AM	S	0.1	0.03	0.03	0.03	19.216	0.28	6.53	70.8	0.572	3.1	7.11	1.2
CHARLES RIVER	MID-BASIN	006	5/24/23 8:45 AM	B		0.03	0.03	0.03	18.721	0.27	6.43	69	0.562	11.36	7.01	
CHARLES RIVER	MID-BASIN	006	6/7/23 9:06 AM	S	0.1	0	0	0.07	18.426	0.33	5.75	61.3	0.667	3.27	7.04	1
CHARLES RIVER	MID-BASIN	006	6/7/23 9:06 AM	B		0	0	0.07	18.146	0.31	5.29	56.1	0.634	5.9	6.92	
CHARLES RIVER	MID-BASIN	006	6/15/23 8:39 AM	S	0.1	0	0.12	0.13	21.807	0.34	7.35	83.9	0.703	4.27	7.2	0.8
CHARLES RIVER	MID-BASIN	006	6/15/23 8:39 AM	B		0	0.12	0.13	19.505	0.56	3.63	39.7	1.118		6.95	
CHARLES RIVER	MID-BASIN	006	6/16/23 8:40 AM	S	0.1	0	0	0.12	22.266	0.36	6.68	76.9	0.746	3.99	7.23	1
CHARLES RIVER	MID-BASIN	006	6/16/23 8:40 AM	B		0	0	0.12	20.137	0.53	4.19	46.3	1.062	6.09	7.01	
CHARLES RIVER	MID-BASIN	006	6/29/23 8:27 AM	S	0.1	0	0.53	1.08	24.865	0.34	7.32	88.6	0.691	2.75	7.18	0.9
CHARLES RIVER	MID-BASIN	006	6/29/23 8:27 AM	B		0	0.53	1.08	22.465	0.46	2.12	24.5	0.924	7.5	6.88	
CHARLES RIVER	MID-BASIN	006	8/3/23 8:31 AM	S	0.1	0	0	0	23.325	0.21	6.93	81.4	0.429	3.41	7.16	0.5
CHARLES RIVER	MID-BASIN	006	8/3/23 8:31 AM	B		0	0	0	23.073	0.21	6.75	78.9	0.428		7.1	
CHARLES RIVER	MID-BASIN	006	9/1/23 8:13 AM	S	0.1	0	0	0.54	22.102	0.24	7.29	83.7	0.493	4.13	7.24	1
CHARLES RIVER	MID-BASIN	006	9/1/23 8:13 AM	B		0	0	0.54	21.945	0.24	6.72	76.9	0.507	20.76	7.1	
CHARLES RIVER	MID-BASIN	006	9/12/23 8:15 AM	S	0.1	0.09	0.48	0.68	24.385	0.28	5.79	69.4	0.579	3.12	7.02	1
CHARLES RIVER	MID-BASIN	006	9/12/23 8:15 AM	B		0.09	0.48	0.68	24.314	0.28	5.31	63.5	0.577	3.23	7	
CHARLES RIVER	MID-BASIN	006	9/15/23 8:41 AM	S	0.1	0	0	0.57	22.587	0.24	6.8	78.7	0.493	5.34	7.14	0.8
CHARLES RIVER	MID-BASIN	006	9/15/23 8:41 AM	B		0	0	0.57	22.519	0.23	6.56	75.8	0.484	5.96	7.03	
CHARLES RIVER	MID-BASIN	006	9/17/23 8:54 AM	S	0.1	0	0.07	0.07	19.873	0.29	8.13	89.3	0.588	4.16	7.27	0.7
CHARLES RIVER	MID-BASIN	006	9/17/23 8:54 AM	B		0	0.07	0.07	19.664	0.28	7.93	86.8	0.584	5.93	7.16	
CHARLES RIVER	MID-BASIN	006	9/19/23 8:48 AM	S	0.1	0	1.52	1.52	19.232	0.13	7.95	86.2	0.28	8.17	7.16	0.5
CHARLES RIVER	MID-BASIN	006	9/19/23 8:48 AM	B		0	1.52	1.52	19.179	0.13	7.62	82.5	0.282		7.11	
CHARLES RIVER	MID-BASIN	006	9/23/23 8:41 AM	S	0.1	0.12	0.12	0.12	18.724	0.24	7.54	80.9	0.496	4.29	7.24	1
CHARLES RIVER	MID-BASIN	006	9/23/23 8:41 AM	B		0.12	0.12	0.12	18.727	0.25	7.53	80.8	0.514	13.37	7.17	
CHARLES RIVER	MID-BASIN	006	9/26/23 8:56 AM	S	0.1	0	0.07	0.38	16.641	0.2	8.66	89	0.418	4.65	7.19	0.8
CHARLES RIVER	MID-BASIN	006	9/26/23 8:56 AM	B		0	0.07	0.38	16.649	0.2	8.63	88.8	0.418	13.97	7.1	
CHARLES RIVER	MID-BASIN	006	10/2/23 8:37 AM	S	0.1	0	0	0	15.847	0.2	8.85	89.4	0.421	2.93	7.22	0.7

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
CHARLES RIVER	MID-BASIN	006	10/2/23 8:37 AM	B		0	0	0	15.653	0.2	8.86	89.2	0.421	14.14	7.14	
CHARLES RIVER	MID-BASIN	006	10/4/23 8:29 AM	S	0.1	0	0	0	16.948	0.22	8.85	91.5	0.448	4.19	7.26	1
CHARLES RIVER	MID-BASIN	006	10/4/23 8:29 AM	B		0	0	0	16.753	0.22	8.82	90.9	0.446	5.43	7.13	
CHARLES RIVER	MID-BASIN	006	10/11/23 8:30 AM	S	0.1	0	0	0	16.401	0.25	8.39	85.9	0.505	2.97	7.07	1
CHARLES RIVER	MID-BASIN	006	10/11/23 8:30 AM	B		0	0	0	16.304	0.23	8.29	84.6	0.474	5.04	7.01	
CHARLES RIVER	MID-BASIN	007	4/3/23 8:48 AM	S	0.1	0	0	0.35	9.049	0.32	10.97	95.2	0.655	5.11	7.34	1
CHARLES RIVER	MID-BASIN	007	4/3/23 8:48 AM	B	4.4	0	0	0.35	8.936	0.71	10.07	87.3	1.409	0.5	7	
CHARLES RIVER	MID-BASIN	007	4/10/23 8:56 AM	S	0.1	0	0	0	10.877	0.32	11.23	101.7	0.662	4.97	7.65	1
CHARLES RIVER	MID-BASIN	007	4/10/23 8:56 AM	B	3.9	0	0	0	10.611	0.38	11.16	100.5	0.77	3.22	7.45	
CHARLES RIVER	MID-BASIN	007	4/25/23 9:17 AM	S	0.1	0	0	0.51	14.528	0.43	10.4	102.3	0.865	3.53	7.66	1.3
CHARLES RIVER	MID-BASIN	007	4/25/23 9:17 AM	B	4.9	0	0	0.51	13.318	0.71	6.95	66.8	1.413	2.15	7.7	
CHARLES RIVER	MID-BASIN	007	5/3/23 8:52 AM	S	0.1	0.03	0.19	0.24	13.994	0.27	8.89	86.4	0.563	3.42	7.57	1.1
CHARLES RIVER	MID-BASIN	007	5/3/23 8:52 AM	B	4.3	0.03	0.19	0.24	13.738	0.36	8.04	77.8	0.733	11.98	7.44	
CHARLES RIVER	MID-BASIN	007	5/19/23 8:48 AM	S	0.1	0	0	0	17.238	0.36	7.62	79.4	0.728	4.58	7.31	0.9
CHARLES RIVER	MID-BASIN	007	5/19/23 8:48 AM	B	4.3	0	0	0	16.98	0.38	6.66	69	0.766	1.79	7.23	
CHARLES RIVER	MID-BASIN	007	5/24/23 8:28 AM	S	0.1	0.03	0.03	0.03	19.31	0.3	6.54	71.1	0.614	3.6	7.27	1.1
CHARLES RIVER	MID-BASIN	007	5/24/23 8:28 AM	B	3.7	0.03	0.03	0.03	18.968	0.35	5.73	61.9	0.708	4.04	7.12	
CHARLES RIVER	MID-BASIN	007	6/7/23 8:53 AM	S	0.1	0	0	0.07	18.907	0.45	6.01	64.8	0.902	4.23	7.18	1
CHARLES RIVER	MID-BASIN	007	6/7/23 8:53 AM	B	5.3	0	0	0.07	18.635	0.54	3.48	37.4	1.079	1.57	7.3	
CHARLES RIVER	MID-BASIN	007	6/15/23 8:29 AM	S	0.1	0	0.12	0.13	21.247	0.41	7.74	87.5	0.844	4.17	7.32	1
CHARLES RIVER	MID-BASIN	007	6/15/23 8:29 AM	B	4.6	0	0.12	0.13	18.84	0.71	2.37	25.5	1.418	11.59	7.04	
CHARLES RIVER	MID-BASIN	007	6/16/23 8:28 AM	S	0.1	0	0	0.12	22.085	0.43	8.18	93.9	0.868	3.56	7.44	1
CHARLES RIVER	MID-BASIN	007	6/16/23 8:28 AM	B	4.1	0	0	0.12	19.118	0.69	2.69	29.2	1.375	6.42	7.07	
CHARLES RIVER	MID-BASIN	007	6/29/23 8:12 AM	S	0.1	0	0.53	1.08	24.238	0.39	6.75	80.7	0.79	2.17	7.23	1.2
CHARLES RIVER	MID-BASIN	007	6/29/23 8:12 AM	B	4.4	0	0.53	1.08	20.538	0.72	0.35	3.9	1.437		6.89	
CHARLES RIVER	MID-BASIN	007	8/3/23 8:20 AM	S	0.1	0	0	0	24.276	0.2	6.88	82.2	0.428	2.58	7.24	0.8
CHARLES RIVER	MID-BASIN	007	8/3/23 8:20 AM	B	4.2	0	0	0	23.669	0.23	3.63	42.9	0.47	3.48	7	
CHARLES RIVER	MID-BASIN	007	9/1/23 7:56 AM	S	0.1	0	0	0.54	22.405	0.25	6.78	78.3	0.527	4.11	7.32	1
CHARLES RIVER	MID-BASIN	007	9/1/23 7:56 AM	B	4.4	0	0	0.54	22.207	0.26	4.14	47.6	0.53	7.53	7.04	
CHARLES RIVER	MID-BASIN	007	9/12/23 8:05 AM	S	0.1	0.09	0.48	0.68	24.669	0.28	6.16	74.2	0.576	2.53	7.13	1.1
CHARLES RIVER	MID-BASIN	007	9/12/23 8:05 AM	B	3.7	0.09	0.48	0.68	23.596	0.34	1.94	22.9	0.69	7.7	6.88	
CHARLES RIVER	MID-BASIN	007	9/15/23 8:29 AM	S	0.1	0	0	0.57	22.978	0.28	5.27	61.5	0.58	4.23	7.12	1
CHARLES RIVER	MID-BASIN	007	9/15/23 8:29 AM	B	4	0	0	0.57	22.865	0.3	5.07	59.1	0.62	4.8	7	
CHARLES RIVER	MID-BASIN	007	9/17/23 8:35 AM	S	0.1	0	0.07	0.07	21.028	0.33	7.15	80.3	0.672	4.29	7.25	1.1
CHARLES RIVER	MID-BASIN	007	9/17/23 8:35 AM	B	4.5	0	0.07	0.07	20.169	0.28	7.22	79.8	0.586	2.05	7.19	
CHARLES RIVER	MID-BASIN	007	9/19/23 8:39 AM	S	0.1	0	1.52	1.52	19.896	0.26	7.09	77.9	0.536	3.8	7.22	0.9
CHARLES RIVER	MID-BASIN	007	9/19/23 8:39 AM	B	3.8	0	1.52	1.52	19.767	0.34	1.51	16.6	0.692	1.47	7.3	
CHARLES RIVER	MID-BASIN	007	9/23/23 8:27 AM	S	0.1	0.12	0.12	0.12	19.109	0.21	7.4	80.1	0.438	3.49	7.31	1
CHARLES RIVER	MID-BASIN	007	9/23/23 8:27 AM	B	5	0.12	0.12	0.12	19.182	0.34	5.5	59.6	0.7	2.21	7.13	
CHARLES RIVER	MID-BASIN	007	9/26/23 8:45 AM	S	0.1	0	0.07	0.38	16.89	0.22	8.49	87.7	0.465	4.53	7.28	0.9
CHARLES RIVER	MID-BASIN	007	9/26/23 8:45 AM	B	4.2	0	0.07	0.38	16.856	0.25	7.82	80.8	0.519	13.79	7.22	
CHARLES RIVER	MID-BASIN	007	10/2/23 8:27 AM	S	0.1	0	0	0	16.643	0.22	8.58	88.2	0.446	2.84	7.24	0.5
CHARLES RIVER	MID-BASIN	007	10/2/23 8:27 AM	B	4	0	0	0	15.698	0.2	7.98	80.4	0.412	15.7	7.1	
CHARLES RIVER	MID-BASIN	007	10/4/23 8:18 AM	S	0.1	0	0	0	17.118	0.24	8.43	87.5	0.491	3.93	7.28	0.8
CHARLES RIVER	MID-BASIN	007	10/4/23 8:18 AM	B	4.8	0	0	0	16.269	0.23	7.31	74.6	0.466	6.89	7.16	
CHARLES RIVER	MID-BASIN	007	10/11/23 8:15 AM	S	0.1	0	0	0	16.741	0.25	7.64	78.7	0.522	2.85	7.17	1
CHARLES RIVER	MID-BASIN	007	10/11/23 8:15 AM	B	3.8	0	0	0	16.273	0.22	7.76	79.2	0.45	4.91	7.14	
CHARLES RIVER	MID-BASIN	145	4/3/23 8:54 AM	S	0.1	0	0	0.35	9.218	0.32	11.01	95.9	0.658	5.28	7.25	1.5
CHARLES RIVER	MID-BASIN	145	4/3/23 8:54 AM	B		0	0	0.35	9.384	0.57	9.24	81	1.138	5.6	6.98	
CHARLES RIVER	MID-BASIN	145	4/10/23 9:02 AM	S	0.1	0	0	0	11.093	0.33	11.4	103.8	0.682	4.92	7.49	0.8
CHARLES RIVER	MID-BASIN	145	4/10/23 9:02 AM	B		0	0	0	10.877	0.59	9.64	87.5	1.184		7.21	
CHARLES RIVER	MID-BASIN	145	4/25/23 9:23 AM	S	0.1	0	0	0.51	14.488	0.4	10	98.4	0.806	3.78	7.63	1
CHARLES RIVER	MID-BASIN	145	4/25/23 9:23 AM	B		0	0	0.51	12.928	0.56	7.62	72.4	1.116	6.06	7.32	
CHARLES RIVER	MID-BASIN	145	5/3/23 8:58 AM	S	0.1	0.03	0.19	0.24	14.054	0.27	8.67	84.3	0.545	4.12	7.5	1
CHARLES RIVER	MID-BASIN	145	5/3/23 8:58 AM	B		0.03	0.19	0.24	12.624	0.52	7.89	74.5	1.042	13.38	7.22	
CHARLES RIVER	MID-BASIN	145	5/19/23 8:53 AM	S	0.1	0	0	0	17.466	0.38	7.68	80.4	0.765	4.37	7.29	0.8
CHARLES RIVER	MID-BASIN	145	5/19/23 8:53 AM	B		0	0	0	15.431	0.69	6.98	70.2	1.361	7.26	7.05	
CHARLES RIVER	MID-BASIN	145	5/24/23 8:37 AM	S	0.1	0.03	0.03	0.03	19.465	0.28	6.92	75.4	0.58	2.97	7.18	1.3
CHARLES RIVER	MID-BASIN	145	5/24/23 8:37 AM	B		0.03	0.03	0.03	16.15	0.57	6.03	61.5	1.138	3.55	7	
CHARLES RIVER	MID-BASIN	145	6/7/23 8:58 AM	S	0.1	0	0	0.07	18.542	0.39	5.4	57.8	0.79	4.31	7.13	0.5
CHARLES RIVER	MID-BASIN	145	6/7/23 8:58 AM	B		0	0	0.07	18.197	0.41	4.73	50.2	0.839	7.86	6.97	
CHARLES RIVER	MID-BASIN	145	6/15/23 8:34 AM	S	0.1	0	0.12	0.13	21.38	0.37	7.69	87.1	0.758	3.89	7.26	1
CHARLES RIVER	MID-BASIN	145	6/15/23 8:34 AM	B		0	0.12	0.13	20.504	0.49	4.6	51.2	1	17.1	7.07	
CHARLES RIVER	MID-BASIN	145	6/16/23 8:32 AM	S	0.1	0	0	0.12	21.968	0.42	7.95	91.1	0.848	3.67	7.36	1
CHARLES RIVER	MID-BASIN	145	6/16/23 8:32 AM	B		0	0	0.12	21.215	0.43	6.59	74.4	0.865	8.36	7.25	
CHARLES RIVER	MID-BASIN	145	6/29/23 8:18 AM	S	0.1	0	0.53	1.08	24.277	0.38	6.95	83.2	0.776	2.13	7.18	1.5
CHARLES RIVER	MID-BASIN	145	6/29/23 8:18 AM	B		0	0.53	1.08	20.507	0.46	4.9	54.5	0.936	4.83	6.95	
CHARLES RIVER	MID-BASIN	145	8/3/23 8:25 AM	S	0.1	0	0	0	24.329	0.21	7.15	85.5	0.43	2.67	7.22	0.6
CHARLES RIVER	MID-BASIN	145	8/3/23 8:25 AM	B		0	0	0	21.662	0.46	5.92	67.4	0.924	14.38	7	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
CHARLES RIVER	MID-BASIN	145	9/1/23 8:04 AM	S	0.1	0	0	0.54	22.323	0.27	7.54	86.9	0.552	4.26	7.36	0.8
CHARLES RIVER	MID-BASIN	145	9/1/23 8:04 AM	B		0	0	0.54	20.174	0.49	6.18	68.4	0.984		7.01	
CHARLES RIVER	MID-BASIN	145	9/12/23 8:10 AM	S	0.1	0.09	0.48	0.68	24.554	0.28	6.06	72.8	0.58	2.44	7.1	1.2
CHARLES RIVER	MID-BASIN	145	9/12/23 8:10 AM	B		0.09	0.48	0.68	23.046	0.29	5.04	58.9	0.604	6.77	7.01	
CHARLES RIVER	MID-BASIN	145	9/15/23 8:35 AM	S	0.1	0	0	0.57	22.684	0.3	5.57	64.6	0.611	4.2	7.1	0.9
CHARLES RIVER	MID-BASIN	145	9/15/23 8:35 AM	B		0	0	0.57	22.564	0.3	5.53	64.1	0.616	4.53	7	
CHARLES RIVER	MID-BASIN	145	9/17/23 8:41 AM	S	0.1	0	0.07	0.07	20.692	0.32	7.42	82.9	0.664	4.73	7.3	1.1
CHARLES RIVER	MID-BASIN	145	9/17/23 8:41 AM	B		0	0.07	0.07	20.277	0.34	6.58	72.9	0.697	8.1	7.08	
CHARLES RIVER	MID-BASIN	145	9/19/23 8:43 AM	S	0.1	0	1.52	1.52	19.742	0.24	7.5	82.2	0.495	4.25	7.27	0.7
CHARLES RIVER	MID-BASIN	145	9/19/23 8:43 AM	B		0	1.52	1.52	19.415	0.21	7.22	78.6	0.432		7.26	
CHARLES RIVER	MID-BASIN	145	9/23/23 8:32 AM	S	0.1	0.12	0.12	0.12	19.095	0.24	7.04	76.1	0.505	3	7.3	1
CHARLES RIVER	MID-BASIN	145	9/23/23 8:32 AM	B		0.12	0.12	0.12	17.578	0.61	6.28	66	1.219	7.47	7.03	
CHARLES RIVER	MID-BASIN	145	9/26/23 8:49 AM	S	0.1	0	0.07	0.38	17.156	0.27	8.67	90.2	0.55	14.81	7.22	0.7
CHARLES RIVER	MID-BASIN	145	9/26/23 8:49 AM	B		0	0.07	0.38	17.138	0.28	8.25	85.7	0.566	11.83	7.17	
CHARLES RIVER	MID-BASIN	145	10/2/23 8:32 AM	S	0.1	0	0	0	16.618	0.22	8.6	88.4	0.462	2.6	7.24	0.5
CHARLES RIVER	MID-BASIN	145	10/2/23 8:32 AM	B		0	0	0	16.417	0.35	7.61	78	0.71	12.21	7.07	
CHARLES RIVER	MID-BASIN	145	10/4/23 8:21 AM	S	0.1	0	0	0	17.528	0.22	8.83	92.5	0.461	4.35	7.25	1
CHARLES RIVER	MID-BASIN	145	10/4/23 8:21 AM	B		0	0	0	16.899	0.37	7.94	82.2	0.755	5.19	6.93	
CHARLES RIVER	MID-BASIN	145	10/11/23 8:22 AM	S	0.1	0	0	0	16.61	0.24	7.78	79.9	0.492	2.66	7.11	1.1
CHARLES RIVER	MID-BASIN	145	10/11/23 8:22 AM	B		0	0	0	16.32	0.38	6.49	66.3	0.775	6.17	7.02	
CHARLES RIVER	MID-BASIN	008	4/3/23 8:44 AM	S	0.1	0	0	0.35	9.093	0.35	10.91	94.8	0.712	4.49	7.5	1.5
CHARLES RIVER	MID-BASIN	008	4/3/23 8:44 AM	B	3.6	0	0	0.35	8.966	0.36	9.69	83.9	0.727		7.19	
CHARLES RIVER	MID-BASIN	008	4/10/23 8:50 AM	S	0.1	0	0	0	10.802	0.35	11.42	103.3	0.719	4.58	7.78	1
CHARLES RIVER	MID-BASIN	008	4/10/23 8:50 AM	B	4	0	0	0	10.35	0.48	9.01	80.8	0.96	11.08	7.61	
CHARLES RIVER	MID-BASIN	008	4/25/23 9:11 AM	S	0.1	0	0	0.51	14.898	0.42	10.34	102.5	0.855	2.91	7.62	1
CHARLES RIVER	MID-BASIN	008	4/25/23 9:11 AM	B	3.7	0	0	0.51	13.532	0.5	9.97	96	1.012	3	7.59	
CHARLES RIVER	MID-BASIN	008	5/3/23 8:45 AM	S	0.1	0.03	0.19	0.24	13.967	0.28	8.76	85.1	0.576	3.51	7.58	1.2
CHARLES RIVER	MID-BASIN	008	5/3/23 8:45 AM	B	4	0.03	0.19	0.24	13.884	0.46	8.32	80.7	0.937	10.61	7.44	
CHARLES RIVER	MID-BASIN	008	5/19/23 8:42 AM	S	0.1	0	0	0	17.218	0.38	7.68	80	0.771	4.04	7.38	1
CHARLES RIVER	MID-BASIN	008	5/19/23 8:42 AM	B	4.3	0	0	0	16.852	0.69	0.31	3.2	1.379	2.54	7.14	
CHARLES RIVER	MID-BASIN	008	5/24/23 8:22 AM	S	0.1	0.03	0.03	0.03	19.215	0.31	6.45	69.9	0.631	3.29	7.28	1.4
CHARLES RIVER	MID-BASIN	008	5/24/23 8:22 AM	B	3.6	0.03	0.03	0.03	18.533	0.51	5.45	58.4	1.029	4.48	7.14	
CHARLES RIVER	MID-BASIN	008	6/7/23 8:48 AM	S	0.1	0	0	0.07	18.78	0.43	5.89	63.4	0.864	3.26	7.25	1
CHARLES RIVER	MID-BASIN	008	6/7/23 8:48 AM	B	6.4	0	0	0.07	18.535	1.71	2.94	31.7	3.257	9.36	7.3	
CHARLES RIVER	MID-BASIN	008	6/15/23 8:25 AM	S	0.1	0	0.12	0.13	21.392	0.39	8.05	91.1	0.786	4.12	7.39	1
CHARLES RIVER	MID-BASIN	008	6/15/23 8:25 AM	B	3.6	0	0.12	0.13	18.975	0.89	4.3	46.6	1.754	13.94	7.12	
CHARLES RIVER	MID-BASIN	008	6/16/23 8:22 AM	S	0.1	0	0	0.12	22.161	0.41	8.5	97.7	0.835	3.69	7.55	1.1
CHARLES RIVER	MID-BASIN	008	6/16/23 8:22 AM	B	3.6	0	0	0.12	19.439	0.65	3.28	35.8	1.296	5.4	7.1	
CHARLES RIVER	MID-BASIN	008	6/29/23 8:08 AM	S	0.1	0	0.53	1.08	24.333	0.41	7.31	87.6	0.842	2	7.27	1.2
CHARLES RIVER	MID-BASIN	008	6/29/23 8:08 AM	B	3.8	0	0.53	1.08	21.678	0.65	2.73	31.2	1.302	3.89	7.01	
CHARLES RIVER	MID-BASIN	008	8/3/23 8:13 AM	S	0.1	0	0	0	24.209	0.21	6.81	81.3	0.432	2.67	7.35	1
CHARLES RIVER	MID-BASIN	008	8/3/23 8:13 AM	B	4.2	0	0	0	23.53	0.32	3.66	43.2	0.652	3.17	7.48	
CHARLES RIVER	MID-BASIN	008	9/1/23 7:49 AM	S	0.1	0	0	0.54	22.482	0.29	7.54	87.2	0.596	3.92	7.37	0.7
CHARLES RIVER	MID-BASIN	008	9/1/23 7:49 AM	B	3.9	0	0	0.54	22.345	0.28	7.51	86.6	0.575	7.26	7.25	
CHARLES RIVER	MID-BASIN	008	9/12/23 8:01 AM	S	0.1	0.09	0.48	0.68	24.554	0.28	6.65	79.9	0.575	2.44	7.3	1.1
CHARLES RIVER	MID-BASIN	008	9/12/23 8:01 AM	B	3.7	0.09	0.48	0.68	24.012	0.31	4.35	51.8	0.635	4.16	7.02	
CHARLES RIVER	MID-BASIN	008	9/15/23 8:24 AM	S	0.1	0	0	0.57	23.067	0.3	6.05	70.7	0.626	3.64	7.42	1.2
CHARLES RIVER	MID-BASIN	008	9/15/23 8:24 AM	B	4	0	0	0.57	22.845	0.28	5.59	65.1	0.571	4.67	7.18	
CHARLES RIVER	MID-BASIN	008	9/17/23 8:29 AM	S	0.1	0	0.07	0.07	20.867	0.32	7.11	79.7	0.653	4.96	7.28	0.7
CHARLES RIVER	MID-BASIN	008	9/17/23 8:29 AM	B	3.5	0	0.07	0.07	20.659	0.35	6.86	76.6	0.716	4.24	7.18	
CHARLES RIVER	MID-BASIN	008	9/19/23 8:32 AM	S	0.1	0	1.52	1.52	19.79	0.25	7.44	81.6	0.517	4.2	7.27	0.8
CHARLES RIVER	MID-BASIN	008	9/19/23 8:32 AM	B	3.4	0	1.52	1.52	19.441	0.21	7.16	78	0.441		7.12	
CHARLES RIVER	MID-BASIN	008	9/23/23 8:21 AM	S	0.1	0.12	0.12	0.12	19.308	0.25	7.19	78.1	0.509	3.71	7.3	1.5
CHARLES RIVER	MID-BASIN	008	9/23/23 8:21 AM	B	6.1	0.12	0.12	0.12	19.35	0.49	3.03	33	0.991	1.58	7.33	
CHARLES RIVER	MID-BASIN	008	9/26/23 8:41 AM	S	0.1	0	0.07	0.38	17.314	0.25	8.42	87.9	0.514	4.12	7.41	0.9
CHARLES RIVER	MID-BASIN	008	9/26/23 8:41 AM	B	4.2	0	0.07	0.38	17.513	0.26	7.02	73.6	0.539	6.06	7.49	
CHARLES RIVER	MID-BASIN	008	10/2/23 8:23 AM	S	0.1	0	0	0	16.453	0.22	8.47	86.7	0.46	2.5	7.33	0.8
CHARLES RIVER	MID-BASIN	008	10/2/23 8:23 AM	B	3.9	0	0	0	15.928	0.22	7.72	78.2	0.453		7.08	
CHARLES RIVER	MID-BASIN	008	10/4/23 8:12 AM	S	0.1	0	0	0	17.075	0.22	8.75	90.8	0.456	3.46	7.37	1
CHARLES RIVER	MID-BASIN	008	10/4/23 8:12 AM	B	4.1	0	0	0	16.682	0.25	8.47	87.2	0.516	3.59	7.25	
CHARLES RIVER	MID-BASIN	008	10/11/23 8:09 AM	S	0.1	0	0	0	16.865	0.27	7.47	77.2	0.561	2.63	7.29	1
CHARLES RIVER	MID-BASIN	008	10/11/23 8:09 AM	B	3.7	0	0	0	16.683	0.26	7.46	76.8	0.529	4.06	7.23	
CHARLES RIVER	MID-BASIN	009	4/3/23 8:35 AM	S	0.1	0	0	0.35	9.226	0.35	11.13	97	0.704	4.66	7.26	1
CHARLES RIVER	MID-BASIN	009	4/3/23 8:35 AM	B	8.8	0	0	0.35	12.304	19.86	1.47	15.6	31.848	9.03	6.81	
CHARLES RIVER	MID-BASIN	009	4/10/23 8:42 AM	S	0.1	0	0	0	10.248	0.38	11.79	105.3	0.768	4.3	7.72	1
CHARLES RIVER	MID-BASIN	009	4/10/23 8:42 AM	B	6.8	0	0	0	11.069	16.03	1.51	15.2	26.222	0.07	7.26	
CHARLES RIVER	MID-BASIN	009	4/25/23 9:03 AM	S	0.1	0	0	0.51	14.401	0.48	10.38	101.9	0.965	2.9	7.63	1.5
CHARLES RIVER	MID-BASIN	009	4/25/23 9:03 AM	B	9.2	0	0	0.51	12.643	21	1.06	11.4	33.504	0.33	7.03	
CHARLES RIVER	MID-BASIN	009	5/3/23 8:37 AM	S	0.1	0.03	0.19	0.24	13.954	0.33	9.14	88.8	0.679	3.15	7.59	0.9

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
CHARLES RIVER	MID-BASIN	009	5/3/23 8:37 AM	B	8.9	0.03	0.19	0.24	12.658	19.7	1.04	11.1	31.616	0.15	7.08	
CHARLES RIVER	MID-BASIN	009	5/19/23 8:34 AM	S	0.1	0	0	0	17.365	0.4	8.03	83.9	0.814	4.63	7.36	0.8
CHARLES RIVER	MID-BASIN	009	5/19/23 8:34 AM	B	9.3	0	0	0	12.67	20.9	0.38	4.1	33.363	0.28	6.85	
CHARLES RIVER	MID-BASIN	009	5/24/23 8:10 AM	S	0.1	0.03	0.03	0.03	18.788	0.34	6.24	67.1	0.703	2.9	7.21	1.2
CHARLES RIVER	MID-BASIN	009	5/24/23 8:10 AM	B	8.6	0.03	0.03	0.03	12.501	21.28	0.16	1.7	33.912	2.03	7.22	
CHARLES RIVER	MID-BASIN	009	6/7/23 8:40 AM	S	0.1	0	0	0.07	18.867	0.43	6.35	68.5	0.864	3.03	7.27	1
CHARLES RIVER	MID-BASIN	009	6/7/23 8:40 AM	B	8.9	0	0	0.07	12.991	19.9	0.91	9.8	31.898	1.98	6.99	
CHARLES RIVER	MID-BASIN	009	6/15/23 8:17 AM	S	0.1	0	0.12	0.13	21.154	0.42	8.27	93.3	0.851	3.91	7.36	1
CHARLES RIVER	MID-BASIN	009	6/15/23 8:17 AM	B	8.7	0	0.12	0.13	13.115	19.07	1.03	11	30.671	1.55	6.95	
CHARLES RIVER	MID-BASIN	009	6/16/23 8:14 AM	S	0.1	0	0	0.12	22.346	0.41	9.39	108.4	0.83	4.11	7.59	0.8
CHARLES RIVER	MID-BASIN	009	6/16/23 8:14 AM	B	8.5	0	0	0.12	12.509	20.99	0.52	5.6	33.493	2.39	6.89	
CHARLES RIVER	MID-BASIN	009	6/29/23 8:00 AM	S	0.1	0	0.53	1.08	24.389	0.41	7.64	91.6	0.845	2.09	7.32	1.5
CHARLES RIVER	MID-BASIN	009	6/29/23 8:00 AM	B	8.6	0	0.53	1.08	13.001	20.35	0.55	5.9	32.542	0.18	6.9	
CHARLES RIVER	MID-BASIN	009	8/3/23 8:04 AM	S	0.1	0	0	0	23.92	0.23	6.15	73	0.472	2.36	7.27	1.1
CHARLES RIVER	MID-BASIN	009	8/3/23 8:04 AM	B	9.3	0	0	0	14.966	18.49	0.84	9.3	29.795	1.29	6.93	
CHARLES RIVER	MID-BASIN	009	9/1/23 7:39 AM	S	0.1	0	0	0.54	22.367	0.27	7.86	90.6	0.559	3.77	7.33	0.8
CHARLES RIVER	MID-BASIN	009	9/1/23 7:39 AM	B	9.2	0	0	0.54	15.217	18.52	1.45	16.2	29.828	7.4	6.86	
CHARLES RIVER	MID-BASIN	009	9/12/23 7:54 AM	S	0.1	0.09	0.48	0.68	24.539	0.27	6.62	79.5	0.566	2.33	7.3	1.3
CHARLES RIVER	MID-BASIN	009	9/12/23 7:54 AM	B	8.6	0.09	0.48	0.68	13.913	19.04	0.6	6.5	30.613	0.57	6.93	
CHARLES RIVER	MID-BASIN	009	9/15/23 8:19 AM	S	0.1	0	0	0.57	23.423	0.3	6.69	78.8	0.625	3.66	7.43	1
CHARLES RIVER	MID-BASIN	009	9/15/23 8:19 AM	B	8.4	0	0	0.57	13.91	19.53	0.19	2	31.328	0.36	7	
CHARLES RIVER	MID-BASIN	009	9/17/23 8:23 AM	S	0.1	0	0.07	0.07	20.79	0.32	7.57	84.7	0.664	3.82	7.15	1
CHARLES RIVER	MID-BASIN	009	9/17/23 8:23 AM	B	9	0	0.07	0.07	15.095	18.71	1.37	15.3	30.118	3.41	6.78	
CHARLES RIVER	MID-BASIN	009	9/19/23 8:23 AM	S	0.1	0	1.52	1.52	20.01	0.3	7.18	79.1	0.615	2.87	7.33	0.9
CHARLES RIVER	MID-BASIN	009	9/19/23 8:23 AM	B	9	0	1.52	1.52	15.364	17.61	1.81	20.1	28.486	4.93	6.72	
CHARLES RIVER	MID-BASIN	009	9/23/23 8:13 AM	S	0.1	0.12	0.12	0.12	19.603	0.26	7.06	77.1	0.542	2.72	7.23	1
CHARLES RIVER	MID-BASIN	009	9/23/23 8:13 AM	B	8.6	0.12	0.12	0.12	14.398	18.62	0.87	9.5	29.99	0.27	6.86	
CHARLES RIVER	MID-BASIN	009	9/26/23 8:35 AM	S	0.1	0	0.07	0.38	17.416	0.25	8.35	87.2	0.522	4.2	7.41	1
CHARLES RIVER	MID-BASIN	009	9/26/23 8:35 AM	B	9	0	0.07	0.38	14.201	19.48	1.2	13.2	31.258	2.32	6.75	
CHARLES RIVER	MID-BASIN	009	10/2/23 8:19 AM	S	0.1	0	0	0	16.494	0.22	8.55	87.6	0.459	2.14	7.18	0.7
CHARLES RIVER	MID-BASIN	009	10/2/23 8:19 AM	B	8.7	0	0	0	13.903	18.58	0.75	8.2	29.936	0.26	6.82	
CHARLES RIVER	MID-BASIN	009	10/4/23 8:05 AM	S	0.1	0	0	0	17.893	0.23	9.07	95.7	0.468	3.77	7.2	1
CHARLES RIVER	MID-BASIN	009	10/4/23 8:05 AM	B	8.7	0	0	0	14.146	20.06	1.98	21.8	32.095	4.93	6.78	
CHARLES RIVER	MID-BASIN	009	10/11/23 7:59 AM	S	0.1	0	0	0	16.958	0.31	7.97	82.6	0.626	2.45	7.27	1
CHARLES RIVER	MID-BASIN	009	10/11/23 7:59 AM	B	8.8	0	0	0	14.033	20.32	0.52	5.7	32.475	4.78	6.78	
CHARLES RIVER	MID-BASIN	010	4/3/23 8:28 AM	S	0.1	0	0	0.35	9.15	0.36	11.2	97.5	0.724	4.63	6.95	1.5
CHARLES RIVER	MID-BASIN	010	4/3/23 8:28 AM	B	8.8	0	0	0.35	8.52	19.95	1.72	16.8	32.169		6.85	
CHARLES RIVER	MID-BASIN	010	4/10/23 8:33 AM	S	0.1	0	0	0	10.397	0.39	11.8	105.8	0.783	8.82	7.27	1.2
CHARLES RIVER	MID-BASIN	010	4/10/23 8:33 AM	B	9.1	0	0	0	8.619	21.62	2.35	23.1	34.604	1.5	7.11	
CHARLES RIVER	MID-BASIN	010	4/25/23 8:56 AM	S	0.1	0	0	0.51	13.376	0.47	10.1	97	0.949	2.91	7.5	1.3
CHARLES RIVER	MID-BASIN	010	4/25/23 8:56 AM	B	8.8	0	0	0.51	8.969	20.37	1.6	15.8	32.75	0.45	7.05	
CHARLES RIVER	MID-BASIN	010	5/3/23 8:29 AM	S	0.1	0.03	0.19	0.24	13.682	0.32	8.52	82.2	0.656	4.05	7.9	1
CHARLES RIVER	MID-BASIN	010	5/3/23 8:29 AM	B	9.1	0.03	0.19	0.24	9.214	20.29	1.26	12.5	32.621	0.44	7.09	
CHARLES RIVER	MID-BASIN	010	5/19/23 8:28 AM	S	0.1	0	0	0	17.262	0.4	7.77	81.1	0.818	4.41	7.53	0.5
CHARLES RIVER	MID-BASIN	010	5/19/23 8:28 AM	B	9	0	0	0	9.35	22.02	1.25	12.6	35.147	8.45	6.88	
CHARLES RIVER	MID-BASIN	010	5/24/23 8:01 AM	S	0.1	0.03	0.03	0.03	18.561	0.36	5.82	62.4	0.733	3.59	7.7	1.3
CHARLES RIVER	MID-BASIN	010	5/24/23 8:01 AM	B	9.1	0.03	0.03	0.03	10.065	20.55	0.29	2.9	32.949	0.4	7.1	
CHARLES RIVER	MID-BASIN	010	6/7/23 8:34 AM	S	0.1	0	0	0.07	18.985	0.43	6.29	67.9	0.869	3.65	7.46	1
CHARLES RIVER	MID-BASIN	010	6/7/23 8:34 AM	B	8.9	0	0	0.07	11.399	20.16	1.09	11.4	32.321	3.87	7.1	
CHARLES RIVER	MID-BASIN	010	6/15/23 8:08 AM	S	0.1	0	0.12	0.13	21.124	0.45	8.06	90.8	0.904	3.93	7.18	1
CHARLES RIVER	MID-BASIN	010	6/15/23 8:08 AM	B	9	0	0.12	0.13	10.255	21.05	1.87	19.1	33.676	16.21	6.8	
CHARLES RIVER	MID-BASIN	010	6/16/23 8:07 AM	S	0.1	0	0	0.12	22.766	0.41	10.24	119.1	0.833	3.6	7.73	1
CHARLES RIVER	MID-BASIN	010	6/16/23 8:07 AM	B	8.6	0	0	0.12	10.775	20.67	0.75	7.7	33.1	5.75	6.9	
CHARLES RIVER	MID-BASIN	010	6/29/23 7:54 AM	S	0.1	0	0.53	1.08	24.365	0.44	7.26	87	0.902	2.31	7.61	1.4
CHARLES RIVER	MID-BASIN	010	6/29/23 7:54 AM	B	9	0	0.53	1.08	12.336	20.51	0.71	7.5	32.801	0.03	7.11	
CHARLES RIVER	MID-BASIN	010	8/3/23 7:56 AM	S	0.1	0	0	0	23.903	0.22	6.48	76.9	0.463	2.6	7.04	0.8
CHARLES RIVER	MID-BASIN	010	8/3/23 7:56 AM	B	9.4	0	0	0	16.503	18.97	1.23	14.1	30.477	4.2	7.11	
CHARLES RIVER	MID-BASIN	010	9/1/23 7:31 AM	S	0.1	0	0	0.54	22.278	0.3	7.74	89.1	0.625	4.19	7.07	0.7
CHARLES RIVER	MID-BASIN	010	9/1/23 7:31 AM	B	9.4	0	0	0.54	16.14	19.34	1.37	15.6	31.032	13.77	6.97	
CHARLES RIVER	MID-BASIN	010	9/12/23 7:45 AM	S	0.1	0.09	0.48	0.68	24.409	0.27	6.88	82.4	0.567	2.39	7.14	1.2
CHARLES RIVER	MID-BASIN	010	9/12/23 7:45 AM	B	8.7	0.09	0.48	0.68	16.321	18.62	0.25	2.9	29.966	0.04	6.98	
CHARLES RIVER	MID-BASIN	010	9/15/23 8:12 AM	S	0.1	0	0	0.57	23.544	0.32	6.65	78.5	0.661	3.76	7.15	1
CHARLES RIVER	MID-BASIN	010	9/15/23 8:12 AM	B	8.8	0	0	0.57	15.761	17.82	0.06	0.7	28.799	0.3	7.08	
CHARLES RIVER	MID-BASIN	010	9/17/23 8:17 AM	S	0.1	0	0.07	0.07	21.3	0.34	7.3	82.5	0.696	3.74	7.08	1
CHARLES RIVER	MID-BASIN	010	9/17/23 8:17 AM	B	8.9	0	0.07	0.07	16.014	18.47	0.49	5.6	29.755	0.66	7.02	
CHARLES RIVER	MID-BASIN	010	9/19/23 8:13 AM	S	0.1	0	1.52	1.52	20.454	0.33	6.98	77.6	0.683	2.83	7.08	1
CHARLES RIVER	MID-BASIN	010	9/19/23 8:13 AM	B	8.9	0	1.52	1.52	16.104	18.56	1.07	12.2	29.88	0.94	6.79	
CHARLES RIVER	MID-BASIN	010	9/23/23 8:07 AM	S	0.1	0.12	0.12	0.12	19.49	0.28	6.87	74.9	0.584	2.78	7.02	1.5
CHARLES RIVER	MID-BASIN	010	9/23/23 8:07 AM	B	9	0.12	0.12	0.12	16.156	18.84	0.79	9	30.298	7.62	6.92	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
CHARLES RIVER	MID-BASIN	010	9/26/23 8:30 AM	S	0.1	0	0.07	0.38	17.45	0.27	8.38	87.6	0.547	4.21	7.27	0.9
CHARLES RIVER	MID-BASIN	010	9/26/23 8:30 AM	B	9	0	0.07	0.38	15.943	18.87	1.04	11.8	30.337	10.86	7.05	
CHARLES RIVER	MID-BASIN	010	10/2/23 8:13 AM	S	0.1	0	0	0	16.451	0.23	8.44	86.4	0.478	2.76	6.98	0.6
CHARLES RIVER	MID-BASIN	010	10/2/23 8:13 AM	B	8.8	0	0	0	15.809	18.18	1.91	21.5	29.331	3.17	6.77	
CHARLES RIVER	MID-BASIN	010	10/4/23 7:59 AM	S	0.1	0	0	0	18.16	0.24	9.01	95.6	0.492	3.62	6.98	1.1
CHARLES RIVER	MID-BASIN	010	10/4/23 7:59 AM	B	9.1	0	0	0	16.307	18.7	0.81	9.2	30.085	2.23	6.84	
CHARLES RIVER	MID-BASIN	010	10/11/23 7:52 AM	S	0.1	0	0	0	16.946	0.3	7.99	82.7	0.616	2.26	7.08	1
CHARLES RIVER	MID-BASIN	010	10/11/23 7:52 AM	B	9.1	0	0	0	16.048	19.25	0.88	10	30.895	13.68	7.02	
CHARLES RIVER	MID-BASIN	210	4/3/23 8:26 AM	S	0.1	0	0	0.35	9.218	0.37	11.21	97.7	0.75	4.49	7.05	1.5
CHARLES RIVER	MID-BASIN	210	4/3/23 8:26 AM	B		0	0	0.35	9.094	0.37	11.16	97	0.755	4.64	6.93	
CHARLES RIVER	MID-BASIN	210	4/10/23 8:29 AM	S	0.1	0	0	0	10.519	0.4	11.9	107	0.814	4.15	7.37	1.3
CHARLES RIVER	MID-BASIN	210	4/10/23 8:29 AM	B		0	0	0	10.041	0.4	11.54	102.5	0.811	7.24	7.29	
CHARLES RIVER	MID-BASIN	210	4/25/23 8:52 AM	S	0.1	0	0	0.51	13.777	0.48	10.27	99.4	0.967	2.86	7.49	1.5
CHARLES RIVER	MID-BASIN	210	4/25/23 8:52 AM	B		0	0	0.51	13.118	0.51	9.82	93.7	1.029	2.86	7.46	
CHARLES RIVER	MID-BASIN	210	5/3/23 8:26 AM	S	0.1	0.03	0.19	0.24	13.926	0.32	8.91	86.4	0.647	3.41	7.37	1.2
CHARLES RIVER	MID-BASIN	210	5/3/23 8:26 AM	B		0.03	0.19	0.24	13.809	0.32	8.8	85.2	0.65	3.58	7.36	
CHARLES RIVER	MID-BASIN	210	5/19/23 8:25 AM	S	0.1	0	0	0	17.493	0.44	8.17	85.6	0.896	3.98	7.37	1
CHARLES RIVER	MID-BASIN	210	5/19/23 8:25 AM	B		0	0	0	17.263	0.43	8	83.5	0.868	5.41	7.19	
CHARLES RIVER	MID-BASIN	210	5/24/23 7:57 AM	S	0.1	0.03	0.03	0.03	18.435	0.36	6.38	68.2	0.728	3.11	7.07	1.4
CHARLES RIVER	MID-BASIN	210	5/24/23 7:57 AM	B		0.03	0.03	0.03	18.373	0.41	6.13	65.4	0.825	3.25	7.02	
CHARLES RIVER	MID-BASIN	210	6/7/23 8:29 AM	S	0.1	0	0	0.07	19.252	0.45	6.54	71	0.916	2.69	7.23	1
CHARLES RIVER	MID-BASIN	210	6/7/23 8:29 AM	B		0	0	0.07	18.755	0.73	5.73	61.8	1.452	6.07	7.07	
CHARLES RIVER	MID-BASIN	210	6/15/23 8:05 AM	S	0.1	0	0.12	0.13	21.18	0.45	8.05	90.8	0.913	3.22	7.23	1
CHARLES RIVER	MID-BASIN	210	6/15/23 8:05 AM	B		0	0.12	0.13	21.072	0.5	7.46	84.1	1.002	7.43	7.21	
CHARLES RIVER	MID-BASIN	210	6/16/23 8:02 AM	S	0.1	0	0	0.12	22.585	0.41	10.25	118.8	0.831	3.87	7.74	0.7
CHARLES RIVER	MID-BASIN	210	6/16/23 8:02 AM	B		0	0	0.12	22.053	0.41	8.92	102.3	0.839	7.16	7.52	
CHARLES RIVER	MID-BASIN	210	6/29/23 7:50 AM	S	0.1	0	0.53	1.08	24.433	0.47	7.56	90.7	0.952	1.94	7.19	1.3
CHARLES RIVER	MID-BASIN	210	6/29/23 7:50 AM	B		0	0.53	1.08	24.287	0.46	6.67	79.9	0.931	5.19	7.08	
CHARLES RIVER	MID-BASIN	210	8/3/23 7:53 AM	S	0.1	0	0	0	23.889	0.23	6.11	72.6	0.478	2.65	7	0.8
CHARLES RIVER	MID-BASIN	210	8/3/23 7:53 AM	B		0	0	0	23.893	0.24	5.63	66.9	0.508	2.82	6.98	
CHARLES RIVER	MID-BASIN	210	9/1/23 7:27 AM	S	0.1	0	0	0.54	22.396	0.3	7.68	88.6	0.611	4	7.14	0.7
CHARLES RIVER	MID-BASIN	210	9/1/23 7:27 AM	B		0	0	0.54	22.399	0.32	6.91	79.7	0.656	5.29	6.95	
CHARLES RIVER	MID-BASIN	210	9/12/23 7:42 AM	S	0.1	0.09	0.48	0.68	24.386	0.28	6.83	81.9	0.571	2.25	7.19	1.1
CHARLES RIVER	MID-BASIN	210	9/12/23 7:42 AM	B		0.09	0.48	0.68	24.312	0.28	6.14	73.4	0.578	4.87	7.1	
CHARLES RIVER	MID-BASIN	210	9/15/23 8:09 AM	S	0.1	0	0	0.57	23.7	0.33	6.94	82.1	0.67	4.88	7.21	0.9
CHARLES RIVER	MID-BASIN	210	9/15/23 8:09 AM	B		0	0	0.57	23.699	0.32	6.87	81.3	0.666	5.09	7.19	
CHARLES RIVER	MID-BASIN	210	9/17/23 8:14 AM	S	0.1	0	0.07	0.07	21.458	0.36	6.83	77.5	0.739	3.79	7.02	0.9
CHARLES RIVER	MID-BASIN	210	9/17/23 8:14 AM	B		0	0.07	0.07	20.993	0.36	7.15	80.3	0.729	6.13	7.01	
CHARLES RIVER	MID-BASIN	210	9/19/23 8:09 AM	S	0.1	0	1.52	1.52	20.568	0.33	6.54	72.8	0.678	2.58	7.04	1
CHARLES RIVER	MID-BASIN	210	9/19/23 8:09 AM	B		0	1.52	1.52	20.354	0.34	6.74	74.8	0.699	4.88	7.04	
CHARLES RIVER	MID-BASIN	210	9/23/23 8:03 AM	S	0.1	0.12	0.12	0.12	19.403	0.29	6.84	74.5	0.588	2.7	7.03	1.5
CHARLES RIVER	MID-BASIN	210	9/23/23 8:03 AM	B		0.12	0.12	0.12	19.362	0.26	6.82	74.1	0.543	14.47	7.02	
CHARLES RIVER	MID-BASIN	210	9/26/23 8:26 AM	S	0.1	0	0.07	0.38	17.501	0.27	8.3	86.9	0.553	4.11	7.3	1
CHARLES RIVER	MID-BASIN	210	9/26/23 8:26 AM	B		0	0.07	0.38	17.505	0.27	8.29	86.8	0.554	4.25	7.3	
CHARLES RIVER	MID-BASIN	210	10/2/23 8:10 AM	S	0.1	0	0	0	16.609	0.26	8.22	84.4	0.527	2.14	6.97	0.8
CHARLES RIVER	MID-BASIN	210	10/2/23 8:10 AM	B		0	0	0	16.381	0.25	8.11	82.9	0.506	2.74	6.92	
CHARLES RIVER	MID-BASIN	210	10/4/23 7:55 AM	S	0.1	0	0	0	18.059	0.24	9	95.3	0.496	3.26	7.01	0.9
CHARLES RIVER	MID-BASIN	210	10/4/23 7:55 AM	B		0	0	0	17.274	0.25	8.4	87.6	0.525	3.52	6.97	
CHARLES RIVER	MID-BASIN	210	10/11/23 7:48 AM	S	0.1	0	0	0	16.881	0.3	7.93	81.9	0.62	2.09	7.09	1
CHARLES RIVER	MID-BASIN	210	10/11/23 7:48 AM	B		0	0	0	16.873	0.31	7.84	81.1	0.625	3.75	7.04	
CHARLES RIVER	LOWER BASIN	166	1/10/23 10:22 AM	S	0.1	0	0	0	3.572	0.3	12.44	94	0.626		6.98	
CHARLES RIVER	LOWER BASIN	166	1/23/23 10:00 AM	S	0.1	0.87	1.11	1.11	3.19	0.63	12.61	94.6	1.276		7.15	
CHARLES RIVER	LOWER BASIN	166	1/23/23 10:00 AM	B		0.87	1.11	1.11	3.03	0.64	12.55	93.7	1.295		7.04	
CHARLES RIVER	LOWER BASIN	166	2/8/23 10:38 AM	S	0.1	0	0.04	0.04	1.321	0.32	13.37	95.1	0.673		7.4	
CHARLES RIVER	LOWER BASIN	166	2/8/23 10:38 AM	B		0	0.04	0.04	0.915	0.32	14.07	99	0.672	0.92	7.13	
CHARLES RIVER	LOWER BASIN	166	2/21/23 10:00 AM	S	0.1	0.15	0.15	0.15	5.305	0.35	12.79	101.1	0.711	0.99	7.4	
CHARLES RIVER	LOWER BASIN	166	2/21/23 10:00 AM	B		0.15	0.15	0.15	5.393	0.35	12.66	100.4	0.71	3.15	7.18	
CHARLES RIVER	LOWER BASIN	166	3/9/23 10:25 AM	S	0.1	0	0	0	4.788	1.02	13.59	106.5	2.003	2.93	7.85	
CHARLES RIVER	LOWER BASIN	166	3/20/23 8:07 AM	S	0.1	0	0	0	6.002	0.48	12.71	102.5	0.979	2.06	7.27	
CHARLES RIVER	LOWER BASIN	166	3/20/23 8:07 AM	B		0	0	0	6.031	0.48	12.31	99.3	0.98	13.73	7.12	
CHARLES RIVER	LOWER BASIN	166	4/7/23 8:55 AM	S	0.1	0	0.01	0.01	10.137	0.36	11.21	99.8	0.733		7.41	
CHARLES RIVER	LOWER BASIN	166	4/7/23 8:55 AM	B		0	0.01	0.01	10.125	0.36	11.15	99.3	0.733		7.19	
CHARLES RIVER	LOWER BASIN	166	4/18/23 9:05 AM	S	0.1	0	0.08	0.08	14.498	0.41	10.84	106.6	0.823		7.36	
CHARLES RIVER	LOWER BASIN	166	4/18/23 9:05 AM	B		0	0.08	0.08	14.453	0.41	10.73	105.4	0.822		7.34	
CHARLES RIVER	LOWER BASIN	166	5/2/23 9:42 AM	S	0.1	0.16	0.21	2.02	14.108	0.38	9.27	90.3	0.78	3.24	7.2	
CHARLES RIVER	LOWER BASIN	166	5/2/23 9:42 AM	B		0.16	0.21	2.02	14.086	0.38	9.26	90.3	0.78	3.44	7.22	
CHARLES RIVER	LOWER BASIN	166	5/17/23 9:30 AM	S	0.1	0	0	0	18.257	0.36	8.12	86.4	0.734	2.51	7.44	
CHARLES RIVER	LOWER BASIN	166	5/17/23 9:30 AM	B		0	0	0	18.176	0.36	8.14	86.5	0.734	4.79	7.2	
CHARLES RIVER	LOWER BASIN	166	5/31/23 9:32 AM	S	0.1	0	0	0	20.551	0.41	7.6	84.7	0.826		7.18	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
CHARLES RIVER	LOWER BASIN	166	5/31/23 9:32 AM	B		0	0	0	20.212	0.41	6.99	77.4	0.832		6.93	
CHARLES RIVER	LOWER BASIN	166	6/13/23 9:49 AM	S	0.1	0.01	0.35	0.35	19.968	0.45	6.23	68.6	0.91	1.47	7.34	
CHARLES RIVER	LOWER BASIN	166	6/13/23 9:49 AM	B		0.01	0.35	0.35	19.52	0.48	5.91	64.6	0.972	9.76	7.09	
CHARLES RIVER	LOWER BASIN	166	6/26/23 9:04 AM	S	0.1	0	0.02	0.07	24.408	0.4	8.52	102.2	0.814		7.3	
CHARLES RIVER	LOWER BASIN	166	6/26/23 9:04 AM	B		0	0.02	0.07	24.408	0.4	8.42	101.1	0.814		7.21	
CHARLES RIVER	LOWER BASIN	166	7/10/23 9:29 AM	S	0.1	0.71	0.71	0.71	26.079	0.35	6.91	85.5	0.729		6.84	
CHARLES RIVER	LOWER BASIN	166	7/10/23 9:29 AM	B		0.71	0.71	0.71	26.047	0.36	6.75	83.4	0.732		6.84	
CHARLES RIVER	LOWER BASIN	166	7/25/23 9:34 AM	S	0.1	0.88	0.88	0.88	26.851	0.28	10.52	131.9	0.578	2.15	7.98	
CHARLES RIVER	LOWER BASIN	166	7/25/23 9:34 AM	B		0.88	0.88	0.88	26.658	0.28	9.98	124.7	0.584	5.43	7.9	
CHARLES RIVER	LOWER BASIN	166	8/8/23 9:17 AM	S	0.1	1.33	1.33	1.33	24.269	0.28	7.05	84.3	0.574	1.97	7.11	
CHARLES RIVER	LOWER BASIN	166	8/8/23 9:17 AM	B		1.33	1.33	1.33	23.833	0.3	5.82	69.1	0.619	6.64	6.96	
CHARLES RIVER	LOWER BASIN	166	8/24/23 8:57 AM	S	0.1	0.01	0.01	0.01	22.97	0.27	7.49	87.4	0.554		7.18	
CHARLES RIVER	LOWER BASIN	166	8/24/23 8:57 AM	B		0.01	0.01	0.01	22.857	0.27	7.63	88.9	0.554		7.12	
CHARLES RIVER	LOWER BASIN	166	9/7/23 9:13 AM	S	0.1	0	0	0	26.758	0.27	10.5	131.3	0.556		8.14	
CHARLES RIVER	LOWER BASIN	166	9/7/23 9:13 AM	B		0	0	0	25.604	0.27	9.8	120.1	0.558		7.85	
CHARLES RIVER	LOWER BASIN	166	9/18/23 9:40 AM	S	0.1	1.52	1.52	1.59	20.199	0.14	8.86	98	0.301		7.36	
CHARLES RIVER	LOWER BASIN	166	9/18/23 9:40 AM	B		1.52	1.52	1.59	21.067	0.33	7.38	83	0.679		7.12	
CHARLES RIVER	LOWER BASIN	166	10/3/23 9:13 AM	S	0.1	0	0	0	16.883	0.23	8.64	89.3	0.484		7.33	
CHARLES RIVER	LOWER BASIN	166	10/3/23 9:13 AM	B		0	0	0	16.757	0.23	8.6	88.6	0.482		7.1	
CHARLES RIVER	LOWER BASIN	166	10/17/23 9:33 AM	S	0.1	0	0.06	0.06	15.35	0.3	8.83	88.4	0.61		7.27	
CHARLES RIVER	LOWER BASIN	166	10/17/23 9:33 AM	B		0	0.06	0.06	15.249	0.29	8.76	87.4	0.594		7.11	
CHARLES RIVER	LOWER BASIN	166	10/30/23 8:53 AM	S	0.1	0.43	0.62	0.62	14.632	0.32	8.77	86.4	0.644		7.37	
CHARLES RIVER	LOWER BASIN	166	10/30/23 8:53 AM	B		0.43	0.62	0.62	14.564	0.31	9.1	89.6	0.637		7.28	
CHARLES RIVER	LOWER BASIN	166	11/15/23 10:17 AM	S	0.1	0	0	0	8.013	0.34	12.58	106.5	0.686		7.44	
CHARLES RIVER	LOWER BASIN	166	11/15/23 10:17 AM	B		0	0	0	7.888	0.33	11.61	98	0.681		7.41	
CHARLES RIVER	LOWER BASIN	166	11/29/23 10:17 AM	S	0.1	0	0	0.4	4.605	0.31	12.7	98.6	0.64	1.35	7.36	
CHARLES RIVER	LOWER BASIN	166	11/29/23 10:17 AM	B		0	0	0.4	4.605	0.31	12.3	95.5	0.64	3.43	7.39	
CHARLES RIVER	LOWER BASIN	166	12/14/23 10:38 AM	S	0.1	0	0	0	5.757	0.21	11.98	95.8	0.442	2.13	7.57	
CHARLES RIVER	LOWER BASIN	166	12/14/23 10:38 AM	B		0	0	0	5.594	0.21	11.88	94.6	0.444	7.74	7.43	
CHARLES RIVER	LOWER BASIN	166	12/27/23 9:51 AM	S	0.1	0.02	0.02	0.02	5.055	0.14	12.76	100.1	0.284	10.22	7.66	
CHARLES RIVER	LOWER BASIN	166	12/27/23 9:51 AM	B		0.02	0.02	0.02	4.822	0.13	13.11	102.3	0.283	3.26	7.35	
CHARLES RIVER	LOWER BASIN	011	4/3/23 8:19 AM	S	0.1	0	0	0.35	9.186	0.45	11.23	97.9	0.906	4.26	7	1.5
CHARLES RIVER	LOWER BASIN	011	4/3/23 8:19 AM	B	6.5	0	0	0.35	8	11.47	9.53	86.7	19.351	8.46	6.78	
CHARLES RIVER	LOWER BASIN	011	4/10/23 8:21 AM	S	0.1	0	0	0	10.338	0.48	11.76	105.3	0.975	3.99	7.09	1.1
CHARLES RIVER	LOWER BASIN	011	4/10/23 8:21 AM	B	5.8	0	0	0	8.867	11.81	10.2	94.9	19.847	5.25	7.16	
CHARLES RIVER	LOWER BASIN	011	4/25/23 8:46 AM	S	0.1	0	0	0.51	13.627	0.6	9.89	95.5	1.189	2.19	7.48	2.3
CHARLES RIVER	LOWER BASIN	011	4/25/23 8:46 AM	B	6.4	0	0	0.51	11.407	17.46	8.25	84.2	28.34	8.37	7.14	
CHARLES RIVER	LOWER BASIN	011	5/3/23 8:16 AM	S	0.1	0.03	0.19	0.24	14.015	0.42	8.96	87.1	0.852	3.01	7.14	1
CHARLES RIVER	LOWER BASIN	011	5/3/23 8:16 AM	B	6.6	0.03	0.19	0.24	12.842	10.36	7.66	77.2	17.522	6.37	7.01	
CHARLES RIVER	LOWER BASIN	011	5/19/23 8:19 AM	S	0.1	0	0	0	17.58	0.5	8.35	87.6	1.002	3.44	7.36	1
CHARLES RIVER	LOWER BASIN	011	5/19/23 8:19 AM	B	6	0	0	0	15.133	15.16	6.07	66.2	24.831	4.46	7.03	
CHARLES RIVER	LOWER BASIN	011	5/24/23 7:47 AM	S	0.1	0.03	0.03	0.03	18.226	0.54	6.4	68.1	1.078	2.59	6.97	1.4
CHARLES RIVER	LOWER BASIN	011	5/24/23 7:47 AM	B	3.1	0.03	0.03	0.03								
CHARLES RIVER	LOWER BASIN	011	6/7/23 8:20 AM	S	0.1	0	0	0.07	18.883	0.54	6.28	67.8	1.089	2.44	7.06	1
CHARLES RIVER	LOWER BASIN	011	6/7/23 8:20 AM	B	6.3	0	0	0.07	16.66	14.49	4.43	49.7	23.822	8.58	7.06	
CHARLES RIVER	LOWER BASIN	011	6/15/23 7:56 AM	S	0.1	0	0.12	0.13	21.007	0.57	7.62	85.7	1.137	3.25	7.1	1.1
CHARLES RIVER	LOWER BASIN	011	6/15/23 7:56 AM	B	5.3	0	0.12	0.13	17.998	10.17	4.66	52.3	17.201	3.95	6.82	
CHARLES RIVER	LOWER BASIN	011	6/16/23 7:54 AM	S	0.1	0	0	0.12	22.498	0.46	9.16	106	0.936	3.31	7.27	1
CHARLES RIVER	LOWER BASIN	011	6/16/23 7:54 AM	B	5.1	0	0	0.12	19.217	10.09	6.29	72.3	17.087	2.87	7.03	
CHARLES RIVER	LOWER BASIN	011	6/29/23 7:42 AM	S	0.1	0	0.53	1.08	24.391	0.54	7.4	88.8	1.083	1.86	7.13	1.5
CHARLES RIVER	LOWER BASIN	011	6/29/23 7:42 AM	B	5.3	0	0.53	1.08	20.221	7.79	2.03	23.5	13.461	2.24	6.73	
CHARLES RIVER	LOWER BASIN	011	8/3/23 7:45 AM	S	0.1	0	0	0	23.917	0.36	6.05	71.8	0.731	2.53	6.92	1
CHARLES RIVER	LOWER BASIN	011	8/3/23 7:45 AM	B	4.8	0	0	0	23.851	0.91	5.5	65.5	1.801	2.66	6.85	
CHARLES RIVER	LOWER BASIN	011	9/1/23 7:20 AM	S	0.1	0	0	0.54	22.306	0.53	7.38	85.1	1.076	2.19	6.86	1
CHARLES RIVER	LOWER BASIN	011	9/1/23 7:20 AM	B	4.3	0	0	0.54	22.317	0.57	7.29	84.1	1.141	3.63	6.88	
CHARLES RIVER	LOWER BASIN	011	9/12/23 7:33 AM	S	0.1	0.09	0.48	0.68	24.244	0.3	6.53	78.1	0.626	2.17	7.04	1.5
CHARLES RIVER	LOWER BASIN	011	9/12/23 7:33 AM	B	5.4	0.09	0.48	0.68	23.74	1.42	4.77	56.8	2.737	2.83	6.79	
CHARLES RIVER	LOWER BASIN	011	9/15/23 8:01 AM	S	0.1	0	0	0.57	23.769	0.4	6.84	81.1	0.808	3.8	6.94	1
CHARLES RIVER	LOWER BASIN	011	9/15/23 8:01 AM	B	5.9	0	0	0.57	23.344	5.9	5.06	61.5	10.429	3.71	6.63	
CHARLES RIVER	LOWER BASIN	011	9/17/23 8:07 AM	S	0.1	0	0.07	0.07	21.66	0.51	6.97	79.4	1.024	3.42	6.81	1.2
CHARLES RIVER	LOWER BASIN	011	9/17/23 8:07 AM	B	4.8	0	0.07	0.07	21.514	0.52	6.85	77.8	1.042	7.55	6.87	
CHARLES RIVER	LOWER BASIN	011	9/19/23 8:01 AM	S	0.1	0	1.52	1.52	20.41	0.36	7.03	78.1	0.741	3.11	7.03	1
CHARLES RIVER	LOWER BASIN	011	9/19/23 8:01 AM	B	6	0	1.52	1.52	20.477	0.42	6.77	75.3	0.847	4.33	6.99	
CHARLES RIVER	LOWER BASIN	011	9/23/23 7:55 AM	S	0.1	0.12	0.12	0.12	19.351	0.39	6.74	73.3	0.802	3.15	6.85	1.5
CHARLES RIVER	LOWER BASIN	011	9/23/23 7:55 AM	B	6.1	0.12	0.12	0.12	19.337	6.06	5.96	67	10.662	4.02	6.85	
CHARLES RIVER	LOWER BASIN	011	9/26/23 8:19 AM	S	0.1	0	0.07	0.38	17.672	0.4	8.42	88.5	0.806	4.61	7.19	1.1
CHARLES RIVER	LOWER BASIN	011	9/26/23 8:19 AM	B	6.4	0	0.07	0.38	18.36	7.02	6.87	76.2	12.22	6.05	6.91	
CHARLES RIVER	LOWER BASIN	011	10/2/23 8:01 AM	S	0.1	0	0	0	16.332	0.31	8.33	85.1	0.638	2.09	6.86	0.7
CHARLES RIVER	LOWER BASIN	011	10/2/23 8:01 AM	B	3.1	0	0	0								

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
CHARLES RIVER	LOWER BASIN	011	10/4/23 7:47 AM	S	0.1	0	0	0	17.686	0.33	8.76	92.1	0.679	3.17	6.64	1
CHARLES RIVER	LOWER BASIN	011	10/4/23 7:47 AM	B	5.5	0	0	0	17.258	2.84	7.91	83.7	5.245	3.2	6.74	
CHARLES RIVER	LOWER BASIN	011	10/11/23 7:40 AM	S	0.1	0	0	0	16.96	0.4	8.09	83.8	0.817	2.21	6.97	1
CHARLES RIVER	LOWER BASIN	011	10/11/23 7:40 AM	B	5.7	0	0	0	17.323	3.42	7.3	77.7	6.236	2.13	6.76	
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	4/6/23 9:22 AM	S	0.1	0.01	0.01	0.01								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	4/11/23 9:06 AM	S	0.1	0	0	0								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	4/27/23 9:29 AM	S	0.1	0.04	0.04	0.04								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	5/4/23 9:10 AM	S	0.1	0.01	0.04	0.2								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	5/26/23 9:24 AM	S	0.1	0	0	0.03								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	6/2/23 8:54 AM	S	0.1	0.37	0.37	0.37								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	6/8/23 8:55 AM	S	0.1	0.01	0.01	0.01								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	7/18/23 8:42 AM	S	0.1	0	0	1.6								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	7/19/23 9:05 AM	S	0.1	0	0	0								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	7/26/23 9:12 AM	S	0.1	0	0.88	0.88								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	7/31/23 8:35 AM	S	0.1	0	0	3.07								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	8/1/23 9:30 AM	S	0.1	0	0	0								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	8/9/23 9:05 AM	S	0.1	0	1.33	1.33								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	8/17/23 8:15 AM	S	0.1	0	0	0.64								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	8/21/23 8:40 AM	S	0.1	0.28	0.28	0.28								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	8/23/23 9:00 AM	S	0.1	0	0	0.28								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	9/21/23 9:54 AM	S	0.1	0	0	0								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	10/16/23 9:13 AM	S	0.1	0.06	0.06	0.06								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	10/19/23 9:37 AM	S	0.1	0	0	0								
MYSTIC/ALEWIFE	ALEWIFE BROOK	174	10/26/23 9:30 AM	S	0.1	0	0	0								
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	4/6/23 9:27 AM	S	0.1	0.01	0.01	0.01	9.277	0.74	9.55	83.6	1.466		7.37	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	4/11/23 9:16 AM	S	0.1	0	0	0	12.452	0.77	10.52	99.1	1.525	24.6	7.39	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	4/27/23 9:38 AM	S	0.1	0.04	0.04	0.04	14.017	0.67	14.3	139.4	1.333		7.95	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	5/4/23 9:16 AM	S	0.1	0.01	0.04	0.2	12.133	0.54	10.05	93.9	1.088	5.29	7.11	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	5/26/23 9:29 AM	S	0.1	0	0	0.03	17.326	0.55	8.33	87.1	1.1		7.21	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	6/2/23 9:04 AM	S	0.1	0.37	0.37	0.37	22.052	0.61	2.98	34.2	1.231		7.1	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	6/8/23 9:03 AM	S	0.1	0.01	0.01	0.01	15.251	0.58	0.29	3	1.157		6.62	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	7/18/23 8:47 AM	S	0.1	0	0	1.6	25.049	0.41	4.09	49.7	0.847	8.36	7.16	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	7/19/23 9:13 AM	S	0.1	0	0	0	24.686	0.45	4.64	56	0.914		7.06	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	7/26/23 9:22 AM	S	0.1	0	0.88	0.88	23.869	0.41	4.32	51.3	0.829	24.35	7.05	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	7/31/23 8:45 AM	S	0.1	0	0	3.07	22.978	0.39	4.83	56.4	0.799		6.81	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	8/1/23 9:36 AM	S	0.1	0	0	0	22.855	0.42	6.17	71.8	0.856		7.24	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	8/9/23 9:11 AM	S	0.1	0	1.33	1.33	23.281	0.35	4.33	50.9	0.714		6.94	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	8/17/23 8:25 AM	S	0.1	0	0	0.64	21.328	0.45	3.62	41	0.904		7.08	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	8/21/23 8:46 AM	S	0.1	0.28	0.28	0.28	21.099	0.34	3.92	44.2	0.689		7.06	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	8/23/23 9:08 AM	S	0.1	0	0	0.28	20.548	0.46	5.76	64.2	0.931		7.15	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	9/21/23 9:59 AM	S	0.1	0	0	0								
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	10/16/23 9:26 AM	S	0.1	0.06	0.06	0.06	12.962	0.55	5.22	49.6	1.097		7.14	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	10/19/23 9:47 AM	S	0.1	0	0	0	14.637	0.55	5.13	50.7	1.099		6.91	
MYSTIC/ALEWIFE	ALEWIFE BROOK	074	10/26/23 9:36 AM	S	0.1	0	0	0	15.563	0.56	5.3	53.4	1.118		7.19	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	4/6/23 9:08 AM	S	0.1	0.01	0.01	0.01	9.463	0.71	2.08	18.3	1.412		6.8	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	4/11/23 8:56 AM	S	0.1	0	0	0	11.52	0.74	9.77	90.1	1.466	4.48	7.31	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	4/27/23 9:17 AM	S	0.1	0.04	0.04	0.04	13.232	0.65	7.16	68.6	1.286		6.92	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	5/4/23 8:56 AM	S	0.1	0.01	0.04	0.2	12.054	0.53	7.93	73.9	1.057	5.43	6.9	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	5/26/23 9:10 AM	S	0.1	0	0	0.03	15.337	0.56	3.44	34.5	1.122		6.9	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	6/2/23 8:45 AM	S	0.1	0.37	0.37	0.37	20.215	0.6	2.27	25.2	1.207	6.23	7	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	6/8/23 8:44 AM	S	0.1	0.01	0.01	0.01	15.181	0.58	2.54	25.3	1.158		6.81	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	7/18/23 8:29 AM	S	0.1	0	0	1.6	24.743	0.4	3.64	43.9	0.817	5.57	7.01	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	7/19/23 8:57 AM	S	0.1	0	0	0	24.14	0.44	2.39	28.5	0.9		6.76	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	7/26/23 9:02 AM	S	0.1	0	0.88	0.88	22.905	0.4	2.76	32.2	0.82	5.51	6.74	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	7/31/23 8:25 AM	S	0.1	0	0	3.07	22.303	0.37	3.36	38.7	0.76		6.63	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	8/1/23 9:16 AM	S	0.1	0	0	0	21.709	0.42	3.8	43.3	0.848		7.04	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	8/9/23 8:50 AM	S	0.1	0	1.33	1.33	23.002	0.35	2.65	31	0.714		6.99	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	8/17/23 8:07 AM	S	0.1	0	0	0.64	20.962	0.43	2.75	30.8	0.882		7	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	8/21/23 8:24 AM	S	0.1	0.28	0.28	0.28	20.893	0.46	3.07	34.5	0.934		7.01	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	8/23/23 8:50 AM	S	0.1	0	0	0.28	19.666	0.45	2.68	29.4	0.904		6.86	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	9/21/23 9:39 AM	S	0.1	0	0	0								
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	10/16/23 9:07 AM	S	0.1	0.06	0.06	0.06	12.579	0.55	2.15	20.3	1.108		6.84	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	10/19/23 9:25 AM	S	0.1	0	0	0	13.584	0.56	5.11	49.3	1.124		6.98	
MYSTIC/ALEWIFE	ALEWIFE BROOK	277	10/26/23 9:09 AM	S	0.1	0	0	0	14.699	0.55	3.35	33.1	1.095		7.06	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	4/6/23 9:10 AM	S	0.1	0.01	0.01	0.01	9.461	0.71	8.41	73.9	1.414		7.22	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	4/11/23 8:59 AM	S	0.1	0	0	0	11.477	0.74	9.03	83.2	1.469	2.31	7.04	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	4/27/23 9:20 AM	S	0.1	0.04	0.04	0.04	13.388	0.66	9.55	91.8	1.314		6.92	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	5/4/23 8:59 AM	S	0.1	0.01	0.04	0.2	12.05	0.53	7.77	72.5	1.057	5.63	6.86	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	5/26/23 9:12 AM	S	0.1	0	0	0.03	15.274	0.56	3.48	34.8	1.124		6.86	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	6/2/23 8:47 AM	S	0.1	0.37	0.37	0.37	20.096	0.62	1.68	18.6	1.236	1.9	6.94	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	6/8/23 8:47 AM	S	0.1	0.01	0.01	0.01	15.163	0.59	2.64	26.4	1.172		6.79	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	7/18/23 8:32 AM	S	0.1	0	0	1.6	24.759	0.4	3.67	44.3	0.817	6.17	7.04	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	7/19/23 8:59 AM	S	0.1	0	0	0	24.155	0.45	3.19	38.1	0.908		6.89	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	7/19/23 8:59 AM	B		0	0	0	24.167	0.45	2.81	33.6	0.909		6.86	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	7/26/23 9:06 AM	S	0.1	0	0.88	0.88	22.881	0.4	2.8	32.7	0.818	5.37	6.86	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	7/26/23 9:06 AM	B		0	0.88	0.88	22.884	0.4	2.54	29.6	0.819	12.93	6.75	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	7/31/23 8:28 AM	S	0.1	0	0	3.07	22.319	0.38	4.17	48	0.771		6.66	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	7/31/23 8:28 AM	B		0	0	3.07	22.337	0.38	3.22	37.1	0.77		6.58	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/1/23 9:19 AM	S	0.1	0	0	0	21.75	0.42	3.72	42.4	0.85		7.05	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/1/23 9:19 AM	B		0	0	0	21.771	0.42	3.47	39.6	0.85		7.03	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/9/23 8:52 AM	S	0.1	0	1.33	1.33	23.045	0.35	3.88	45.3	0.717		6.91	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/9/23 8:52 AM	B		0	1.33	1.33	23.047	0.35	3.7	43.3	0.716		6.84	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/17/23 8:04 AM	S	0.1	0	0	0.64	20.969	0.43	2.51	28.2	0.879		7.02	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/21/23 8:26 AM	S	0.1	0.28	0.28	0.28	20.902	0.46	3.22	36.1	0.936		6.94	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/21/23 8:26 AM	B		0.28	0.28	0.28	20.905	0.46	2.74	30.8	0.934		6.95	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	8/23/23 8:52 AM	S	0.1	0	0	0.28	19.634	0.45	3.26	35.7	0.904		6.88	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	9/21/23 9:44 AM	S	0.1	0	0	0								
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	10/16/23 9:04 AM	S	0.1	0.06	0.06	0.06	12.584	0.55	3.62	34.1	1.11		7.2	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	10/19/23 9:27 AM	S	0.1	0	0	0	13.692	0.56	4.94	47.8	1.115		7.07	
MYSTIC/ALEWIFE	ALEWIFE BROOK	172	10/26/23 9:12 AM	S	0.1	0	0	0	14.668	0.56	3.72	36.8	1.117		7.05	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	4/6/23 8:58 AM	S	0.1	0.01	0.01	0.01	9.38	0.71	7.61	66.8	1.405		7.19	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	4/11/23 8:49 AM	S	0.1	0	0	0	11.566	0.74	8.97	82.8	1.466	42.4	7.11	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	4/27/23 9:10 AM	S	0.1	0.04	0.04	0.04	13.459	0.67	8.53	82.2	1.323		6.75	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	5/4/23 8:49 AM	S	0.1	0.01	0.04	0.2	12.004	0.52	7.52	70	1.048	5.54	6.84	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	5/26/23 9:03 AM	S	0.1	0	0	0.03	15.273	0.57	1.1	11	1.147		6.83	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	6/2/23 8:36 AM	S	0.1	0.37	0.37	0.37	20.512	0.63	0.16	1.8	1.269		6.67	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	6/8/23 8:38 AM	S	0.1	0.01	0.01	0.01	15.573	0.54	0.9	9.1	1.084		6.64	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	7/18/23 8:22 AM	S	0.1	0	0	1.6	24.888	0.4	3.32	40.1	0.818	7.83	6.86	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	7/19/23 8:52 AM	S	0.1	0	0	0								
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	7/26/23 8:56 AM	S	0.1	0	0.88	0.88	22.768	0.4	2.16	25.1	0.814	7.81	6.64	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	7/31/23 8:19 AM	S	0.1	0	0	3.07	22.247	0.38	2.74	31.5	0.771		6.59	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	8/1/23 9:12 AM	S	0.1	0	0	0	21.657	0.42	3.18	36.2	0.848		6.98	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	8/9/23 8:42 AM	S	0.1	0	1.33	1.33	23.006	0.35	3.55	41.5	0.717		6.8	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	8/17/23 7:54 AM	S	0.1	0	0	0.64	20.961	0.43	2.52	28.3	0.879		6.96	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	8/21/23 8:19 AM	S	0.1	0.28	0.28	0.28	20.919	0.46	3.16	35.5	0.931		6.98	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	8/23/23 8:42 AM	S	0.1	0	0	0.28	19.704	0.45	2.7	29.6	0.902		6.9	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	9/21/23 9:29 AM	S	0.1	0	0	0	18.327	0.38	5.2	55.4	0.769		6.82	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	10/16/23 8:56 AM	S	0.1	0.06	0.06	0.06	12.608	0.55	3.72	35.1	1.108		7.19	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	10/19/23 9:14 AM	S	0.1	0	0	0	13.757	0.56	3.95	38.2	1.127		6.85	
MYSTIC/ALEWIFE	ALEWIFE BROOK	276	10/26/23 9:00 AM	S	0.1	0	0	0	14.757	0.55	3.82	37.8	1.107		7.04	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	4/6/23 8:17 AM	S	0.1	0.01	0.01	0.01	9.139	0.71	7.85	68.4	1.414		7.29	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	4/11/23 8:35 AM	S	0.1	0	0	0	11.898	0.73	7.9	73.4	1.442	2.32	7.16	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	4/27/23 9:51 AM	S	0.1	0.04	0.04	0.04	13.449	0.67	9.84	94.7	1.323		7.46	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	5/4/23 8:37 AM	S	0.1	0.01	0.04	0.2	11.988	0.53	8.08	75.2	1.061	4.61	7.01	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	5/26/23 8:52 AM	S	0.1	0	0	0.03	15.163	0.54	4.07	40.6	1.076		7.15	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	6/2/23 8:24 AM	S	0.1	0.37	0.37	0.37	22.542	0.61	1.87	21.7	1.233	2.11	7.22	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	6/8/23 8:24 AM	S	0.1	0.01	0.01	0.01	15.895	0.59	3.42	34.7	1.171		6.78	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	7/18/23 8:02 AM	S	0.1	0	0	1.6	25.01	0.4	3.44	41.7	0.813	3.7	6.96	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	7/19/23 8:38 AM	S	0.1	0	0	0	24.327	0.44	3.08	36.9	0.905		6.91	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	7/26/23 8:45 AM	S	0.1	0	0.88	0.88	22.485	0.38	2.67	30.9	0.776	2.44	6.47	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	7/31/23 8:07 AM	S	0.1	0	0	3.07	22.198	0.37	3.82	44	0.759		6.75	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	8/1/23 9:01 AM	S	0.1	0	0	0	21.724	0.42	3.5	40	0.856		7.05	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	8/9/23 8:27 AM	S	0.1	0	1.33	1.33	22.994	0.35	4.29	50.1	0.719		7.19	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	8/9/23 8:27 AM	B		0	1.33	1.33	23.003	0.35	3.79	44.3	0.719		7	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	8/17/23 7:42 AM	S	0.1	0	0	0.64	21.056	0.43	2.8	31.5	0.882		6.92	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	8/21/23 8:09 AM	S	0.1	0.28	0.28	0.28	21.584	0.46	3.37	38.3	0.927		6.92	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	8/23/23 8:31 AM	S	0.1	0	0	0.28	19.957	0.44	3.02	33.3	0.898		6.99	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	9/21/23 9:16 AM	S	0.1	0	0	0	18.311	0.37	5.8	61.8	0.758		6.93	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	10/16/23 8:44 AM	S	0.1	0.06	0.06	0.06	12.99	0.55	4.74	45.1	1.095		7.18	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	10/19/23 9:00 AM	S	0.1	0	0	0	14.119	0.56	5.09	49.7	1.119		6.82	
MYSTIC/ALEWIFE	ALEWIFE BROOK	070	10/26/23 8:45 AM	S	0.1	0	0	0	15.501	0.56	5.15	51.8	1.112		6.93	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	1/10/23 9:50 AM	S	0.1	0	0	0	3.1	0.43	11.64	86.9	0.879		7.05	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	1/23/23 9:35 AM	S	0.1	0.87	1.11	1.11	3.419	0.46	12.49	94.1	0.932		7.08	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	2/8/23 9:52 AM	S	0.1	0	0.04	0.04	2.508	0.54	13.33	98.1	1.097	3.39	7.26	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	2/21/23 9:30 AM	S	0.1	0.15	0.15	0.15	3.937	0.56	12.45	95.1	1.125	1.78	7.21	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	3/9/23 9:46 AM	S	0.1	0	0	0	5.84	0.9	12.97	104.4	1.775	3.23	7.41	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	3/20/23 7:37 AM	S	0.1	0	0	0	4.728	0.63	12.96	101.2	1.263	13.72	7.35	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/6/23 8:24 AM	S	0.1	0.01	0.01	0.01	8.668	0.59	11.76	101.3	1.185		7.42	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/6/23 8:24 AM	B		0.01	0.01	0.01	8.662	0.59	11.78	101.4	1.185		7.37	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/7/23 8:26 AM	S	0.1	0	0.01	0.01	9.331	0.59	12.05	105.5	1.181		7.38	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/11/23 8:20 AM	S	0.1	0	0	0	10.455	0.59	11.97	107.6	1.187	2.69	7.42	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/18/23 8:33 AM	S	0.1	0	0.08	0.08	14.183	0.57	10.96	107.1	1.149		7.53	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/27/23 8:45 AM	S	0.1	0.04	0.04	0.04	13.529	0.56	10.58	102	1.115		7.03	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	4/27/23 8:45 AM	B		0.04	0.04	0.04	13.345	0.56	10.62	101.9	1.115		7.13	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/2/23 8:58 AM	S	0.1	0.16	0.21	2.02	12.79	0.52	10.36	98.2	1.04	1.92	7.31	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/2/23 8:58 AM	B		0.16	0.21	2.02	12.782	0.52	10.38	98.3	1.04	2.3	7.28	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/4/23 8:21 AM	S	0.1	0.01	0.04	0.2	12.62	0.49	10.67	100.7	0.994	2.07	6.82	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/4/23 8:21 AM	B		0.01	0.04	0.2	12.619	0.49	10.67	100.7	0.994	3.34	6.85	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/17/23 8:50 AM	S	0.1	0	0	0	17.226	0.46	10.23	106.6	0.934	2.71	7.56	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/17/23 8:50 AM	B		0	0	0	17.345	0.47	10.05	105	0.941	5.03	7.54	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/26/23 10:03 AM	S	0.1	0	0	0.03	17.596	0.46	8.47	88.9	0.927	2.68	7.37	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/26/23 10:03 AM	B		0	0	0.03	17.619	0.46	8.51	89.4	0.924	5.09	7.4	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	5/31/23 9:00 AM	S	0.1	0	0	0	20.132	0.44	8.49	93.9	0.884		7.16	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/2/23 9:30 AM	S	0.1	0.37	0.37	0.37	22.511	0.48	8.55	99.1	0.972	2.19	7.81	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/2/23 9:30 AM	B		0.37	0.37	0.37	22.004	0.48	8.5	97.5	0.967	2.72	7.76	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/8/23 10:03 AM	S	0.1	0.01	0.01	0.01	17.76	0.46	6.27	66	0.934	2.1	7.63	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/8/23 10:03 AM	B		0.01	0.01	0.01	17.748	0.46	6.2	65.3	0.933	3.52	7.57	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/13/23 9:20 AM	S	0.1	0.01	0.35	0.35	20.001	0.43	7.04	77.6	0.864	1.2	7.32	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/13/23 9:20 AM	B		0.01	0.35	0.35	19.929	0.42	6.61	72.8	0.863	2.87	7.23	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/26/23 8:41 AM	S	0.1	0	0.02	0.07	24.357	0.4	5.69	68.2	0.818		7.12	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	6/26/23 8:41 AM	B		0	0.02	0.07	24.213	0.4	5.16	61.7	0.818		7.05	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/10/23 9:02 AM	S	0.1	0.71	0.71	0.71	23.307	0.18	7.14	83.8	0.377		7.05	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/18/23 10:02 AM	S	0.1	0	0	1.6	25.026	0.35	6.6	80.1	0.725	2.56	7.81	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/18/23 10:02 AM	B		0	0	1.6	25.022	0.36	6.58	79.8	0.736	12.3	7.73	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/19/23 9:47 AM	S	0.1	0	0	0	25.765	0.35	7.6	93.5	0.722	2.83	7.49	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/19/23 9:47 AM	B		0	0	0	25.752	0.35	7.58	93.2	0.715	4.36	7.45	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/25/23 8:59 AM	S	0.1	0.88	0.88	0.88	26.115	0.32	6.29	77.9	0.654	2.01	7.11	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/25/23 8:59 AM	B		0.88	0.88	0.88	25.979	0.32	6.07	75	0.655	6.63	7.09	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/26/23 9:33 AM	S	0.1	0	0.88	0.88	25.704	0.33	6.56	80.6	0.68	2.09	7.41	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/26/23 9:33 AM	B		0	0.88	0.88	25.537	0.34	6.01	73.6	0.697		7.22	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	7/31/23 9:32 AM	S	0.1	0	0	3.07	25.436	0.31	6.17	75.4	0.646	1.59	7.39	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/1/23 9:35 AM	S	0.1	0	0	0	25.166	0.32	6.82	83	0.654	1.48	7.37	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/8/23 8:51 AM	S	0.1	1.33	1.33	1.33	23.831	0.33	5.96	70.7	0.681	1.88	7.29	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/9/23 8:21 AM	S	0.1	0	1.33	1.33	23.712	0.31	7.36	87.1	0.645		7.44	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/17/23 9:37 AM	S	0.1	0	0	0.64	23.703	0.32	7.4	87.6	0.664	3.39	7.61	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/17/23 9:37 AM	B		0	0	0.64	23.699	0.32	7.39	87.5	0.662	5.79	7.55	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/21/23 9:42 AM	S	0.1	0.28	0.28	0.28	23.318	0.31	7.68	90.2	0.631	1.82	7.39	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/23/23 9:31 AM	S	0.1	0	0	0.28	23.037	0.32	7.87	92	0.661	3.84	7.62	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/24/23 8:29 AM	S	0.1	0.01	0.01	0.01	23.102	0.3	7.63	89.3	0.625		7.27	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	8/24/23 8:29 AM	B		0.01	0.01	0.01	23.016	0.3	7.34	85.7	0.625		7.23	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	9/7/23 8:29 AM	S	0.1	0	0	0	25.331	0.3	8.35	101.8	0.621		7.5	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	9/18/23 9:03 AM	S	0.1	1.52	1.52	1.59	21.222	0.3	8.09	91.3	0.626		7.37	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	9/21/23 10:27 AM	S	0.1	0	0	0	19.582	0.32	7.03	76.8	0.651	4.17	7.38	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	9/21/23 10:27 AM	B		0	0	0	19.572	0.32	6.95	75.9	0.651	4.25	7.36	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/3/23 8:43 AM	S	0.1	0	0	0	17.118	0.31	8.26	85.9	0.635		7.44	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/3/23 8:43 AM	B		0	0	0	17.154	0.31	7.81	81.2	0.635		7.31	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/16/23 8:29 AM	S	0.1	0.06	0.06	0.06	15.286	0.33	6.68	66.8	0.675		7.46	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/17/23 8:56 AM	S	0.1	0	0.06	0.06	15.313	0.33	7.03	70.3	0.678		6.85	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/17/23 8:56 AM	B		0	0.06	0.06	15.322	0.33	6.7	67.1	0.679		6.84	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/19/23 8:45 AM	S	0.1	0	0	0	15.502	0.34	6.97	70	0.683		6.46	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/26/23 9:39 AM	S	0.1	0	0	0	15.298	0.36	7.23	72.3	0.737	6.35	7.63	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/26/23 9:39 AM	B		0	0	0	15.287	0.36	7.19	71.9	0.725	10.49	7.59	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	10/30/23 8:26 AM	S	0.1	0.43	0.62	0.62	14.675	0.34	8.33	82.2	0.701		7.41	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	11/15/23 9:46 AM	S	0.1	0	0	0	8.714	0.38	8.84	76.1	0.778		7.29	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	11/29/23 9:48 AM	S	0.1	0	0	0.4	6.261	0.4	10.35	83.9	0.818	1.07	7.28	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	12/14/23 9:59 AM	S	0.1	0	0	0	5.361	0.37	11.38	90.2	0.763	1.92	7.38	
MYSTIC/ALEWIFE	UPPER MYSTIC	083	12/27/23 9:32 AM	S	0.1	0.02	0.02	0.02	6.072	0.22	12.07	97.3	0.449	9.31	7.3	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	4/6/23 8:36 AM	S	0.1	0.01	0.01	0.01	8.595	0.59	11.63	100	1.185		7.38	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	4/11/23 8:26 AM	S	0.1	0	0	0	10.99	0.59	11.96	108.8	1.18	2.42	7.23	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	4/27/23 8:53 AM	S	0.1	0.04	0.04	0.04	13.328	0.57	10.36	99.4	1.142		7.34	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	4/27/23 8:53 AM	B		0.04	0.04	0.04	13.293	0.59	9.74	93.4	1.184		7.24	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	5/4/23 8:28 AM	S	0.1	0.01	0.04	0.2	12.614	0.5	10.68	100.8	0.996	2.65	7.12	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	5/4/23 8:28 AM	B		0.01	0.04	0.2	12.618	0.49	10.63	100.3	0.995	4.21	7.12	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	5/26/23 9:57 AM	S	0.1	0	0	0.03	17.693	0.46	8.23	86.7	0.929	2.88	7.34	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	5/26/23 9:57 AM	B		0	0	0.03	17.677	0.46	8.24	86.7	0.928	3.69	7.36	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	6/2/23 9:26 AM	S	0.1	0.37	0.37	0.37	22.393	0.48	8.48	98	0.978	2.69	7.87	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	6/8/23 9:57 AM	S	0.1	0.01	0.01	0.01	17.702	0.47	6.32	66.6	0.941	2.08	7.81	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
MYSTIC/ALEWIFE	UPPER MYSTIC	057	6/8/23 9:57 AM	B		0.01	0.01	0.01	17.711	0.46	6.08	64	0.937	2.68	7.63	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	7/18/23 9:56 AM	S	0.1	0	0	1.6	25.006	0.35	6.43	78	0.725	3.04	7.73	1.2
MYSTIC/ALEWIFE	UPPER MYSTIC	057	7/18/23 9:56 AM	B		0	0	1.6	25.008	0.36	6.42	77.9	0.747	3.59	7.62	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	7/19/23 9:41 AM	S	0.1	0	0	0	25.727	0.35	7.31	89.8	0.73	3.12	7.4	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	7/19/23 9:41 AM	B		0	0	0	25.721	0.35	7.27	89.3	0.721	6.32	7.35	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	7/26/23 9:28 AM	S	0.1	0	0.88	0.88	25.631	0.33	6.22	76.2	0.687	2.03	7.39	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	7/26/23 9:28 AM	B		0	0.88	0.88	24.249	0.36	4.98	59.5	0.742	6.68	7.29	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	7/31/23 9:27 AM	S	0.1	0	0	3.07	25.393	0.31	6.12	74.7	0.644	1.61	7.38	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	8/1/23 9:29 AM	S	0.1	0	0	0	25.117	0.32	6.6	80.2	0.653	1.38	7.36	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	8/9/23 8:05 AM	S	0.1	0	1.33	1.33	23.483	0.31	6.65	78.4	0.647		7.19	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	8/17/23 9:32 AM	S	0.1	0	0	0.64	23.602	0.33	7	82.6	0.671	2.91	7.55	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	8/21/23 9:36 AM	S	0.1	0.28	0.28	0.28	23.32	0.31	7.13	83.8	0.631	1.83	7.36	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	8/23/23 9:26 AM	S	0.1	0	0	0.28	23.083	0.32	7.73	90.4	0.654	2.93	7.57	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	9/21/23 10:22 AM	S	0.1	0	0	0	19.531	0.32	6.93	75.7	0.653	4.05	7.4	1
MYSTIC/ALEWIFE	UPPER MYSTIC	057	9/21/23 10:22 AM	B		0	0	0	19.483	0.32	6.84	74.6	0.654	4.19	7.38	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	10/16/23 8:35 AM	S	0.1	0.06	0.06	0.06	15.067	0.33	6.53	65	0.675		7.3	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	10/19/23 8:51 AM	S	0.1	0	0	0	15.642	0.36	6.65	67	0.731		6.72	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	10/26/23 9:34 AM	S	0.1	0	0	0	15.235	0.39	6.72	67.2	0.788	1.97	7.67	
MYSTIC/ALEWIFE	UPPER MYSTIC	057	10/26/23 9:34 AM	B		0	0	0	15.345	0.46	5.79	58	0.933	2.29	7.51	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	1/10/23 9:43 AM	S	0.1	0	0	0	3.298	0.49	10.98	82.5	0.989		7.02	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	1/23/23 9:26 AM	S	0.1	0.87	1.11	1.11	3.399	0.45	12.02	90.5	0.927		7.16	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	1/23/23 9:26 AM	B		0.87	1.11	1.11	3.399	0.45	11.94	89.9	0.927		7.08	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	2/8/23 9:43 AM	S	0.1	0	0.04	0.04	2.492	0.55	12.63	92.9	1.112	0.97	7.44	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	2/8/23 9:43 AM	B		0	0.04	0.04	2.439	0.55	12.64	92.8	1.112	1.07	7.18	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	2/21/23 9:24 AM	S	0.1	0.15	0.15	0.15	4.157	0.55	11.88	91.3	1.119	0.96	7.28	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	2/21/23 9:24 AM	B		0.15	0.15	0.15	4.165	0.55	11.83	90.9	1.119	3.31	7.24	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	3/9/23 9:38 AM	S	0.1	0	0	0	3.947	0.65	13.14	100.5	1.31	0.93	7.48	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	3/20/23 7:31 AM	S	0.1	0	0	0	4.721	0.64	12.62	98.5	1.282	1.52	7.37	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	4/7/23 8:19 AM	S	0.1	0	0.01	0.01	8.879	0.6	11.65	100.9	1.192		7.34	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	4/18/23 8:23 AM	S	0.1	0	0.08	0.08	13.91	0.59	9.99	97.1	1.178		7.42	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	4/18/23 8:23 AM	B		0	0.08	0.08	13.825	0.59	9.85	95.5	1.181		7.31	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	5/2/23 8:49 AM	S	0.1	0.16	0.21	2.02	12.802	0.52	10.14	96.1	1.038	2.24	7.32	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	5/2/23 8:49 AM	B		0.16	0.21	2.02	12.796	0.52	10.14	96.1	1.038	4.49	7.26	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	5/17/23 8:42 AM	S	0.1	0	0	0	17.338	0.49	8.7	90.9	0.991	3.22	7.43	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	5/17/23 8:42 AM	B		0	0	0	17.265	0.49	8.66	90.4	0.992	4.77	7.38	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	5/31/23 8:52 AM	S	0.1	0	0	0	19.359	0.45	7.56	82.3	0.908		7.19	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	6/13/23 9:11 AM	S	0.1	0.01	0.35	0.35	20.057	0.42	6.22	68.7	0.858	1.45	7.38	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	6/13/23 9:11 AM	B		0.01	0.35	0.35	19.972	0.42	5.8	63.9	0.86	6.9	7.27	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	6/26/23 8:29 AM	S	0.1	0	0.02	0.07	24.374	0.42	5.2	62.4	0.858		7.08	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	6/26/23 8:29 AM	B		0	0.02	0.07	24.298	0.43	4.26	51.1	0.879		6.96	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	7/10/23 8:53 AM	S	0.1	0.71	0.71	0.71	25.54	0.37	4.93	60.4	0.77		7.06	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	7/10/23 8:53 AM	B		0.71	0.71	0.71	25.662	0.37	4.59	56.3	0.768		6.97	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	7/25/23 8:50 AM	S	0.1	0.88	0.88	0.88	25.397	0.35	4.75	58	0.718	1.27	7.14	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	7/25/23 8:50 AM	B		0.88	0.88	0.88	25.22	0.35	4.92	59.9	0.719	6.94	6.97	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	8/8/23 8:43 AM	S	0.1	1.33	1.33	1.33	23.399	0.37	4.98	58.6	0.756	1.38	7.25	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	8/8/23 8:43 AM	B		1.33	1.33	1.33	23.398	0.37	4.84	57	0.756	5.98	7.18	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	8/24/23 8:22 AM	S	0.1	0.01	0.01	0.01	22.63	0.33	5.85	67.8	0.674		7.22	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	8/24/23 8:22 AM	B		0.01	0.01	0.01	22.572	0.33	5.59	64.8	0.676		7.12	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	9/7/23 8:19 AM	S	0.1	0	0	0	25.325	0.32	6.72	81.9	0.667		7.31	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	9/7/23 8:19 AM	B		0	0	0	25.191	0.33	6.88	83.7	0.675		7.28	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	9/18/23 8:52 AM	S	0.1	1.52	1.52	1.59	21.066	0.33	7.17	80.7	0.668		7.45	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	9/18/23 8:52 AM	B		1.52	1.52	1.59	21.087	0.33	6.84	77	0.667		7.27	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/3/23 8:36 AM	S	0.1	0	0	0	16.744	0.34	6.72	69.3	0.701		7.47	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/3/23 8:36 AM	B		0	0	0	16.744	0.34	6.64	68.5	0.7		7.23	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/17/23 8:48 AM	S	0.1	0	0.06	0.06	14.786	0.38	6.79	67.1	0.769		6.94	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/17/23 8:48 AM	B		0	0.06	0.06	14.719	0.38	6.16	60.9	0.777		6.88	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/30/23 8:19 AM	S	0.1	0.43	0.62	0.62	14.565	0.36	7.45	73.3	0.723		7.27	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	10/30/23 8:19 AM	B		0.43	0.62	0.62	14.569	0.35	7.34	72.2	0.722		7.26	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	11/15/23 9:41 AM	S	0.1	0	0	0	8.354	0.41	7.88	67.2	0.823		7.4	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	11/15/23 9:41 AM	B		0	0	0	8.276	0.41	7.29	62.1	0.825		7.31	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	11/29/23 9:41 AM	S	0.1	0	0	0.4	5.74	0.41	9.96	79.7	0.827	0.25	7.15	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	11/29/23 9:41 AM	B		0	0	0.4	5.735	0.41	9.09	72.8	0.827	0.56	7.24	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	12/14/23 9:51 AM	S	0.1	0	0	0	5.176	0.37	11.74	92.5	0.763	0.68	7.37	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	12/14/23 9:51 AM	B		0	0	0	5.186	0.37	10.5	82.8	0.765	2.46	7.3	
MYSTIC/ALEWIFE	UPPER MYSTIC	066	12/27/23 9:23 AM	S	0.1	0.02	0.02	0.02	6.125	0.32	11.73	94.7	0.651	9.71	7.48	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	4/6/23 8:37 AM	S	0.1	0.01	0.01	0.01	8.643	0.6	11.72	100.9	1.206	6.91	7.5	1.1
MYSTIC/ALEWIFE	UPPER MYSTIC	056	4/6/23 8:37 AM	B		0.01	0.01	0.01	8.63	0.6	11.65	100.3	1.208	7.69	7.45	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	4/11/23 9:37 AM	S	0.1	0	0	0	11.209	0.63	12.07	110.4	1.262	4.91	8.03	1
MYSTIC/ALEWIFE	UPPER MYSTIC	056	4/11/23 9:37 AM	B		0	0	0	11.142	0.64	12.08	110.3	1.265	5.39	7.91	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
MYSTIC/ALEWIFE	UPPER MYSTIC	056	4/27/23 9:17 AM	S	0.1	0.04	0.04	0.04	14.108	0.6	10.74	104.9	1.193	4	8.14	1.1
MYSTIC/ALEWIFE	UPPER MYSTIC	056	4/27/23 9:17 AM	B		0.04	0.04	0.04	14.073	0.6	10.49	102.4	1.195	9.24	7.93	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	5/4/23 8:16 AM	S	0.1	0.01	0.04	0.2	12.188	0.51	9.64	90.1	1.015	4.45	7.21	1.2
MYSTIC/ALEWIFE	UPPER MYSTIC	056	5/4/23 8:16 AM	B		0.01	0.04	0.2	12.191	0.51	9.49	88.8	1.019	5.42	7.16	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	5/26/23 9:32 AM	S	0.1	0	0	0.03	17.763	0.49	7.67	80.9	0.982	5.59	7.28	1.5
MYSTIC/ALEWIFE	UPPER MYSTIC	056	5/26/23 9:32 AM	B		0	0	0.03	17.33	0.49	7.57	79.1	0.986	9.72	7.28	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	6/2/23 9:01 AM	S	0.1	0.37	0.37	0.37	22.643	0.52	5.51	64	1.053	2.76	7.61	1.5
MYSTIC/ALEWIFE	UPPER MYSTIC	056	6/2/23 9:01 AM	B		0.37	0.37	0.37	22.108	0.52	4.84	55.7	1.059	10.28	7.37	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	6/8/23 9:35 AM	S	0.1	0.01	0.01	0.01	17.659	0.5	5.75	60.5	1.005	2.9	7.79	1.7
MYSTIC/ALEWIFE	UPPER MYSTIC	056	6/8/23 9:35 AM	B		0.01	0.01	0.01	17.644	0.5	5.48	57.6	1.005	4.6	7.62	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/18/23 9:27 AM	S	0.1	0	0	1.6	24.67	0.37	5	60.3	0.755	3.31	7.78	1.2
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/18/23 9:27 AM	B		0	0	1.6	24.661	0.35	4.73	57	0.727	5	7.55	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/19/23 10:20 AM	S	0.1	0	0	0	25.455	0.36	5.33	65.2	0.75	2.86	7.12	1.4
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/19/23 10:20 AM	B		0	0	0	25.343	0.37	5.15	62.8	0.752	5.52	7.07	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/26/23 9:04 AM	S	0.1	0	0.88	0.88	25.138	0.33	3.28	39.9	0.685	2.59	7.19	1.5
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/26/23 9:04 AM	B		0	0.88	0.88	24.65	0.35	2.95	35.6	0.711	5.66	7.09	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/31/23 9:00 AM	S	0.1	0	0	3.07	24.301	0.32	4.84	57.9	0.659	2.46	7.26	1.2
MYSTIC/ALEWIFE	UPPER MYSTIC	056	7/31/23 9:00 AM	B		0	0	3.07	24.21	0.32	4.6	54.9	0.662	3.84	7.15	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/1/23 9:03 AM	S	0.1	0	0	0	24.558	0.34	4.61	55.5	0.694	2.05	7.1	1.4
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/1/23 9:03 AM	B		0	0	0	24.46	0.34	4.45	53.4	0.691	3.44	7.08	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/9/23 9:39 AM	S	0.1	0	1.33	1.33	23.703	0.32	6.84	81	0.653	4.78	7.41	1.1
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/9/23 9:39 AM	B		0	1.33	1.33	23.708	0.32	6.83	80.8	0.653	8.98	7.37	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/17/23 9:08 AM	S	0.1	0	0	0.64	22.809	0.36	5	58.2	0.737	4.01	7.47	2
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/17/23 9:08 AM	B		0	0	0.64	22.795	0.34	4.72	54.9	0.691	10.35	7.28	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/21/23 9:10 AM	S	0.1	0.28	0.28	0.28	23.207	0.33	5.25	61.5	0.672	2.64	7.19	1.2
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/21/23 9:10 AM	B		0.28	0.28	0.28	23.193	0.33	5.07	59.5	0.674	4.98	7.12	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/23/23 8:58 AM	S	0.1	0	0	0.28	22.978	0.33	5.69	66.5	0.68	6.11	7.55	1.2
MYSTIC/ALEWIFE	UPPER MYSTIC	056	8/23/23 8:58 AM	B		0	0	0.28	22.606	0.34	5.38	62.4	0.695	7.92	7.43	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	9/21/23 9:55 AM	S	0.1	0	0	0	19.111	0.33	6.64	71.9	0.672	4.33	7.39	1
MYSTIC/ALEWIFE	UPPER MYSTIC	056	9/21/23 9:55 AM	B		0	0	0	19.08	0.33	6.45	69.8	0.672	6.43	7.34	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	10/16/23 8:41 AM	S	0.1	0.06	0.06	0.06	14.484	0.41	6.49	63.8	0.826	1.06	7.46	1.5
MYSTIC/ALEWIFE	UPPER MYSTIC	056	10/16/23 8:41 AM	B		0.06	0.06	0.06	14.483	0.41	6.07	59.7	0.825	2.23	7.21	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	10/19/23 9:45 AM	S	0.1	0	0	0	15.389	0.37	6.91	69.2	0.75	3.54	7.5	2
MYSTIC/ALEWIFE	UPPER MYSTIC	056	10/19/23 9:45 AM	B		0	0	0	15.139	0.38	6.3	62.8	0.765	8	7.36	
MYSTIC/ALEWIFE	UPPER MYSTIC	056	10/26/23 9:09 AM	S	0.1	0	0	0	15.149	0.41	6.09	60.8	0.822	2.74	7.63	1.5
MYSTIC/ALEWIFE	UPPER MYSTIC	056	10/26/23 9:09 AM	B		0	0	0	14.937	0.4	5.83	57.9	0.813	3.46	7.52	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	1/10/23 9:08 AM	S	0.1	0	0	0	2.906	0.46	11.87	88.2	0.945		7.13	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	1/10/23 9:08 AM	B		0	0	0	3.952	0.74	10.07	77.1	1.474		6.89	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	1/23/23 8:55 AM	S	0.1	0.87	1.11	1.11	3.43	0.55	12.23	92.2	1.105		7.07	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	1/23/23 8:55 AM	B		0.87	1.11	1.11	4.71	6.11	6.47	52.4	10.875		6.64	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	2/8/23 9:03 AM	S	0.1	0	0.04	0.04	1.943	0.55	16.08	116.5	1.116	2.67	7.51	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	2/8/23 9:03 AM	B		0	0.04	0.04	2.329	0.57	12.2	89.4	1.164	14.21	7.15	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	2/21/23 8:41 AM	S	0.1	0.15	0.15	0.15	5.566	0.57	12.44	99.2	1.15	0.85	7.4	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	2/21/23 8:41 AM	B		0.15	0.15	0.15	5.433	0.59	12.21	97.1	1.179	11.7	7.43	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	3/9/23 9:06 AM	S	0.1	0	0	0	4.271	0.64	13.9	107.2	1.296	1.09	7.36	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	3/9/23 9:06 AM	B		0	0	0	4.222	0.65	13.72	105.8	1.3	2.62	7.4	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	3/20/23 6:52 AM	S	0.1	0	0	0	4.393	0.63	12.62	97.6	1.266	1.43	7.47	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	3/20/23 6:52 AM	B		0	0	0	4.441	0.63	10.67	82.7	1.272	3.75	7.35	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	4/7/23 7:43 AM	S	0.1	0	0.01	0.01	9.575	0.62	11.52	101.4	1.232		7.28	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	4/7/23 7:43 AM	B		0	0.01	0.01	9.459	0.62	11.11	97.5	1.238		7.19	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	4/18/23 7:59 AM	S	0.1	0	0.08	0.08	13.89	0.61	9.62	93.5	1.223		7.2	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	4/18/23 7:59 AM	B		0	0.08	0.08	13.851	0.62	9.21	89.5	1.245		7.11	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/2/23 8:12 AM	S	0.1	0.16	0.21	2.02	12.41	0.52	9.51	89.4	1.048	3.32	7.21	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/2/23 8:12 AM	B		0.16	0.21	2.02	12.37	0.52	9.28	87.1	1.05	4.76	7.08	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/17/23 8:02 AM	S	0.1	0	0	0	17.276	0.52	8.76	91.4	1.046		7.39	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/17/23 8:02 AM	B		0	0	0	17.21	0.52	8.73	91	1.051	4.88	7.29	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/31/23 8:13 AM	S	0.1	0	0	0	20.673	0.49	7.32	81.7	0.994		7.22	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	5/31/23 8:13 AM	B		0	0	0	20.066	0.5	6.14	67.8	1.017		6.98	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	6/13/23 8:31 AM	S	0.1	0.01	0.35	0.35	21.41	0.43	6.8	77.1	0.88	2.72	7.65	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	6/13/23 8:31 AM	B		0.01	0.35	0.35	21.198	0.46	5.54	62.5	0.929		7.32	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	6/26/23 7:54 AM	S	0.1	0	0.02	0.07	24.695	0.45	7.9	95.3	0.925		7.16	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	6/26/23 7:54 AM	B		0	0.02	0.07	23.854	0.49	4.65	55.3	0.985		6.97	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	7/10/23 8:06 AM	S	0.1	0.71	0.71	0.71	26.112	0.4	5.72	70.7	0.814		6.97	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	7/10/23 8:06 AM	B		0.71	0.71	0.71	26.143	0.42	4.63	57.3	0.854		6.82	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	7/25/23 8:11 AM	S	0.1	0.88	0.88	0.88	26.107	0.36	6.47	80.1	0.745	2.25	7.28	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	7/25/23 8:11 AM	B		0.88	0.88	0.88	25.447	0.37	4.43	54.2	0.755	6.82	6.9	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	8/8/23 8:12 AM	S	0.1	1.33	1.33	1.33	23.38	0.4	5.69	67	0.824	2.24	7.24	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	8/8/23 8:12 AM	B		1.33	1.33	1.33	23.38	0.4	5.05	59.5	0.823	3.72	7	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	8/24/23 7:43 AM	S	0.1	0.01	0.01	0.01	23.065	0.34	6.78	79.2	0.69		7.25	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	8/24/23 7:43 AM	B		0.01	0.01	0.01	22.876	0.34	6.03	70.2	0.706		7.14	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	9/7/23 7:54 AM	S	0.1	0	0	0	25.404	0.35	6.59	80.5	0.724		7.28	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	9/7/23 7:54 AM	B		0	0	0	25.371	0.35	6.32	77.2	0.726		7.13	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	9/18/23 8:11 AM	S	0.1	1.52	1.52	1.59	20.462	0.37	7.2	80.1	0.75		7.41	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	9/18/23 8:11 AM	B		1.52	1.52	1.59	20.372	0.4	6.6	73.2	0.813		7.21	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/3/23 7:59 AM	S	0.1	0	0	0	17.263	0.35	7.07	73.7	0.714		7.48	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/3/23 7:59 AM	B		0	0	0	17.099	0.37	6.21	64.5	0.749		7.15	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/17/23 8:04 AM	S	0.1	0	0.06	0.06	14.235	0.41	7.66	74.9	0.83		6.69	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/17/23 8:04 AM	B		0	0.06	0.06	14.919	0.76	7.99	79.5	1.497		6.83	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/30/23 7:44 AM	S	0.1	0.43	0.62	0.62	14.747	0.61	6.41	63.5	1.214		7.03	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	10/30/23 7:44 AM	B		0.43	0.62	0.62	16.495	3.8	2.65	27.7	6.895		6.72	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	11/15/23 9:05 AM	S	0.1	0	0	0	6.367	0.93	9.77	79.7	1.839		7.3	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	11/15/23 9:05 AM	B		0	0	0	10.076	4.92	6.05	55.4	8.79		6.93	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	11/29/23 8:55 AM	S	0.1	0	0	0.4	5.028	0.42	9.1	71.5	0.853	0.38	7.21	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	11/29/23 8:55 AM	B		0	0	0.4	5.104	0.42	8.66	68.2	0.854	2.7	7.15	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	12/14/23 9:11 AM	S	0.1	0	0	0	4.771	0.37	11.64	90.8	0.757	0.71	7.38	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	12/14/23 9:11 AM	B		0	0	0	4.811	0.37	10.26	80.2	0.764	4.17	7.28	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	12/27/23 8:45 AM	S	0.1	0.02	0.02	0.02	6.61	0.33	11.44	93.5	0.684	1.72	7.54	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	177	12/27/23 8:45 AM	B		0.02	0.02	0.02	6.543	0.33	10.46	85.3	0.686		7.1	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	4/6/23 8:52 AM	S	0.1	0.01	0.01	0.01	9.628	0.66	11.35	100.1	1.308	5.02	7.41	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	4/6/23 8:52 AM	B		0.01	0.01	0.01	9.576	0.68	10.77	94.9	1.351	19.19	7.34	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	4/11/23 9:19 AM	S	0.1	0	0	0	11.884	0.72	12.42	115.4	1.432	5.48	8.23	0.7
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	4/11/23 9:19 AM	B		0	0	0	11.665	0.81	12.22	113.1	1.59	7.15	8.12	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	4/27/23 8:59 AM	S	0.1	0.04	0.04	0.04	14.483	0.66	10.03	98.7	1.316	6.3	8.1	0.5
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	4/27/23 8:59 AM	B		0.04	0.04	0.04	13.847	3.93	8.25	81.8	7.11	9.84	7.61	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	5/4/23 8:33 AM	S	0.1	0.01	0.04	0.2	12.237	0.51	9.76	91.4	1.027	5	7.21	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	5/4/23 8:33 AM	B		0.01	0.04	0.2	11.964	0.51	9.5	88.4	1.027		7.2	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	5/26/23 9:21 AM	S	0.1	0	0	0.03	18.395	0.5	9.54	101.9	1.011	4.16	7.74	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	5/26/23 9:21 AM	B		0	0	0.03	18.148	0.52	9.4	99.9	1.054	5.27	7.8	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	6/2/23 8:51 AM	S	0.1	0.37	0.37	0.37	23.633	1.35	10.93	130	2.612	3.53	8.38	0.8
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	6/2/23 8:51 AM	B		0.37	0.37	0.37	18.413	20.16	7.51	90.2	32.217	4.08	7.66	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	6/8/23 9:16 AM	S	0.1	0.01	0.01	0.01	17.525	1.1	10	105.3	2.136	4.69	8.03	0.5
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	6/8/23 9:16 AM	B		0.01	0.01	0.01	17.688	1.76	9.59	101.7	3.337	7.97	7.88	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/18/23 9:08 AM	S	0.1	0	0	1.6	25.741	0.38	5.84	71.8	0.775	3.54	7.7	1.1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/18/23 9:08 AM	B		0	0	1.6	25.613	0.38	4.98	61.1	0.79	7.62	7.41	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/19/23 8:55 AM	S	0.1	0	0	0	25.784	0.45	6.28	77.2	0.923	4.17	7.34	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/19/23 8:55 AM	B		0	0	0	25.543	3.21	3.91	48.7	5.926	18.5	6.94	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/26/23 8:43 AM	S	0.1	0	0.88	0.88	25.361	0.4	6.67	81.4	0.821	5.99	7.58	0.6
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/26/23 8:43 AM	B		0	0.88	0.88	25.347	0.39	6.22	75.9	0.804	10.84	7.38	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/31/23 8:40 AM	S	0.1	0	0	3.07	24.57	0.29	5.47	65.8	0.595	3.22	7.34	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	7/31/23 8:40 AM	B		0	0	3.07	24.232	0.29	4.85	57.9	0.594	3.9	7.25	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/1/23 8:43 AM	S	0.1	0	0	0	24.53	0.32	7.09	85.2	0.654	3.98	7.43	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/1/23 8:43 AM	B		0	0	0	24.322	0.32	6.69	80.1	0.655	4.54	7.35	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/9/23 9:21 AM	S	0.1	0	1.33	1.33	23.529	0.29	5.84	68.8	0.598	7.83	7.31	0.7
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/9/23 9:21 AM	B		0	1.33	1.33	23.502	0.34	5.5	64.8	0.706	11.15	7.21	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/17/23 8:48 AM	S	0.1	0	0	0.64	22.926	0.44	6.04	70.5	0.89	4.48	7.41	1.2
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/17/23 8:48 AM	B		0	0	0.64	22.906	2.12	4.84	57	4.005	15.81	7.15	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/21/23 8:50 AM	S	0.1	0.28	0.28	0.28	22.988	0.37	7.55	88.2	0.761	3.37	7.53	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/21/23 8:50 AM	B		0.28	0.28	0.28	22.929	0.41	7.43	86.7	0.832	4.82	7.49	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/23/23 8:37 AM	S	0.1	0	0	0.28	23.184	0.5	7.93	93	1.021	4.89	7.7	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	8/23/23 8:37 AM	B		0	0	0.28	23.676	1.81	7	83.5	3.457	13.71	7.42	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	9/21/23 9:36 AM	S	0.1	0	0	0	19.617	0.33	6.75	73.9	0.683	3.24	7.45	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	9/21/23 9:36 AM	B		0	0	0	19.453	0.34	6.42	70	0.693	7.98	7.4	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	10/16/23 8:23 AM	S	0.1	0.06	0.06	0.06	14.238	0.93	9.82	96.3	1.829	1.65	7.57	1.1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	10/16/23 8:23 AM	B		0.06	0.06	0.06	17.621	7.84	2.14	23.5	13.531	9.93	6.79	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	10/19/23 9:26 AM	S	0.1	0	0	0	14.699	0.88	9.59	95	1.734	4.29	7.83	2.6
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	10/19/23 9:26 AM	B		0	0	0	14.982	4.52	7.02	71.5	8.1	7.1	7.38	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	10/26/23 8:50 AM	S	0.1	0	0	0	14.763	0.94	9.04	89.7	1.848	3.03	7.77	1.1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	067	10/26/23 8:50 AM	B		0	0	0	14.728	19.48	6.62	73.6	31.235	4.1	7.46	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	4/6/23 9:11 AM	S	0.1	0.01	0.01	0.01	9.746	0.76	11.23	99.3	1.506	5.86	7.49	0.9
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	4/6/23 9:11 AM	B		0.01	0.01	0.01	9.687	0.93	10.97	97	1.824	6.91	7.46	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	4/11/23 9:00 AM	S	0.1	0	0	0	11.832	0.87	12.2	113.3	1.71	7.81	8.38	0.5
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	4/11/23 9:00 AM	B		0	0	0	11.509	1.03	11.98	110.6	2.001	7.73	8.24	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	4/27/23 8:41 AM	S	0.1	0.04	0.04	0.04	14.109	0.83	10.75	105.1	1.63	6.28	8.28	0.5
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	4/27/23 8:41 AM	B		0.04	0.04	0.04	14.066	1.31	10.96	107.4	2.522	7.14	8.3	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	5/4/23 8:52 AM	S	0.1	0.01	0.04	0.2	12.28	0.55	9.43	88.3	1.106	8.03	7.21	0.7
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	5/4/23 8:52 AM	B		0.01	0.04	0.2	12.281	0.55	9.35	87.6	1.107	25.14	7.2	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	5/26/23 9:06 AM	S	0.1	0	0	0.03	18.483	0.63	9.85	105.4	1.259	4.94	8.38	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	5/26/23 9:06 AM	B		0	0	0.03	18.437	0.83	9.29	99.4	1.636	7.13	8.12	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	6/2/23 8:37 AM	S	0.1	0.37	0.37	0.37	23.361	1.48	10.94	129.5	2.85	3.69	8.62	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	6/2/23 8:37 AM	B		0.37	0.37	0.37	20.458	9.76	9.12	107.1	16.59	5.35	8.03	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	6/8/23 8:57 AM	S	0.1	0.01	0.01	0.01	17.336	1.47	11.41	120	2.815	5.18	8.62	0.5
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	6/8/23 8:57 AM	B		0.01	0.01	0.01	17.812	1.87	10.62	113	3.531	4.62	8.27	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/18/23 8:46 AM	S	0.1	0	0	1.6	25.995	0.55	6.44	79.6	1.118	4.65	7.86	0.9
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/18/23 8:46 AM	B		0	0	1.6	25.732	0.74	5.38	66.3	1.477	14.4	7.52	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/19/23 8:38 AM	S	0.1	0	0	0	26.207	0.59	7.42	92.1	1.186	5.99	7.93	0.8
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/19/23 8:38 AM	B		0	0	0	26.3	0.61	7.29	90.7	1.238	5.73	7.75	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/26/23 8:28 AM	S	0.1	0	0.88	0.88	25.718	0.53	9.75	119.9	1.084	5.33	8.65	0.6
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/26/23 8:28 AM	B		0	0.88	0.88	25.56	0.61	9.11	111.8	1.232	8.49	8.45	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/31/23 8:23 AM	S	0.1	0	0	3.07	24.522	0.36	5.93	71.3	0.749	4.46	7.64	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	7/31/23 8:23 AM	B		0	0	3.07	24.183	0.37	6.54	78.1	0.761	7.35	7.57	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/1/23 8:25 AM	S	0.1	0	0	0	24.545	0.39	9.1	109.4	0.79	3.51	8.01	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/1/23 8:25 AM	B		0	0	0	24.371	0.39	7.79	93.4	0.799	4.74	7.71	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/9/23 9:00 AM	S	0.1	0	1.33	1.33	23.738	0.59	6.68	79.3	1.196	7.47	7.73	0.8
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/9/23 9:00 AM	B		0	1.33	1.33	23.415	2.63	5.63	67.1	4.896	7.85	7.31	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/17/23 8:29 AM	S	0.1	0	0	0.64	22.706	0.77	6.98	81.3	1.528	4.6	7.88	1.1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/17/23 8:29 AM	B		0	0	0.64	22.988	1.47	6.25	73.4	2.83	14.03	7.57	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/21/23 8:31 AM	S	0.1	0.28	0.28	0.28	22.69	0.58	8.03	93.4	1.172	3.69	7.77	0.8
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/21/23 8:31 AM	B		0.28	0.28	0.28	22.705	0.66	7.9	92	1.317	4.41	7.69	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/23/23 8:22 AM	S	0.1	0	0	0.28	22.894	0.71	9.01	105.2	1.42	5.43	8.01	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	8/23/23 8:22 AM	B		0	0	0.28	22.984	0.9	9.28	108.7	1.768	6.18	8	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	9/21/23 9:16 AM	S	0.1	0	0	0	20.072	0.42	8.09	89.4	0.858	4.57	7.79	0.8
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	9/21/23 9:16 AM	B		0	0	0	19.378	0.34	6.97	75.8	0.687	4.7	7.67	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	10/16/23 8:04 AM	S	0.1	0.06	0.06	0.06	14.273	1.17	10.06	98.9	2.258	2.15	7.37	1
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	10/16/23 8:04 AM	B		0.06	0.06	0.06	14.341	1.19	10.03	98.8	2.294	4.18	7.5	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	10/19/23 9:06 AM	S	0.1	0	0	0	14.35	0.91	10.2	100.3	1.778	4.06	8.21	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	10/19/23 9:06 AM	B		0	0	0	14.411	1.09	9.74	96	2.124	6.48	8.04	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	10/26/23 8:30 AM	S	0.1	0	0	0	14.702	0.82	9.38	92.9	1.617	2.95	8.01	1.3
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	059	10/26/23 8:30 AM	B		0	0	0	14.71	8.23	8.38	86.9	14.152	4.36	7.65	
MYSTIC/ALEWIFE	MALDEN RIVER	176	4/6/23 9:04 AM	S	0.1	0.01	0.01	0.01	10.327	0.91	10.86	97.5	1.785	6.33	7.32	0.9
MYSTIC/ALEWIFE	MALDEN RIVER	176	4/6/23 9:04 AM	B		0.01	0.01	0.01	10.214	1.03	9.87	88.4	2.018	4.77	7.31	
MYSTIC/ALEWIFE	MALDEN RIVER	176	4/11/23 9:07 AM	S	0.1	0	0	0	12.323	1.08	11.96	112.5	2.095	8.49	8.18	0.6
MYSTIC/ALEWIFE	MALDEN RIVER	176	4/11/23 9:07 AM	B		0	0	0	11.712	1.42	11.39	105.9	2.73	11.58	7.95	
MYSTIC/ALEWIFE	MALDEN RIVER	176	4/27/23 8:47 AM	S	0.1	0.04	0.04	0.04	13.805	1.05	11.06	107.5	2.046	11	8.25	0.2
MYSTIC/ALEWIFE	MALDEN RIVER	176	4/27/23 8:47 AM	B		0.04	0.04	0.04	12.977	6.52	7.25	71.6	11.403	15.97	7.55	
MYSTIC/ALEWIFE	MALDEN RIVER	176	5/4/23 8:45 AM	S	0.1	0.01	0.04	0.2	12.234	0.56	8.4	78.6	1.124	7.92	7.18	0.6
MYSTIC/ALEWIFE	MALDEN RIVER	176	5/4/23 8:45 AM	B		0.01	0.04	0.2	12.232	0.59	7.74	72.5	1.182	8.4	7.03	
MYSTIC/ALEWIFE	MALDEN RIVER	176	5/26/23 9:11 AM	S	0.1	0	0	0.03	18.604	0.68	6.81	73.1	1.358	4.26	7.74	0.5
MYSTIC/ALEWIFE	MALDEN RIVER	176	5/26/23 9:11 AM	B		0	0	0.03	18.074	0.73	6.01	63.9	1.441	8.06	7.59	
MYSTIC/ALEWIFE	MALDEN RIVER	176	6/2/23 8:41 AM	S	0.1	0.37	0.37	0.37	24.042	1.21	10.08	120.7	2.363	4.22	8.09	0.6
MYSTIC/ALEWIFE	MALDEN RIVER	176	6/2/23 8:41 AM	B		0.37	0.37	0.37	22.162	2.52	9.13	106.2	4.711	6.31	7.95	
MYSTIC/ALEWIFE	MALDEN RIVER	176	6/8/23 9:04 AM	S	0.1	0.01	0.01	0.01	17.474	1.69	10.36	109.3	3.22	5.32	8.08	0.6
MYSTIC/ALEWIFE	MALDEN RIVER	176	6/8/23 9:04 AM	B		0.01	0.01	0.01	17.838	2.29	7.93	84.6	4.287	7.02	7.69	
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/18/23 8:56 AM	S	0.1	0	0	1.6	25.665	0.45	5.15	63.2	0.923	4.49	7.74	0.8
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/18/23 8:56 AM	B		0	0	1.6	24.018	2.53	2.99	36.1	4.73	8.88	7.11	
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/19/23 8:46 AM	S	0.1	0	0	0	26.375	0.48	6.57	81.8	0.987	4.18	7.42	1
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/19/23 8:46 AM	B		0	0	0	24.454	5.38	3.22	39.7	9.585	5.91	7.04	
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/26/23 8:33 AM	S	0.1	0	0.88	0.88	25.493	0.54	7.27	89	1.099	4.67	7.84	0.5
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/26/23 8:33 AM	B		0	0.88	0.88	25.186	0.52	6.27	76.4	1.058	6.37	7.61	
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/31/23 8:27 AM	S	0.1	0	0	3.07	23.352	0.21	6.61	77.7	0.432	5.52	7.3	0.8
MYSTIC/ALEWIFE	MALDEN RIVER	176	7/31/23 8:27 AM	B		0	0	3.07	23.304	0.23	6.23	73.1	0.484	2.61	7.2	
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/1/23 8:31 AM	S	0.1	0	0	0	24.289	0.28	8.25	98.7	0.583	3.43	7.38	0.8
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/1/23 8:31 AM	B		0	0	0	23.862	0.3	7.31	86.8	0.625	4.26	7.64	
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/9/23 9:08 AM	S	0.1	0	1.33	1.33	22.966	0.29	5.27	61.5	0.598	10.98	7.27	0.6
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/9/23 9:08 AM	B		0	1.33	1.33	22.352	4.56	3.68	43.5	8.193	10.51	7.04	
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/17/23 8:36 AM	S	0.1	0	0	0.64	22.341	0.56	3.89	45	1.137	3.61	7.46	1.3
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/17/23 8:36 AM	B		0	0	0.64	22.204	7.68	3.17	38	13.3	18.93	6.98	
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/21/23 8:37 AM	S	0.1	0.28	0.28	0.28	22.83	0.54	6.44	75	1.097	2.89	7.37	1
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/21/23 8:37 AM	B		0.28	0.28	0.28	22.74	0.54	5.89	68.5	1.098	10.65	7.36	
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/23/23 8:27 AM	S	0.1	0	0	0.28	22.631	0.75	7.27	84.5	1.499	6.71	7.69	1
MYSTIC/ALEWIFE	MALDEN RIVER	176	8/23/23 8:27 AM	B		0	0	0.28	22.651	0.88	6.84	79.7	1.743	13.15	7.58	
MYSTIC/ALEWIFE	MALDEN RIVER	176	9/21/23 9:23 AM	S	0.1	0	0	0	19.3	0.36	8.49	92.3	0.741	5.79	7.46	0.5
MYSTIC/ALEWIFE	MALDEN RIVER	176	9/21/23 9:23 AM	B		0	0	0	19.131	0.35	8.52	92.2	0.706	13.65	7.47	
MYSTIC/ALEWIFE	MALDEN RIVER	176	10/16/23 8:12 AM	S	0.1	0.06	0.06	0.06	14.231	1.21	9.23	90.7	2.341	2.65	7.45	1
MYSTIC/ALEWIFE	MALDEN RIVER	176	10/16/23 8:12 AM	B		0.06	0.06	0.06	14.286	1.18	8.41	82.7	2.293	4.35	7.37	
MYSTIC/ALEWIFE	MALDEN RIVER	176	10/19/23 9:13 AM	S	0.1	0	0	0	14.307	1.06	10.06	98.9	2.067	4.04	7.92	
MYSTIC/ALEWIFE	MALDEN RIVER	176	10/19/23 9:13 AM	B		0	0	0	14.743	2.46	8.39	84	4.584	8.35	7.51	
MYSTIC/ALEWIFE	MALDEN RIVER	176	10/26/23 8:38 AM	S	0.1	0	0	0	14.773	0.88	8.65	85.8	1.732	5.48	7.77	1

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
MYSTIC/ALEWIFE	MALDEN RIVER	176	10/26/23 8:38 AM	B		0	0	0	14.704	10.28	5.17	54.3	17.371	5.93	7.35	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	1/10/23 8:49 AM	S	0.1	0	0	0	3.735	0.77	10.49	79.9	1.537		6.84	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	1/23/23 8:41 AM	S	0.1	0.87	1.11	1.11	3.249	1.4	11.88	89.7	2.723		6.83	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	2/21/23 8:27 AM	S	0.1	0.15	0.15	0.15	6.257	0.85	12.14	98.7	1.678	1.91	7.39	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	3/9/23 8:49 AM	S	0.1	0	0	0	4.632	1.1	13.54	105.8	2.155	2.78	7.37	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	3/20/23 6:35 AM	S	0.1	0	0	0	6.4	0.81	12.48	101.8	1.602	2.51	7.7	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	4/7/23 7:28 AM	S	0.1	0	0.01	0.01	10.579	0.84	11.2	101.1	1.645		7.16	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	4/18/23 7:39 AM	S	0.1	0	0.08	0.08	15.86	1.13	10.3	104.8	2.192		7.9	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	5/2/23 7:59 AM	S	0.1	0.16	0.21	2.02	13.74	0.57	8.87	85.8	1.147	9.79	7.24	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	5/17/23 7:47 AM	S	0.1	0	0	0	18.276	1.14	9.35	100	2.216	6.86	7.65	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	5/31/23 7:56 AM	S	0.1	0	0	0	20.468	1.05	10.72	119.7	2.048		7.52	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	6/13/23 8:11 AM	S	0.1	0.01	0.35	0.35	20.927	1.18	8.09	91.2	2.296	5.59	7.3	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	6/26/23 7:41 AM	S	0.1	0	0.02	0.07	24.574	0.77	7.91	95.4	1.525		7.51	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	7/10/23 7:51 AM	S	0.1	0.71	0.71	0.71	26.008	0.58	8.06	99.6	1.17		7.05	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	7/25/23 7:55 AM	S	0.1	0.88	0.88	0.88	25.98	0.57	9.42	116.4	1.156	7.2	6.97	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	8/8/23 8:00 AM	S	0.1	1.33	1.33	1.33	23.423	0.91	8.67	102.4	1.795	6.33	7.8	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	8/24/23 7:27 AM	S	0.1	0.01	0.01	0.01	22.667	0.73	8.72	101.4	1.445		7.18	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	9/7/23 7:41 AM	S	0.1	0	0	0	25.933	0.53	7.85	97	1.077		7.37	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	9/18/23 7:50 AM	S	0.1	1.52	1.52	1.59	19.777	1.38	9.02	99.5	2.666		7.25	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	10/3/23 7:42 AM	S	0.1	0	0	0	17.687	0.55	9.18	96.7	1.1		7.36	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	10/17/23 7:51 AM	S	0.1	0	0.06	0.06	14.264	1.07	9.99	98.1	2.074		7.16	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	10/30/23 7:29 AM	S	0.1	0.43	0.62	0.62	14.976	1.07	9.12	91	2.09		7.17	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	11/15/23 8:44 AM	S	0.1	0	0	0	6.806	1.28	11.48	94.9	2.477		7.37	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	11/29/23 8:40 AM	S	0.1	0	0	0.4	4.413	1.24	11.34	88.2	2.427	2.08	7.12	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	12/14/23 8:55 AM	S	0.1	0	0	0	5.48	0.46	11.02	87.7	0.928	2.93	7.17	
MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	167	12/27/23 8:32 AM	S	0.1	0.02	0.02	0.02	6.494	0.39	11.2	91.3	0.797		7.02	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	4/6/23 9:20 AM	S	0.1	0.01	0.01	0.01	8.137	19.44	10.27	98.7	31.435	2.8	7.47	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	4/6/23 9:20 AM	B		0.01	0.01	0.01	6.937	29.2	10.04	100	45.661	5.53	7.61	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	4/11/23 8:51 AM	S	0.1	0	0	0	9.944	12.88	11.17	107.3	21.462	4.29	8.05	1
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	4/11/23 8:51 AM	B		0	0	0	9.4	18.15	10.7	105.1	29.45	6.4	8	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	4/27/23 8:35 AM	S	0.1	0.04	0.04	0.04	11.868	23.94	9.11	97.9	37.776	21.67	7.92	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	4/27/23 8:35 AM	B		0.04	0.04	0.04	10.517	30.06	8.25	89.5	46.503	6.92	7.85	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	5/4/23 8:58 AM	S	0.1	0.01	0.04	0.2	12.054	11.7	8.9	89	19.598	4.4	7.06	1.2
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	5/4/23 8:58 AM	B	3.5	0.01	0.04	0.2	10.838	28.47	7.88	85.3	44.263	12.56	7.4	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	5/26/23 8:58 AM	S	0.1	0	0	0.03	15.47	18.95	7.27	81.8	30.452	3	7.98	1.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	5/26/23 8:58 AM	B		0	0	0.03	13.732	27.91	6.62	76	43.321	2.43	7.99	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	6/2/23 8:28 AM	S	0.1	0.37	0.37	0.37	18.858	20.35	8.01	97.2	32.487	2.99	7.98	2
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	6/2/23 8:28 AM	B	2.7	0.37	0.37	0.37	15.267	29.86	7.41	88.7	46.003	4.9	7.99	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	6/8/23 8:46 AM	S	0.1	0.01	0.01	0.01	15.704	18.32	7.94	89.4	29.522	4.09	7.97	1
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	6/8/23 8:46 AM	B		0.01	0.01	0.01	14.195	30.95	6.24	73.6	47.538	2.45	7.88	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/18/23 8:40 AM	S	0.1	0	0	1.6	24.449	6.88	5.96	74.2	12.043	3.86	7.65	1.1
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/18/23 8:40 AM	B		0	0	1.6	19.746	25.96	4.01	51.2	40.514	3.79	7.47	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/19/23 8:32 AM	S	0.1	0	0	0	21.835	17.41	4.28	53.9	28.223	3.65	7.46	1.4
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/19/23 8:32 AM	B		0	0	0	19.987	25.29	3.11	39.6	39.569	5.63	7.43	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/26/23 8:22 AM	S	0.1	0	0.88	0.88	21.834	18.72	8.38	106.5	30.151	3.15	7.89	1.3
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/26/23 8:22 AM	B		0	0.88	0.88	17.881	29.46	3.88	48.8	45.404	6.46	7.48	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/31/23 8:11 AM	S	0.1	0	0	3.07	19.638	20.86	5.48	67.7	33.237	3.03	7.64	0.7
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	7/31/23 8:11 AM	B	2.8	0	0	3.07	16.842	28.79	4.39	53.9	44.48	4.19	7.68	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/1/23 10:31 AM	S	0.1	0	0	0	18.768	24.96	7.03	87.6	39.098	2.19	7.59	1.4
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/1/23 10:31 AM	B	2.9	0	0	0	16.598	29.22	6.39	78.3	45.079	1.95	7.57	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/9/23 8:54 AM	S	0.1	0	1.33	1.33	18.027	27.26	5.89	73.3	42.343	3.48	7.63	2.4
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/9/23 8:54 AM	B		0	1.33	1.33	16.336	29.55	4.25	51.9	45.539	9.03	7.52	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/17/23 8:22 AM	S	0.1	0	0	0.64	18.752	20.26	5.45	65.8	32.367	4.28	7.53	2
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/17/23 8:22 AM	B	3	0	0	0.64	15.853	28.85	4.92	59.2	44.575	7.68	7.54	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/21/23 8:23 AM	S	0.1	0.28	0.28	0.28	20.772	9.13	6.86	80.8	15.596	4.74	7.4	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/23/23 8:12 AM	S	0.1	0	0	0.28	17.752	25.35	6.66	81.5	39.656	3.22	7.69	1.4
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	8/23/23 8:12 AM	B		0	0	0.28	17.202	28.1	6.18	76.1	43.518	10.23	7.68	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	9/21/23 9:07 AM	S	0.1	0	0	0	19.413	7.63	7.11	80.9	13.198	4.48	7.54	1
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	9/21/23 9:07 AM	B		0	0	0	19.357	10.66	6.29	72.8	17.987	5.44	7.47	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	10/16/23 9:07 AM	S	0.1	0.06	0.06	0.06	15.555	27.96	6.46	76.9	43.346	0.87	7.3	2.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	10/16/23 9:07 AM	B	2.7	0.06	0.06	0.06	15.498	31.01	5.61	67.9	47.581	1.57	7.39	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	10/19/23 8:57 AM	S	0.1	0	0	0	15.33	25.73	6.76	79	40.212	3.35	7.71	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	10/19/23 8:57 AM	B		0	0	0	15.495	29.89	6.13	73.8	46.039	5.92	7.72	
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	10/26/23 8:20 AM	S	0.1	0	0	0	14.861	25.22	7.17	82.7	39.501	1.55	7.73	2.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	052	10/26/23 8:20 AM	B	3.9	0	0	0	14.775	29.91	6.52	77.3	46.081	3.78	7.75	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/6/23 9:29 AM	S	0.1	0.01	0.01	0.01	8.118	17.91	10.47	99.6	29.163	3.04	7.68	2.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/6/23 9:29 AM	B	3	0.01	0.01	0.01	6.731	30.13	10.24	102.2	47.009	4	7.84	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/11/23 8:43 AM	S	0.1	0	0	0	9.899	27.82	10.34	109.2	43.415	2.14	7.98	3
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/11/23 8:43 AM	B	3	0	0	0	7.63	30.24	10.35	105.5	47.044	7.63	8	

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/27/23 8:27 AM	S	0.1	0.04	0.04	0.04	12.134	27.02	9.76	107.7	42.145	2.01	7.99	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	4/27/23 8:27 AM	B	3.6	0.04	0.04	0.04	10.611	29.98	9.26	100.7	46.39	10.52	7.95	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	5/4/23 9:06 AM	S	0.1	0.01	0.04	0.2	11.573	8.73	9.94	96.5	14.954	4.63	7.32	1
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	5/4/23 9:06 AM	B	3.1	0.01	0.04	0.2	11.013	28.97	8.82	96.2	44.957	6.88	7.58	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	5/26/23 8:35 AM	S	0.1	0	0	0.03	14.112	27.96	7.78	90	43.383	1.69	8.03	3.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	5/26/23 8:35 AM	B	4.2	0	0	0.03	12.969	30.91	7.42	85.4	47.539	3.18	8.07	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	6/2/23 8:19 AM	S	0.1	0.37	0.37	0.37	18.089	24.62	8.48	104	38.621	6.44	8.05	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	6/2/23 8:19 AM	B	3.7	0.37	0.37	0.37	13.849	30.87	7.65	89.6	47.446	3.71	8.03	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	6/8/23 8:25 AM	S	0.1	0.01	0.01	0.01	14.065	26.7	7.17	82.2	41.612	2.66	7.89	2.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	6/8/23 8:25 AM	B	3.9	0.01	0.01	0.01	14.126	31.27	6.47	76.3	47.981	5.6	7.91	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/18/23 8:30 AM	S	0.1	0	0	1.6	23.244	12.83	5.11	64.4	21.365	3.86	7.49	1.6
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/18/23 8:30 AM	B	4.3	0	0	1.6	17.959	30.57	4.05	51.3	46.942	5.29	7.62	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/19/23 8:22 AM	S	0.1	0	0	0	22.792	16.69	5.26	67.3	27.175	3.38	7.54	1.6
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/19/23 8:22 AM	B	3.7	0	0	0	18.103	30.27	3.5	44.4	46.527	4.53	7.63	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/26/23 8:13 AM	S	0.1	0	0.88	0.88	22.301	22.41	10.18	133.3	35.509	2.41	8.09	1.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/26/23 8:13 AM	B	3.5	0	0.88	0.88	16.977	30.16	5.24	65	46.381	5.66	7.64	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/31/23 8:00 AM	S	0.1	0	0	3.07	21.235	23.66	9.2	119.1	37.279	4.24	8.12	0.8
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	7/31/23 8:00 AM	B		0	0	3.07	17.051	29.53	6.22	77	45.503	1.51	7.8	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/1/23 8:08 AM	S	0.1	0	0	0	18.515	24.67	7.12	88	38.695	2.76	7.79	1.4
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/1/23 8:08 AM	B		0	0	0	16.472	29.02	7.47	91.1	44.808	2.22	7.84	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/9/23 8:45 AM	S	0.1	0	1.33	1.33	18.202	27.05	6.42	80.1	42.048	3.01	7.68	2.2
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/9/23 8:45 AM	B		0	1.33	1.33	16.648	29.04	5.27	64.5	44.832	5.45	7.63	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/17/23 8:14 AM	S	0.1	0	0	0.64	19.116	19.36	5.93	71.9	31.054	3.88	7.58	2.2
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/17/23 8:14 AM	B	3.1	0	0	0.64	15.562	29.65	5.76	69.3	45.703	7.32	7.61	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/21/23 8:15 AM	S	0.1	0.28	0.28	0.28	18.389	21.25	6.64	80.2	33.795	2.56	7.56	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	8/23/23 8:03 AM	S	0.1	0	0	0.28	18.172	25.64	9.92	122.6	40.056	4.2	8.01	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	9/21/23 8:58 AM	S	0.1	0	0	0	19.578	9	6.63	76.3	15.38	3.72	7.57	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	9/21/23 8:58 AM	B		0	0	0	19.277	20.63	6.19	75.7	32.908	3.19	7.68	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	10/16/23 9:16 AM	S	0.1	0.06	0.06	0.06	14.837	25.56	6.66	77.1	39.988	0.52	7.49	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	10/16/23 9:16 AM	B		0.06	0.06	0.06	15.256	31.05	6.26	75.5	47.636	0.52	7.54	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	10/19/23 8:48 AM	S	0.1	0	0	0	15.426	28.6	7.43	88.6	44.237	2.83	7.79	4
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	10/19/23 8:48 AM	B	5.9	0	0	0	15.349	30.71	5.27	63.5	47.169	7.13	7.67	
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	10/26/23 8:10 AM	S	0.1	0	0	0	14.858	26.55	7.3	85	41.387	1.76	7.75	3
MYSTIC/ALEWIFE	MYSTIC MOUTH	069	10/26/23 8:10 AM	B	3.7	0	0	0	14.715	30.3	6.57	78	46.621	2.64	7.74	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/11/23 11:49 AM	S	0.1	0.01	0.01	0.01	4.317	23.33	10.52	94.6	37.556	2.08	7.88	2.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/11/23 11:49 AM	B	12.3	0.01	0.01	0.01	5.42	30.72	9.72	94.4	48.045	2.75	7.93	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/27/23 11:18 AM	S	0.1	0	0.72	1.03	4.274	15.92	10.11	86.4	26.459	5.65	7.77	1.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	1/27/23 11:18 AM	B	13.3	0	0.72	1.03	4.4	30.95	8.82	83.7	48.566	4.23	7.87	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/1/23 11:52 AM	S	0.1	0	0.04	0.04	4.074	23.8	9.07	81.4	38.288	2.98	7.8	5.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/1/23 11:52 AM	B	14.1	0	0.04	0.04	4.793	30.78	8.64	82.7	48.25	3.4	7.89	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/14/23 11:39 AM	S	0.1	0	0	0	3.68	29.8	11.29	104.4	47.053	1.91	7.99	3
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	2/14/23 11:39 AM	B	10.8	0	0	0	3.68	31.1	11.03	103	48.928	2.35	7.99	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/3/23 11:33 AM	S	0.1	0	0.58	0.58	4.308	29.31	10.32	96.7	46.238	2.09	7.92	3
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/3/23 11:33 AM	B	12.3	0	0.58	0.58	3.568	31.14	10.29	95.9	49.011	2.49	7.94	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/24/23 10:11 AM	S	0.1	0	0	0	6.125	24.3	10.74	101.7	38.739	1.66	7.9	3
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	3/24/23 10:11 AM	B	12.5	0	0	0	4.819	30.54	10.14	97	47.907	1.56	7.88	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/5/23 10:40 AM	S	0.1	0	0	0	8.616	22.92	10.66	106	36.496	2.61	7.99	2
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/5/23 10:40 AM	B	13.2	0	0	0	6.058	31.38	10.37	102.6	48.873	1.9	8.01	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/13/23 10:46 AM	S	0.1	0	0	0	8.802	29.87	10.22	106.7	46.4	1.72	7.97	5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	4/13/23 10:46 AM	B	10.4	0	0	0	7.066	31.13	10.41	105.4	48.38	4.42	7.99	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/10/23 10:40 AM	S	0.1	0	0	0	14.048	24.91	10.24	116	39.081	1.7	8.05	2.3
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/10/23 10:40 AM	B	11.6	0	0	0	10.751	31.31	8.96	98.6	48.242	2.09	7.89	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/25/23 10:05 AM	S	0.1	0	0.03	0.03	14.989	27.21	8.64	101.2	42.307	2.16	8.09	2.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	5/25/23 10:05 AM	B	11	0	0.03	0.03	12.289	31.44	7.32	83.3	48.306	2.57	8.09	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/6/23 10:26 AM	S	0.1	0	0.07	0.17	14.82	29.45	7.31	86.6	45.44	1.47	7.89	3
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/6/23 10:26 AM	B	12.4	0	0.07	0.17	13.323	31.62	5.94	69.1	48.503	4.29	7.83	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/22/23 10:14 AM	S	0.1	0	0	0	20.125	21.1	10.64	132.9	33.593	2.05	8.17	1.8
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	6/22/23 10:14 AM	B	11.3	0	0	0	15.503	30.81	5.61	67.8	47.31	13.56	7.83	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/11/23 10:12 AM	S	0.1	0	0.71	0.71	20.679	27.21	7.73	101	42.287	2.15	7.98	2.2
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/11/23 10:12 AM	B	11.7	0	0.71	0.71	17.103	30.72	4.28	53.4	47.149	2.23	7.71	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/20/23 10:16 AM	S	0.1	0	0	0	22.368	19.63	5.87	73.8	31.485	2.6	7.69	2
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	7/20/23 10:16 AM	B	12.2	0	0	0	14.976	31.2	5.92	71.1	47.861	12.4	7.83	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/14/23 10:04 AM	S	0.1	0	0.15	0.15	19.071	24.92	8.58	107.4	39.04	3.64	7.92	1.8
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/14/23 10:04 AM	B	13.1	0	0.15	0.15	13.553	30.96	6.19	72	47.583	3.59	7.73	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/31/23 9:52 AM	S	0.1	0	0.54	0.83	17.474	27.86	7.15	88.3	43.175	1.81	7.77	2.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	8/31/23 9:52 AM	B	13.3	0	0.54	0.83	15.844	30.31	5.38	65.3	46.604	1.5	7.66	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/20/23 10:33 AM	S	0.1	0	0	1.52	19.887	12.72	6.99	82.7	21.151	3.7	7.61	1.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/20/23 10:33 AM	B	11.5	0	0	1.52	18.473	29.92	4.7	60	46.039	1.95	7.62	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/28/23 9:16 AM	S	0.1	0	0	0	17.728	20.68	7.4	87.4	32.968	3.06	7.61	2.7

Region	Subregion	Station	Day/Time (EST)	Surface or Bottom	Sample depth (m)	Logan Rainfall 1-Day	Logan Rainfall 2-Day	Logan Rainfall 3-Day	Temperature (C)	Salinity (PSU)	Dissolved Oxygen (mg/L)	DO Pct Saturation (pct)	Specific Conductivity (mS/cm)	Turbidity (NTU)	pH	Secchi depth (m)
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	9/28/23 9:16 AM	B	13	0	0	0	18.345	29.66	4.81	61.1	45.685	3.2	7.56	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/10/23 10:06 AM	S	0.1	0	0	0	16.076	25.21	7.31	86.4	39.473	0.41	7.73	2
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/10/23 10:06 AM	B	11.9	0	0	0	17.291	30.62	6.48	81.1	47.021	5.8	7.77	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/25/23 9:51 AM	S	0.1	0	0	0	14.427	28.1	7.74	90.1	43.568	2.49	7.88	3.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	10/25/23 9:51 AM	B	13.6	0	0	0	14.544	30.54	6.52	77.3	46.959	4.12	7.84	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/1/23 9:48 AM	S	0.1	0	0	0.43	12.709	25.96	7.75	85.9	40.618	2.66	7.75	3
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/1/23 9:48 AM	B	11.7	0	0	0.43	13.996	30.54	7.21	84.5	46.987	3.94	7.78	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/21/23 10:34 AM	S	0.1	0.03	0.03	0.03	7.947	29.52	9.01	92	45.993	0.22	7.85	4.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	11/21/23 10:34 AM	B	10.5	0.03	0.03	0.03	9.734	30.8	8.66	92.8	47.614		7.85	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/7/23 11:26 AM	S	0.1	0	0	0	7.131	29.83	9.78	98.3	46.538	3.21	7.99	4.7
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/7/23 11:26 AM	B	11	0	0	0	7.247	30.42	9.24	93.5	47.35	7.64	7.96	
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/19/23 11:23 AM	S	0.1	0	1.68	2.05	8.177	7.1	10.53	93.5	12.407	5.67	7.76	2.5
MYSTIC/ALEWIFE	MYSTIC MOUTH	137	12/19/23 11:23 AM	B	11.3	0	1.68	2.05	7.03	29.19	9.39	93.8	45.645	2.74	7.91	

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