

Summary of CSO Receiving Water Quality Monitoring in Upper Mystic River/Alewife Brook and Charles River, 2022



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Cover Photo

Mystic River from MWRA Research Vessel, taken by Daniel Peck, Chemist I.

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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 2022 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 February, two outfalls have been confirmed to be meeting LTCP goals. Eight have projects in design or construction, and work is expected to be completed by the end of 2024, bringing these eight into compliance with the LTCP goals. The remaining six outfalls present significant challenges and will continue to be investigated through December 2024. Developments on these investigations are discussed in MWRA's most recent annual report on CSO discharges (AECOM 2023).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 28, 2023: CSO Discharge Estimates and Rainfall Analyses for Calendar Year. 2022. <https://www.mwra.com/cso/pcmpa-reports/042823-annualcso.pdf>

quality impacts due to remaining CSOs in a Typical Year⁴ 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 Somerville⁶) 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 Plan⁹.

Since the beginning of MWRA's CSO control planning efforts in the late 1980s, MWRA and the CSO communities have eliminated¹⁰ 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 95% 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 (2018-2022) is considered representative of current conditions.

⁹ MWRA Final Notification Plan: https://www.mwra.com/harbor/pdf/final_csotnotif_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

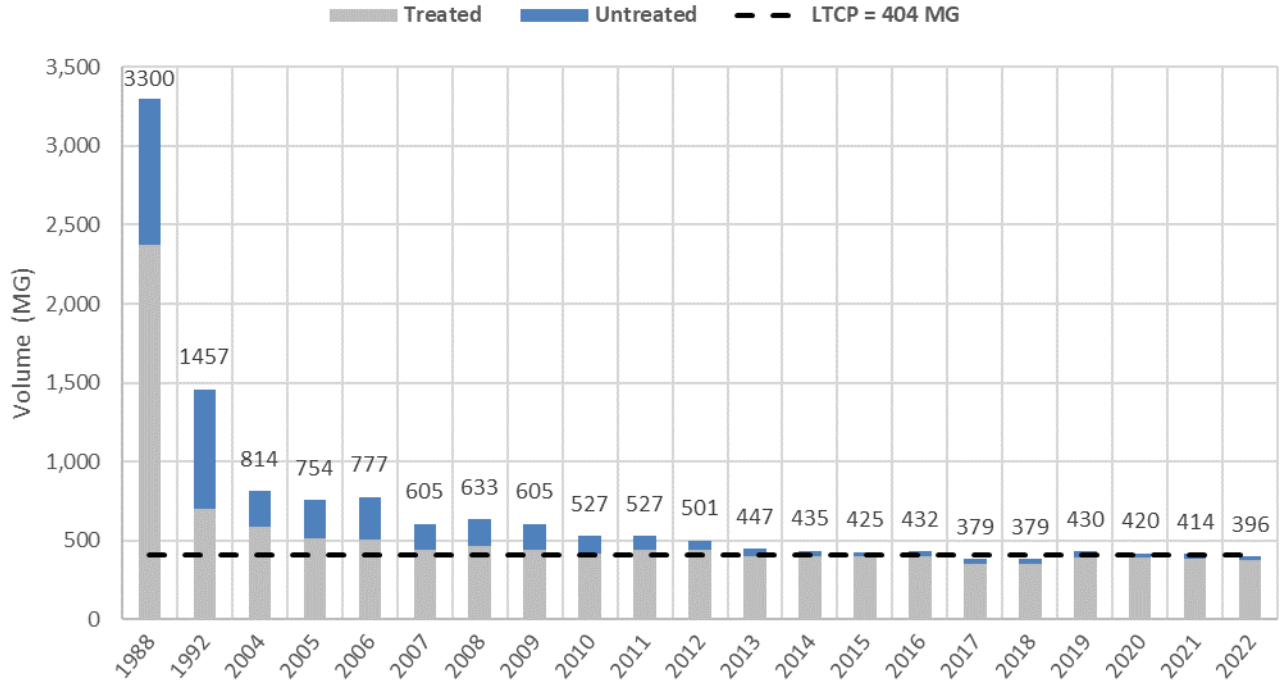


Figure 1-1. Estimated Treated, Untreated and Total CSO Volume in the Typical Year, 1988-2022.

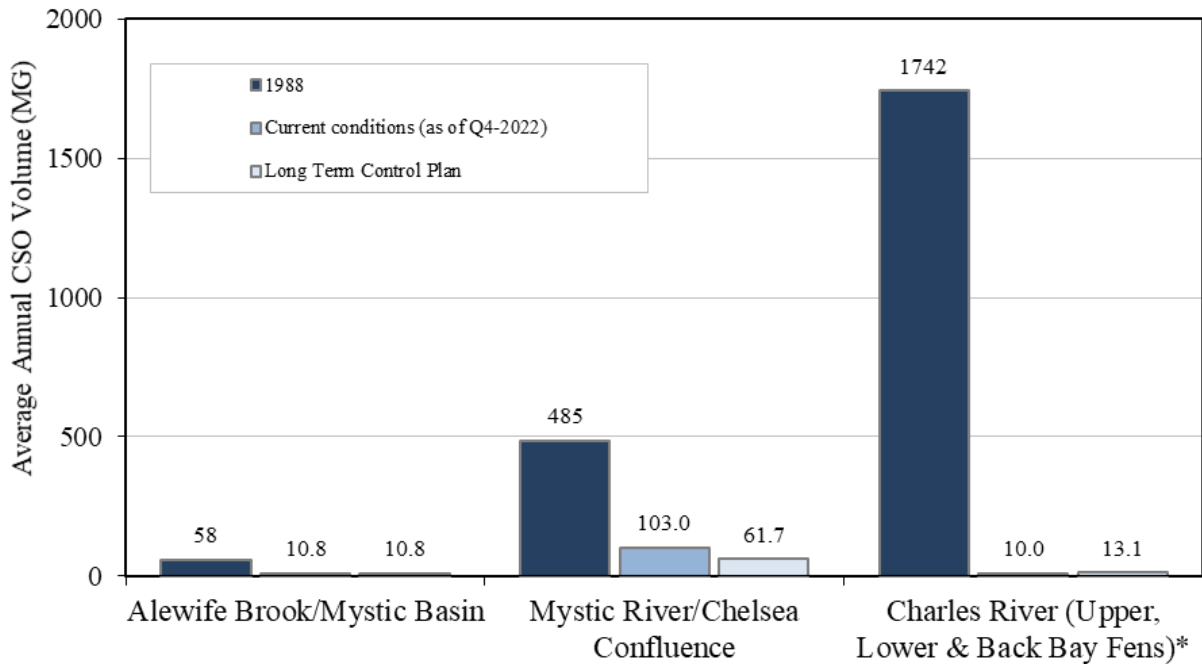


Figure 1-2. CSO Typical Year Discharge Volume Estimates for 1988, Current, and Approved Long Term Control Plan

* Back Bay Fens (Muddy River) is tributary to the Charles Basin but is not a variance water. Source: Updated from AECOM (2023)

Rainfall volumes for calendar year 2022 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 2022 within selected ranges of rainfall volume. In 2022, metropolitan Boston experienced below average rainfall totals despite a similar number of total storm events. The total rainfall volume was much lower than the Typical Year (approximately 33 versus 46.8 inches), and several inches lower than the official average annual rainfall for Boston (42.5 inches¹²).

Numbers of storms were similar or higher than the Typical Year for the <0.25 inch and 0.25-0.5 inch categories. For storm sizes greater than 0.5 inches, 2022 counts were similar or lower than the Typical Year. Most notably, there were between zero and three storms >2.0 inches recorded at gauges in 2022, compared to six in the Typical Year.

Table 1-2 lists the number of storms in 2022 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 much fewer storms with high peak intensities in 2022 than the Typical Year. The average total rainfall in these storms, and the average peak intensity, were both lower than storms of similar intensity in 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, 2022 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	46.8	93	49	14	16	8	6
2022 Chelsea Creek Headworks (MWRA)	30.16	92	54	19	12	6	1
2022 Ward St. Headworks (MWRA)	34.94	94	56	15	13	10	0
2022 BWSC East Boston ¹³	32.66	94	54	19	13	7	1
2022 BWSC Allston	33.46	88	48	18	12	7	3
2022 Fresh Pond (USGS)	30.53	82	42	20	13	7	0

Source: AECOM (2023)

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/>

¹³ Previous reports used BWSC Charlestown. BWSC East Boston used as proxy for BWSC Charlestown in 2022. Source: AECOM (2023) and MWRA rainfall data

Table 1-2. Number of rain events with peak intensity >0.4 inches/hour, 2022 vs. Typical Year.

	Number of storms (peak hourly intensity > 0.4 in/hr)	Average total rainfall per storm (inches)	Average peak hourly intensity (inches/hour)
Typical Year	9	1.56	0.63
2022 Chelsea Creek Headworks (MWRA)	3	1.23	0.48
2022 Ward St. Headworks (MWRA)	4	0.98	0.54
2022 Columbus Park Headworks (MWRA)	3	1.06	0.49
2022 Fresh Pond (USGS)	4	1.02	0.46

1.1 Overview of the monitoring program

MWRA’s CSO receiving water quality monitoring program has been ongoing since 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 continued into 2022. Chapter 2 details these changes in full.

1.2 Organization and purpose of the report

The purpose of the report is to summarize 2022 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 2022 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 examined 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 category, 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

The COVID-19 pandemic disrupted the usual sampling schedule until April 2022. As much of the sampling involved staff working in close proximity and in enclosed vehicles, the sampling program was modified to allow for proper social distancing when necessary or appropriate. At least 20 station visits were made to each location last year, within two separate monitoring projects described below. In 2022, eutrophication monitoring was conducted biweekly year-round, without interruptions from COVID-19, 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. Under both projects, physical measurements collected using water quality sondes were omitted until April 2022 when safety precautions lessened.

2.1.3 Sample collection

As noted above, due to COVID-19, the use of water quality sondes was omitted until April 2022. At all locations, water samples were collected near-surface (approximately 0.1 meters below surface). 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 & Mapping System (EM&MS) 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 EM&MS 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.

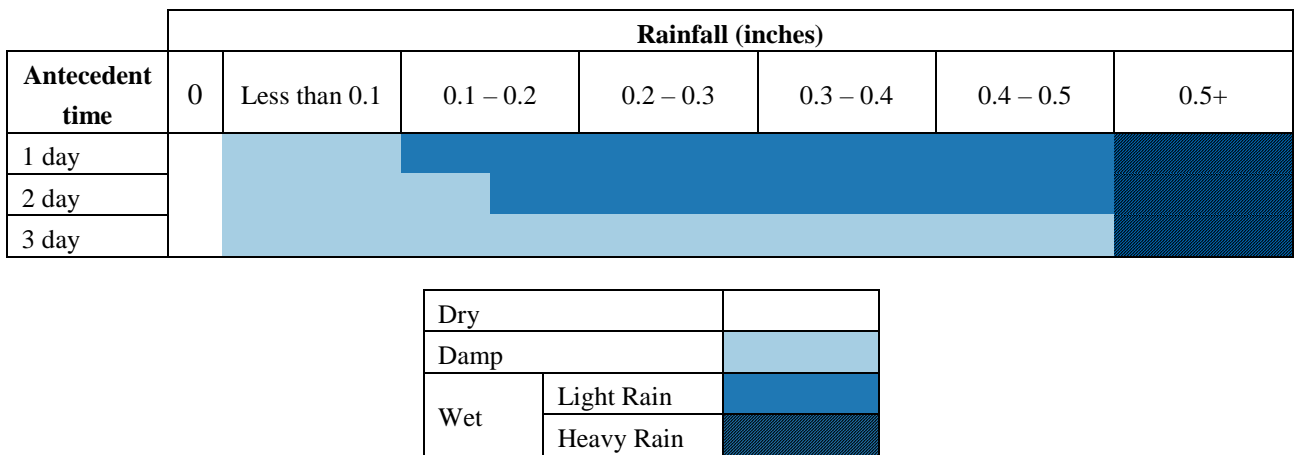


Figure 2-1. Summary and comparison of the two rainfall classification systems

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
<i>Enterococcus</i>	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)
<i>E. coli</i>	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 <i>a</i>	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 2-1 for the 10th, 25th, 50th, 75th, and 90th percentiles. Open circles at the top and bottom represent maximum and minimum measurements.

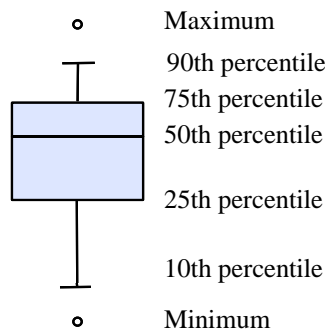


Figure 2-2. Percentile distributions indicated on percentile box plots

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 4.00¹⁴, 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.

¹⁴ 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. 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	≤ 28.3°C (83°F)
	pH	6.5 to 8.3 S.U.
Coastal/marine waters (Class SB) Massachusetts waters, MADEP	Dissolved Oxygen	≥ 5.0 mg/L
	Temperature	< 26.7°C (80°F)
	pH	6.5 to 8.5 S.U.
Marine and freshwater primary contact recreation (designated swimming area), MADEP	<i>Enterococcus</i>	Statistical Threshold Value (STV): 130 counts/100 mL; Geometric mean: 35 counts/100 mL
Freshwater primary contact recreation (designated swimming area), MADEP	<i>E. coli</i>	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 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 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 lower Charles is divided into three smaller reaches: Upper Basin, Mid-Basin, and Lower Basin. Sampling locations and CSOs appear in Figure 3-1 with labeled reach boundaries. Table 3-1 describes the reaches, and the sampling locations and CSOs within each reach.

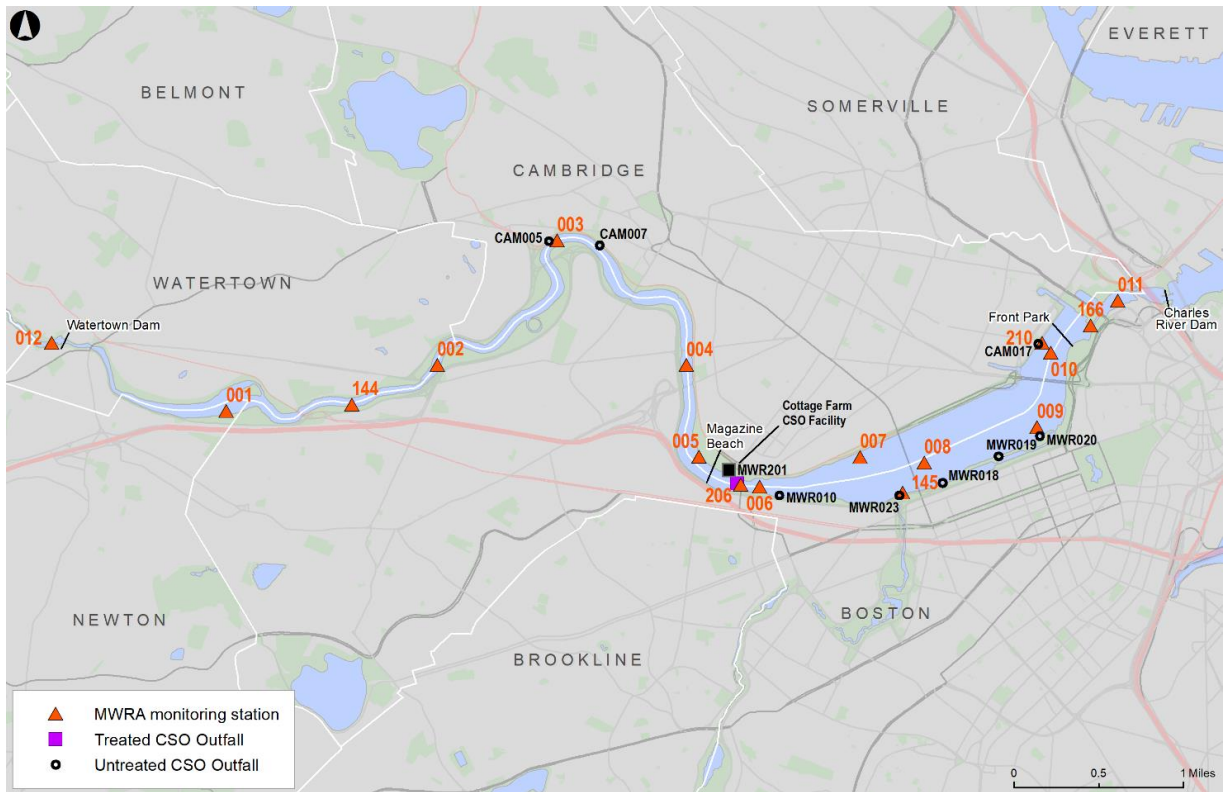


Figure 3-1. Map of MWRA Charles River monitoring stations.

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

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. These sources include nine CSO 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.¹⁵ 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, but there were no activations at Cottage Farm in 2022. 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 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, of which there were none in 2022.¹⁶

Table 3-3 shows the MWRA and community metering results for CSOs affecting the Charles River Basin for 2022. The Cottage Farm CSO treatment facility did not activate in 2022. There was a total of five CSO activations in 2022 in the Charles River Basin combined between CAM005 and MWR023.

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.

¹⁵ 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

¹⁶ MWRA Sanitary Sewer Overflow (SSO) Reporting page. http://www.mwra.com/harbor/html/ssr_reporting.htm

Table 3-2. Charles River Basin pollution sources in 2022.

Source	Upper Basin	Mid-Basin	Lower Basin
CSOs (untreated)	2 active, 4 closed CAM005 ¹ CAM007 CAM009 closed 11/07 ² CAM011 closed 11/07 ² BOS032 closed 11/97 BOS033 closed 10/96	6 active, 3 closed MWR010 MWR018 MWR019 MWR020 MWR023 ¹ CAM017 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) No activations in 2022	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	No	No

¹Activated in 2022

² Pending continuing hydraulic evaluations by City of Cambridge.

³ From MWRA-owned system.

Table 3-3. Charles River Basin CSO activations, results of meter data and facility records for 2022 system conditions and 2022 rainfall.

CSO Outfall	Activation Frequency	Total Discharge Duration (hr)	Total Discharge Volume (million gallons)
<i>Upper Charles</i>			
CAM005 ¹	4	2.75	0.16
CAM007 ¹	0	0	0.00
TOTAL	4		0.16
<i>Lower Charles</i>			
CAM017 ¹	0	0	0.00
MWR010 ²	0	0	0.00
MWR018 ²	0	0	0.00
MWR019 ²	0	0	0.00
MWR020 ²	0	0	0.00
MWR201 (Cottage Farm Facility) ³	0	0	0.00
MWR023 (Stony Brook) ⁴	1	0.25	0.01
TOTAL	1		0.01

¹ Results from City of Cambridge meter data (City of Cambridge 2023).

² Metered data are estimates of outfall discharge calculated using data from sensors, taking into account physical configurations and constraints. (AECOM 2023)

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
2017-2021 ²	26% 890 station visits	22% 732 station visits	52% 1760 station visits	100% 3382 station visits
2022 ³	37% 129 station visits	25% 89 station visits	38% 133 station visits	100% 351 station visits

¹ See Section 2.1.5 for descriptions of rainfall conditions.

² 2017-2019 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, 2018-2022

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, 2018-2022.

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	21.8±4.6	98.9	7.7-28.9	561	22.1±4.4	99.4	8.4-28.5	528	22.1±4.1	99.2	9-28.4	120
	Winter		5.8±2.9	100	0.1-10.9	68	7.2±1.8	100	4.2-10.4	40	4.4±2.4	100	1-9.1	26
Bottom water dissolved oxygen (mg/L) ¹	Summer	≥ 5.0	7±1.8	91	0.2-11.7	388	4.4±3	46.8	0.1-10.7	496	6.1±2.4	71.2	1-11.2	104
	Winter	≥ 5.0	11.9±1.1	100	10.8-14.8	27	10±3.7	85.3	0.4-12.5	34	12.9±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	1435	7.2±0.4	97.4	6.1-8.5	1513	7±0.5	97.2	6.1-8.4	388
Water clarity	Total Suspended Solids (mg/L)	NS	3.9±3.8	-	0.2-33.5	174	-	-	-		3.5±3.1	-	0.3-30.3	123
	Secchi depth (m) ³	NS	0.9±0.3	-	0.2-2	650	1.1±0.3	-	0.5-2	903	1.3±0.3	-	0.6-2.6	195
	Turbidity (NTU)	NS	5.8±5.1	-	0.1-63.6	1219	5.3±4.2	-	0.1-42.8	1419	4.3±4.2	-	0.2-40.9	285

For footnotes, see following page.

Table 3-5. Summary of water quality, Charles River Basin, 2018-2022, 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	<i>E. coli</i>	126 / 410 ⁵	218 (202-235)	72.6	0-24200	1356	92 (84-101)	80	0-15500	1752	90 (78-105)	84.2	0-24200	455
	<i>Enterococcus</i>	35/ 130 ^{5,6}	46 (41-51)	71	0-24200	1350	15 (13-17)	82.8	0-19900	1741	15 (13-18)	87	0-2760	453
Nutrients (µmol/L)	Phosphate	NS	0.6±0.4	-	0.1-2	174	ND	-	ND		0.5±0.4	-	0-1.6	123
	Ammonium	NS	3.6±2.7	-	0.1-15.4	174	ND	-	ND		4.9±4	-	0-16.7	123
	Nitrate+nitrite	NS	37.7±15.6	-	0.3-79.8	174	ND	-	ND		36.3±20.3	-	0.1-74.2	123
Algae (µg/L)	Chlorophyll	NS	4.3±5.3	-	0.1-35.6	174	ND	-	ND		8.6±10	-	0.1-51.3	123

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, 2022*

This section provides an analysis of water quality parameters measured in the lower Charles during the 2022 monitoring year.

3.4.1 Physical measurements

Temperature. Summer (June to October) water temperatures for 2022 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 predominately ≥ 5.0 mg/L in the Charles with bottom DO means at some Mid Basin locations (007-010) and one Lower Basin station (011) failing to meet the standard. Stratification, due to salt water 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. Station 012 at the further upstream end is too shallow for Secchi measurements but is typically clear to the river bottom. In 2022, most locations in the Charles Basin had relatively similar average Secchi depths below the MADPH beach guideline of 1.2 meters at a minimum. Means observed at locations downstream of the Longfellow Bridge met or exceeded the guideline.

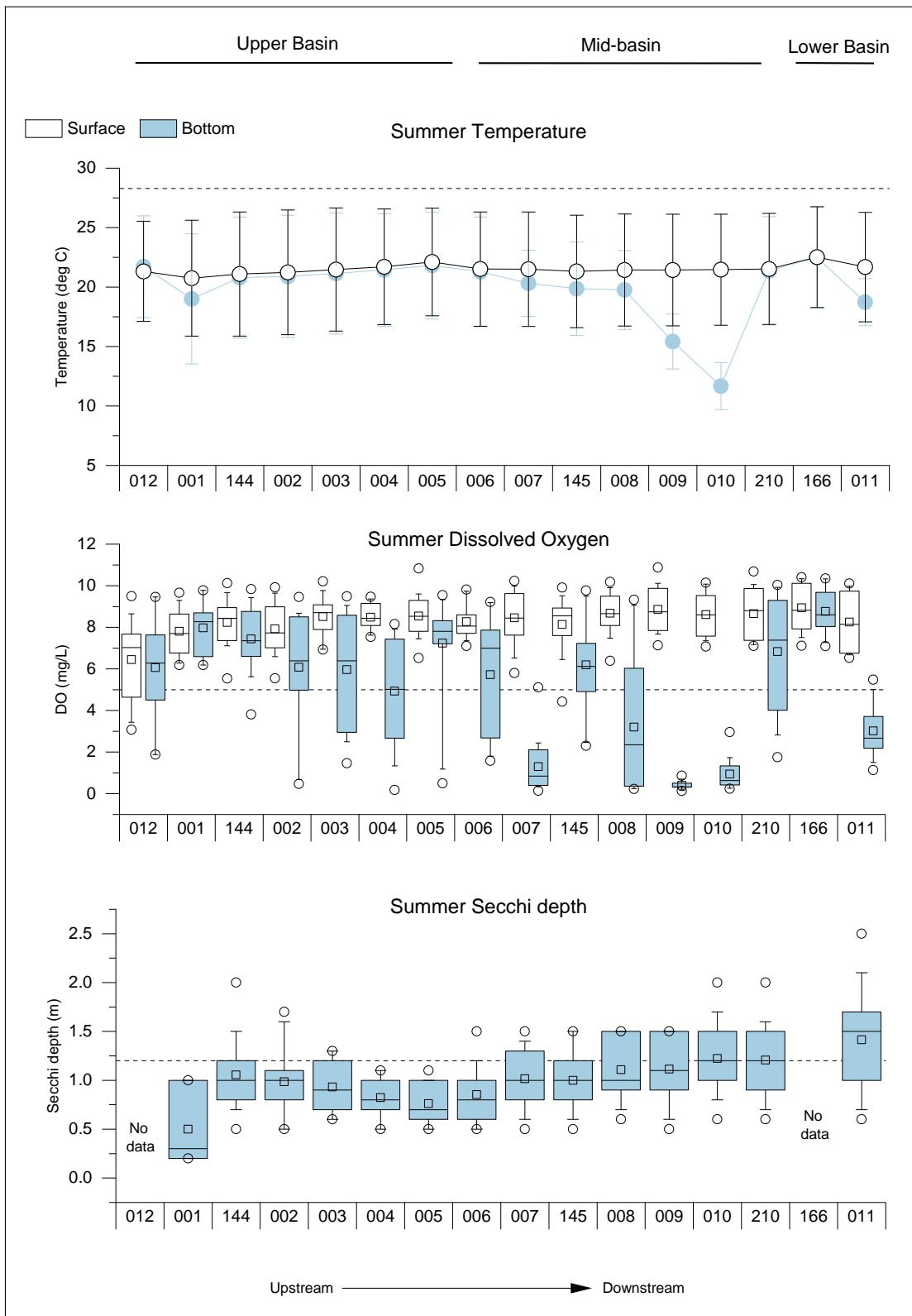


Figure 3-2. Summer (June-October) temperature, dissolved oxygen and Secchi depth, Charles River Basin, 2022.

Dashed lines are State standards or guidelines (maximum for temperature, minima for DO and Secchi). No Secchi data are available for station 012 because of shallow depth; the bottom is typically visible at this site. No secchi data are available for station 166, which is collected from the shoreline. Hollow squares on the DO and Secchi plots indicate the arithmetic mean. Station 006 includes samples from nearby station 206.

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 the upstream (012, 005) and downstream (166) locations in the Lower Charles are shown in Figures 3-3, 3-4, and 3-5 respectively. 2022 averages are plotted with the average of the previous five years (2017 – 2021) for comparison for stations 012 and 166; at station 005, there are only 2021 and 2022 averages. January measurements were not possible at stations 005 and 166 due to the locations being iced over.

Seasonal patterns for the 2022 monitoring year were similar to the 2017 – 2021 averages at stations 012 and 166, for most parameters. Seasonal signals during 2022 were most evident for nitrate/nitrite and ammonium. At both locations, nitrate/nitrite levels were highest in winter when biological uptake is low. Both locations exhibit an increase in ammonium concentrations during the spring to summer transition. Notably ammonium levels at station 166 were lower than the five-year average for much of the year. Total phosphorus, phosphate, and chlorophyll *a* concentrations were quite low the past year, with some of the lowest averages in the past five years recorded in the summer (June-October). A TSS spike was captured by the sampling program at 012 in April.

Station 005 observed monthly averages were generally equal to or lower than those observed in 2021, with the exception of TSS and chlorophyll *a*.

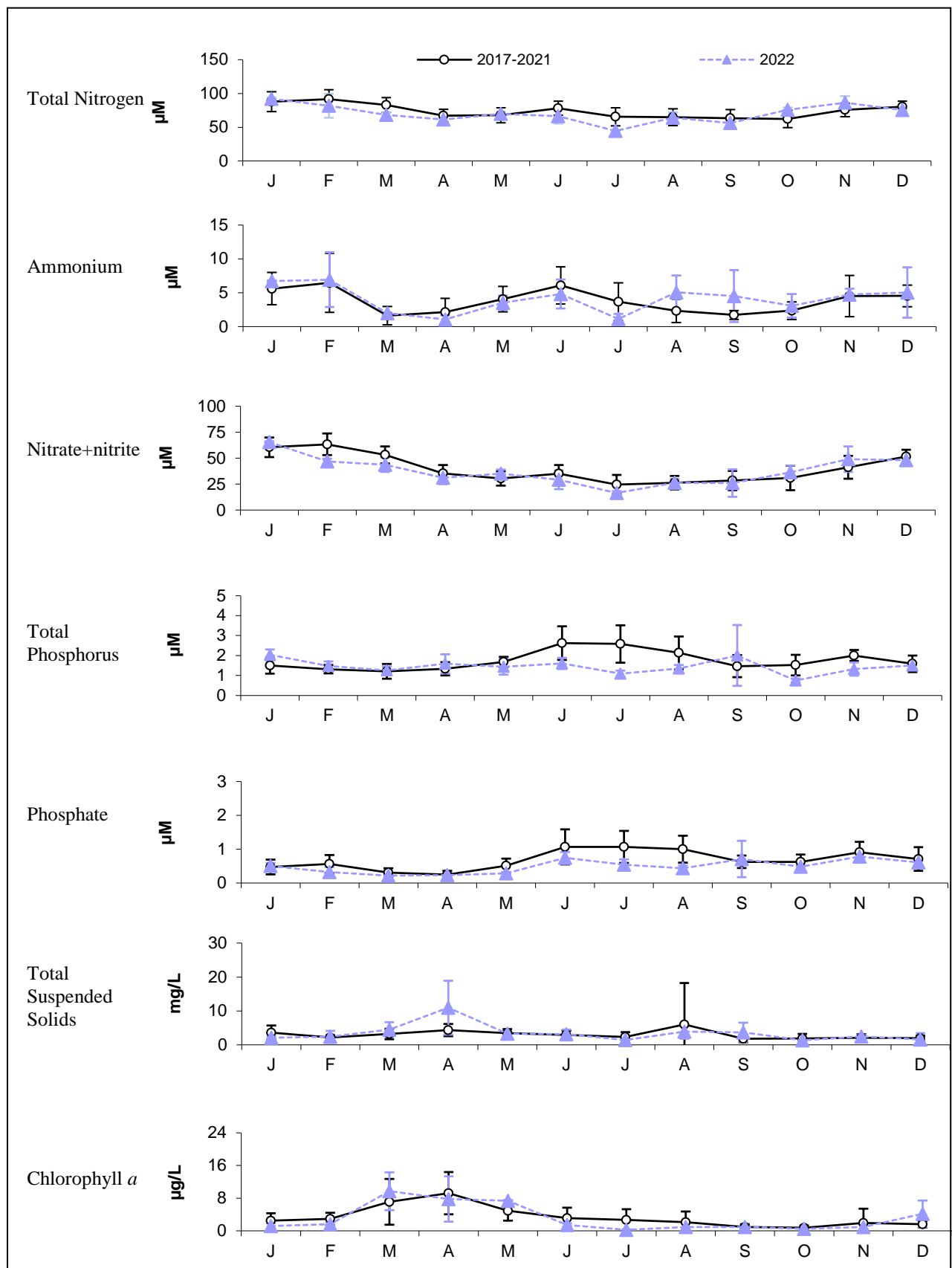


Figure 3-3. Monthly average nutrients, TSS and Chlorophyll 2017 – 2021 and 2022, Station 012, Watertown Dam.

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

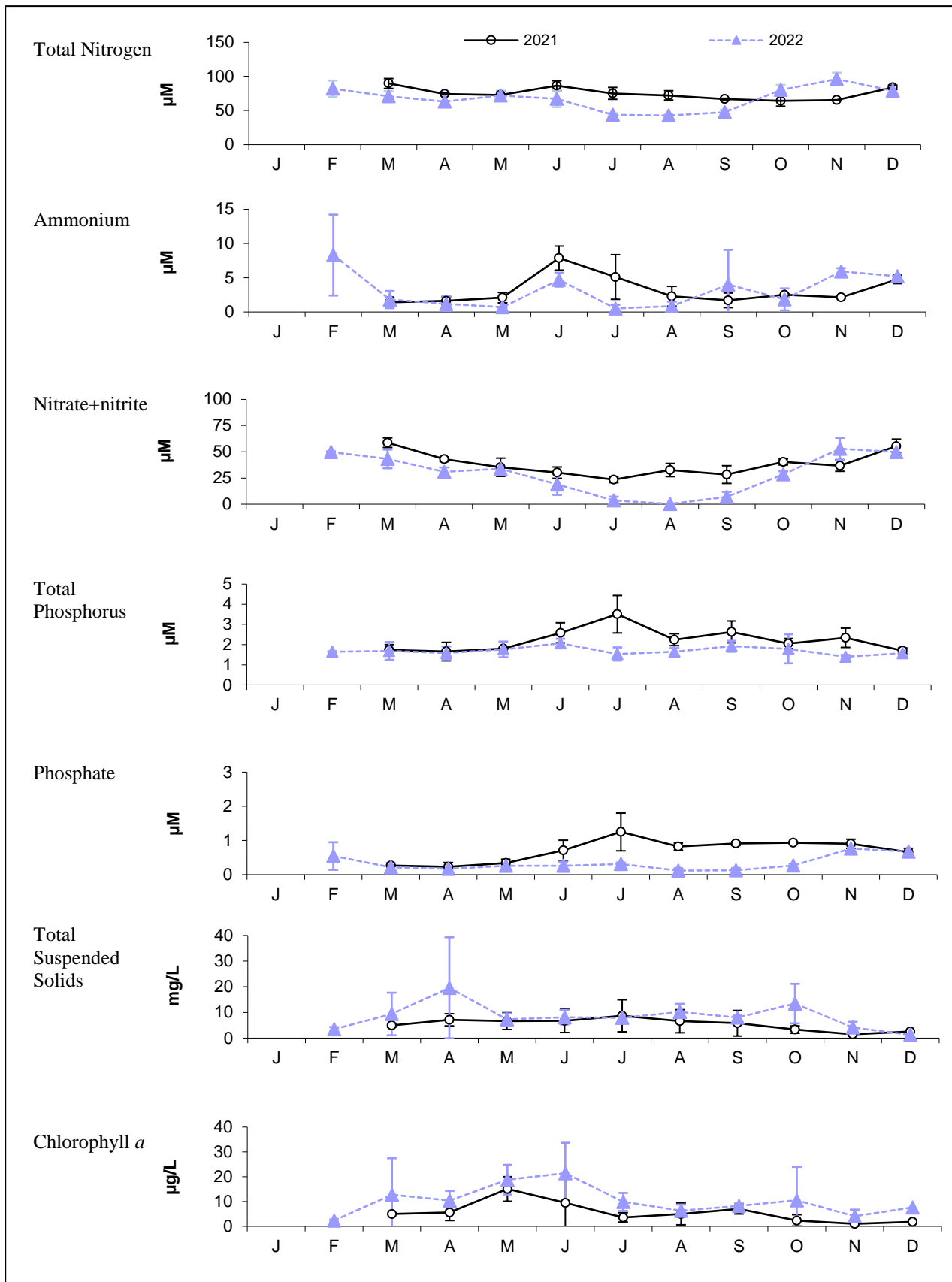


Figure 3-4. Monthly average nutrients, TSS and Chlorophyll 2021 and 2022, Station 005, Magazine Beach.

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.

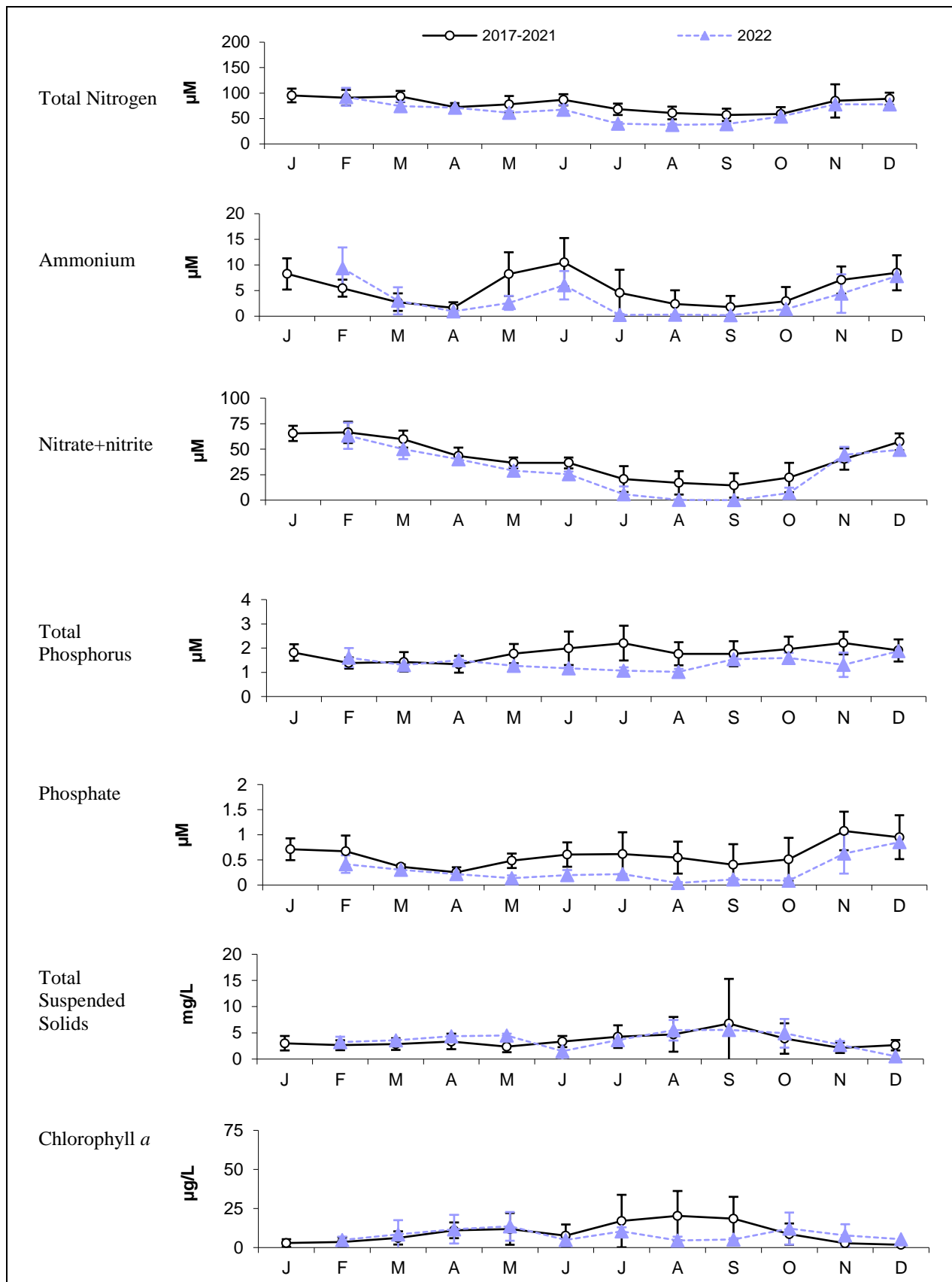


Figure 3-5. Monthly average nutrients, TSS and Chlorophyll 2017 – 2021 and 2022, Station 166, Science Museum.

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 2022 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, 2022 sampling in the Charles Basin was balanced between dry and wet conditions. The amount of damp data collected was similar to that collected from 2017-2019.

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 2022 respectively (note log scale). In 2022, *E. coli* counts followed the historic spatial trend with more elevated bacteria counts upstream relative to downstream locations. This spatial trend was not as pronounced for dry or damp weather *Enterococcus* results relative to previous years. Stations upstream of 009 had a higher prevalence of high *Enterococcus* and *E. coli* counts in wet weather. All Charles Basin stations met standards in dry and damp conditions for *Enterococcus*; station 003 and those downstream met both conditions for *E. coli*.

Geometric means for each location under all rain conditions for 2017 – 2021, and 2022 appear in Table 3-6. Geometric means for 2022 are shown in a separate column from the 5-year geometric means. If confidence intervals for the two periods overlap, this generally indicates no statistically significant difference between the two means ($\alpha = 0.95$). For both indicators, 2022 geometric means were lower than the 5-year mean at all locations except 012 and 144. This is likely due to statewide drought conditions¹⁷ and fewer large storms with high intensities (AECOM 2023). Annual geometric means met standards at all stations for *Enterococcus*. All stations from station 003 to points downstream had *E. coli* annual geometric means below the DEP standard.

Figure 3-7 shows the impact of rainfall on the three Lower Charles reaches on *Enterococcus* densities (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 2022, bacterial concentrations in the Upper Basin – where there are no CSO discharges - were routinely higher than Mid-Basin and Lower Basin stations in wet weather. The 2022 geometric means, the line within the box, met the state standard in dry and damp rain conditions, and only exceeded in 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 Figure 3-8 and Figure 3-9. Results are grouped by phases of the LTCP improvements with the last period (2014-2022) after the completion of all LTCP-related projects in the Charles. The plot includes the counts for all locations in the Charles combined, in each rainfall condition. 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

¹⁷ Massachusetts Drought Status – Past Droughts. Retrieved June 15, 2023. <https://www.mass.gov/info-details/drought-status#past-droughts-and-declaration->

swimming standard in dry and damp weather, although individual high counts are still seen in all conditions. The most pronounced change is in the Middle and Lower Charles Basins, which met the geometric mean swimming standard in all conditions besides heavy rain.

Mapped 2022 compliance rates with State statistical threshold values by rainfall condition are shown in Figures 3-10 (*Enterococcus*) and 3-11 (*E. coli*). All stations exhibited high compliance for *Enterococcus* in dry weather. Most Upper Basin stations showed lower compliance for *E. coli* in damp weather than *Enterococcus*. Given the ongoing drought during the sampling season, only the upper stations of the Upper Basin between the Watertown Dam and Beacon Street Bridge presented low compliance rates during wet weather. 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).

Table 3-6. Geometric mean indicator bacteria, Charles River Basin, 2017 – 2021 and 2022.

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

Station	Location	Surface or Bottom	Number of samples		<i>Enterococcus</i> (95% CI) ¹ MPN/100 mL DEP limit: 35 MPN/100 mL		<i>E. coli</i> (95% CI) ¹ MPN/100 mL DEP limit: 126 MPN/100 mL	
			2017 – 21	2022	2017 – 21	2022	2017 – 21	2022
			012	Newton/Watertown, footbridge upstream of Watertown Dam	S	195	26	58 (45-74)
001	Newton, near Nonantum Rd., rear of DCR skating rink	S	242	21	84 (65-107)	34 (14-84)	323 (273-383)	206 (101-422)
144	Brighton, downstream of N. Beacon St. bridge, Faneuil Brook outlet, BOS032 (closed 1999)	S	140	21	49 (35-71)	24 (8-69)	263 (210-328)	321 (185-557)
002	Allston, downstream of Arsenal Street bridge, BOS033	S	242	21	62 (48-82)	23 (10-55)	266 (225-315)	259 (145-464)
003	Allston/Cambridge, midstream, near Mt. Auburn Street, between CAM005 and CAM007	S	242	21	46 (35-61)	11 (5-23)	276 (234-326)	86 (46-161)
004	Allston/Cambridge, midstream, between River Street and Western Avenue bridges	S	143	21	23 (15-34)	4 (1-8)	169 (128-223)	36 (20-64)
005	Cambridge, near Magazine Beach, upstream of Cottage Farm	S	333	44	47 (37-59)	12 (6-22)	216 (184-253)	96 (67-138)
006 ²	Cambridge/Boston, midstream, downstream of Cottage Farm, BU bridge	S	181	21	33 (24-47)	14 (6-31)	174 (141-215)	68 (39-118)
007	Cambridge, near Memorial Dr., MIT Boathouse	S	241	21	29 (22-38)	11 (5-26)	168 (139-204)	43 (23-79)
		B	143	21	39 (28-55)	8 (3-18)	173 (131-227)	43 (29-65)
145	Boston (Charlesgate), Muddy River/Stony Brook outlet	S	242	21	47 (36-62)	8 (3-21)	280 (227-345)	84 (51-139)
008	Cambridge/Boston, midstream, downstream of Harvard Bridge	S	143	21	18 (12-27)	5 (1-15)	119 (87-162)	35 (15-82)
		B	143	21	23 (15-35)	10 (4-22)	146 (106-199)	71 (44-116)
009	Cambridge/Boston, midstream, upstream of Longfellow Bridge near Community Sailing	S	242	21	14 (10-18)	1 (0-3)	108 (86-135)	17 (7-38)
		B	143	21	2 (1-2)	1 (0-2)	20 (14-27)	18 (8-40)
010	Boston, downstream of Longfellow Bridge, MWR022	S	143	21	7 (5-10)	2 (0-5)	52 (38-71)	16 (8-30)
		B	143	21	7 (5-10)	3 (1-7)	22 (16-30)	16 (9-28)
210	Cambridge, Cambridge Pkwy (at CAM017)	S	182	21	12 (9-16)	3 (1-7)	92 (72-118)	17 (8-36)
166	Boston, old Charles River dam, rear of Science Museum	S	126	22	8 (5-11)	5 (2-10)	81 (62-106)	30 (15-60)
011	Boston, upstream of river locks (Charles River Dam) and I-93, near Nashua St.	S	242	21	18 (14-24)	4 (1-11)	103 (83-128)	45 (15-136)
		B	143	21	25 (18-33)	11 (5-23)	69 (53-89)	39 (20-74)

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

² Includes samples taken at both 006 and 206.

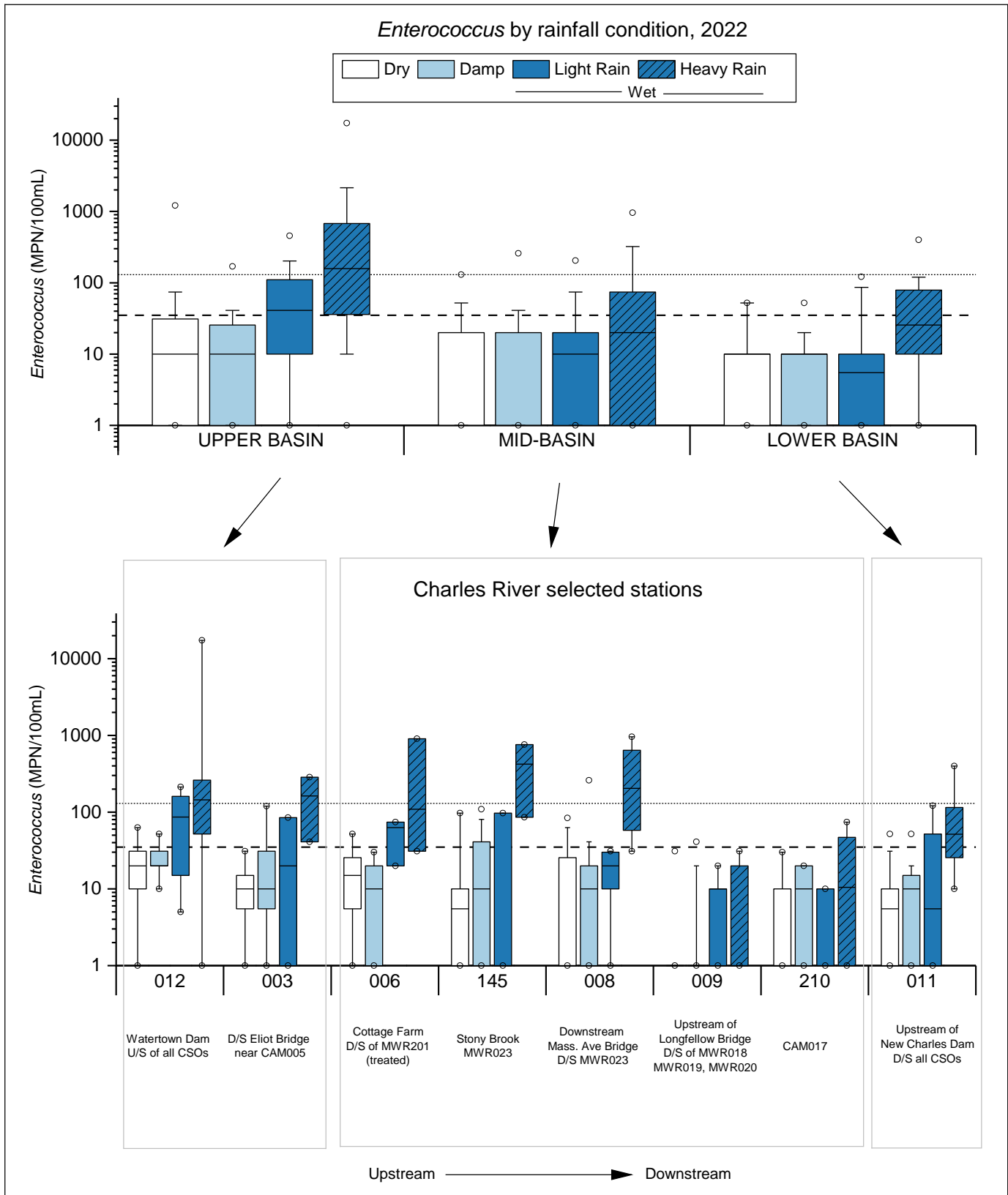


Figure 3-7. Enterococcus by rainfall condition, Charles Basin, 2022.

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.

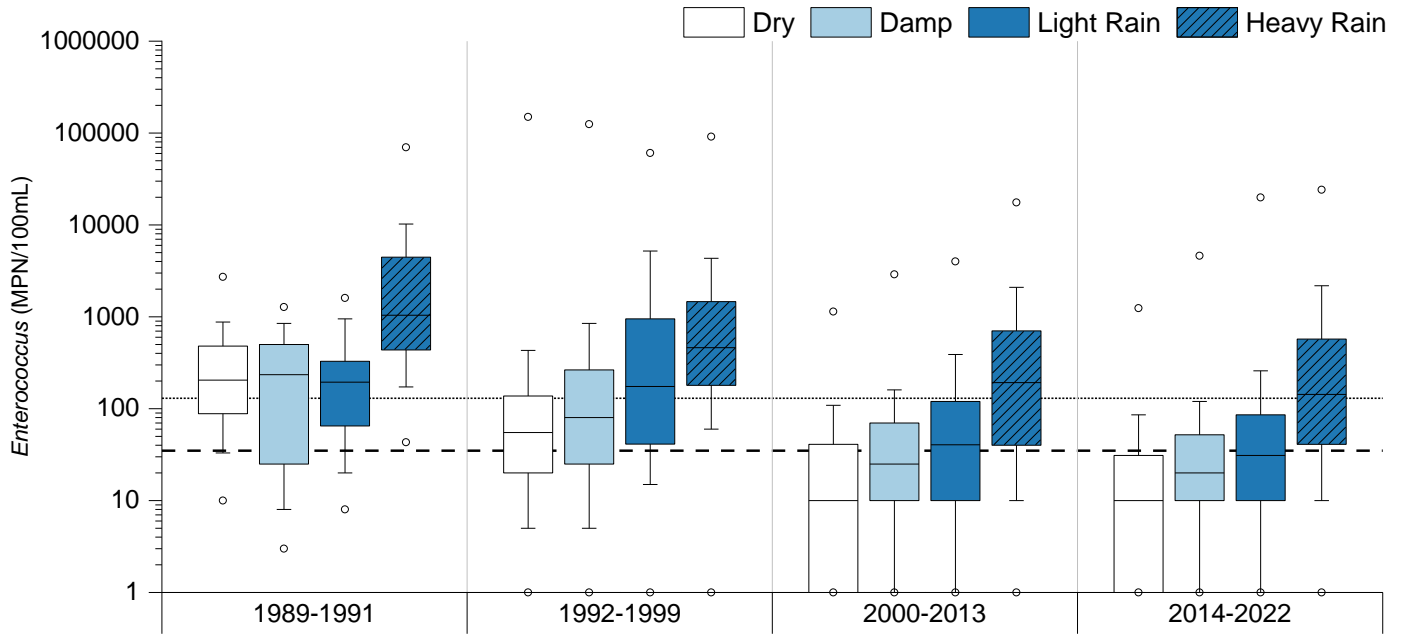


Figure 3-8. *Enterococcus* over time, Upper Charles Basin (upstream of most CSOs) by phase of Long Term CSO Plan and rainfall condition.

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.

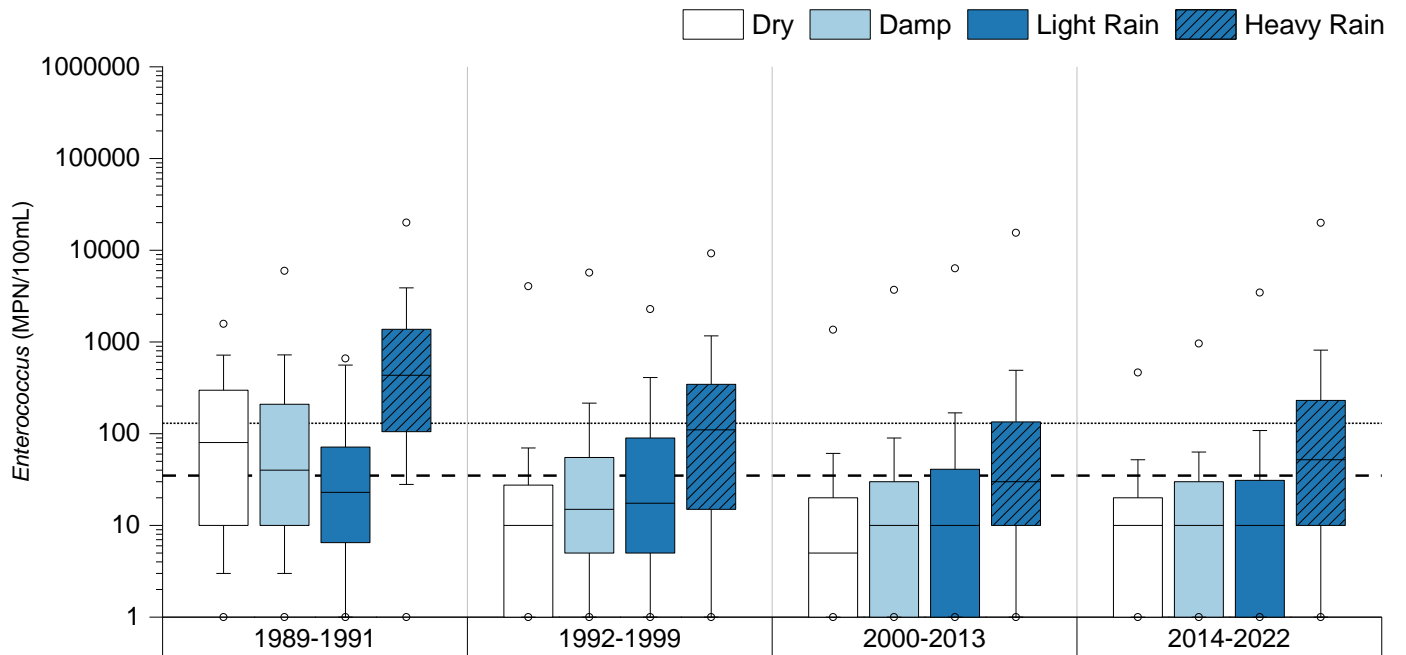


Figure 3-9. *Enterococcus* over time, Lower and Middle Charles Basin by phase of Long Term CSO Plan and rainfall condition.

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.

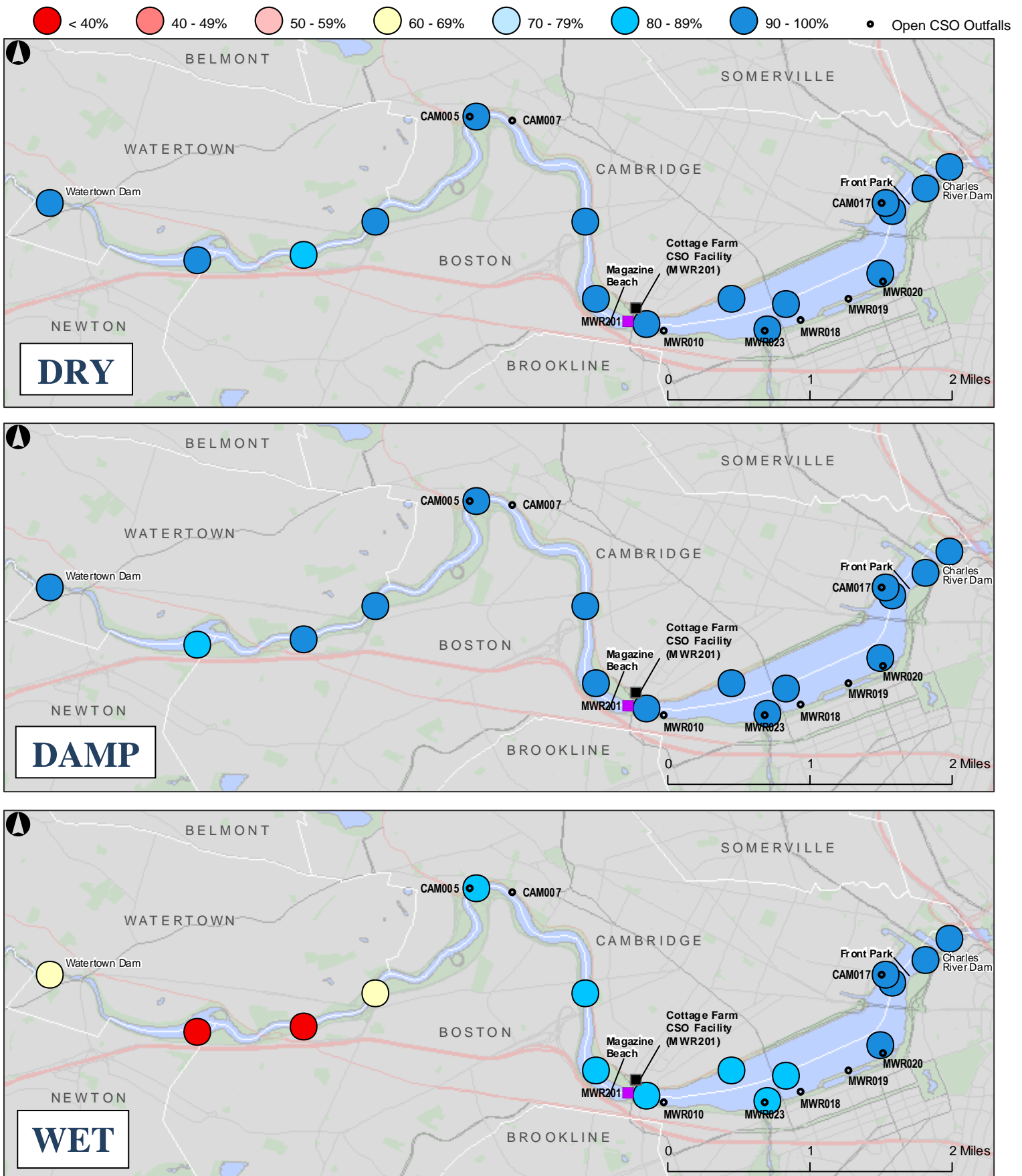


Figure 3-10. Charles River *Enterococcus* percent compliance by weather condition, 2022.

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.

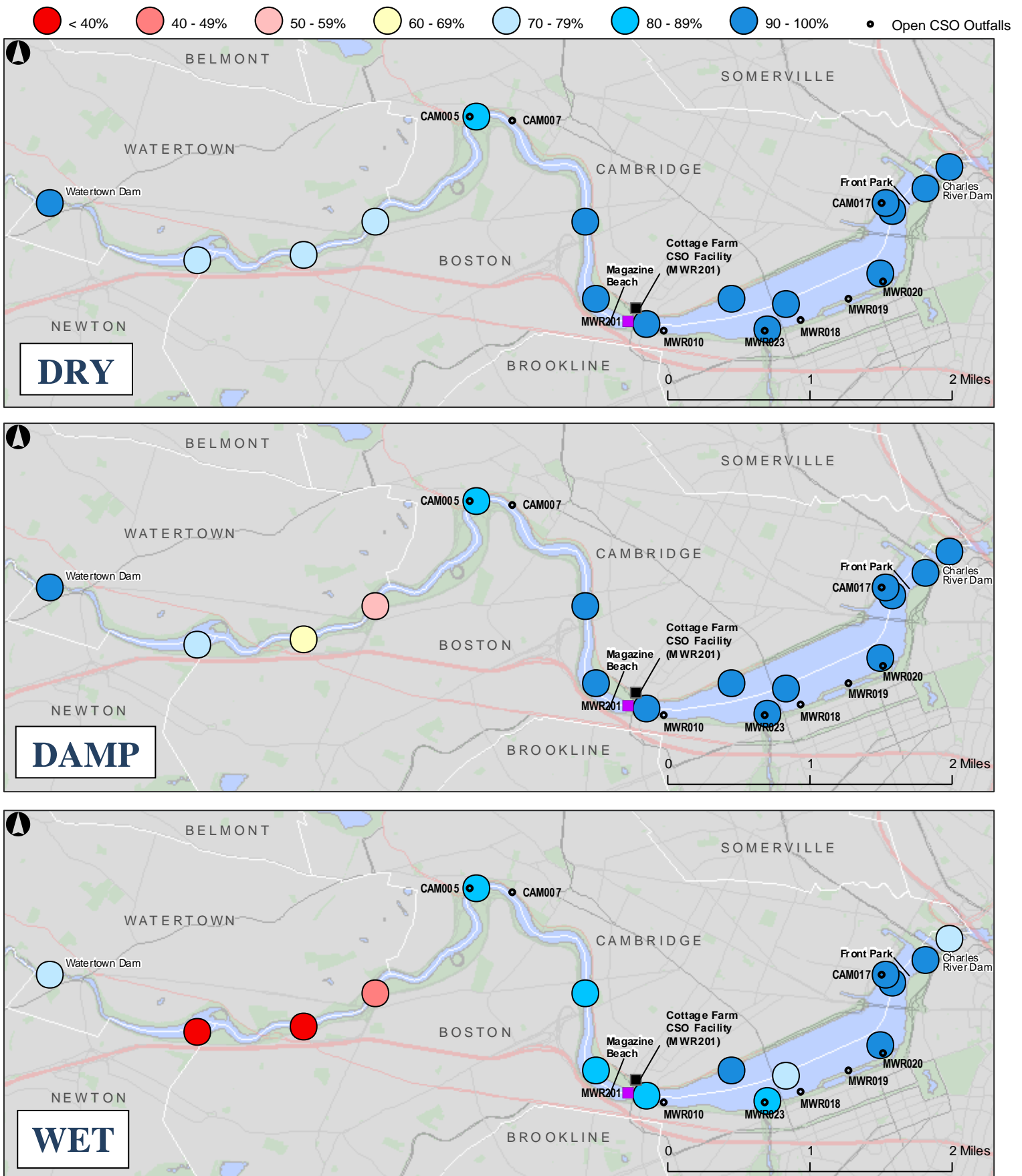


Figure 3-11. Charles River *E. coli* percent compliance by weather condition, 2022. Compliance with 410 MPN/100mL statistical threshold value. Rainfall is from nearest rain gauge to station. See Section 2.1.5 for definitions of rainfall conditions. Dots are the monitoring locations pictured in Figure 3-1 and listed in Table 3-1.

3.5 Summary of Charles River Water Quality

Spatial differences of 2022 bacterial water quality in the Charles Basin were most pronounced in wet conditions, where fewer samples met standards in much of the Upper Basin. Annual geometric means met standards for *Enterococcus* at all stations and all but the four most upstream stations for *E. coli*. Most stations routinely met *Enterococcus* and *E. coli* standards in all weather conditions with exceedances occurring in much of the Upper Basin. Percent compliance rates were high for all Mid-Basin and Lower Basin stations, even in wet weather. 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 2014-2022 period, after completion of all construction projects in the study area, the geometric mean of *Enterococcus* in all regions meets state standards in all but heavy rain.

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

Nutrients exhibited seasonal signals as expected with historic nutrient stations matching long term averages overall. Chlorophyll *a* trended equal to or lower than historic averages; with the exception of higher levels at Magazine Beach (station 005) in June and October.

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 CSO outfalls are shown on the map in Figure 4-1 with reach extent labels. Table 4-1 describes the reaches and the sampling locations within each reach.

In 2021, nutrient sampling was added to station 177 in the lower Mystic River basin. In 2019, station 308 was added at the CAM401A outfall, the beginning of Alewife Brook. This station joins 277 and 276 among sampling locations added to support the CSO performance assessment described in Chapter 1. Sampling at station 308 was discontinued in mid-2020 due to safety concerns and access issues.

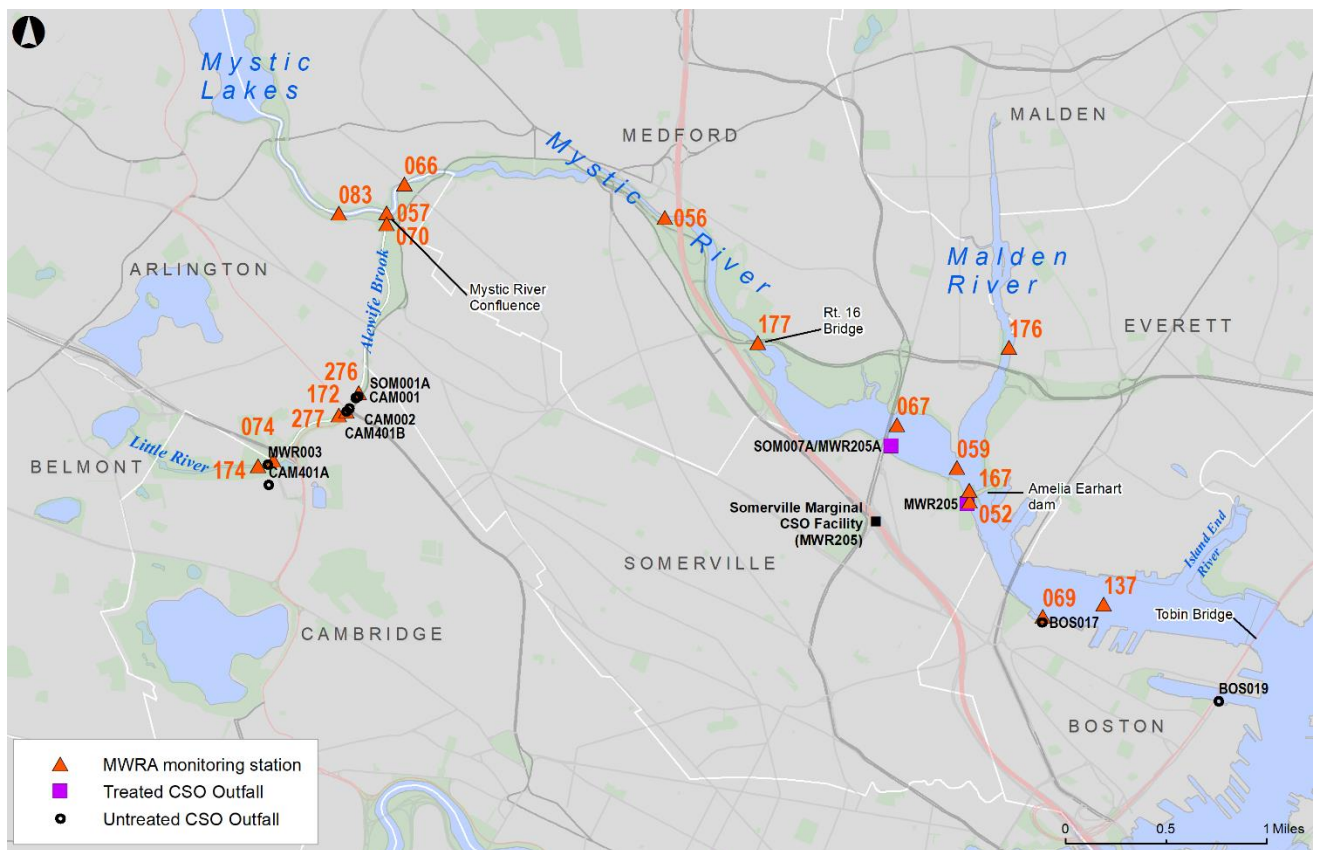


Figure 4-1. Map of Mystic River sampling locations.

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 2022, Somerville Marginal MWR205A/SOM007A had four discharge events, and Somerville Marginal MWR205 had 18 activations resulting in discharge below the dam. BOS017 did not discharge in 2022. CAM401A was the most frequent CSO discharge to Alewife Brook, discharging ten times in 2022.

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, of which there were none in 2022.¹⁸

Table 4-3 shows the MWRA meter results for CSOs affecting the Mystic River and Alewife Brook in calendar year 2022. 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.

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 x308, Cambridge *074, Cambridge/Arlington *277, Cambridge/Arlington *172, Cambridge/Arlington *276, Cambridge/Arlington *070, Arlington/Somerville	Little River, upstream of Rt. 2 and off ramp to Alewife T station. Upstream of all CSOs Alewife Brook at CAM401A outfall Downstream of CAM401A, MWR003 Upstream of CAM401B Downstream of CAM401B Downstream of SOM001A 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 *057, Medford †066, Medford *056, Medford	Upstream of confluence of Mystic River and Alewife Brook Confluence of Mystic River and Alewife Brook Boston Ave bridge, downstream side 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 *067, Medford *176, Medford/Everett 059, Somerville/Everett †*167, Somerville/Everett	Downstream of Rt. 16 bridge Rt. 28 bridge, downstream side, near Somerville Marginal MWR205A outfall Malden River, upstream of Rt. 16 bridge Confluence of Mystic and Malden Rivers 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 069, Charlestown †137, Charlestown/Everett	Downstream of Amelia Earhart dam, near Somerville Marginal CSO facility outfall (MWR205) Rear of Schrafft's Center at BOS017 outfall 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 2022.

Source	Alewife Brook	Upper Mystic River	Lower Mystic Basin	Mystic River mouth
CSOs (untreated)	6 active, 7 closed CAM401A ¹ MWR003 CAM001 CAM002 CAM401B 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 4 times in 2022	Somerville Marginal (MWR205 ¹) Activated 18 times in 2022
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 2022

² From MWRA-owned system.

Table 4-3. Mystic River/Alewife Brook CSO activations, results of meter data and facility records for 2022 system conditions and 2022 rainfall.¹

CSO Outfall	Activation Frequency	Total Discharge Duration (hr)	Total Discharge Volume (Million Gallons)
<i>Alewife Brook</i>			
CAM001 ¹	0	0	0.00
CAM002 ¹	0	0	0.00
MWR003 ²	0	0	0.00
CAM401A ¹	10	2.39	0.47
CAM401B ¹	0	0	0.00
SOM001A ³	1	0.08	0.03
TOTAL	11		0.50
<i>Mystic River (upstream of dam)</i>			
SOM007A/MWR205A (Somerville Marginal, high tide discharge only) ⁴	4	5.81	3.12
TOTAL	4	5.81	3.12
<i>Mystic River mouth (downstream of dam, marine outfalls)</i>			
MWR205 (Somerville Marginal Facility) ⁴	18	37.32	34.56
BOS017 ²	0	0	0.00
TOTAL	18		34.56

¹ Results from City of Cambridge meter data (City of Cambridge 2023).

² Metered data are estimates of outfall discharge calculated using data from sensors, taking into account physical configurations and constraints. (AECOM 2023)

³ Results from City of Somerville meter data (City of Somerville 2023).

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
2017 – 2021 ²	28% 1063 station visits	27% 997 station visits	45% 1700 station visits	100% 3760 station visits
2022	21% 83 station visits	37% 147 station visits	42% 168 station visits	100% 398 station visits

¹ See Section 2.1.5 for descriptions of rainfall conditions.

² 2017-2019 samples tended to be collected in wetter conditions with increased focus on sampling following large storms.

4.3 Summary of water quality, 2018-2022

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, 2018 – 2022.

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	19.1±3.9	100	6.9-25.9	448	21.6±4.3	99.7	10.4-28.6	336	21.6±4.4	99.2	9.4-28.6	249	21.5±4.6	100	9.5-27.3	83	18.9±2.4	100	9.6-23.1	163
	Winter		6.6±1.6	100	4.2-8.2	15	4±1.9	100	1.5-8.2	47	4.5±2.1	100	1.2-8.9	41	6.7±3	100	3.8-9.8	3	3.8±1.4	100	1.6-6.2	28
Bottom water dissolved oxygen (mg/L) ¹	Summer	≥ 5.0	ND	-	ND		5.1±2.1	54.7	0.2-8.9	137	6.2±3.1	64.5	0.1-15.2	169	6.8±2.9	74.5	1.2-15.3	47	6.7±1.8	83.7	1.5-11.4	135
	Winter	≥ 5.0	ND	-	ND		11.4±0.5	100	10.2-12.3	16	10.8±1.4	100	5.8-12.3	32	9.8±2.6	100	6.9-11.5	3	10.5±0.4	100	9.6-11.4	27
pH ² (S.U.)		6.5-8.3 (8.5 marine)	6.7±0.2	99.8	6.5-7.9	644	7.4±0.5	94	6.3-8.7	745	7.4±0.7	83.3	6.2-9.4	693	7.4±0.7	79.3	6.3-9.3	184	7.8±0.3	99.2	6.3-8.4	476
Water clarity	Total Suspended Solids (mg/L)	NS	ND	-	ND		3.4±2.1	-	0.2-14.3	248	7±7.7	-	1.1-74.6	166	ND	-	ND	-	3.7±2.9	-	1.1-18.5	180
	Secchi depth (m) ³	NS		-	-	-	1.1±0.5	-	0.4-2.3	124	0.9±0.3	-	0.2-1.9	0.2-1.9	0.7±0.3	-	0-1.6	104	2.2±0.8	-	0.6-4.9	247
	Turbidity (NTU)	NS	8.8±7.1	-	0.1-38.1	220	4.5±3.8	-	0-50.5	454	6.1±3.9	-	0.5-22.6	439	7.6±5.2	-	0.1-29.3	145	4.2±5.1	-	0-93.4	417

For footnotes, see following page.

Table 4-5. Summary of water quality, Mystic River/Alewife Brook, 2018 - 2022, 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		26 (21-32)	85.7	0-620000	566
	<i>E. coli</i>	126 / 410 ^{5,6}	748 (688-814)	39.6	0-1990000	1271	156 (142-171)	80.2	0-72700	843	109 (95-126)	79.6	0-24200	636	199 (149-264)	67.7	0-44100	198	ND	-	ND	
	<i>Enterococcus</i>	35/ 130 ⁵	255 (233-280)	31.3	0-201000	1272	53 (46-60)	67.9	0-19900	845	13 (11-16)	85.6	0-19900	638	33 (24-47)	73.7	0-14100	198	5 (4-7)	88.2	0-24200	568
Nutrients (µmol/L)	Phosphate	NS	ND	-	ND		0.5±0.4	-	0-3.7	248	0.8±1.4	-	0-11.1	166	ND	-	ND		0.8±0.4	-	0-2.5	225
	Ammonium	NS	ND	-	ND		12.8±9.8	-	0.1-44.3	249	9.4±8	-	0-32.4	166	ND	-	ND		3.9±3	-	0-12.7	225
	Nitrate+nitrite	NS	ND	-	ND		48.9±23	-	1.5-128	249	36.2±25.4	-	0-76.7	166	ND	-	ND		7.5±7.4	-	0-34.1	225
Algae (µg/L)	Chlorophyll <i>a</i>	NS	ND	-	ND		6.6±6.2	-	0.7-55.3	249	18±24.1	-	0.9-156	166	ND	-	ND		2.9±3.6	-	0.1-19.6	225

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, 2022*

This section reports spatial trends for water quality parameters measured in the Mystic River/Alewife Brook in 2022.

4.4.1 Physical measurements

Temperature. Summer (June to October) mean temperatures for 2022 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 2022.

Dissolved Oxygen. Dissolved oxygen is shown in the center graph of Figure 4-2. Mean surface dissolved oxygen concentrations met the State standard of ≥ 5.0 mg/L at all locations in the Mystic and Malden Rivers. Dissolved oxygen in Alewife Brook is typically lower than the Mystic and is often below the State standard. Average summer bottom water concentrations were below the State standard at station 057 at the Alewife Brook confluence, station 056 near Medford Square, and at station 177 downstream of the Route 16 bridge. Surface dissolved oxygen in the Lower Mystic basin was very high during periods of observed elevated chlorophyll.

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 low, with all stations upstream of the Dam not meeting the water clarity guideline of 1.2 meters most of the time. Alewife Brook locations are often clear to the bottom and too shallow to measure Secchi depth. River depth at those locations are typically 0.5 meters.

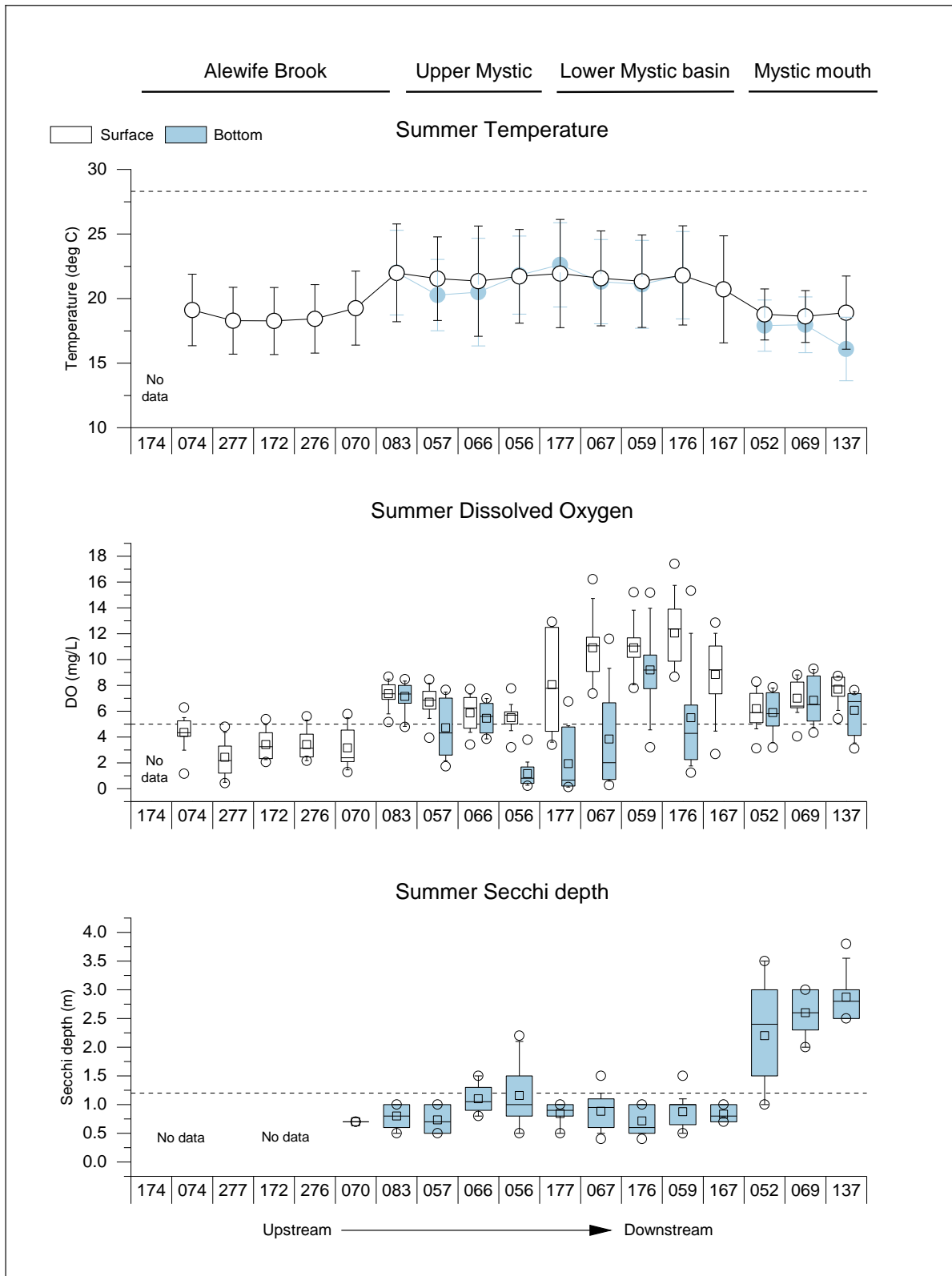


Figure 4-2. Summer (June-October) temperature, dissolved oxygen, and Secchi depth, Mystic River, 2022.

Dashed lines are State standards or guideline (maximum for temperature, minima for DO and Secchi). Station 174 was too shallow for accurate summer temperature and DO readings in 2022. Stations 174, 074, 277, 172 and 276 were typically too shallow for Secchi measurements in the summer months of 2022.. Hollow squares indicate the arithmetic mean.

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 upstream Mystic locations (083 upstream of Alewife Brook and 066 at Boston Ave.), midstream (177 downstream of Route 16 bridge) downstream (167 at Amelia Earhart Dam) and river mouth (137). Monthly averages are missing from the plots for January for stations 083 and 177, as many portions of the rivers were inaccessible due to freezing.

Regionally, ammonium, nitrate/nitrite, and phosphate results show relatively strong seasonal effects, as biological activity increases during the summer months. 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 2022 were similar to the previous five-year average (2017-2021) except as described below. Seasonal signals are more evident in nitrogenous compounds than in total phosphorus or phosphate. Station 177 results varied from its first year of nutrient sampling, particularly in late summer and early fall. Station 167 had elevated total phosphorous and phosphate results in August and September. Chlorophyll *a* values were higher in November than the five-year average, at stations 167 and 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. Nitrogenous compounds varied slightly from the previous five-year seasonal pattern. Chlorophyll *a* was lower than the typical average for most of 2022.

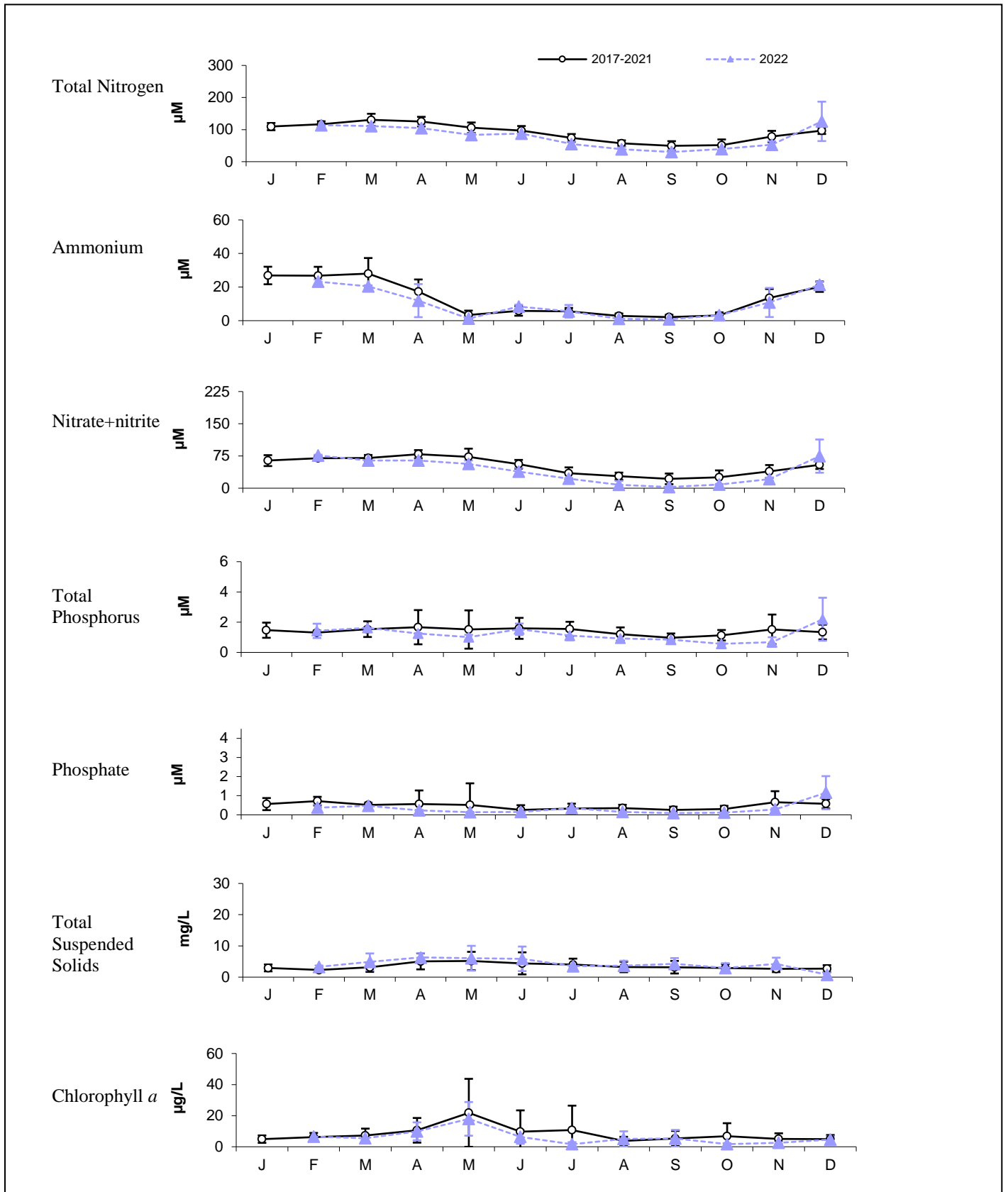


Figure 4-3. Monthly average nutrients, TSS and Chlorophyll, 2017 – 2021 and 2022, Station 083, Mystic upstream of Alewife Brook.
 Error bars are ± 1 SD. Note different scales than for Figures 4-4, 4-5, 4-6 and 4-7 for most parameters.

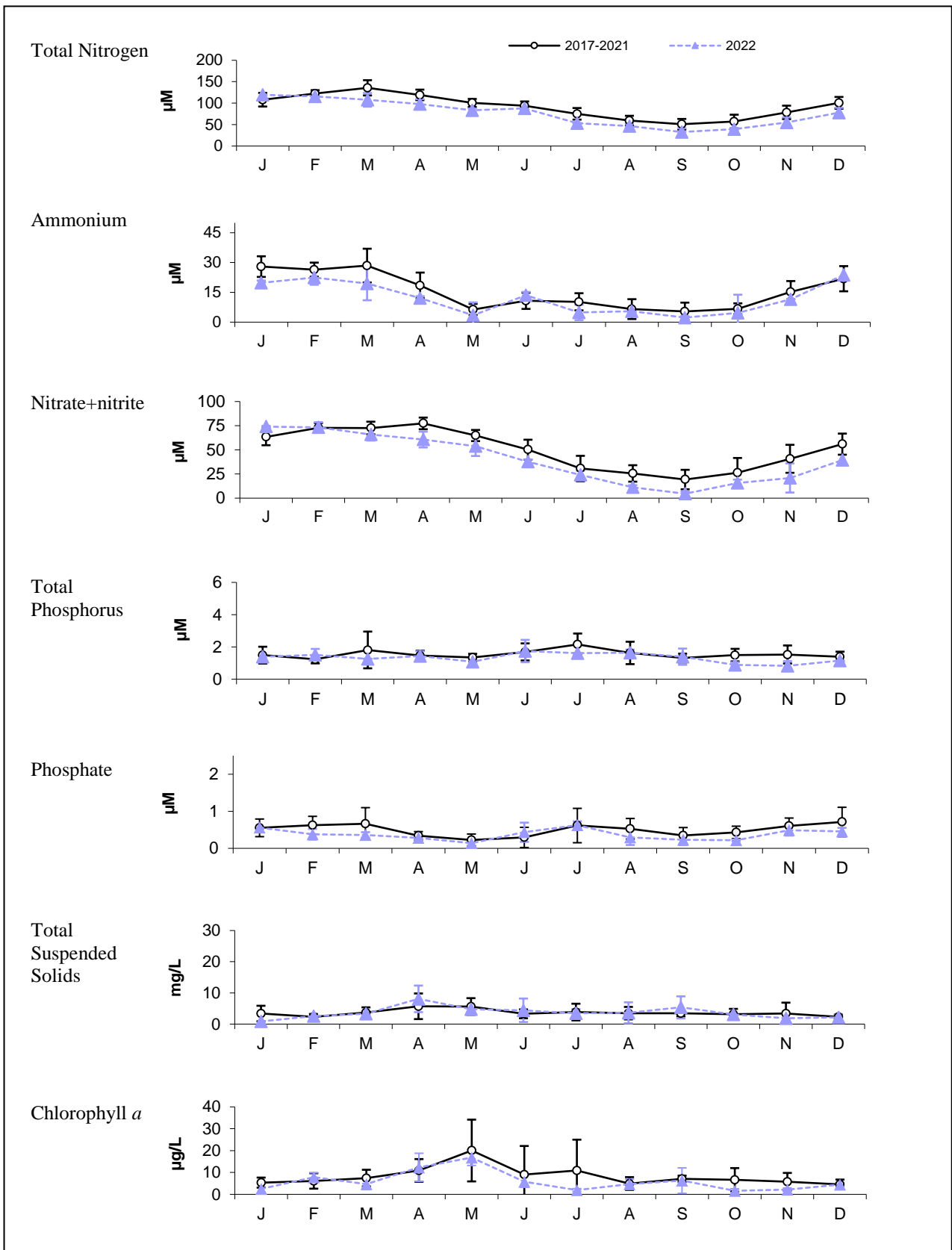


Figure 4-4. Monthly average nutrients, TSS and Chlorophyll 2017 – 2021 and 2022, Station 066, Boston Ave.

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

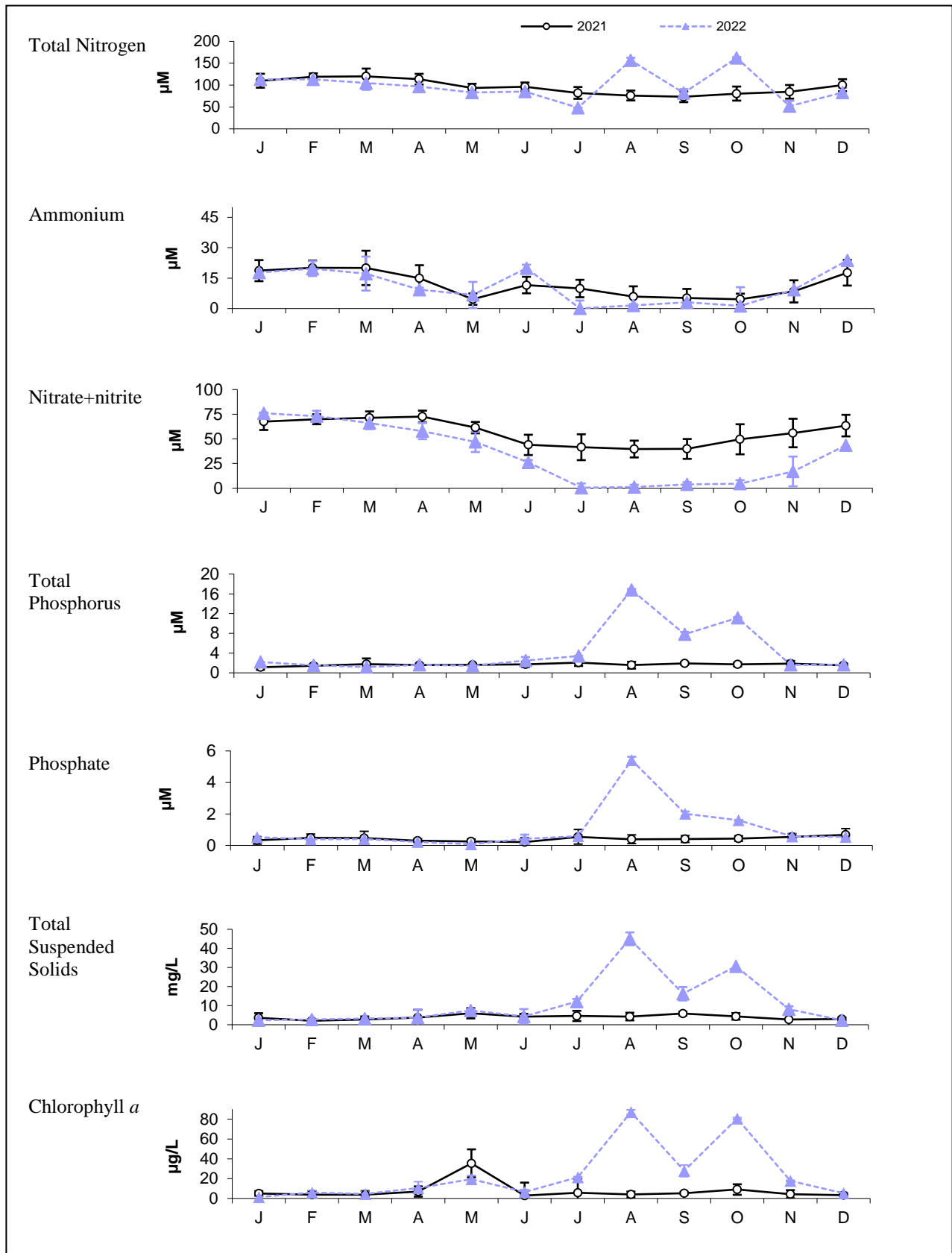


Figure 4-5. Monthly average nutrients, TSS and Chlorophyll 2017-2021 and 2022, Station 177, Route 16 Bridge.

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.

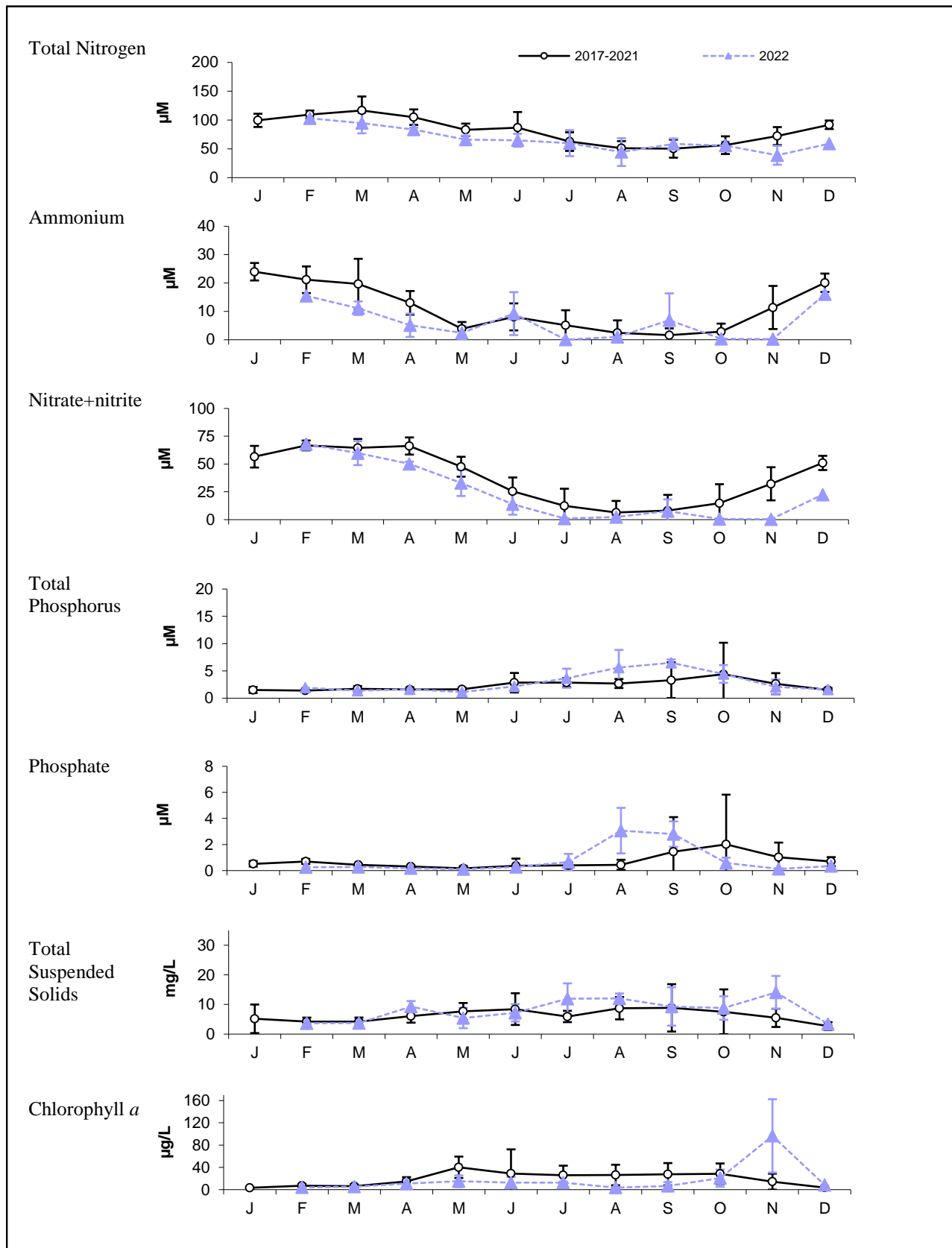


Figure 4-6. Monthly average nutrients, TSS and Chlorophyll 2017 – 2021 and 2022, Station 167, Amelia Earhart Dam (upstream/freshwater).

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

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 2022 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 2022. The center graph shows percentile plots of *E. coli*, which is only monitored in the freshwater portion of the Mystic River, and the bottom graph fecal coliform, which is only monitored in the marine portion of the Mystic River in place of *E. coli*.

As shown in Figure 4-8, in 2022 all locations in Alewife Brook failed to meet both *E. coli* and *Enterococcus* geometric mean standards during damp and wet weather conditions. Bacteria concentrations at stations 083 (Mystic Lakes outlet, before the confluence with the Alewife Brook) and 057 (Alewife Brook/Mystic River confluence) exhibited a similar distribution in wet weather. Samples taken in the Lower Mystic Basin met *Enterococcus* standards most of the time during all weather conditions. Malden River station 176 met standards most of the time. Marine station 137 at the Mystic mouth demonstrated high compliance for both *Enterococcus* and fecal coliform in all weather conditions. Results from the other two marine stations also showed high compliance in dry weather with a few elevated results in damp and wet weather.

Geometric means for each indicator for 2017 - 2021 and 2022 appear in Table 4-6 (Alewife Brook) and 4-7 (Mystic River), for all weather conditions combined. As shown in Table 4-4, nearly 80% of the samples collected in this region in 2022 were in damp or wet conditions, despite the lower than average annual rainfall. Overall, annual geometric means did not meet water quality standards in Alewife Brook and at some locations in the Mystic River. Stations 083 and 057 in the Upper Mystic and station 167 in the Lower Mystic Basin all met standards for both indicators. Malden River station 176 was below the state standard for *Enterococcus* but exceeded it for *E. coli*. Like the Charles River, *E. coli* counts are consistently higher than *Enterococcus* counts at all stations.

Annual geometric means met standards for both *Enterococcus* and fecal coliform at all of the Mystic mouth stations, including 052, downstream of Amelia Earhart Dam, 069 at CSO outfall BOS017 and 137 upstream of the Tobin Bridge.

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* densities on the four river reaches in 2022, along with locations near CSO outfalls. In the Alewife, the Little River station 174 upstream of CSOs – as well as all other stations – fails to meet standards in wet weather and also often in dry weather, suggesting persistent contamination not necessarily tied to CSOs. In the Upper Mystic and Lower Mystic, results were often below the statistical threshold value in all weather conditions. Station 052 at 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--2022 period following completion of all LTCP-related construction in this region. *Enterococcus* results in Figure 4-11 show slight improvement over time in the Mystic River in dry and wet weather since the early 1990s, particularly in dry and light rain conditions. In the five years of data collected following LTCP project completion, results are similarly distributed to the previous LTCP phase.

Mystic River 2022 compliance rates with statistical threshold values for both indicators are shown 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*. Station 056 near Medford Square exhibited low compliance in wet weather without influence of nearby CSO. Mystic stations 057 and 066 near the confluence with Alewife Brook demonstrate the limited impact of Alewife Brook on the Mystic in dry and damp weather. Stations 059 and 167 near Amelia Earhart Dam and downstream of the Somerville Marginal CSO relief outfall demonstrated high *Enterococcus* compliance rates in dry, damp and wet weather in 2022.

Alewife Brook 2022 compliance rates with statistical threshold values 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 generally low in most weather conditions, though stations 277,172 and 276 were 100% compliant in dry weather for *E. coli*. All Alewife stations were below 50% compliant in wet weather for both indicators. Like the Charles, some discrepancies in compliance between the two indicators exist.

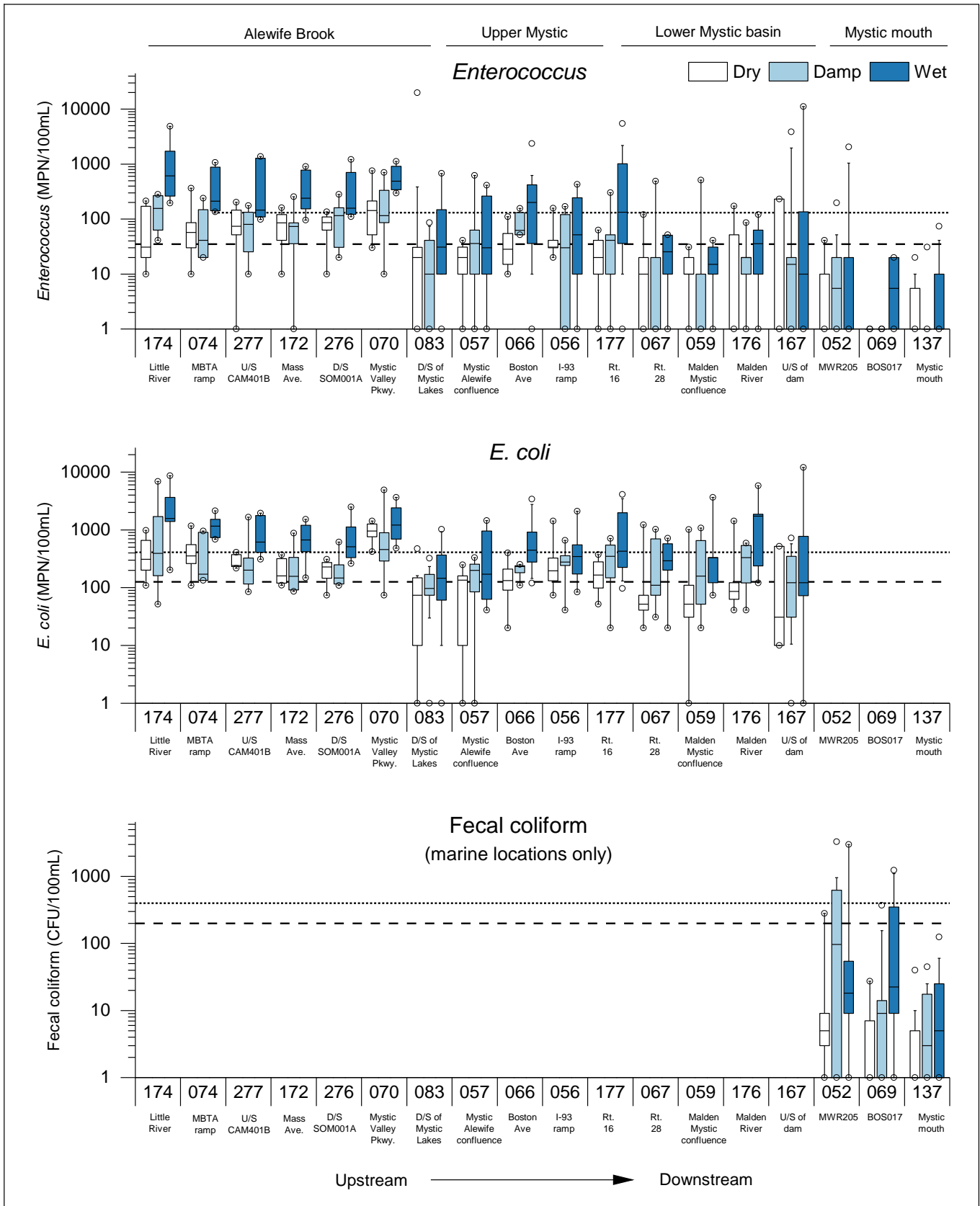


Figure 4-8. Indicator bacteria concentrations, Mystic River/Alewife Brook, 2022.

Dashed lines show MADEP *Enterococcus* and *E. coli* and the former fecal coliform geometric mean standards. Dotted lines show the statistical threshold values for *Enterococcus* 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, 2017 – 2021 and 2022.

All Alewife Brook stations are designated for shoreline sampling (including weekends), shaded.

Station	Location	Surface or Bottom	Number of samples		<i>Enterococcus</i> (95% CI) counts/100 mL DEP limit: 35 counts/100 mL		<i>E. coli</i> (95% CI) counts/100 mL DEP limit: 126 counts/100 mL	
			2017–2021	2022	2017 – 2021	2022	2017 – 2021	2022
174	Cambridge, Little River, upstream of Rt. 2 and off ramp to Alewife T station	S	234	20	189 (150-237)	186 (96-358)	552 (459-663)	684 (361-1296)
074	Cambridge, Alewife Brook, at off ramp to Alewife T station	S	236	20	162 (129-204)	103 (59-178)	668 (564-792)	494 (329-742)
277	Arlington, Alewife Brook, upstream of 4 CSO outfalls near Mass. Ave bridge.	S	191	20	281 (227-348)	91 (45-182)	737 (605-899)	368 (248-546)
172	Arlington, Alewife Brook, upstream of Massachusetts Ave bridge, midchannel	S	236	20	222 (182-271)	91 (47-176)	633 (535-748)	286 (189-432)
276	Arlington, Alewife Brook, downstream of SOM001A	S	193	20	250 (202-309)	113 (69-185)	611 (505-739)	281 (191-413)
070	Arlington, Alewife Brook, off Mystic Valley Parkway bridge	S	237	20	317 (264-380)	212 (123-365)	736 (624-869)	789 (518-1200)

Table 4-7. Geometric mean indicator bacteria, Mystic River, 2017 – 2021 and 2022.

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

Station	Location	Surface or Bottom	Number of samples		<i>Enterococcus</i> (95% CI) counts/100 mL DEP limit: 35 counts/100 mL		<i>E. coli</i> ¹ (95% CI) counts/100 mL DEP limit: 126 counts/100 mL	
			2017 – 2021	2022	2017 – 2021	2022	2017 – 2021	2022
083	Medford, upstream of confluence of Mystic River and Alewife Brook	S	354	44	47 (38-58)	19 (9-38)	115 (100-132)	73 (43-123)
057	Medford, confluence of Mystic River and Alewife Brook	S	230	20	57 (43-74)	23 (10-51)	139 (117-165)	93 (39-224)
066	Medford, Mystic River, Boston Ave bridge	S	127	25	43 (32-58)	65 (34-124)	130 (106-159)	265 (173-407)
056	Medford, Mystic River, upstream of I-93 bridge	S	229	20	55 (43-70)	25 (10-59)	254 (217-297)	276 (184-414)
177	Medford, Downstream of Rt. 16 bridge, mid-channel	S	125	25	24 (16-34)	45 (18-110)	201 (158-255)	304 (185-499)
067	Medford, Mystic River, Rt. 28 bridge	S	228	20	9 (7-13)	7 (2-18)	83 (64-108)	153 (85-275)
059	Everett, confluence of Mystic and Malden Rivers	S	116	20	5 (3-7)	7 (3-16)	69 (49-98)	133 (57-308)
176	Malden River, upstream of Rt. 16 bridge	S	229	20	32 (23-43)	11 (4-26)	164 (125-215)	311 (166-581)
167	Medford, Mystic River, upstream side of Amelia Earhart Dam	S	231	22	12 (9-16)	13 (3-47)	71 (57-88)	112 (41-300)
052 ²	Somerville, Mystic River, near Somerville Marginal CSO facility (MWR205) – marine	S	138	20	24 (16-37)	4 (1-13)	<i>136 (87-211)</i>	<i>33 (8-126)</i>
		B	55	10	6 (3-10)	2 (0-8)	<i>19 (13-29)</i>	<i>9 (4-19)</i>
069 ²	Charlestown, near Schrafft's Center at BOS-017 outfall - marine	S	138	20	14 (9-22)	1 (0-2)	<i>94 (65-137)</i>	<i>16 (5-48)</i>
		B	39	14	2 (1-4)	0 (0-1)	<i>10 (5-18)</i>	<i>2 (0-6)</i>
137 ²	Mystic River, upstream of Tobin Bridge – marine/Inner Harbor	S	112	24	3 (2-4)	2 (1-4)	<i>19 (13-27)</i>	<i>7 (4-15)</i>
		B	111	24	1 (1-1)	1 (0-2)	<i>2 (1-3)</i>	<i>1 (0-1)</i>

¹Results in italics are fecal coliform, not *E. coli*.

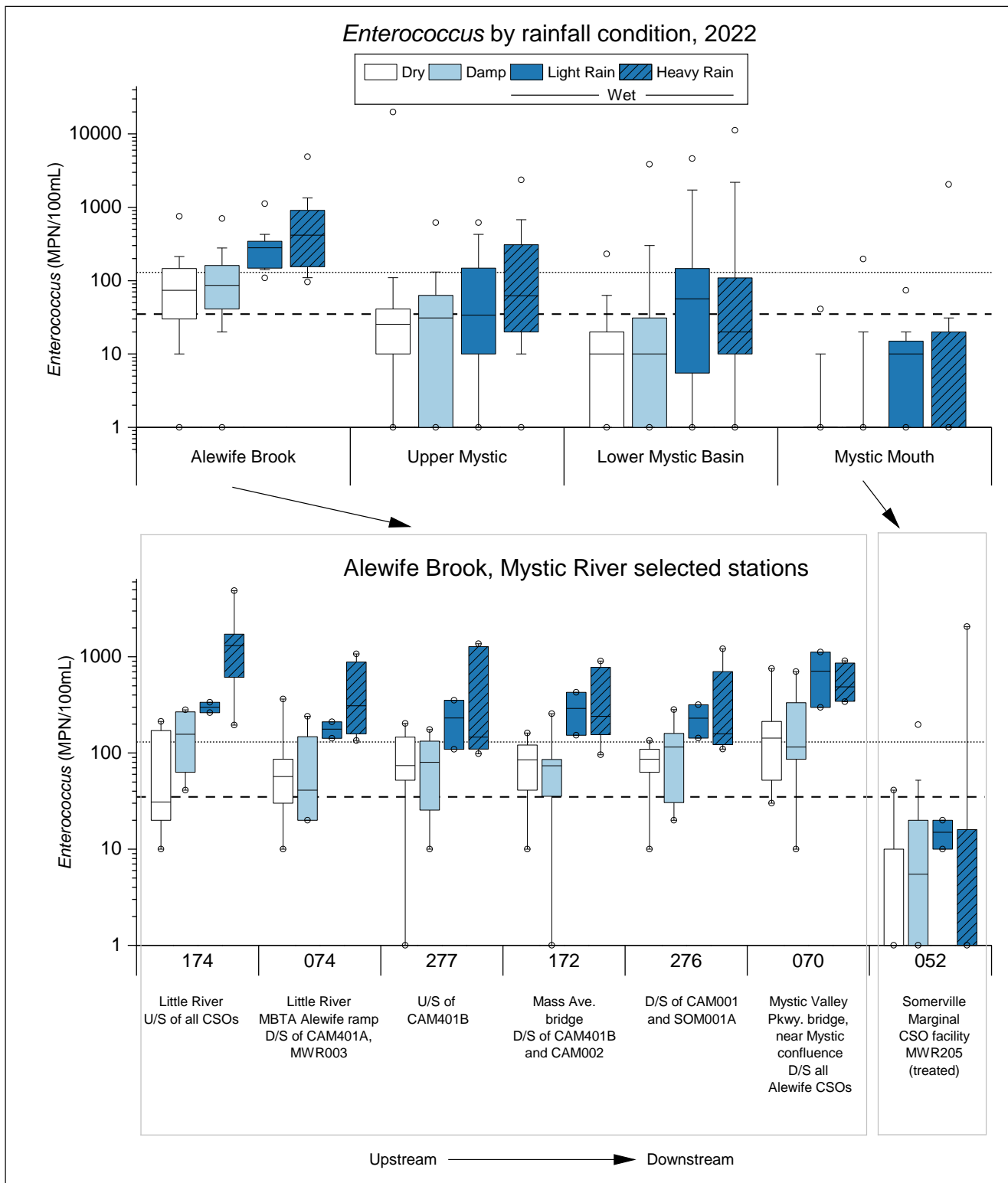


Figure 4-9. Enterococcus by rainfall condition, Mystic River/Alewife Brook, 2022. Dashed lines show MADEP state geometric mean standards (35 MPN/100mL for freshwater and marine). Dotted lines show statistical threshold value (130 MPN/100mL for freshwater and marine). Rainfall is from the BWSC Charlestown or USGS Fresh Pond gauge. See Section 2.1.5 for descriptions of rainfall conditions. “D/S”: downstream; “U/S”: upstream.

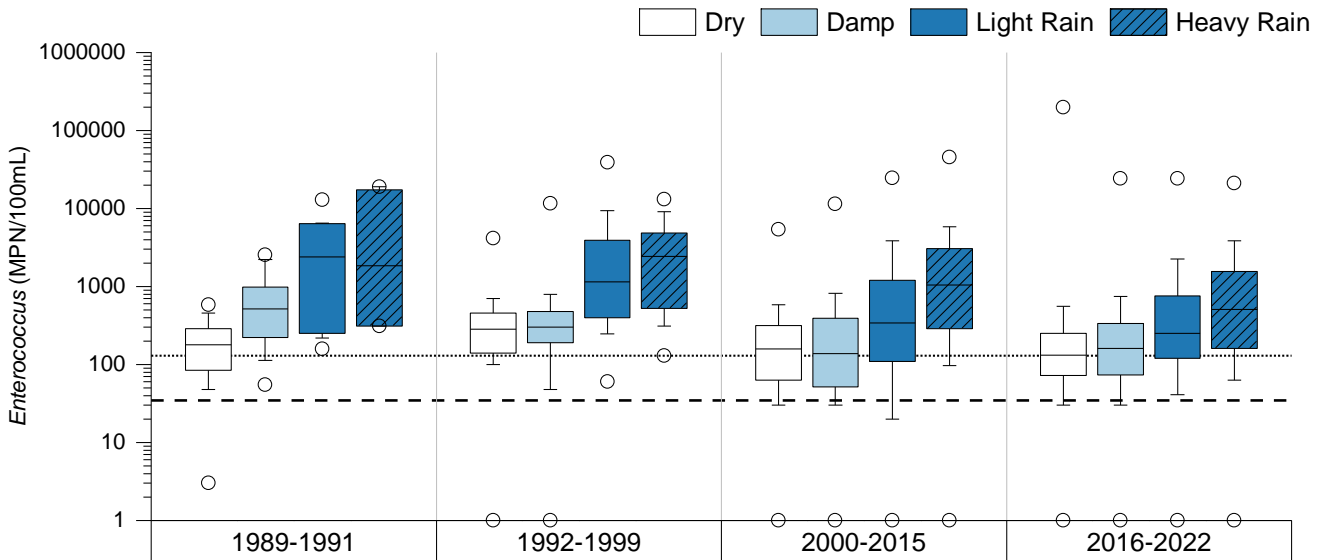


Figure 4-10. *Enterococcus* over time, Alewife Brook by phase of CSO LTCP and rainfall condition. Dashed line shows State geometric mean standard (35 MPN/100mL), dotted line shows statistical threshold value (130 MPN/100mL). Data includes results for stations 174, 074, 277, 172, 276 and 070. Rainfall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

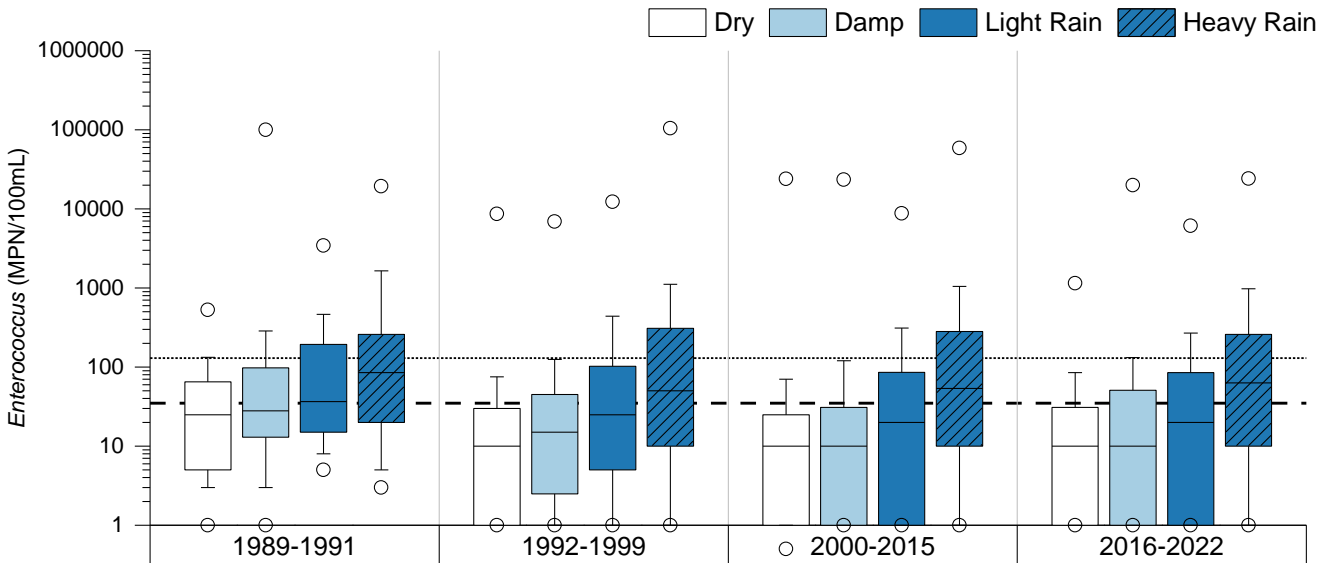


Figure 4-11. *Enterococcus* over time, Mystic River by phase of CSO LTCP and rainfall condition. Dashed line shows State geometric mean standard (35 MPN/100mL), dotted line shows statistical threshold value (130 MPN/100mL). Data includes results for all Mystic River stations in Table 4-1 excepting Alewife Brook. Rainfall is NOAA rainfall from Logan airport. See Section 2.1.5 for descriptions of rainfall conditions.

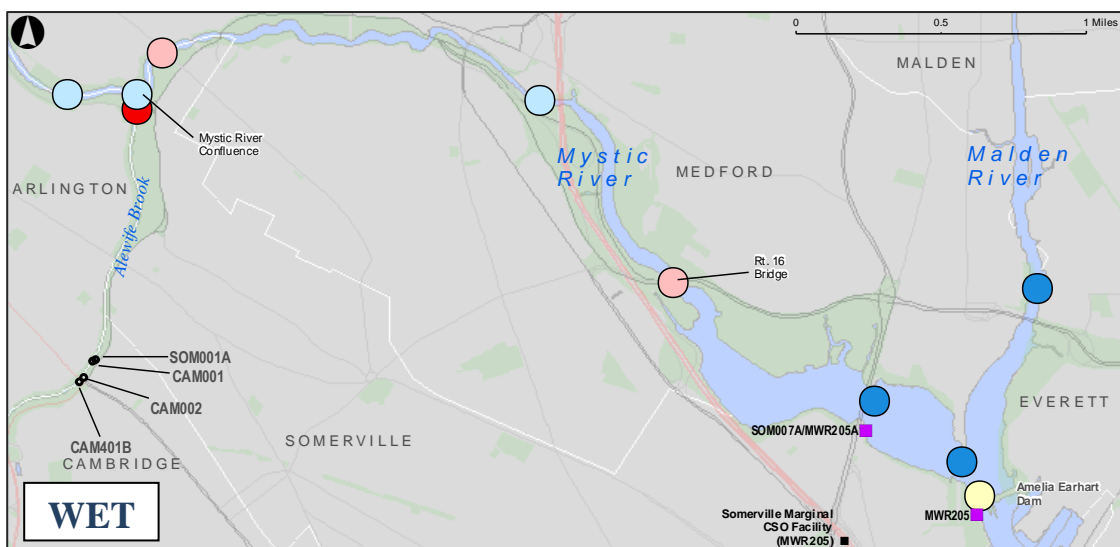
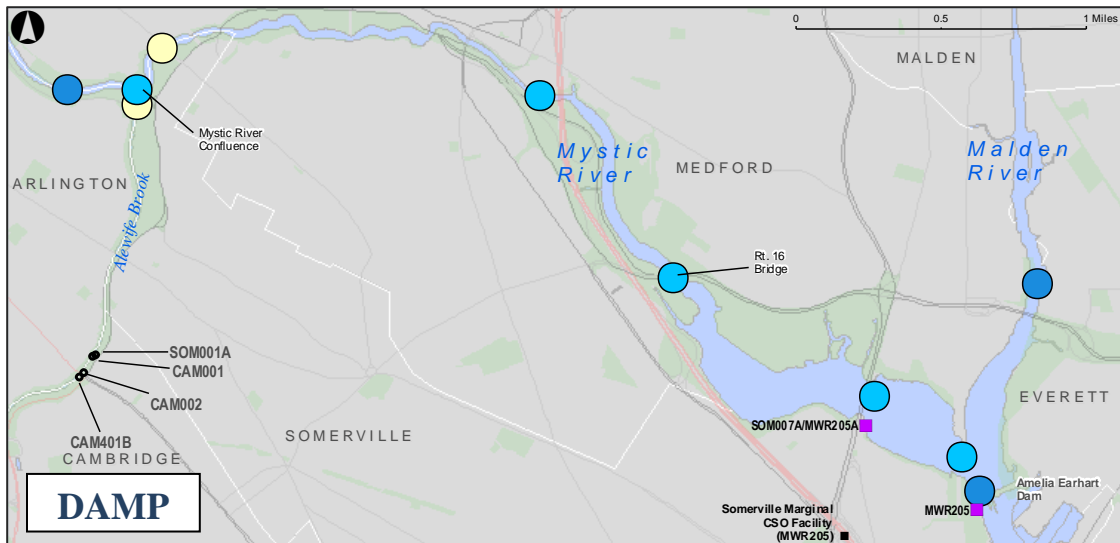
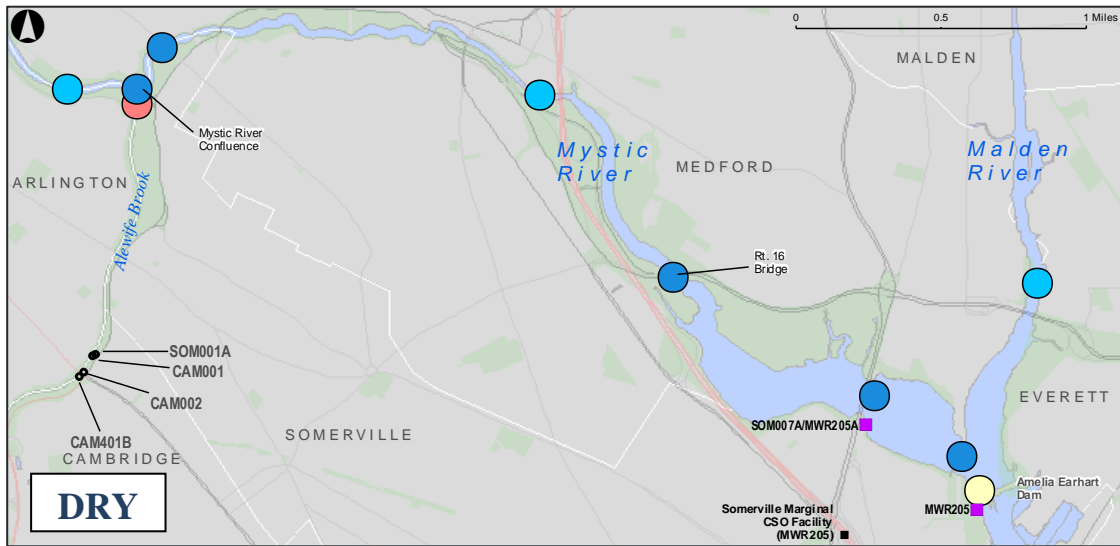


Figure 4-12. Mystic River *Enterococcus* percent compliance by weather condition, 2022. Compliance with 130 MPN/100mL statistical threshold value. Rainfall is from nearest rain gauge to station. See Section 2.1.5 for descriptions of rainfall conditions. Alewife Brook station 070 near Mystic River confluence included for reference.

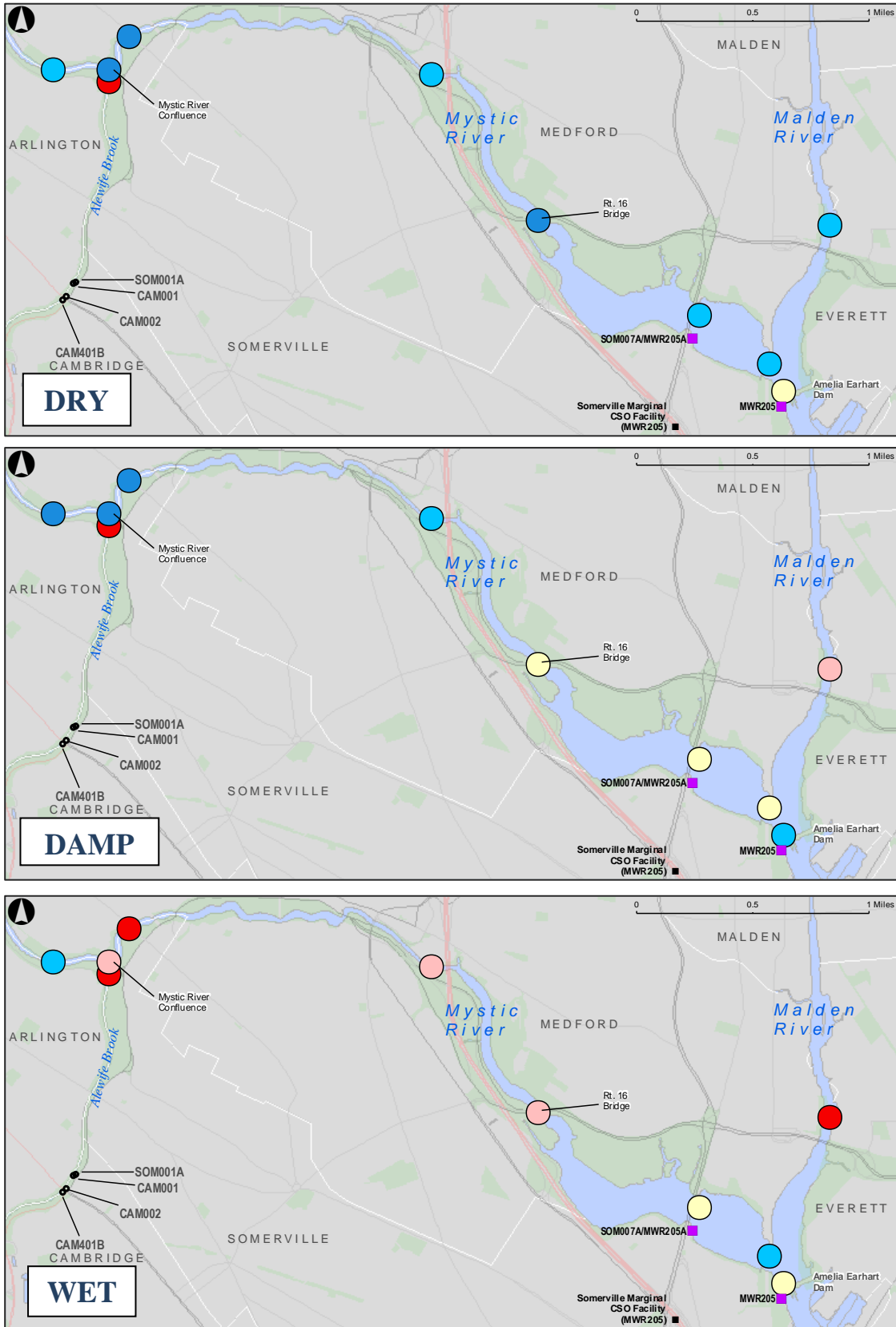


Figure 4-13. Mystic River *E. coli* percent compliance by weather condition, 2022.

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.

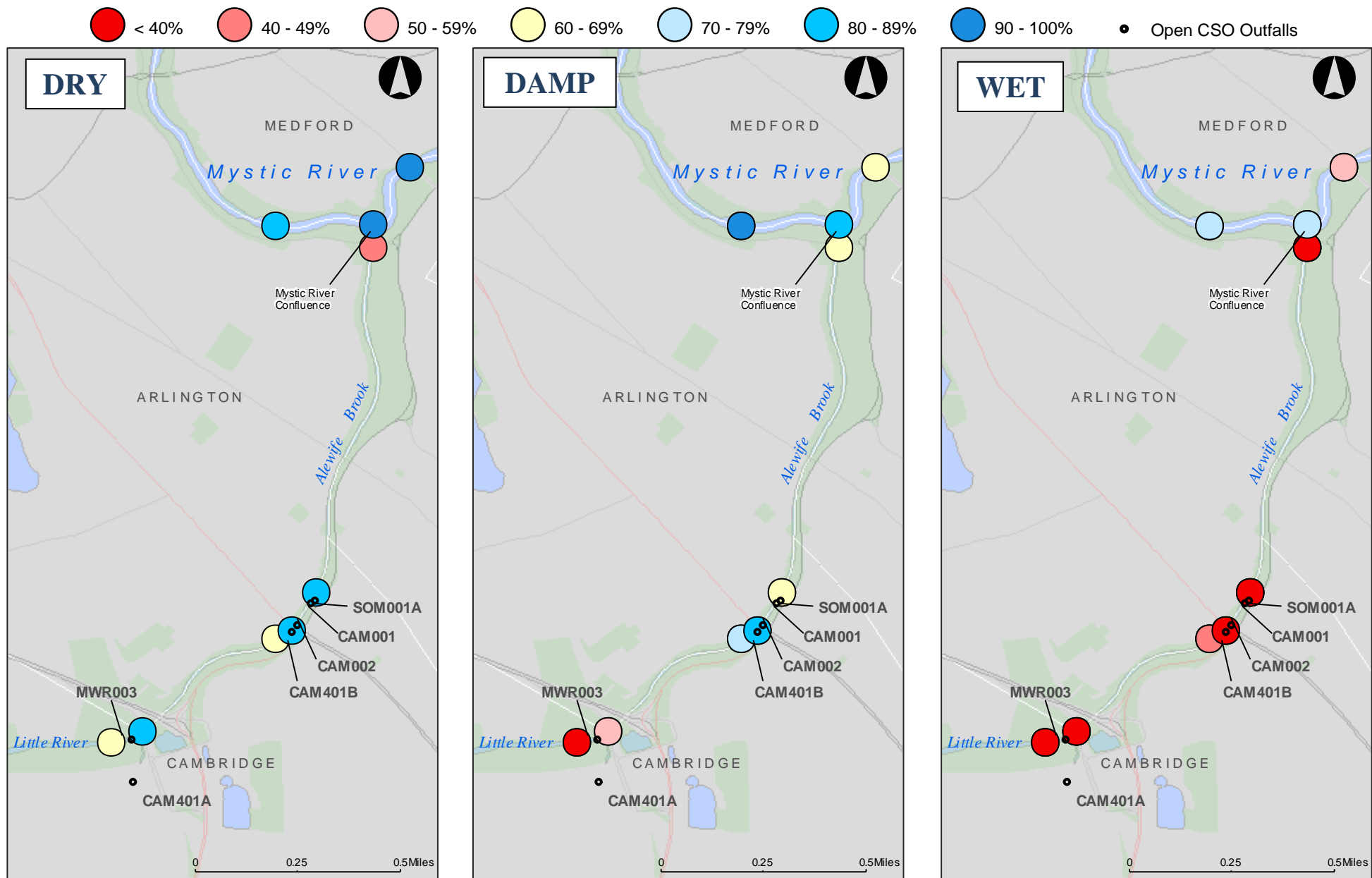


Figure 4-14. Alewife Brook *Enterococcus* percent compliance by weather condition, 2022.

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.

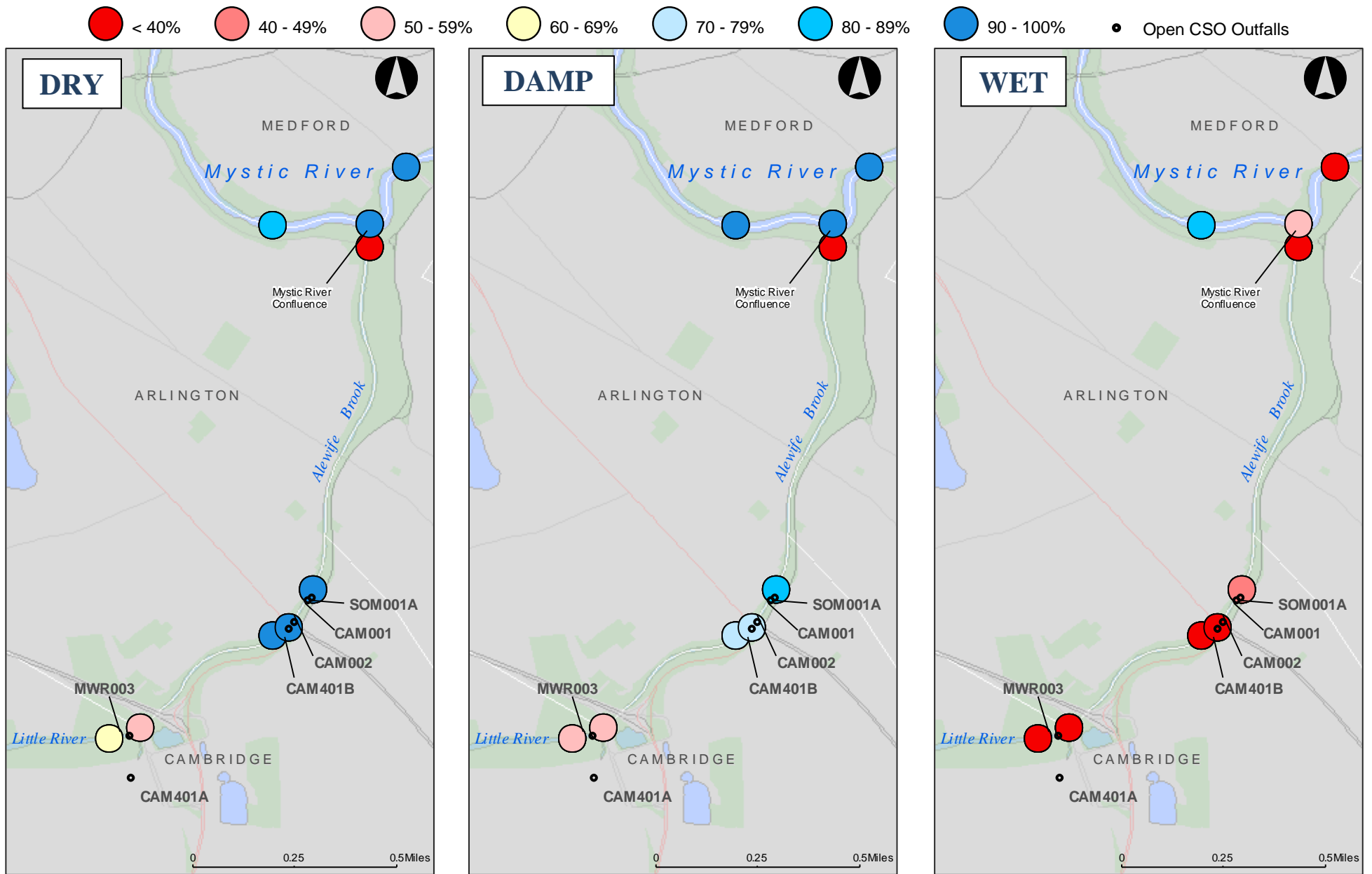


Figure 4-15. Alewife Brook *E. coli* percent compliance by weather condition, 2022.

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

In general, bacterial water quality in the Mystic River and Alewife Brook was similar in pattern to recent years. Bacteria concentrations in the Mystic River met standards for much of the upper and lower Mystic Basin and Mystic River mouth in dry and damp weather, but did not meet standards in wet weather conditions at several locations. Bacteria concentrations in Alewife Brook fail to meet standards in most weather conditions both upstream and downstream of CSOs in that region. Station 174, which is upstream of all CSOs, had poor water quality in dry and wet weather. Most locations in the Mystic River met *Enterococcus* and *E. coli* geometric mean limits in dry and damp conditions most of the time.

In 2022, mean surface DO conditions met the 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 too shallow to be measured.

Nutrient levels in 2022 were similar to previous years, with monthly concentrations near long-term averages for most parameters. Chlorophyll α values were higher than the five-year average at a couple stations in November, but otherwise were near or below the previous five-year 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 spurred a schedule adjustment. 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 2022, summarizing bacteria results after storms from the past five years.

5.1 2018-2022 bacteria counts by time period and storm size

Figures 5-1 through 5-8 present 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 that 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, the vertical axis scale is higher for the Mystic/Alewife 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 750 results are included in the upstream figures, and 2200 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.

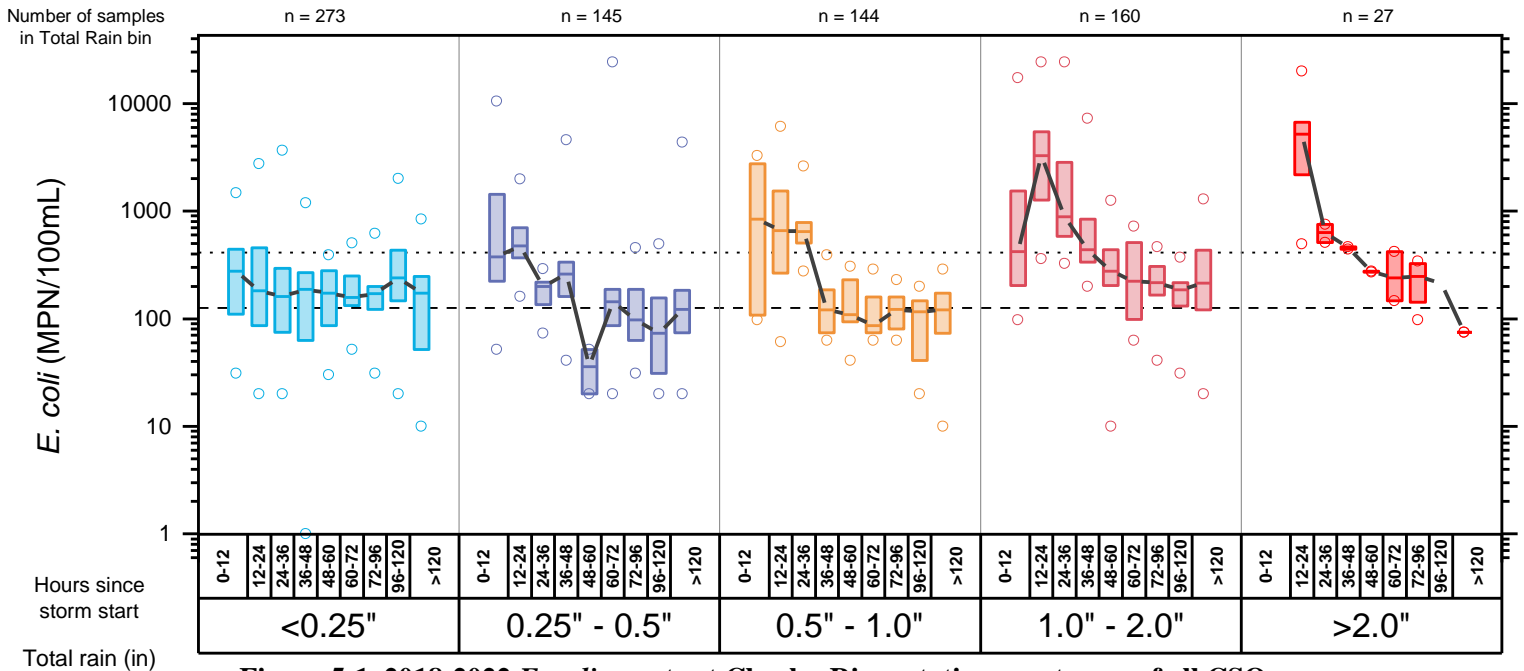


Figure 5-1. 2018-2022 *E. coli* counts at Charles River stations upstream of all CSOs by storm size and hours after start of rain.

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).

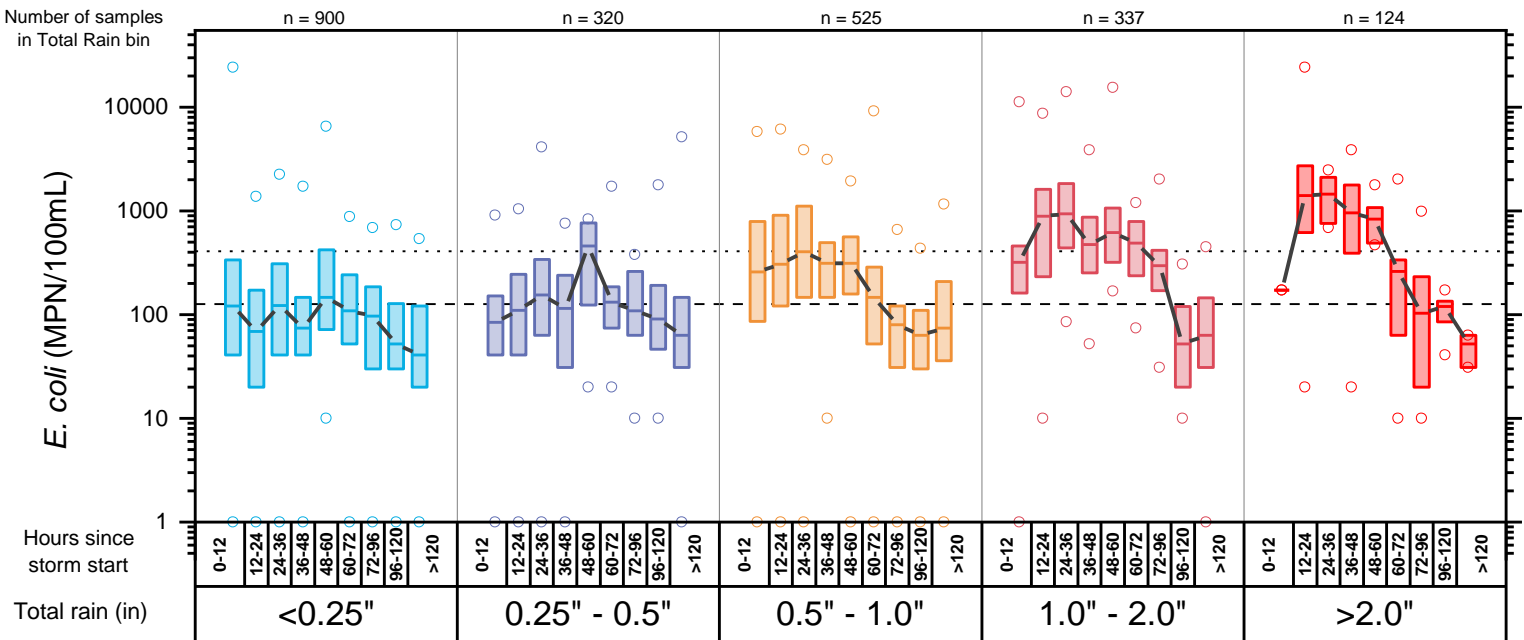


Figure 5-2. 2018-2022 *E. coli* counts at Charles River stations in reaches downstream of CSOs by storm size and hours after start of rain.

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.

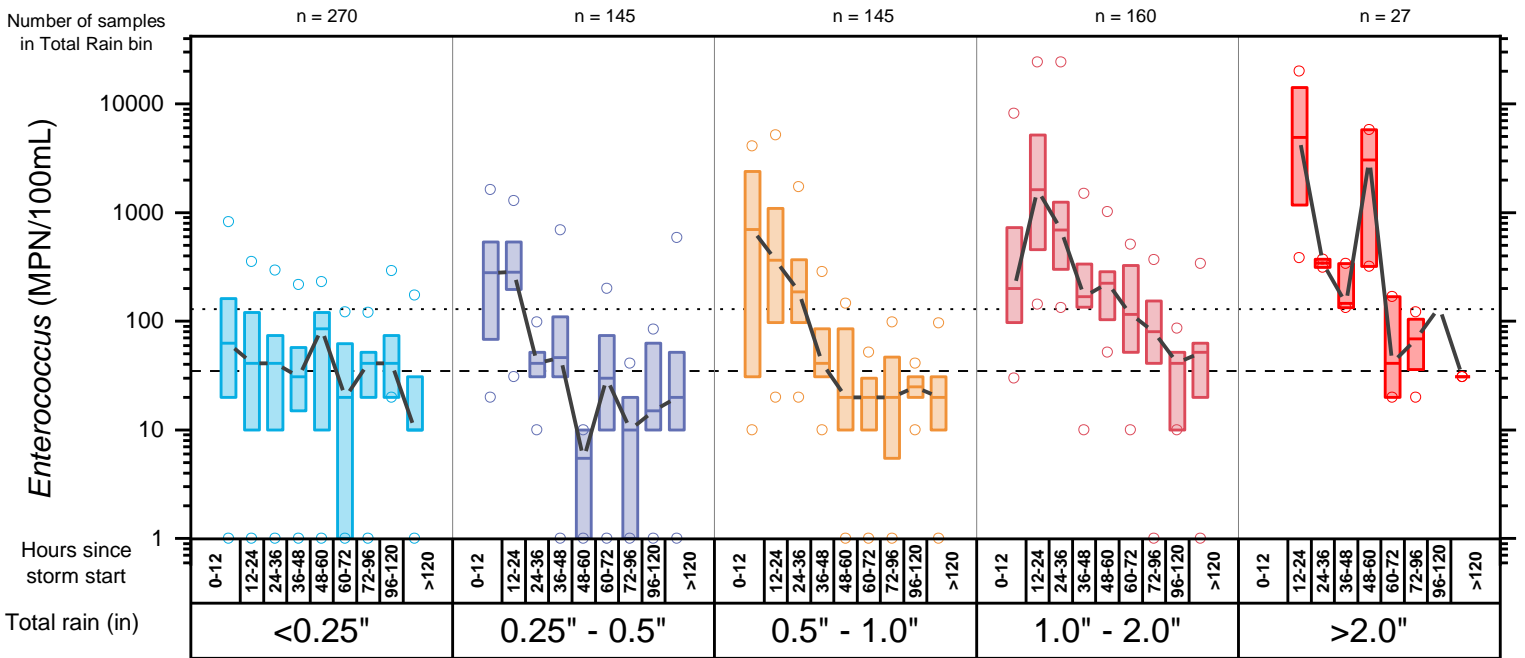


Figure 5-3. 2018-2022 *Enterococcus* counts at Charles River stations upstream of all CSOs by storm size and hours after start of rain.

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).

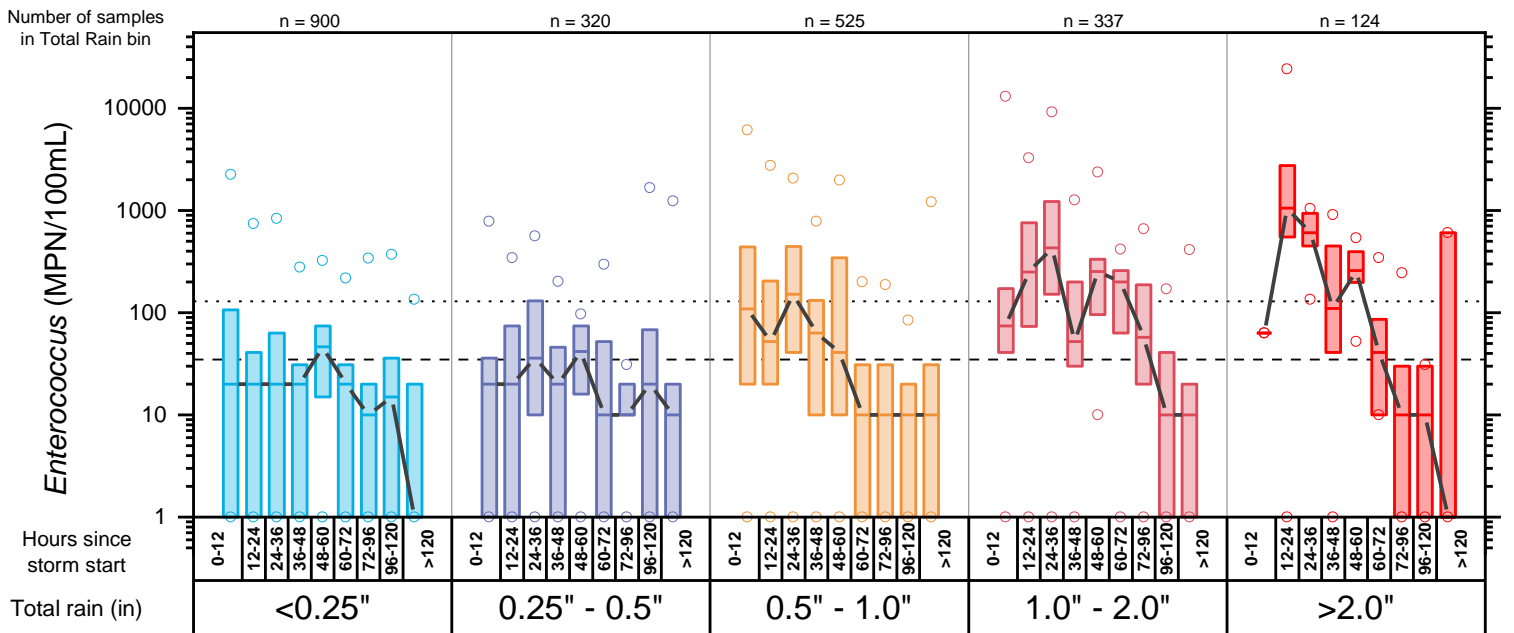


Figure 5-4. 2018-2022 *Enterococcus* counts at Charles River stations in reaches downstream of CSOs by storm size and hours after start of rain.

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. Due to extremely low sample size, results in storms $>2.0''$ are not shown. Sample counts are roughly evenly distributed between storm sizes.

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 fail to meet 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 2-3 days of the storm start.

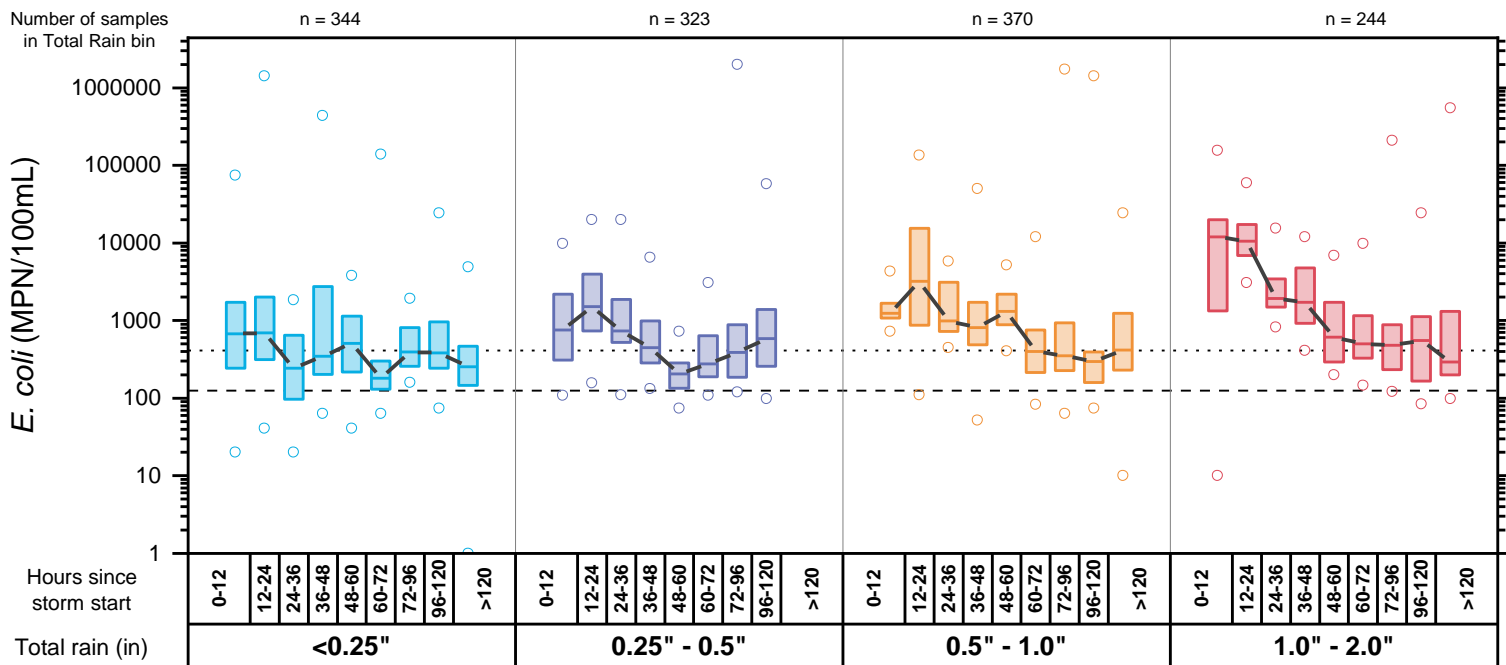


Figure 5-5. 2018-2022 *E. coli* counts in Alewife Brook by storm size and hours after start of rain. Dashed line shows MADEP freshwater geometric mean standard of 126 MPN/100mL for *E. coli*; dotted line shows the statistical threshold value of 410 MPN/100mL. Total rain is rainfall from nearest MWRA, 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.

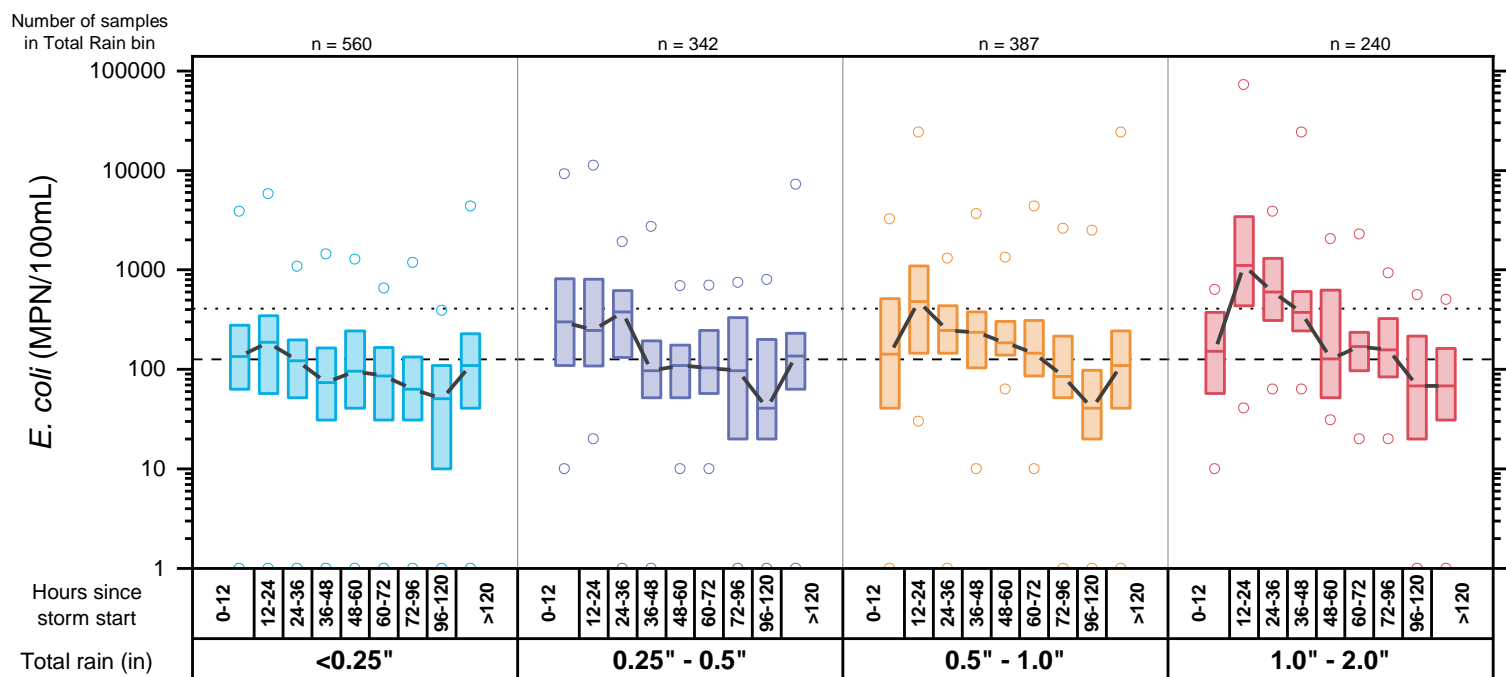


Figure 5-6. 2018-2022 *E. coli* counts in the Mystic River by storm size and hours after start of rain. Dashed line shows MADEP freshwater geometric mean standard of 126 MPN/100mL for *E. coli*; dotted line shows the statistical threshold value of 410 MPN/100mL. Total rain is rainfall from nearest MWRA, 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.

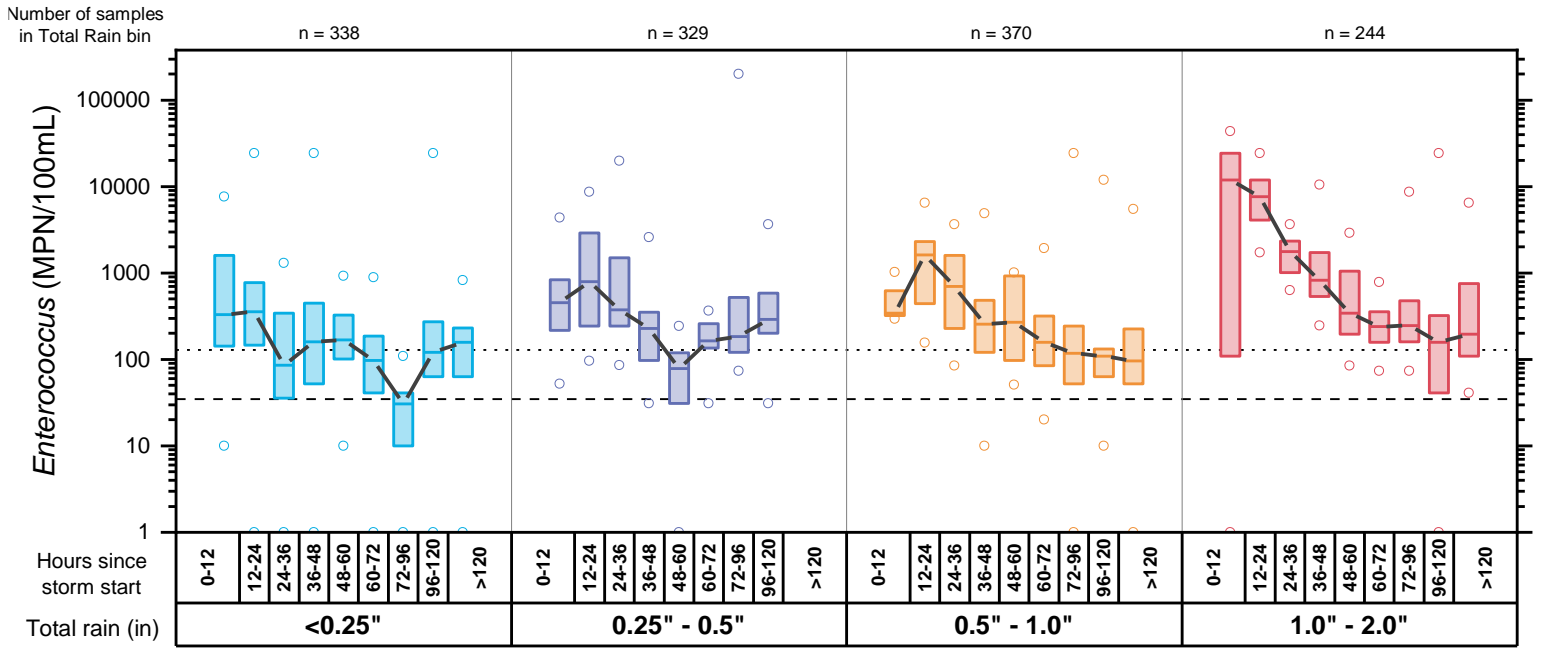


Figure 5-7. 2018-2022 *Enterococcus* counts in Alewife Brook by storm size and hours after start of rain.

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.

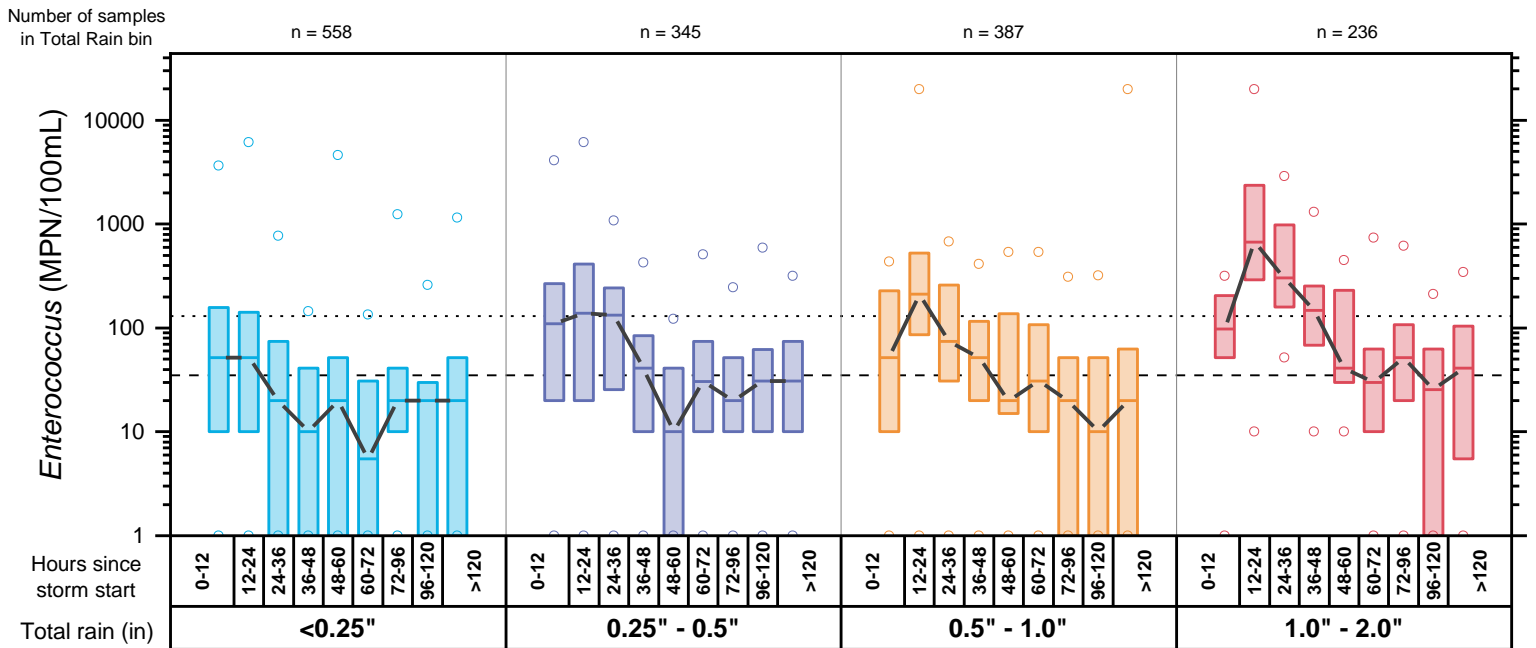


Figure 5-8. 2018-2022 *Enterococcus* counts in the Mystic River by storm size and hours after start of rain.

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.

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APPENDICES

Appendix I

Use of local rain gauge data for rainfall characterization

Appendix II

2022 raw data, laboratory analyses

Appendix III

2022 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 past reports, these categories have been 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

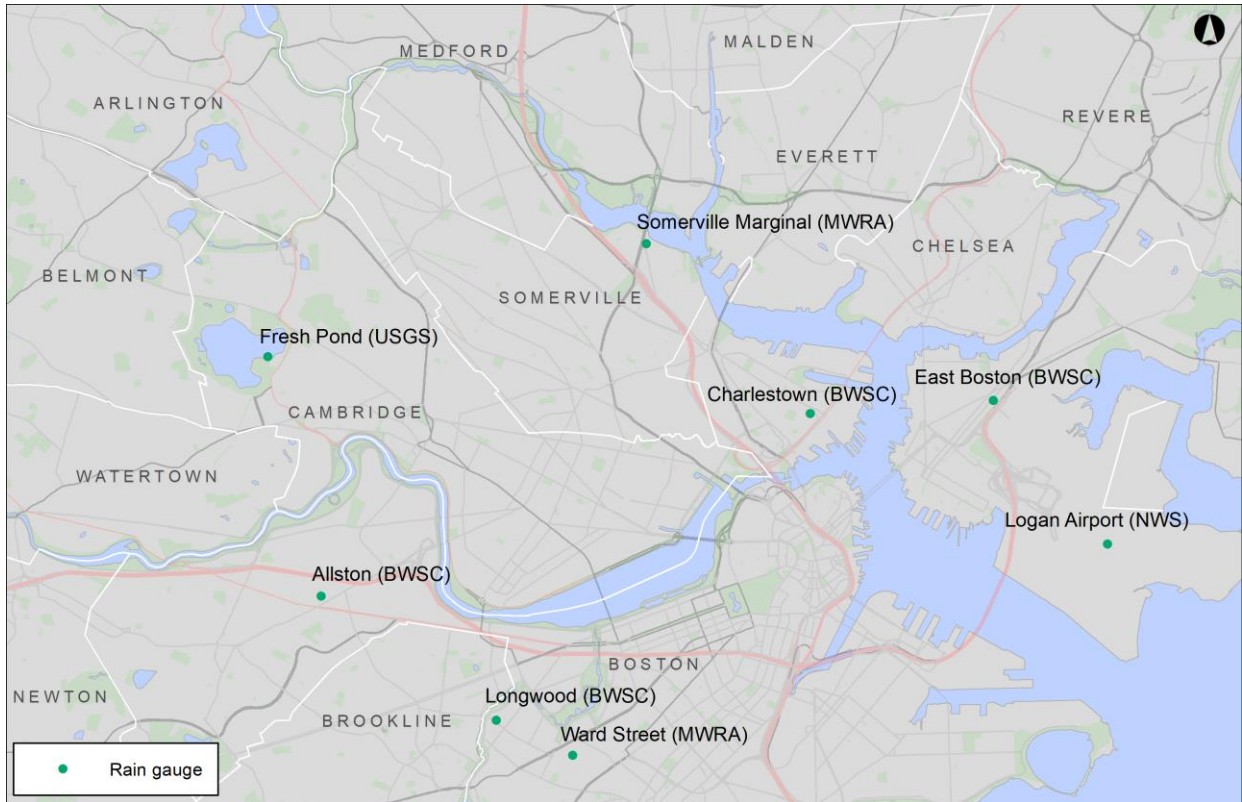


Figure I-1. Map of rain gauges utilized in this report.

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.

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APPENDIX II

2022 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.

2022 MWRA Central Lab Analyses - Bacteria

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
012	1/12/22 10:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	185	
012	1/27/22 10:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.02	0	10	
012	2/9/22 10:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.49	0.9	52	309	
012	2/22/22 10:42 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.35	0.35	0.35	10	31	
012	3/10/22 10:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.26	0.26	5	41	
012	3/24/22 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.75	0.75	0.75	110	307	
012	4/5/22 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.01	10	74	
012	4/19/22 9:56 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.56	0.56	0.56	193	242	
012	5/4/22 10:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.12	0.21	0.37	15	74.5	
012	5/17/22 10:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.09	0.1	63	175	
012	6/2/22 10:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	161	388	
012	6/13/22 10:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.09	0.09	52	243	
012	6/28/22 10:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.65	0.65	97	820	
012	7/11/22 9:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	31	275	
012	7/28/22 9:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.04	0.04	20	272	
012	8/10/22 10:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.14	0.14	10	359	
012	8/23/22 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.46	0.46	213	471	
012	9/6/22 10:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.97	0.97	17300	5790	
012	9/19/22 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.42	0.43	0.43	63	370.5	
012	10/3/22 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.02	20	107	
012	10/20/22 10:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.18	0	135	
012	11/2/22 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.04	20	175	
012	11/14/22 11:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.17	31	97	
012	11/28/22 10:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.64	0.64	262	697	
012	12/12/22 10:56 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.04	31	145	
012	12/28/22 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	52	262	
001	3/18/22 10:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1				0	63	
001	3/21/22 9:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	0	31	
001	4/6/22 10:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	20	63	
001	4/8/22 10:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	345	395	
001	5/12/22 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20	63	
001	5/16/22 9:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	10	359	
001	5/18/22 10:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	20	0	
001	6/2/22 9:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	173	471	
001	6/16/22 10:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	109	620	
001	6/17/22 10:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	74	565	
001	7/6/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	191	1190	
001	7/7/22 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.05	0	450	
001	8/11/22 9:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	41	173	
001	8/12/22 9:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	31	331	
001	8/16/22 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	86	
001	9/14/22 10:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	10	120	
001	9/26/22 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	169	677	
001	10/4/22 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	10	246	
001	10/5/22 9:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	1090	1660	
001	10/31/22 10:09 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	74	132	
001	11/16/22 11:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	1300	1860	
144	3/18/22 10:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1				0	41	
144	3/21/22 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	20	74	

2022 MWRA Central Lab Analyses - Bacteria

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
144	4/6/22 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	20	20	
144	4/8/22 9:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	455	354	
144	5/12/22 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	148	
144	5/16/22 9:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	0	175	
144	5/18/22 9:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	20	521	
144	6/2/22 9:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	134	663	
144	6/16/22 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	120	556	
144	6/17/22 10:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	201	435	
144	7/6/22 9:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	52	1960	
144	7/7/22 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.05	20	249	
144	8/11/22 9:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	10	285	
144	8/12/22 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	228	
144	8/16/22 9:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	246	
144	9/14/22 10:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	86	670	
144	9/26/22 9:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	41	677	
144	10/4/22 9:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	10	240	
144	10/5/22 9:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	703	1540	
144	10/31/22 9:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	110	
144	11/16/22 11:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	5170	6130	
002	3/18/22 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1				0	30	
002	3/21/22 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	10	62	
002	4/6/22 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	52	108	
002	4/8/22 9:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	74	201	
002	5/12/22 9:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	226	
002	5/16/22 9:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	31	839	
002	5/18/22 9:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	41	933	
002	6/2/22 9:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	52	471	
002	6/16/22 9:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	51	218	
002	6/17/22 10:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	41	175	
002	7/6/22 8:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	10	52	
002	7/7/22 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.05	20	759	
002	8/11/22 9:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	0	135	
002	8/12/22 9:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	84	
002	8/16/22 9:42 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	20	
002	9/14/22 10:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	31	441	
002	9/26/22 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	10	1470	
002	10/4/22 9:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	10	173	
002	10/5/22 9:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	1620	2850	
002	10/31/22 9:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	52	554	
002	11/16/22 11:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	2140	2190	
003	3/18/22 9:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1				10	52	
003	3/21/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	120	109	
003	4/6/22 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	10	63	
003	4/8/22 9:34 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	85	109	
003	5/12/22 9:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	228	
003	5/16/22 8:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	0	86	
003	5/18/22 9:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	31	727	
003	6/2/22 9:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	20	160	
003	6/16/22 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	74	

2022 MWRA Central Lab Analyses - Bacteria

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
003	6/17/22 9:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20	41	
003	7/6/22 8:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	0	63	
003	7/7/22 9:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.05	31	62	
003	8/11/22 9:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	10	0	
003	8/12/22 8:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	52	
003	8/16/22 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	41	
003	9/14/22 9:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	10	85	
003	9/26/22 9:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	0	203	
003	10/4/22 9:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	0	10	
003	10/5/22 9:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	41	231	
003	10/31/22 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	31	631	
003	11/16/22 10:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	285	738	
004	3/18/22 9:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1				10	20	
004	3/21/22 9:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	10	86	
004	4/6/22 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	0	52	
004	4/8/22 9:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	10	63	
004	5/12/22 9:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	20	
004	5/16/22 8:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	0	10	
004	5/18/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	0	20	
004	6/2/22 8:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	10	109	
004	6/16/22 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20	41	
004	6/17/22 9:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	20	
004	7/6/22 8:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	10	41	
004	7/7/22 8:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.05	10	52	
004	8/11/22 8:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	10	10	
004	8/12/22 8:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	0	
004	8/16/22 9:09 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	20	
004	9/14/22 9:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	0	20	
004	9/26/22 9:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	10	63	
004	10/4/22 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	0	30	
004	10/5/22 9:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	41	161	
004	10/31/22 9:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	146	
004	11/16/22 10:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	332	754	
005	2/9/22 10:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.49	0.9	269	109	
005	2/22/22 10:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.35	0.35	0.35	0	20	
005	3/10/22 10:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.26	0.26	0	63	
005	3/18/22 9:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1				20	10	
005	3/21/22 9:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	0	41	
005	3/24/22 9:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.75	0.75	0.75	41	169	
005	4/5/22 9:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.01	52		
005	4/6/22 9:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	20	52	
005	4/8/22 9:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	0	63	
005	4/19/22 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.56	0.56	0.56	173	354	
005	5/4/22 9:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.12	0.21	0.37	74	63	
005	5/12/22 9:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	20	
005	5/16/22 8:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	0	41	
005	5/17/22 10:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.09	0.1	41	63	
005	5/18/22 9:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	0	85	
005	6/2/22 8:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	0	85	

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Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
005	6/2/22 10:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	31	74	
005	6/13/22 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.09	0.09	0	31	
005	6/16/22 9:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20	228	
005	6/17/22 9:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	172	
005	6/28/22 10:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.65	0.65	85	313	
005	7/6/22 8:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	10	52	
005	7/7/22 8:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.05	31	135	
005	7/11/22 9:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	30.5	
005	7/28/22 9:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.04	0.04	10	10	
005	8/10/22 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.14	0.14	20	134	
005	8/11/22 8:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	0	10	
005	8/12/22 8:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20	98	
005	8/16/22 9:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	31	
005	8/23/22 9:42 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.46	0.46	122	1660	
005	9/6/22 10:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.97	0.97	650	816	
005	9/14/22 9:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	0	959	
005	9/19/22 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.42	0.43	0.43	20	86	
005	9/26/22 9:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	0	110	
005	10/3/22 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.02	74	906	
005	10/4/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	20	63	
005	10/5/22 9:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	142	233	
005	10/20/22 9:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.18	20	520	
005	10/31/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	20	
005	11/2/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.04	10	171	
005	11/14/22 10:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.17	10	146	
005	11/16/22 10:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	31	295	
005	11/28/22 10:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.64	0.64	10	122	
005	12/12/22 10:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.04	1210	110	
006	3/18/22 9:13 AM	S	CHARLES RIVER	MID-BASIN	0.1				0	10	
006	3/21/22 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	20	98	
006	4/6/22 9:06 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	0	10	
006	4/8/22 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	31	108	
006	5/12/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	20	10	
006	5/16/22 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	20	10	
006	5/18/22 9:06 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	30	85	
006	6/2/22 8:41 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	74	285	
006	6/16/22 9:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	98	
006	6/17/22 9:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	31	121	
006	7/6/22 8:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	0	20	
006	7/7/22 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	10	31	
006	8/11/22 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	63	41	
006	8/12/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	20	52	
006	8/16/22 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	20	
006	9/14/22 9:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	20	120	
006	9/26/22 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	52	262	
006	10/4/22 9:12 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	0	259	
006	10/5/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	906	794	
006	10/31/22 9:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	98	
006	11/16/22 10:35 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	109	404	

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Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
007	3/18/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1				0	52	
007	3/18/22 8:59 AM	B	CHARLES RIVER	MID-BASIN	4.1				10	228	
007	3/21/22 8:43 AM	B	CHARLES RIVER	MID-BASIN	4.1	0	0	0.2	20	135	
007	3/21/22 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	10	84	
007	4/6/22 8:53 AM	B	CHARLES RIVER	MID-BASIN	4.1	0.11	0.11	0.12	0	31	
007	4/6/22 8:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	0	41	
007	4/8/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	10	31	
007	4/8/22 8:59 AM	B	CHARLES RIVER	MID-BASIN	3.7	0.15	0.16	0.27	0	10	
007	5/12/22 8:44 AM	B	CHARLES RIVER	MID-BASIN	3.9	0	0	0	10	20	
007	5/12/22 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	130	10	
007	5/16/22 8:22 AM	B	CHARLES RIVER	MID-BASIN	4.3	0.09	0.1	0.1	73	20	
007	5/16/22 8:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	41	10	
007	5/18/22 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	20	41	
007	5/18/22 8:52 AM	B	CHARLES RIVER	MID-BASIN	4.7	0	0	0.09	51	31	
007	6/2/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	204	74	
007	6/2/22 8:25 AM	B	CHARLES RIVER	MID-BASIN	4.3	0.1	0.19	0.19	94	41	
007	6/16/22 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	10	
007	6/16/22 8:56 AM	B	CHARLES RIVER	MID-BASIN	4.2	0	0	0	73	41	
007	6/17/22 9:19 AM	B	CHARLES RIVER	MID-BASIN	5.1	0	0	0	10	74	
007	6/17/22 9:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	41	173	
007	7/6/22 8:00 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	10	20	
007	7/6/22 8:00 AM	B	CHARLES RIVER	MID-BASIN	4.1	0.01	0.05	0.05	20	63	
007	7/7/22 8:25 AM	B	CHARLES RIVER	MID-BASIN	4.2	0	0.01	0.05	10	10	
007	7/7/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	0	0	
007	8/11/22 8:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	63	86	
007	8/11/22 8:15 AM	B	CHARLES RIVER	MID-BASIN	4.3	0	0	0.14	10	120	
007	8/12/22 8:16 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	30	41	
007	8/12/22 8:16 AM	B	CHARLES RIVER	MID-BASIN	4.2	0	0	0	0	10	
007	8/16/22 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	52	41	
007	8/16/22 8:44 AM	B	CHARLES RIVER	MID-BASIN	4.4	0	0	0	31	52	
007	9/14/22 9:16 AM	B	CHARLES RIVER	MID-BASIN	5.1	0	0.15	0.15	0	41	
007	9/14/22 9:16 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	0	20	
007	9/26/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	0	63	
007	9/26/22 8:45 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.29	0.29	0.29	0	108	
007	10/4/22 8:58 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	10	63	
007	10/4/22 8:58 AM	B	CHARLES RIVER	MID-BASIN	4.8	0.46	0.46	0.46	0	31	
007	10/5/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	240	1620	
007	10/5/22 8:45 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.44	0.9	0.9	51	201	
007	10/31/22 8:59 AM	B	CHARLES RIVER	MID-BASIN	4.3	0	0	0	0	20	
007	10/31/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	20	109	
007	11/16/22 10:21 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.79	0.79	0.79	51	63	
007	11/16/22 10:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	10	121	
145	3/18/22 9:05 AM	S	CHARLES RIVER	MID-BASIN	0.1				31	30	
145	3/21/22 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	0	86	
145	4/6/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	109	269	
145	4/8/22 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	0	62	
145	5/12/22 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	97	41	
145	5/16/22 8:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	0	20	
145	5/18/22 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	10	51	

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Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
145	6/2/22 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	97	63	
145	6/16/22 9:02 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	10	
145	6/17/22 9:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	31	
145	7/6/22 8:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	0	63	
145	7/7/22 8:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	0	31	
145	8/11/22 8:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	0	86	
145	8/12/22 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	235	
145	8/16/22 8:51 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	41	
145	9/14/22 9:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	41	327	
145	9/26/22 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	52	173	
145	10/4/22 9:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	10	335	
145	10/5/22 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	759	1540	
145	10/31/22 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	52	
145	11/16/22 10:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	86	250	
008	3/18/22 8:53 AM	B	CHARLES RIVER	MID-BASIN	4.9				259	826	
008	3/18/22 8:53 AM	S	CHARLES RIVER	MID-BASIN	0.1				10	41	
008	3/21/22 8:38 AM	B	CHARLES RIVER	MID-BASIN	3.9	0	0	0.2	31	110	
008	3/21/22 8:38 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	20	74	
008	4/6/22 8:48 AM	B	CHARLES RIVER	MID-BASIN	3.2	0.11	0.11	0.12	31	131	
008	4/6/22 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	41	175	
008	4/8/22 8:53 AM	B	CHARLES RIVER	MID-BASIN	5.8	0.15	0.16	0.27	10	135	
008	4/8/22 8:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	0	109	
008	5/12/22 8:39 AM	B	CHARLES RIVER	MID-BASIN	3.9	0	0	0	41	52	
008	5/12/22 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	84	30	
008	5/16/22 8:17 AM	B	CHARLES RIVER	MID-BASIN	3.5	0.09	0.1	0.1	0	20	
008	5/16/22 8:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	10	0	
008	5/18/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	20	20	
008	5/18/22 8:45 AM	B	CHARLES RIVER	MID-BASIN	4.1	0	0	0.09	20	63	
008	6/2/22 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	30	31	
008	6/2/22 8:19 AM	B	CHARLES RIVER	MID-BASIN	4.1	0.1	0.19	0.19	20	41	
008	6/16/22 8:51 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	31	
008	6/16/22 8:51 AM	B	CHARLES RIVER	MID-BASIN	4.1	0	0	0	63	63	
008	6/17/22 9:15 AM	B	CHARLES RIVER	MID-BASIN	4.1	0	0	0	10	41	
008	6/17/22 9:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	30	
008	7/6/22 7:54 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	0	0	
008	7/6/22 7:54 AM	B	CHARLES RIVER	MID-BASIN	3.8	0.01	0.05	0.05	0	10	
008	7/7/22 8:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	0	52	
008	7/7/22 8:21 AM	B	CHARLES RIVER	MID-BASIN	3.8	0	0.01	0.05	10	10	
008	8/11/22 8:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	0	41	
008	8/11/22 8:09 AM	B	CHARLES RIVER	MID-BASIN	4.7	0	0	0.14	41	350	
008	8/12/22 8:11 AM	B	CHARLES RIVER	MID-BASIN	3.9	0	0	0	0	52	
008	8/12/22 8:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	10	
008	8/16/22 8:40 AM	B	CHARLES RIVER	MID-BASIN	6.2	0	0	0	0	31	
008	8/16/22 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	0	
008	9/14/22 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	20	74	
008	9/14/22 9:04 AM	B	CHARLES RIVER	MID-BASIN	4.6	0	0.15	0.15	0	51	
008	9/26/22 8:40 AM	B	CHARLES RIVER	MID-BASIN	3.8	0.29	0.29	0.29	10	31	
008	9/26/22 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	0	52	
008	10/4/22 8:52 AM	B	CHARLES RIVER	MID-BASIN	4	0.46	0.46	0.46	0	63	

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Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
008	10/4/22 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	0	31	
008	10/5/22 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	958	2280	
008	10/5/22 8:40 AM	B	CHARLES RIVER	MID-BASIN	3.9	0.44	0.9	0.9	85	265	
008	10/31/22 8:53 AM	B	CHARLES RIVER	MID-BASIN	4.6	0	0	0	10	85	
008	10/31/22 8:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	41	
008	11/16/22 10:16 AM	B	CHARLES RIVER	MID-BASIN	3.2	0.79	0.79	0.79	31	441	
008	11/16/22 10:16 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	323	1300	
009	3/18/22 8:44 AM	B	CHARLES RIVER	MID-BASIN	6.7				0	74	
009	3/18/22 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1				20	74	
009	3/21/22 8:31 AM	B	CHARLES RIVER	MID-BASIN	8.2	0	0	0.2	0	97	
009	3/21/22 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	0	121	
009	4/6/22 8:39 AM	B	CHARLES RIVER	MID-BASIN	5.7	0.11	0.11	0.12	0	132	
009	4/6/22 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	0	52	
009	4/8/22 8:45 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.15	0.16	0.27	10	146	
009	4/8/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	20	161	
009	5/12/22 8:31 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0	0	0	0	
009	5/12/22 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	0	
009	5/16/22 8:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	0	20	
009	5/16/22 8:11 AM	B	CHARLES RIVER	MID-BASIN	8.6	0.09	0.1	0.1	0	10	
009	5/18/22 8:36 AM	B	CHARLES RIVER	MID-BASIN	6.7	0	0	0.09	41	305	
009	5/18/22 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	0	457	
009	6/2/22 8:09 AM	B	CHARLES RIVER	MID-BASIN	9.3	0.1	0.19	0.19	10	20	
009	6/2/22 8:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	10	10	
009	6/16/22 8:44 AM	B	CHARLES RIVER	MID-BASIN	8.4	0	0	0	0	0	
009	6/16/22 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	0	
009	6/17/22 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	31	
009	6/17/22 9:08 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0	0	31	20	
009	7/6/22 7:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	0	0	
009	7/6/22 7:48 AM	B	CHARLES RIVER	MID-BASIN	6.7	0.01	0.05	0.05	0	10	
009	7/7/22 8:15 AM	B	CHARLES RIVER	MID-BASIN	9	0	0.01	0.05	0	0	
009	7/7/22 8:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	0	0	
009	8/11/22 8:01 AM	B	CHARLES RIVER	MID-BASIN	8.6	0	0	0.14	0	41	
009	8/11/22 8:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	20	10	
009	8/12/22 8:05 AM	B	CHARLES RIVER	MID-BASIN	9	0	0	0	0	10	
009	8/12/22 8:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	10	
009	8/16/22 8:31 AM	B	CHARLES RIVER	MID-BASIN	6.8	0	0	0	0	0	
009	8/16/22 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	0	
009	9/14/22 8:57 AM	B	CHARLES RIVER	MID-BASIN	7.2	0	0.15	0.15	10	121	
009	9/14/22 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	0	30	
009	9/26/22 8:30 AM	B	CHARLES RIVER	MID-BASIN	7.1	0.29	0.29	0.29	0	74	
009	9/26/22 8:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	0	31	
009	10/4/22 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	0	30	
009	10/4/22 8:43 AM	B	CHARLES RIVER	MID-BASIN	8.2	0.46	0.46	0.46	0	10	
009	10/5/22 8:32 AM	B	CHARLES RIVER	MID-BASIN	9	0.44	0.9	0.9	0	10	
009	10/5/22 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	31	20	
009	10/31/22 8:45 AM	B	CHARLES RIVER	MID-BASIN	8.8	0	0	0	0	20	
009	10/31/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	63	
009	11/16/22 10:08 AM	B	CHARLES RIVER	MID-BASIN	7.6	0.79	0.79	0.79	0	31	
009	11/16/22 10:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	20	96	

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Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
010	3/18/22 8:35 AM	B	CHARLES RIVER	MID-BASIN	9.2				0	10	
010	3/18/22 8:35 AM	S	CHARLES RIVER	MID-BASIN	0.1				0	30	
010	3/21/22 8:26 AM	B	CHARLES RIVER	MID-BASIN	8.3	0	0	0.2	0	20	
010	3/21/22 8:26 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	0	63	
010	4/6/22 8:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	0	61	
010	4/6/22 8:29 AM	B	CHARLES RIVER	MID-BASIN	8.9	0.11	0.11	0.12	0	31	
010	4/8/22 8:37 AM	B	CHARLES RIVER	MID-BASIN	7.8	0.15	0.16	0.27	0	41	
010	4/8/22 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	0	63	
010	5/12/22 8:25 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0	0	20	0	
010	5/12/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	20	
010	5/16/22 8:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	143	20	
010	5/16/22 8:03 AM	B	CHARLES RIVER	MID-BASIN	9	0.09	0.1	0.1	0	20	
010	5/18/22 8:28 AM	B	CHARLES RIVER	MID-BASIN	8.8	0	0	0.09	0	10	
010	5/18/22 8:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	20	109	
010	6/2/22 8:01 AM	B	CHARLES RIVER	MID-BASIN	9.1	0.1	0.19	0.19	10	31	
010	6/2/22 8:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	41	10	
010	6/16/22 8:32 AM	B	CHARLES RIVER	MID-BASIN	8.9	0	0	0	20	20	
010	6/16/22 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	20	
010	6/17/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	10	
010	6/17/22 8:59 AM	B	CHARLES RIVER	MID-BASIN	9	0	0	0	10	63	
010	7/6/22 7:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	0	0	
010	7/6/22 7:42 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.01	0.05	0.05	10	20	
010	7/7/22 8:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	0	10	
010	7/7/22 8:07 AM	B	CHARLES RIVER	MID-BASIN	8.8	0	0.01	0.05	30	41	
010	8/11/22 7:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	0	10	
010	8/11/22 7:53 AM	B	CHARLES RIVER	MID-BASIN	9.4	0	0	0.14	0	20	
010	8/12/22 7:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	10	
010	8/12/22 7:56 AM	B	CHARLES RIVER	MID-BASIN	9.1	0	0	0	20	0	
010	8/16/22 8:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	0	
010	8/16/22 8:22 AM	B	CHARLES RIVER	MID-BASIN	9.2	0	0	0	20	20	
010	9/14/22 8:50 AM	B	CHARLES RIVER	MID-BASIN	9.1	0	0.15	0.15	0	30	
010	9/14/22 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	0	31	
010	9/26/22 8:23 AM	B	CHARLES RIVER	MID-BASIN	8.9	0.29	0.29	0.29	0	31	
010	9/26/22 8:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	0	41	
010	10/4/22 8:37 AM	B	CHARLES RIVER	MID-BASIN	9.1	0.46	0.46	0.46	0	0	
010	10/4/22 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	10	0	
010	10/5/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	0	30	
010	10/5/22 8:25 AM	B	CHARLES RIVER	MID-BASIN	8.9	0.44	0.9	0.9	20	31	
010	10/31/22 8:37 AM	B	CHARLES RIVER	MID-BASIN	8.9	0	0	0	41	41	
010	10/31/22 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	10	
010	11/16/22 10:00 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.79	0.79	0.79	0	30	
010	11/16/22 10:00 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	20	134	
210	3/18/22 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1				10	86	
210	3/21/22 8:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	0	96	
210	4/6/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	10	52	
210	4/8/22 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	0	20	
210	5/12/22 8:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	10	
210	5/16/22 7:58 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	20	0	
210	5/18/22 8:24 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	20	20	

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Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
210	6/2/22 7:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	10	10	
210	6/16/22 8:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	0	
210	6/17/22 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	30	31	
210	7/6/22 7:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	0	20	
210	7/7/22 8:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	0	0	
210	8/11/22 7:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	0	20	
210	8/12/22 7:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	20	20	
210	8/16/22 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	31	
210	9/14/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	20	41	
210	9/26/22 8:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	0	41	
210	10/4/22 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	0	0	
210	10/5/22 8:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	74	364	
210	10/31/22 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	63	
210	11/16/22 9:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	0	41	
166	2/9/22 10:15 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.49	0.9	96	318	
166	2/22/22 9:57 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.35	0.35	0.35	52	97	
166	3/10/22 9:58 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.26	0.26	10	216	
166	3/24/22 8:53 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.75	0.75	0.75	10	63	
166	4/5/22 9:00 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.01	0.01	0	74	
166	4/19/22 9:08 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.56	0.56	0.56	20	31	
166	5/4/22 9:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.12	0.21	0.37	0	20	
166	5/17/22 9:49 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.09	0.1	0	0	
166	6/13/22 9:16 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.09	0.09	0.09	0	31	
166	6/28/22 9:39 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.65	0.65	0	0	
166	7/11/22 8:48 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	0	0	
166	7/28/22 9:01 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.04	0.04	0.04	0	20	
166	8/10/22 9:20 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.14	0.14	20	52	
166	8/23/22 9:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.02	0.46	0.46	10	52	
166	9/6/22 9:50 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.53	0.97	0.97	31	121	
166	9/19/22 9:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.42	0.43	0.43	10	10	
166	10/3/22 9:07 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.02	30	31	
166	10/20/22 9:24 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.18	0	52	
166	11/2/22 8:57 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.04	0.04	10	31	
166	11/14/22 10:38 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.1	0.17	10	98	
166	11/28/22 10:05 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.64	0.64	0	31	
166	12/12/22 10:10 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.04	0.04	10	74	
011	3/18/22 8:24 AM	S	CHARLES RIVER	LOWER BASIN	0.1				10	63	
011	3/18/22 8:24 AM	B	CHARLES RIVER	LOWER BASIN	5				0	52	
011	3/21/22 8:15 AM	B	CHARLES RIVER	LOWER BASIN	5.8	0	0	0.2	10	20	
011	3/21/22 8:15 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.2	0	74	
011	4/6/22 8:17 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0.11	0.11	0.12	20	63	
011	4/6/22 8:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.11	0.11	0.12	0	52	
011	4/8/22 8:27 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.15	0.16	0.27	0	74	
011	4/8/22 8:27 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0.15	0.16	0.27	0	86	
011	5/12/22 8:15 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	0	10	
011	5/12/22 8:15 AM	B	CHARLES RIVER	LOWER BASIN	6	0	0	0	0	0	
011	5/16/22 7:52 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.09	0.1	0.1	0	10	
011	5/16/22 7:52 AM	B	CHARLES RIVER	LOWER BASIN	5.3	0.09	0.1	0.1	0	10	
011	5/18/22 8:16 AM	B	CHARLES RIVER	LOWER BASIN	6	0	0	0.09	10	31	

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Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
011	5/18/22 8:16 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.09	10	20	
011	6/2/22 7:48 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.1	0.19	0.19	121	24200	
011	6/2/22 7:48 AM	B	CHARLES RIVER	LOWER BASIN	5.6	0.1	0.19	0.19	52	318	
011	6/16/22 8:20 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	0	10	
011	6/16/22 8:20 AM	B	CHARLES RIVER	LOWER BASIN	6.5	0	0	0	10	31	
011	6/17/22 8:46 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0	0	0	31	41	
011	6/17/22 8:46 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	10	0	
011	7/6/22 7:26 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0.01	0.05	0.05	52	52	
011	7/6/22 7:26 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.01	0.05	0.05	10	41	
011	7/7/22 7:51 AM	B	CHARLES RIVER	LOWER BASIN	5.3	0	0.01	0.05	10	31	
011	7/7/22 7:51 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.01	0.05	10	0	
011	8/11/22 7:41 AM	B	CHARLES RIVER	LOWER BASIN	5.2	0	0	0.14	62	145	
011	8/11/22 7:41 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.14	20	546	
011	8/12/22 7:45 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	10	73	
011	8/12/22 7:45 AM	B	CHARLES RIVER	LOWER BASIN	6.1	0	0	0	41	121	
011	8/16/22 8:10 AM	B	CHARLES RIVER	LOWER BASIN	5	0	0	0	0	63	
011	8/16/22 8:10 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	0	31	
011	9/14/22 8:35 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.15	0.15	0	0	
011	9/14/22 8:35 AM	B	CHARLES RIVER	LOWER BASIN	5.4	0	0.15	0.15	20	0	
011	9/26/22 7:57 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.29	0.29	0.29	0	30	
011	9/26/22 7:57 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0.29	0.29	0.29	20	20	
011	10/4/22 8:26 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.46	0.46	0.46	0	52	
011	10/4/22 8:26 AM	B	CHARLES RIVER	LOWER BASIN	6.3	0.46	0.46	0.46	52	41	
011	10/5/22 8:14 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.44	0.9	0.9	399	6130	
011	10/5/22 8:14 AM	B	CHARLES RIVER	LOWER BASIN	6.7	0.44	0.9	0.9	120	262	
011	10/31/22 8:26 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	10	20	
011	10/31/22 8:26 AM	B	CHARLES RIVER	LOWER BASIN	5.9	0	0	0	10	86	
011	11/16/22 9:50 AM	B	CHARLES RIVER	LOWER BASIN	5.9	0.79	0.79	0.79	31	121	
011	11/16/22 9:50 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.79	0.79	0.79	110	650	
174	3/22/22 8:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	41	301	
174	3/30/22 8:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	31	309	
174	3/31/22 8:39 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.15	0.15	0.15	10	201	
174	4/14/22 9:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.26	74	63	
174	5/19/22 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	256	6870	
174	5/23/22 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.09	0.11	158	1550	
174	5/25/22 8:53 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	171	982	
174	6/7/22 9:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	213	657	
174	6/10/22 8:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.85	1.08	1310	1580	
174	6/29/22 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.65	1720	8660	
174	6/30/22 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	613	2140	
174	8/2/22 8:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	52	52	
174	8/18/22 9:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	20	109	
174	8/25/22 9:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.02	156	259	
174	9/1/22 9:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.33	0.33	262	203	
174	9/8/22 8:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.53	195	3650	
174	9/21/22 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.43	336	1500	
174	9/29/22 8:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	281	1840	
174	10/6/22 9:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.44	0.9	4880	1400	
174	10/17/22 9:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.23	278	487	

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074	3/22/22 8:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	20	134	
074	3/30/22 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	10	291	
074	3/31/22 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.15	0.15	0.15	30	262	
074	4/14/22 9:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.26	20	135	
074	5/19/22 8:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	148	419	
074	5/23/22 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.09	0.11	240	959	
074	5/25/22 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	73	419	
074	6/7/22 9:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	86	556	
074	6/10/22 8:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.85	1.08	884	1520	
074	6/29/22 9:02 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.65	309	2140	
074	6/30/22 8:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	135	959	
074	8/2/22 8:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	41	134	
074	8/18/22 9:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	41	109	
074	8/25/22 9:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.02	31	171	
074	9/1/22 9:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.33	0.33	142	733	
074	9/8/22 8:46 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.53	158	1160	
074	9/21/22 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.43	211	689	
074	9/29/22 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	146	910	
074	10/6/22 9:16 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.44	0.9	1070	1180	
074	10/17/22 9:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.23	364	1170	
277	3/22/22 8:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	31	228	
277	3/30/22 8:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	0	216	
277	3/31/22 8:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.15	0.15	0.15	52	408	
277	4/14/22 8:54 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.26	10	85	
277	5/19/22 8:26 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	74	110	
277	5/23/22 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.09	0.11	97	213	
277	5/25/22 8:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	74	243	
277	6/7/22 9:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	203	373	
277	6/10/22 8:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.85	1.08	1280	988	
277	6/29/22 8:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.65	146	410	
277	6/30/22 8:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	110	556	
277	8/2/22 8:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	20	189	
277	8/18/22 9:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	146	233	
277	8/25/22 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.02	86	1660	
277	9/1/22 9:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.33	0.33	109	613	
277	9/8/22 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.53	98	309	
277	9/21/22 8:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.43	354	1940	
277	9/29/22 8:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	175	121	
277	10/6/22 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.44	0.9	1370	1780	
277	10/17/22 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.23	169	422	
172	3/22/22 8:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	30	226	
172	3/30/22 8:16 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	10	160	
172	3/31/22 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.15	0.15	0.15	41	369	
172	4/14/22 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.26	0	97	
172	5/19/22 8:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	62	98	
172	5/23/22 8:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.09	0.11	86	86	
172	5/25/22 8:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	121	120	
172	6/7/22 9:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	161	318	
172	6/10/22 8:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.85	1.08	776	985	

2022 MWRA Central Lab Analyses - Bacteria

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
172	6/29/22 8:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.65	155	419	
172	6/30/22 8:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	96	148	
172	8/2/22 8:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	85	86	
172	8/18/22 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	85	110	
172	8/25/22 9:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.02	41	880	
172	9/1/22 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.33	0.33	153	520	
172	9/8/22 8:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.53	240	670	
172	9/21/22 8:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.43	428	1200	
172	9/29/22 8:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	85	216	
172	10/6/22 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.44	0.9	906	1520	
172	10/17/22 9:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.23	256	443	
276	3/22/22 7:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	41	309	
276	3/30/22 8:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	10	228	
276	3/31/22 8:16 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.15	0.15	0.15	63	309	
276	4/14/22 8:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.26	20	110	
276	5/19/22 8:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	20	161	
276	5/23/22 8:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.09	0.11	121	122	
276	5/25/22 8:26 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	135	74	
276	6/7/22 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	109	272	
276	6/10/22 7:53 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.85	1.08	703	855	
276	6/29/22 8:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.65	122	331	
276	6/30/22 8:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	110	262	
276	8/2/22 7:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	135	189	
276	8/18/22 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	86	146	
276	8/25/22 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.02	282	109	
276	9/1/22 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.33	0.33	143	512	
276	9/8/22 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.53	158	369	
276	9/21/22 8:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.43	318	1120	
276	9/29/22 8:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	109	134	
276	10/6/22 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.44	0.9	1210	2490	
276	10/17/22 8:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.23	185	613	
070	3/22/22 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	10	74	
070	3/30/22 7:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	30	1420	
070	3/31/22 8:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.15	0.15	0.15	52	1260	
070	4/14/22 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.26	121	228	
070	5/19/22 8:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	109	537	
070	5/23/22 8:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.09	0.11	504	1250	
070	5/25/22 8:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	143	419	
070	6/7/22 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	754	763	
070	6/10/22 7:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.85	1.08	862	776	
070	6/29/22 7:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.65	341	691	
070	6/30/22 8:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	487	480	
070	8/2/22 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	86	350	
070	8/18/22 8:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	213	959	
070	8/25/22 8:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.02	161	431	
070	9/1/22 8:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.33	0.33	298	1420	
070	9/8/22 8:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.53	345	1210	
070	9/21/22 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.43	1120	3650	
070	9/29/22 8:19 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	703	4880	

2022 MWRA Central Lab Analyses - Bacteria

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
070	10/6/22 8:39 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.44	0.9	909	2400	
070	10/17/22 8:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.23	86	480	
083	2/9/22 9:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.49	0.9	20	20	
083	2/22/22 9:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.35	0.35	0.35	31	20	
083	3/10/22 9:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.26	0.26	10	10	
083	3/22/22 7:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	0	30	
083	3/24/22 8:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.75	0.75	0.75	148	1020	
083	3/30/22 7:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01	20	10	
083	3/31/22 7:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.15	0.15	0.15	0	0	
083	4/5/22 8:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	0	0	
083	4/14/22 8:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.26	0	0	
083	4/19/22 8:33 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.56	0.56	0.56	120	231	
083	5/4/22 8:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.12	0.21	0.37	10	61	
083	5/17/22 9:07 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.1	0	74	
083	5/19/22 7:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	10	97	
083	5/23/22 9:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.11	86	323	
083	5/25/22 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20	63	
083	6/2/22 8:57 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.1	0.19	0.19	48	79.5	
083	6/7/22 9:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20	86	
083	6/10/22 10:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.85	1.08	676	0	
083	6/13/22 8:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.09	0.09	0	109	
083	6/28/22 9:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.65	0.65	576	932	
083	6/29/22 9:33 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.65	10	243	
083	6/30/22 9:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	10	146	
083	7/11/22 8:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	30	85	
083	7/28/22 8:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.04	0.04	0.04	31	63	
083	8/2/22 8:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	52	74	
083	8/10/22 8:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.14	0.14	41	233	
083	8/18/22 8:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	0	74	
083	8/23/22 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.46	0.46	20	109	
083	8/25/22 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.02	0	85	
083	9/1/22 9:37 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.33	0.33	119	231	
083	9/6/22 9:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.53	0.97	0.97	683	591	
083	9/8/22 9:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.53	30	20	
083	9/19/22 8:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.42	0.43	0.43	0	148	
083	9/21/22 9:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.43	10	368	
083	9/29/22 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	0	187	
083	10/3/22 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.02	0	161	
083	10/6/22 10:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.44	0.9	63	171	
083	10/17/22 8:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.23	74	86	
083	10/20/22 8:46 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.18	31	97	
083	11/2/22 8:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.04	0.04	10	169	
083	11/14/22 10:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.1	0.17	41	132	
083	11/28/22 9:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.64	0.64	160	404	
083	12/12/22 9:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.04	0.04	19900		
083	12/28/22 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	384	472	
057	3/22/22 7:39 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	10	0	
057	3/30/22 7:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01	0	10	
057	3/31/22 7:58 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.15	0.15	0.15	20	0	

2022 MWRA Central Lab Analyses - Bacteria

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
057	4/14/22 8:27 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.26	0	10	
057	5/19/22 7:58 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	63	332	
057	5/23/22 9:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.11	41	278	
057	5/25/22 9:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	41	249	
057	6/7/22 9:48 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	10	160	
057	6/10/22 9:58 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.85	1.08	10	85	
057	6/29/22 9:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.65	30	63	
057	6/30/22 9:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	0	41	
057	8/2/22 8:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	10	160	
057	8/18/22 8:39 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	31	135	
057	8/25/22 9:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.02	63	218	
057	9/1/22 9:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.33	0.33	20	609	
057	9/8/22 9:33 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.53	30	171	
057	9/21/22 9:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.43	262	959	
057	9/29/22 9:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	31	231	
057	10/6/22 9:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.44	0.9	413	1450	
057	10/17/22 8:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.23	620	181	
066	1/12/22 9:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	25.5	122	
066	2/9/22 9:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.49	0.9	62	428	
066	2/22/22 9:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.35	0.35	0.35	10	158	
066	3/10/22 9:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.26	0.26	10	145	
066	3/24/22 8:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.75	0.75	0.75	109	393	
066	4/5/22 8:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	10	20	
066	4/19/22 8:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.56	0.56	0.56	292	441	
066	5/4/22 8:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.12	0.21	0.37	0	120	
066	5/17/22 8:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.1	62.5	159.5	
066	6/2/22 8:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.1	0.19	0.19	309	450	
066	6/13/22 8:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.09	0.09	62.5	252.5	
066	6/28/22 8:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.65	0.65	308.5	3410	
066	7/11/22 8:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	31	143	
066	7/28/22 8:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.04	0.04	0.04	52	110	
066	8/10/22 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.14	0.14	131	240	
066	8/23/22 8:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.46	0.46	620	1330	
066	9/6/22 9:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.53	0.97	0.97	2360	2760	
066	9/19/22 8:48 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.42	0.43	0.43	110	262	
066	10/3/22 8:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.02	20	399	
066	10/20/22 8:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.18	10	496	
066	11/2/22 8:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.04	0.04	52	233	
066	11/14/22 9:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.1	0.17	156	181	
066	11/28/22 9:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.64	0.64	529	480	
066	12/12/22 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.04	0.04	63	86	
066	12/28/22 8:54 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	46.5	96	
056	3/22/22 9:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	0	359	
056	3/30/22 8:09 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01	31	132	
056	3/31/22 8:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.15	0.15	0.15	30	173	
056	4/14/22 7:48 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.26	31	41	
056	5/19/22 8:13 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	30	278	
056	5/23/22 8:54 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.11	121	246	
056	5/25/22 9:05 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20	74	

2022 MWRA Central Lab Analyses - Bacteria

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
056	6/7/22 9:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	41	218	
056	6/10/22 9:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.85	1.08	52	345	
056	6/29/22 8:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.65	10	249	
056	6/30/22 9:07 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	243	441	
056	8/2/22 9:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	0	359	
056	8/18/22 10:05 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	158	1420	
056	8/25/22 9:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.02	169	243	
056	9/1/22 9:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.33	0.33	0	84	
056	9/8/22 9:09 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.53	30	173	
056	9/21/22 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.43	428	2100	
056	9/29/22 9:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	0	657	
056	10/6/22 9:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.44	0.9	122	552	
056	10/17/22 9:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.23	31	327	
177	1/27/22 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.02	0	158	
177	2/9/22 9:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.49	0.9	109	278	
177	2/22/22 8:41 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.35	0.35	0.35	20	373	
177	3/10/22 9:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.26	0.26	74	291	
177	3/24/22 7:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.75	0.75	0.75	0	97	
177	4/5/22 7:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	62	299	
177	4/19/22 7:51 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.56	0.56	0.56	318	637	
177	5/4/22 7:54 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.12	0.21	0.37	10	171	
177	5/17/22 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.09	0.1	158	565	
177	6/2/22 8:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.1	0.19	0.19	62	131	
177	6/13/22 8:06 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.09	0.09	0.09	0	20	
177	6/28/22 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.65	0.65	209	1050	
177	7/11/22 7:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	20	52	
177	7/28/22 7:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.04	0.04	0.04	41	350	
177	8/10/22 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.14	0.14	52	712	
177	8/23/22 8:10 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.46	0.46	1720	3450	
177	9/6/22 8:16 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.53	0.97	0.97	5480	4110	
177	9/19/22 8:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.42	0.43	0.43	20	173	
177	10/3/22 7:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.02	10	63	
177	10/20/22 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.18	10	278.5	
177	11/2/22 7:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.04	0.04	10	148	
177	11/14/22 9:30 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.1	0.17	301	545	
177	11/28/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.64	0.64	2190	2910	
177	12/12/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.04	0.04	10	262	
177	12/28/22 8:40 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	63	135	
067	3/22/22 9:04 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	0	74	
067	3/30/22 8:21 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.01	0	74	
067	3/31/22 8:33 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.15	0.15	0.15	0	20	
067	4/14/22 7:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.23	0.23	0.26	0	31	
067	5/19/22 8:37 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.01	0.01	0.01	0	41	
067	5/23/22 8:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.09	0.11	31	98	
067	5/25/22 8:54 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	20	52	
067	6/7/22 9:12 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	10	41	
067	6/10/22 9:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.85	1.08	52	201	
067	6/29/22 8:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.65	10	294	
067	6/30/22 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	0	20	

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Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
067	8/2/22 9:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	10	1020	
067	8/18/22 9:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	121	1220	
067	8/25/22 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.02	487	697	
067	9/1/22 8:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.33	0.33	20	738	
067	9/8/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.53	10	573	
067	9/21/22 8:47 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.43	51	717	
067	9/29/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	0	148	
067	10/6/22 9:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.44	0.9	41	288	
067	10/17/22 9:23 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.23	0.23	0.23	0	110	
059	3/22/22 8:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	10	52	
059	3/30/22 8:37 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.01	10	31	
059	3/31/22 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.15	0.15	0.15	10	0	
059	4/14/22 8:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.23	0.23	0.26	0	20	
059	5/19/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.01	0.01	0.01	0	31	
059	5/23/22 8:29 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.09	0.11	41	52	
059	5/25/22 8:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	20	52	
059	6/7/22 8:54 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	0	110	
059	6/10/22 9:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.85	1.08	31	122	
059	6/29/22 8:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.65	10	3650	
059	6/30/22 8:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	10	74	
059	8/2/22 9:31 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	0	1020	
059	8/18/22 9:24 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	31	1010	
059	8/25/22 8:37 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.02	512	650	
059	9/1/22 8:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.33	0.33	10	1080	
059	9/8/22 8:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.53	0	331	
059	9/21/22 8:32 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.43	20		
059	9/29/22 8:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	0	158	
059	10/6/22 8:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.44	0.9	41	332	
059	10/17/22 9:02 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.23	0.23	0.23	0	171	
176	3/22/22 8:53 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	0	41	
176	3/30/22 8:31 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.01	0	63	
176	3/31/22 8:45 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.15	0.15	0.15	0	41	
176	4/14/22 7:53 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.23	0.23	0.26	0	63	
176	5/19/22 8:50 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.01	0.01	0.01	20	331	
176	5/23/22 8:34 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.09	0.11	51	121	
176	5/25/22 8:44 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	52	86	
176	6/7/22 9:00 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	0	122	
176	6/10/22 9:05 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.85	1.08	51	238	
176	6/29/22 8:29 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.65	63	5790	
176	6/30/22 8:43 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	10	1850	
176	8/2/22 9:26 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.01	0.01	20	441	
176	8/18/22 9:32 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.01	0.01	173	1420	
176	8/25/22 8:42 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.02	86	547	
176	9/1/22 8:45 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.33	0.33	10	591	
176	9/8/22 8:44 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.53	0	1610	
176	9/21/22 8:38 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.01	0.43	121	1860	
176	9/29/22 8:47 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	10	231	
176	10/6/22 9:04 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.44	0.9	20	121	
176	10/17/22 9:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.23	0.23	0.23	20	538	

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Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
167	2/22/22 8:26 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.35	0.35	0.35	0	31	
167	3/10/22 8:48 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.26	0.26	20	74	
167	3/24/22 7:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.75	0.75	0.75	0	0	
167	4/5/22 7:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	0	0	
167	4/19/22 7:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.56	0.56	0.56	0	73	
167	5/4/22 7:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.12	0.21	0.37	0	31	
167	5/17/22 7:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.09	0.1	20	20	
167	6/2/22 7:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.1	0.19	0.19	135	323	
167	6/13/22 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.09	0.09	0.09	20	31	
167	6/28/22 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.65	0.65	10	122	
167	7/11/22 7:29 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	231	10	
167	7/28/22 7:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.04	0.04	0.04	0	169	
167	8/10/22 7:35 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.14	0.14	3870	723	
167	8/23/22 7:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.46	0.46	4610	11200	
167	9/6/22 8:03 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.53	0.97	0.97	11200	12000	
167	9/19/22 7:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.42	0.43	0.43	0	521	
167	10/3/22 7:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.02	52	428	
167	10/20/22 7:48 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.18	0	350	
167	11/2/22 7:27 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.04	0.04	0	52	
167	11/14/22 9:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.1	0.17	20	771	
167	11/28/22 8:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.64	0.64	0	74	
167	12/12/22 8:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.04	0.04	10	216	
052	3/22/22 8:33 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		0
052	3/30/22 8:44 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.01	0		0
052	3/30/22 8:44 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.3	0	0	0.01	0		5
052	3/31/22 9:01 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.7	0.15	0.15	0.15	10		5
052	3/31/22 9:01 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.15	0.15	0.15	10		0
052	4/14/22 8:07 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.26	0		0
052	4/14/22 8:07 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.1	0.23	0.23	0.26	0		0
052	5/19/22 9:06 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.01	197		3300
052	5/23/22 8:22 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.09	0.11	0		0
052	5/25/22 8:29 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.9	0	0	0	0		5
052	5/25/22 8:29 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		9.09
052	6/7/22 8:47 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		9.09
052	6/10/22 8:51 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.1	0	0.85	1.08	31		15
052	6/10/22 8:51 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.85	1.08	0		54.5
052	6/29/22 8:18 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.65	2060		
052	6/30/22 8:31 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		3000
052	8/2/22 9:38 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.01	20		946
052	8/18/22 9:15 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.01	41		280
052	8/25/22 8:28 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.02	0		300
052	8/25/22 8:28 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.8	0	0	0.02	0		5
052	9/1/22 8:31 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.33	0.33	20		955
052	9/8/22 8:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.3	0	0	0.53	0		18.2
052	9/8/22 8:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.53	0		0
052	9/21/22 8:20 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.5	0	0.01	0.43	10		18.2
052	9/21/22 8:20 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.43	20		117
052	9/29/22 8:35 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	10		173
052	10/6/22 8:49 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.2	0	0.44	0.9	0		9.09

2022 MWRA Central Lab Analyses - Bacteria

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
052	10/6/22 8:49 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.44	0.9	0		9.09
052	10/17/22 8:54 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.23	10		109
052	10/17/22 8:54 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.7	0.23	0.23	0.23	52		85
069	3/22/22 8:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.8	0	0	0	0		0
069	3/22/22 8:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		0
069	3/30/22 8:50 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.01	0		0
069	3/31/22 9:09 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.15	0.15	0.15	0		0
069	4/14/22 8:15 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.7	0.23	0.23	0.26	0		0
069	4/14/22 8:15 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.26	0		9.09
069	5/19/22 9:15 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	4.6	0.01	0.01	0.01	0		30
069	5/19/22 9:15 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.01	0		155
069	5/23/22 8:15 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.09	0.11	0		9.09
069	5/25/22 8:22 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.1	0	0	0	0		5
069	5/25/22 8:22 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		27.3
069	6/7/22 8:38 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.6	0	0	0	0		0
069	6/7/22 8:38 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		0
069	6/10/22 8:43 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.9	0	0.85	1.08	0		0
069	6/10/22 8:43 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.85	1.08	0		9.09
069	6/29/22 8:13 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.65	20		955
069	6/30/22 8:26 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	10		1240
069	8/2/22 10:00 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.01	0		0
069	8/18/22 9:06 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	5.4	0	0.01	0.01	0		0
069	8/18/22 9:06 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.01	0		9.09
069	8/25/22 8:20 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.9	0	0	0.02	0		10
069	8/25/22 8:20 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.02	0		0
069	9/1/22 8:24 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	4.5	0	0.33	0.33	0		0
069	9/1/22 8:24 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.33	0.33	0		9.09
069	9/8/22 8:16 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.53	20		191
069	9/8/22 8:16 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3	0	0	0.53	0		10
069	9/21/22 8:14 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.8	0	0.01	0.43	0		35
069	9/21/22 8:14 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.43	20		350
069	9/29/22 8:16 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.1	0	0	0	0		0
069	9/29/22 8:16 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		18.2
069	10/6/22 8:44 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.9	0	0.44	0.9	10		0
069	10/6/22 8:44 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.44	0.9	0		9.09
069	10/17/22 8:46 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.23	0		370
069	10/17/22 8:46 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3	0.23	0.23	0.23	0		10
137	1/20/22 11:21 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	15.1	0.15	0.15	0.15	0		0
137	1/20/22 11:21 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.15	0.15	0.15	74		25
137	1/25/22 11:14 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.3	0.02	0.06	0.07	0		0
137	1/25/22 11:14 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.02	0.06	0.07	31		45
137	2/3/22 11:07 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.6	0.17	0.17	0.17	0		0
137	2/3/22 11:07 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.17	0.17	0.17	0		20
137	2/15/22 11:19 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.7	0	0.01	0.23	0		0
137	2/15/22 11:19 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.23	0		5
137	3/2/22 12:16 PM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1				0		2.5
137	3/2/22 12:16 PM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.8				10		0
137	3/23/22 10:18 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.9				0		5
137	3/23/22 10:18 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1				0		0

2022 MWRA Central Lab Analyses - Bacteria

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	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)
137	4/4/22 10:14 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.4	0.01	0.01	0.01	0		0
137	4/4/22 10:14 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.01	0		0
137	4/27/22 9:41 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.9	0.09	0.32	0.32	0		0
137	4/27/22 9:41 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.09	0.32	0.32	0		0
137	5/5/22 9:57 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.3	0	0.12	0.21	0		0
137	5/5/22 9:57 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.12	0.21	0		5
137	5/24/22 9:48 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.3	0	0	0.09	10		0
137	5/24/22 9:48 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.09	0		10
137	6/6/22 9:46 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.6	0	0	0	0		0
137	6/6/22 9:46 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		5
137	6/27/22 9:45 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.65	0.65	0.65	10		5
137	6/27/22 9:45 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.6	0.65	0.65	0.65	0		0
137	7/22/22 10:16 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		0
137	7/22/22 10:16 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.2	0	0	0	0		0
137	7/27/22 9:52 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.8	0	0	0	0		0
137	7/27/22 9:52 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		17.5
137	8/24/22 9:58 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.02	0.46	10		30
137	8/24/22 9:58 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.7	0	0.02	0.46	10		10
137	8/30/22 11:07 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		0
137	8/30/22 11:07 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	14.3	0	0	0	0		0
137	9/15/22 11:02 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.15	0		5
137	9/15/22 11:02 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.9	0	0	0.15	0		5
137	9/27/22 9:57 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.9	0	0.29	0.29	10		5
137	9/27/22 9:57 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.29	0.29	20		125
137	10/13/22 10:13 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.4	1.03	1.03	1.03	0		0
137	10/13/22 10:13 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	1.03	1.03	1.03	10		40
137	10/27/22 10:01 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.3	0	0.47	0.52	0		5
137	10/27/22 10:01 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.47	0.52	41		60
137	11/3/22 10:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	14.2	0	0	0.04	0		0
137	11/3/22 10:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.04	0		25
137	11/29/22 11:43 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.64	20		50
137	11/29/22 11:43 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.8	0	0	0.64	0		0
137	12/8/22 11:48 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.4	0	0.85	0.94	0		0
137	12/8/22 11:48 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.85	0.94	0		0
137	12/21/22 11:50 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.9	0	0	0	20		5
137	12/21/22 11:50 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		10

2022 MWRA Central Lab Analyses - Nutrients

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	Ammonium (uM)	Nitrate+nitrite (uM)	Total Nitrogen (uM)	Particulate P (uM)	Phosphate (uM)	Chlorophyll a (ug/L)	Pheophytin (ug/L)	Particulate carbon (uM)	Particulate nitrogen (uM)	Total dissolved N (uM)	Total dissolved P (uM)	Total phosphorus (uM)	Total suspended solids (mg/L)
012	1/12/22 10:40 AM	S	CHARLES RIVER	UPPER BASIN	6.81	65.1	93.4		0.567	1.72	1.15					1.84	2.3
012	1/27/22 10:30 AM	S	CHARLES RIVER	UPPER BASIN	6.66	66	90.9		0.443	0.733	0.579					2.23	1.87
012	2/9/22 10:55 AM	S	CHARLES RIVER	UPPER BASIN	9.77	45.1	94.3		0.429	1.9	1.66					1.32	3.64
012	2/22/22 10:42 AM	S	CHARLES RIVER	UPPER BASIN	4.08	48.9	69.3		0.221	1.44	0.825					1.64	1.14
012	3/10/22 10:35 AM	S	CHARLES RIVER	UPPER BASIN	1.97	48.7	70.8		0.249	6.44	2.36					1.125	2.96
012	3/24/22 9:39 AM	S	CHARLES RIVER	UPPER BASIN	2.04	38.8	65.6		0.19	13	4.14					1.39	6.03
012	4/5/22 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.663	35.6	63.7		0.207	11.7	5.33					1.25	5.34
012	4/19/22 9:56 AM	S	CHARLES RIVER	UPPER BASIN	1.475	26.95	59.5		0.2555	3.875	2.78					1.925	16.6
012	5/4/22 10:16 AM	S	CHARLES RIVER	UPPER BASIN	2.8	37.85	67.8		0.272	7.24	5.605					1.155	3.785
012	5/17/22 10:33 AM	S	CHARLES RIVER	UPPER BASIN	4.27	32.2	72		0.309	7.48	4.32					1.73	2.8
012	6/2/22 10:29 AM	S	CHARLES RIVER	UPPER BASIN	7.05	39.6	78.6		0.947	1.2	1.49					1.91	4.7
012	6/13/22 10:06 AM	S	CHARLES RIVER	UPPER BASIN	2.79	26.1	62.7		0.637	1.96	1.73					1.52	2.46
012	6/28/22 10:30 AM	S	CHARLES RIVER	UPPER BASIN	4.56	22.3	57.6		0.658	1.16	1.13					1.38	2.34
012	7/11/22 9:29 AM	S	CHARLES RIVER	UPPER BASIN	1.66	17.7	45.4		0.654	0.376	0.988					1.2	1.03
012	7/28/22 9:59 AM	S	CHARLES RIVER	UPPER BASIN	0.579	15.3	43.9		0.433	0.19	0.444					0.985	1.82
012	8/10/22 10:11 AM	S	CHARLES RIVER	UPPER BASIN	3.31	23.6	58.5		0.499	0.345	0.429					1.47	2.41
012	8/23/22 10:04 AM	S	CHARLES RIVER	UPPER BASIN	6.83	28.8	69.7		0.383	1.63	2.58					1.22	5.31
012	9/6/22 10:45 AM	S	CHARLES RIVER	UPPER BASIN	7.21	16.7	53.4		1.09	1.19	1.14					3.08	5.67
012	9/19/22 9:55 AM	S	CHARLES RIVER	UPPER BASIN	1.785	35.45	59.2		0.33	0.686	1.0055					0.924	1.62
012	10/3/22 9:45 AM	S	CHARLES RIVER	UPPER BASIN	1.86	31.7	78.3		0.515	0.751	1.64					0.822	1.52
012	10/20/22 10:19 AM	S	CHARLES RIVER	UPPER BASIN	4.29	41	73.3		0.457	0.322	0.632					0.684	1.19
012	11/2/22 9:54 AM	S	CHARLES RIVER	UPPER BASIN	4.98	43.9	88.1		0.721	1.39	2.52					1.32	2.98
012	11/14/22 11:32 AM	S	CHARLES RIVER	UPPER BASIN	5.44	40.4	76.2		0.857	0.308	0.83					1	1.9
012	11/28/22 10:54 AM	S	CHARLES RIVER	UPPER BASIN	3.77	63	95.1		0.784	1.2	9.83					1.66	2.45
012	12/12/22 10:56 AM	S	CHARLES RIVER	UPPER BASIN	7.66	45.9	77.1		0.688	6.5	3.13					1.6	2.88
012	12/28/22 9:55 AM	S	CHARLES RIVER	UPPER BASIN	2.4	50.5	73.8		0.539	1.88	2.53					1.4	0.25
005	2/9/22 10:35 AM	S	CHARLES RIVER	UPPER BASIN	12.5	49.2	90.4		0.832	1.95	2.03					1.63	4.06
005	2/22/22 10:14 AM	S	CHARLES RIVER	UPPER BASIN	4.16	50.3	73.3		0.261	2.66	1.77					1.66	2.9
005	3/10/22 10:18 AM	S	CHARLES RIVER	UPPER BASIN	2.71	49.5	76.3		0.309	2.37	1.08					1.37	3.58
005	3/24/22 9:17 AM	S	CHARLES RIVER	UPPER BASIN	0.94	36.9	65.3		0.116	23.2	21.4					1.99	15.3
005	4/5/22 9:18 AM	S	CHARLES RIVER	UPPER BASIN	1.98	33.9	63.4		0.157	13.2	5.9					1.36	5.65
005	4/19/22 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.396	28	62.4		0.187	7.64	3.05					1.82	33.5
005	5/4/22 9:50 AM	S	CHARLES RIVER	UPPER BASIN	0.673	34.7	67.1		0.233	14.6	6.96					1.48	5.68
005	5/17/22 10:12 AM	S	CHARLES RIVER	UPPER BASIN	0.748	32.8	76.9		0.28	23.1	7.02					2.03	8.93
005	6/2/22 10:07 AM	S	CHARLES RIVER	UPPER BASIN	5.72	19.5	70.6		0.124	14.4	6.45					2.29	11.2
005	6/13/22 9:33 AM	S	CHARLES RIVER	UPPER BASIN	3.69	28.6	77		0.369	35.6	4.67					1.83	5.72
005	6/28/22 10:03 AM	S	CHARLES RIVER	UPPER BASIN	4.74	8.77	53.5		0.277	14.4	6.59					2.06	7.5
005	7/11/22 9:07 AM	S	CHARLES RIVER	UPPER BASIN	0.904	6.27	45.1		0.3405	12.445	19.25					1.76	8.635
005	7/28/22 9:23 AM	S	CHARLES RIVER	UPPER BASIN	0.129	1.33	42		0.273	7.33	2.5					1.3	7.2
005	8/10/22 9:43 AM	S	CHARLES RIVER	UPPER BASIN	1.33	0.463	43.7		0.0623	4.56	2.11					1.77	12.4
005	8/23/22 9:42 AM	S	CHARLES RIVER	UPPER BASIN	0.364	0.312	41.1		0.166	8.08	2.66					1.52	7.9
005	9/6/22 10:12 AM	S	CHARLES RIVER	UPPER BASIN	7.59	3.83	49.9		0.17	8.92	6.55					2.11	7.46
005	9/19/22 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.421	10.5	44.8		0.0736	7.56	3.7					1.73	8.61
005	10/3/22 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.698	26.5	74.6		0.229	20.1	37.2					2.3	18.9
005	10/20/22 9:44 AM	S	CHARLES RIVER	UPPER BASIN	2.99	30.6	85.4		0.301	1.02	1.4					1.28	8.03
005	11/2/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	5.77	48.3	93.9		0.689	7.14	3.22					1.49	4.83
005	11/14/22 10:55 AM	S	CHARLES RIVER	UPPER BASIN	6.45	45.7	88.3		0.858	1.92	3.37					1.35	1.67
005	11/28/22 10:33 AM	S	CHARLES RIVER	UPPER BASIN	5.55	64.7	106		0.742	3.06	1.74					1.36	5.96
005	12/12/22 10:37 AM	S	CHARLES RIVER	UPPER BASIN	5.22	49.8	79.1		0.676	7.69	3.71					1.57	1.33
166	2/9/22 10:15 AM	S	CHARLES RIVER	LOWER BASIN	12.2	72.2	105		0.541	6.38	2.65					1.33	3.99
166	2/22/22 9:57 AM	S	CHARLES RIVER	LOWER BASIN	6.5	54.1	80		0.293	3.4	1.16					1.89	2.55
166	3/10/22 9:58 AM	S	CHARLES RIVER	LOWER BASIN	4.87	57	80.6		0.34	1.96	0.669					1.34	3.74
166	3/24/22 8:53 AM	S	CHARLES RIVER	LOWER BASIN	1.11	43.2	67.7		0.262	14.9	3.54					1.26	3.45
166	4/5/22 9:00 AM	S	CHARLES RIVER	LOWER BASIN	1.17	43	74.6		0.226	18.2	5.4					1.49	4.24
166	4/19/22 9:08 AM	S	CHARLES RIVER	LOWER BASIN	0.703	37.3	68.4		0.205	5.3	1.81					1.52	4.46
166	5/4/22 9:17 AM	S	CHARLES RIVER	LOWER BASIN	1.62	26.4	59.2		0.176	20	8.99					1.3	4.73
166	5/17/22 9:49 AM	S	CHARLES RIVER	LOWER BASIN	3.55	31.5	63.5		0.0956	7.09	3.35					1.23	4.28
166	6/13/22 9:16 AM	S	CHARLES RIVER	LOWER BASIN	7.98	27.4	74.1		0.123	6.19	3.72					1.14	2.71
166	6/28/22 9:39 AM	S	CHARLES RIVER	LOWER BASIN	4.06	23.3	60.9		0.268	3.5	2.46					1.2	0.31
166	7/11/22 8:48 AM	S	CHARLES RIVER	LOWER BASIN	0.381	11.2	42.1		0.222	8.52	4.15					0.972	3.67
166	7/28/22 9:01 AM	S	CHARLES RIVER	LOWER BASIN	0.0478	0.477	37.9		0.21	12.2	3.54					1.17	3.61
166	8/10/22 9:20 AM	S	CHARLES RIVER	LOWER BASIN	0.236	0.347	35.4		0.0291	2.81	1.36					0.923	4.11
166	8/23/22 9:17 AM	S	CHARLES RIVER	LOWER BASIN	0.297	0.279	39.2		0.0562	6.25	2.25					1.11	6.89
166	9/6/22 9:50 AM	S	CHARLES RIVER	LOWER BASIN	0.116	0.0635	40.6		0.0914	4.57	2.28					1.48	6.2
166	9/19/22 9:17 AM	S	CHARLES RIVER	LOWER BASIN	0.254	0.223	37.4		0.129	5.81	1.01					1.61	4.91
166	10/3/22 9:07 AM	S	CHARLES RIVER	LOWER BASIN	2.39	3.33	47.5		0.0539	19.4	8.78					1.74	6.87
166	10/20/22 9:24 AM	S	CHARLES RIVER	LOWER BASIN	0.356	10.7	60		0.118	4.99	2.85					1.45	3
166	11/2/22 8:57 AM	S	CHARLES RIVER	LOWER BASIN	1.16	38.2	71		0.306	15.8	7.72					1.25	3.52
166	11/14/22 10:38 AM	S	CHARLES RIVER	LOWER BASIN	3.53	42.7	75.1		0.498	5.63	3.87					0.84	2.18
166	11/28/22 10:05 AM	S	CHARLES RIVER	LOWER BASIN	8.54	53	86.9		1.07	1.94	1.06					1.84	2.48

2022 MWRA Central Lab Analyses - Nutrients

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	Ammonium (uM)	Nitrate+nitrate (uM)	Total Nitrogen (uM)	Particulate P (uM)	Phosphate (uM)	Chlorophyll a (ug/L)	Pheophytin (ug/L)	Particulate carbon (uM)	Particulate nitrogen (uM)	Total dissolved N (uM)	Total dissolved P (uM)	Total phosphorus (uM)	Total suspended solids (mg/L)
166	12/12/22 10:10 AM	S	CHARLES RIVER	LOWER BASIN	7.8	49.3	77.8		0.856	5.4	3.68					1.88	0.54
083	2/9/22 9:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	24.2	75	113		0.485	7.05	2.79					1.09	2.98
083	2/22/22 9:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	22.3	77.4	114		0.262	6.03	1.5					1.76	3.59
083	3/10/22 9:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	20.9	68	119		0.579	3.65	1.21					1.64	2.98
083	3/24/22 8:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	20.1	60.9	103		0.354	7.41	2.69					1.62	6.8
083	4/5/22 8:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	18.9	65.8	111		0.215	14	5.29					1.26	5.34
083	4/19/22 8:33 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	4.97	63.4	98.1		0.251	5.83	2					1.24	7.29
083	5/4/22 8:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.935	62.1	86.9		0.138	25.6	10.2					1.12	8.86
083	5/17/22 9:07 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	1.43	51	79.9		0.13	10.3	2.69					0.903	3.25
083	6/2/22 8:57 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	7.715	45.7	83.85		0.0147	2.28	2.135					1.25	4.475
083	6/13/22 8:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	9.67	41.5	92.8		0.25	5.73	3					1.38	2.79
083	6/28/22 9:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	7.62	28.9	85.6		0.189	11.1	2.78					1.96	10.3
083	7/11/22 8:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	8.25	23.3	60.4		0.39	2.57	1.75					1.33	3.21
083	7/28/22 8:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	2.97	21.3	49.2		0.313	0.657	1.14					0.892	3.84
083	8/10/22 8:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	1.51	14.3	43.8		0.171	1.5	1.05					1.02	2.48
083	8/23/22 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.633	1.47	34.3		0.138	8.49	2.52					0.82	4.77
083	9/6/22 9:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.81	3.22	34.8		0.112	9.23	4.94					0.907	2.94
083	9/19/22 8:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.748	2.21	25.4		0.0659	1.54	1.12					0.773	5.56
083	10/3/22 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	3.08	7.02	36.5		0.125	2.12	4.28					0.606	4
083	10/20/22 8:46 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	3.55	9.29	42.6		0.0998	1.16	1.13					0.527	1.8
083	11/2/22 8:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	6.56	18.2	50.1		0.252	2.79	2.65					0.874	3.31
083	11/14/22 10:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	5.12	20.7	43.8		0.231	3.27	2.73					0.318	2.88
083	11/28/22 9:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	20.8	24.6	64.3		0.356	1.56	0.805					0.864	6.52
083	12/12/22 9:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	20.3	102	169		1.77	3.21	2.24					3.2	1.28
083	12/28/22 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	22.6	47.3	82.2		0.545	6.07	3.56					1.19	0.27
066	1/12/22 9:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	19.8	74	119.5		0.557	2.455	1.105					1.385	0.87
066	2/9/22 9:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	23.3	72.6	116		0.481	6.49	2.48					1.25	2.44
066	2/22/22 9:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	21.7	73.8	115		0.277	9.29	2.08					1.77	2.63
066	3/10/22 9:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	22	69.6	119		0.413	2.87	1.01					1.27	3.04
066	3/24/22 8:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	16.8	62	96.5		0.308	6.38	2.63					1.26	3.58
066	4/5/22 8:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	18	65	106		0.313	16.9	5.24					1.22	5.08
066	4/19/22 8:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	6.14	56.3	89.5		0.253	7.81	3.06					1.65	11.1
066	5/4/22 8:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	2.79	59.6	80.5		0.183	19.4	7.06					1	4.26
066	5/17/22 8:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	4.18	48.05	86.15		0.09495	14.25	3.845					1.16	5.355
066	6/2/22 8:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	20	42.4	88.1		0.71	4.56	4.61					1.89	1.47
066	6/13/22 8:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	7.105	44.8	91.45		0.196	4.09	2.205					0.9925	3.135
066	6/28/22 8:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	13.4	26.05	83.25		0.3965	8.75	2.305					2.355	8.68
066	7/11/22 8:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	6.08	25.6	53.2		0.698	2.43	1.75					1.62	2.56
066	7/28/22 8:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	3.68	22.4	53.2		0.551	1.53	1.58					1.62	4.42
066	8/10/22 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	2.75	14.2	42.9		0.44	3.06	2.13					1.51	1.24
066	8/23/22 8:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	8.24	7.99	50.7		0.15	6.33	1.97					1.78	5.99
066	9/6/22 9:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	2.7	6.19	38.9		0.329	10.4	6.81					1.75	7.86
066	9/19/22 8:48 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	1.89	2.96	26.6		0.128	2.15	1.5					1.04	2.86
066	10/3/22 8:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	4.13	17.3	38.1		0.233	2.26	2.63					0.779	3.07
066	10/20/22 8:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	5.15	13.9	41		0.202	0.988	1.03					0.999	
066	11/2/22 8:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	5.63	18.9	49.6		0.624	2.43	2.79					1.03	3.35
066	11/14/22 9:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	6.88	18.8	46.8		0.333	2.73	2.37					0.497	0.24
066	11/28/22 9:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	22.1	25	68.9		0.515	1.44	1.11					0.958	2.02
066	12/12/22 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	23.9	28.7	70.3		0.392	3.71	2.75					1.15	1.51
066	12/28/22 8:54 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	23.65	50.05	85.9		0.526	5.125	3.045					1.145	2.82
177	1/27/22 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	17.8	75.9	113		0.521	1.35	0.526					2.21	2.35
177	2/9/22 9:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	21.9	70.3	117		0.492	6.76	2.55					1.22	3.25
177	2/22/22 8:41 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	17.5	75.8	109		0.289	5.28	1.48					1.82	2.19
177	3/10/22 9:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	18.5	67.5	112		0.357	2.96	1.01					1.17	2.97
177	3/24/22 7:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	16	64.5	98.2		0.438	6.15	2.35					1.18	3.52
177	4/5/22 7:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	13.9	65.6	109		0.284	14.6	4.32					1.36	4
177	4/19/22 7:51 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	4.66	50.1	84.9		0.159	6.25	3.16					1.91	3.49
177	5/4/22 7:54 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	2.29	55.6	80.6		0.0607	21.2	8.96					1.21	7.11
177	5/17/22 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	11.1	38	85.2		0.0875	17.8	10.3					1.66	7.77
177	6/2/22 8:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	26.3	32.4	88.6		0.468	3.61	4.58					2.13	4.96
177	6/13/22 8:06 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	13.4	36.4	97.6		0.47	7.21	4.01					1.73	1.67
177	6/28/22 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	20.1	9.68	69.9		0.33	8.38	8.04					3.66	6.67
177	7/11/22 7:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.028	0.318	49.7		0.281	34.4	6.8					2.32	16.2
177	7/28/22 7:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.122	0.518	47		0.878	8.4	1.74					4.49	8.13
177	8/10/22 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.378	0.297	85.9		5.23	27.2	8.18					10.4	15.4
177	8/23/22 8:10 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	2.79	1.97	228		5.61	147	34.6					23.2	74.6
177	9/6/22 8:16 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	5.59	7.06	45.5		1.51	3.14	1.58					3.97	7.97
177	9/19/22 8:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.561	0.278	119		2.51	52.4	1.6					11.6	24.5
177	10/3/22 7:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.67	1.07	170		1.25	124	188					13.7	46.4
177	10/20/22 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	2.065	7.965	154.5		1.94	37.35	10.675					8.555	14.75

2022 MWRA Central Lab Analyses - Nutrients

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	Ammonium (uM)	Nitrate+nitrite (uM)	Total Nitrogen (uM)	Particulate P (uM)	Phosphate (uM)	Chlorophyll a (ug/L)	Pheophytin (ug/L)	Particulate carbon (uM)	Particulate nitrogen (uM)	Total dissolved N (uM)	Total dissolved P (uM)	Total phosphorus (uM)	Total suspended solids (mg/L)
177	11/2/22 7:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	5.05	16	54.1		0.253	24.2	7.67					2.02	5
177	11/14/22 9:30 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	4.76	7.36	32.2		0.616	24	7.64					0.964	14.8
177	11/28/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	18.3	27.4	69.2		0.819	4.92	3.75					1.85	4.49
177	12/12/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	24.7	29.5	73.2		0.554	4.43	2.69					1.73	2.6
177	12/28/22 8:40 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	22.8	57.5	92.6		0.531	5.82	2.97					1.48	2.19
167	2/22/22 8:26 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	15.5	68.1	103		0.26	4.2	1.35					1.95	3.69
167	3/10/22 8:48 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	12.8	67.5	107		0.281	2.19	1.12					1.27	3.17
167	3/24/22 7:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	9.44	52.2	82.1		0.268	8.77	3.13					1.46	4.37
167	4/5/22 7:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	8.01	51.6	85.7		0.178	16.6	6.96					1.6	7.92
167	4/19/22 7:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	2.2	48.6	80.8		0.203	4.94	2.92					1.68	10.6
167	5/4/22 7:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.747	41.3	70.9		0.0471	22.5	8.54					1.08	7.88
167	5/17/22 7:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	4.12	24.7	61.5		0.175	7.61	6.89					1.18	3.02
167	6/2/22 7:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	17.9	16.9	69.9		0.322	2.31	4.41					2.15	9.19
167	6/13/22 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	5.72	21.8	72.7		0.26	13.7	4.2					1.65	3.84
167	6/28/22 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	4.01	3.34	52		0.236	21.9	14.6					2.7	8.58
167	7/11/22 7:29 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.028	1.08	44		0.231	13.9	5					2.42	8.25
167	7/28/22 7:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.0807	1.2	75.9		1.1	11.3	2.59					4.9	15.6
167	8/10/22 7:35 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.578	1.24	61.5		4.3	4.3	2					7.9	10.8
167	8/23/22 7:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	1.41	3.57	27.3		1.83	2.98	2.15					3.34	13.2
167	9/6/22 8:03 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	13.6	15.1	65.2		3.49	1.62	1.09					6.92	4.75
167	9/19/22 7:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.223	0.254	52.2		2.11	11.5	4.34					6.07	13.9
167	10/3/22 7:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.211	0.213	50.7		0.297	31.5	4.93					3.3	11.6
167	10/20/22 7:48 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.376	0.94	60.6		0.871	9.73	3.03					5.6	6
167	11/2/22 7:27 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.223	0.131	39.6		0.0801	25.7	8.89					2.53	8.31
167	11/14/22 9:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.169	0.831	22.1		0.152	156	112					0.503	14.5
167	11/28/22 8:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.311	0.179	54.9		0.16	108	22.9					3.17	19.4
167	12/12/22 8:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	16.1	22.6	59		0.346	8.28	3.63					1.59	3.43
137	1/20/22 11:21 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.07	6.17			0.723	2.46	1.43						1.97
137	1/20/22 11:21 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	6.66	23.1		0.526	0.596	1.37	1.01	62.2	4.85	40.4	1.06		9.47
137	1/25/22 11:14 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.56	6.37			0.707	0.71	0.39						1.22
137	1/25/22 11:14 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	6.73	26.7		0.327	0.63	1.21	0.6	34.4	2.2	43.5	1.11		18.3
137	2/3/22 11:07 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.27	5.87			0.431	3.35	1.16						2.54
137	2/3/22 11:07 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	5.77	20		0.29	0.468	1.42	0.876	25.3	2.34	33.4	0.785		1.64
137	2/15/22 11:19 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.55	5.2			0.932	0.769	0.612						2.83
137	2/15/22 11:19 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.84	9.95		0.238	0.553	0.721	0.547	27.9	3.33	24.7	0.678		2.29
137	3/2/22 12:16 PM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	4	12.8		0.269	0.661	0.374	0.495	19.9	2.32	26	0.8835		4.665
137	3/2/22 12:16 PM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.16	6.8			0.63	0.546	0.997						8.41
137	3/23/22 10:18 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.685	2.29			0.281	6.83	3.2						2.88
137	3/23/22 10:18 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.6	6		0.216	0.298	2.85	1.3	24.8	3.21	15.3	0.62		2.89
137	4/4/22 10:14 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.15	2.36			0.564	0.304	0.351						1.67
137	4/4/22 10:14 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.88	11.2		0.236	0.448	0.627	0.452	24.5	3.46	21.5	0.675		2.51
137	4/27/22 9:41 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.7	3.01			0.613	0.261	0.248						1.47
137	4/27/22 9:41 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.47	7.79		0.229	0.615	0.37	0.282	22.8	2.41	22	0.871		2.19
137	5/5/22 9:57 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.32	3.47			0.63	1.1	0.593						1.9
137	5/5/22 9:57 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.11	8.79		0.361	0.493	3.12	1.18	30.4	3.63	23.1	0.718		1.75
137	5/24/22 9:48 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.61	0.843			0.613	0.38	0.379						4.07
137	5/24/22 9:48 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.61	3.12		0.541	0.363	2.14	0.9	39.8	5.63	16.6	0.502		3.68
137	6/6/22 9:46 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.1	0.766			0.775	1.95	1.4						2.02
137	6/6/22 9:46 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.325	2.23		0.461	0.702	1.245	0.721	24.55	3.99	16.45	0.7745		1.0715
137	6/27/22 9:45 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.028	0.236		0.702	0.353	2.71	0.613	60.7	8.84	12	0.455		2.54
137	6/27/22 9:45 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.603	0.293			0.638	1.19	0.571						1.83
137	7/22/22 10:16 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.206	0.253		0.755	0.739	3.89	1.55	55.4	8.03	12.4	1.01		2.32
137	7/22/22 10:16 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.75	1.74			1.01	0.69	1.16						8.1
137	7/27/22 9:52 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.99	2.05			1.1	0.676	0.872						4.24
137	7/27/22 9:52 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1059	0.387		0.7125	0.883	5.165	1.385	51.5	7.525	11.95	1.065		4.495
137	8/24/22 9:58 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.27	0.75		0.75	1.67	1.06	0.803	53.7	8.13	22.8	2.44		3.85
137	8/24/22 9:58 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	4.6	0.129			1.45	0.473	0.497						3.2
137	8/30/22 11:07 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.376	0.025		0.495	0.843	4.59	2.77	67.7	8.36	13.5	1.19		2.79
137	8/30/22 11:07 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	7	0.501			1.67	2.21	2.11						2.21
137	9/15/22 11:02 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.5	2.65		0.319	1.78	3.01	1.39	29.8	3.98	25.9	1.82		3.02
137	9/15/22 11:02 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11	1.96			1.66	0.509	1.48						5.47
137	9/27/22 9:57 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	8.36	3.35			1.34	0.245	0.344						3.12
137	9/27/22 9:57 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	9.03	5.78		0.596	1.45	0.817	0.29	43.6	5.92	31.3	2.12		1.7
137	10/13/22 10:13 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	6.75	2.97			0.783	0.681	0.919						4.68
137	10/13/22 10:13 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	5.27	3.54		0.666	0.697	6.19	1.62	62.5	8.29	26	1.27		11.3
137	10/27/22 10:01 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	6.24	6.92			1.4	1.06	0.786						2.27
137	10/27/22 10:01 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	6.33	6.92		0.523	1.24	5.65	1.63	49.5	5.19	31.4	1.48		2.24
137	11/3/22 10:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	5.16	7.08			1.36	0.477	0.619						3.05
137	11/3/22 10:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	5.34	8			1.29	1.76	0.734	29.6	3.89	29.1	1.37		1.19
137	11/29/22 11:43 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.44	8.17		0.779	1.01	14.9	1.3	56.5	6.53	23.8	1.13		2.91

2022 MWRA Central Lab Analyses - Nutrients

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	Ammonium (uM)	Nitrate+nitrate (uM)	Total Nitrogen (uM)	Particulate P (uM)	Phosphate (uM)	Chlorophyll a (ug/L)	Pheophytin (ug/L)	Particulate carbon (uM)	Particulate nitrogen (uM)	Total dissolved N (uM)	Total dissolved P (uM)	Total phosphorus (uM)	Total suspended solids (mg/L)
137	11/29/22 11:43 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.2	8.45			1.23	1.53	2.87						11.4
137	12/8/22 11:48 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.01	8.67			1.32	0.462	0.384						1.85
137	12/8/22 11:48 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.67	10.5		0.1985	1.19	1.815	0.8215	16.6	1.81	26.7	1.295		2.29
137	12/21/22 11:50 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.68	7.81			1.02	1.14	1.54						8.08
137	12/21/22 11:50 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.56	9.07		0.291	1.03	0.715	0.985	22.8	2.18	22.1	0.926		4.75

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APPENDIX III

2022 raw data for physical profile results.

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
012	2/22/22 10:42 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.35	0.35	0.35	2.265	0.23	14.03	102.3	0.49	0.49	7.2	
012	2/22/22 10:42 AM	B	CHARLES RIVER	UPPER BASIN		0.35	0.35	0.35	2.259	0.23	14.17	103.3	0.491	0.59	7.01	
012	3/10/22 10:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.26	0.26	4.996	0.31	13.09	102.7	0.635	1.84	7.3	
012	3/10/22 10:35 AM	B	CHARLES RIVER	UPPER BASIN		0	0.26	0.26	4.995	0.31	13.23	103.7	0.635	1.87	7.26	
012	3/24/22 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.75	0.75	0.75	9.047	0.29	11.73	101.8	0.587	4.46	7.29	
012	3/24/22 9:39 AM	B	CHARLES RIVER	UPPER BASIN		0.75	0.75	0.75	9.044	0.29	11.67	101.2	0.586	4.62	7.21	
012	4/5/22 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.01	10.808	0.25	11.7	105.8	0.514	2.4	7.57	
012	4/5/22 9:40 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.01	10.79	0.25	11.76	106.3	0.515	2.44	7.54	
012	4/19/22 9:56 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.56	0.56	0.56	11.955	0.22	10.67	99	0.457	6.91	7.12	
012	4/19/22 9:56 AM	B	CHARLES RIVER	UPPER BASIN		0.56	0.56	0.56	11.929	0.22	10.68	99.1	0.456	7.08	7.08	
012	5/4/22 10:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.12	0.21	0.37	13.873	0.27	9.88	95.7	0.551	2.35	7.11	
012	5/4/22 10:16 AM	B	CHARLES RIVER	UPPER BASIN		0.12	0.21	0.37	13.865	0.27	9.83	95.2	0.552	2.26	7.03	
012	5/17/22 10:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.09	0.1	22.297	0.3	7.89	90.9	0.624	1.93	7.36	
012	5/17/22 10:33 AM	B	CHARLES RIVER	UPPER BASIN		0	0.09	0.1	22.307	0.3	7.68	88.5	0.625	2.07	7.2	
012	6/2/22 10:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	21.033	0.36	7.19	80.8	0.736		7.06	
012	6/2/22 10:29 AM	B	CHARLES RIVER	UPPER BASIN		0.1	0.19	0.19	21.011	0.36	7.13	80.2	0.736		7.03	
012	6/13/22 10:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.09	0.09	23.072	0.33	7.52	87.9	0.669		7.11	
012	6/28/22 10:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.65	0.65	23.18	0.35	7.03	82.4	0.713		7.09	
012	6/28/22 10:30 AM	B	CHARLES RIVER	UPPER BASIN		0	0.65	0.65	22.775	0.35	6.28	73	0.71		6.97	
012	7/11/22 9:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.743	0.36	6.39	75.7	0.745		7.51	
012	7/11/22 9:29 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.236	0.36	5.54	65	0.744		7.3	
012	7/28/22 9:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.04	0.04	25.232	0.42	4.64	56.5	0.862		7.2	
012	7/28/22 9:59 AM	B	CHARLES RIVER	UPPER BASIN		0.04	0.04	0.04	24.794	0.42	4.51	54.5	0.861		7.14	
012	8/10/22 10:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.14	0.14	26.471	0.39	3.43	42.7	0.801		7.1	
012	8/10/22 10:11 AM	B	CHARLES RIVER	UPPER BASIN		0	0.14	0.14	26.586	0.39	1.88	23.5	0.796		6.9	
012	8/23/22 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.46	0.46	23.433	0.36	3.08	36.2	0.747	0.97	7.2	
012	9/6/22 10:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.97	0.97	20.326	0.19	7.67	85	0.39		7.32	
012	9/6/22 10:45 AM	B	CHARLES RIVER	UPPER BASIN		0.53	0.97	0.97	20.328	0.19	7.63	84.5	0.39		7.1	
012	9/19/22 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.42	0.43	0.43	20.722	0.34	5.76	64.4	0.7		7.18	
012	10/3/22 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.02	14.017	0.31	8.65	84.1	0.643		7.41	
012	10/20/22 10:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.18	13.332	0.28	9.5	91	0.582		6.93	
012	10/20/22 10:19 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.18	13.295	0.28	9.46	90.5	0.583		6.89	
012	11/2/22 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.04	12.324	0.29	12.16	113.9	0.591		7.16	
012	11/2/22 9:54 AM	B	CHARLES RIVER	UPPER BASIN		0	0.04	0.04	12.292	0.29	12.06	112.8	0.591		7.06	
012	11/14/22 11:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.17	11.504	0.33	9.82	90.2	0.673		7.15	
012	11/28/22 10:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.64	0.64	6.021	0.27	12.46	100.3	0.556		7.35	
012	11/28/22 10:54 AM	B	CHARLES RIVER	UPPER BASIN		0	0.64	0.64	5.996	0.27	12.44	100.1	0.555		7.22	
012	12/12/22 10:56 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.04	2.654	0.29	14.61	107.7	0.6		7.41	
012	12/28/22 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0.589	0.22	14.53	101.2	0.453		7.26	
001	3/18/22 10:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	9.206	0.28	12.21	106.3	0.58	0.72	7.21	
001	3/21/22 9:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	10.601	0.29	11.56	104	0.598	0.97	7.19	
001	3/21/22 9:48 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.2	10.589	0.29	11.56	104	0.598	1.88	7.17	
001	4/6/22 10:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	11.035	0.26	11.12	101.1	0.529	4.48	7.49	0.8
001	4/6/22 10:01 AM	B	CHARLES RIVER	UPPER BASIN		0.11	0.11	0.12	11.039	0.26	10.99	99.9	0.528	3.71	7.39	
001	4/8/22 10:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	10.426	0.24	11.05	99	0.497	10.01	7.51	1
001	4/8/22 10:01 AM	B	CHARLES RIVER	UPPER BASIN		0.15	0.16	0.27	10.413	0.24	11.04	98.9	0.497	11.48	7.49	
001	5/12/22 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	16.612	0.28	9.73	100	0.579	8.9	7.61	1
001	5/12/22 10:00 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	16.398	0.28	9.64	98.6	0.581	7.93	7.48	
001	5/16/22 9:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	22.611	0.3	7.22	83.7	0.617	1.76	7.36	
001	5/18/22 10:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	19.866	0.31	8.79	96.6	0.631	5.16	7.52	0.8
001	5/18/22 10:06 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.09	19.857	0.31	8.79	96.6	0.633	5.48	7.49	
001	6/2/22 9:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	20.597	0.37	6.19	69.1	0.752	3.69	7.32	0.2
001	6/16/22 10:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.124	0.35	6.72	78.7	0.718	4.27	7.24	
001	6/16/22 10:17 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.074	0.35	6.59	77.1	0.715	5.05	7.13	
001	6/17/22 10:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.357	0.35	7.11	83.6	0.718	7.51	7.26	
001	7/6/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	23.943	0.38	6.77	80.5	0.777	11.89	7.1	0.3
001	7/7/22 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.05	24.567	0.38	7.7	92.6	0.77	1.81	7.2	
001	8/11/22 9:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	25.963	0.38	6.28	77.5	0.781	0.82	7.26	
001	8/11/22 9:38 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.14	25.899	0.38	6.19	76.3	0.783	6.18	7.25	
001	8/12/22 9:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.366	0.4	7.03	85.9	0.829	0.95	7.24	
001	8/16/22 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	24.123	0.46	9.3	111	0.936	1.64	7.9	
001	9/14/22 10:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	21.813	0.38	8.53	97.4	0.78	9.55	7.68	
001	9/14/22 10:29 AM	B	CHARLES RIVER	UPPER BASIN		0	0.15	0.15	21.8	0.38	8	91.4	0.775	13.05	7.35	
001	9/26/22 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	17.4	0.33	8.64	90.3	0.684	0.77	7.36	
001	9/26/22 10:00 AM	B	CHARLES RIVER	UPPER BASIN		0.29	0.29	0.29	17.303	0.34	8.7	90.8	0.685	1.28	7.22	
001	10/4/22 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	13.289	0.33	8.99	86.1	0.675	1.89	7.37	
001	10/5/22 9:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	14.13	0.3	8.63	84.1	0.621	12.86	7.52	
001	10/5/22 9:58 AM	B	CHARLES RIVER	UPPER BASIN		0.44	0.9	0.9	14.086	0.31	8.55	83.3	0.632	19.71	7.2	
001	10/31/22 10:09 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	12.058	0.3	9.66	89.9	0.606	1.56	7.32	1
001	10/31/22 10:09 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	11.861	0.3	9.78	90.6	0.604	1.93	7.29	

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
001	11/16/22 11:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	9.773	0.38	10.47	92.4	0.566	5.75	7.11	0.5
144	3/18/22 10:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1				8.832	0.29	11.79	101.8	0.587	0.91	7.23	1.5
144	3/18/22 10:02 AM	B	CHARLES RIVER	UPPER BASIN					8.676	0.29	11.74	101	0.59	1.58	7.17	
144	3/21/22 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	10.112	0.3	11.04	98.3	0.612	1.46	7.11	1
144	3/21/22 9:39 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.2	10.093	0.3	11.04	98.2	0.616	2.02	7.06	
144	4/6/22 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	10.723	0.27	10.41	94	0.562	5.96	7.33	0.7
144	4/6/22 9:51 AM	B	CHARLES RIVER	UPPER BASIN		0.11	0.11	0.12	10.766	0.29	10.33	93.4	0.586	6.85	7.28	
144	4/8/22 9:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	10.17	0.26	10.83	96.5	0.527	11.47	7.47	0.9
144	4/8/22 9:53 AM	B	CHARLES RIVER	UPPER BASIN		0.15	0.16	0.27	9.954	0.26	10.75	95.3	0.534	12.43	7.4	
144	5/12/22 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	16.597	0.29	9.08	93.3	0.59	6.16	7.48	1.2
144	5/12/22 9:51 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	15.78	0.35	8.44	85.3	0.716	9.9	7.29	
144	5/16/22 9:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	22.996	0.3	6.95	81.2	0.616	2.02	7.38	1
144	5/16/22 9:20 AM	B	CHARLES RIVER	UPPER BASIN		0.09	0.1	0.1	21.738	0.32	6.15	70.1	0.651	3	7.2	
144	5/18/22 9:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	19.502	0.31	7.68	83.8	0.633	5.08	7.44	1
144	5/18/22 9:58 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.09	19.401	0.31	7.32	79.7	0.641	5.78	7.3	
144	6/2/22 9:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	20.227	0.38	5.54	61.3	0.768	4.39	7.17	0.8
144	6/2/22 9:38 AM	B	CHARLES RIVER	UPPER BASIN		0.1	0.19	0.19	20.151	0.39	3.81	42.1	0.787	8.83	6.98	
144	6/16/22 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	24.15	0.35	8.44	100.8	0.725	3.39	7.38	0.9
144	6/16/22 10:05 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.207	0.37	7	82.1	0.766	5.41	7.19	
144	6/17/22 10:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.354	0.36	7.36	86.6	0.743	2.82	7.26	0.7
144	6/17/22 10:17 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	22.431	0.36	7.35	84.9	0.738	3.16	7.19	
144	7/6/22 9:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	24.442	0.38	7.78	93.3	0.786	2.39	7.15	1.2
144	7/6/22 9:06 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.05	0.05	24.201	0.39	6.6	78.8	0.8	5.92	7.01	
144	7/7/22 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.05	24.695	0.38	8.51	102.6	0.786	3.08	7.45	1
144	7/7/22 9:31 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.05	24.004	0.42	5.95	70.9	0.859	5.32	7.18	
144	8/11/22 9:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	26.895	0.54	7.17	90.1	1.097	3.56	7.36	0.9
144	8/11/22 9:27 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.14	26.844	0.55	5.63	70.7	1.109	4.94	7.14	
144	8/12/22 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.466	0.54	8.35	104.1	1.086	3.95	7.41	1
144	8/12/22 9:21 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	26.192	0.53	7.87	97.6	1.07	7.92	7.25	
144	8/16/22 9:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.121	0.49	10.13	123.2	0.992	3.7	7.97	0.5
144	8/16/22 9:52 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	24.907	0.48	9.84	119.2	0.976	4.96	7.65	
144	9/14/22 10:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	22.426	0.39	7.11	82.1	0.795	2.54	7.31	1.5
144	9/14/22 10:21 AM	B	CHARLES RIVER	UPPER BASIN		0	0.15	0.15	22.291	0.4	6.86	79.1	0.81	3.87	7.24	
144	9/26/22 9:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	16.995	0.33	8.88	92	0.683	0.95	7.18	
144	9/26/22 9:49 AM	B	CHARLES RIVER	UPPER BASIN		0.29	0.29	0.29	16.962	0.34	8.64	89.5	0.693	1.36	7.06	
144	10/4/22 9:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	13.628	0.34	9.18	88.5	0.697	1.79	7.41	
144	10/4/22 9:57 AM	B	CHARLES RIVER	UPPER BASIN		0.46	0.46	0.46	13.629	0.34	9.04	87.2	0.699	1.94	7.3	
144	10/5/22 9:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	13.802	0.32	8.95	86.6	0.662	3.76	7.57	2
144	10/5/22 9:49 AM	B	CHARLES RIVER	UPPER BASIN		0.44	0.9	0.9	13.667	0.34	8.76	84.6	0.697	4.64	7.25	
144	10/31/22 9:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	12.053	0.3	9.67	90	0.616	1.86	7.41	1.1
144	10/31/22 9:59 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	11.918	0.31	9.43	87.5	0.639	14.95	7.21	
144	11/16/22 11:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	9.531	0.3	10.19	89.5	0.616	4.26	7.05	1
144	11/16/22 11:16 AM	B	CHARLES RIVER	UPPER BASIN		0.79	0.79	0.79	9.303	0.33	10.3	90	0.667	3.91	7.06	
002	3/18/22 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1				8.645	0.29	11.62	99.9	0.593	0.91	7.16	1.6
002	3/18/22 9:54 AM	B	CHARLES RIVER	UPPER BASIN					8.628	0.29	11.61	99.7	0.592	1.34	7.1	
002	3/21/22 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	9.977	0.3	10.89	96.6	0.615	1.25	7.13	1.1
002	3/21/22 9:31 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.2	9.904	0.3	10.77	95.4	0.615	3.69	7.08	
002	4/6/22 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	10.59	0.27	10.53	94.7	0.545	5.15	7.46	1
002	4/6/22 9:45 AM	B	CHARLES RIVER	UPPER BASIN		0.11	0.11	0.12	10.596	0.27	10.4	93.6	0.545	5.34	7.34	
002	4/8/22 9:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	9.943	0.26	10.79	95.6	0.541	7.98	7.47	1
002	4/8/22 9:46 AM	B	CHARLES RIVER	UPPER BASIN		0.15	0.16	0.27	9.889	0.26	10.71	94.7	0.541	9.69	7.4	
002	5/12/22 9:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	16.917	0.29	9.48	98.1	0.599	6.77	7.48	1
002	5/12/22 9:44 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	16.162	0.3	8.84	90	0.622	10.58	7.28	
002	5/16/22 9:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	23.176	0.3	7.26	85	0.627	1.99	7.3	0.7
002	5/16/22 9:14 AM	B	CHARLES RIVER	UPPER BASIN		0.09	0.1	0.1	22.046	0.31	6.63	76.1	0.639	5.24	7.27	
002	5/18/22 9:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	20.485	0.32	8.04	89.4	0.647	6.34	7.4	0.5
002	5/18/22 9:49 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.09	20.125	0.31	7.51	82.9	0.644	12.85	7.31	
002	6/2/22 9:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	21.146	0.39	5.55	62.6	0.794	5.31	7.32	0.5
002	6/2/22 9:29 AM	B	CHARLES RIVER	UPPER BASIN		0.1	0.19	0.19	20.806	0.39	5.03	56.3	0.795	28.87	7.12	
002	6/16/22 9:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	24.144	0.36	8.33	99.4	0.73	3.61	7.48	0.7
002	6/16/22 9:57 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.092	0.39	4.74	55.5	0.792		6.95	
002	6/17/22 10:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.093	0.36	7.06	82.7	0.744	3.41	7.28	0.8
002	6/17/22 10:11 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	22.722	0.36	6.61	76.8	0.745	10.92	7.13	
002	7/6/22 8:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	24.717	0.39	7.02	84.7	0.802	2.41	7.08	1
002	7/6/22 8:59 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.05	0.05	24.356	0.4	6.37	76.3	0.81	2.86	6.94	
002	7/7/22 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.05	0.05	24.837	0.39	7.62	92.1	0.797	1.92	7.28	1.1
002	7/7/22 9:24 AM	B	CHARLES RIVER	UPPER BASIN		0	0.05	0.05	24.353	0.41	6.39	76.6	0.839	3.58	7.16	
002	8/11/22 9:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	27.148	0.58	6.7	84.6	1.182	2.38	7.36	1.1
002	8/11/22 9:18 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.14	26.82	1.08	0.47	5.9	2.122		6.91	
002	8/12/22 9:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.584	0.66	7.73	96.7	1.331	3.49	7.35	0.8

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
002	8/12/22 9:12 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	26.443	0.77	4.98	62.2	1.537	8.72	7.08	
002	8/16/22 9:42 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.403	0.62	9.92	121.4	1.245	4.35	7.81	0.5
002	8/16/22 9:42 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	25.023	0.63	8.5	103.2	1.258	9.92	7.48	
002	9/14/22 10:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	22.405	0.43	6.59	76.2	0.871	3.15	7.24	1
002	9/14/22 10:12 AM	B	CHARLES RIVER	UPPER BASIN		0	0.15	0.15	22.229	1.17	0.68	7.8	2.281	11.34	6.88	
002	9/26/22 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	16.549	0.33	8.99	92.4	0.675	1.06	7.52	1.6
002	9/26/22 9:43 AM	B	CHARLES RIVER	UPPER BASIN		0.29	0.29	0.29	16.216	0.33	8.49	86.6	0.681	2.17	7.19	
002	10/4/22 9:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	13.931	0.34	8.83	85.8	0.701	2.01	7.32	1.7
002	10/4/22 9:50 AM	B	CHARLES RIVER	UPPER BASIN		0.46	0.46	0.46	13.896	0.35	8.68	84.2	0.705	5.1	7.27	
002	10/5/22 9:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	13.81	0.29	9.02	87.3	0.594	5.18	7.61	1
002	10/5/22 9:41 AM	B	CHARLES RIVER	UPPER BASIN		0.44	0.9	0.9	13.602	0.35	8.65	83.4	0.705	9.52	7.24	
002	10/31/22 9:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	12.27	0.31	9.64	90.2	0.632	2.12	7.29	1
002	10/31/22 9:53 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	12.124	0.31	9.46	88.2	0.634	8.65	7.21	
002	11/16/22 11:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	9.333	0.31	10.34	90.4	0.63	4.38	7.05	1.2
002	11/16/22 11:11 AM	B	CHARLES RIVER	UPPER BASIN		0.79	0.79	0.79	9.28	0.32	10.44	91.1	0.65	7.35	7.05	
003	3/18/22 9:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1				8.446	0.29	11.57	98.9	0.601	1.38	7.24	1
003	3/18/22 9:41 AM	B	CHARLES RIVER	UPPER BASIN					8.392	0.29	11.51	98.3	0.601	1.87	7.15	
003	3/21/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	10.371	0.31	10.91	97.7	0.624	1.64	7.22	1
003	3/21/22 9:19 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.2	10.352	0.31	10.75	96.2	0.625	3.66	7.13	
003	4/6/22 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	11.39	0.27	11.03	101.1	0.55	5.72	7.49	0.8
003	4/6/22 9:33 AM	B	CHARLES RIVER	UPPER BASIN		0.11	0.11	0.12	11.377	0.27	10.88	99.7	0.55	6.55	7.41	
003	4/8/22 9:34 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	10.306	0.28	10.97	98.1	0.568	7.92	7.48	1.1
003	4/8/22 9:34 AM	B	CHARLES RIVER	UPPER BASIN		0.15	0.16	0.27	10.149	0.28	10.82	96.4	0.566	13.03	7.42	
003	5/12/22 9:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	16.501	0.3	10.17	104.3	0.606	6.88	7.58	1.1
003	5/12/22 9:29 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	15.35	0.3	9.28	92.9	0.616	7.72	7.39	
003	5/16/22 8:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	22.494	0.31	7.04	81.4	0.633	2.28	7.27	0.7
003	5/16/22 8:57 AM	B	CHARLES RIVER	UPPER BASIN		0.09	0.1	0.1	21.856	0.31	6.41	73.3	0.634	2.92	7.21	
003	5/18/22 9:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	20.797	0.32	7.15	80.1	0.66	5.58	7.35	0.9
003	5/18/22 9:36 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.09	20.614	0.32	6.47	72.1	0.662	7.23	7.19	
003	6/2/22 9:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	22.14	0.39	7.9	90.7	0.802	4.36	7.33	0.6
003	6/2/22 9:15 AM	B	CHARLES RIVER	UPPER BASIN		0.1	0.19	0.19	21.66	0.41	2.79	31.7	0.833	20.21	7.06	
003	6/16/22 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	24.109	0.36	10.21	121.7	0.741	3.69	7.75	0.6
003	6/16/22 9:39 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	21.976	0.4	1.46	16.7	0.812	6.99		
003	6/17/22 9:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.441	0.37	9.77	115	0.752	3.66	7.63	0.8
003	6/17/22 9:57 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.231	0.37	9.49	111.4	0.751	5.67	7.51	
003	7/6/22 8:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	24.604	0.44	6.93	83.5	0.904	3.78	7.06	1.2
003	7/6/22 8:41 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.05	0.05	24.474	0.45	6.39	76.8	0.918	6.86	6.98	
003	7/7/22 9:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.05	24.888	0.42	8.58	103.8	0.856	3.5	7.43	0.7
003	7/7/22 9:06 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.05	24.525	0.43	6.6	79.4	0.878	5.05	7.22	
003	8/11/22 9:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	27.255	0.75	7.15	90.5	1.498	2.99	7.49	0.9
003	8/11/22 9:00 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.14	27.299	1.12	2.5	31.8	2.201		7.08	
003	8/12/22 8:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.822	0.73	8.61	108.2	1.458	2.85	7.65	1
003	8/12/22 8:55 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	26.83	0.93	4.38	55.1	1.846	4.85	7.19	
003	8/16/22 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.604	0.78	9.08	111.6	1.552	4.14	7.8	0.7
003	8/16/22 9:24 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	25.119	0.79	2.95	36	1.58	12.29	7.08	
003	9/14/22 9:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	22.399	0.44	6.95	80.3	0.901	2.74	7.35	1.3
003	9/14/22 9:59 AM	B	CHARLES RIVER	UPPER BASIN		0	0.15	0.15	22.251	0.46	6.37	73.4	0.926	4.17	7.16	
003	9/26/22 9:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	17.235	0.27	8.71	90.7	0.554	3.01	7.6	0.8
003	9/26/22 9:29 AM	B	CHARLES RIVER	UPPER BASIN		0.29	0.29	0.29	17.11	0.27	8.21	85.3	0.56	3.52	7.38	
003	10/4/22 9:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	14.504	0.4	8.92	87.7	0.815	3.61	7.38	1
003	10/4/22 9:37 AM	B	CHARLES RIVER	UPPER BASIN		0.46	0.46	0.46	14.464	0.4	8.76	86.1	0.807	5.28	7.34	
003	10/5/22 9:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	14.083	0.37	8.74	85.1	0.749	4.6	7.4	1.3
003	10/5/22 9:28 AM	B	CHARLES RIVER	UPPER BASIN		0.44	0.9	0.9	14.018	0.37	8.58	83.4	0.743	7.02	7.16	
003	10/31/22 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	12.099	0.32	9.11	84.9	0.646	2.18	7.3	1.2
003	10/31/22 9:40 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	11.948	0.32	9.05	84	0.646	9.95	7.23	
003	11/16/22 10:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	9.285	0.34	9.67	84.4	0.703	3.97	7	1.4
003	11/16/22 10:59 AM	B	CHARLES RIVER	UPPER BASIN		0.79	0.79	0.79	9.252	0.35	9.71	84.7	0.705	5.15	6.99	
004	3/18/22 9:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1				8.646	0.29	12.21	104.9	0.601	1.13	7.14	1.6
004	3/18/22 9:26 AM	B	CHARLES RIVER	UPPER BASIN					8.555	0.29	12.13	104	0.601	1.48	7.09	
004	3/21/22 9:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	10.946	0.31	11.33	102.8	0.636	1.61	7.17	1.2
004	3/21/22 9:07 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.2	10.819	0.31	11.23	101.6	0.638	5.2	7.11	
004	4/6/22 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	10.92	0.27	11.04	100.1	0.554	5.11	7.4	1
004	4/6/22 9:21 AM	B	CHARLES RIVER	UPPER BASIN		0.11	0.11	0.12	10.873	0.27	10.88	98.6	0.556	11.98	7.3	
004	4/8/22 9:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	10.428	0.27	11.07	99.2	0.558	7.47	7.48	1.3
004	4/8/22 9:23 AM	B	CHARLES RIVER	UPPER BASIN		0.15	0.16	0.27	10.234	0.27	10.84	96.7	0.559	8.75	7.41	
004	5/12/22 9:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	16.251	0.3	10.69	109.1	0.613	6.89	7.64	1.2
004	5/12/22 9:13 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	14.493	0.3	9.27	91.1	0.618	9.38	7.41	
004	5/16/22 8:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	23.156	0.31	8.99	105.3	0.632	2.13	7.53	0.8
004	5/16/22 8:43 AM	B	CHARLES RIVER	UPPER BASIN		0.09	0.1	0.1	17.958	0.35	7.34	77.6	0.706	3.25	7.28	
004	5/18/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	20.896	0.32	8.16	91.6	0.655	5.24	7.42	0.7

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
004	5/18/22 9:19 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.09	20.105	0.33	6.17	68.1	0.686		7.15	
004	6/2/22 8:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	21.796	0.36	7.85	89.6	0.74	4.83	7.38	0.5
004	6/2/22 8:58 AM	B	CHARLES RIVER	UPPER BASIN		0.1	0.19	0.19	21.691	0.37	2.67	30.4	0.75	19.36	7.2	
004	6/16/22 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.809	0.4	8.44	100.1	0.809	4.07	7.5	0.5
004	6/16/22 9:25 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.068	0.45	4.36	51	0.922	8.21	7.16	
004	6/17/22 9:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.662	0.38	9.36	110.7	0.77	3.42	7.64	0.8
004	6/17/22 9:44 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.071	0.38	7.79	91.1	0.768	15.7	7.27	
004	7/6/22 8:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	24.763	0.55	8.09	97.7	1.103	3.71	7.24	1
004	7/6/22 8:28 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.05	0.05	24.606	0.55	7.43	89.5	1.121	6.17	7.15	
004	7/7/22 8:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.05	24.959	0.53	9.15	110.9	1.073	4.92	7.62	0.5
004	7/7/22 8:53 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.05	24.294	0.78	2.17	26	1.546	7.57	7.16	
004	8/11/22 8:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	27.32	1.04	7.62	96.8	2.059	2.92	7.76	1.1
004	8/11/22 8:45 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.14	27.002	1.64	0.18	2.3	3.158	1.3	7.01	
004	8/12/22 8:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.686	1.08	7.54	94.7	2.131	3.79	7.6	1
004	8/12/22 8:40 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	26.684	1.19	5.02	63.1	2.324	8.95	7.22	
004	8/16/22 9:09 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.669	1.01	9.24	113.8	1.996	3.81	8.12	0.7
004	8/16/22 9:09 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	25.297	1.04	5.89	72	2.052	7.47	7.37	
004	9/14/22 9:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	22.8	0.56	8.46	98.5	1.135	3.07	7.51	1
004	9/14/22 9:46 AM	B	CHARLES RIVER	UPPER BASIN		0	0.15	0.15	22.448	1.77	1.34	15.6	3.369	8.18	7.06	
004	9/26/22 9:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	17.734	0.36	9.47	99.7	0.739	2.77	7.41	0.8
004	9/26/22 9:15 AM	B	CHARLES RIVER	UPPER BASIN		0.29	0.29	0.29	17.975	1.37	6.91	73.6	2.639	5.62	7.15	
004	10/4/22 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	15.126	0.63	8.2	81.9	1.245	5.15	7.42	0.7
004	10/4/22 9:25 AM	B	CHARLES RIVER	UPPER BASIN		0.46	0.46	0.46	15.094	0.63	7.91	78.9	1.25	6.99	7.33	
004	10/5/22 9:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	14.81	0.54	8.43	83.5	1.088	5.75	7.48	1
004	10/5/22 9:14 AM	B	CHARLES RIVER	UPPER BASIN		0.44	0.9	0.9	14.922	0.58	4.31	42.8	1.162	7.21	7.16	
004	10/31/22 9:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	13.031	0.32	8.46	80.5	0.648	2.7	7.31	1.1
004	10/31/22 9:26 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	12.673	0.33	8.16	77.1	0.672	5.95	7.22	
004	11/16/22 10:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	10.927	0.32	8.35	75.7	0.658	4.9	7.05	0.8
004	11/16/22 10:47 AM	B	CHARLES RIVER	UPPER BASIN		0.79	0.79	0.79	10.672	0.35	8.16	73.6	0.706	5.35	6.98	
005	2/22/22 10:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.35	0.35	0.35	2.972	0.27	13.99	104	0.553	1.92	7.28	
005	3/10/22 10:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.26	0.26	6.13	0.32	12.71	102.7	0.653	3.25	7.41	
005	3/18/22 9:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1				8.594	0.3	12.11	103.9	0.61	0.97	7.17	
005	3/18/22 9:18 AM	B	CHARLES RIVER	UPPER BASIN					8.609	0.3	12.04	103.4	0.61	1.22	7.12	
005	3/21/22 9:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.2	10.426	0.32	11.09	99.5	0.654	1.6	7.16	1.1
005	3/21/22 9:00 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.2	10.421	0.32	11.03	98.9	0.654	2.68	7.09	
005	3/24/22 9:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.75	0.75	0.75	8.752	0.3	11.96	103	0.61	6.02	7.49	
005	4/5/22 9:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.01	11.211	0.27	12.17	111.1	0.55	3.84	7.58	
005	4/6/22 9:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	10.696	0.27	10.83	97.7	0.558	5.26	7.41	1
005	4/6/22 9:12 AM	B	CHARLES RIVER	UPPER BASIN		0.11	0.11	0.12	10.67	0.27	10.13	91.3	0.555		7.04	
005	4/8/22 9:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.16	0.27	10.43	0.27	10.73	96.2	0.559	26.11	7.46	1
005	4/8/22 9:16 AM	B	CHARLES RIVER	UPPER BASIN		0.15	0.16	0.27	10.276	0.27	10.61	94.7	0.562	9.28	7.39	
005	4/19/22 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.56	0.56	0.56	12.922	0.25	11.76	111.5	0.521	6.27	7.69	
005	5/4/22 9:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.12	0.21	0.37	13.952	0.29	9.78	94.9	0.587	5.74	7.02	
005	5/4/22 9:50 AM	B	CHARLES RIVER	UPPER BASIN		0.12	0.21	0.37	13.942	0.29	9.64	93.6	0.586		6.96	
005	5/12/22 9:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	15.901	0.3	10.81	109.5	0.611	7.26	7.75	1.2
005	5/12/22 9:05 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	15.655	0.3	10.48	105.6	0.611	7.62	7.6	
005	5/16/22 8:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.1	0.1	22.109	0.31	9.66	110.9	0.63	2.44	7.65	0.7
005	5/16/22 8:37 AM	B	CHARLES RIVER	UPPER BASIN		0.09	0.1	0.1	21.425	0.31	8.95	101.4	0.632	8.46	7.5	
005	5/17/22 10:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.09	0.1	22.484	0.33	9.64	111.5	0.671	3.41	7.56	
005	5/17/22 10:12 AM	B	CHARLES RIVER	UPPER BASIN		0	0.09	0.1	22.49	0.32	6.2	71.7	0.668		6.91	
005	5/18/22 9:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.09	20.617	0.32	8.36	93.3	0.66	5.56	7.43	0.6
005	5/18/22 9:12 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.09	20.614	0.32	8.26	92.1	0.66	9.51	7.37	
005	6/2/22 8:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	21.757	0.38	7.21	82.3	0.779	5.34	7.39	0.5
005	6/2/22 8:49 AM	B	CHARLES RIVER	UPPER BASIN		0.1	0.19	0.19	21.6	0.38	1.18	13.5	0.782	20.25	7.1	
005	6/2/22 10:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.19	0.19	21.987	0.37	7.45	85.4	0.764		7.2	
005	6/2/22 10:07 AM	B	CHARLES RIVER	UPPER BASIN		0.1	0.19	0.19	21.907	0.38	7.21	82.5	0.768		7.14	
005	6/13/22 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.09	0.09	0.09	24.073	0.33	8.58	102.3	0.687		7.19	
005	6/13/22 9:33 AM	B	CHARLES RIVER	UPPER BASIN		0.09	0.09	0.09	23.771	0.33	8.32	98.6	0.689		7.11	
005	6/16/22 9:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.784	0.43	8.51	100.9	0.869	3.88	7.46	0.5
005	6/16/22 9:17 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.759	0.43	8.28	98.2	0.872	8.97	7.35	
005	6/17/22 9:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.475	0.42	8.71	102.7	0.847	3.31	7.56	0.7
005	6/17/22 9:36 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.342	0.42	8.14	95.8	0.849		7.31	
005	6/28/22 10:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.65	0.65	24.696	0.42	8.56	103.2	0.867		7.45	
005	6/28/22 10:03 AM	B	CHARLES RIVER	UPPER BASIN		0	0.65	0.65	24.068	0.45	6.91	82.3	0.912		7.3	
005	7/6/22 8:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.05	0.05	24.494	0.61	8.2	98.6	1.221	4.69	7.28	0.6
005	7/6/22 8:17 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.05	0.05	24.495	0.61	8.21	98.7	1.222	5.13	7.24	
005	7/7/22 8:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.05	24.605	0.61	8.37	100.9	1.237	4.86	7.57	0.6
005	7/7/22 8:45 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.05	24.414	0.64	7.68	92.2	1.29	5.64	7.48	
005	7/11/22 9:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.225	0.54	9.6	117	1.099		7.72	
005	7/28/22 9:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.04	0.04	27.206	0.87	10.83	137.1	1.725		8.51	

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
005	8/10/22 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.14	0.14	27.755	1.07	7.79	99.6	2.107		7.8	
005	8/10/22 9:43 AM	B	CHARLES RIVER	UPPER BASIN		0	0.14	0.14	27.748	1.06	7.44	95.2	2.089		7.7	
005	8/11/22 8:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.14	27.167	1.09	7.8	98.8	2.141	3.09	7.89	1
005	8/11/22 8:38 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.14	27.032	1.09	7.58	95.7	2.141	9.37	7.79	
005	8/12/22 8:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.316	1.12	7.52	93.8	2.199	3.92	7.64	0.7
005	8/12/22 8:32 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	26.189	1.12	7.4	92	2.195	5.2	7.59	
005	8/16/22 9:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.675	1.12	9.19	113.3	2.2	3.89	8.31	1
005	8/16/22 9:03 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	25.206	1.12	8.67	106	2.185	9.33	8.06	
005	8/23/22 9:42 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.46	0.46	24.952	1.07	8.5	103.4	2.106	6.43	7.75	
005	9/6/22 10:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.97	0.97	23.448	1.13	6.52	77.1	2.215		7.17	
005	9/6/22 10:12 AM	B	CHARLES RIVER	UPPER BASIN		0.53	0.97	0.97	23.414	1.12	6.04	71.4	2.193		7.12	
005	9/14/22 9:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.15	0.15	22.534	0.71	8.66	100.4	1.41	3.32	7.6	1
005	9/14/22 9:36 AM	B	CHARLES RIVER	UPPER BASIN		0	0.15	0.15	22.495	1.52	0.5	5.9	2.928		7.29	
005	9/19/22 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.42	0.43	0.43	21.412	0.85	9.41	106.9	1.684		7.64	
005	9/26/22 9:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.29	0.29	0.29	17.654	0.46	10.06	105.8	0.931	2.52	7.84	0.7
005	9/26/22 9:04 AM	B	CHARLES RIVER	UPPER BASIN		0.29	0.29	0.29	17.49	0.53	9.55	100.1	1.056	10.15	7.5	
005	10/3/22 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.02	15.263	0.65	9.49	95	1.294		7.56	
005	10/3/22 9:25 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.02	15.275	0.65	9.27	92.9	1.294		7.48	
005	10/4/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.46	0.46	0.46	14.665	0.66	9.47	93.6	1.308	5.11	7.61	0.8
005	10/4/22 9:19 AM	B	CHARLES RIVER	UPPER BASIN		0.46	0.46	0.46	14.61	0.66	9.33	92.1	1.309	6.33	7.56	
005	10/5/22 9:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.44	0.9	0.9	14.815	0.66	8.73	86.6	1.316	6.08	7.52	0.7
005	10/5/22 9:06 AM	B	CHARLES RIVER	UPPER BASIN		0.44	0.9	0.9	14.796	0.69	7.96	78.9	1.368	7.56	7.23	
005	10/20/22 9:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.18	14.348	0.27	7.82	76.5	0.548		7.09	
005	10/31/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	13.445	0.31	8.02	77.1	0.643	2.65	7.29	1.1
005	10/31/22 9:19 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	13.032	0.31	7.81	74.3	0.641	4.31	7.23	
005	11/2/22 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.04	13.217	0.33	10.86	103.8	0.663		7	
005	11/2/22 9:19 AM	B	CHARLES RIVER	UPPER BASIN		0	0.04	0.04	13.201	0.32	10.68	102	0.663		6.93	
005	11/14/22 10:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.17	12.488	0.39	8.58	80.7	0.789		7.16	
005	11/16/22 10:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.79	0.79	0.79	11.176	0.35	7.82	71.3	0.703	5.05	7.11	0.9
005	11/16/22 10:41 AM	B	CHARLES RIVER	UPPER BASIN		0.79	0.79	0.79	11.174	0.35	7.77	70.9	0.704	7.43	7.06	
005	11/28/22 10:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.64	0.64	5.597	0.31	12.77	101.7	0.641		7.28	
005	11/28/22 10:33 AM	B	CHARLES RIVER	UPPER BASIN		0	0.64	0.64	5.589	0.31	12.73	101.4	0.64		7.23	
005	12/12/22 10:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.04	3.197	0.27	14.56	108.9	0.561		7.59	
006	3/18/22 9:13 AM	S	CHARLES RIVER	MID-BASIN	0.1				8.394	0.3	11.99	102.4	0.616	1.34	7.14	1
006	3/18/22 9:13 AM	B	CHARLES RIVER	MID-BASIN					8.338	0.3	11.88	101.4	0.622	1.55	7.08	
006	3/21/22 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	10.407	0.33	10.9	97.7	0.679	2.6	7.21	1.1
006	3/21/22 8:55 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.2	9.378	0.43	10.68	93.5	0.874	6.37	7.1	
006	4/6/22 9:06 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	10.837	0.27	11.01	99.7	0.556	5.55	7.42	1
006	4/6/22 9:06 AM	B	CHARLES RIVER	MID-BASIN		0.11	0.11	0.12	10.21	0.35	10.21	97.3	0.713		6.95	
006	4/8/22 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	10.521	0.28	10.75	96.5	0.568	7.45	7.52	1.1
006	4/8/22 9:11 AM	B	CHARLES RIVER	MID-BASIN		0.15	0.16	0.27	10.429	0.28	10.67	95.7	0.569	10.18	7.41	
006	5/12/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	16.339	0.3	11.26	115.2	0.613	6.36	7.88	1.2
006	5/12/22 8:59 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	15.152	0.31	9.99	99.6	0.628	7.99	7.54	
006	5/16/22 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	21.402	0.31	9.42	106.7	0.646	2.29	7.61	0.8
006	5/16/22 8:32 AM	B	CHARLES RIVER	MID-BASIN		0.09	0.1	0.1	17.152	0.37	8.26	85.9	0.758	7.6	7.42	
006	5/18/22 9:06 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	19.637	0.35	8.17	89.4	0.711	6.22	7.4	0.5
006	5/18/22 9:06 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.09	19.455	0.35	7.79	84.9	0.72	7.94	7.33	
006	6/2/22 8:41 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	21.956	0.41	7.35	84.1	0.829	5.1	7.39	0.5
006	6/2/22 8:41 AM	B	CHARLES RIVER	MID-BASIN		0.1	0.19	0.19	21.426	0.6	5.48	62.2	1.198	27.62	7.35	
006	6/16/22 9:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.625	0.44	8.06	95.3	0.906	3.75	7.44	0.5
006	6/16/22 9:07 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	22.819	0.52	2.68	31.2	1.049	10.19	7.01	
006	6/17/22 9:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.2	0.47	7.1	83.3	0.954	3.7	7.38	0.8
006	6/17/22 9:29 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	22.084	0.75	2.41	27.7	1.483	9.2	7.06	
006	7/6/22 8:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	24.373	0.67	7.55	90.7	1.35	3.23	7.25	0.9
006	7/6/22 8:10 AM	B	CHARLES RIVER	MID-BASIN		0.01	0.05	0.05	23.318	1.01	1.8	21.2	1.991	6.45	6.89	
006	7/7/22 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	24.476	0.72	8.44	101.6	1.431	3.36	7.65	0.7
006	7/7/22 8:37 AM	B	CHARLES RIVER	MID-BASIN		0	0.01	0.05	24.282	0.71	7.75	93	1.424	6.36	7.53	
006	8/11/22 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	27.098	1.2	7.71	97.6	2.345	2.26	7.96	1.2
006	8/11/22 8:31 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.14	26.92	1.69	1.58	19.9	3.244	11.87	7.13	
006	8/12/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.518	1.25	7.92	99.2	2.438	2.91	7.87	1.1
006	8/12/22 8:25 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	26.945	1.44	7	87.7	2.788	7.34	7.78	
006	8/16/22 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	25.778	1.49	8.6	106.4	2.871	2.77	8.36	1
006	8/16/22 8:55 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	25.53	1.44	7.66	94.4	2.781	4.97	8.01	
006	9/14/22 9:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	22.482	0.98	8.32	96.5	1.935	3.79	7.61	0.8
006	9/14/22 9:30 AM	B	CHARLES RIVER	MID-BASIN		0	0.15	0.15	22.39	2.52	2.88	33.7	4.697	8.92	7.2	
006	9/26/22 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	17.602	0.75	9.82	103.3	1.478	3.15	7.7	0.6
006	9/26/22 8:56 AM	B	CHARLES RIVER	MID-BASIN		0.29	0.29	0.29	17.776	1.43	8.93	94.7	2.744	4.27	7.62	
006	10/4/22 9:12 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	14.593	0.74	9.74	96.1	1.468	4.18	7.73	0.9
006	10/4/22 9:12 AM	B	CHARLES RIVER	MID-BASIN		0.46	0.46	0.46	14.574	0.88	9.22	91	1.723	13.48	7.68	
006	10/5/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	14.699	0.63	9.08	89.8	1.26	5.86	7.4	0.6

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
006	10/5/22 8:59 AM	B	CHARLES RIVER	MID-BASIN		0.44	0.9	0.9	14.902	1.5	9.19	91.7	2.865	11.44	7.65	
006	10/31/22 9:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	13.294	0.33	7.84	75.1	0.68	2.97	7.31	1.5
006	10/31/22 9:13 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	13.661	0.63	7.87	76.1	1.256	7.96	7.27	
006	11/16/22 10:35 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	10.934	0.35	8.56	77.7	0.714	4.97	7.19	0.9
006	11/16/22 10:35 AM	B	CHARLES RIVER	MID-BASIN		0.79	0.79	0.79	10.867	0.35	8.53	77.3	0.717	5.49	7.1	
007	3/18/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1				8.117	0.35	12.73	108	0.706	1.05	7.4	1.5
007	3/18/22 8:59 AM	B	CHARLES RIVER	MID-BASIN	4.1				6.259	0.67	10.61	86.1	1.341	2.81	7.17	
007	3/21/22 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	9.425	0.39	11.83	103.7	0.792	1.17	7.4	1.2
007	3/21/22 8:43 AM	B	CHARLES RIVER	MID-BASIN	4.1	0	0	0.2	7.816	0.63	10.38	87.7	1.263	4.81	7.27	
007	4/6/22 8:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	10.35	0.29	11.52	103.1	0.591	4.47	7.68	1
007	4/6/22 8:53 AM	B	CHARLES RIVER	MID-BASIN	4.1	0.11	0.11	0.12	9.825	0.32	11.03	97.5	0.662	7.51	7.47	
007	4/8/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	10.439	0.28	10.94	98.1	0.579	7.54	7.58	1.1
007	4/8/22 8:59 AM	B	CHARLES RIVER	MID-BASIN	3.7	0.15	0.16	0.27	10.337	0.29	10.78	96.4	0.592	9.06	7.57	
007	5/12/22 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	15.276	0.32	11.05	110.4	0.65	6.77	7.92	1.2
007	5/12/22 8:44 AM	B	CHARLES RIVER	MID-BASIN	3.9	0	0	0	14.577	0.36	10.76	106	0.723	9.37	7.8	
007	5/16/22 8:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	20.105	0.34	9.65	106.6	0.691	2.26	7.72	1
007	5/16/22 8:22 AM	B	CHARLES RIVER	MID-BASIN	4.3	0.09	0.1	0.1	15.402	0.4	7.07	70.9	0.815	6.89	7.41	
007	5/18/22 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	18.653	0.41	8.63	92.6	0.828	5.26	7.59	0.6
007	5/18/22 8:52 AM	B	CHARLES RIVER	MID-BASIN	4.7	0	0	0.09	18.497	0.42	8.19	87.7	0.845		7.48	
007	6/2/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	21.28	0.54	5.8	65.6	1.095	4.28	7.35	0.6
007	6/2/22 8:25 AM	B	CHARLES RIVER	MID-BASIN	4.3	0.1	0.19	0.19	21.239	0.62	5.11	57.8	1.24	23.42	7.27	
007	6/16/22 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.899	0.58	8.34	99.2	1.175	2.95	7.61	0.7
007	6/16/22 8:56 AM	B	CHARLES RIVER	MID-BASIN	4.2	0	0	0	21.887	0.75	2.11	24.2	1.495	9.88	7.05	
007	6/17/22 9:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	22.837	0.56	6.52	76	1.126	2.61	7.37	1.3
007	6/17/22 9:19 AM	B	CHARLES RIVER	MID-BASIN	5.1	0	0	0	22.103	0.93	2.21	25.5	1.83	9.49	7.03	
007	7/6/22 8:00 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	24.166	0.71	8.19	98	1.418	2.34	7.48	1
007	7/6/22 8:00 AM	B	CHARLES RIVER	MID-BASIN	4.1	0.01	0.05	0.05	21.561	2.36	0.37	4.2	4.425	3.15	6.95	
007	7/7/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	24.75	0.83	8.94	108.2	1.644	1.36	7.95	1
007	7/7/22 8:25 AM	B	CHARLES RIVER	MID-BASIN	4.2	0	0.01	0.05	23.134	1.87	0.4	4.7	3.549	7.2	7.15	
007	8/11/22 8:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	27.193	1.49	7.39	93.9	2.875	1.62	8.1	1.5
007	8/11/22 8:15 AM	B	CHARLES RIVER	MID-BASIN	4.3	0	0	0.14	22.037	8.88	0.14	1.6	15.218		7.04	
007	8/12/22 8:16 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.727	1.54	7.62	96	2.976	1.69	8.01	1.4
007	8/12/22 8:16 AM	B	CHARLES RIVER	MID-BASIN	4.2	0	0	0	22.249	8.55	0.33	4	14.692	9.01	7.04	
007	8/16/22 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	25.696	1.64	8.45	104.6	3.159	1.72	8.36	1.3
007	8/16/22 8:44 AM	B	CHARLES RIVER	MID-BASIN	4.4	0	0	0	21.687	9.65	0.92	11.1	16.433	1.6	7.02	
007	9/14/22 9:16 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	22.612	1.54	9.99	116.6	2.96	3.84	8.47	1
007	9/14/22 9:16 AM	B	CHARLES RIVER	MID-BASIN	5.1	0	0.15	0.15	21.508	11.28	0.6	7.3	18.957		6.9	
007	9/26/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	17.703	1.23	10.23	108.2	2.373	3.3	8.05	0.5
007	9/26/22 8:45 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.29	0.29	0.29	18.744	5.18	0.84	9.3	9.211	8.79	7.13	
007	10/4/22 8:58 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	14.777	1.39	9.87	98.2	2.665	4.42	8.03	0.8
007	10/4/22 8:58 AM	B	CHARLES RIVER	MID-BASIN	4.8	0.46	0.46	0.46	18.303	9.75	0.57	6.4	16.556	18.6	6.81	
007	10/5/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	14.496	0.89	9.62	94.9	1.741	5.53	7.68	0.9
007	10/5/22 8:45 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.44	0.9	0.9	15.394	4.87	0.84	8.6	8.685	10.38	7.1	
007	10/31/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	13.393	0.49	9.01	86.5	0.979	2.19	7.45	1.2
007	10/31/22 8:59 AM	B	CHARLES RIVER	MID-BASIN	4.3	0	0	0	14.293	1.19	2.44	24	2.299	3.38	7.25	
007	11/16/22 10:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	11.219	0.66	9.32	85.3	1.308	3.99	7.41	1.1
007	11/16/22 10:21 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.79	0.79	0.79	11.371	0.72	8.91	81.9	1.433	4.75	7.31	
145	3/18/22 9:05 AM	S	CHARLES RIVER	MID-BASIN	0.1				8.668	0.31	12.11	104.1	0.63	0.87	7.34	1.4
145	3/18/22 9:05 AM	B	CHARLES RIVER	MID-BASIN					8.542	0.58	11.69	100.4	1.171	3.59	7.05	
145	3/21/22 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	9.613	0.38	11.33	99.7	0.77	1.65	7.3	1.1
145	3/21/22 8:48 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.2	9.657	0.43	11.17	98.4	0.869	11.96	7.24	
145	4/6/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	10.998	0.5	8.87	80.7	0.999	13.56	7.21	0.5
145	4/6/22 8:59 AM	B	CHARLES RIVER	MID-BASIN		0.11	0.11	0.12	10.52	0.48	8.56	77	0.973	10.09	7.12	
145	4/8/22 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	10.496	0.33	10.8	77	0.667	7.99	7.51	1.2
145	4/8/22 9:04 AM	B	CHARLES RIVER	MID-BASIN		0.15	0.16	0.27	10.376	0.32	9.33	83.6	0.653	11.82	7.37	
145	5/12/22 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	15.339	0.33	11.25	112.6	0.681	6.58	7.99	1
145	5/12/22 8:50 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	13.557	0.64	7.77	75	1.269	6.98	7.27	
145	5/16/22 8:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	20.488	0.39	9.78	108.9	0.801	2.21	7.67	0.7
145	5/16/22 8:27 AM	B	CHARLES RIVER	MID-BASIN		0.09	0.1	0.1	18.453	0.54	8.94	98.3	1.077	3.44	7.56	
145	5/18/22 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	18.611	0.4	8.6	92.2	0.809	5.48	7.53	0.8
145	5/18/22 8:57 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.09	18.588	0.4	8.6	92.2	0.811	5.46	7.51	
145	6/2/22 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	21.267	0.54	6.46	73	1.089	4.24	7.42	0.8
145	6/2/22 8:33 AM	B	CHARLES RIVER	MID-BASIN		0.1	0.19	0.19	18.35	0.73	2.3	24.6	1.441	7.63	7.03	
145	6/16/22 9:02 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.862	0.57	8.42	100.1	1.143	3.57	7.58	0.6
145	6/16/22 9:02 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	19	0.67	3.96	42.8	1.331	3.31	7.09	
145	6/17/22 9:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.068	0.58	7.39	86.6	1.17	2.66	7.45	1
145	6/17/22 9:23 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	21.827	0.57	5.27	60.3	1.139	7.44	7.14	
145	7/6/22 8:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	24.194	0.75	8.34	99.9	1.498	1.45	7.51	1.4
145	7/6/22 8:04 AM	B	CHARLES RIVER	MID-BASIN		0.01	0.05	0.05	23.834	0.73	7.23	86	1.449	2.68	7.3	
145	7/7/22 8:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	24.412	0.78	9.02	108.4	1.552	1.86	7.89	1.1

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
145	7/7/22 8:30 AM	B	CHARLES RIVER	MID-BASIN		0	0.01	0.05	24.049	0.74	6.12	73.1	1.48	2.79	7.53	
145	8/11/22 8:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	26.989	1.4	7.61	96.3	2.725	2.35	8.11	1.2
145	8/11/22 8:21 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.14	24.059	0.93	4.91	58.8	1.84	5.25	7.26	
145	8/12/22 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	25.627	1.13	4.43	54.6	2.205	2.28	7.4	1.1
145	8/12/22 8:20 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	22.257	0.96	2.47	28.6	1.881	4.72	7.1	
145	8/16/22 8:51 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	25.638	1.54	8.57	105.8	2.964	2.7	8.33	1.5
145	8/16/22 8:51 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	24.477	1.42	6.96	84.1	2.745	2.83	7.73	
145	9/14/22 9:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	22.262	1.28	9.91	114.8	2.481	4.4	8.2	0.7
145	9/14/22 9:22 AM	B	CHARLES RIVER	MID-BASIN		0	0.15	0.15	20.038	1.07	5.88	65.1	2.097	5.82	7.37	
145	9/26/22 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	17.495	1.04	8.93	94	2.022	3.49	7.71	0.5
145	9/26/22 8:50 AM	B	CHARLES RIVER	MID-BASIN		0.29	0.29	0.29	17.612	1.26	9.5	100.3	2.427	4.47	7.72	
145	10/4/22 9:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	14.798	1.39	9.52	94.7	2.67	4.14	7.87	0.8
145	10/4/22 9:05 AM	B	CHARLES RIVER	MID-BASIN		0.46	0.46	0.46	14.708	1.43	9.77	97.1	2.737	5.31	8.01	
145	10/5/22 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	14.15	0.61	8.59	83.9	1.222	5.87	7.66	0.8
145	10/5/22 8:52 AM	B	CHARLES RIVER	MID-BASIN		0.44	0.9	0.9	14.829	1.46	9.31	92.8	2.793	6.2	7.65	
145	10/31/22 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	13.417	0.42	8.55	82.1	0.854	2.13	7.36	1.5
145	10/31/22 9:04 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	13.235	0.45	6.92	66.2	0.914	5.99	7.24	
145	11/16/22 10:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	10.843	0.56	7.64	69.3	1.112	6.83	7.27	0.6
145	11/16/22 10:27 AM	B	CHARLES RIVER	MID-BASIN		0.79	0.79	0.79	11.056	0.6	8.21	74.8	1.203	7.47	7.19	
008	3/18/22 8:53 AM	S	CHARLES RIVER	MID-BASIN	0.1				8.426	0.31	12.45	106.4	0.642	0.94	7.65	1.3
008	3/18/22 8:53 AM	B	CHARLES RIVER	MID-BASIN		4.9			6.806	0.67	10.66	87.8	1.337	3.59	7.32	
008	3/21/22 8:38 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	9.348	0.38	11.71	102.4	0.775	1.75	7.62	1.2
008	3/21/22 8:38 AM	B	CHARLES RIVER	MID-BASIN		3.9	0	0	9.125	0.39	11.45	99.5	0.788	7.48	7.55	
008	4/6/22 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	9.898	0.33	11.36	100.6	0.666	4.89	7.64	1.1
008	4/6/22 8:48 AM	B	CHARLES RIVER	MID-BASIN		0.11	0.11	0.12	9.756	0.38	10.44	92.1	0.779	10.73	7.4	
008	4/8/22 8:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	10.387	0.29	10.99	98.4	0.599	7.32	7.58	1.2
008	4/8/22 8:53 AM	B	CHARLES RIVER	MID-BASIN		5.8	0.15	0.16	9.834	0.33	10.86	96.1	0.675	8.64	7.7	
008	5/12/22 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	14.986	0.34	11.06	109.9	0.698	6.29	8.05	1.2
008	5/12/22 8:39 AM	B	CHARLES RIVER	MID-BASIN		3.9	0	0	14.42	0.37	10.31	101.2	0.748	6.89	7.72	
008	5/16/22 8:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	19.967	0.35	10.33	113.8	0.725	2.13	8.07	1.3
008	5/16/22 8:17 AM	B	CHARLES RIVER	MID-BASIN		3.5	0.09	0.1	17.882	0.39	9.24	97.6	0.787	3.21	7.65	
008	5/18/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	18.458	0.4	8.66	92.5	0.812	5.46	7.74	0.6
008	5/18/22 8:45 AM	B	CHARLES RIVER	MID-BASIN		4.1	0	0	16.69	0.57	0.65	6.7	1.139	0.81	7.27	
008	6/2/22 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	21.143	0.62	6.39	72.1	1.236	3.69	7.48	0.9
008	6/2/22 8:19 AM	B	CHARLES RIVER	MID-BASIN		0.1	0.19	0.19	20.482	0.94	2.35	26.2	1.849	3.25	7.28	
008	6/16/22 8:51 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.662	0.59	8.3	98.3	1.181	3.24	7.64	1
008	6/16/22 8:51 AM	B	CHARLES RIVER	MID-BASIN		4.1	0	0	21.415	1.58	2.7	30.8	3.022	5.75	7.1	
008	6/17/22 9:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	22.946	0.63	7.48	87.4	1.262	2.13	7.5	1
008	6/17/22 9:15 AM	B	CHARLES RIVER	MID-BASIN		4.1	0	0	21.625	1.36	2.83	32.4	2.631	4.49	7.06	
008	7/6/22 7:54 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	24.212	0.77	8.43	101	1.529	1.48	7.62	1.5
008	7/6/22 7:54 AM	B	CHARLES RIVER	MID-BASIN		3.8	0.01	0.05	23.643	1.47	1.29	15.3	2.84	1.8	7.01	
008	7/7/22 8:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	24.709	0.81	9.16	110.7	1.618	1.39	8.05	1.3
008	7/7/22 8:21 AM	B	CHARLES RIVER	MID-BASIN		3.8	0	0.01	23.803	0.98	6.03	71.8	1.923	4.21	7.43	
008	8/11/22 8:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	27.117	1.51	7.67	97.3	2.925	1.64	8.16	1.5
008	8/11/22 8:09 AM	B	CHARLES RIVER	MID-BASIN		4.7	0	0.14	19.787	9.85	0.36	4.2	16.712	2.04	6.98	
008	8/12/22 8:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.488	1.53	8.09	101.5	2.945	1.92	8.17	1.5
008	8/12/22 8:11 AM	B	CHARLES RIVER	MID-BASIN		3.9	0	0	23.706	8.27	0.52	6.4	14.275	5.05	7.06	
008	8/16/22 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	25.417	1.61	8.66	106.6	3.098	1.92	8.43	1.5
008	8/16/22 8:40 AM	B	CHARLES RIVER	MID-BASIN		6.2	0	0	18.848	12.76	0.27	3.2	21.207	0.96	6.92	
008	9/14/22 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	22.226	1.35	9.41	108.9	2.616	4.84	8.01	1
008	9/14/22 9:04 AM	B	CHARLES RIVER	MID-BASIN		4.6	0	0.15	21.066	13.29	0.25	3.1	22.032	9.3	7.01	
008	9/26/22 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	17.676	1.28	10.18	107.7	2.468	3.79	8.15	0.7
008	9/26/22 8:40 AM	B	CHARLES RIVER	MID-BASIN		3.8	0.29	0.29	18.022	2.26	6.39	68.5	4.236	3.67	7.56	
008	10/4/22 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	14.858	1.44	9.9	98.7	2.751	4.03	8.09	0.6
008	10/4/22 8:52 AM	B	CHARLES RIVER	MID-BASIN		4	0.46	0.46	14.885	1.46	9.06	90.4	2.792	14.7	7.94	
008	10/5/22 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	14.637	1.17	9.5	94.1	2.272	5.63	7.88	0.7
008	10/5/22 8:40 AM	B	CHARLES RIVER	MID-BASIN		3.9	0.44	0.9	14.696	1.52	9.32	92.7	2.9	9.49	7.86	
008	10/31/22 8:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	13.555	0.51	9.68	93.3	1.028	2.06	7.49	1.2
008	10/31/22 8:53 AM	B	CHARLES RIVER	MID-BASIN		4.6	0	0	14.899	4.23	0.23	2.3	7.607	12.42	7.17	
008	11/16/22 10:16 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	11.431	0.69	9.35	86	1.377	3.95	7.44	1
008	11/16/22 10:16 AM	B	CHARLES RIVER	MID-BASIN		3.2	0.79	0.79	11.409	0.7	9.42	86.6	1.397	3.89	7.42	
009	3/18/22 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1				8.035	0.34	12.7	107.6	0.702	1	7.73	1.5
009	3/18/22 8:44 AM	B	CHARLES RIVER	MID-BASIN		6.7			10.757	21.15	0.43	4.5	33.791	2.72	7.2	
009	3/21/22 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	9.58	0.38	11.72	103.1	0.777	1.23	7.71	1.3
009	3/21/22 8:31 AM	B	CHARLES RIVER	MID-BASIN		8.2	0	0.2	12.897	20.58	0.59	6.4	32.884	0	7.16	
009	4/6/22 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	9.95	0.33	11.75	104.2	0.671	4.6	7.78	1.1
009	4/6/22 8:39 AM	B	CHARLES RIVER	MID-BASIN		5.7	0.11	0.12	9.171	5.17	4.56	40.9	9.219	0.15	7.44	
009	4/8/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	10.049	0.33	11.3	100.4	0.675	7.15	7.65	1.1
009	4/8/22 8:45 AM	B	CHARLES RIVER	MID-BASIN		8.7	0.15	0.16	12.627	20.94	1.04	11.1	33.42	4.32	7	
009	5/12/22 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	14.735	0.35	11.27	111.3	0.713	6.3	8.25	1.2

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
009	5/12/22 8:31 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0	0	12.329	20.55	0.77	8.1	32.863	6.28	6.99	
009	5/16/22 8:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	20.093	0.35	10.29	113.6	0.721	2.25	8	1
009	5/16/22 8:11 AM	B	CHARLES RIVER	MID-BASIN	8.6	0.09	0.1	0.1	12.31	21.11	0.68	7.2	33.674	2.32	7.02	
009	5/18/22 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	18.48	0.4	8.7	93.1	0.821	5.25	7.68	1
009	5/18/22 8:36 AM	B	CHARLES RIVER	MID-BASIN	6.7	0	0	0.09	12.646	15.22	0.31	3.3	24.954	0.33	7.13	
009	6/2/22 8:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	21.311	0.67	7.13	80.7	1.331	3.02	7.55	1
009	6/2/22 8:09 AM	B	CHARLES RIVER	MID-BASIN	9.3	0.1	0.19	0.19	13.651	21.72	0.51	5.6	34.516	2.94	7.09	
009	6/16/22 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.192	0.61	7.85	92.1	1.224	2.25	7.59	1
009	6/16/22 8:44 AM	B	CHARLES RIVER	MID-BASIN	8.4	0	0	0	12.574	22	0.31	3.4	34.959	0	7.02	
009	6/17/22 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	22.776	0.66	7.98	92.9	1.315	2.12	7.59	1.5
009	6/17/22 9:08 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0	0	12.536	22.11	0.35	3.8	35.119	9.7	6.98	
009	7/6/22 7:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	24.464	0.82	8.75	105.4	1.626	1.04	7.69	1.3
009	7/6/22 7:48 AM	B	CHARLES RIVER	MID-BASIN	6.7	0.01	0.05	0.05	17.486	13.45	0.31	3.5	22.25	6.85	7.26	
009	7/7/22 8:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	24.711	0.84	9.19	111.2	1.67	1.04	8.06	1.1
009	7/7/22 8:15 AM	B	CHARLES RIVER	MID-BASIN	9	0	0.01	0.05	12.891	22.13	0.31	3.4	35.13	2.48	7.09	
009	8/11/22 8:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	27.189	1.56	7.67	97.5	3.016	1.65	8.14	1.5
009	8/11/22 8:01 AM	B	CHARLES RIVER	MID-BASIN	8.6	0	0	0.14	16.7	19.48	0.7	8	31.227	7.92	6.93	
009	8/12/22 8:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.489	1.6	7.69	96.5	3.085	1.73	8.02	1.5
009	8/12/22 8:05 AM	B	CHARLES RIVER	MID-BASIN	9	0	0	0	13.628	20.72	0.32	3.5	33.078	0.72	7.01	
009	8/16/22 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	25.279	1.63	8.51	104.5	3.133	2.12	8.34	1.5
009	8/16/22 8:31 AM	B	CHARLES RIVER	MID-BASIN	6.8	0	0	0	19.135	16.38	0.19	2.2	26.665	0.28	7.24	
009	9/14/22 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	22.475	1.61	9.56	111.4	3.083	3.81	8.32	0.9
009	9/14/22 8:57 AM	B	CHARLES RIVER	MID-BASIN	7.2	0	0.15	0.15	18.304	19.89	0.86	10.3	31.823	0.88	7.26	
009	9/26/22 8:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	17.753	1.35	10.88	115.2	2.607	3.5	8.27	0.5
009	9/26/22 8:30 AM	B	CHARLES RIVER	MID-BASIN	7.1	0.29	0.29	0.29	18.026	17.31	0.13	1.5	28.039	0	7.12	
009	10/4/22 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	14.97	1.45	10.12	101.1	2.785	4.03	8.1	0.7
009	10/4/22 8:43 AM	B	CHARLES RIVER	MID-BASIN	8.2	0.46	0.46	0.46	15.614	20.73	0.16	1.8	33.061	12.87	6.87	
009	10/5/22 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	14.742	1.52	9.88	98.3	2.901	5.62	8.02	0.6
009	10/5/22 8:32 AM	B	CHARLES RIVER	MID-BASIN	9	0.44	0.9	0.9	14.881	21.08	0.69	7.7	33.566	0.75	7.07	
009	10/31/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	13.373	0.61	9.93	95.3	1.223	1.91	7.54	1.4
009	10/31/22 8:45 AM	B	CHARLES RIVER	MID-BASIN	8.8	0	0	0	15.026	20.69	0.35	4	33.007	11.53	6.88	
009	11/16/22 10:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	11.336	0.72	9.75	89.5	1.419	4.08	7.57	1.3
009	11/16/22 10:08 AM	B	CHARLES RIVER	MID-BASIN	7.6	0.79	0.79	0.79	16.638	21.02	0.51	5.9	33.466	4.25	6.91	
010	3/18/22 8:35 AM	S	CHARLES RIVER	MID-BASIN	0.1				7.537	0.37	13.03	109	0.753	1.18	7.09	1.4
010	3/18/22 8:35 AM	B	CHARLES RIVER	MID-BASIN	9.2				7.736	23.06	0.8	7.8	36.772	3.15	7.05	
010	3/21/22 8:26 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	9.622	0.35	12.18	107.2	0.719	0.95	7.51	1.2
010	3/21/22 8:26 AM	B	CHARLES RIVER	MID-BASIN	8.3	0	0	0.2	7.738	20.65	1.22	11.7	33.255	2.54	7.18	
010	4/6/22 8:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	10.085	0.32	11.94	106.2	0.662	4.69	7.6	1
010	4/6/22 8:29 AM	B	CHARLES RIVER	MID-BASIN	8.9	0.11	0.11	0.12	7.865	20.08	2.16	20.7	32.406	8.09	7.31	
010	4/8/22 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	9.913	0.33	11.57	102.5	0.682	6.75	7.69	1.3
010	4/8/22 8:37 AM	B	CHARLES RIVER	MID-BASIN	7.8	0.15	0.16	0.27	7.663	21.26	1.11	10.7	34.157		7.13	
010	5/12/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	14.581	0.36	11.13	109.6	0.723	6.07	8	1.2
010	5/12/22 8:25 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0	0	8.869	20.9	0.79	7.8	33.53	1.68	7.22	
010	5/16/22 8:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	20.192	0.36	10.38	114.8	0.727	2.12	7.98	1
010	5/16/22 8:03 AM	B	CHARLES RIVER	MID-BASIN	9	0.09	0.1	0.1	8.416	21.96	0.89	8.7	35.118	8.4	7.25	
010	5/18/22 8:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	19.2	0.4	9	97.6	0.814	4.8	7.68	0.7
010	5/18/22 8:28 AM	B	CHARLES RIVER	MID-BASIN	8.8	0	0	0.09	8.663	20.78	0.97	9.5	33.377	0.1	7.18	
010	6/2/22 8:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.19	0.19	21.276	0.68	7.07	80.1	1.354	2.72	7.34	1
010	6/2/22 8:01 AM	B	CHARLES RIVER	MID-BASIN	9.1	0.1	0.19	0.19	9.659	25.24	1.55	16.1	39.77	21.85	7.14	
010	6/16/22 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.181	0.61	7.58	89	1.234	1.95	7.33	1.1
010	6/16/22 8:32 AM	B	CHARLES RIVER	MID-BASIN	8.9	0	0	0	9.113	22.16	0.37	3.7	35.356	0	7.24	
010	6/17/22 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	22.764	0.66	7.89	91.9	1.313	2.17	7.54	1.3
010	6/17/22 8:59 AM	B	CHARLES RIVER	MID-BASIN	9	0	0	0	9.605	22.63	2.96	30.1	36.012	12.13	7.17	
010	7/6/22 7:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	24.582	0.85	8.6	103.8	1.687	0.76	7.77	1.5
010	7/6/22 7:42 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.01	0.05	0.05	9.782	22.28	0.49	4.9	35.499	2.56	7.3	
010	7/7/22 8:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	24.425	0.87	8.88	106.8	1.717	0.95	8.14	1.3
010	7/7/22 8:07 AM	B	CHARLES RIVER	MID-BASIN	8.8	0	0.01	0.05	9.766	22.93	0.27	2.7	36.439	4.75	7.44	
010	8/11/22 7:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	27.324	1.61	7.35	93.6	3.1	1.57	7.94	1.5
010	8/11/22 7:53 AM	B	CHARLES RIVER	MID-BASIN	9.4	0	0	0.14	11.244	21.73	0.58	6	34.615		7.46	
010	8/12/22 7:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.587	1.62	7.49	94.2	3.112	1.66	7.84	2
010	8/12/22 7:56 AM	B	CHARLES RIVER	MID-BASIN	9.1	0	0	0	11.756	21.94	1.73	18.3	34.9	23.28	7.32	
010	8/16/22 8:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	25.12	1.66	8.31	101.7	3.186	1.82	8.2	1.7
010	8/16/22 8:22 AM	B	CHARLES RIVER	MID-BASIN	9.2	0	0	0	11.582	21.3	0.24	2.6	33.983	0.23	7.43	
010	9/14/22 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	22.585	1.6	9.81	114.5	3.067	3.81	8.4	1.1
010	9/14/22 8:50 AM	B	CHARLES RIVER	MID-BASIN	9.1	0	0.15	0.15	13.156	23.96	0.72	8	37.758	8.8	7.09	
010	9/26/22 8:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	17.822	1.39	10.15	107.7	2.677	3.29	8.3	0.8
010	9/26/22 8:23 AM	B	CHARLES RIVER	MID-BASIN	8.9	0.29	0.29	0.29	14.039	21.69	0.63	7	34.466	1.13	7.06	
010	10/4/22 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	15.078	1.48	9.53	95.5	2.83	3.93	8.08	0.6
010	10/4/22 8:37 AM	B	CHARLES RIVER	MID-BASIN	9.1	0.46	0.46	0.46	13.731	21.88	0.97	10.8	34.753	7.09	6.86	
010	10/5/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	14.763	1.53	9.13	90.9	2.924	5.73	8.02	0.8

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
010	10/5/22 8:25 AM	B	CHARLES RIVER	MID-BASIN	8.9	0.44	0.9	0.9	13.859	21.69	1.34	14.9	34.47	1.3	7	
010	10/31/22 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	13.488	0.63	10.08	97.1	1.25	1.73	7.48	1.2
010	10/31/22 8:37 AM	B	CHARLES RIVER	MID-BASIN	8.9	0	0	0	14.459	21.85	0.42	4.7	34.696	4.02	6.9	
010	11/16/22 10:00 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	11.397	0.71	9.86	90.6	1.415	4.01	7.24	1
010	11/16/22 10:00 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.79	0.79	0.79	14.37	22.62	0.26	2.9	35.805	1.43	6.95	
210	3/18/22 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1				7.462	0.39	13.18	110.1	0.8	1.46	7.16	1.2
210	3/18/22 8:31 AM	B	CHARLES RIVER	MID-BASIN					6.46	0.5	12.54	102.3	1.002	1.04	7.06	
210	3/21/22 8:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.2	9.734	0.35	12.25	108.1	0.722	0.91	7.58	1
210	3/21/22 8:23 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.2	9.513	0.36	12.24	107.4	0.723	2.83	7.56	
210	4/6/22 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	9.964	0.33	11.94	105.9	0.666	9.67	7.59	1
210	4/6/22 8:25 AM	B	CHARLES RIVER	MID-BASIN	0.11	0.11	0.11	0.12	9.969	0.33	11.94	105.9	0.664		7.58	
210	4/8/22 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.15	0.16	0.27	9.92	0.34	11.51	102	0.688	6.42	7.73	1.4
210	4/8/22 8:33 AM	B	CHARLES RIVER	MID-BASIN	0.15	0.16	0.27	0.27	9.794	0.34	11.41	100.8	0.689	5.69	7.65	
210	5/12/22 8:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	14.449	0.36	11.21	110.1	0.732	5.98	8.11	1.2
210	5/12/22 8:22 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	13.68	0.41	10.13	97.9	0.826	6.71	7.75	
210	5/16/22 7:58 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.09	0.1	0.1	20.05	0.36	10.24	112.9	0.732	2.25	8.05	1
210	5/16/22 7:58 AM	B	CHARLES RIVER	MID-BASIN		0.09	0.1	0.1	19.584	0.35	10.02	109.5	0.725	2.5	7.92	
210	5/18/22 8:24 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.09	19.5	0.4	8.6	93.9	0.821	4.76	7.61	1.2
210	5/18/22 8:24 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.09	18.933	0.44	8.71	94	0.895	5.07	7.53	
210	6/2/22 7:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.19	0.19	0.19	21.242	0.69	7.37	83.4	1.383	2.58	7.37	1
210	6/2/22 7:57 AM	B	CHARLES RIVER	MID-BASIN	0.1	0.19	0.19	0.19	21.224	0.69	7.22	81.7	1.383	10.01	7.34	
210	6/16/22 8:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.194	0.64	7.17	84.2	1.292	1.59	7.36	1.2
210	6/16/22 8:28 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	22.201	0.81	4.01	46.2	1.597		7.04	
210	6/17/22 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	22.796	0.68	7.62	88.8	1.356	1.54	7.54	1.3
210	6/17/22 8:55 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	22.618	0.68	7.38	85.8	1.366	4.83	7.47	
210	7/6/22 7:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.05	0.05	24.672	0.87	8.8	106.4	1.718	0.6	7.65	1.3
210	7/6/22 7:36 AM	B	CHARLES RIVER	MID-BASIN		0.01	0.05	0.05	24.64	0.87	8.63	104.3	1.72	0.89	7.6	
210	7/7/22 8:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.05	24.687	0.87	8.91	107.7	1.716	0.86	7.82	1.5
210	7/7/22 8:01 AM	B	CHARLES RIVER	MID-BASIN		0	0.01	0.05	24.57	1	7.8	94.2	1.977	0.87	7.57	
210	8/11/22 7:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.14	27.259	1.6	7.33	93.2	3.09	1.66	7.93	1.6
210	8/11/22 7:50 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.14	26.734	5.89	2.82	36.4	10.453	3.95	7.04	
210	8/12/22 7:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.623	1.61	7.1	89.3	3.101	1.72	7.77	1.6
210	8/12/22 7:53 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	26.606	1.61	7.15	89.9	3.105	1.88	7.77	
210	8/16/22 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	25.183	1.75	7.93	97.3	3.342	1.7	7.97	2
210	8/16/22 8:19 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	25.245	4.8	3.11	38.9	8.627	2.23	7.13	
210	9/14/22 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.15	0.15	22.903	1.62	9.85	115.7	3.095	3.74	8.35	0.7
210	9/14/22 8:45 AM	B	CHARLES RIVER	MID-BASIN		0	0.15	0.15	22.537	3.96	1.75	20.7	7.187	3.37	7.05	
210	9/26/22 8:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.29	0.29	0.29	17.811	1.42	10.69	113.4	2.736	3.41	8.15	0.6
210	9/26/22 8:08 AM	B	CHARLES RIVER	MID-BASIN		0.29	0.29	0.29	17.808	1.45	10.04	106.5	2.782	3.35	7.92	
210	10/4/22 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.46	0.46	0.46	15.165	1.5	10.06	101.1	2.877	3.81	7.98	0.8
210	10/4/22 8:32 AM	B	CHARLES RIVER	MID-BASIN		0.46	0.46	0.46	15.192	1.52	9.92	99.7	2.901	3.87	7.96	
210	10/5/22 8:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.44	0.9	0.9	14.911	1.58	9.87	98.7	3.012	5.55	7.94	0.9
210	10/5/22 8:22 AM	B	CHARLES RIVER	MID-BASIN		0.44	0.9	0.9	15.041	1.69	9.3	93.3	3.219	11.67	7.8	
210	10/31/22 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	13.426	0.64	9.87	95	1.268	1.81	7.45	1.2
210	10/31/22 8:33 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	13.408	0.65	9.64	92.6	1.288	2.09	7.43	
210	11/16/22 9:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.79	0.79	0.79	11.576	0.73	9.96	92	1.446	4.03	7.31	1.3
210	11/16/22 9:57 AM	B	CHARLES RIVER	MID-BASIN		0.79	0.79	0.79	11.564	0.73	9.94	91.7	1.443	4.77	7.29	
166	2/22/22 9:57 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.35	0.35	0.35	2.1	0.39	13.61	99	0.803	1.64	7.39	
166	2/22/22 9:57 AM	B	CHARLES RIVER	LOWER BASIN		0.35	0.35	0.35	2.078	0.39	13.61	98.9	0.805	1.71	7.32	
166	3/10/22 9:58 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.26	0.26	5.401	0.5	12.55	99.6	1.016	2.72	7.35	
166	3/10/22 9:58 AM	B	CHARLES RIVER	LOWER BASIN		0	0.26	0.26	5.358	0.5	12.59	99.9	1.016	4.57	7.34	
166	3/24/22 8:53 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.75	0.75	0.75	9.043	0.41	11.8	102.5	0.834	2.36	7.42	
166	3/24/22 8:53 AM	B	CHARLES RIVER	LOWER BASIN		0.75	0.75	0.75	9.071	0.41	11.76	102.2	0.834	2.86	7.37	
166	4/5/22 9:00 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.01	0.01	9.966	0.33	11.87	105.3	0.663	2.76	7.69	
166	4/5/22 9:00 AM	B	CHARLES RIVER	LOWER BASIN		0	0.01	0.01	9.998	0.32	11.88	105.5	0.662	3.77	7.65	
166	4/19/22 9:08 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.56	0.56	0.56	12.376	0.35	10.81	101.3	0.716	2.47	7.5	
166	4/19/22 9:08 AM	B	CHARLES RIVER	LOWER BASIN		0.56	0.56	0.56	12.386	0.35	10.82	101.5	0.715	5.98	7.49	
166	5/4/22 9:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.12	0.21	0.37	13.128	0.31	10.74	102.4	0.636	3.06	7.46	
166	5/4/22 9:17 AM	B	CHARLES RIVER	LOWER BASIN		0.12	0.21	0.37	13.148	0.31	10.61	101.3	0.637		7.31	
166	5/17/22 9:49 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.09	0.1	20.16	0.38	9.45	104.4	0.776	2.16	7.59	
166	5/17/22 9:49 AM	B	CHARLES RIVER	LOWER BASIN		0	0.09	0.1	20.165	0.38	9.44	104.4	0.777	2.24	7.52	
166	6/13/22 9:16 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.09	0.09	0.09	22.909	0.66	7.9	92.3	1.314		7.3	
166	6/13/22 9:16 AM	B	CHARLES RIVER	LOWER BASIN		0.09	0.09	0.09	22.604	0.66	7.44	86.4	1.318		7.21	
166	6/28/22 9:39 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.65	0.65	24.001	0.79	7.92	94.5	1.572		7.69	
166	6/28/22 9:39 AM	B	CHARLES RIVER	LOWER BASIN		0	0.65	0.65	23.834	0.8	8.04	95.7	1.581		7.58	
166	7/11/22 8:48 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	24.223	0.93	9.44	113.2	1.844		8	
166	7/11/22 8:48 AM	B	CHARLES RIVER	LOWER BASIN		0	0	0	24.254	0.93	9.45	113.3	1.844		7.98	
166	7/28/22 9:01 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.04	0.04	0.04	26.791	1.29	8.99	113.2	2.505		8.2	
166	7/28/22 9:01 AM	B	CHARLES RIVER	LOWER BASIN		0.04	0.04	0.04	26.73	1.29	8.84	111.2	2.508		8.15	
166	8/10/22 9:20 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.14	0.14	27.812	1.67	7.11	91.4	3.209		7.78	

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Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
166	8/10/22 9:20 AM	B	CHARLES RIVER	LOWER BASIN		0	0.14	0.14	28.004	1.68	7.09	91.4	3.225			7.83
166	8/23/22 9:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.02	0.46	0.46	24.599	1.89	8.65	105	3.605	1.84		8.17
166	8/23/22 9:17 AM	B	CHARLES RIVER	LOWER BASIN		0.02	0.46	0.46	24.49	1.93	8.07	97.9	3.669	2.38		8.03
166	9/6/22 9:50 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.53	0.97	0.97	23.008	1.98	8.59	101.4	3.76			7.48
166	9/6/22 9:50 AM	B	CHARLES RIVER	LOWER BASIN		0.53	0.97	0.97	23.267	1.98	8.37	99.2	3.762			7.59
166	9/19/22 9:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.42	0.43	0.43	21.096	1.54	10.12	114.8	2.958			8.37
166	9/19/22 9:17 AM	B	CHARLES RIVER	LOWER BASIN		0.42	0.43	0.43	21.158	1.55	9.68	109.9	2.966			8.27
166	10/3/22 9:07 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.02	15.894	1.51	10.26	104.7	2.896			8
166	10/3/22 9:07 AM	B	CHARLES RIVER	LOWER BASIN		0	0	0.02	15.929	1.52	10.31	105.2	2.897			8.12
166	10/20/22 9:24 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.18	14.781	0.81	10.41	103.2	1.605			7.63
166	10/20/22 9:24 AM	B	CHARLES RIVER	LOWER BASIN		0	0	0.18	14.791	0.82	10.35	102.7	1.607			7.59
166	11/2/22 8:57 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.04	0.04	13.755	0.6	12.14	117.6	1.197			7.47
166	11/2/22 8:57 AM	B	CHARLES RIVER	LOWER BASIN		0	0.04	0.04	13.754	0.6	12.15	117.7	1.197			7.37
166	11/14/22 10:38 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.1	0.17	13.331	0.75	9.77	93.8	1.483			7.52
166	11/14/22 10:38 AM	B	CHARLES RIVER	LOWER BASIN		0	0.1	0.17	13.279	0.75	9.73	93.4	1.483			7.45
166	11/28/22 10:05 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.64	0.64	6.025	0.59	12.44	100.4	1.185			7.58
166	11/28/22 10:05 AM	B	CHARLES RIVER	LOWER BASIN		0	0.64	0.64	5.975	0.59	12.45	100.4	1.186			7.48
166	12/12/22 10:10 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.04	0.04	4.378	0.44	12.91	99.7	0.905			7.51
166	12/12/22 10:10 AM	B	CHARLES RIVER	LOWER BASIN		0	0.04	0.04	4.586	0.45	13	101	0.907			7.41
011	3/18/22 8:24 AM	S	CHARLES RIVER	LOWER BASIN	0.1				6.915	0.52	12.8	105.6	1.056	1.18		7.06
011	3/18/22 8:24 AM	B	CHARLES RIVER	LOWER BASIN	5				6.729	0.64	12.72	104.5	1.288	1.23		7.02
011	3/21/22 8:15 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.2	9.061	0.56	12.49	108.6	1.123	0.72		7.91
011	3/21/22 8:15 AM	B	CHARLES RIVER	LOWER BASIN	5.8	0	0	0.2	8.247	4.37	12.08	105.5	7.886	2.69		7.5
011	4/6/22 8:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.11	0.11	0.12	9.94	0.51	11.83	105	1.021	4.48		7.24
011	4/6/22 8:17 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0.11	0.11	0.12	8.644	7.29	10.74	96.5	12.703	3.95		7.22
011	4/8/22 8:27 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.15	0.16	0.27	9.707	0.43	11.47	101.1	0.864	6.82		7.84
011	4/8/22 8:27 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0.15	0.16	0.27	8.821	8.05	10.15	92.1	13.926	6.12		7.49
011	5/12/22 8:15 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	14.322	0.42	10.94	107.2	0.846	5.96		8.1
011	5/12/22 8:15 AM	B	CHARLES RIVER	LOWER BASIN	6	0	0	0	11.848	15.67	8.28	84.5	25.654	7.03		7.58
011	5/16/22 7:52 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.09	0.1	0.1	20.006	0.42	10.22	112.7	0.854	2.09		8.09
011	5/16/22 7:52 AM	B	CHARLES RIVER	LOWER BASIN	5.3	0.09	0.1	0.1	15.567	7.87	8.4	88.5	13.575	2.11		7.47
011	5/18/22 8:16 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.09	19.513	0.54	8.91	97.3	1.088	4.56		7.36
011	5/18/22 8:16 AM	B	CHARLES RIVER	LOWER BASIN	6	0	0	0.09	14.77	11.46	6.63	70.2	19.209	5.12		7.23
011	6/2/22 7:48 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.1	0.19	0.19	21.316	0.79	6.53	74	1.561	2.52		6.99
011	6/2/22 7:48 AM	B	CHARLES RIVER	LOWER BASIN	5.6	0.1	0.19	0.19	18.134	14.33	5.02	57.9	23.586	10.2		6.95
011	6/16/22 8:20 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	23.423	0.67	6.76	79.8	1.35	1.03		7.09
011	6/16/22 8:20 AM	B	CHARLES RIVER	LOWER BASIN	6.5	0	0	0	17.658	19.45	2.88	33.9	31.181			7.08
011	6/17/22 8:46 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	22.718	0.77	7.39	86	1.527	1.04		7.66
011	6/17/22 8:46 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0	0	0	18.507	15.34	3.4	39.7	25.101	0.34		7.15
011	7/6/22 7:26 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.01	0.05	0.05	24.8	0.98	8.15	98.8	1.929	0.28		7.27
011	7/6/22 7:26 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0.01	0.05	0.05	19.396	17.41	2.13	25.7	28.197	1.15		6.91
011	7/7/22 7:51 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.01	0.05	24.752	0.98	8.48	102.7	1.937	0.66		7.25
011	7/7/22 7:51 AM	B	CHARLES RIVER	LOWER BASIN	5.3	0	0.01	0.05	19.837	16.73	2.53	30.6	27.185	1.15		7.07
011	8/11/22 7:41 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.14	27.296	1.67	6.74	85.8	3.21	1.27		7.62
011	8/11/22 7:41 AM	B	CHARLES RIVER	LOWER BASIN	5.2	0	0	0.14	20.913	19.11	2.3	28.8	30.713	5.93		7.04
011	8/12/22 7:45 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	26.753	1.73	6.68	84.3	3.313	1.22		7.49
011	8/12/22 7:45 AM	B	CHARLES RIVER	LOWER BASIN	6.1	0	0	0	20.231	21.48	2.67	33.5	34.143	5.81		7.14
011	8/16/22 8:10 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	25.497	1.92	7.77	95.9	3.661	1.55		7.63
011	8/16/22 8:10 AM	B	CHARLES RIVER	LOWER BASIN	5	0	0	0	20.428	20.39	1.5	18.8	32.573	1.45		6.99
011	9/14/22 8:35 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.15	0.15	22.791	1.7	9.81	115	3.251	2.77		8.15
011	9/14/22 8:35 AM	B	CHARLES RIVER	LOWER BASIN	5.4	0	0.15	0.15	21.038	18.82	1.13	14.2	30.284	7.26		7.03
011	9/26/22 7:57 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.29	0.29	0.29	18.065	1.57	10.11	107.9	3.005	2.94		7.8
011	9/26/22 7:57 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0.29	0.29	0.29	19.348	15.85	2.19	26.1	25.883	2.22		7.11
011	10/4/22 8:26 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.46	0.46	0.46	15.401	1.61	9.98	100.8	3.066	3.01		7.9
011	10/4/22 8:26 AM	B	CHARLES RIVER	LOWER BASIN	6.3	0.46	0.46	0.46	17.154	19.15	4.33	50.5	30.747	2.52		7.18
011	10/5/22 8:14 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.44	0.9	0.9	15.627	1.7	9.11	92.5	3.223	5.68		7.51
011	10/5/22 8:14 AM	B	CHARLES RIVER	LOWER BASIN	6.7	0.44	0.9	0.9	16.806	21.12	3.71	43.4	33.604	7.61		7.2
011	10/31/22 8:26 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	13.416	0.68	9.74	93.7	1.35	1.93		7.35
011	10/31/22 8:26 AM	B	CHARLES RIVER	LOWER BASIN	5.9	0	0	0	14.043	15.75	5.48	58.6	25.741	2.37		7.12
011	11/16/22 9:50 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.79	0.79	0.79	11.805	0.79	9.61	89.2	1.563	3.83		7.14
011	11/16/22 9:50 AM	B	CHARLES RIVER	LOWER BASIN	5.9	0.79	0.79	0.79	13.468	13.79	5.09	53.2	22.78	3.58		7.11
074	3/22/22 8:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	8.174	0.71	8.98	76.5	1.409	8.72		7.2
074	3/30/22 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	4.99	0.67	12.09	95	1.333	6.34		7.5
074	3/31/22 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.15	0.15	0.15	7.81	0.68	9.03	76.2	1.352	8.13		7.38
074	4/14/22 9:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.26	12.7	0.62	7.15	67.6	1.226	10.74		7.16
074	5/19/22 8:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	15.612	0.62	3.86	38.9	1.242	5.79		7.3
074	5/23/22 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.09	0.11	20.05	0.63	6.69	73.9	1.265	6.67		7.36
074	5/25/22 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	17.542	0.64	7.94	83.4	1.273	10.99		7.41
074	6/7/22 9:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	20.646	0.63	3.61	40.4	1.259			7.09
074	6/10/22 8:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.85	1.08	20.233	0.54	4.07	45.1	1.082			7.07

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
074	6/29/22 9:02 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.65	21.775	0.6	2.98	34	1.204		7.21	
074	6/30/22 8:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	21.436	0.6	1.16	13.2	1.204		7.17	
074	8/2/22 8:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	22.124	0.57	4.17	48	1.139		7.19	
074	8/18/22 9:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	19.054	0.54	6.29	68.1	1.078		7.34	
074	8/25/22 9:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.02	21.894	0.57	4.71	53.9	1.143		7.22	
074	9/1/22 9:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.33	0.33	20.201	0.5	5.25	58.1	1.005		7.14	
074	9/8/22 8:46 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.53	18.66	0.52	4.19	45	1.042		7.11	
074	9/21/22 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.43	17.702	0.54	4.34	45.7	1.081		7.21	
074	9/29/22 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	15.105	0.54	5.51	54.9	1.091		7.38	
074	10/6/22 9:16 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.44	0.9	16.208	0.46	5.46	55.7	0.927		6.98	
074	10/17/22 9:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.23	13.491	0.47	4.73	45.5	0.955		7.04	
277	3/22/22 8:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	7.664	0.71	8.32	70	1.404	4.83	7.3	
277	3/30/22 8:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	4.382	0.66	10.02	77.5	1.333	4.08	7.33	
277	3/31/22 8:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.15	0.15	0.15	7.533	0.69	8.58	71.9	1.372	3.93	7.51	
277	4/14/22 8:54 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.26	12.688	0.61	6.3	59.6	1.22	2.98	7.11	
277	5/19/22 8:26 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	16.021	0.62	2.22	22.6	1.229	9.71	7.13	
277	5/23/22 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.09	0.11	19.339	0.65	2.43	26.5	1.299	3.87	7.06	
277	5/25/22 8:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	15.662	0.64	3.08	31.1	1.27	3.29	7.15	
277	6/7/22 9:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	18.164	0.63	2.16	22.9	1.253		7.07	
277	6/10/22 8:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.85	1.08	19.336	0.48	0.5	5.4	0.965		6.66	
277	6/29/22 8:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.65	20.061	0.59	1.01	11.2	1.189		7.08	
277	6/30/22 8:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	19.993	0.6	2.18	24	1.211		7.15	
277	8/2/22 8:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	22.036	0.55	0.43	4.9	1.114		7.02	
277	8/18/22 9:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	18.815	0.55	2.96	31.9	1.105		7.04	
277	8/25/22 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.02	21.088	0.55	3.3	37.2	1.114		7.13	
277	9/1/22 9:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.33	0.33	19.862	0.48	1.66	18.3	0.966		6.91	
277	9/8/22 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.53	18.437	0.53	3.72	39.8	1.067		7	
277	9/21/22 8:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.43	16.702	0.48	3.25	33.5	0.972		7.09	
277	9/29/22 8:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	14.402	0.52	4.8	47.1	1.052		7.28	
277	10/6/22 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.44	0.9	15.226	0.4	1.21	12.1	0.817		6.82	
277	10/17/22 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.23	13.655	0.46	4.37	42.2	0.927		6.86	
172	3/22/22 8:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	7.645	0.7	8.44	70.9	1.396	4.82	7.26	
172	3/30/22 8:16 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	4.244	0.66	11.38	87.8	1.333	5.08	7.26	
172	3/31/22 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.15	0.15	0.15	7.48	0.69	8.48	71	1.37	3.62	7.49	
172	4/14/22 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.26	12.65	0.61	6.69	63.2	1.214	5.33	7.11	
172	5/19/22 8:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	16.088	0.62	2.65	27	1.244	1.8	7.09	
172	5/23/22 8:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.09	0.11	19.299	0.63	2.18	23.7	1.266	2.13	7.13	
172	5/25/22 8:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	15.589	0.64	2.93	29.6	1.276	2.62	7.1	
172	6/7/22 9:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	18.035	0.63	2.29	24.3	1.255		7.13	
172	6/10/22 8:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.85	1.08	19.342	0.49	2.33	25.4	0.988		6.92	
172	6/29/22 8:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.65	19.98	0.59	2.07	22.8	1.192		7.07	
172	6/30/22 8:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	20.014	0.61	2.26	25	1.212		7.19	
172	8/2/22 8:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	22.097	0.57	2.65	30.5	1.148		7.09	
172	8/18/22 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	18.821	0.55	4.7	50.6	1.111		7.2	
172	8/25/22 9:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.02	21.066	0.55	3.26	36.7	1.115		7.1	
172	9/1/22 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.33	0.33	19.769	0.49	3.03	33.2	0.984		6.99	
172	9/8/22 8:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.53	18.465	0.52	3.83	40.9	1.046		7.04	
172	9/21/22 8:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.43	16.686	0.49	3.3	34	0.978		7.05	
172	9/29/22 8:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	14.345	0.52	4.97	48.7	1.053		7.25	
172	10/6/22 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.44	0.9	15.155	0.41	4.34	43.3	0.829		6.86	
172	10/17/22 9:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.23	13.646	0.47	5.38	52	0.95		6.93	
276	3/22/22 7:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	7.788	0.72	8.14	68.7	1.426	4.19	7.15	
276	3/30/22 8:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	4.258	0.67	10.71	82.6	1.336	5.72	7.36	
276	3/31/22 8:16 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.15	0.15	0.15	7.483	0.73	8.69	72.8	1.445	9.88	7.64	
276	4/14/22 8:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.26	12.481	0.61	6.44	60.6	1.22	3.48	7.11	
276	5/19/22 8:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	16.044	0.63	3.02	30.7	1.247	10.94	7.09	
276	5/23/22 8:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.09	0.11	19.613	0.63	2.62	28.7	1.258	2.01	7.05	
276	5/25/22 8:26 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	15.938	0.64	3.49	35.4	1.277	4.86	7.14	
276	6/7/22 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	18.326	0.63	2.39	25.5	1.249		7.11	
276	6/10/22 7:53 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.85	1.08	19.291	0.48	2.46	26.7	0.973		6.91	
276	6/29/22 8:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.65	20.036	0.59	2.17	23.9	1.188		7.03	
276	6/30/22 8:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	20.29	0.6	2.55	28.3	1.211		7.17	
276	8/2/22 7:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	22.24	0.57	2.99	34.4	1.15		6.97	
276	8/18/22 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	19.048	0.55	5.6	60.6	1.111		7.29	
276	8/25/22 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.02	21.535	0.55	3.22	36.6	1.103		7.04	
276	9/1/22 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.33	0.33	19.989	0.49	3.15	34.7	0.981		7.03	
276	9/8/22 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.53	18.533	0.52	2.16	23.1	1.052		6.97	
276	9/21/22 8:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.43	16.723	0.48	3.45	35.6	0.971		7.04	
276	9/29/22 8:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	14.607	0.52	4.7	46.4	1.051		7.2	
276	10/6/22 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.44	0.9	15.186	0.41	4.23	42.3	0.83		6.89	

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
276	10/17/22 8:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.23	13.701	0.47	5.31	51.3	0.95			7.03
070	3/22/22 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	7.318	0.57	9.53	79.4	1.139	10.33		7.29
070	3/30/22 7:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	4.246	0.67	10.71	82.6	1.348	3.48		7.27
070	3/31/22 8:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.15	0.15	0.15	7.703	0.68	9.9	83.3	1.354	3.08		7.54
070	4/14/22 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.26	13.059	0.61	6.3	60.1	1.215	2.33		7.1
070	5/19/22 8:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	17.854	0.63	2.78	29.4	1.249	2.06		7.11
070	5/23/22 8:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.09	0.11	21.638	0.62	2.4	27.3	1.24	2.81		6.98
070	5/25/22 8:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	17.306	0.64	3.86	40.4	1.267	2.42		6.95
070	6/7/22 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	19.868	0.62	1.29	14.2	1.248			6.93
070	6/10/22 7:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.85	1.08	19.537	0.48	2.13	23.3	0.972			6.68
070	6/29/22 7:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.65	21.429	0.54	1.46	16.5	1.092			6.82
070	6/30/22 8:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	22.159	0.6	1.77	20.3	1.197			7.09
070	8/2/22 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	22.804	0.57	2.24	26.1	1.151			7.28
070	8/18/22 8:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.01	19.538	0.55	3.31	36.2	1.103			7.19
070	8/25/22 8:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.02	22.234	0.53	2.1	24.2	1.072			7.01
070	9/1/22 8:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.33	0.33	21.244	0.48	2.39	27	0.973			6.95
070	9/8/22 8:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.53	19.339	0.52	3.71	40.4	1.051			6.98
070	9/21/22 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.43	17.21	0.46	4.54	47.3	0.925			7.01
070	9/29/22 8:19 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	15.606	0.52	5.77	58.1	1.042			6.8
070	10/6/22 8:39 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.44	0.9	15.065	0.4	4.78	47.5	0.807			6.86
070	10/17/22 8:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.23	14.345	0.46	5.49	53.9	0.929			7.14
083	2/22/22 9:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.35	0.35	0.35	2.502	0.53	12.66	93.1	1.078	1.62		7.25
083	3/10/22 9:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.26	0.26	3.626	0.52	12.81	97.1	1.054	3.91		7.46
083	3/22/22 7:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	6.694	0.43	11.61	95.1	0.881	6.81		6.5
083	3/24/22 8:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.75	0.75	0.75	6.48	0.55	11.57	94.4	1.107	5.9		7.38
083	3/30/22 7:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01	5.174	0.56	11.8	93.2	1.138	2.74		7.03
083	3/31/22 7:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.15	0.15	0.15	7.433	0.53	11.07	92.5	1.064	2.53		7.15
083	4/5/22 8:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	7.808	0.54	11.89	100.2	1.08	3.1		7.58
083	4/14/22 8:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.26	11.395	0.51	12.34	113.2	1.026	3.38		7.64
083	4/19/22 8:33 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.56	0.56	0.56	10.708	0.48	11.64	105.1	0.97	3.45		7.67
083	5/4/22 8:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.12	0.21	0.37	12.252	0.46	10.95	102.5	0.926	2.5		7.58
083	5/4/22 8:35 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.12	0.21	0.37	12.251	0.46	10.87	101.7	0.927	6.21		7.56
083	5/17/22 9:07 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.1	20.14	0.46	9.85	108.9	0.938	1.71		7.8
083	5/17/22 9:07 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.1	20.124	0.46	9.86	109	0.938	3.53		7.81
083	5/19/22 7:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	18.873	0.47	7.67	82.7	0.955	1.44		6.86
083	5/19/22 7:49 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	18.875	0.47	7.56	81.5	0.955	1.51		7.05
083	5/23/22 9:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.11	21.924	0.46	7.53	86.3	0.94	4.28		7.67
083	5/23/22 9:24 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.11	21.85	0.47	7.19	82.2	0.944	8.07		7.6
083	5/25/22 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	19.833	0.46	8.93	98.1	0.928	1.4		8.02
083	5/25/22 9:36 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	19.611	0.45	8.72	95.4	0.92	3.12		7.83
083	6/2/22 8:57 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.1	0.19	0.19	20.436	0.52	6.77	75.3	1.055			7.24
083	6/2/22 8:57 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.1	0.19	0.19	20.436	0.52	6.63	73.8	1.056			7.23
083	6/7/22 9:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	22.601	0.48	7.34	85.2	0.974	1.25		7.72
083	6/7/22 9:53 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	21.729	0.48	7.42	84.6	0.965	1.6		7.56
083	6/10/22 10:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.85	1.08	22.653	0.47	7.77	90.2	0.955	0.83		7.75
083	6/10/22 10:04 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.85	1.08	22.024	0.47	8.33	95.5	0.952	4.72		7.68
083	6/13/22 8:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.09	0.09	22.204	0.47	7.37	84.9	0.96			7.24
083	6/13/22 8:44 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.09	0.09	22.175	0.47	7.33	84.4	0.96			7.22
083	6/28/22 9:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.65	0.65	23.127	0.46	8.05	94.3	0.931			8.24
083	6/28/22 9:06 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.65	0.65	23.031	0.46	7.97	93.2	0.931			8.22
083	6/29/22 9:33 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.65	24.34	0.47	8.03	96.2	0.962			8.57
083	6/29/22 9:33 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.65	24.293	0.47	7.98	95.5	0.962			8.55
083	6/30/22 9:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.988	0.48	7.05	85.5	0.969	6.66		8.35
083	7/11/22 8:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.063	0.47	5.16	61.5	0.95			7.96
083	7/11/22 8:12 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	23.943	0.47	4.77	56.7	0.951			7.76
083	7/28/22 8:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.04	0.04	0.04	25.892	0.5	6.39	78.8	1.008			7.75
083	8/2/22 8:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	26.533	0.51	6.86	85.6	1.037	2.33		8.08
083	8/2/22 8:31 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	26.383	0.47	6.18	76.9	0.961	7.66		7.91
083	8/10/22 8:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.14	0.14	27.696	0.49	5.8	73.9	0.998			7.85
083	8/10/22 8:45 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.14	0.14	27.69	0.49	6.05	77.1	0.998			7.9
083	8/18/22 8:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	23.141	0.47	7.28	85.4	0.948			8.13
083	8/18/22 8:29 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	23.082	0.47	7.12	83.4	0.957			8.08
083	8/23/22 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.46	0.46	24.294	0.49	8.31	99.5	0.988	2.4		8.58
083	8/23/22 8:41 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.46	0.46	24.274	0.54	7.01	84	1.086	4.9		8.1
083	8/25/22 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.02	25.415	0.49	7.74	94.6	1.003	2.63		8.57
083	8/25/22 9:34 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.02	24.165	0.5	4.83	57.7	1.022			8.01
083	9/1/22 9:37 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.33	0.33	24.605	0.47	5.48	66	0.964	5.3		7.8
083	9/6/22 9:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.53	0.97	0.97	23.148	0.45	8.49	99.5	0.916			8.34
083	9/6/22 9:11 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.53	0.97	0.97	23.142	0.45	8.47	99.3	0.915			8.36
083	9/8/22 9:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.53	22.437	0.46	7.07	81.8	0.926	2.02		8.28

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
083	9/8/22 9:38 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.53	22.199	0.45	6.62	76.2	0.92	5.05	8.19	
083	9/19/22 8:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.42	0.43	0.43	21.407	0.46	7.83	88.8	0.935		8.2	
083	9/19/22 8:55 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.42	0.43	0.43	21.416	0.46	7.8	88.4	0.935		8.19	
083	9/21/22 9:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.43	20.393	0.5	8.67	96.4	1.004	1.63	8.54	
083	9/21/22 9:32 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.01	0.43	20.283	0.5	8	88.8	1.005	7.43	8.33	
083	9/29/22 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	18.03	0.45	8.58	90.9	0.91	1.56	8.08	
083	9/29/22 9:36 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	17.702	0.45	8.16	85.9	0.909	2.64	7.97	
083	10/3/22 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.02	14.521	0.45	7.21	71	0.917		7.7	
083	10/3/22 8:32 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.02	14.548	0.46	6.97	68.6	0.919		7.62	
083	10/6/22 10:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.44	0.9	15.983	0.45	6.97	70.8	0.903	3.37	7.69	
083	10/17/22 8:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.23	15.709	0.42	8.16	82.3	0.858		7.27	
083	10/17/22 8:15 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.23	0.23	0.23	15.726	0.42	8.15	82.3	0.858		7.28	
083	10/20/22 8:46 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.18	14.136	0.42	7.9	77.1	0.844		7.33	
083	11/2/22 8:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.04	0.04	13.899	0.44	7.68	74.6	0.883		7.28	
083	11/2/22 8:29 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.04	0.04	13.912	0.44	7.61	73.9	0.884		7.24	
083	11/14/22 10:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.1	0.17	12.089	0.44	8.44	78.7	0.89		7.46	
083	11/28/22 9:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.64	0.64	8.7	0.44	7.73	66.6	0.889		7.28	
083	11/28/22 9:41 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.64	0.64	8.702	0.44	7.57	65.2	0.889		7.22	
083	12/12/22 9:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.04	0.04	4.655	0.46	10.1	78.6	0.943		7.4	
083	12/28/22 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	2.492	0.42	11.44	84.1	0.87		7.25	
057	3/22/22 7:39 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	7.149	0.56	11.19	92.9	1.116	3.39	7.15	
057	3/30/22 7:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01	4.89	0.54	12.13	95	1.099	2.23	7.26	
057	3/31/22 7:58 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.15	0.15	0.15	6.972	0.55	10.95	90.5	1.107	3.98	7.54	
057	4/14/22 8:27 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.26	11.129	0.51	12.01	109.6	1.023	3.16	7.66	
057	5/19/22 7:58 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	18.794	0.49	7.03	75.7	0.992	1.51	7.23	
057	5/19/22 7:58 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.01	0.01	0.01	18.792	0.49	7	75.4	0.997	1.59	7.21	
057	5/23/22 9:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.11	21.895	0.49	6.21	71	0.997	2.31	7.53	
057	5/23/22 9:18 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.09	0.11	21.903	0.53	5.54	63.4	1.067	4.09	7.44	
057	5/25/22 9:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	18.652	0.49	6.78	72.8	0.993	4.42	7.6	
057	5/25/22 9:31 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	18.445	0.54	6.7	71.7	1.077	5.26	7.49	
057	6/7/22 9:48 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	22.172	0.48	7.23	83.1	0.982	1.35	7.65	
057	6/7/22 9:48 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	20.444	0.61	4.2	46.7	1.225	4.4	7.39	
057	6/10/22 9:58 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.85	1.08	22.392	0.47	7.54	87.1	0.954	0.91	7.67	
057	6/10/22 9:58 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.85	1.08	20.61	0.48	4.14	46.2	0.966	3.46	7.27	
057	6/29/22 9:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.65	23.83	0.48	6.46	76.8	0.966		7.93	0.5
057	6/30/22 9:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.801	0.48	6.56	79.3	0.97	5.18	8	1
057	6/30/22 9:35 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	22.672	0.59	2.59	30.1	1.18	4.44	7.37	
057	8/2/22 8:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	25.516	0.5	5.6	68.6	1.009	17.18	7.68	
057	8/2/22 8:38 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.01	0.01	23.565	0.56	2.6	30.7	1.125	3	7.44	
057	8/18/22 8:39 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	22.661	0.48	6.85	79.6	0.971		7.68	
057	8/18/22 8:39 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.01	0.01	21.448	0.51	5.45	61.8	1.038		7.4	
057	8/25/22 9:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.02	23.746	0.52	5.44	64.6	1.061	2.44	8.04	
057	8/25/22 9:29 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.02	23.646	4.05	1.73	20.9	7.342		7.35	
057	9/1/22 9:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.33	0.33	23.301	0.55	3.94	46.3	1.117	3.42	7.48	
057	9/8/22 9:33 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.53	22.417	0.46	7	80.9	0.926	1.72	8.29	
057	9/8/22 9:33 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.53	19.829	0.51	4.43	48.7	1.035	4.89	7.5	
057	9/21/22 9:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.43	19.918	0.5	7.75	85.3	1.007	4.31	8.24	
057	9/21/22 9:26 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.01	0.43	17.718	0.52	7.02	74	1.038	2.81	7.92	
057	9/29/22 9:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	17.588	0.45	8.46	88.8	0.919	7.71	8.09	0.7
057	9/29/22 9:31 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	17.335	0.47	7.65	79.9	0.941	6.31	7.79	
057	10/6/22 9:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.44	0.9	16.154	0.42	6.16	62.7	0.849	1.74	7.53	
057	10/17/22 8:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.23	15.559	0.43	8.17	82.2	0.865		7.25	
057	10/17/22 8:23 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.23	0.23	0.23	15.412	0.43	7.31	73.3	0.875		7.23	
066	2/22/22 9:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.35	0.35	0.35	2.733	0.56	12.04	89.2	1.131	1.6	7.33	
066	2/22/22 9:14 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.35	0.35	0.35	2.7	0.56	11.91	88.1	1.127	1.62	7.21	
066	3/10/22 9:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.26	0.26	3.786	0.59	12.2	92.9	1.191	2.62	7.42	
066	3/10/22 9:17 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.26	0.26	3.981	0.74	11.35	87	1.471	3.38	7.32	
066	3/24/22 8:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.75	0.75	0.75	7.733	0.63	10.16	85.6	1.258	3.22	7.32	
066	3/24/22 8:17 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.75	0.75	0.75	7.641	0.62	10.18	85.6	1.245	8.68	7.3	
066	4/5/22 8:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	7.971	0.54	11.28	95.5	1.091	2.7	7.54	
066	4/5/22 8:18 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.01	0.01	7.971	0.54	11.2	94.9	1.091	2.67	7.5	
066	4/19/22 8:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.56	0.56	0.56	10.273	0.42	11.04	98.7	0.844	5.62	7.48	
066	4/19/22 8:22 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.56	0.56	0.56	10.319	0.43	11.06	99	0.87	7.28	7.48	
066	5/4/22 8:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.12	0.21	0.37	12.835	0.47	10.35	98.2	0.95	2.29	7.4	
066	5/17/22 8:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.1	19.943	0.47	8.39	92.5	0.95	2.05	7.38	
066	5/17/22 8:52 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.09	0.1	19.73	0.47	8.32	91.3	0.958	3.41	7.36	
066	6/2/22 8:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.1	0.19	0.19	19.351	0.55	4.97	54.1	1.107		7.2	
066	6/2/22 8:43 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.1	0.19	0.19	19.08	0.57	4.41	47.8	1.134		7.15	
066	6/13/22 8:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.09	0.09	22.997	0.48	6.25	73.1	0.983		7.15	
066	6/13/22 8:36 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.09	0.09	0.09	22.97	0.49	6.16	72	0.984		7.14	

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
066	6/28/22 8:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.65	0.65	22.939	0.46	6.25	72.9	0.937			7.74
066	6/28/22 8:50 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.65	0.65	22.363	0.46	5.61	64.8	0.937			7.51
066	7/11/22 8:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	23.491	0.49	4.68	55.2	0.995			7.54
066	7/11/22 8:23 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	23.44	0.49	4.32	51	0.992			7.33
066	7/28/22 8:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.04	0.04	0.04	24.482	0.53	4.36	52.4	1.071			7.52
066	7/28/22 8:21 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.04	0.04	0.04	24.45	0.53	3.85	46.3	1.08			7.44
066	8/10/22 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.14	0.14	27.199	0.49	3.42	43.2	1.001			7.54
066	8/23/22 8:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.46	0.46	23.771	0.7	5.5	65.3	1.396	2.52		7.82
066	8/23/22 8:29 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.02	0.46	0.46	23.597	0.8	4.12	48.8	1.584	5.23		7.54
066	9/6/22 9:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.53	0.97	0.97	22.234	0.4	7.72	88.9	0.806			7.74
066	9/19/22 8:48 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.42	0.43	0.43	21.067	0.51	7.06	79.5	1.024			8.03
066	9/19/22 8:48 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.42	0.43	0.43	21.218	0.51	6.9	78	1.025			7.97
066	10/3/22 8:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.02	13.868	0.48	7.33	71.1	0.969			7.93
066	10/3/22 8:25 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.02	13.926	0.48	6.98	67.8	0.962			7.72
066	10/20/22 8:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.18	13.493	0.42	6.84	65.8	0.852			7.26
066	10/20/22 8:35 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.18	13.427	0.42	6.61	63.5	0.853			7.13
066	11/2/22 8:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.04	0.04	13.822	0.45	7.45	72.2	0.898			7.57
066	11/2/22 8:21 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.04	0.04	13.81	0.44	7.27	70.4	0.897			7.42
066	11/14/22 9:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.1	0.17	11.563	0.45	6.38	58.7	0.907			7.34
066	11/14/22 9:52 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.1	0.17	11.569	0.45	6.36	58.6	0.907			7.32
066	11/28/22 9:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.64	0.64	8.641	0.44	7.19	61.8	0.887			7.45
066	11/28/22 9:30 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.64	0.64	8.629	0.44	7.05	60.6	0.89			7.29
066	12/12/22 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.04	0.04	4.877	0.48	10.28	80.5	0.965			7.68
066	12/12/22 9:34 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.04	0.04	4.857	0.48	9.6	75.1	0.967			7.5
066	12/28/22 8:54 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	2.391	0.43	11.49	84.2	0.878			7.28
056	3/22/22 9:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	8.235	0.56	11.26	96	1.131	2.73		7.66
056	3/22/22 9:22 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	8.213	0.56	11.22	95.6	1.128			7.48
056	3/30/22 8:09 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01	5.351	0.55	12.06	95.6	1.107	8.08		7.91
056	3/30/22 8:09 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.01	5.393	0.58	11.52	91.4	1.165			7.59
056	3/31/22 8:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.15	0.15	0.15	7.508	0.56	11.66	97.6	1.124	4.32		6.99
056	3/31/22 8:15 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.15	0.15	0.15	7.39	0.56	11.72	97.9	1.12			7.18
056	4/14/22 7:48 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.26	12.532	0.51	11.16	105.2	1.024	3.47		7.2
056	5/19/22 8:13 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	19.589	0.91	5.88	64.4	1.792	5.02		7.56
056	5/19/22 8:13 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.01	0.01	0.01	20.621	3.24	5.01	56.8	5.943	9.96		7.17
056	5/23/22 8:54 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.11	22.142	0.62	5.96	68.6	1.252	2.34		7.7
056	5/23/22 8:54 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.09	0.11	21.743	3.27	5.85	67.9	6.004			7.22
056	5/25/22 9:05 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20.364	0.53	6.95	77.2	1.066	1.7		7.82
056	5/25/22 9:05 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	21.274	3.17	3.64	41.8	5.835	5.61		7.09
056	6/7/22 9:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	21.786	0.55	5.01	57.2	1.104	1.74		7.67
056	6/7/22 9:23 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	21.221	2.39	1.47	16.7	4.466	8.56		7.11
056	6/10/22 9:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.85	1.08	21.997	0.44	4.56	52.2	0.9	2		7.42
056	6/10/22 9:30 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.85	1.08	21.189	0.44	3.79	42.8	0.888	3.13		7.22
056	6/29/22 8:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.65	23.46	0.46	4.5	53.1	0.934			7.53
056	6/29/22 8:53 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.65	23.831	2.45	1.68	20.2	4.594			7.05
056	6/30/22 9:07 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	23.757	0.47	5.7	67.6	0.962	3.1		7.5
056	6/30/22 9:07 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	23.473	2.02	0.59	7.1	3.822	3.62		7.03
056	8/2/22 9:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	25.848	0.9	5.95	73.5	1.784	1.69		7.35
056	8/2/22 9:04 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.01	0.01	24.932	7.4	0.41	5.2	12.897	2.97		7.05
056	8/18/22 10:05 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.01	24.121	10.29	3.21	40.6	17.462	8.21		7.59
056	8/18/22 10:05 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.01	0.01	23.949	16.76	0.23	3	27.306	5.89		7.3
056	8/25/22 9:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.02	24.189	1.89	5.8	69.9	3.591	1.54		7.94
056	8/25/22 9:04 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.02	23.611	16.17	0.81	10.5	26.416	6.5		7.15
056	9/1/22 9:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.33	0.33	26.825	9.83	5.39	71.3	16.784	7.42		7.65
056	9/1/22 9:06 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.33	0.33	23.5	15.64	0.61	7.9	25.62	6		6.84
056	9/8/22 9:09 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.53	21.975	1.68	5.83	67.3	3.215	3.26		7.64
056	9/8/22 9:09 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.53	23.908	9.86	0.27	3.4	16.789	3.29		7.27
056	9/21/22 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.43	19.548	1.52	5.01	55	2.91	2.51		7.63
056	9/21/22 9:00 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.01	0.43	22.908	12.25	0.33	4.2	20.482	4.88		7.02
056	9/29/22 9:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	17.151	1.06	7.76	81	2.062	3.39		8.09
056	9/29/22 9:08 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	18.939	5.6	0.86	9.6	9.901	4.39		7.19
056	10/6/22 9:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.44	0.9	15.188	4.26	6.13	62.7	7.672	3.66		8.26
056	10/6/22 9:29 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.44	0.9	15.029	5.93	2.06	21.2	10.429	4.37		7.8
056	10/17/22 9:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.23	16.527	2.25	6.52	67.7	4.207	5.88		7.58
056	10/17/22 9:42 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.23	0.23	0.23	17.111	3.51	1.91	20.3	6.4	12.73		7.24
177	2/22/22 8:41 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.35	0.35	0.35	3.212	0.52	12.78	95.8	1.064	1.32		7.34
177	2/22/22 8:41 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.35	0.35	0.35	3.638	0.55	12.32	93.5	1.121	8.89		7.17
177	3/10/22 9:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.26	0.26	3.674	0.58	12.51	95	1.176	2.47		7.47
177	3/10/22 9:01 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.26	0.26	4.293	1.43	11.35	88.1	2.776	9.51		7.23
177	3/24/22 7:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.75	0.75	0.75	8.067	0.59	11.8	100.1	1.185	2.96		7.41
177	3/24/22 7:39 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.75	0.75	0.75	8.139	0.6	11.37	96.7	1.209	6.53		7.21

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
177	4/5/22 7:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	8.963	0.55	11.33	98.3	1.107	2.24	7.43	
177	4/5/22 7:55 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.01	0.01	8.788	0.55	11.15	96.3	1.109	3.97	7.37	
177	4/19/22 7:51 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.56	0.56	0.56	10.899	0.41	11.1	100.6	0.838	6.59	7.52	
177	4/19/22 7:51 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.56	0.56	0.56	10.898	0.41	11.08	100.5	0.84	7.47	7.44	
177	5/4/22 7:54 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.12	0.21	0.37	13.408	0.49	10.62	102	0.989	3.64	7.36	
177	5/4/22 7:54 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.12	0.21	0.37	13.41	0.49	10.44	100.3	0.989	4.32	7.19	
177	5/17/22 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.09	0.1	21.119	0.84	6.66	75.2	1.668	3.57	7.25	
177	5/17/22 8:07 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.09	0.1	19.144	9.35	5.59	63.9	15.925		6.78	
177	6/2/22 8:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.1	0.19	0.19	20.686	0.91	3.4	38.2	1.791		7.09	
177	6/2/22 8:14 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.1	0.19	0.19	21.616	2.83	4.87	56.2	5.247		7.1	
177	6/13/22 8:06 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.09	0.09	0.09	22.805	0.61	6.33	73.7	1.233		7.2	
177	6/13/22 8:06 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.09	0.09	0.09	22.909	1.9	2.37	27.9	3.615		7.01	
177	6/28/22 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.65	0.65	22.898	0.6	3.61	42.2	1.2		7.33	
177	6/28/22 8:07 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.65	0.65	24.156	4.24	0.13	1.6	7.671		7.21	
177	7/11/22 7:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	24.616	2.35	12.54	152.7	4.416		8.45	
177	7/11/22 7:42 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	24.279	8.1	6.74	84.3	14.012		7.85	
177	7/28/22 7:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.04	0.04	0.04	27.428	4.92	12.92	168	8.856		8.82	
177	7/28/22 7:55 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.04	0.04	0.04	26.79	8.48	0.67	8.8	14.65		7.27	
177	8/10/22 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.14	0.14	25.652	5.43	8.59	108.5	9.681		8.58	
177	8/10/22 7:52 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.14	0.14	25.472	16.44	0.2	2.7	26.855		7.38	
177	8/23/22 8:10 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.46	0.46	24.604	7.91	4.44	55.8	13.708	5.5	7.48	
177	8/23/22 8:10 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.02	0.46	0.46	24.071	14.29	0.2	2.6	23.609	5.5	7.2	
177	9/6/22 8:16 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.53	0.97	0.97	22.159	1.39	5.82	67.3	2.676		7.14	
177	9/6/22 8:16 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.53	0.97	0.97	23.717	13.09	0.13	1.7	21.775		6.95	
177	9/19/22 8:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.42	0.43	0.43	21.611	5.09	10.66	124.7	9.071		8.49	
177	9/19/22 8:14 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.42	0.43	0.43	22.465	14.98	0.21	2.6	24.619		6.83	
177	10/3/22 7:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.02	15.049	3.42	12.5	126.7	6.235		8.89	
177	10/3/22 7:59 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.02	16.71	7.08	4.77	51.2	12.304		7.89	
177	10/20/22 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.18	13.812	0.5	7.78	75.4	0.999		7.33	
177	10/20/22 8:07 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.18	16.56	3.71	1.09	11.4	6.729		6.86	
177	11/2/22 7:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.04	0.04	12.807	1.52	11.67	111.3	2.898		7.67	
177	11/2/22 7:39 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.04	0.04	14.565	17.79	1.51	16.5	28.765		6.88	
177	11/14/22 9:30 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.1	0.17	11.338	5.83	7.07	67.1	10.286		7.43	
177	11/14/22 9:30 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.1	0.17	14.516	24.13	0.29	3.3	37.953		7	
177	11/28/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.64	0.64	8.346	1.09	8.7	74.6	2.125		7.52	
177	11/28/22 8:57 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.64	0.64	9.074	23.96	3.37	34.1	37.969		7.06	
177	12/12/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.04	0.04	3.859	0.92	10.81	82.6	1.827		7.28	
177	12/12/22 8:57 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.04	0.04	10.682	20.64	0.51	5.2	33.047		6.71	
177	12/28/22 8:40 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	2.363	0.45	11.45	83.9	0.922		7.25	
177	12/28/22 8:40 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	2.485	0.52	11.33	83.3	1.068		7.29	
067	3/22/22 9:04 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	8.93	0.78	11.45	99.4	1.544	3.13	7.84	0.9
067	3/22/22 9:04 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	8.91	1.31	11.06	96.2	2.531	3.51	7.65	
067	3/30/22 8:21 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.01	3.76	0.91	13.13	100.2	1.801	9.14	8.04	1.4
067	3/30/22 8:21 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.01	5.507	6.45	10.9	90.2	11.408		7.64	
067	3/31/22 8:33 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.15	0.15	0.15	5.969	0.75	12.79	103.2	1.492	4.61	7.67	1.3
067	3/31/22 8:33 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.15	0.15	0.15	5.732	6.19	5.81	48.3	10.969		7.34	
067	4/14/22 7:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.23	0.23	0.26	13.345	0.95	11.88	114.3	1.858	3.3	7.58	1
067	4/14/22 7:42 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.23	0.23	0.26	10.64	9.57	11.59	110.7	16.298	18.75	7.55	
067	5/19/22 8:37 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.01	0.01	0.01	19.22	4.18	8.37	92.9	7.536	5.7	7.62	1
067	5/19/22 8:37 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.01	0.01	0.01	17.582	12.9	7.96	90	21.411		7.6	
067	5/23/22 8:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.09	0.11	22.072	3.53	10.06	117.6	6.46	3.66	8.01	0.7
067	5/23/22 8:43 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.09	0.11	20.959	7.18	8.64	101	12.495		7.64	
067	5/25/22 8:54 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	21.113	3.22	9.68	110.9	5.917	3.69	7.92	0.5
067	5/25/22 8:54 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	20.802	4.54	8.34	95.7	8.158		7.67	
067	6/7/22 9:12 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	22.056	2.67	10.31	119.9	4.975	4.43	8.08	0.6
067	6/7/22 9:12 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	19.934	9.91	1.42	16.5	16.815	7.48	7.14	
067	6/10/22 9:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.85	1.08	22.338	1.94	7.36	85.7	3.679	4.76	7.65	0.8
067	6/10/22 9:17 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.85	1.08	22.573	2.96	5.91	69.5	5.477	8.53	7.5	
067	6/29/22 8:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.65	23.835	1.74	9.08	108.6	3.321		8.01	0.6
067	6/29/22 8:39 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.65	23.192	6.06	2.01	24.4	10.691		7.26	
067	6/30/22 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	24.345	1.97	11.06	133.7	3.745	4.2	8.61	0.4
067	6/30/22 8:52 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	22.638	7.57	0.72	8.7	13.136		7.7	7.3
067	8/2/22 9:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	26.423	6.42	14.73	189.7	11.324	2.95	9.07	1.1
067	8/2/22 9:14 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.01	0.01	25.749	8.16	9.31	119.5	14.122	4.94	8.78	
067	8/18/22 9:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	22.242	10.66	9.23	112.8	18.005	6.75	8.78	1
067	8/18/22 9:44 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.01	0.01	21.92	15.3	6.65	83	25.079	9.19	8.52	
067	8/25/22 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.02	25.369	8.83	11.65	149.2	15.176	3.24	8.84	1
067	8/25/22 8:52 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.02	24.144	13.56	1.35	17.4	22.494	9.96	7.91	
067	9/1/22 8:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.33	0.33	24.791	9.87	8.21	104.7	16.823	3.27	8.33	1
067	9/1/22 8:55 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.33	0.33	24.933	10.31	6.93	88.8	17.507	4.85	8.24	

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
067	9/8/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.53	21.128	2.3	7.73	88.2	4.319	1.98	7.89	1.5
067	9/8/22 8:57 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.53	21.85	15.1	2.5	31.1	24.778	6.54	7.4	
067	9/21/22 8:47 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.43	19.754	6.86	11.73	133.7	11.962	3.34	8.95	0.7
067	9/21/22 8:47 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.01	0.43	20.548	12.82	0.27	3.3	21.313	13.78	7.33	
067	9/29/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	17.655	3.78	16.23	174.1	6.853	2.82	9.31	0.5
067	9/29/22 8:57 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	18.213	21.31	0.66	8	33.887	3.86	7.27	
067	10/6/22 9:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.44	0.9	14.805	3.87	12.98	131.2	7.013	1.93	9.05	0.5
067	10/6/22 9:14 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.44	0.9	14.42	5.72	11.6	117.7	10.096	2.37	9.01	
067	10/17/22 9:23 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.23	0.23	0.23	15.613	1.72	11.45	116.3	3.264	3.86	8.53	1
067	10/17/22 9:23 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.23	0.23	0.23	16.89	7.91	0.59	6.4	13.63		7.2	
059	3/22/22 8:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	8.685	1.02	11.12	96.1	1.988	3.29	8.05	0.9
059	3/22/22 8:44 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	8.814	1.03	11.02	95.6	2.015	6.89	7.88	
059	3/30/22 8:37 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.01	4.227	-1	12.89	99.6	1.97	8.83	7.84	1.2
059	3/30/22 8:37 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.01	5.005	7.61	12.12	99.7	13.32		7.76	
059	3/31/22 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.15	0.15	0.15	5.877	0.97	12.66	102	1.91	4.68	7.69	1.4
059	3/31/22 8:52 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.15	0.15	0.15	6.003	6.57	11.13	93.3	11.589		7.52	
059	4/14/22 8:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.23	0.23	0.26	13.398	1.12	11.78	113.6	2.178	9.72	7.89	0.3
059	4/14/22 8:00 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.23	0.23	0.26	13.401	1.15	11.77	113.5	2.224	12.84	7.87	
059	5/19/22 8:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.01	0.01	0.01	19.406	3.17	9.4	104.1	5.818	5.23	8.04	0.8
059	5/19/22 8:57 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.01	0.01	0.01	19.15	6.96	9.14	103	12.118	5.59	7.87	
059	5/23/22 8:29 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.09	0.11	22.078	4.15	10.83	127	7.502	3.58	8.3	0.6
059	5/23/22 8:29 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.09	0.11	17.007	15.46	9.81	112	25.279		7.56	
059	5/25/22 8:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	20.914	4.16	10.45	119.9	7.513	3.9	8.2	0.5
059	5/25/22 8:39 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	19.252	11.02	8.74	101.1	18.54		7.47	
059	6/7/22 8:54 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	21.74	2.94	11.05	127.9	5.437	4.03	8.36	0.6
059	6/7/22 8:54 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	21.222	5.6	8.09	94.1	9.918	5.41	7.71	
059	6/10/22 9:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.85	1.08	22.714	2.58	8.37	98.4	4.817	3.93	7.9	1
059	6/10/22 9:00 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.85	1.08	19.763	13.67	6.93	82.2	22.608	10.41	7.65	
059	6/29/22 8:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.65	23.326	2.06	10.25	121.7	3.887		8.42	0.5
059	6/29/22 8:25 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.65	23.407	2.52	9.6	114.3	4.709		8.19	
059	6/30/22 8:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	24.014	2.14	11.24	135.2	4.045	4.02	8.8	0.5
059	6/30/22 8:38 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	23.935	2.58	9.19	110.6	4.818	6.61	8.4	
059	8/2/22 9:31 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	26.165	7.14	13.82	177.9	12.484	2.89	9.14	0.7
059	8/2/22 9:31 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.01	0.01	25.809	7.52	13.97	179	13.102	3.27	9.19	
059	8/18/22 9:24 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	22.083	11.05	10.17	124.2	18.614	7.13	8.98	1
059	8/18/22 9:24 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.01	0.01	22.151	11.1	9.9	121	18.69	7.25	8.95	
059	8/25/22 8:37 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.02	24.564	10.45	10.74	136.9	17.717	3.07	8.9	1
059	8/25/22 8:37 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.02	23.45	14.68	3.21	41	24.178	10.16	8.21	
059	9/1/22 8:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.33	0.33	24.915	10.38	7.79	99.8	17.617	3.61	8.38	1
059	9/1/22 8:39 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.33	0.33	25.039	10.42	7.74	99.4	17.683	3.64	8.38	
059	9/8/22 8:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.53	20.596	2.6	8.04	90.8	4.845	2.06	8.06	1.5
059	9/8/22 8:39 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.53	21.21	13.82	4.56	55.7	22.847	5.31	7.56	
059	9/21/22 8:32 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.43	19.282	6.66	11.69	131.9	11.632	3.12	9.01	0.6
059	9/21/22 8:32 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.01	0.43	19.853	8.81	8.86	102.4	15.078	4.37	8.82	
059	9/29/22 8:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	17.423	4.2	15.21	162.8	7.562	2.79	9.36	0.7
059	9/29/22 8:42 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	17.412	4.27	15.18	162.5	7.683	6.18	9.34	
059	10/6/22 8:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.44	0.9	14.863	3.44	11.96	120.7	6.277	1.81	8.96	1
059	10/6/22 8:59 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.44	0.9	14.489	5.87	11.87	120.7	10.342	2.64	8.98	
059	10/17/22 9:02 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.23	0.23	0.23	15.728	2.12	11.45	116.9	3.983	3.99	8.76	1.1
059	10/17/22 9:02 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.23	0.23	0.23	16.586	2.9	10.35	108.1	5.34	4.8	8.63	
176	3/22/22 8:53 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	9.827	0.96	10.78	95.7	1.885	4.09	7.68	0.7
176	3/22/22 8:53 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0	0	7.898	13.41	6.86	63.1	22.364	0.98	7.25	
176	3/30/22 8:31 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.01	3.785	1.01	12.22	93.3	1.999	9.4	7.55	1.2
176	3/30/22 8:31 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0	0.01	5.541	5.22	11.47	94.2	9.367		7.49	
176	3/31/22 8:45 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.15	0.15	0.15	6.456	0.87	12.11	99	1.713	4.9	7.45	1.6
176	3/31/22 8:45 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0.15	0.15	0.15	6.977	7.83	11.17	96.4	13.616	0.13	7.4	
176	4/14/22 7:53 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.23	0.23	0.26	13.72	1.03	10.61	102.9	2.009	8.95	7.45	0.8
176	4/14/22 7:53 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0.23	0.23	0.26	9.484	20.09	5.13	51	32.314	6.62	6.91	
176	5/19/22 8:50 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.01	0.01	0.01	19.522	3.21	8.9	98.8	5.887	6.38	7.69	0.7
176	5/19/22 8:50 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0.01	0.01	0.01	18.043	11.79	7.83	88.8	19.715	7.96	7.52	
176	5/23/22 8:34 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.09	0.11	22.734	4.22	10.44	124	7.638	5.45	7.97	0.5
176	5/23/22 8:34 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0.09	0.11	17.727	13.93	8.12	92.3	22.981		7.71	
176	5/25/22 8:44 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	21.266	4.79	10.75	124.6	8.576	5.2	8.16	0.3
176	5/25/22 8:44 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0	0	20.553	6.78	7.93	91.5	11.842		7.63	
176	6/7/22 9:00 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	22.674	3.26	9.03	106.6	5.989	4.1	7.87	0.6
176	6/7/22 9:00 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0	0	22.536	3.67	6.47	76.3	6.704	8.57	7.47	
176	6/10/22 9:05 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.85	1.08	22.546	1.47	9.29	108.3	2.828	4.39	7.76	0.8
176	6/10/22 9:05 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0.85	1.08	23.247	3.49	4.28	51.1	6.395	10.03	7.36	
176	6/29/22 8:29 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.65	23.129	1.24	8.66	101.9	2.409		7.81	0.5
176	6/29/22 8:29 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0	0.65	23.431	2.3	6.14	73.1	4.32		7.59	

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
176	6/30/22 8:43 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	24.221	1.51	10.82	130.2	2.911	4.6	8.46	0.5
176	6/30/22 8:43 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0	0	23.697	3.47	6.67	80.4	6.353	12.49	7.73	
176	8/2/22 9:26 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.01	0.01	26.702	6.32	14.03	181.5	11.159	4.02	9.08	0.6
176	8/2/22 9:26 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0.01	0.01	24.274	13.6	3.9	50.3	22.563	10.18	8.05	
176	8/18/22 9:32 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.01	0.01	22.136	10.99	12.37	151.2	18.523	6.99	9.11	1
176	8/18/22 9:32 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0.01	0.01	22.1	19.31	1.76	22.5	31.012	12.79	7.88	
176	8/25/22 8:42 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.02	25.306	9.92	17.42	224.3	16.903	2.87	9.22	1
176	8/25/22 8:42 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0	0.02	24.092	14.58	2.26	29.3	24.041	6.87	8.13	
176	9/1/22 8:45 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.33	0.33	27.256	10.48	12.37	165.4	17.809	3.3	8.74	1
176	9/1/22 8:45 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0.33	0.33	26.609	11.03	6.4	84.8	18.655	3.93	8.27	
176	9/8/22 8:44 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.53	20.82	4.52	9.87	113.3	8.125	2.46	8.37	1
176	9/8/22 8:44 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0	0.53	23.446	9.74	1.82	22.6	16.584	4.54	7.54	
176	9/21/22 8:38 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.01	0.43	19.491	6.59	13.91	157.5	11.523	3.4	9.04	0.4
176	9/21/22 8:38 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0.01	0.43	20.625	18.26	1.24	15.4	29.46	16.06	7.3	
176	9/29/22 8:47 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	17.98	4.15	15.75	170.5	7.481	3.72	9.3	0.5
176	9/29/22 8:47 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0	0	18.014	4.32	15.34	166.3	7.765	4.16	9.24	
176	10/6/22 9:04 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.44	0.9	14.584	5.54	12.64	128.6	9.801	2.28	9.03	0.5
176	10/6/22 9:04 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0	0.44	0.9	14.678	6.25	12.03	123.1	10.958	4.56	8.86	
176	10/17/22 9:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.23	0.23	0.23	16.413	2.08	10.51	108.8	3.902	5.18	8.38	0.9
176	10/17/22 9:10 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER		0.23	0.23	0.23	16.808	7.01	3.15	33.9	12.188	13.68	7.49	
167	2/22/22 8:26 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.35	0.35	0.35	3.566	0.8	12.66	96	1.599	2.51	6.99	
167	3/10/22 8:48 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.26	0.26	5.189	0.94	12.65	100.2	1.863	4.34	6.97	
167	3/24/22 7:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.75	0.75	0.75	8.716	1	11.29	97.6	1.964	4.05	7.06	
167	4/5/22 7:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.01	10.706	0.78	11.57	104.7	1.532	4.39	7.45	
167	4/19/22 7:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.56	0.56	0.56	11.734	0.94	10.73	99.6	1.835	11.84	7.3	
167	5/4/22 7:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.12	0.21	0.37	13.695	0.99	11.49	111.4	1.941	3.92	7.5	
167	5/17/22 7:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.09	0.1	22.227	2.7	9.24	107.8	5.019	2.62	7.48	
167	6/2/22 7:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.1	0.19	0.19	20.62	4.06	6.22	70.9	7.338	7.05		
167	6/13/22 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.09	0.09	0.09	22.861	2.12	10.36	122	4.003	7.32		
167	6/28/22 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.65	0.65	23.563	2.6	8.28	99	4.851	7.68		
167	7/11/22 7:29 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	23.233	4.6	9.51	114.3	8.27	8.15		
167	7/28/22 7:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.04	0.04	0.04	25.261	5.73	11.19	140.6	10.165	7.83		
167	8/23/22 7:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.46	0.46	23.761	13.79	2.69	34.4	22.841	5.98	8.03	
167	9/6/22 8:03 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.53	0.97	0.97	20.416	4.38	7.35	83.6	7.882	7.29		
167	9/19/22 7:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.42	0.43	0.43	20.561	6.78	8.91	103.1	11.839	8.48		
167	10/3/22 7:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.02	13.316	4.91	12.86	126.7	8.759	9.1		
167	10/20/22 7:48 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.18	13.571	2.18	11.04	107.5	4.084	7.88		
167	11/2/22 7:27 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.04	0.04	13.959	2.33	16.78	165	4.341	8.51		
167	11/14/22 9:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.1	0.17	11.977	5.68	10.14	97.5	10.034	8.37		
167	11/28/22 8:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.64	0.64	6.633	4.24	16.35	137.3	7.689	8.73		
167	12/12/22 8:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.04	0.04	2.444	1.7	12.6	93.3	3.278	7.16		
052	3/22/22 8:33 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	5.279	30.01	11.04	106.3	47.066	0.3	8.06	
052	3/30/22 8:44 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.01	6.15	29.27	10.55	103.3	45.872	7.25	7.91	
052	3/30/22 8:44 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.3	0	0	0.01	6.187	29.75	10.42	102.4	46.544	10.47	7.97	
052	3/31/22 9:01 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.15	0.15	0.15	5.887	22.72	10.81	100.6	36.461	4.6	7.78	3.5
052	3/31/22 9:01 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.7	0.15	0.15	0.15	6.51	28.84	10.35	101.9	45.213	7.78		
052	4/14/22 8:07 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.26	9.141	26.09	10.19	104.7	41.019	13.96	7.75	
052	4/14/22 8:07 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.1	0.23	0.23	0.26	7.841	29.07	10.03	102	45.372	6.75	7.79	
052	5/19/22 9:06 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.01	13.686	24.25	8.54	95.6	38.151	3.81	7.84	
052	5/19/22 9:06 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.01	0.01	0.01	0.01	12.721	27.39	8.65	96.8	42.631	6.56	7.85	
052	5/23/22 8:22 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.09	0.11	13.194	28.57	9.03	102.9	44.267	1.16	7.87	2.1
052	5/23/22 8:22 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0	0.09	0.11	0.11	12.507	28.8	8.57	96.3	44.63	7.26	7.83	
052	5/25/22 8:29 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	15.81	22.71	8.71	100.9	35.903	1.44	7.81	1.5
052	5/25/22 8:29 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.9	0	0	0	14.048	28.78	8.32	96.5	44.531	7.78		
052	6/7/22 8:47 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	17.317	27.79	7.94	97.7	43.087	0.8	7.76	
052	6/7/22 8:47 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0	0	0	0	16.258	30.22	7.17	87.8	46.466	1.71	7.74	
052	6/10/22 8:51 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.85	1.08	16.927	26.93	7.29	88.6	41.88	0.91	7.75	2.4
052	6/10/22 8:51 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.1	0	0.85	1.08	14.944	30.69	6.41	76.7	47.157	1.08	7.69	
052	6/29/22 8:18 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.65	19.569	27.4	7.38	94.6	42.534	7.69		1.5
052	6/29/22 8:18 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0	0	0	0.65	19.303	29.3	7.85	101.3	45.178	7.73		
052	6/30/22 8:31 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	19.043	28.53	7.53	96.2	44.113	1.38	7.73	
052	6/30/22 8:31 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0	0	0	0	18.326	30.51	7.69	98.1	46.852	1.57	7.75	
052	8/2/22 9:38 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.01	19.876	26.64	6.97	89.5	41.477	1.07	7.72	
052	8/2/22 9:38 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0	0	0.01	0.01	18.544	29.69	7.8	99.4	45.72	2.75	7.69	
052	8/18/22 9:15 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.01	19.289	26	5.11	64.7	40.572	5.92	7.78	1.5
052	8/18/22 9:15 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0	0	0.01	0.01	18.588	29.05	5.36	68.2	44.829	5.64	7.63	
052	8/25/22 8:28 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.02	21.7	28.54	4.91	66	44.155	0.99	7.65	
052	8/25/22 8:28 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.8	0	0	0.02	20.983	29.32	4.34	57.8	45.228	4.9	7.62	
052	9/1/22 8:31 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.33	0.33	21.54	29.05	3.13	42	44.855	2.74	7.43	
052	9/8/22 8:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.53	20.392	27.58	4.64	60.5	42.79	1.12	7.59	2.5

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
052	9/8/22 8:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.3	0	0	0.53	20.238	29.71	3.57	47	45.76	2.3	7.52	
052	9/21/22 8:20 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.43	19.276	29.73	5.48	71	45.777	1.18	7.72	3.5
052	9/21/22 8:20 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.5	0	0.01	0.43	19.164	32.58	3.19	41.9	49.689	6.62	7.55	
052	9/29/22 8:35 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	17.65	19.81	8.28	97.8	31.704	1.85	8.12	1
052	9/29/22 8:35 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0	0	17.54	29.75	5.62	70.3	45.806	2.36	7.65	
052	10/6/22 8:49 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.44	0.9	15.98	29.63	5.83	70.7	45.657	1.73	7.63	3
052	10/6/22 8:49 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.2	0	0.44	0.9	15.789	29.8	5.88	71.1	45.898	1.93	7.64	
052	10/17/22 8:54 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.23	15.469	28.1	5.89	70	43.537	2.59	7.57	
052	10/17/22 8:54 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.7	0.23	0.23	0.23	15.134	30.78	5.75	69.1	47.278	2.37	7.58	
069	3/22/22 8:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	4.928	31.25	11.13	107.2	48.877	0.18	8.07	4
069	3/22/22 8:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.8	0	0	0	4.894	31.27	11.32	109	48.916	4.06	8.07	
069	3/30/22 8:50 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.01	5.816	27.61	10.64	102.1	43.551	7.31	8.03	
069	3/30/22 8:50 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0	0.01	6.012	29.87	10.57	103.4	46.743	9.6	8.04	
069	3/31/22 9:09 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.15	0.15	0.15	5.888	22.76	10.99	102.4	36.517	3.17	7.86	
069	3/31/22 9:09 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0.15	0.15	0.15	6.394	28.77	10.65	104.4	45.133	3.91	7.84	
069	4/14/22 8:15 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.26	10.132	21.08	10.56	107.4	33.722	6.06	7.87	2.5
069	4/14/22 8:15 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.7	0.23	0.23	0.26	7.82	29.32	10.33	105.1	45.731	6.62	7.88	
069	5/19/22 9:15 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.01	12.848	27.22	8.79	98.6	42.39	4.02	7.84	3
069	5/19/22 9:15 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	4.6	0.01	0.01	0.01	12.045	28.94	8.99	100.2	44.85	4.36	7.88	
069	5/23/22 8:15 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.09	0.11	13.892	27.79	8.79	101	43.153	1.9	7.84	1.9
069	5/23/22 8:15 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0.09	0.11	12.343	29	8.74	98	44.919	6.05	7.85	
069	5/25/22 8:22 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	16.167	22.3	8.86	103.1	35.313	1.45	7.82	1.2
069	5/25/22 8:22 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.1	0	0	0	14.164	28.77	8.88	103.3	44.512	4.25	7.83	
069	6/7/22 8:38 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	17.723	29.52	8.63	108.2	45.485	7.04	7.84	2.6
069	6/7/22 8:38 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.6	0	0	0	15.341	30.62	8.55	103	47.049	0.96	7.86	
069	6/10/22 8:43 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.85	1.08	17.178	28.27	8.25	101.6	43.756	0.34	7.84	3
069	6/10/22 8:43 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.9	0	0.85	1.08	14.98	30.82	8.73	104.6	47.334	8.31	7.88	
069	6/29/22 8:13 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.65	20.254	26.42	7.91	102.1	41.168	7.75	7.84	
069	6/29/22 8:13 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0	0.65	20.425	29.56	9.14	120.6	45.55	7.86	7.86	
069	6/30/22 8:26 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	19.6	28.6	8.81	113.8	44.213	0.92	7.9	
069	6/30/22 8:26 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0	0	18.722	30.38	9.28	119.3	46.669	1.79	7.89	
069	8/2/22 10:00 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.01	19.703	29.99	8.82	115.1	46.142	1.06	7.84	
069	8/2/22 10:00 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0.01	0.01	18.329	30.05	9.23	117.5	46.218	1.01	7.86	
069	8/18/22 9:06 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.01	18.694	29.67	6.3	80.5	45.694	5.74	7.69	2
069	8/18/22 9:06 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	5.4	0	0.01	0.01	17.861	29.86	5.34	67.3	45.963	8.21	7.6	
069	8/25/22 8:20 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.02	21.646	29.09	6.27	84.3	44.915	0.87	7.76	3
069	8/25/22 8:20 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.9	0	0	0.02	20.507	29.58	5.24	69.3	45.582	1.18	7.68	
069	9/1/22 8:24 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.33	0.33	21.319	29.73	4.04	54.2	45.794	3.32	7.51	2
069	9/1/22 8:24 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	4.5	0	0.33	0.33	20.976	30.08	4.74	63.4	46.278	4.28	7.67	
069	9/8/22 8:16 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.53	19.261	24.65	5.9	74	38.67	1.09	7.68	3
069	9/8/22 8:16 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3	0	0	0.53	19.611	30.1	4.33	56.4	46.293	1.84	7.59	
069	9/21/22 8:14 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.43	18.543	30.17	6.38	81.6	46.379	1.25	7.85	2.6
069	9/21/22 8:14 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.8	0	0.01	0.43	18.997	32.78	5.04	66.1	49.961	2.66	7.68	
069	9/29/22 8:16 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	17.268	29.71	6.4	79.6	45.75	1.48	7.68	2.5
069	9/29/22 8:16 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.1	0	0	0	17.126	30.15	5.81	72.3	46.365	7.03	7.67	
069	10/6/22 8:44 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.44	0.9	15.994	29.62	5.99	72.7	45.644	1.09	7.64	3
069	10/6/22 8:44 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.9	0	0.44	0.9	15.591	29.87	6.51	78.5	46.002	2.15	7.69	
069	10/17/22 8:46 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.23	14.773	26.09	7.32	84.8	40.73	2.32	7.7	2.3
069	10/17/22 8:46 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3	0.23	0.23	0.23	15.148	30.64	7.03	84.4	47.076	2.99	7.68	
137	1/20/22 11:21 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.15	0.15	0.15	2.01	26.38	11.26	97.7	42.46	2.45	8	2.5
137	1/20/22 11:21 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	15.1	0.15	0.15	0.15	3	32.07	10.54	97.4	50.461	11.22	8.04	
137	1/25/22 11:14 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.02	0.06	0.07	2.294	18.53	11.86	98.2	30.675	1.9	7.93	3.5
137	1/25/22 11:14 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.3	0.02	0.06	0.07	2.756	31.5	10.74	98.2	49.714	2.37	8.01	
137	2/3/22 11:07 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.17	0.17	0.17	2.34	24.48	11.65	100.5	39.585	1.86	7.94	2.6
137	2/3/22 11:07 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.6	0.17	0.17	0.17	1.436	32	11.04	98	50.781	4.85	7.99	
137	2/15/22 11:19 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.23	1.639	28.87	11.22	98	46.183	1.92	7.9	3
137	2/15/22 11:19 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.7	0	0.01	0.23	2.278	31.91	10.68	96.8	50.426	3.87	7.9	
137	3/2/22 12:16 PM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1				4.003	28.29	10.73	99.1	44.828	1.13	8	2
137	3/2/22 12:16 PM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.8				3.42	31.07	10.42	96.7	48.936	6.56	8.01	
137	3/23/22 10:18 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1				5.267	30.18	11.3	108.9	47.307	0	8.07	4
137	3/23/22 10:18 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.9				5.362	31.44	11.14	108.5	49.086	6.61	8.05	
137	4/4/22 10:14 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.01	7.483	24.09	10.63	103.7	38.282	4.97	8.01	3.4
137	4/4/22 10:14 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.4	0.01	0.01	0.01	5.634	29.91	10.41	101	46.865	4.14	8.01	
137	4/27/22 9:41 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.09	0.32	0.32	10.259	26.79	9.17	97	41.933	4.05	7.84	4
137	4/27/22 9:41 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.9	0.09	0.32	0.32	8.599	29.15	8.71	90.1	45.417	6.31	7.82	
137	5/5/22 9:57 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.12	0.21	10.943	26.48	9.58	102.6	41.441	5.21	7.87	4
137	5/5/22 9:57 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.3	0	0.12	0.21	8.783	29.67	8.81	91.8	46.12	5.09	7.83	
137	5/24/22 9:48 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.09	14.612	26.13	9.05	104.5	40.799	6.18	7.89	2.6
137	5/24/22 9:48 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.3	0	0	0.09	11.932	29.57	8.85	98.8	45.737	6.91	7.88	
137	6/6/22 9:46 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	16.795		8.12	102.1		3.97	7.84	3.8

2022 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface or Bottom	Region	Subregion	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)
137	6/6/22 9:46 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.6	0	0	0	13.393		6.99	83.1		5.89	7.77	
137	6/27/22 9:45 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.65	0.65	0.65	20.347	29.81	8.7	114.8	45.886	4.2	7.87	2.5
137	6/27/22 9:45 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.6	0.65	0.65	0.65	15.253	31.38	7.37	89.1	48.102	5.06	7.7	
137	7/22/22 10:16 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	21.794	29.11	8.73	117.8	44.939	1.83	7.86	3
137	7/22/22 10:16 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.2	0	0	0	14.996	30.41	7.41	88.6	46.771	7.86	7.76	
137	7/27/22 9:52 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	18.706	30.1	8.44	108.2	46.291	3.34	7.91	3.3
137	7/27/22 9:52 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.8	0	0	0	14.234	32.03	7.64	90.8	49.024	4.89	7.8	
137	8/24/22 9:58 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.02	0.46	21.295	28.87	6.71	89.6	44.605	1.17	7.74	2.6
137	8/24/22 9:58 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.7	0	0.02	0.46	18.974	30	3.98	51.2	46.154	2.43	7.47	
137	8/30/22 11:07 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	23.061	29.39	7.79	107.7	45.357	1.55	7.81	2.5
137	8/30/22 11:07 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	14.3	0	0	0	20.007	29.88	3.11	40.8	45.998		7.37	
137	9/15/22 11:02 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.15	19.525	29.85	5.43	70.6	45.938	3.11	7.62	3
137	9/15/22 11:02 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.9	0	0	0.15	19.144	30.11	4.12	53.3	46.302	5.73	7.57	
137	9/27/22 9:57 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.29	0.29	17.931	29.38	7.26	91.4	45.286	1.56	7.76	2.5
137	9/27/22 9:57 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.9	0	0.29	0.29	16.708	32.94	6.49	81.4	50.207	5.63	7.73	
137	10/13/22 10:13 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	1.03	1.03	1.03	14.985	24.66	8.63	99.5	38.697	1.78	7.98	2.5
137	10/13/22 10:13 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.4	1.03	1.03	1.03	14.559	29.76	7.32	86.4	45.883	5.48	7.79	
137	10/27/22 10:01 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.47	0.52	14.685	29.2	7.16	84.4	45.091	2.7	7.78	3
137	10/27/22 10:01 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.3	0	0.47	0.52	13.616	31.68	6.16	72.2	48.57	4.25	7.75	
137	11/3/22 10:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.04	14.307	30.12	7.09	83.5	46.387	1.4	7.72	3
137	11/3/22 10:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	14.2	0	0	0.04	13.128	31.53	7.27	84.3	48.387	9.82	7.78	
137	11/29/22 11:43 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.64	7.854	28	10.3	104	43.849	1.99	7.95	2.5
137	11/29/22 11:43 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.8	0	0	0.64	8.048	31.74	9.7	100.8	49.106	4.83	7.89	
137	12/8/22 11:48 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.85	0.94	7.88	29.96	10.04	102.7	46.621	1.3	7.93	3
137	12/8/22 11:48 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.4	0	0.85	0.94	8.024	32.04	9.16	95.3	49.523	1.18	7.9	
137	12/21/22 11:50 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	5.313	30.41	9.26	89.5	47.628	4.61	7.85	1.7
137	12/21/22 11:50 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.9	0	0	0	5.431	31.47	9.05	88.3	49.109	5.97	7.85	

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