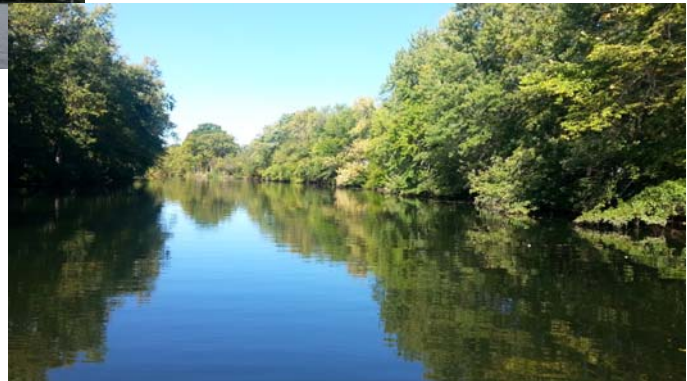


# Summary of CSO Receiving Water Quality Monitoring in Upper Mystic River/Alewife Brook and Charles River, 2019



Massachusetts Water Resources Authority  
Environmental Quality Department  
Report 2020-05



## **Citation**

Goodwin C, Ellis-Hibbett D, Wu D. 2020. **Summary of CSO Receiving Water Quality Monitoring in Upper Mystic River/Alewife Brook and Charles River, 2019**. Boston: Massachusetts Water Resources Authority. Report 2020-05. 83 pp, plus appendices.

**Summary of CSO Receiving Water Quality Monitoring  
in Upper Mystic River/Alewife Brook  
and Charles River, 2019**

Prepared by:

Christopher Goodwin, Denise Ellis-Hibbett and David Wu  
Environmental Quality Department, Operations Division  
Massachusetts Water Resources Authority  
100 First Avenue, Boston, MA 02129

July 2020

Environmental Quality Department Technical Report 2020-05

## **Acknowledgements**

The Indigo Team of the MWRA's Department of Laboratory Services (DLS) supervised by Laura Ducott and consisting of Eric Sanderson, Caitlin Chafee, Elmire Hilaire, Tim Heckmann, Renee Angelo, Julia Wallace, Bryan Burton, and Jason Rodenhiser collected nearly all the samples, collated the physical data, and did all the microbiological analyses for this report.

Special thanks go to both the Indigo Team and additional DLS staff (Julia Japarov, Keith Stocks, Jeanette Spero, Conor Donovan, Megan Levesque, and Kristin Coombs) for post-storm sampling on weekends.

The DLS Red Team supervised by Charles Blodget conducted the nutrient analyses.

Wendy Leo, Doug Hersh, and Fang Yu of Environmental Quality were a great help on the data management end.

Special thanks to former MWRA employee Kelly Coughlin for setting up many of the analyses used in this report.

# TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	OVERVIEW OF THE MONITORING PROGRAM.....	6
1.2	ORGANIZATION AND PURPOSE OF THE REPORT .....	6
<b>2</b>	<b>MATERIALS AND METHODS .....</b>	<b>7</b>
2.1	FIELD AND LABORATORY METHODS .....	7
2.1.1	<i>Selection of sampling locations</i> .....	7
2.1.2	<i>Sampling schedules</i> .....	7
2.1.3	<i>Sample collection</i> .....	7
2.1.4	<i>Field measurements</i> .....	8
2.1.5	<i>Rainfall measurements</i> .....	8
2.1.6	<i>Laboratory analyses</i> .....	8
2.2	DATA ANALYSIS.....	9
2.3	WATER QUALITY STANDARDS USED IN THIS REPORT .....	10
<b>3</b>	<b>CHARLES RIVER.....</b>	<b>12</b>
3.1	SAMPLING AREA.....	12
3.2	POLLUTION SOURCES .....	14
3.3	SUMMARY OF WATER QUALITY, 2014-2019 .....	16
3.4	WATER QUALITY RESULTS, 2019 .....	19
3.4.1	<i>Physical measurements</i> .....	19
3.4.2	<i>Nutrients, TSS and chlorophyll</i> .....	21
3.4.3	<i>Bacterial water quality</i> .....	24
3.5	SUMMARY OF CHARLES RIVER WATER QUALITY .....	32
<b>4</b>	<b>MYSTIC RIVER AND ALEWIFE BROOK .....</b>	<b>33</b>
4.1	SAMPLING AREA.....	33
4.2	POLLUTION SOURCES .....	33
4.3	SUMMARY OF WATER QUALITY, 2015-2019 .....	37
4.4	WATER QUALITY RESULTS, 2019 .....	40
4.4.1	<i>Physical measurements</i> .....	40
4.4.2	<i>Nutrients, TSS and chlorophyll</i> .....	42
4.4.3	<i>Bacterial water quality</i> .....	47
4.5	SUMMARY OF MYSTIC RIVER/ALEWIFE BROOK WATER QUALITY .....	59
<b>5</b>	<b>STORM SAMPLING SUMMARY .....</b>	<b>60</b>
5.1	2018-2019 BACTERIA COUNTS BY TIME PERIOD AND STORM SIZE .....	60
5.1.1	<i>Charles River</i> .....	60
5.1.2	<i>Mystic River &amp; Alewife Brook</i> .....	64
5.2	STORM COMPARISONS .....	67
5.2.1	<i>Charles River</i> .....	67
5.2.2	<i>Mystic River &amp; Alewife Brook</i> .....	74
<b>6</b>	<b>REFERENCES .....</b>	<b>83</b>
	APPENDIX I: 2019 Sampling Program by Storm Characteristics, CSO Activation Records	
	APPENDIX II: Use of Local Rain Gauge Data for Rainfall Categorization	
	APPENDIX III: Raw data, laboratory analyses	
	APPENDIX IV: Raw data, physical profile results	

## LIST OF TABLES

Table 1-1. Comparison of rain event frequency by rainfall volume, 2019 rainfall vs. Typical Year. ....	5
Table 1-2. Number of rain events with peak intensity >0.4 inches/hour, 2019 vs. Typical Year. ....	5
Table 2-1. Field measurements. ....	8
Table 2-2. Laboratory measurements. ....	9
Table 2-3. Water quality standards for Class B and Class SB waters. ....	11
Table 3-1. MWRA monitoring locations, Charles River Basin. ....	13
Table 3-2. Charles River Basin pollution sources. ....	15
Table 3-3. Charles River Basin CSO activations, results of MWRA calibrated hydraulic model simulations and facility records for 2019 system conditions and 2019 rainfall. ....	16
Table 3-4. Charles River station visits by rainfall condition. ....	16
Table 3-5. Summary of water quality, Charles River Basin, 2014-2019. ....	17
Table 3-6. Geometric mean indicator bacteria, Charles River Basin, 2014 – 2018 and 2019. ....	27
Table 4-1. MWRA monitoring locations, Mystic River and Alewife Brook. ....	35
Table 4-2. Mystic River/Alewife Brook pollution sources. ....	36
Table 4-3. Mystic River/Alewife Brook CSO activations, results of MWRA calibrated hydraulic model simulations, and facility records for 2019 system conditions and 2019 rainfall. ....	37
Table 4-4. Mystic River/Alewife Brook station visits by rainfall condition. ....	37
Table 4-5. Summary of water quality, Mystic River/Alewife Brook, 2015 - 2019. ....	38
Table 4-6. Geometric mean indicator bacteria, Alewife Brook, 2014 – 2018 and 2019. ....	51
Table 4-7. Geometric mean indicator bacteria, Mystic River, 2014 – 2018 and 2019. ....	52
Table 5-1. Rainfall Characteristics for June 21, 2019 Storm. ....	68
Table 5-2. Rainfall Characteristics for June 18, 2019 Storm. ....	68
Table 5-3. Rainfall Characteristics for June 20, 2019 Storm. ....	69
Table 5-4. CSO Discharges in the June 21, 2019 Storm from the MWRA calibrated hydraulic model. ....	69
Table 5-5. Rainfall Characteristics for August 7, 2019 Storm. ....	72
Table 5-6. CSO Discharges in the August 7, 2019 Storm from the MWRA calibrated hydraulic model. ....	72
Table 5-7. Rainfall Characteristics for August 28, 2019 Storm. ....	76
Table 5-8. CSO Discharges in the August 28, 2019 Storm from the MWRA calibrated hydraulic model. ....	76
Table 5-9. Rainfall Characteristics for November 18, 2019 Storm. ....	80
Table 5-10. Rainfall Characteristics for November 20, 2019 Storm. ....	80

## LIST OF FIGURES

Figure 1-1. Estimated CSO volume reductions, 1988 – 2021 system conditions.....	3
Figure 1-2. CSO Typical Year Discharge Volume Estimates for 1988, Current, and Approved Long Term Control Plan.....	4
Figure 2-1. Percentile distributions indicated on percentile box plots.....	9
Figure 3-1. Map of MWRA Charles River sampling locations.....	12
Figure 3-2. Summer temperature, dissolved oxygen and Secchi depth, Charles River Basin, 2019.....	20
Figure 3-3. Monthly average nutrients, TSS and Chlorophyll 2014 – 2018 and 2019, Station 012, Watertown Dam.....	22
Figure 3-4. Monthly average nutrients, TSS and Chlorophyll 2014 – 2018 and 2019, Station 166, Science Museum.....	23
Figure 3-5. Indicator bacteria concentrations, Charles River Basin, 2019.....	26
Figure 3-6. <i>Enterococcus</i> by rainfall condition, Charles Basin, 2019.....	28
Figure 3-7. <i>Enterococcus</i> over time, Upper Charles Basin (upstream of most CSOs) by phase of Long Term CSO Plan and rainfall condition.....	29
Figure 3-8. <i>Enterococcus</i> over time, Lower and Middle Charles Basin by phase of Long Term CSO Plan and rainfall condition.....	29
Figure 3-9. Charles River <i>Enterococcus</i> percent compliance by weather condition, 2019.....	30
Figure 3-10. Charles River <i>E. coli</i> percent compliance by weather condition, 2019.....	31
Figure 4-1. Map of Mystic River sampling locations.....	33
Figure 4-2. Summer temperature, dissolved oxygen, and Secchi depth, Mystic River, 2019.....	41
Figure 4-3. Monthly average nutrients, TSS and Chlorophyll, 2014 – 2018 and 2019, Station 083, Mystic upstream of Alewife Brook.....	43
Figure 4-4. Monthly average nutrients, TSS and Chlorophyll 2014 – 2018 and 2019, Station 066, Boston Ave.....	44
Figure 4-5. Monthly average nutrients, TSS and Chlorophyll 2014 – 2018 and 2019, Station 167, Amelia Earhart Dam (upstream/freshwater).....	45
Figure 4-6. Monthly average nutrients, TSS and Chlorophyll 2014 – 2018 and 2019, Station 137, Mystic River mouth (marine).....	46
Figure 4-7. Indicator bacteria concentrations, Mystic River/Alewife Brook, 2019.....	50
Figure 4-8. <i>Enterococcus</i> by rainfall condition, Mystic River/Alewife Brook, 2019.....	53
Figure 4-9. <i>Enterococcus</i> over time, Alewife Brook by phase of CSO LTCP and rainfall condition.....	54
Figure 4-10. <i>Enterococcus</i> over time, Mystic River by phase of CSO LTCP and rainfall condition.....	54
Figure 4-11. Mystic River <i>Enterococcus</i> percent compliance by weather condition, 2019.....	55
Figure 4-12. Mystic River <i>E. coli</i> percent compliance by weather condition, 2019.....	56
Figure 4-13. Alewife Brook <i>Enterococcus</i> percent compliance by weather condition, 2019.....	57
Figure 4-14. Alewife Brook <i>E. coli</i> percent compliance by weather condition, 2019.....	58
Figure 5-1. 2018-2019 <i>E. coli</i> counts at Charles River stations upstream of all CSOs by storm size and hours after start of rain.....	62
Figure 5-2. 2018-2019 <i>E. coli</i> counts at Charles River stations in reaches downstream of CSOs by storm size and hours after start of rain.....	62
Figure 5-3. 2018-2019 <i>Enterococcus</i> counts at Charles River stations upstream of all CSOs by storm size and hours after start of rain.....	63
Figure 5-4. 2018-2019 <i>Enterococcus</i> counts at Charles River stations in reaches downstream of CSOs by storm size and hours after start of rain.....	63
Figure 5-5. 2018-2019 <i>E. coli</i> counts in Alewife Brook by storm size and hours after start of rain.....	65
Figure 5-6. 2018-2019 <i>E. coli</i> counts in the Mystic River by storm size and hours after start of rain.....	65
Figure 5-7. 2018-2019 <i>Enterococcus</i> counts in Alewife Brook by storm size and hours after start of rain.....	66
Figure 5-8. 2018-2019 <i>Enterococcus</i> counts in the Mystic River by storm size and hours after start of rain.....	66
Figure 5-9. Charles River <i>Enterococcus</i> counts, June 17-25, 2019.....	69
Figure 5-10. Charles River <i>E. coli</i> counts, June 17-25, 2019.....	70
Figure 5-11. Charles River bacteria samples by date, June 17-25, 2019.....	70
Figure 5-12. Charles River <i>Enterococcus</i> counts, August 8-13, 2019.....	73
Figure 5-13. Charles River <i>E. coli</i> counts, August 8-13, 2019.....	73
Figure 5-14. Charles River bacteria samples by date, August 8-13, 2019.....	74
Figure 5-15. Alewife Brook and Mystic River <i>Enterococcus</i> counts, August 27-September 1, 2019.....	77
Figure 5-16. Alewife Brook and Mystic River <i>E. coli</i> counts, August 27-September 1, 2019.....	77

Figure 5-17. Alewife Brook bacteria samples by date, August 27-September 1, 2019. ....78  
Figure 5-18. Mystic River bacteria samples by date, August 27-September 1, 2019. ....78  
Figure 5-19. Alewife Brook and Mystic River *Enterococcus* counts, November 18-22, 2019. ....81  
Figure 5-20. Alewife Brook and Mystic River *E. coli* counts, November 18-22, 2019.....81  
Figure 5-21. Alewife Brook bacteria samples by date, November 18-22, 2019.....82  
Figure 5-22. Mystic River bacteria samples by date, November 18-22, 2019.....82



# 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 for CSO discharges to Lower Charles River/Charles Basin and the variances for CSO discharges to the Alewife Brook/Upper Mystic River Basin. The Massachusetts Department of Environmental Protection (MADEP) issued those initial variances in October 1998 and March 1999, respectively. In August 2016, MADEP extended the variances through August 31, 2019. On August 30, 2019, MADEP issued new variances for the Lower Charles River/Charles Basin and the Alewife Brook/Upper Mystic River Basin with a five-year term, running until August 31, 2024.<sup>1</sup> EPA Region 1 approved these variances on May 31, 2020. These new variances are largely similar to the previous variances with regards to water quality monitoring and reporting conditions. This monitoring summary is submitted pursuant to both the old and new variance conditions and provides an assessment of water quality in 2019 in the Charles River, Upper Mystic River, and Alewife Brook, which benefitted from some of the 35 CSO projects in MWRA's Long-Term CSO Control Plan (LTCP), and are affected by any remaining CSO discharges.

Receiving water quality results in the report reflect the changes in the monitoring program made by MWRA in 2016 and 2017; in short, a switch to more storm-based sampling with the addition of weekend sampling to close temporal data gaps. Sections 2.1.1 and 2.1.2 describe this in more detail. An important consideration when looking at the data – especially data that are not aggregated by rainfall condition (e.g., Tables 3-6 and 4-6) – is that considerably more post-storm, wet weather data were gathered starting in 2018 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. More wet weather data mean more samples with higher counts of indicator bacteria, which can skew some results and trends. Where MWRA believes that the more extensive wet weather sampling has biased the data, it is noted. Finally, where the data are broken down by rainfall category, most rain data now 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.

As part of the Boston Harbor Case (U.S. v. M.D.C, et al., No. 85-0489-RGS), MWRA developed and implemented its LTCP, which addresses CSO discharges from CSO outfalls hydraulically related to the MWRA sewer system and member community sewer systems. The LTCP consists of 35 CSO control projects, the last of which were completed and brought into operation in December 2015. Pursuant to the federal court order in the Boston Harbor Case, MWRA was originally required to perform a three-year CSO post-construction monitoring and performance assessment from January 2018 to December 2020 and submit the results to the United States Environmental Protection Agency (EPA) and the MADEP by December 2020. MWRA commenced its three-year CSO post-construction monitoring and performance assessment in November 2017. In July 2019, MWRA requested, and was granted, an additional year to complete the CSO

---

<sup>1</sup> 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->

post-construction monitoring and performance assessment, so that it had ample time to complete the required receiving water models added to the performance assessment by a 2019 agreement with EPA and MADEP. The goal of the MWRA's CSO post-construction monitoring and performance assessment, which will now conclude in December 2021, is to demonstrate whether MWRA has achieved the levels of control specified in its LTCP.

In 2006, MADEP agreed, as part of the Boston Harbor Case, to issue a series of three-year variance extensions through 2020 with no additional CSO obligations and related construction activities beyond the then-approved LTCP, to allow MWRA to complete implementation of its LTCP and three-year CSO post-construction monitoring and performance assessment. The new five-year variances issued on August 30, 2019 give MWRA a longer term to complete additional CSO control planning for the Lower Charles/Charles Basin and the Alewife Brook/Upper Mystic River Basin required by the new variances.

Variance conditions require MWRA and the municipalities with CSOs discharging to variance waters (Cambridge and Somerville<sup>2</sup>) to continue to implement the Nine Minimum Controls of EPA's National CSO Control Policy, and require all of the CSO permittees 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 continue its receiving water quality monitoring program and submit an annual report to MADEP and EPA assessing the impacts of CSO discharges. This report is submitted pursuant to the latter requirement. The new variances issued on August 30, 2019 include the requirement of rapid notification of the public within four hours of a CSO discharge, and evaluating additional CSO control measures.

The variances, as well as the terms for extending the final CSO post-construction monitoring and performance assessment report to December 2021, also require MWRA to develop receiving water quality models for the Lower Charles River and the Alewife Brook/Upper Mystic River. MWRA, in conjunction with MWRA's consultant for the CSO post-construction monitoring and performance assessment, AECOM, is in the process of collecting data and developing the two models.

Since the beginning of MWRA's CSO control planning efforts in the late 1980s, MWRA and the CSO communities have eliminated or virtually eliminated (i.e., achieved 25-year storm level of control, specifically for the South Boston beaches) CSO discharges at 40 of the 84 outfalls addressed in the LTCP. The completion of the CAM004 Sewer Separation project by Cambridge and MWRA in December 2015 closed the last of the 34 outfalls recommended for closure in the LTCP.<sup>3</sup> MWRA and the CSO communities have also greatly reduced CSO discharges at the 44 outfalls that will 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 outfalls remain active. Along the Alewife Brook, seven CSO outfalls were closed and six CSO outfalls remain active. Along the Upper Mystic River (Mystic

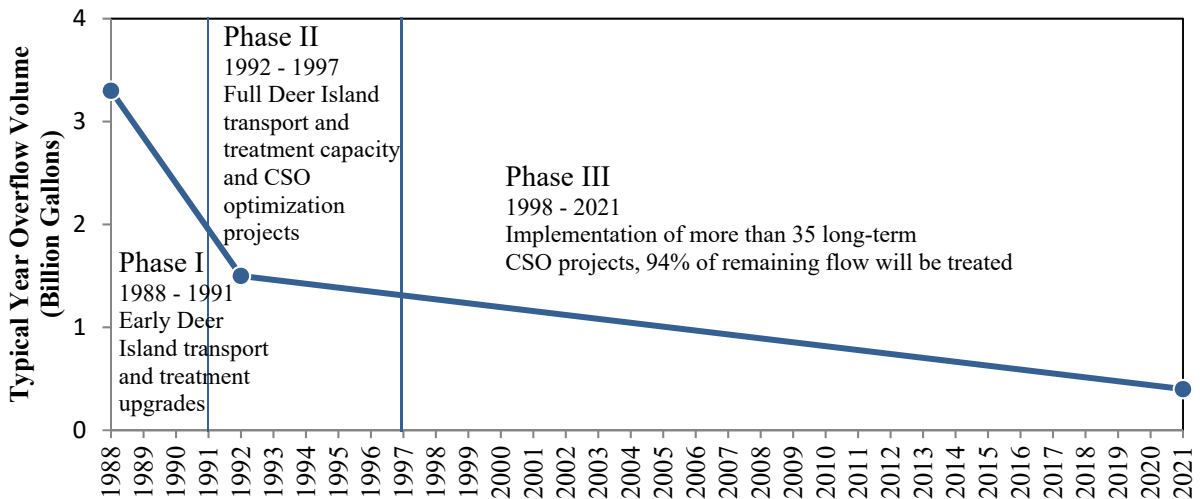
---

<sup>2</sup> Boston and Chelsea also have community CSOs, but they do not discharge into waters covered by CSO variances.

<sup>3</sup> In addition to the 34 outfalls recommended for closure in the LTCP, Boston Water and Sewer Commission (BWSC) has closed outfalls BOS006 and BOS007 in East Boston and outfall BOS072 in the Fort Point Channel; the City of Cambridge has, since 2007, temporarily closed outfalls CAM009 and CAM011 along the Charles River pending the results of a long-term hydraulic assessment; and the City of Chelsea closed outfall CHE002 in the Upper Inner Harbor.

Basin), two CSO outfalls were closed and one treated CSO outfall remains active (Somerville and MWRA jointly permitted SOM007A/MWR205A, which can discharge Somerville Marginal CSO Facility flows to the Basin during high tide). 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.

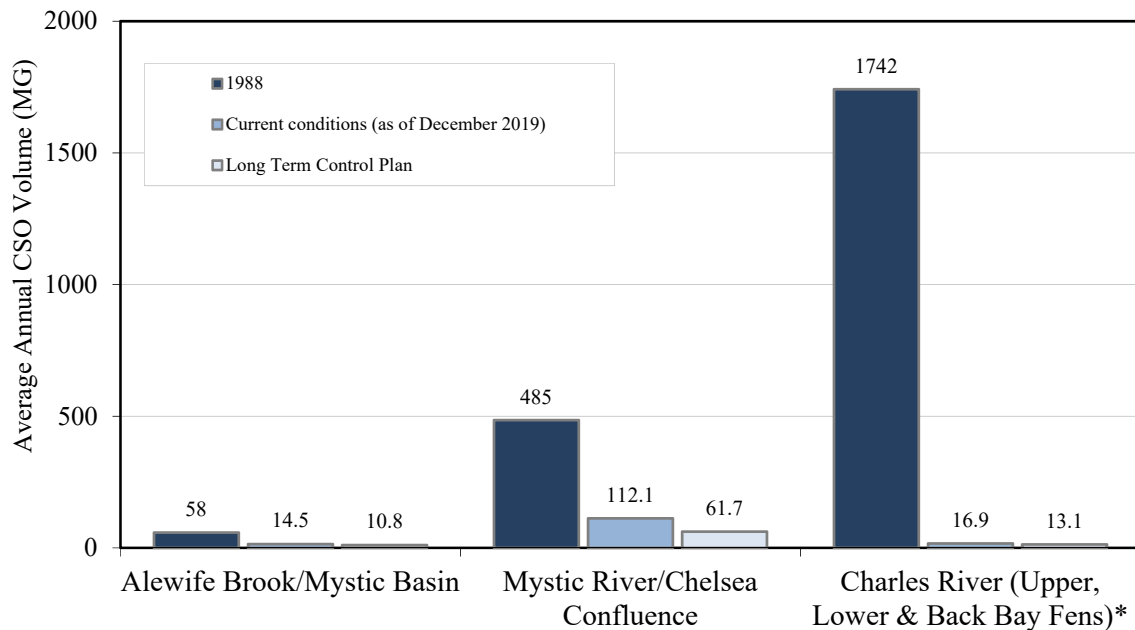
Since the early 1990s, major MWRA system improvements, such as the upgrade of the Deer Island Treatment Plant and related transport systems, and the completed CSO projects, have reduced the frequency and volume of CSO discharges and have increased the percentage of discharges receiving treatment. The LTCP is predicted to reduce region-wide CSO discharge volume in a Typical Year<sup>4</sup> from 3.3 billion gallons in 1988 to 0.4 billion gallons, an 88% reduction, with 94% 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. For purposes of this report, receiving water quality data for the past 5 years (2015-2019) is considered representative of current conditions.



**Figure 1-1. Estimated CSO volume reductions, 1988 – 2021 system conditions.**

Source: Updated from MWRA (2016)

<sup>4</sup> 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.



**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 MWRA (2020b)

Rainfall volumes for calendar year 2019 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 2019 within selected ranges of rainfall volume. 2019 was a wetter year compared to the Typical Year for number of rainfall events (approximately 122 versus 93), while total rainfall volume was close to a Typical Year (approximately 47 versus 46.9 inches), and several inches higher than the official average annual rainfall for the Boston area (43 inches). Numbers of storms were higher than the Typical Year at all gauges for the <0.25 inch and 0.25-0.5 inch categories – at some gauges, there were twice as many storms in the latter category as the Typical Year, reflecting considerable spatial variation. For the 0.5-1.0 inch category, only the Ward Street gauge recorded more storms than the Typical Year. In the 1.0-2.0 inches category, all gauges except Somerville Marginal and BWSC Allston recorded more storms than the Typical Year. Large storms – those greater than or equal to two inches of rainfall – occurred fewer times in 2019 than the Typical Year. However, many of the storms in 2019 also 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. (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, 2019 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
2019 Chelsea Creek Headworks (MWRA)	49.18	116	63	26	9	17	1
2019 Ward St. Headworks (MWRA)	50.14	113	56	25	18	11	3
2019 Somerville Marginal CSO Facility (MWRA)	46.54	111	56	27	13	14	1
2019 BWSC Charlestown	46.09	115	61	28	11	13	2
2019 BWSC Allston	44.44	110	62	23	13	8	4
2019 Fresh Pond (USGS)	45.43	108	60	19	15	10	4

Source: MWRA (2020b)

**Table 1-2. Number of rain events with peak intensity >0.4 inches/hour, 2019 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
2019 Chelsea Creek Headworks (MWRA)	13	1.44	0.72
2019 Ward St. Headworks (MWRA)	11	1.31	0.66
2019 Somerville Marginal CSO Facility (MWRA)	12	1.24	0.76
2019 BWSC Charlestown	11	1.27	0.75
2019 BWSC Allston	9	1.49	0.8
2019 Fresh Pond (USGS)	11	1.4	0.73

Source: MWRA (2020b) and MWRA rainfall data

### *1.1 Overview of the monitoring program*

MWRA's CSO receiving water quality monitoring program has been ongoing since 1989, with most sampling locations continuously 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.

### *1.2 Organization and purpose of the report*

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), dissolved oxygen, water clarity (Secchi depth, total suspended solids), nutrients (phosphate, ammonium, nitrate/nitrite) and chlorophyll.

The purpose of the report is to summarize 2019 water quality in the Charles River and Alewife Brook/Upper Mystic River. The report compares sampling results to water quality standards, and 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 2019 data.

## 2 Materials and Methods

### 2.1 *Field and laboratory methods*

#### 2.1.1 Selection of sampling locations

Some sampling locations were chosen for their proximity to CSO discharges and others were chosen to provide representative water quality measurements for a given area. Typically, all samples are 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. These stations are also used for weekend sampling (see section 2.1.2 below). Complete lists of stations for the Charles River and the Alewife Brook/Mystic River, including maps and descriptions, appear in Figure 3-1 and Table 3-1 (Charles) and Figure 4-1 and Table 4-1 (Alewife/Mystic).

#### 2.1.2 Sampling schedules

At least 20 station visits were made to each location last year, within two separate monitoring projects described below. Eutrophication monitoring is conducted biweekly year-round, at a subset of river locations, and includes nutrient, chlorophyll, TSS, bacteria, and physical measurements. CSO receiving water monitoring includes bacteria sampling and physical parameter measurements that are collected roughly between April and October. Prior to 2016, this monitoring was conducted in weekly rotations for each region, with efforts made to collect approximately equal numbers of samples in dry, damp, and wet weather conditions. Beginning in the 2016 field season, regions were sampled exclusively in two-week rotations, allowing the program to capture data representing the dry weather baseline, wet weather events, and the “recovery” period in the subsequent days after a rain event. Capturing the “recovery” period after storms was given a high priority. The two-week rotations were flexible, so they could be shortened or extended to capture storm events or move to a different region to capture a storm event. In 2017, weekend sampling was added to address the data gap that might occur if a storm, or its recovery period, occurred over a weekend. Weekend sampling occurred only at the shoreline sampling locations, and only near-surface bacteria samples are collected. Due to the rarity of discharges from the Cottage Farm facility, sampling in the Charles River following discharges from the facility was given high priority. Sampling was conducted in the Charles following four of the six Cottage Farm discharge events in 2019. Targeted sampling took place in the Mystic/Alewife region following the other two major storms that caused those Cottage Farm activations.

#### 2.1.3 Sample collection

At all locations, water samples and water quality measurements were collected near-surface (approximately 0.1 meter 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. Bottom water quality measurements (physical measurements such as dissolved oxygen, temperature, and salinity) were made at most locations regardless of depth, but some upstream locations are too shallow for separate bottom readings. Separate sampling containers were used for bacteria, nutrient, and total suspended solids (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

Most analyses or narrative text include 15-minute rainfall data from rain gauges throughout the region which may be more local to CSO outfalls and/or monitoring locations: Ward Street and Somerville Marginal (MWRA); Allston and Charlestown (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.

#### 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 2020a) 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.



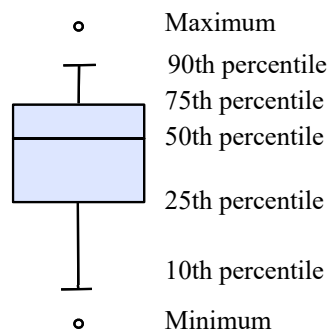
**Table 2-2. Laboratory measurements.**

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 <sup>plus</sup> 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 <sup>plus</sup> autoanalyzer, Whatman GF/F filters
Nitrate+nitrite	Bendschneider and Robinson (1952), modified as in Clesceri et al, (1998, Method 4500- NO3 F), Skalar SAN <sup>plus</sup> 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 2-1. 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 10<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup>, and 90<sup>th</sup> percentiles. Open circles at the top and bottom represent maximum and minimum measurements.



**Figure 2-1. 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 50<sup>th</sup> 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), Environmental Protection Agency (EPA), Massachusetts Department of Public Health (MADPH), and the Massachusetts Division of Marine Fisheries (MADMF). 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 a USEPA recommendation for *Enterococcus* in marine waters (USEPA 1986). The MADPH issued regulations for beach management based on the USEPA criteria. MADMF uses fecal coliform to monitor shellfish growing waters. MADPH uses Secchi depth to assess water transparency at public bathing beaches and lakes. There are no public bathing beaches in the Charles or Upper Mystic/Alewife Brook, but the MADPH standard can still serve as a useful benchmark.

**Table 2-3. Water quality standards for Class B and Class SB waters.<sup>1</sup>**

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), MADPH, MADEP	<i>Enterococcus</i>	Single sample limit: 61 counts/100 mL (freshwater), 104 counts/100 mL (marine); Geometric mean: 33 counts/100 mL (freshwater), 35 counts/100 mL (marine)
Freshwater primary contact recreation (designated swimming area), MADPH, MADEP	<i>E. coli</i>	Single sample limit: 235 counts/100 mL (freshwater only); geometric mean: 126 counts/100 mL (freshwater only)
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
Restricted shellfishing, MADMF	Fecal coliform	Geometric mean: ≤ 88 counts/100 mL, <10% of samples > 260 per 100 mL
Primary contact recreation, MADPH, aesthetics/transparency	Secchi disk depth	≥ 1.2 meters (4 feet) at public bathing beaches and lakes

<sup>1</sup> All receiving water areas discussed in this report are Class B according to MADEP standards current as of December 2013 (except for Mystic River mouth downstream of the Amelia Earhart Dam, which is SB<sub>CSO</sub>. SB<sub>CSO</sub> has the same water quality standards as SB except for an allowance for CSO discharges).

**From MADEP 2013:**

**Inland Water Class 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, they shall be suitable as a source of water supply with appropriate treatment (“Treated Water Supply”). They 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:** 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 in the tables to 314 CMR 4.00 for shellfishing, 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 includes the river segment from the Watertown Dam in Watertown downstream to the New Charles River Dam in Boston, near the river mouth. This area, the “Charles Basin” for 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 10.3 km (8.6 mi) long. The New 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). In 2019, a shoreline sampling location (station 206) was added downstream of MWR201, in addition to the boat-accessible station 006. The addition of 206 allows for sampling on weekends or when conditions are unsafe for boating. 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. Sampling locations and CSOs appear in Figure 3-1. Table 3-1 describes the reaches, and the sampling locations and CSOs within each reach.

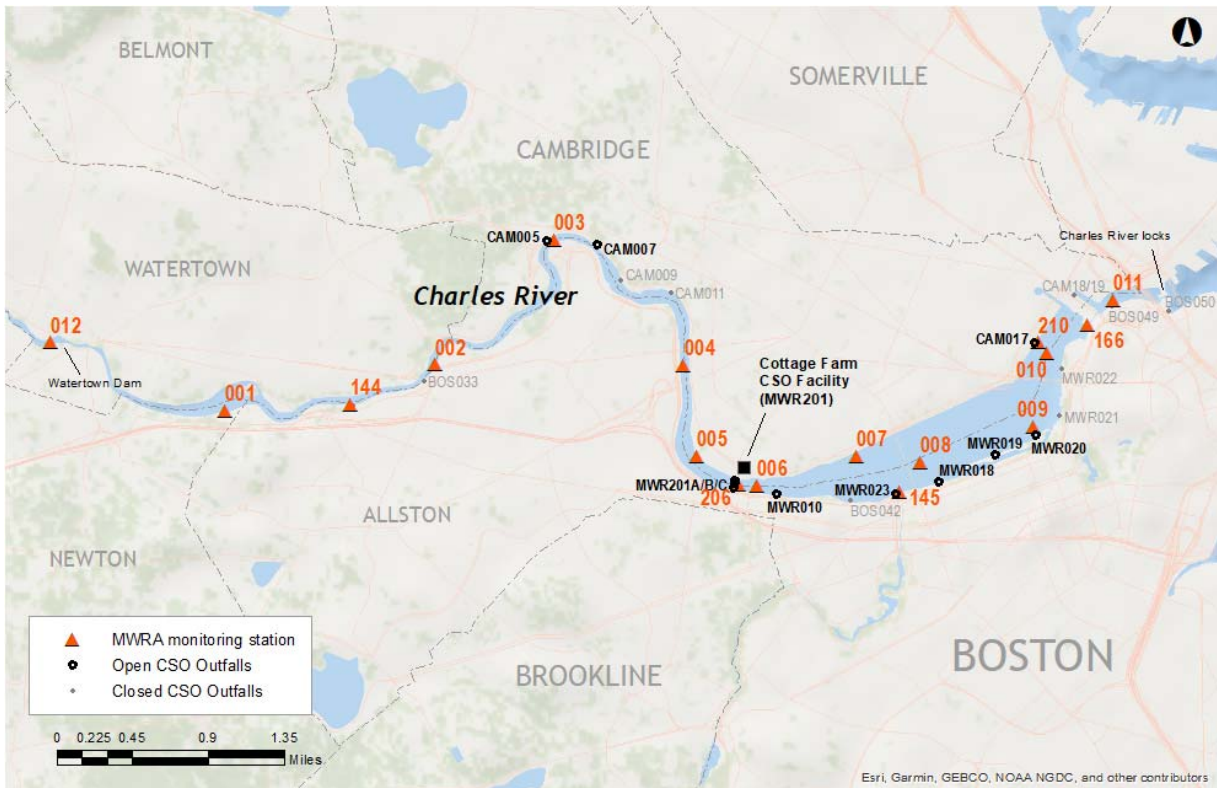


Figure 3-1. Map of MWRA Charles River sampling locations.

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

Reach	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 10 m 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 of Front Park, Cambridge Pkwy (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 New 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.

### 3.2 *Pollution sources*

Known CSO sources to the Charles River Basin are shown in Table 3-2; these include nine CSO outfalls, eight untreated and one treated. MWRA's Cottage Farm CSO treatment facility, located immediately upstream of the BU Bridge, treats CSO flow (screening, chlorination, and dechlorination) before discharge, and is the only source of treated CSO discharge to the river. (MWRA's Prison Point CSO facility, located near the Charles River mouth, has its discharge point on the Boston Harbor side of the New Charles River Dam.) 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 in the 2014-2017 period there were only one to three activations annually. As shown in Table 1-1, 2019 was a wetter than typical year, particularly in the frequency of storms with 1.0 – 2.0 inches of rainfall. There were six activations at Cottage Farm in 2019 (12 hours of discharge total), and samples were taken at available river locations following four of the six activations. (Targeted sampling took place in the Mystic/Alewife region following the other two major storms that caused those Cottage Farm activations.) 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.

Table 3-3 shows the MWRA model simulation results for CSOs affecting the Charles River Basin for 2019. Actual CSO volumes and activation frequency are available for the Cottage Farm CSO facility.

The receiving water 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. MWRA began intensively sampling storm events in 2017. Due to the rarity of discharges from Cottage Farm, the Charles was repeatedly targeted for storm sampling in an attempt to capture water quality impacts from Cottage Farm. Additionally, since Cottage Farm discharges only in the largest storms, the wet weather sampling in the Charles is mostly of larger storms. This accounts for the large portion of the samples being collected in wet weather conditions, and potentially for the greater impacts seen in the "wet" or "heavy rain" rainfall conditions (section 3.4), as well as 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. This is reflected in the large number of station visits in 2019 (740) relative to the previous five years (2874 station visits from 2014-2018, approximately 575/year).

**Table 3-2. Charles River Basin pollution sources.**

Source	Upper Basin	Mid-Basin	Lower Basin
CSOs (untreated)	2 active, 4 closed CAM005, CAM007  CAM009 closed 11/07 <sup>1</sup> CAM011 closed 11/07 <sup>1</sup> BOS032 closed 11/97 BOS033 closed 10/96	6 active, 3 closed MWR010, MWR018, MWR019, MWR020, MWR023, 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	Yes Cottage Farm (MWR201) activated 6 times in 2019	No
Storm drains	Yes	Yes	Yes
Upstream inputs (elevated bacteria counts upstream)	Yes	Yes	Yes
Dry weather inputs (elevated bacteria counts in dry weather)	Yes	Yes	Yes
Tributary brook or stream flow	Yes	Yes	Yes

<sup>1</sup> Pending continuing hydraulic evaluations by City of Cambridge.

**Table 3-3. Charles River Basin CSO activations, results of MWRA calibrated hydraulic model simulations and facility records for 2019 system conditions and 2019 rainfall.<sup>1</sup>**

CSO Outfall	Activation Frequency	Total Discharge Duration (hr)	Total Discharge Volume (million gallons)
<i>Upper Charles</i>			
CAM005	10	10.00	1.71
CAM007	3	3.36	4.43
<b>TOTAL</b>		13.36	6.14
<i>Lower Charles</i>			
CAM017	1	1.25	0.95
MWR010	0	0	0.00
MWR018	2	3.62	6.50
MWR019	2	2.78	3.20
MWR020	2	2.39	2.57
MWR201 (Cottage Farm Facility) <sup>2</sup>	6	12.14	41.50
MWR023 (Stony Brook) <sup>3</sup>			>0.49
<b>TOTAL</b>			>55.21

<sup>1</sup>For the untreated CSO outfalls, activation frequency, duration and volume for 2019 rainfall are from recently calibrated hydraulic model (MWRA 2020b).

<sup>2</sup>Treated discharge. Activation frequency and volume are from MWRA facility records (measurements).

<sup>3</sup>Estimated discharge volume; past modeling of the sewer system tributary to MWR023 has shown very infrequent and small discharges of CSO through MWR023, which also conveys a large amount of stormwater.

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

Sampling period	Dry <sup>1</sup>	Damp <sup>1</sup>	Wet <sup>1</sup>	Total
2014-2018	25% 722 station visits	31% 902 station visits	44% 1250 station visits	100% 2874 station visits
2019 <sup>2</sup>	14% 104 station visits	31% 231 station visits	55% 405 station visits	100% 740 station visits

<sup>1</sup> Dry: no rainfall for previous 3 days; Wet: at least 0.5 inches in previous 2 days; damp is everything in between.

<sup>2</sup> 2019 samples tended to be collected in wetter conditions than the previous five years, with increased focus on sampling following large storms.

### 3.3 Summary of water quality, 2014-2019

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, 2014-2019.**

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) <sup>1</sup>	Summer	≤ 28.3	21.8 ± 4.5	99.2	7.7 – 28.9	795	22.1 ± 4.3	98.9	8.4 – 29.2	723	22.4 ± 4.3	96	9.0 – 30.0	176
	Winter		4.7 ± 2.3	100.0	0.0 – 10.1	101	5.3 ± 1.3	100.0	3.1 - 8.3	62	3.9 ± 2.3	100.0	0.3 – 9.0	37
Bottom water dissolved oxygen (mg/L) <sup>1</sup>	Summer	≥ 5.0	6.9 ± 1.6	91	0.9 – 12.0	547	4.2 ± 3	44.3	0.1 – 10.7	671	5.9 ± 2.7	60.4	0.8 - 11.4	154
	Winter	≥ 5.0	12.3 ± 0.8	100.0	11 - 14.3	50	9.6 ± 3.8	78.6	0.9 – 12.4	56	12.2 ± 1	100.0	9.4 - 13.7	32
pH <sup>2</sup> (S.U.)		6.5-8.3	7.4 ± 0.4	97.9	6.7 – 9.0	2054	7.4 ± 0.5	93.2	6.1 – 9.1	2078	7.2 ± 0.6	90.7	5.9 – 8.8	569
Water clarity	Total Suspended Solids (mg/L)	NS	3.9 ± 8.0	-	0.2 - 60.1	121	ND	-	ND		4.4 ± 5.6	-	0.6 – 44.9	120
	Secchi depth (m) <sup>3</sup>	NS	1.0 ± 0.3	-	0.3 – 2.2	707	1.1 ± 0.3	-	0.4 – 2.1	954	1.2 ± 0.3	-	0.6 – 2.6	298
	Turbidity (NTU)	NS	6.6 ± 4.7	-	0.1 – 63.6	1802	6.3 ± 3.9	-	0.1 - 49	1946	5.7 ± 3.6	-	0.2 – 40.9	442

For footnotes, see following page.

**Table 3-5. Summary of water quality, Charles River Basin, 2014-2019, 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) <sup>4</sup>	<i>E. coli</i>	126 / 235 <sup>5</sup>	210 (195 - 226)	56.7	0 - 24200	1478	79 (72 - 87)	69.6	0 - 19900	1860	61 (52 - 72)	75.8	0 - 11200	509
	<i>Enterococcus</i>	33/ 61 <sup>5,6</sup>	34 (30 - 38)	60.2	0 - 24200	1477	13 (12 - 15)	72.9	0 - 19900	1865	12 (10 - 14)	77.4	0 - 2760	509
Nutrients (µmol/L)	Phosphate	NS	0.6 ± 0.4	-	0.1 - 2.4	123	ND	-	ND		0.5 ± 0.4	-	0 - 2.0	122
	Ammonium	NS	3.7 ± 3.0	-	0.2 - 22.2	121	ND	-	ND		5.5 ± 5.2	-	0 - 32.1	120
	Nitrate+nitrite	NS	39.9 ± 17.5	-	9.7 - 93.6	123	ND	-	ND		36.8 ± 22.6	-	0 - 91.6	122
Algae (µg/L)	Chlorophyll	NS	4.3 ± 4.3	-	0.2 - 22.4	123	ND	-	ND		15 ± 15.7	-	0.6 - 96.6	122

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

<sup>1</sup> Summer (June-October), Winter (January-March).

<sup>2</sup> Median and standard error of the median are shown for pH, rather than arithmetic mean and standard deviation.

<sup>3</sup> MADPH standard of ≥1.2 meters applies only to public bathing beaches; there are none in the Charles River Basin.

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

<sup>5</sup> 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 single sample standard - compare to the "% meeting guideline" column (i.e., the "% meeting guideline" column is the percentage of samples meeting the single sample standard). The "Range" column gives the range of single sample results.

<sup>6</sup> Either *E. coli* or *Enterococcus* are acceptable indicators for EPA, MADEP, and MADPH to assess suitability for swimming in freshwater.

### 3.4 Water quality results, 2019

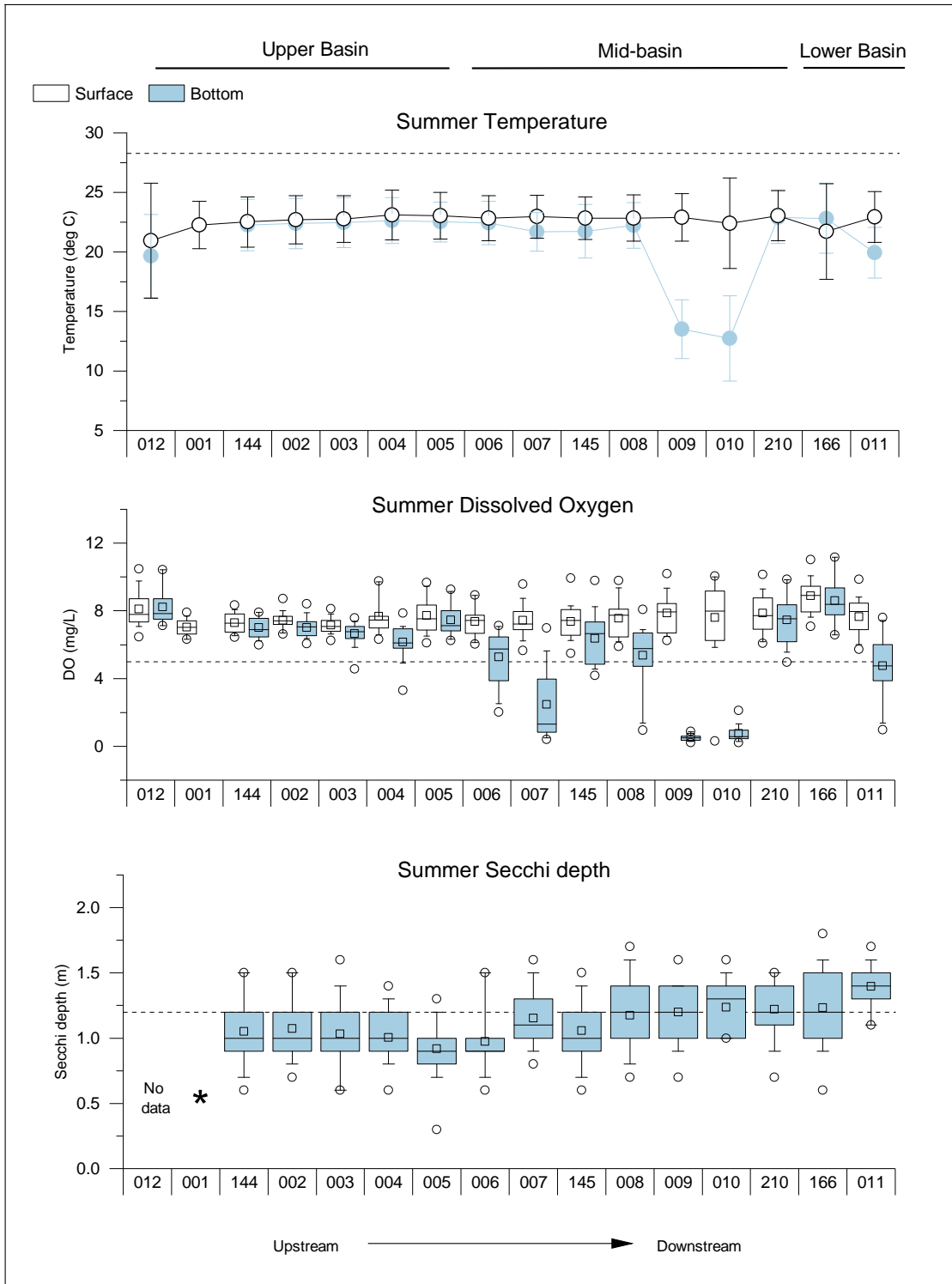
This section provides an analysis of water quality parameters measured in the lower Charles in the 2019 monitoring year.

#### 3.4.1 Physical measurements

**Temperature.** Summer (June to October) water temperatures for 2019 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 surface water DO measurements met the State standard of  $\geq 5.0$  mg/L at all locations. While bottom DO does meet the State standard of  $\geq 5.0$  mg/L at upstream locations in the Charles, mean bottom water DO failed to meet the standard at deeper water locations downstream, including stations 007, 009, and 010. 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. Station 166, downstream of the lower basin, is collected at a relatively shallow near-shore location and does not reflect the low DO levels of deeper water in the lower basin.

**Water clarity.** Water clarity is indicated by Secchi disk depth. Summer Secchi readings are shown for individual sampling locations in the bottom graph 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. Most locations in the Lower Charles had relatively similar average Secchi depths, with values slightly below the MADPH beach guideline of 1.2 meters. In 2019, most downstream stations exhibited average Secchi depths above the MADPH beach guideline.

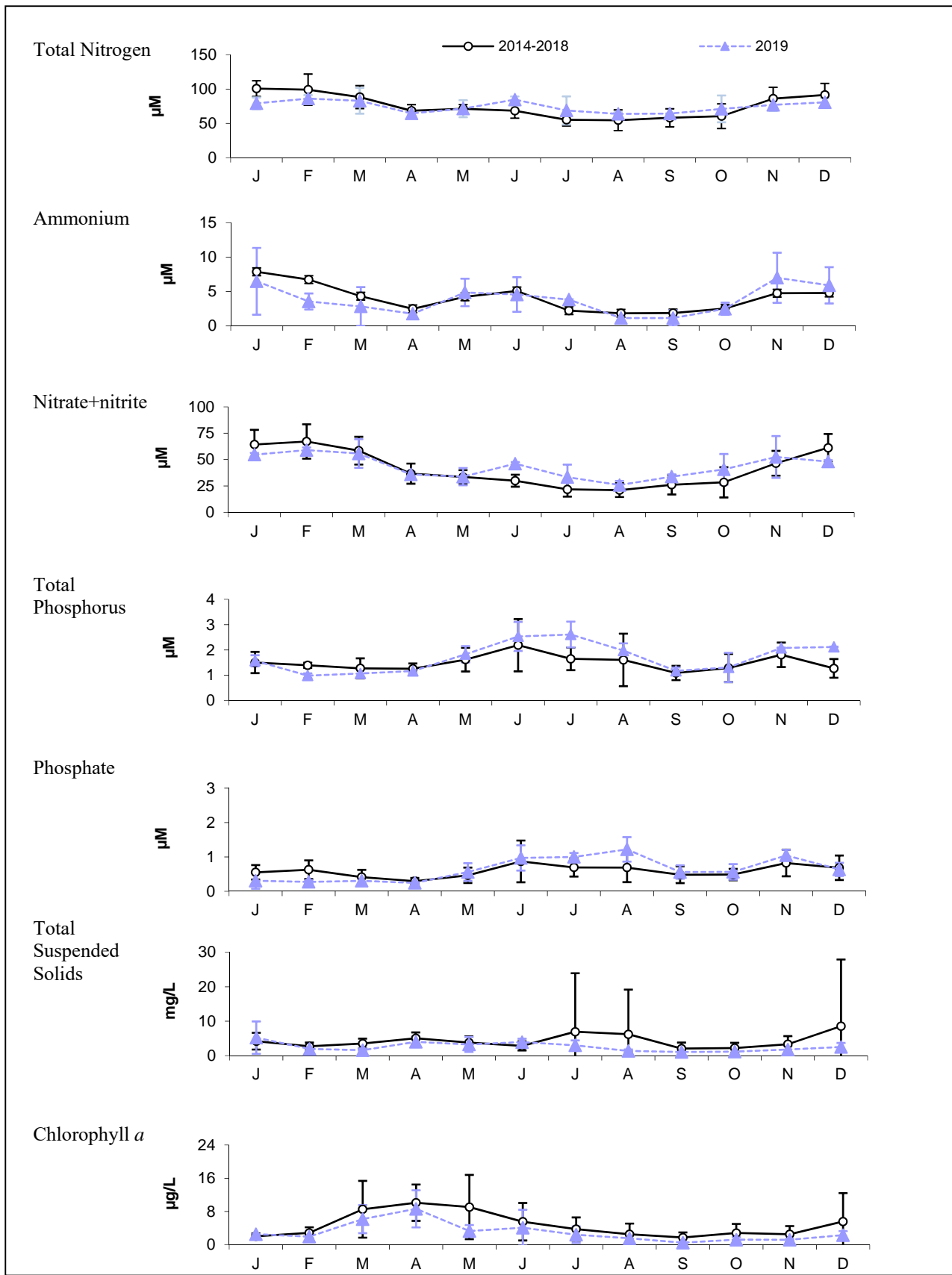


**Figure 3-2. Summer temperature, dissolved oxygen and Secchi depth, Charles River Basin, 2019.** Dashed lines are State standards or guidelines (maximum for temperature, minima for DO and Secchi). No Secchi data are available for station 012 because of shallow depth; the bottom is typically visible at this site. Station 001 was clear to the bottom for all visits in 2019, indicated by \*. 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

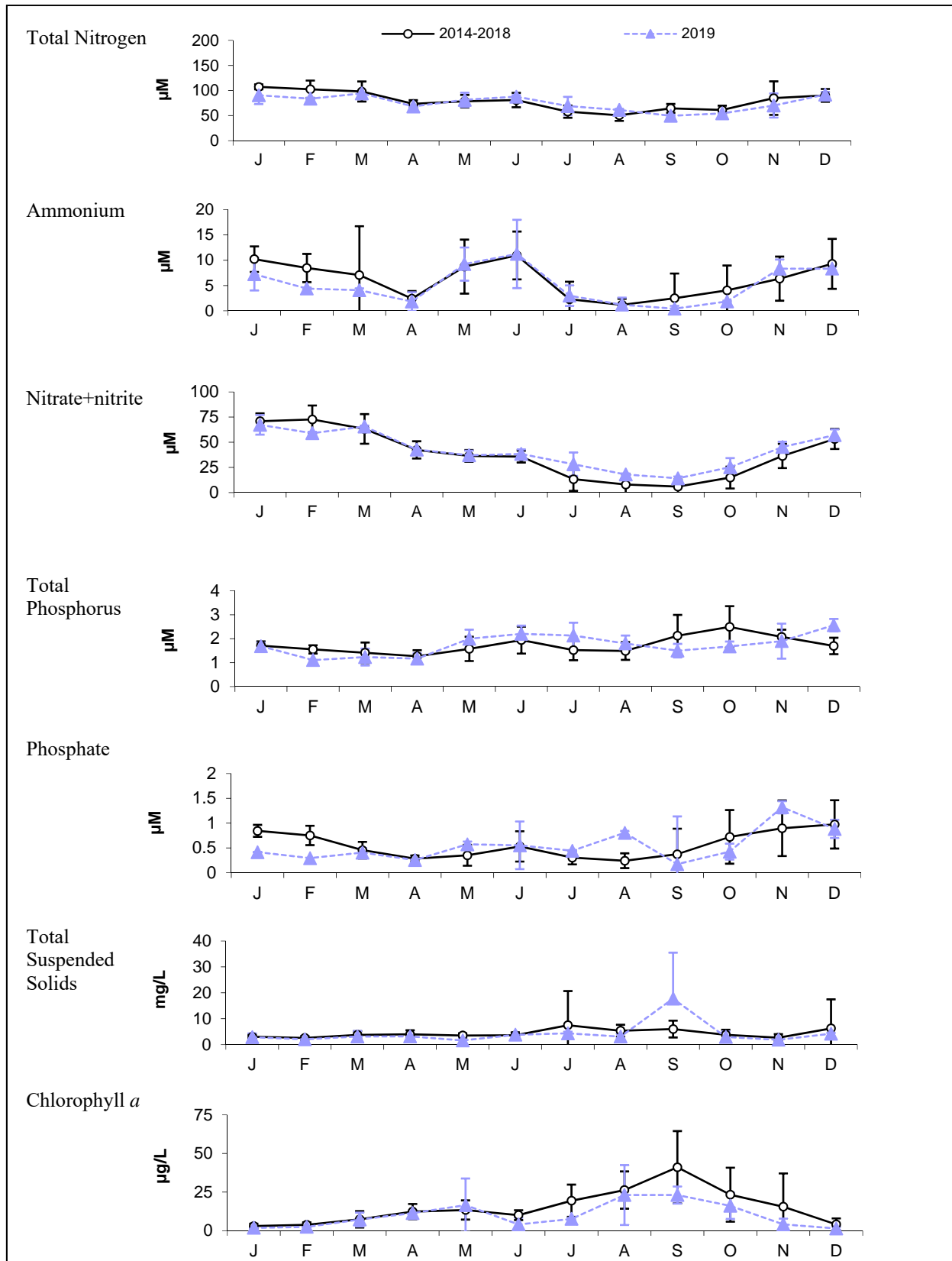
Monthly means for total nitrogen, ammonium, nitrate/nitrite, total phosphorus, phosphate, total suspended solids (TSS), and chlorophyll *a* at the upstream (012) and downstream (166) locations in the lower Charles are shown in Figure 3-3 and Figure 3-4, respectively. 2019 averages are plotted with the average of the previous five years (2014 – 2018) for comparison.

Seasonal patterns for the 2019 monitoring year were similar to the 2014 – 2018 averages at both stations, for most parameters. Total nitrogen and total phosphorus concentrations tracked closely with historical averages. Seasonal signals during 2019 were most evident for nitrate/nitrite, ammonium, and chlorophyll *a*. At both locations, nitrate/nitrite levels were highest in winter when biological uptake is low. Both locations exhibit elevated ammonium concentrations in May/June, a trend reflected in 2019 and the previous 5-year average. While the two locations showed similar concentrations for most parameters, there were differences between the two stations for chlorophyll *a*. Historically, station 012 has the highest chlorophyll concentrations in spring, whereas the Lower Basin has highest concentrations in late summer. This elevated chlorophyll *a* was evident in 2019 at station 166 in August and September before falling below the 5-year average in late fall. A large cyanobacteria bloom occurred in the Lower to Mid Basin in July/August 2019.



**Figure 3-3. Monthly average nutrients, TSS and Chlorophyll 2014 – 2018 and 2019, Station 012, Watertown Dam.**

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



**Figure 3-4. Monthly average nutrients, TSS and Chlorophyll 2014 – 2018 and 2019, Station 166, Science Museum.**

Error bars are  $\pm 1$  SD. Note different scales than Figure 3-3 for most parameters.

### 3.4.3 Bacterial water quality

Figure 3-5 shows the 2019 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. Upstream reaches generally have more elevated bacteria counts than downstream locations, though this trend is less pronounced than in past years. As shown in Table 3-4, wet weather sampling in the Charles River occurred more frequently in 2019 than previous years, due to enhanced focus on sampling consecutive days after storms.

The top and bottom graphs in Figure 3-5 show percentile plots of *Enterococcus* and *E. coli* counts arranged from upstream to downstream locations for 2019 respectively (note log scale). In 2019, both *Enterococcus* and *E. coli* show the historic spatial trend with more elevated bacteria counts upstream relative to downstream locations. *E. coli* counts are typically higher than *Enterococcus*, but show similar distribution spatially and in the various rainfall conditions. Within the same set of samples, geometric mean state standards (dashed lines) were met for *Enterococcus* more often than *E. coli*, particularly at upstream locations. Most stations met standards in dry and damp conditions for *Enterococcus*, but several stations in the Upper Basin did not meet *E. coli* standards in dry and damp conditions. For stations downstream of the Mass. Ave. Bridge (008 through 011), results typically meet standards for both indicators in dry and damp conditions, and occasionally in wet weather.

Geometric means for each location under all rain conditions for 2014 - 2018 appear in Table 3-6. Geometric means for 2019 are shown in a separate column from the 5-year geometric means. For both indicators, 2019 geometric means were higher than the 5-year mean at all locations. This is due to the increased sampling effort following heavy storms, as 55% of station visits in 2019 were conducted in 'Wet' conditions (greater than 0.5" rain in the past two days). This is accentuated in the stations surveyed by shoreline during inclement weather and weekends (shaded), which received a higher proportion of wet weather sampling than samples not sampled by shoreline. Despite this bias, annual geometric means at stations downstream of the Mass. Ave Bridge met the *Enterococcus* standard of 33 MPN/100mL.

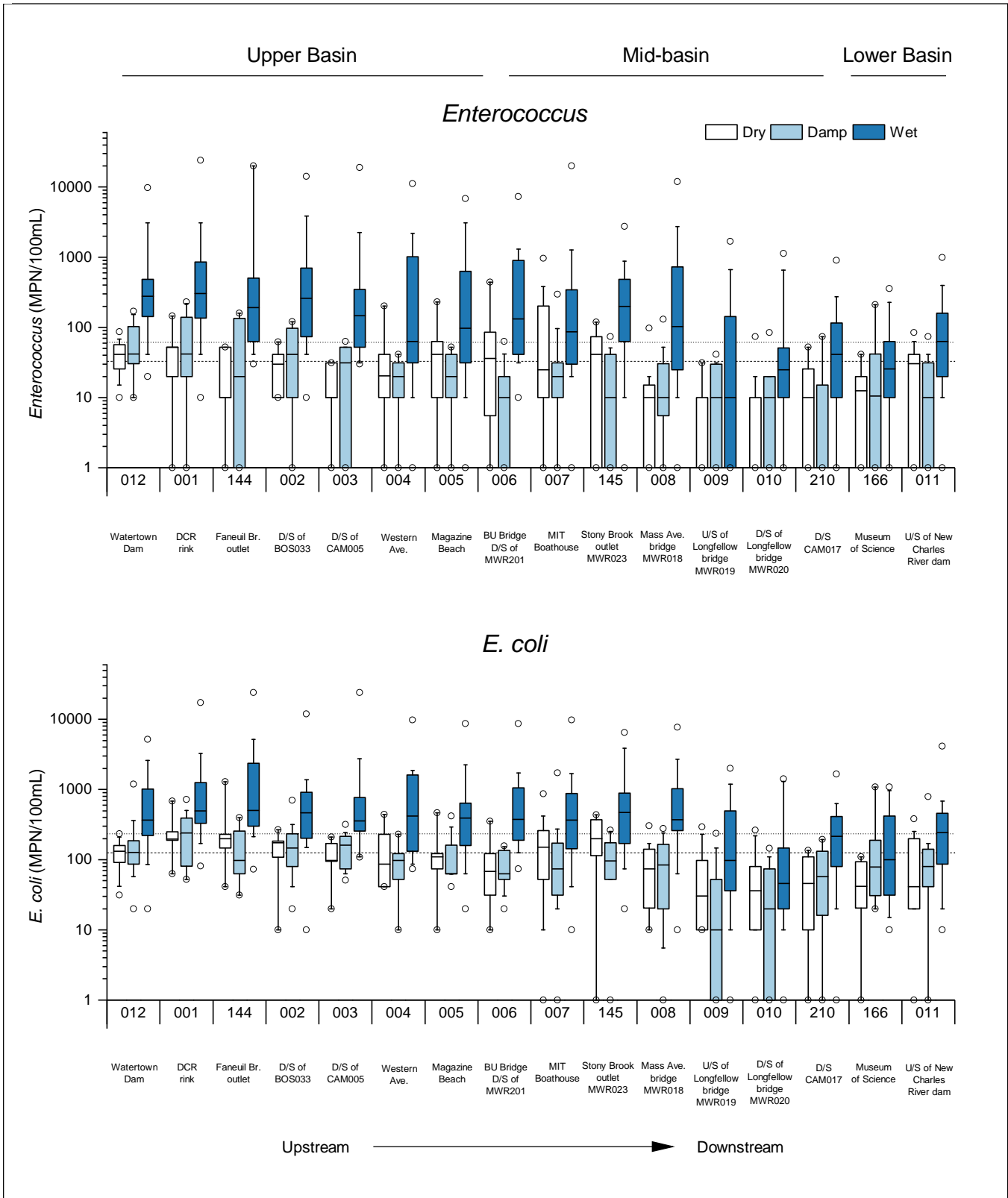
Figure 3-6 shows the impact of rainfall on the three Lower Charles reaches on *Enterococcus* densities (upper figure), along with results for individual locations near CSO outfalls (lower figure). The upper figure shows that for 2019, bacterial concentrations in the Upper Basin were routinely higher than Mid-Basin and Lower Basin stations in all conditions. The 2019 geometric means, the line within the box, met the state standard in damp conditions in all reaches, but exceeded in heavy rain in all reaches. The lower figure shows that stations 005, 006 and 008 had elevated *Enterococcus* levels in heavy rain conditions, but met standards in dry and damp conditions. Stations 009 and 210, which are both downstream of CSOs, met standards in all conditions except heavy rain. Station 011 at the New Charles River Dam, met the geometric mean standard in all conditions except heavy rain.

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 3-7 and Figure 3-8. Results are grouped by phases of the LTCP improvements with the last period (2014-2019) 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 swimming standard in dry, damp, and light rain 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 in the Lower Basin.

2019 compliance rates with State single sample standards by weather condition are shown in Figures 3-9 (*Enterococcus*) and 3-10 (*E. coli*). Stations in the Mid-basin and Lower Basin exhibit high compliance in dry and damp weather. Stations at the widest portion of the river exhibit the highest compliance rates in wet weather, even those immediately downstream of untreated CSOs (009, 210). While the overall dry to wet pattern is clear, there are occasionally stark differences in compliance rates between the two freshwater bacteria indicators.



**Figure 3-5. Indicator bacteria concentrations, Charles River Basin, 2019.**

Dashed lines show MADEP *Enterococcus* and *E. coli* geometric mean standards, dotted lines show single sample standards. “Dry”: no rainfall for previous 3 days; “Wet”: at least 0.5 inches in previous 2 days; “Damp”: everything in between. Rainfall measured at local rain gauges. “D/S” and “U/S”: downstream and upstream, respectively. Station 006 includes samples from nearby station 206.

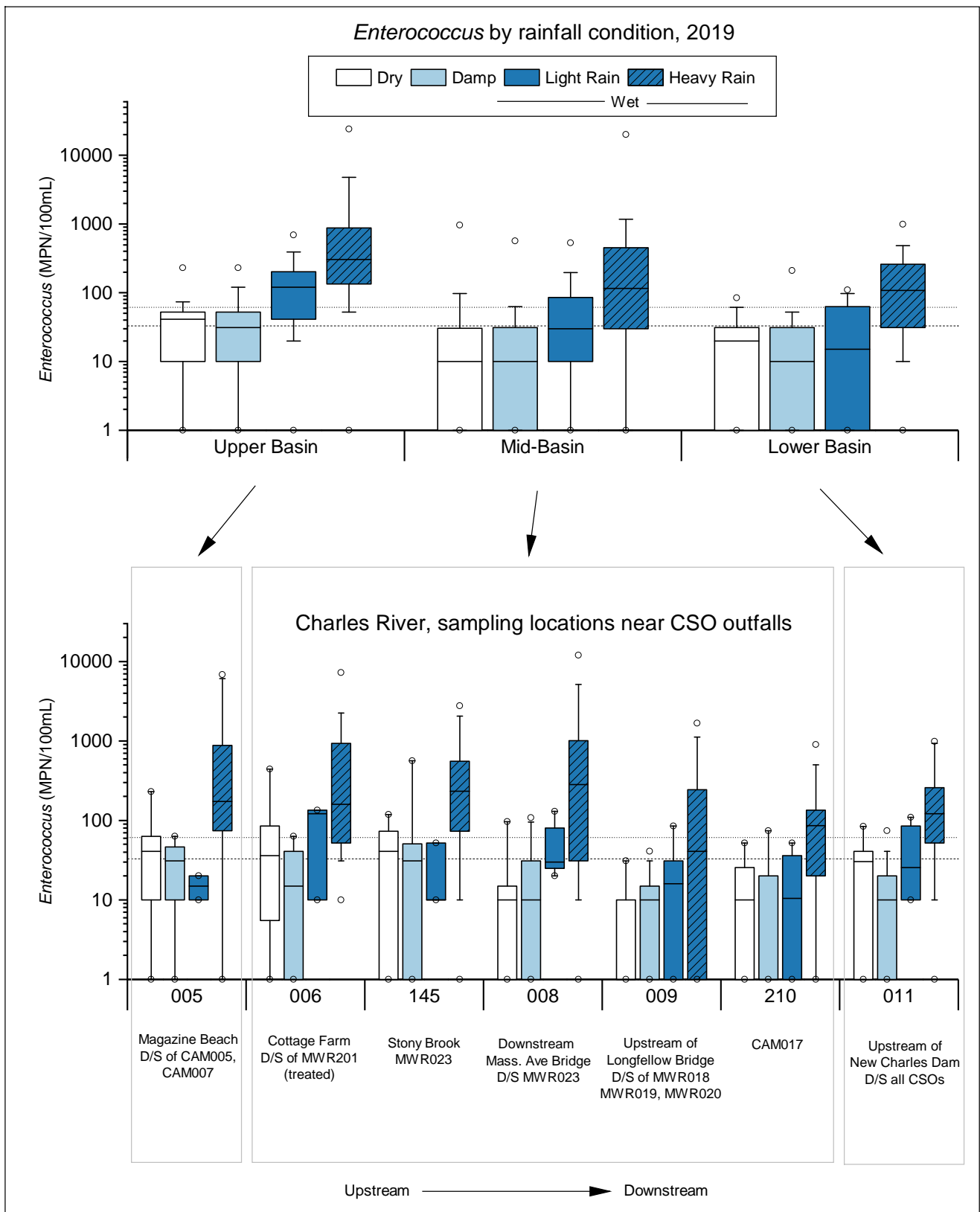
**Table 3-6. Geometric mean indicator bacteria, Charles River Basin, 2014 – 2018 and 2019.**

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) <sup>1</sup> MPN/100 mL DEP limit: 33 MPN/100 mL		<i>E. coli</i> (95% CI) <sup>1</sup> MPN/100 mL DEP limit: 126 MPN/100 mL	
			2014 – 18	2019	2014 – 18	2019	2014 – 18	2019
			012	Newton/Watertown, footbridge upstream of Watertown Dam	S	123	83	19 (13 - 25)
001	Newton, near Nonantum Rd., rear of DCR skating rink	S	201	48	46 (34 - 62)	156 (85 - 285)	273 (230 - 326)	420 (297 - 592)
144	Brighton, downstream of N. Beacon St. bridge, Faneuil Brook outlet, BOS032 (closed 1999)	S	136	30	22 (14 - 32)	72 (28 - 181)	206 (166 - 257)	344 (201 - 591)
002	Allston, downstream of Arsenal Street bridge, BOS033	S	201	48	31 (22 - 44)	114 (64 - 203)	222 (181 - 272)	310 (207 - 463)
003	Allston/Cambridge, midstream, near Mt. Auburn Street, between CAM005 and CAM007	S	201	48	25 (18 - 36)	74 (41 - 133)	229 (188 - 279)	311 (216 - 446)
004	Allston/Cambridge, midstream, between River Street and Western Avenue bridges	S	138	30	8 (5 - 12)	42 (18 - 96)	102 (73 - 142)	187 (113 - 308)
005	Cambridge, near Magazine Beach, upstream of Cottage Farm	S	311	48	19 (15 - 25)	48 (25 - 92)	142 (119 - 169)	189 (130 - 275)
006 <sup>2</sup>	Cambridge/Boston, midstream, downstream of Cottage Farm, BU bridge	S	138	48	21 (14 - 31)	97 (58-163)	157 (124 - 199)	219 (147 - 325)
007	Cambridge, near Memorial Dr., MIT Boathouse	S	201	47	17 (12 - 23)	37 (19 - 70)	100 (76 - 130)	186 (121 - 285)
		B	138	30	15 (10 - 22)	63 (27 - 144)	113 (86 - 149)	156 (78 - 314)
145	Boston (Charlesgate), Muddy River/Stony Brook outlet	S	201	48	28 (20 - 40)	45 (23 - 88)	218 (170 - 279)	219 (136 - 352)
008	Cambridge/Boston, midstream, downstream of Harvard Bridge	S	138	30	8 (5 - 13)	22 (9 - 52)	65 (46 - 92)	103 (52 - 205)
		B	138	30	12 (8 - 18)	36 (14 - 88)	80 (57 - 111)	187 (103 - 338)
009	Cambridge/Boston, midstream, upstream of Longfellow Bridge near Community Sailing	S	207	49	9 (6 - 12)	17 (8 - 32)	67 (50 - 89)	89 (51 - 156)
		B	138	30	0 (0 - 1)	3 (1 - 6)	6 (4 - 9)	23 (11 - 48)
010	Boston, downstream of Longfellow Bridge, MWR022	S	138	30	5 (3 - 7)	8 (3 - 18)	34 (25 - 46)	57 (29 - 108)
		B	138	30	4 (3 - 6)	11 (5 - 25)	13 (9 - 18)	26 (12 - 54)
210	Cambridge, Cambridge Pkwy (at CAM017)	S	72	48	20 (12 - 31)	15 (8 - 28)	138 (91-209)	84 (50 - 141)
166	Boston, old Charles River dam, rear of Science Museum	S	129	26	4 (3 - 6)	10 (4 - 21)	49 (35 - 69)	67 (36 - 122)
011	Boston, upstream of river locks (New Charles River Dam) and I-93, near Nashua St.	S	200	49	10 (7 - 14)	28 (16 - 47)	49 (36 - 65)	121 (76 - 192)
		B	138	30	14 (10 - 19)	24 (11 - 50)	37 (28 - 49)	112 (70 - 180)

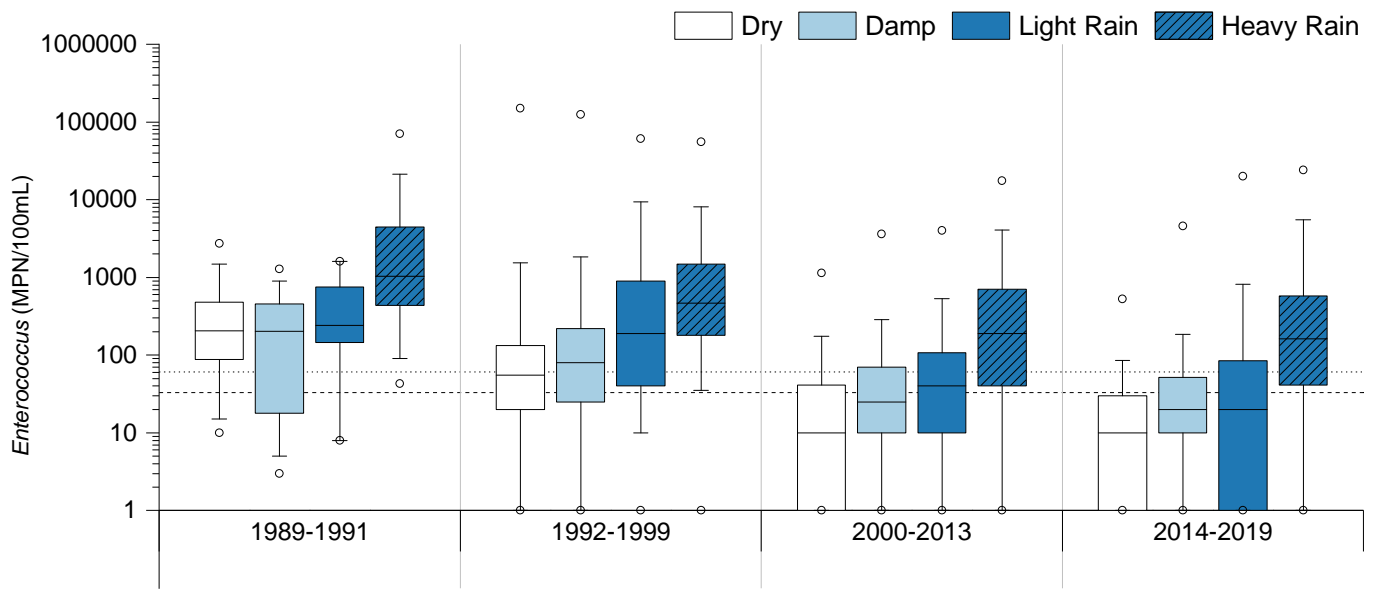
<sup>1</sup> The MADEP limits are geometric means for both *Enterococcus* and *E. coli*.

<sup>2</sup> Includes samples taken at both 006 and 206.



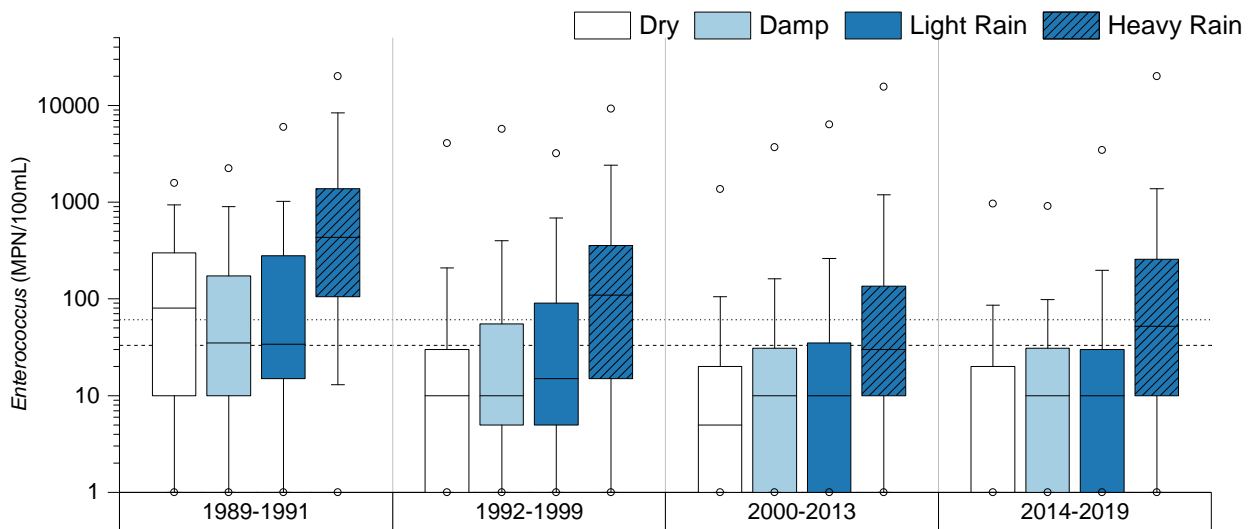
**Figure 3-6. Enterococcus by rainfall condition, Charles Basin, 2019.**

Dashed line shows MADEP freshwater standard of 33 MPN/100 mL for *Enterococcus*; dotted line shows the single sample standard of 61 MPN/100mL. Rainfall is rainfall from local MWRA, BWSC, and USGS rain gauges. “Dry”: no rainfall for previous 3 days; “Damp”: any rain < 0.15 inches at least two or three days previous to sampling and/or 0.1 inches in previous day; “Light Rain”: between 0.1 and 0.5 inches in previous day and/or between 0.15 and 0.5 in two previous days; “Heavy Rain”: more than 0.5 inches in previous 3 days. “D/S”: downstream. Station 006 includes samples from nearby station 206.



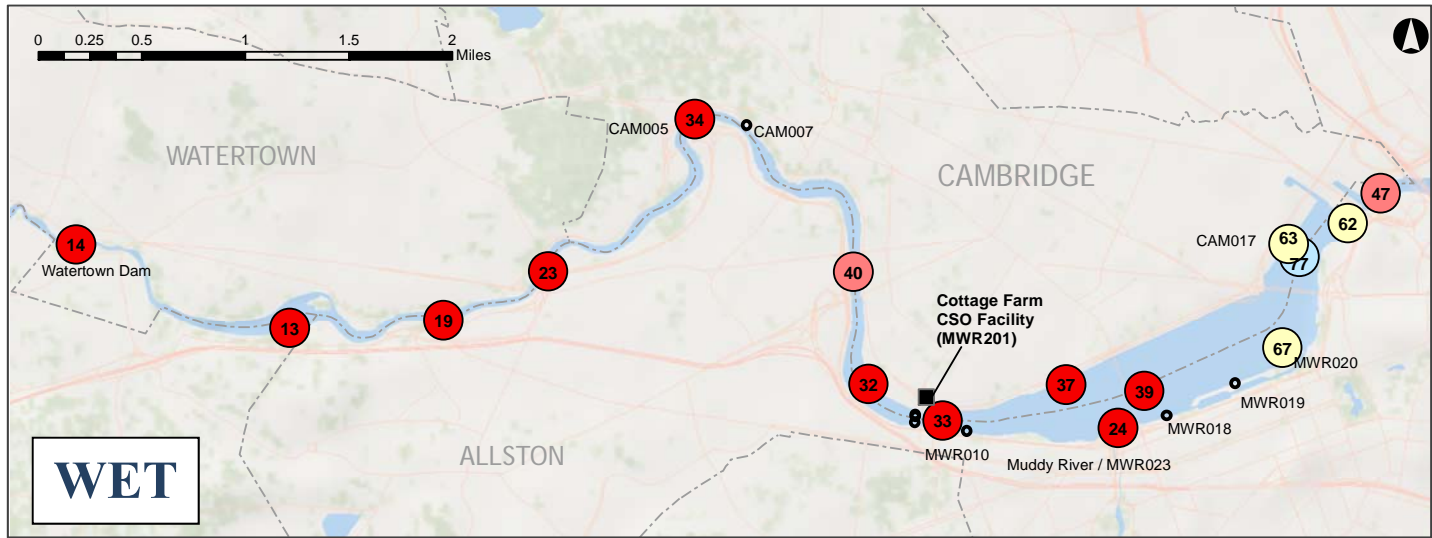
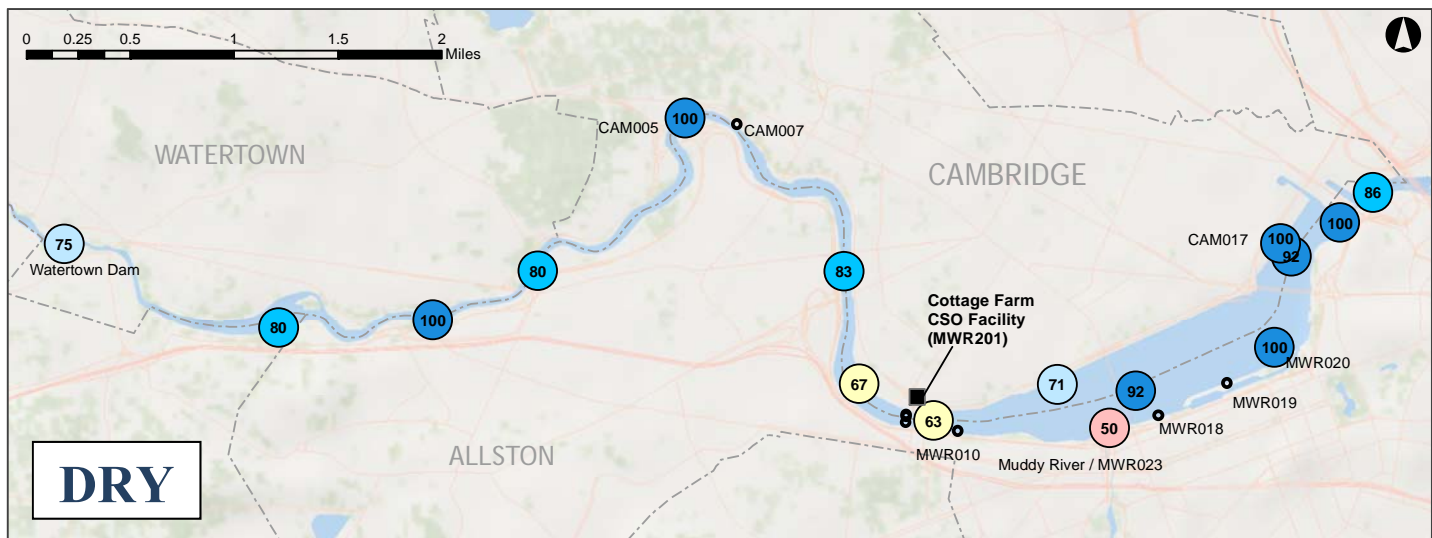
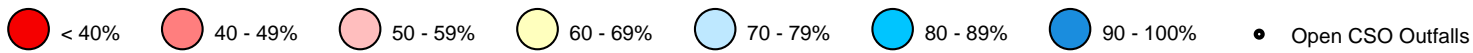
**Figure 3-7. *Enterococcus* over time, Upper Charles Basin (upstream of most CSOs) by phase of Long Term CSO Plan and rainfall condition.**

Dashed line shows State geometric mean standard (33 MPN/100mL), dotted line shows single sample standard (61 MPN/100mL). Data includes results for stations 012, 001, 144, 002, 004, and 005. Rainfall is NOAA rainfall from Logan airport. “Dry”: No rainfall for previous 3 days; “Damp”: any rain < 0.15 inches at least two or three days previous to sampling and/or 0.1 inches in previous day; “Light Rain”: between 0.1 and 0.5 inches in previous day and/or between 0.15 and 0.5 in two previous days; “Heavy Rain”: more than 0.5 inches in previous 3 days.

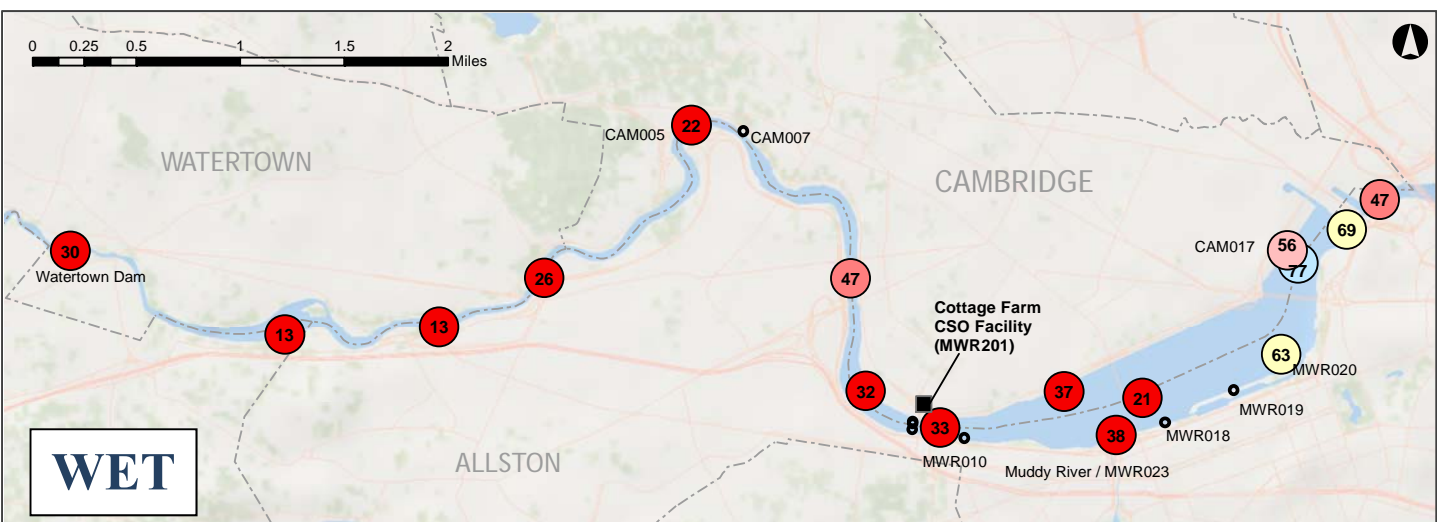
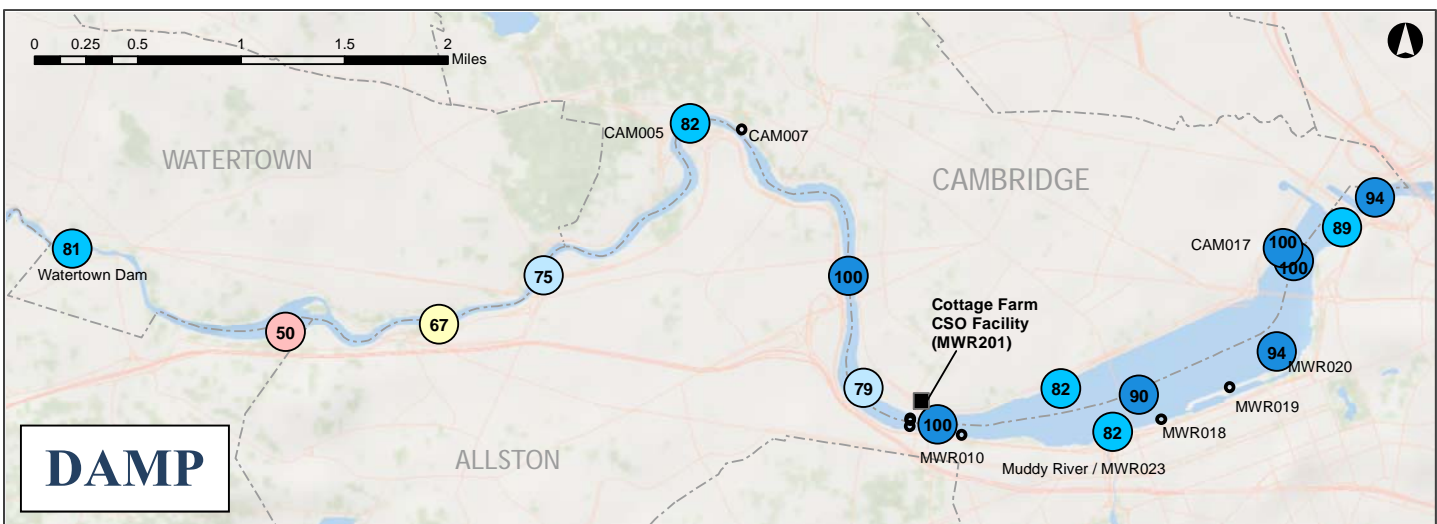
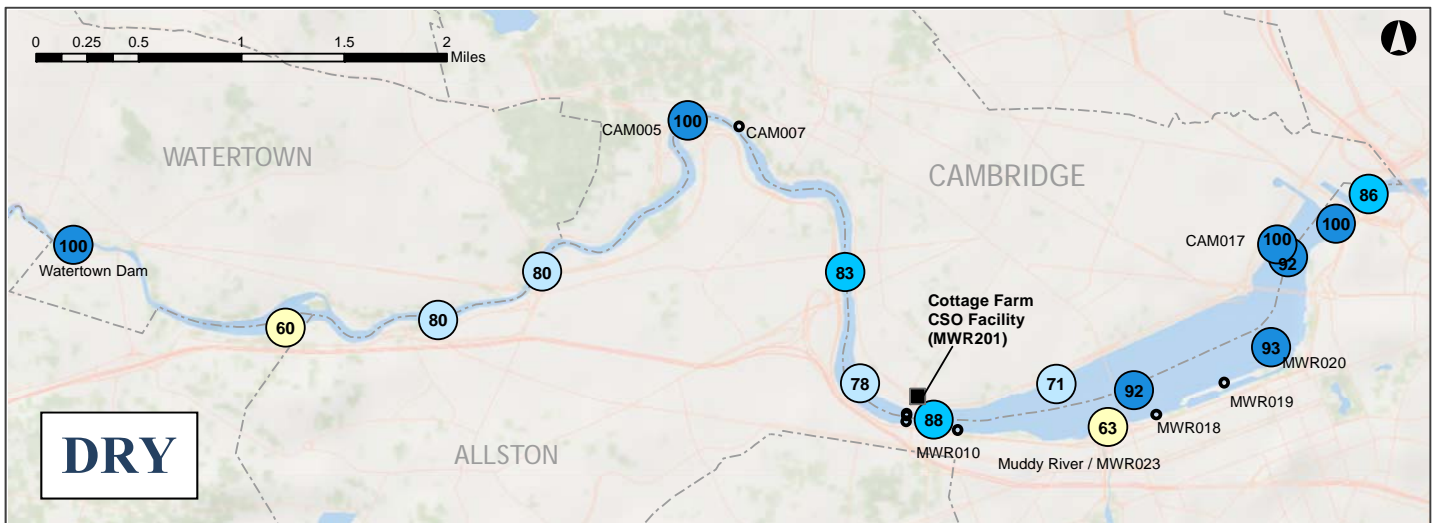
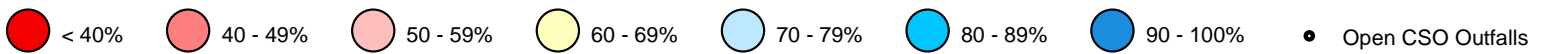


**Figure 3-8. *Enterococcus* over time, Lower and Middle Charles Basin by phase of Long Term CSO Plan and rainfall condition.**

Dashed line shows State geometric mean standard (33 MPN/100mL), dotted line shows single sample standard (61 MPN/100mL). Data includes results for all stations from 006 (BU bridge) downstream. Rainfall is NOAA rainfall from Logan airport. “Dry”: No rainfall for previous 3 days; “Damp”: any rain < 0.15 inches at least two or three days previous to sampling and/or 0.1 inches in previous day; “Light Rain”: between 0.1 and 0.5 inches in previous day and/or between 0.15 and 0.5 in two previous days; “Heavy Rain”: more than 0.5 inches in previous 3 days.



**Figure 3-9. Charles River *Enterococcus* percent compliance by weather condition, 2019.** Compliance with 61 MPN/100mL single sample State standard. Rainfall is from nearest rain gauge to station. Dry: no rainfall for previous 3 days; Wet: > 0.5” previous 3 days or > 0.15” previous two days; Damp is everything in between. Dots are the monitoring locations pictured in Figure 3-1 and listed in Table 3-1.



**Figure 3-10. Charles River *E. coli* percent compliance by weather condition, 2019.** Compliance with 235 MPN/100mL single sample State standard. Rainfall is from nearest rain gauge to station. Dry: no rainfall for previous 3 days; Wet: > 0.5” previous 3 days or > 0.15” previous two days; Damp is everything in between. Dots are the monitoring locations pictured in Figure 3-1 and listed in Table 3-1.

### 3.5 Summary of Charles River Water Quality

The spatial distribution of 2019 bacterial water quality in the Charles across rain conditions was generally consistent with the previous several years. Annual geometric means downstream of the Massachusetts Avenue Bridge generally met state standards for *Enterococcus* despite bias toward sampling after the year's strongest storms. Charles River stations from 144 downstream routinely meet *Enterococcus* standards in dry and damp weather, but exhibit exceedances in wet weather, particularly at Upper Basin and upstream Mid-Basin stations. Generally, water quality was consistent with prior years, with more elevated concentrations at upstream locations (upstream of most CSOs) in all weather, and improving moving downstream to the New Charles River Dam. Chapter 5 provides more detailed analysis of bacteria concentrations following storms of various sizes.

As shown in Figure 3-7 and 3-8, *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 2014-2019 period, after completion of all construction projects in the region, 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 the Lower Charles Basin, a pattern consistent with prior years. Any saltier harbor water that gets trapped in the Basin, after entering through the Charles locks, settles into deeper parts of the river basin, contributing to stratification of the basin and limiting exchange with surface waters. Surface water dissolved oxygen met standards at all locations in the Charles River.

Nutrients and chlorophyll exhibited seasonal signals as expected, and closely followed long term averages overall. Elevated chlorophyll *a* was seen at upstream station 012 in the spring, and at station 166 in late summer and early fall, consistent with previous algae bloom patterns in the river.



## 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. Table 4-1 describes the reaches and the sampling locations within each reach.

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.



**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 of stormwater, upstream inputs and CSOs. Nine CSO outfalls are located in Cambridge and Somerville, including six active CSO outfalls in Alewife Brook, and one treated CSO outfall in the Lower Mystic basin (Somerville Marginal CSO, MWR205A/SOM007A), which discharges screened, chlorinated, and dechlorinated flow only during an activation occurring at high tide. At low tide, the Somerville Marginal CSO outfall (MWR205) discharges downstream of the Amelia Earhart dam, screening, chlorinating, and dechlorinating CSO flow

before discharge. It 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 2019, Somerville Marginal MWR205A/SOM007A had 12 discharge events, and Somerville Marginal MWR205 had 27 activations resulting in discharge below the dam. BOS017 discharged 12 times in 2019. CAM401A and SOM001A are the most frequent CSO discharges to Alewife Brook, discharging 10 times and 7 times, respectively, in 2019.

Table 4-3 shows the MWRA model simulation and facility metering results for CSOs affecting the Mystic River and Alewife Brook in calendar year 2019. Metered CSO volumes and activation frequency are available for the Somerville Marginal CSO facility, while the remaining results were obtained using results from MWRA's recently calibrated hydraulic model, as explained in Section 3.2.

Table 4-4 summarizes the proportion of samples collected in dry, damp, and wet weather. Due to the focus on storm recovery sampling and the frequency of storms during the sampling season, nearly half of samples collected in the Mystic River and Alewife Brook were under wet weather conditions.

**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  *308, 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 28 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 28 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 <sub>CSO</sub> , 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.

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

Source	Alewife Brook	Upper Mystic River	Lower Mystic Basin	Mystic River mouth
CSOs (untreated)	6 active, 7 closed  CAM401A, MWR003, CAM001, CAM002, CAM401B, SOM001A  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	None	1 active  BOS017
CSO treatment facility (screened, chlorinated and dechlorinated CSO discharge)	No	No	Yes Somerville Marginal (MWR205A/SOM007A, high tide only) Activated 15 times in 2019	Yes Somerville Marginal (MWR205) Activated 27 times in 2019
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

**Table 4-3. Mystic River/Alewife Brook CSO activations, results of MWRA calibrated hydraulic model simulations, and facility records for 2019 system conditions and 2019 rainfall.<sup>1</sup>**

CSO Outfall	Activation Frequency	Total Discharge Duration (hr)	Total Discharge Volume (Million Gallons)
<i>Alewife Brook</i>			
CAM001	3	3.16	0.16
CAM002	2	1.72	0.20
MWR003	3	5.74	5.34
CAM401A	10	11.94	6.25
CAM401B	6	6.46	1.69
SOM001A	7	6.19	9.08
<b>TOTAL</b>		<b>35.21</b>	<b>22.72</b>
<i>Mystic River (upstream of dam)</i>			
SOM007A/MWR205A (Somerville Marginal, high tide discharge only) <sup>2</sup>	15	31.75	N/A <sup>2</sup>
<b>TOTAL<sup>3</sup></b>		<b>31.75</b>	<b>N/A<sup>2</sup></b>
<i>Mystic River mouth (downstream of dam, marine outfalls)</i>			
MWR205 (Somerville Marginal Facility) <sup>4</sup>	27	89.38	96.41
BOS017	12	13.64	0.90
<b>TOTAL</b>		<b>103.02</b>	<b>97.31</b>

<sup>1</sup> For the untreated CSO outfalls, activation frequency, duration and volume for 2019 rainfall are from recently calibrated hydraulic model results (MWRA 2020b).

<sup>2</sup>Treated discharge. Activation frequency from MWRA depth sensor measurement.

<sup>3</sup>In 2019, 100% of the volume discharged to the Mystic River (upstream of dam) was treated.

<sup>4</sup>Treated discharge. Activation frequency and volume are from MWRA facility records (measurements).

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

Sampling period	Dry <sup>1</sup>	Damp <sup>1</sup>	Wet <sup>1</sup>	Total
2014 - 2018	26% 825 station visits	31% 986 station visits	43% 1362 station visits	100% 3173 station visits
2019 <sup>2</sup>	23% 228 station visits	32% 326 station visits	45% 459 station visits	100% 1013 station visits

<sup>1</sup> Dry: no rainfall for previous 3 days; Wet: at least 0.5 inches in previous 2 days; Damp is everything in between.

<sup>2</sup> A lower proportion of 2019 samples were collected in dry conditions than the previous five years, with increased focus on sampling tracking rain events.

#### 4.3 Summary of water quality, 2015-2019

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, 2015 - 2019.**

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) <sup>1</sup>	Summer	≤ 28.3	18.5 ± 4.1	100	6.9 - 25.9	519	21.2 ± 4.4	99.8	9.9 - 28.6	464	21.4 ± 4.6	99.4	9.3 - 28.6	348	21.3 ± 4.5	100	9.5 - 27.3	118	18.5 ± 2.6	100	9.6 - 22.9	245
	Winter		7.3 ± 0.8	100	6.3 - 8	6	3.5 ± 2.1	100	-0.1 - 8	61	4.2 ± 2.3	100	0.1 - 10.1	48	7.9 ± 0.3	100	7.7 - 8.2	2	3.8 ± 1.9	100	0.5 - 7.4	32
Bottom water dissolved oxygen (mg/L) <sup>1</sup>	Summer	≥ 5.0	4.9 ± 2	27.3	2.9 - 8.8	11	5.3 ± 2.3	54.8	0.6 - 11.4	199	6.5 ± 2.7	68.3	0.6 - 14.3	287	6 ± 2.4	65.4	0.6 - 12.1	81	6.9 ± 1.3	94.7	2.8 - 11.4	206
	Winter	≥ 5.0	ND	-	ND		11.4 ± 0.6	100	10.4 - 13.2	24	10.4 ± 2.1	95.8	1.5 - 13.4	48	11 ± 0.2	100	10.8 - 11.1	2	10.2 ± 0.5	100	9.2 - 11.6	32
pH <sup>6</sup> (S.U.)		6.5-8.3 (8.5 marine)	7.1 ± 0.3	99.4	6.1 - 8.3	822	7.6 ± 0.6	89.8	6.3 - 9.6	1083	7.6 ± 0.7	79.4	6.1 - 9.4	1090	7.7 ± 0.7	79	6.3 - 9.2	295	7.8 ± 0.3	98.9	6.3 - 8.4	742
Water clarity	Total Suspended Solids (mg/L)	NS	ND	-	ND		4.3 ± 5.2	-	0.6 - 53.4	243	6.7 ± 3.9	-	0.8 - 23.3	109	ND	-	ND	-	3.5 ± 2.6	-	1 - 18.5	232
	Secchi depth (m) <sup>3</sup>	NS	0.5 ± 0.1	-	0 - 0.8	19	1.2 ± 0.5	-	0.4 - 2.5	145	0.8 ± 0.3	-	0.2 - 3	386	0.8 ± 0.3	-	0 - 1.5	126	2 ± 0.7	-	0.2 - 4.2	304
	Turbidity (NTU)	NS	8.9 ± 6.7	-	0.1 - 44.9	350	6.5 ± 5.6	-	0 - 54	753	8.2 ± 5.7	-	0.5 - 68.5	797	9.4 ± 5.6	-	0.5 - 43.3	259	5.9 ± 4.6	-	0 - 93.4	681

For footnotes, see following page.

**Table 4-5. Summary of water quality, Mystic River/Alewife Brook, 2015 - 2019, 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) <sup>4</sup>	Fecal coliform	200 / 400 <sup>5</sup>	ND	-	ND		ND	-	ND		ND	-	ND		ND	-	ND		22 (19 - 27)	88.4	0 - 620000	692
	<i>E. coli</i>	126 / 235 <sup>5,6</sup>	696 (642 - 754)	21.5	0 - 1410000	1297	130 (120 - 142)	71.5	0 - 72700	933	71 (62 - 82)	76.9	0 - 24200	700	148 (111 - 198)	62.2	0 - 44100	225	ND	-	ND	
	<i>Enterococcus</i>	33 / 61 <sup>5</sup>	239 (218 - 261)	15.7	0 - 201000	1302	36 (31 - 41)	56.9	0 - 19900	933	8 (7 - 9)	80.9	0 - 3450	700	26 (18 - 36)	68.4	0 - 14100	225	6 (5 - 7)	81.9	0 - 24200	692
Nutrients (µmol/L)	Phosphate	NS	ND	-	ND		0.4 ± 0.4	-	0 - 3.7	246	0.3 ± 0.3	-	0 - 2.3	111	ND	-	ND		0.8 ± 0.4	-	0 - 2.4	232
	Ammonium	NS	ND	-	ND		13.3 ± 10.6	-	0.1 - 44.3	242	8.8 ± 9.5	-	0 - 32.4	110	ND	-	ND		4.1 ± 3.6	-	0 - 20.9	226
	Nitrate+nitrite	NS	ND	-	ND		47.6 ± 27.1	-	0.1 - 264	247	29.3 ± 25.8	-	0 - 82	111	ND	-	ND		7.3 ± 7.6	-	0 - 34.7	232
Algae (µg/L)	Chlorophyll <i>a</i>	NS	ND	-	ND		9.4 ± 9.4	-	0.9 - 71.6	247	27 ± 25.8	-	2 - 156	111	ND	-	ND		4.5 ± 5.1	-	0.2 - 49.4	231

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

<sup>1</sup> Summer (June-October), Winter (January-March).

<sup>2</sup> Median and standard error of the median are shown for pH, rather than arithmetic mean and standard deviation.

<sup>3</sup> MADPH standard of ≥1.2 meters applies only to public bathing beaches; there are none in the Upper Mystic/Alewife Brook.

<sup>4</sup> For bacterial data, 95% confidence intervals (CI) are provided rather than standard deviations

<sup>5</sup> 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 single sample standard - compare to the "% meeting guideline" column (i.e., the "% meeting guideline" column is the percentage of samples meeting the single sample standard). The "Range" column gives the range of single sample results.

<sup>6</sup> Either *E. coli* or *Enterococcus* are acceptable indicators for EPA, MADEP, and MADPH to assess suitability for swimming in freshwater.

#### 4.4 *Water quality results, 2019*

This section reports spatial trends for water quality parameters measured in the Mystic River/Alewife Brook in 2019.

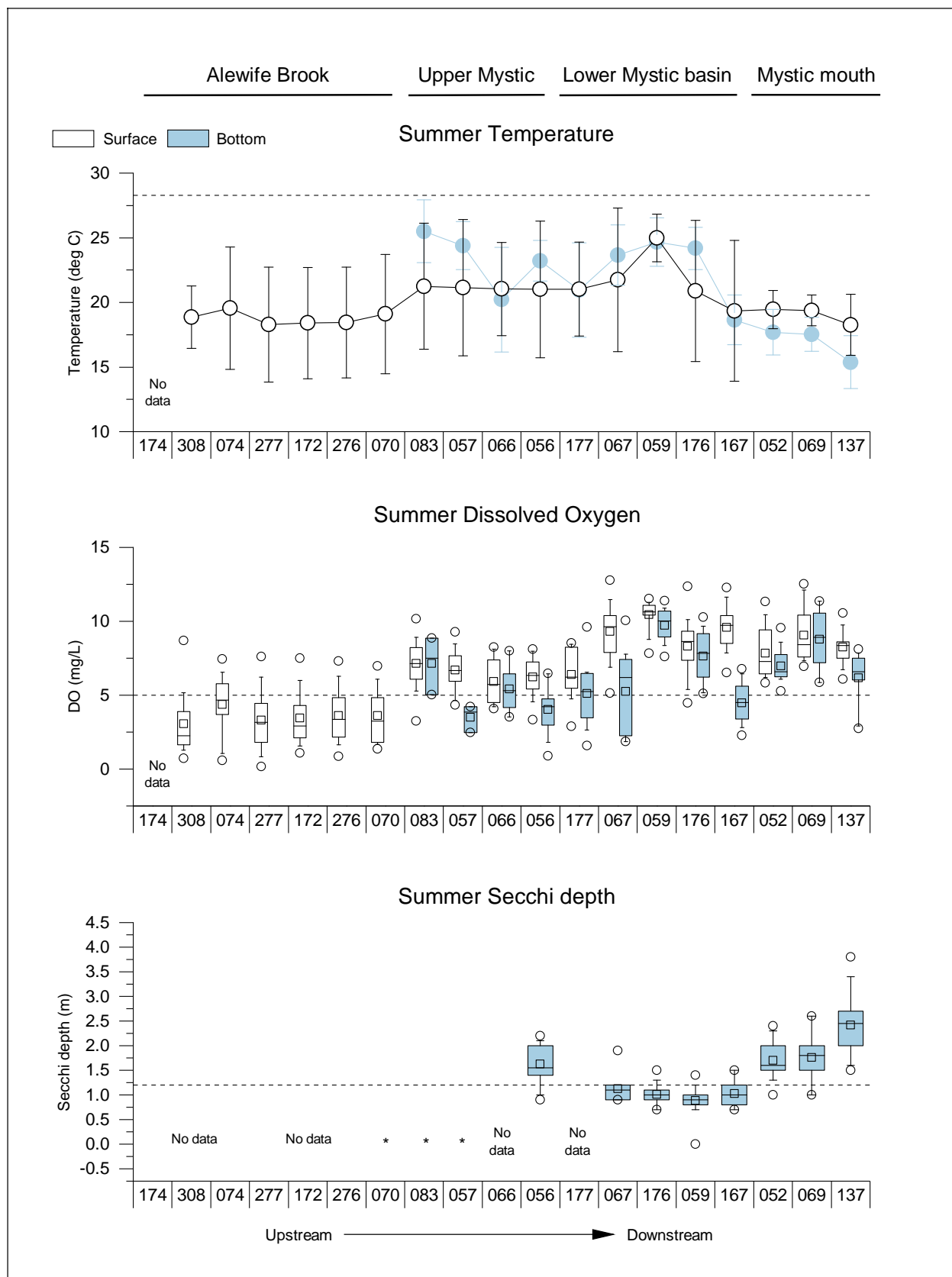
##### 4.4.1 Physical measurements

**Temperature.** Summer (June to October) mean temperatures for 2019 are shown for each sampling location in the uppermost graph of Figure 4-2. Bottom temperatures appear higher in the Mystic main stem at shoreline locations, as more measurements were taken at the surface during shoreline surveys in October. This is highlighted by the similar average surface and bottom temperatures at 066, 177, and 059, which are not included on the storm recovery shoreline surveys. Bottom temperatures at deeper locations in the Mystic mouth have lower annual averages. The lower bottom temperature at Amelia Earhart Dam (station 167) demonstrates the stratification due to salt water intrusion. 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 2019.

**Dissolved Oxygen.** Dissolved oxygen is shown in the center graph of Figure 4-2. Mean surface dissolved oxygen concentrations met the State standard of  $\geq 5.0$  mg/L at all locations in the Mystic and Malden Rivers. Surface dissolved oxygen in Alewife Brook is typically lower than the Mystic River, and is often below the State standard. Surface DO concentrations in Alewife Brook were lower in 2019 than 2018, and consistent along the length of the brook. Average summer bottom water concentrations were below the State standard at station 057 at the Alewife Brook confluence, station 056 near Medford Square, and the deeper station 167 at Amelia Earhart Dam.

**Water clarity.** Water clarity is indicated by Secchi disk depth, which appears 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 (excluding station 056) failing to meet the MADPH beach guideline of 1.2 meters. Alewife Brook and several of the Upper Mystic locations are often clear to the bottom and too shallow to measure Secchi depth. River depth at those locations are typically 0.5 meters in Alewife Brook, and 1 meter in the Mystic River.





**Figure 4-2. Summer temperature, dissolved oxygen, and Secchi depth, Mystic River, 2019.**

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 2019. Stations 174, 308, 074, 277, 172, 276, 066, and 177 were typically too shallow for Secchi measurements in the summer months of 2019. Stations 070, 083, and 057 were clear to the bottom for all visits in 2019, indicated by \*. Hollow squares on the DO and Secchi plots indicate the arithmetic mean.

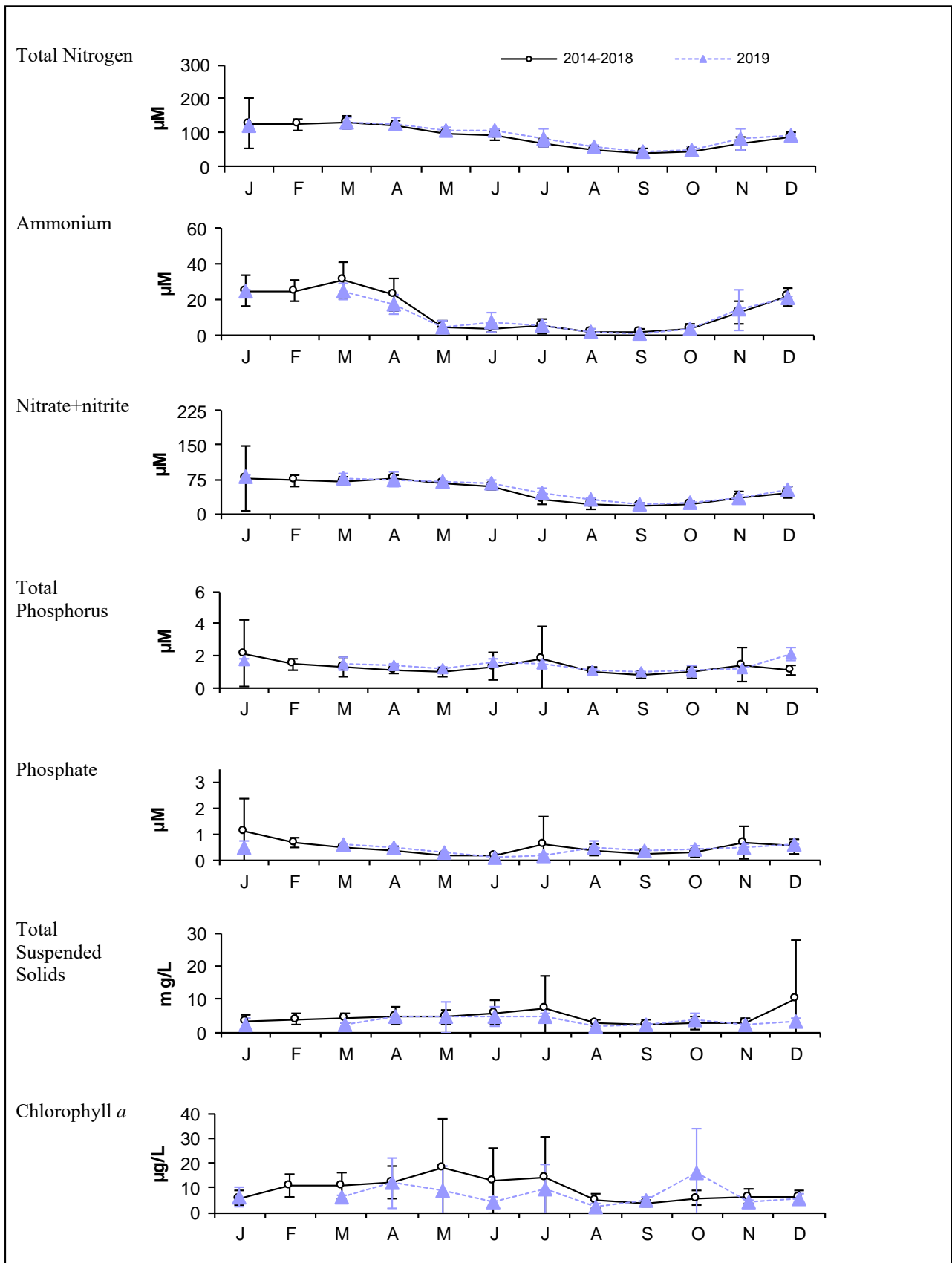
#### 4.4.2 Nutrients, TSS and chlorophyll

Figures 4-3 through 4-6 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.), downstream (167 at Amelia Earhart Dam) and river mouth (137). Results are not available from station 083 in February 2019 due to river 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.

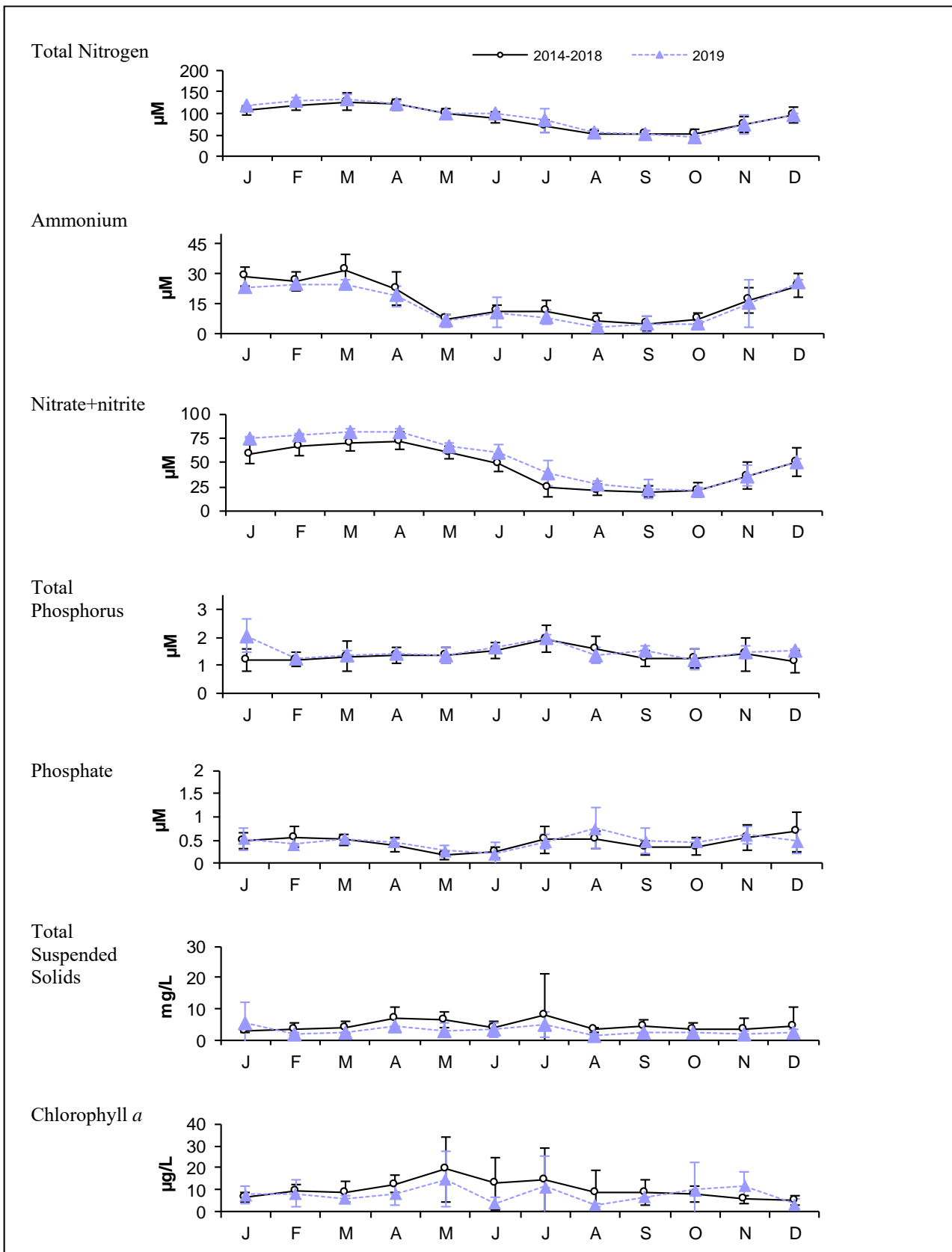
At freshwater Mystic River locations 083, 066, and 167, nutrient results in 2019 were very similar to the previous five-year average (2014-2018). Seasonal signals are more evident in nitrogenous compounds than in total phosphorus or phosphate. Total suspended solids and chlorophyll *a* values were lower than the five-year average throughout the year, aside from an increase in chlorophyll *a* at all stations in the fall. There is no clear signal in the nutrient data preceding this elevated chlorophyll *a*.

At marine station 137 in the Mystic mouth, nutrient results generally aligned with the seasonal pattern of the previous five years while exhibiting slightly lower magnitude. Notably, chlorophyll *a* in July and August was significantly lower than the typical average, before a harbor-wide *Karenia mikimotoi* dinoflagellate bloom in late summer. Nutrient concentrations were lower than the five-year average in October following this bloom.



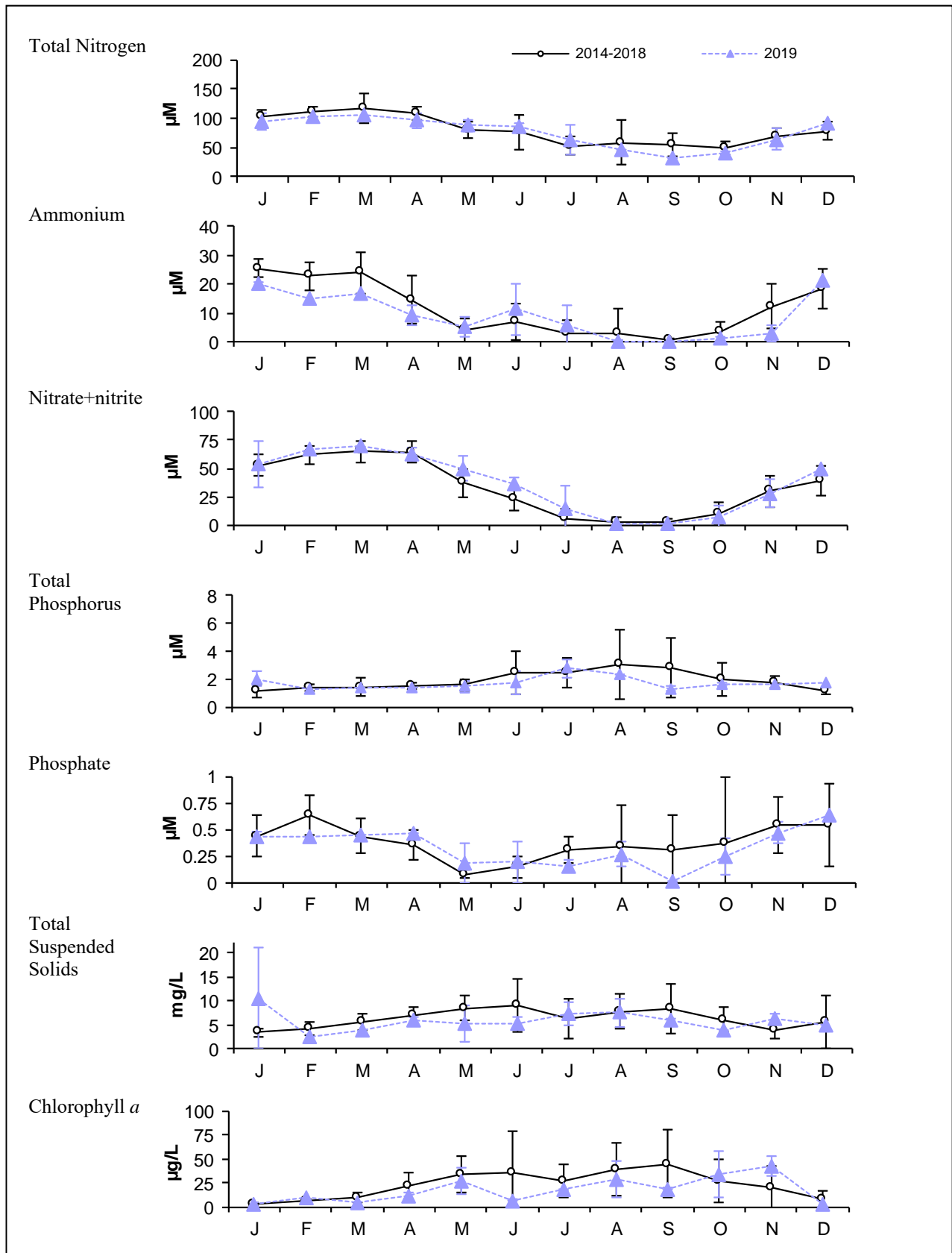
**Figure 4-3. Monthly average nutrients, TSS and Chlorophyll, 2014 – 2018 and 2019, Station 083, Mystic upstream of Alewife Brook.**

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



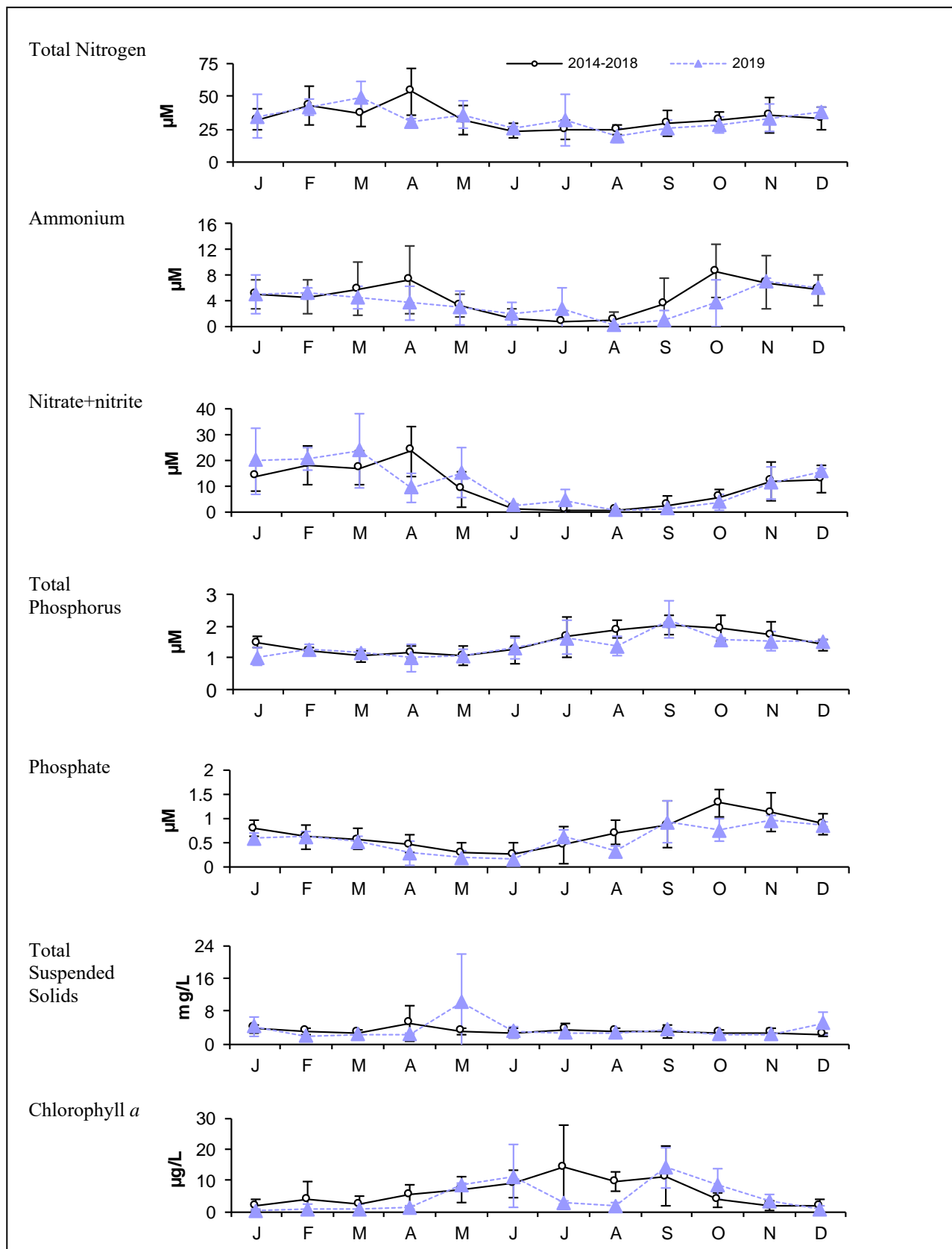
**Figure 4-4. Monthly average nutrients, TSS and Chlorophyll 2014 – 2018 and 2019, Station 066, Boston Ave.**

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



**Figure 4-5. Monthly average nutrients, TSS and Chlorophyll 2014 – 2018 and 2019, Station 167, Amelia Earhart Dam (upstream/freshwater).**

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



**Figure 4-6. Monthly average nutrients, TSS and Chlorophyll 2014 – 2018 and 2019, Station 137, Mystic River mouth (marine).**

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

#### 4.4.3 Bacterial water quality

Figure 4-7 shows the bacterial water quality at each location sampled in the Mystic River and Alewife Brook for 2019 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 Charlestown gauge, the USGS Fresh Pond gauge, and the newly installed 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 2019. 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 emphasized in Table 4-4, Mystic River and Alewife Brook sampling occurred frequently following significant rain events in 2019, with 45% of the samples taken in wet weather conditions.

As shown in Figure 4-7, all locations in Alewife Brook consistently failed to meet both *Enterococcus* and *E. coli* geometric mean standards in dry, damp, and wet weather in 2019. 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, demonstrating low impact of Alewife Brook on the Mystic River. Samples taken in the Lower Mystic Basin met standards in dry and damp weather, and occasionally in wet weather. Malden River station 176 met standards in dry and damp weather, but exhibited very high counts in wet weather. *Enterococcus* and fecal coliform results from the three marine stations demonstrated elevated dry weather results at station 052, but general compliance with standards otherwise.

Geometric means for each indicator for 2014 - 2018 and 2019 appear in Table 4-6 (Alewife Brook) and 4-7 (Mystic River), for all weather conditions combined. Overall, annual geometric means did not meet water quality standards at most locations, and most 2019 geometric means were higher than the previous five years. This is largely due to the frequency of rainfall events in the region in 2019 and a targeted approach of sampling consecutive days following these events. While these results increase our understanding of wet weather impacts, these annual geometric means do not represent typical conditions at these stations. Stations 067, 059, and 167 in the Lower Mystic Basin met standards for both indicators despite this wet weather bias. Station 056 (Medford Square between Craddock Bridge and I-93) exhibited high bacteria counts without influence of nearby CSOs. This is also reflected in the noticeably high wet weather counts at this location, as seen in Figure 4-7. Malden River station 176 matched the state standard for *Enterococcus* but exceeded for *E. coli*. Annual geometric means did not meet standards at the seven Alewife Brook stations. Results at Alewife Brook stations 172 (Mass. Ave. bridge) and 276 (new station downstream of SOM001A) were very similarly distributed. The highest bacteria counts in Alewife Brook were seen at station 308, immediately downstream of the CAM401A CSO outfall. Bacteria counts at station 308 were elevated in all weather conditions. Like the Charles River, *E. coli* counts are consistently higher than *Enterococcus* counts at all stations.

Annual geometric means for surface samples collected at station 052, a near-shore Mystic mouth station downstream of Amelia Earhart Dam exceeded geometric mean standards for both *Enterococcus* and

fecal coliform, though most elevated results were found in dry weather. Geometric means met both standards at Mystic mouth stations 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 4-8 through Figure 4-10. Figure 4-8 shows the impact of rainfall on *Enterococcus* densities on the four river reaches in 2019, along with locations near CSO outfalls. 2019 *Enterococcus* results were distributed similarly to recent years, particularly 2018, which exhibited a similar sampling structure and frequency of rain events. In the Alewife, the Little River station 174 upstream of CSOs – as well as all other stations – fails to meet standards in dry, damp, and wet weather, suggesting persistent contamination not necessarily tied to CSOs. In the Upper Mystic, results were typically below the single sample standard in dry and damp conditions, but often exceeded in wet weather, with little difference in distribution between light and heavy rain. Lower Mystic counts were very low in dry, damp, and light rain conditions and often met following heavy rains. Station 052 at the Amelia Earhart Dam and the treated Somerville Marginal CSO facility outfall, had a wide distribution of results in dry weather, but often met standards in wet weather conditions. This pattern is dissimilar to the low dry weather counts and elevated wet weather counts typically seen at this location. 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 treated CSO and untreated stormwater.

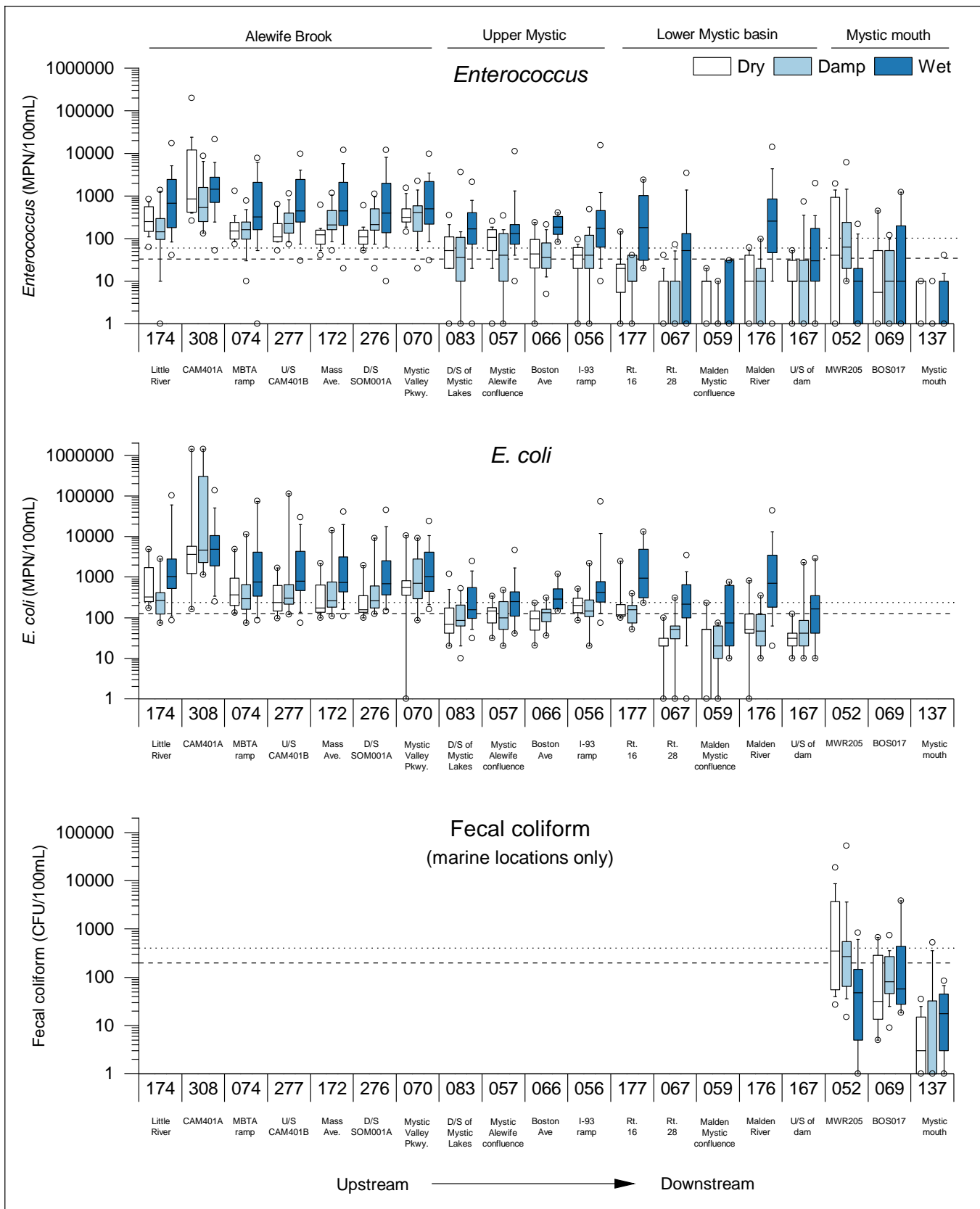
Results in Figures 4-9 (Alewife Brook) and 4-10 (remainder of the Mystic) are grouped by phases of the Long Term CSO Plan improvements and include the geometric mean counts in each rainfall condition. Figure 4-9 shows minimal changes in dry or damp *Enterococcus* counts in the Alewife, but decreases in the magnitude of exceedance in wet weather, particularly in the 2016-2019 period following completion of all LTCP-related construction in this region. *Enterococcus* results in Figure 4-10 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 four years of data collected following LTCP project completion, results are similarly distributed to the previous LTCP phase.

Mystic River 2019 compliance rates with single sample State standards for both indicators are shown in Figures 4-11 (*Enterococcus*) and 4-12 (*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. Compliance rates in the Mystic River were generally higher for *E. coli* than *Enterococcus*. Station 056 near Medford Square exhibited very 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 weather. Stations 059 and 167 near Amelia Earhart Dam and downstream of the Somerville Marginal CSO relief outfall were over demonstrated very high compliance rates in 2019.

Alewife Brook 2019 compliance rates with single sample State standards for both indicators are shown in Figures 4-12 (*Enterococcus*) and 4-13 (*E. coli*). The dots shown on the maps correspond to the monitoring locations shown in Figure 4-1 and listed on Table 4-1. Compliance rates were generally low in all weather conditions, and were similar at all stations in Alewife Brook, regardless of proximity to



CSO outfall. All Alewife stations were below 15% compliant in wet weather, for both indicators. Like the Charles, some discrepancies in compliance between the two indicators exist, with stations near Massachusetts Avenue under 20% compliant in damp weather for *Enterococcus*, but over 50% compliant for *E. coli*.



**Figure 4-7. Indicator bacteria concentrations, Mystic River/Alewife Brook, 2019.**

Dashed lines show MADEP *Enterococcus* and *E. coli* and the former fecal coliform geometric mean standards. Dotted lines show the single sample standards. Note that freshwater and marine *Enterococcus* standards differ. *E. coli* testing was discontinued in 2007 in marine waters for methodological reasons. Dry: no rainfall for previous 3 days; Wet: at least 0.5 inches in previous 2 days; damp is everything in between. Rainfall conditions are derived from either the BWSC Charlestown or USGS Fresh Pond rain gauges. “D/S”: downstream; “U/S”: upstream.

**Table 4-6. Geometric mean indicator bacteria, Alewife Brook, 2014 – 2018 and 2019.**

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: 33 counts/100 mL <sup>2</sup>		<i>E. coli</i> <sup>1</sup> (95% CI) counts/100 mL DEP limit: 126 counts/100 mL	
			2014 – 2018	2019	2014 – 2018	2019	2014 – 2018	2019
174	Cambridge, Little River, upstream of Rt. 2 and off ramp to Alewife T station	S	209	62	149 (115 - 192)	342 (227 - 517)	630 (516 - 770)	699 (483 - 1010)
308	Cambridge, Alewife Brook at CAM401A CSO outfall	S	ND	62	ND	1311 (901 - 1908)	ND	5941 (3620 - 9748)
074	Cambridge, Little River, at off ramp to Alewife T station	S	210	63	127 (99 - 162)	253 (170 - 375)	650 (546 - 774)	716 (485 - 1056)
277	Arlington, Alewife Brook, upstream of 4 CSO outfalls near Mass. Ave bridge.	S	71	62	316 (238 - 421)	346 (244 - 490)	728 (533 - 993)	725 (494 - 1064)
172	Arlington, Alewife Brook, upstream of Massachusetts Ave bridge, midchannel	S	210	63	202 (164 - 249)	324 (226 - 465)	653 (545 - 781)	617 (430 - 885)
276	Arlington, Alewife Brook, downstream of SOM001A	S	71	64	265 (202 - 347)	303 (207 - 443)	633 (468 - 856)	593 (417 - 842)
070	Arlington, Alewife Brook, off Mystic Valley Parkway bridge	S	210	64	253 (206 - 310)	453 (327 - 628)	722 (602 - 866)	909 (620 - 1331)

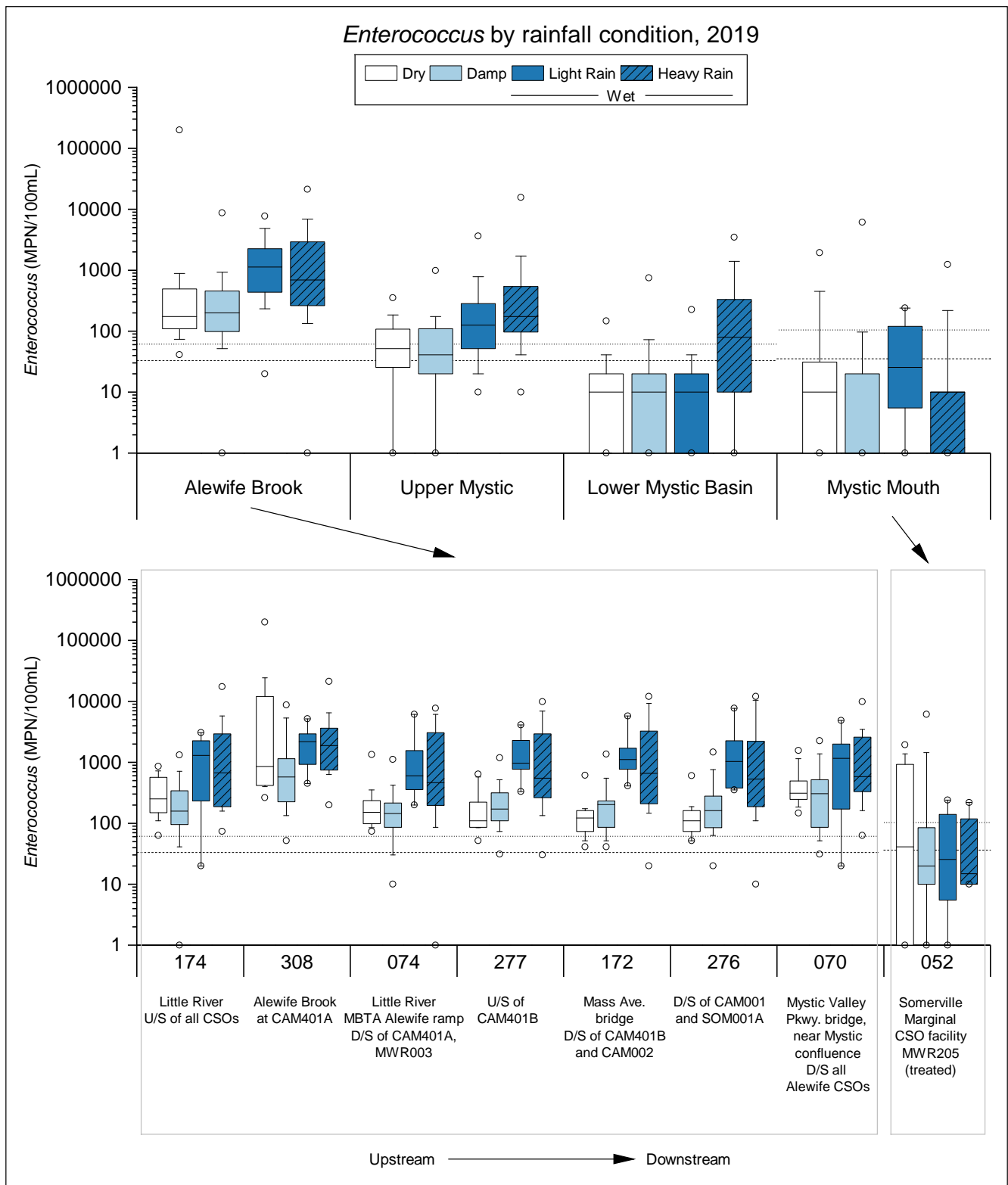
**Table 4-7. Geometric mean indicator bacteria, Mystic River, 2014 – 2018 and 2019.**

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: 33 counts/100 mL <sup>2</sup>		<i>E. coli</i> <sup>1</sup> (95% CI) counts/100 mL DEP limit: 126 counts/100 mL	
			2014 – 2018	2019	2014 – 2018	2019	2014 – 2018	2019
083	Medford, upstream of confluence of Mystic River and Alewife Brook	S	305	87	28 (22 - 34)	64 (43 - 95)	85 (73 - 100)	130 (103 - 165)
057	Medford, confluence of Mystic River and Alewife Brook	S	186	63	40 (30 - 53)	86 (56 - 131)	127 (106 - 153)	164 (126 - 214)
066	Medford, Mystic River, Boston Ave bridge	S	128	26	23 (17 - 31)	61 (35 - 104)	105 (86 - 129)	146 (103 - 205)
056	Medford, Mystic River, upstream of I-93 bridge	S	185	63	28 (20 - 38)	75 (47 - 120)	221 (182 - 270)	319 (236 - 432)
177	Medford, Downstream of Rt. 16 bridge, mid-channel	S	122	23	9 (6 - 14)	31 (13 - 73)	159 (122 - 207)	325 (176 - 601)
067	Medford, Mystic River, Rt. 28 bridge	S	184	63	8 (5 - 11)	8 (4 - 14)	69 (52 - 92)	65 (42 - 99)
059	Everett, confluence of Mystic and Malden Rivers	S	130	21	5 (3 - 7)	2 (1 - 4)	46 (33 - 64)	31 (13 - 68)
176	Malden River, upstream of Rt. 16 bridge	S	182	63	23 (15 - 33)	33 (17 - 63)	151 (109 - 210)	179 (109 - 293)
167	Medford, Mystic River, upstream side of Amelia Earhart Dam	S	176	66	6 (4 - 9)	17 (10 - 29)	59 (45 - 76)	81 (57 - 115)
052 <sup>2</sup>	Somerville, Mystic River, near Somerville Marginal CSO facility (MWR205) – marine	S	173	23	21 (14 - 31)	55 (20 - 149)	89 (60 - 134)	376 (139 - 1011)
		B	81	9	7 (4 - 11)	7 (2 - 22)	17 (11 - 26)	26 (9 - 71)
069 <sup>2</sup>	Charlestown, near Schrafft's Center at BOS-017 outfall - marine	S	172	24	13 (8 - 19)	13 (5 - 34)	71 (50 - 101)	99 (54 - 183)
		B	72	5	2 (1 - 3)	2 (0 - 7)	9 (6 - 13)	30 (12 - 76)
137 <sup>2</sup>	Mystic River, upstream of Tobin Bridge – marine/Inner Harbor	S	116	24	2 (1 - 3)	2 (1 - 4)	9 (7 - 12)	17 (8 - 36)
		B	116	24	1 (0 - 1)	1 (0 - 1)	1 (1 - 2)	1 (0 - 3)

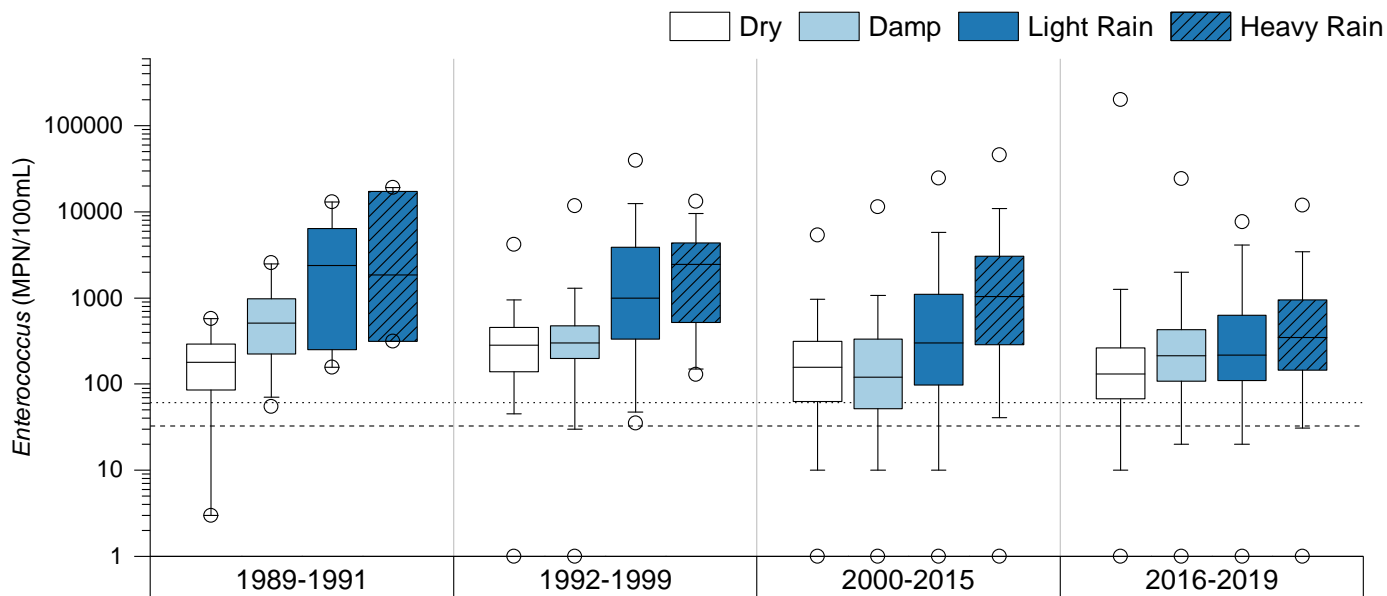
<sup>1</sup>Results in italics are fecal coliform, not *E. coli*.

<sup>2</sup> Geometric mean limit for *Enterococcus* is 35 MPN/100 mL in marine water.

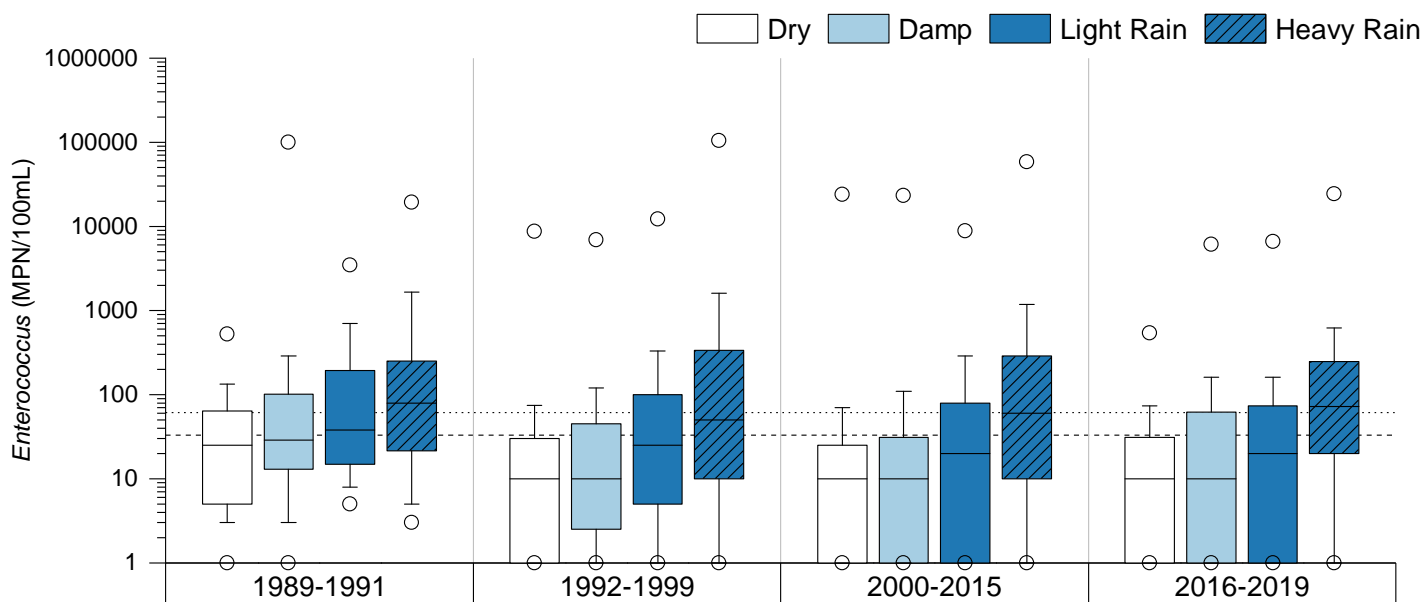


**Figure 4-8. Enterococcus by rainfall condition, Mystic River/Alewife Brook, 2019.**

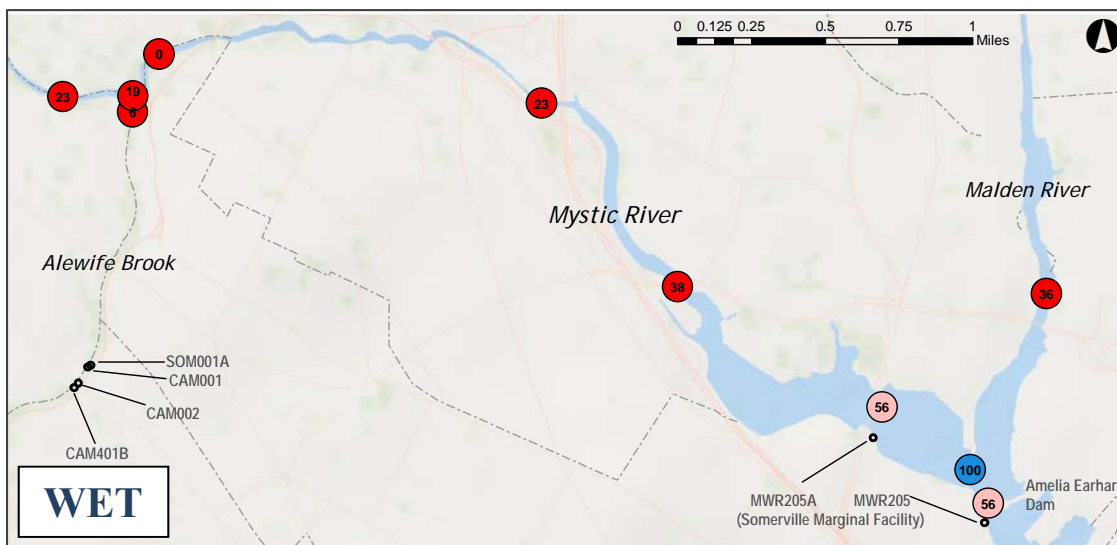
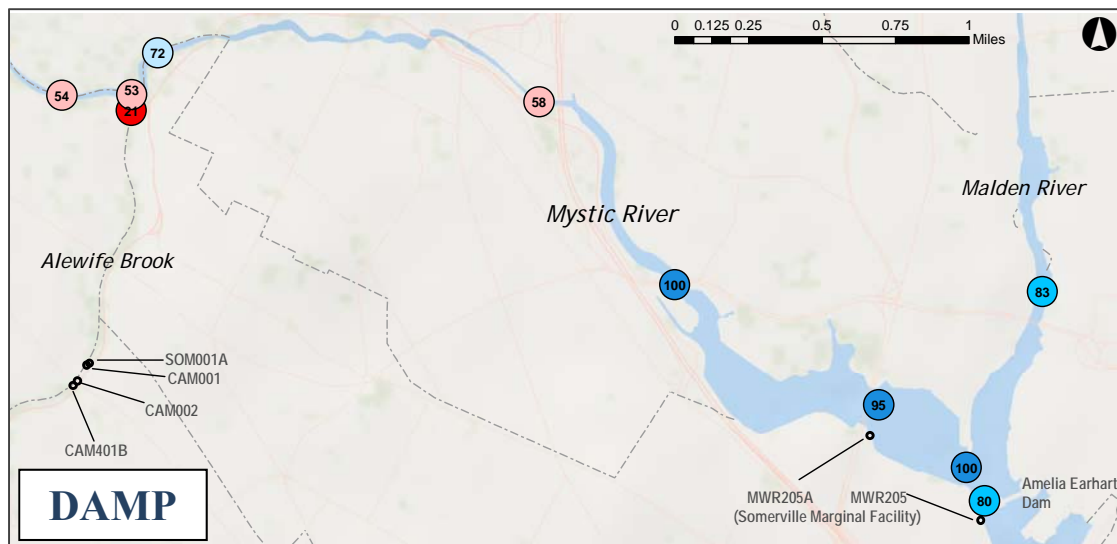
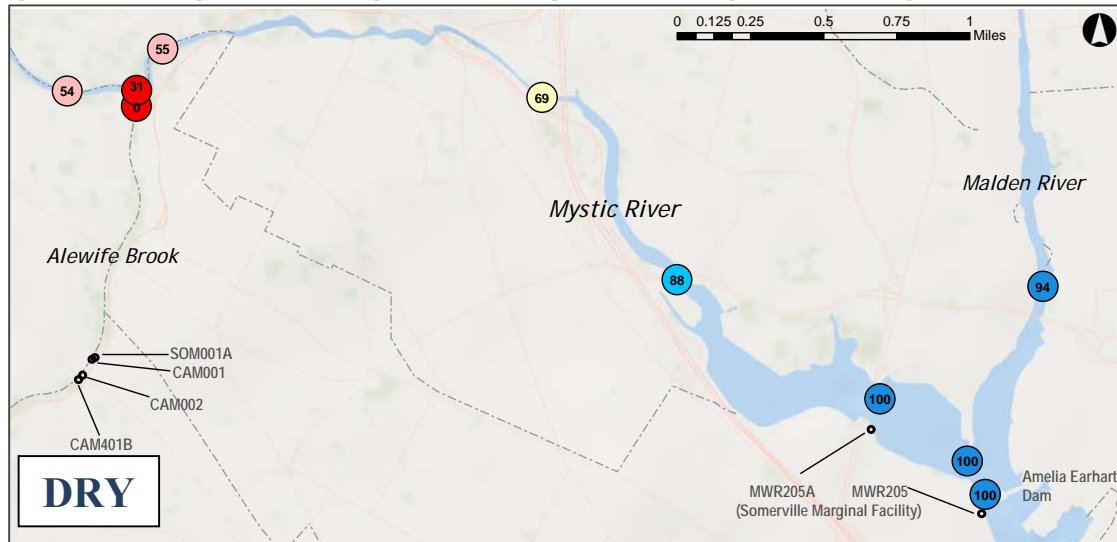
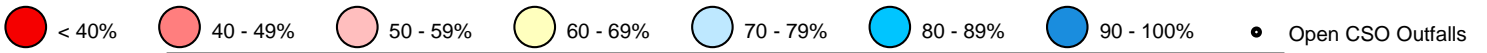
Dashed lines show MADEP state geometric mean standards (33 MPN/100mL and 35 MPN/100mL for freshwater and marine). Dotted lines show single sample State standards (61 MPN/100mL and 104 MPN/100mL for freshwater and marine). Rainfall is from the BWSC Charlestown or USGS Fresh Pond gauge. “Dry”: no rainfall for previous 3 days; “Heavy”: more than 0.5 inches in previous 3 days; “Damp” and/or rain distant in time: any rain < 0.15 inches at least two or three days previous to sampling and/or 0.1 inches in previous day; “Light rain”: between 0.1 and 0.5 inches in previous day and/or between 0.15 and 0.5 in two previous days. “D/S”: downstream; “U/S”: upstream.



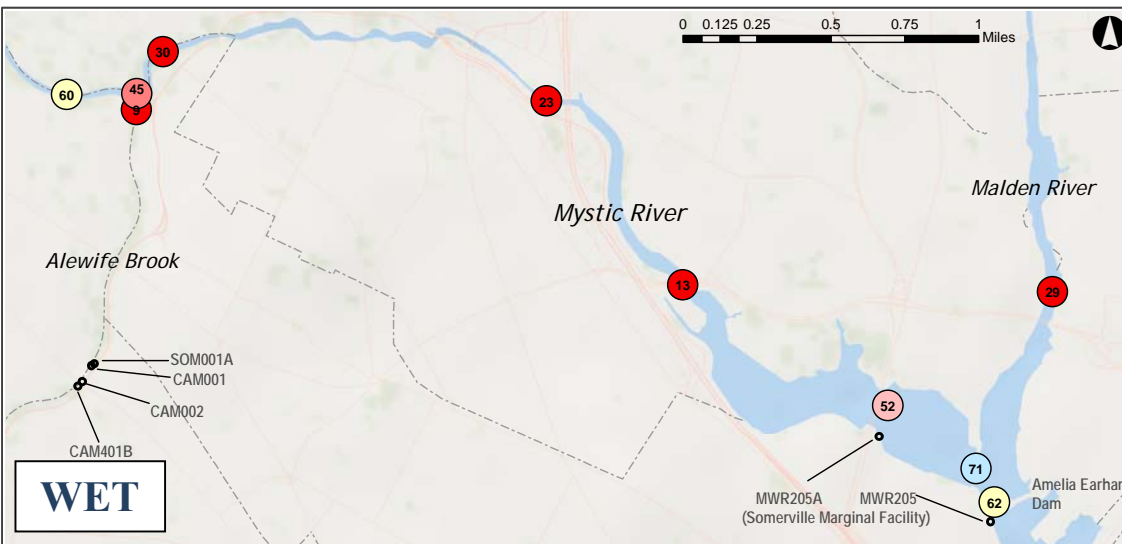
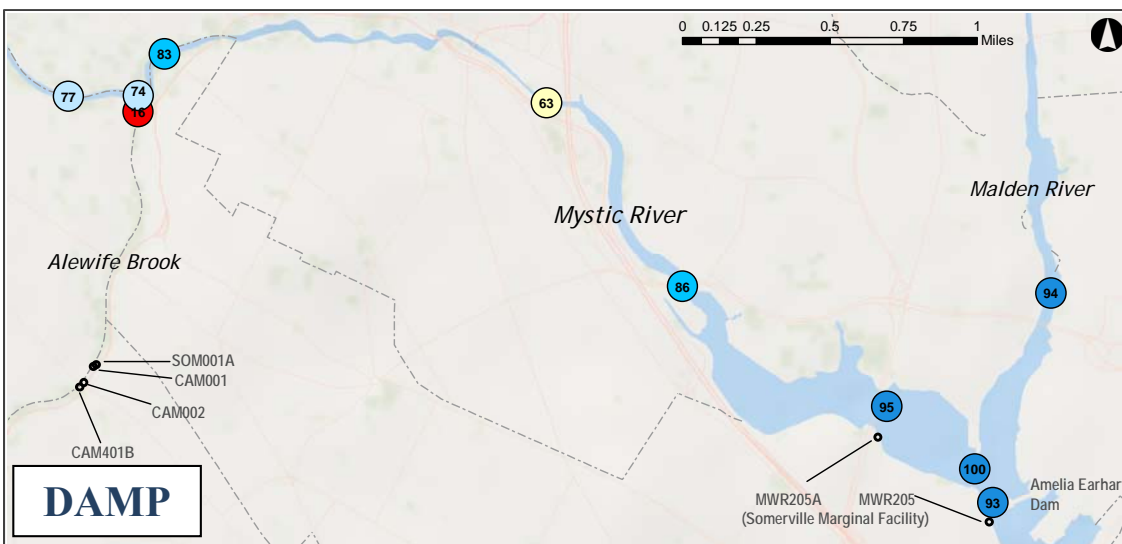
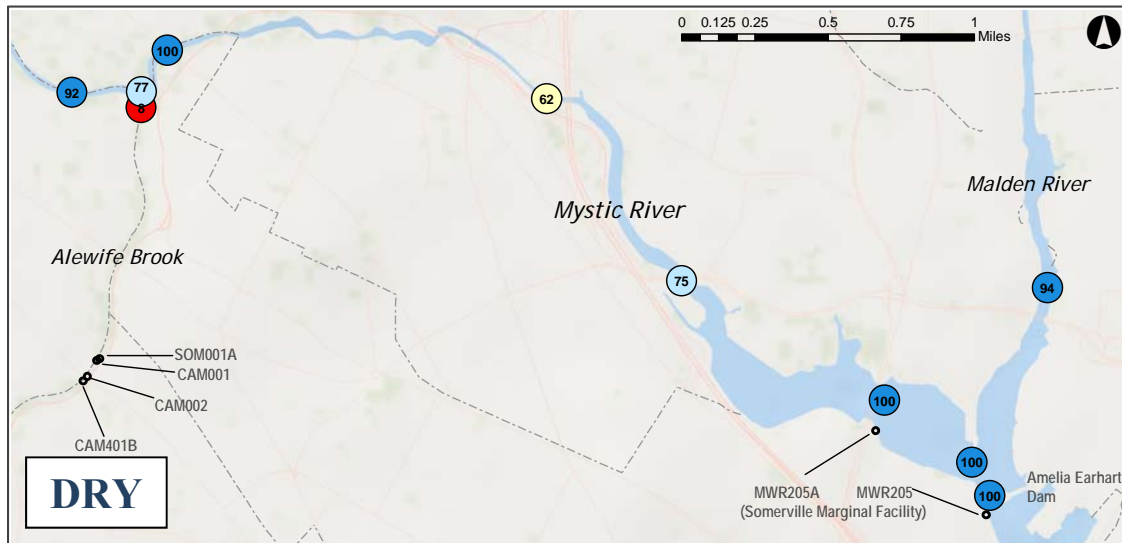
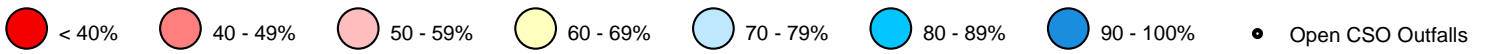
**Figure 4-9. *Enterococcus* over time, Alewife Brook by phase of CSO LTCP and rainfall condition.** Dashed line shows State geometric mean standard (33 MPN/100mL), dotted line shows single sample standard (61 MPN/100mL). Data includes results for stations 174, 074, 277, 172, 276 and 070. Rainfall is NOAA rainfall from Logan airport. “Dry”: no rainfall for previous 3 days; “Heavy”: more than 0.5 inches in previous 3 days; “Damp” and/or rain distant in time: any rain < 0.15 inches at least two or three days previous to sampling and/or 0.1 inches in previous day; “Light rain”: between 0.1 and 0.5 inches in previous day and/or between 0.15 and 0.5 in two previous days.



**Figure 4-10. *Enterococcus* over time, Mystic River by phase of CSO LTCP and rainfall condition.** Dashed line shows State geometric mean standard (33 MPN/100mL), dotted line shows single sample standard (61 MPN/100mL). Data includes results for all Mystic River stations in Table 4-1 excepting Alewife Brook. Rainfall is NOAA rainfall from Logan airport. “Dry”: no rainfall for previous 3 days; “Heavy”: more than 0.5 inches in previous 3 days; “Damp” and/or rain distant in time: any rain < 0.15 inches at least two or three days previous to sampling and/or 0.1 inches in previous day; “Light rain”: between 0.1 and 0.5 inches in previous day and/or between 0.15 and 0.5 in two previous days.



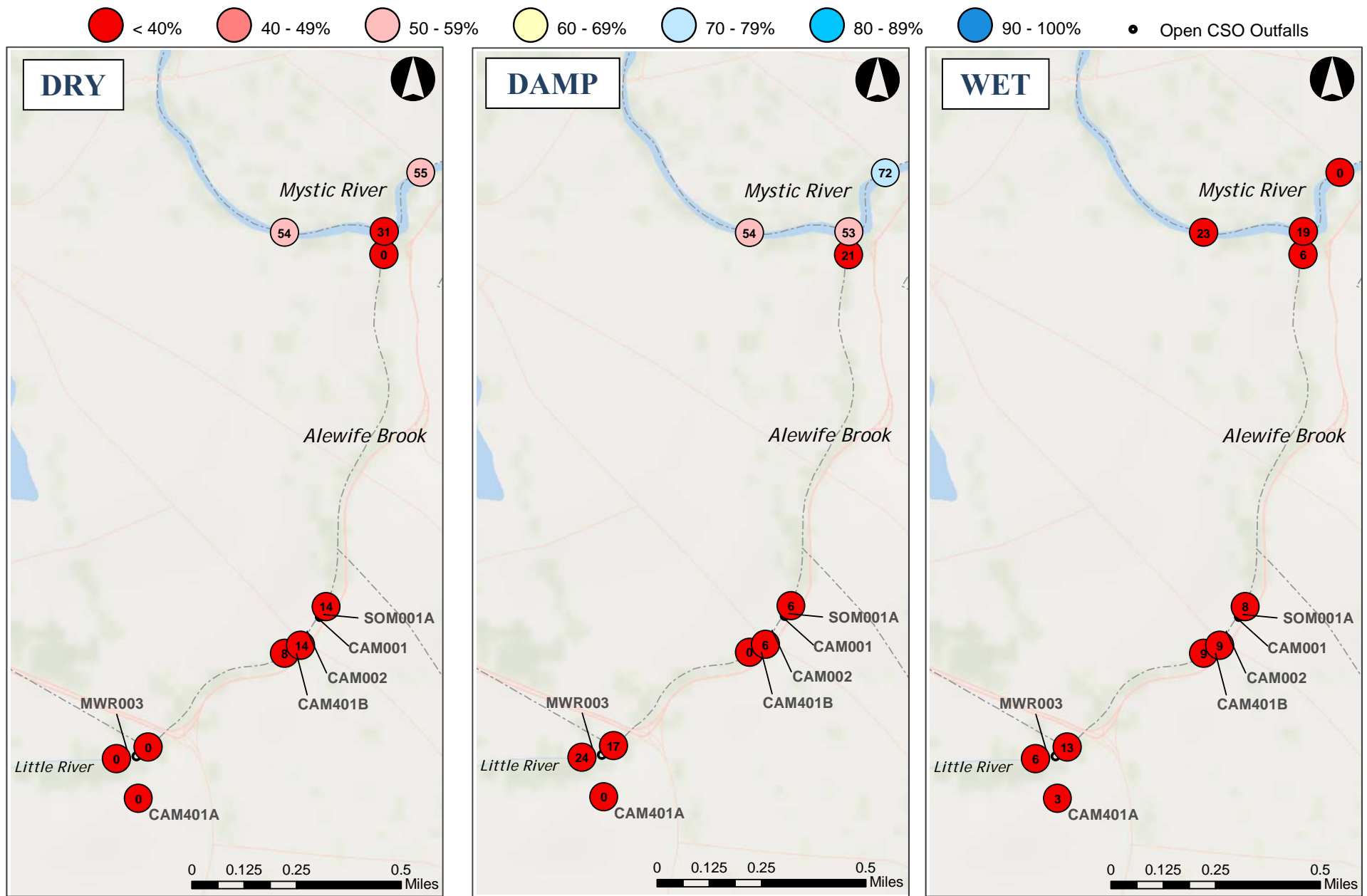
**Figure 4-11. Mystic River *Enterococcus* percent compliance by weather condition, 2019.** Compliance with 61 MPN/100mL single sample State standard. Rainfall is from nearest rain gauge to station. Dry: no rainfall for previous 3 days; Wet: > 0.5” previous 3 days or > 0.15” previous two days; Damp is everything in between. Alewife Brook station 070 near Mystic River confluence included for reference.



**Figure 4-12. Mystic River *E. coli* percent compliance by weather condition, 2019.**

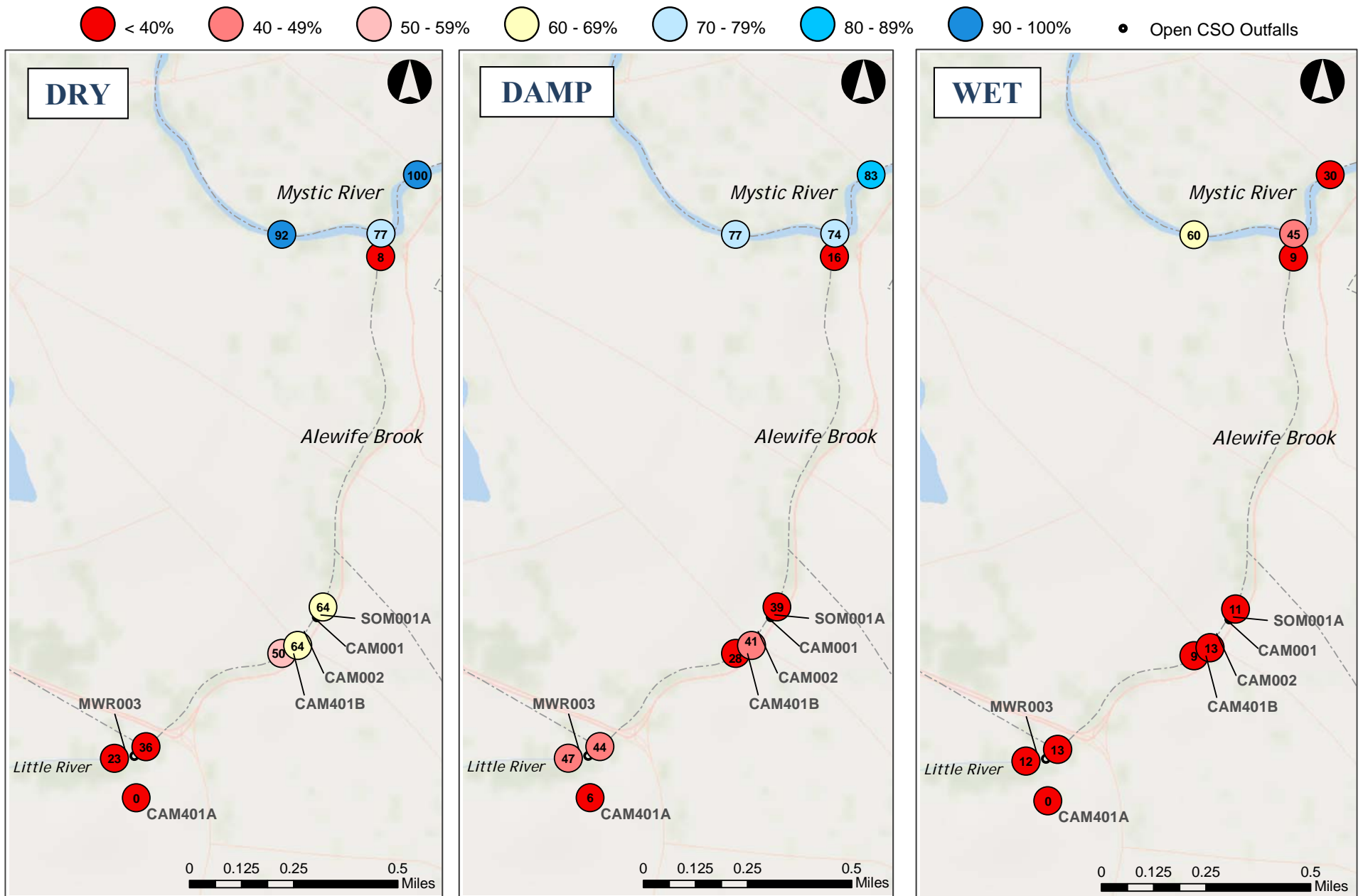
Compliance with 235 MPN/100mL single sample State standard. Rainfall is from nearest rain gauge to station. Dry: no rainfall for previous 3 days; Wet: > 0.5" previous 3 days or > 0.15" previous two days; Damp is everything in between. Alewife Brook station 070 near Mystic River confluence included for reference.





**Figure 4-13. Alewife Brook *Enterococcus* percent compliance by weather condition, 2019.**

Compliance with 61 MPN/100mL single sample State standard. Rainfall is from nearest rain gauge to station. Dry: no rainfall for previous 3 days; Wet: > 0.5" previous 3 days or > 0.15" previous two days; Damp is everything in between. Mystic River stations 083, 057, and 066 included for reference.



**Figure 4-14. Alewife Brook *E. coli* percent compliance by weather condition, 2019.**

Compliance with 235 MPN/100mL single sample State standard. Rainfall is from nearest rain gauge to station. Dry: no rainfall for previous 3 days; Wet: > 0.5" previous 3 days or > 0.15" previous two days; Damp is everything in between. 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, with elevated counts due to the frequency of rain events and targeted sampling directly following them. *Enterococcus* and *E. coli* counts in 2019 were generally higher than the previous five 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 most locations aside from the Lower Mystic Basin. Bacteria concentrations in Alewife Brook fail to meet standards in any weather condition both upstream and downstream of CSOs in that region. Station 174, which is upstream of all CSOs, had poor water quality. Newly added station 308, downstream of CSO outfall CAM401A, had elevated counts in dry weather.

With the exception of Alewife Brook, most locations in the Mystic River met *Enterococcus* and *E. coli* geometric mean limits in dry and damp conditions. While the Alewife did not meet *Enterococcus* or *E. coli* standards in dry or wet weather, conditions in the main stem downstream of the Alewife/Mystic confluence suggest a limited influence of Alewife Brook on bacterial water quality in the Mystic River.

In 2019, surface DO conditions met standards at all Mystic River stations. Bottom water DO concentrations were occasionally below state standards during summer months. Clarity results were generally low or too shallow to be measured.

2019 nutrient levels were largely similar to previous years, with monthly concentrations near long-term averages. Summer chlorophyll *a* values were lower than the previous 5-year average, with peak 2019 chlorophyll *a* values recorded in the fall.

## 5 Storm Sampling Summary

Beginning in 2017, MWRA instituted a comprehensive storm sampling program building on the routine monitoring program which has been in place since 1989. 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 from 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 has sampled 33 storms in the Mystic/Alewife and Charles regions in the past two years. 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 to be used in receiving water model calibration.

### 5.1 2018-2019 bacteria counts by time period and storm size

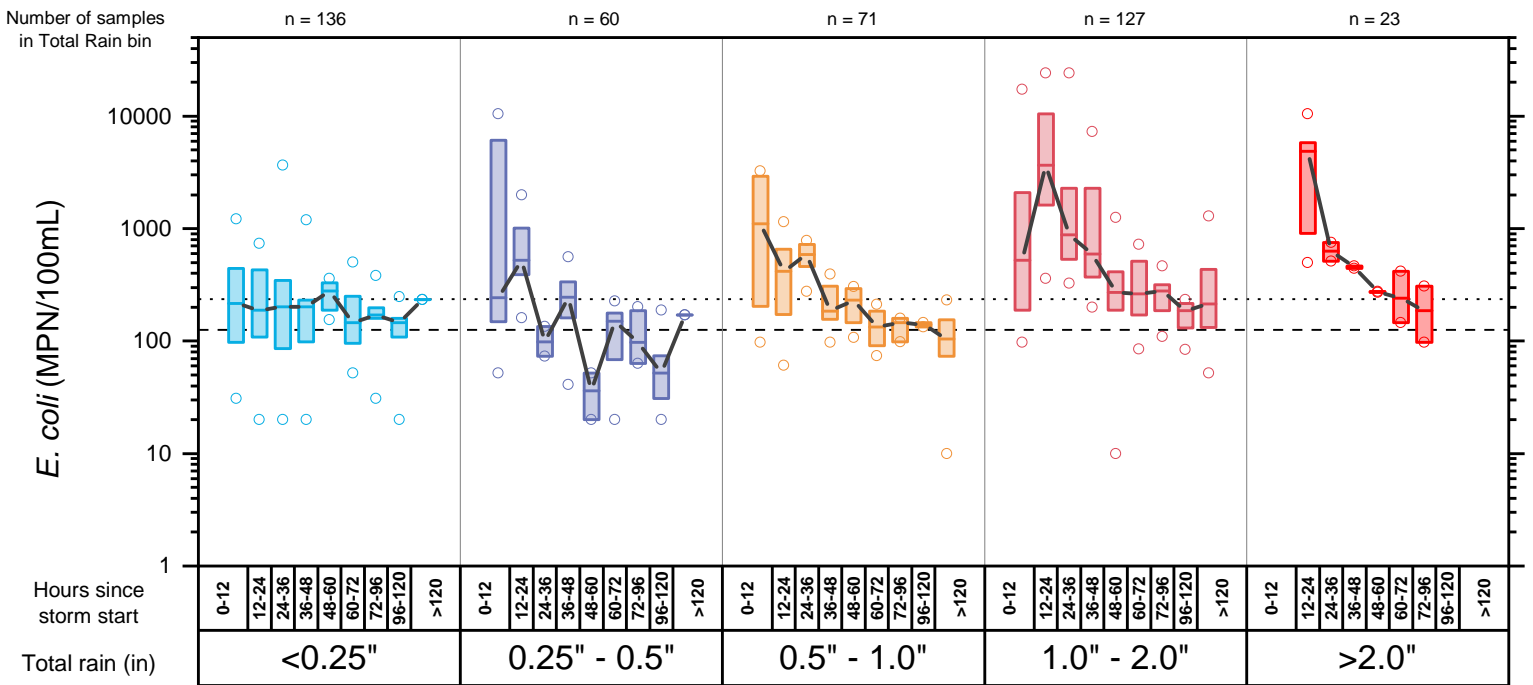
Figures 5-1 through 5-8 present bacteria counts for both *E. coli* and *Enterococcus* in the Charles and Mystic/Alewife regions following varied storm events. Results are binned first by the total rainfall of the most recent storm at a station’s nearest rain gauge, and then by the hours after the start 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 10<sup>th</sup> and 90<sup>th</sup> 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. Approximately 400 results are included in the upstream figures, and 1200 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.

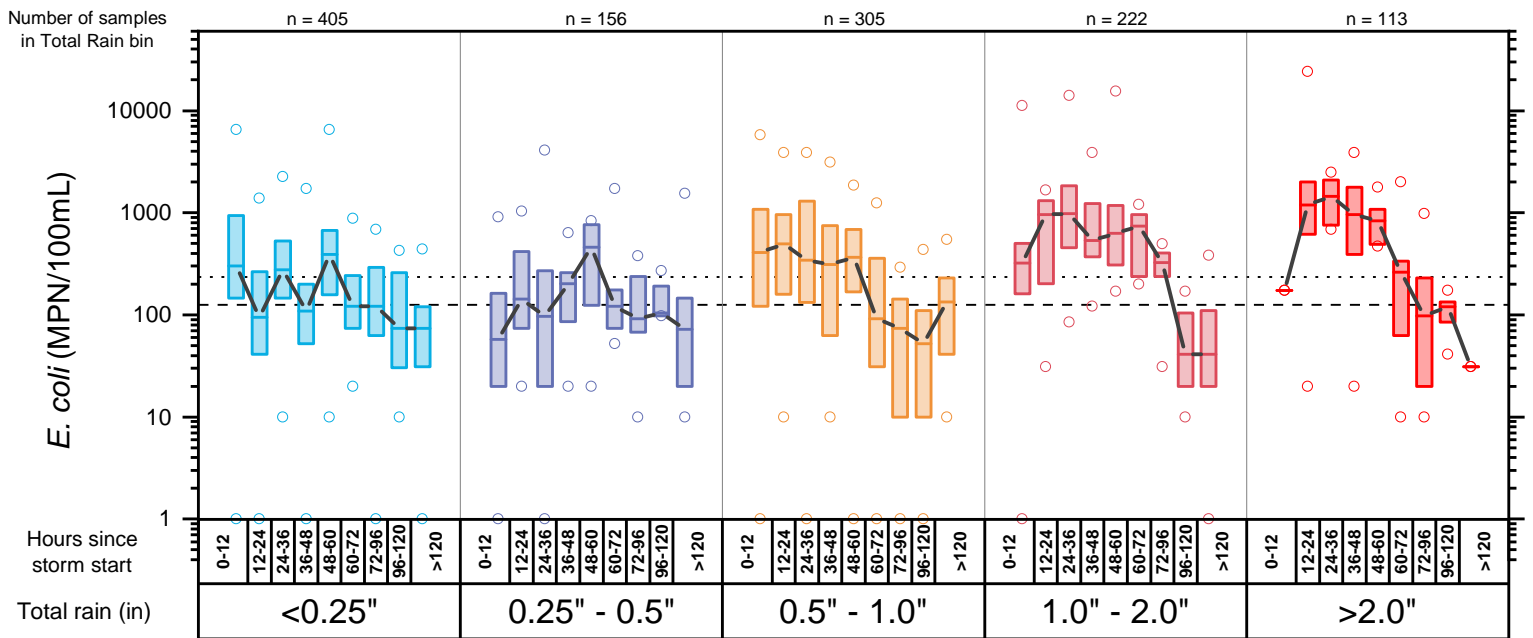
As seen in the top figures, locations upstream of CSOs show high bacteria counts from non-CSO sources in storms >0.25”. Locations downstream of CSOs in the Lower Charles showed minimal contamination in storms below 0.5”. Both indicator bacteria display a similar pattern relative to their respective standards. 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. As expected, the duration of impact increased with storm size, with results typically returning to baseline around 72 hours, even in the largest storms. The greatest magnitude and

duration of impact was observed in 1.0 – 2.0” storms; the lower apparent impact from storms >2.0” may be due to increased dilution, or low sample size.



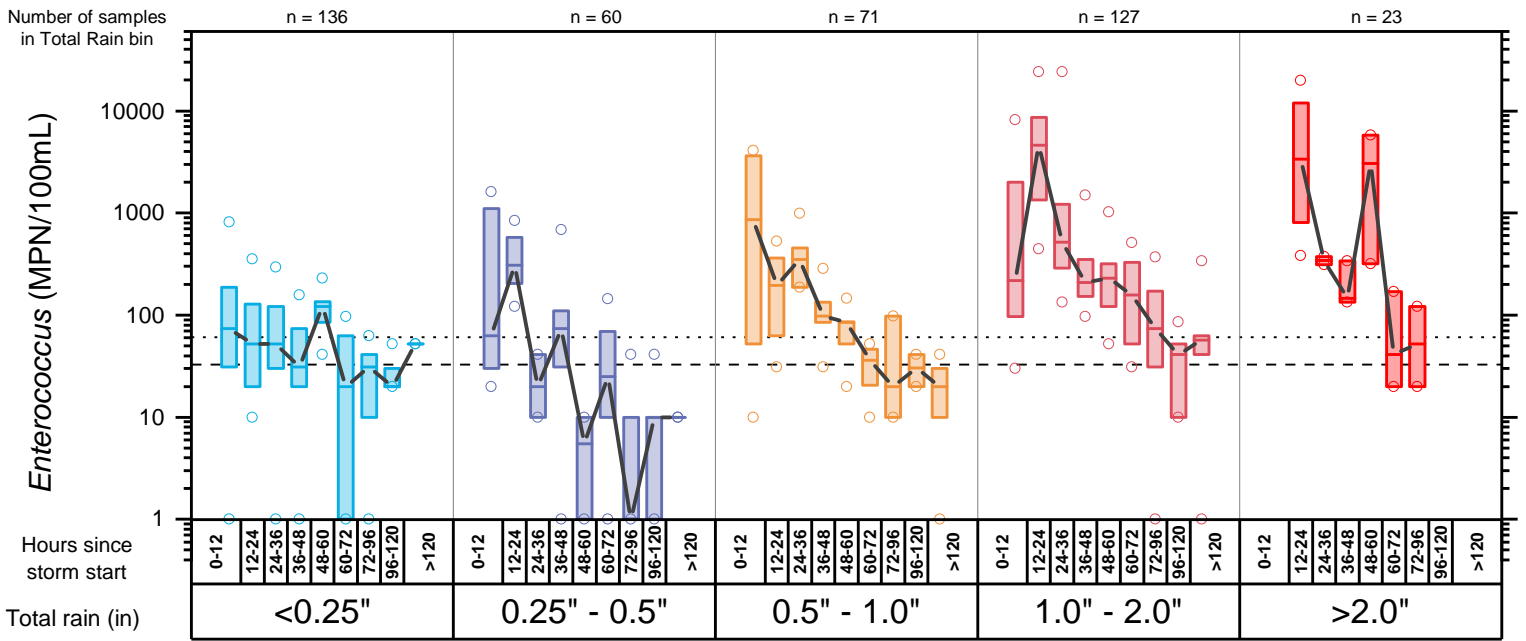
**Figure 5-1. 2018-2019 *E. coli* counts at Charles River stations upstream of all CSOs by storm size and hours after start of rain.**

Dashed line shows MADEP freshwater geometric mean standard of 126 MPN/100mL for *E. coli*; dotted line shows the single sample standard of 235 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).



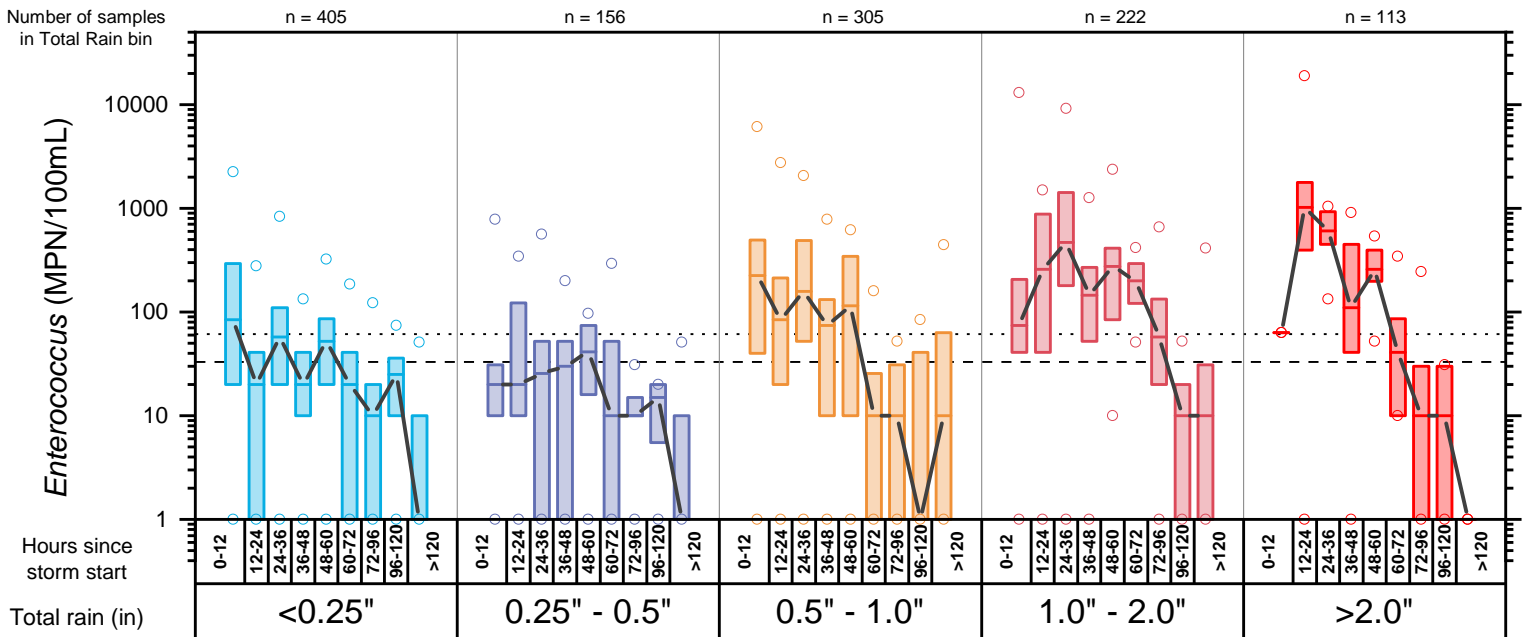
**Figure 5-2. 2018-2019 *E. coli* counts at Charles River stations in reaches downstream of CSOs by storm size and hours after start of rain.**

Dashed line shows MADEP freshwater geometric mean standard of 126 MPN/100mL for *E. coli*; dotted line shows the single sample standard of 235 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. 2018-2019 *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 33 MPN/100mL for *Enterococcus*; dotted line shows the single sample standard of 61 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. 2018-2019 *Enterococcus* counts at Charles River stations in reaches downstream of CSOs by storm size and hours after start of rain.**

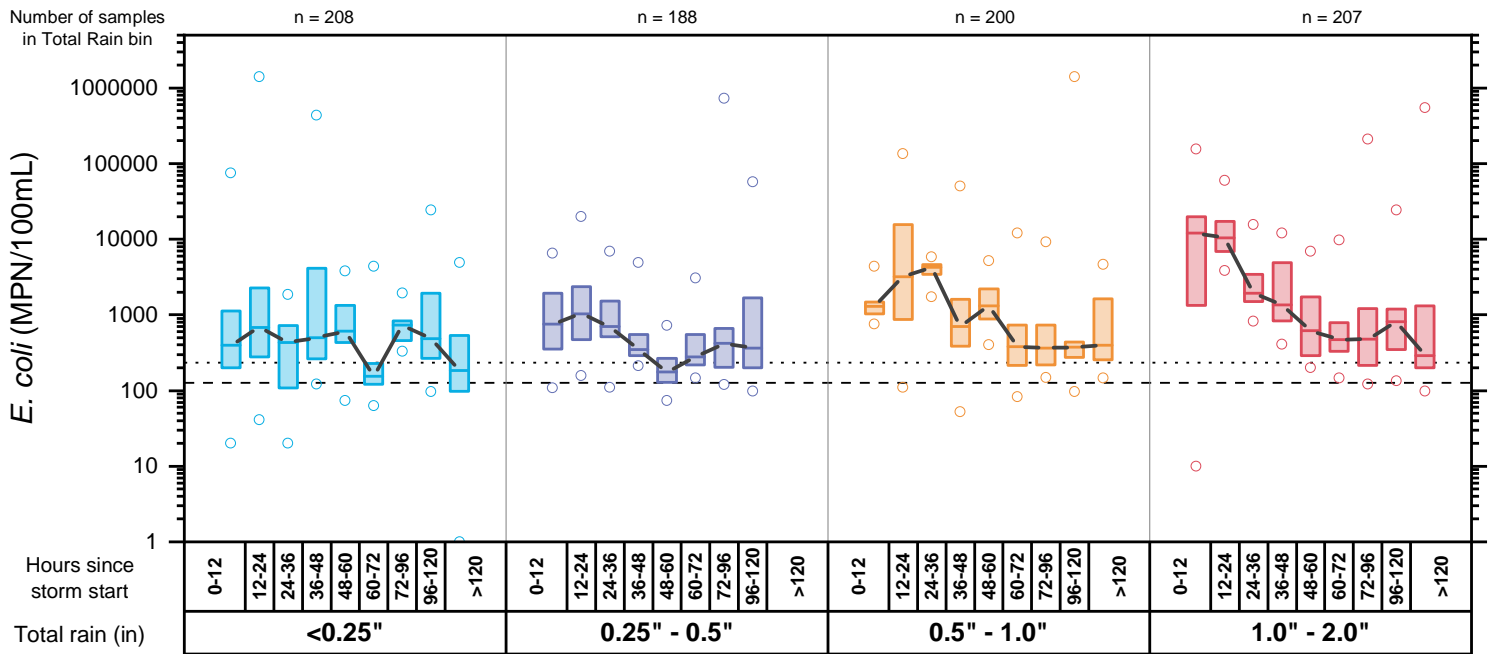
Dashed line shows MADEP freshwater geometric mean standard of 33 MPN/100mL for *Enterococcus*; dotted line shows the single sample standard of 61 MPN/100mL. Total rain is rainfall from nearest MWRA, BWSC or USGS rain gauge to a given location. Total rain is binned to follow Typical Year rainfall categories. 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. There were no storms greater than 2.0" sampled in this region. Sample counts are evenly distributed between storm sizes.

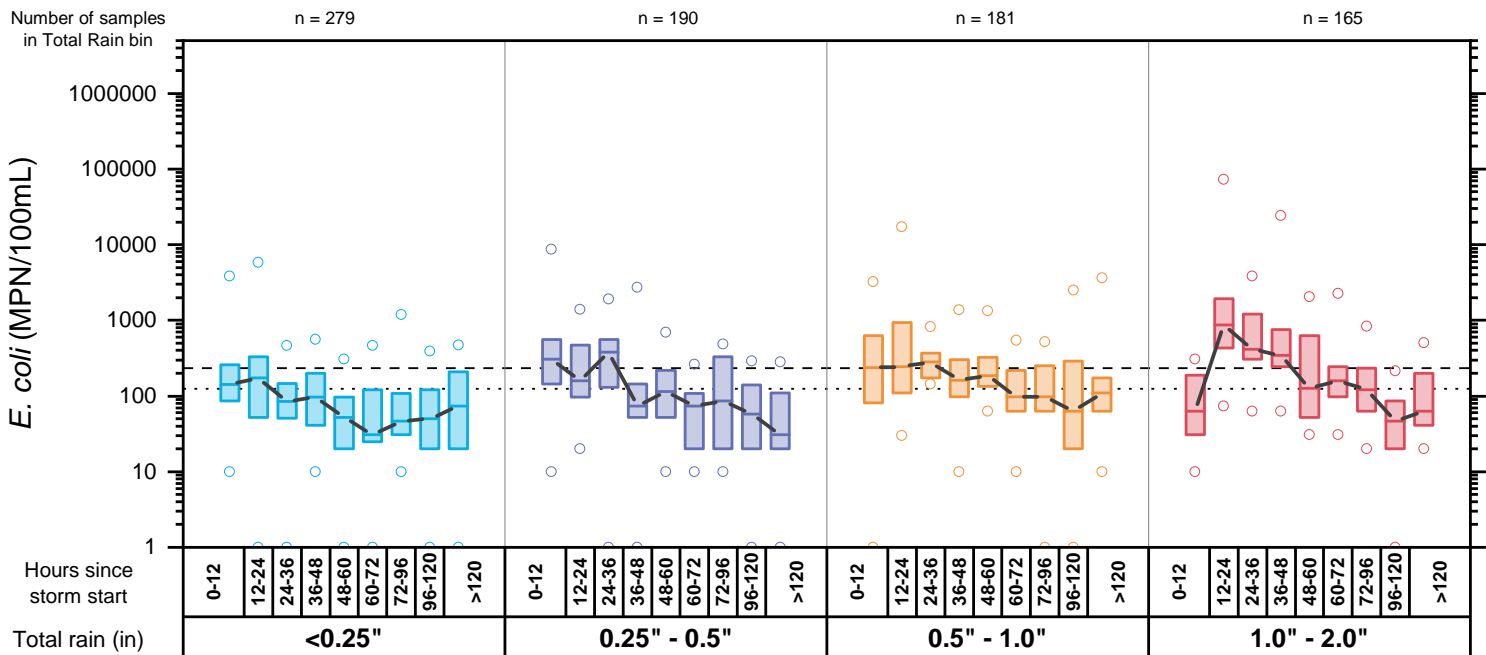
The recovery patterns of bacterial water quality impact are similar between the two indicator species. As discussed in Chapter 4, stations in Alewife Brook often fail to meet state standards in all weather conditions, so the wet weather impacts here should be evaluated by a return to baseline conditions 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". 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.





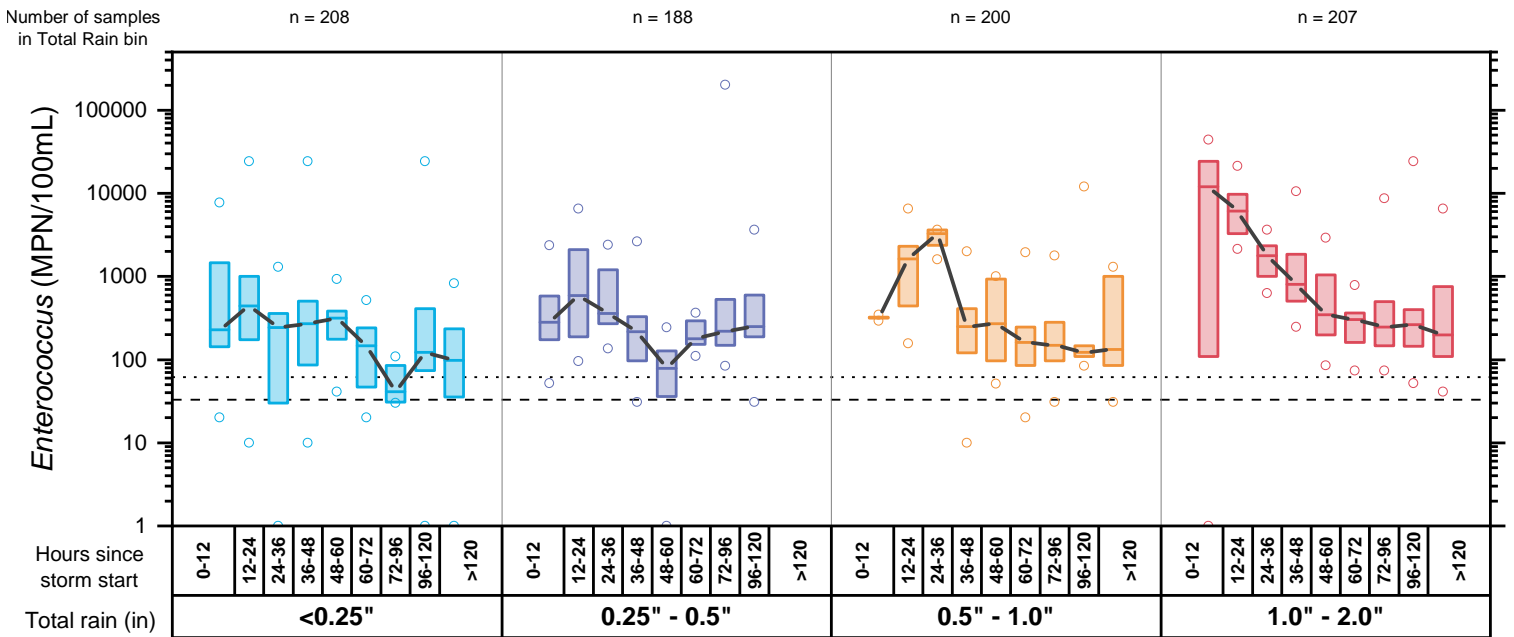
**Figure 5-5. 2018-2019 *E. coli* counts in Alewife Brook by storm size and hours after start of rain.**

Dashed line shows MADEP freshwater geometric mean standard of 126 MPN/100mL for *E. coli*; dotted line shows the single sample standard of 235 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.



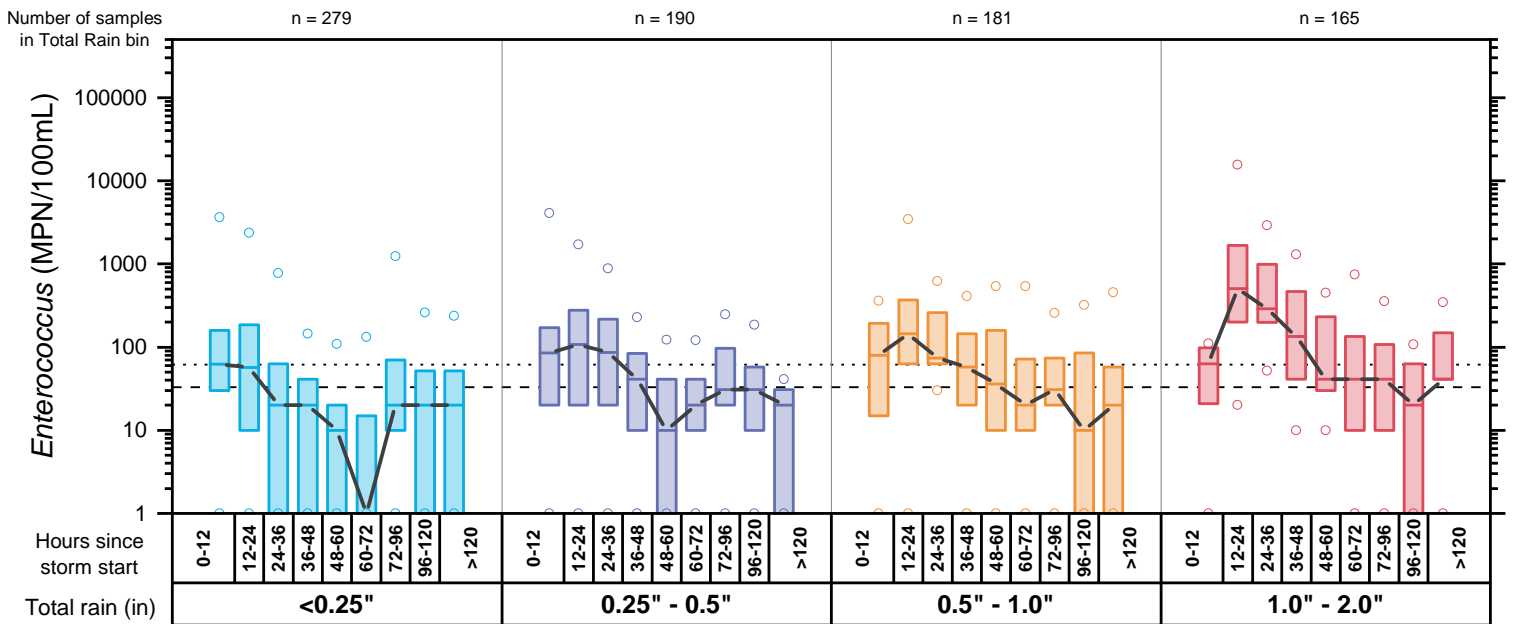
**Figure 5-6. 2018-2019 *E. coli* counts in the Mystic River by storm size and hours after start of rain.**

Dashed line shows MADEP freshwater geometric mean standard of 126 MPN/100mL for *E. coli*; dotted line shows the single sample standard of 235 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. 2018-2019 *Enterococcus* counts in Alewife Brook by storm size and hours after start of rain.**

Dashed line shows MADEP freshwater geometric mean standard of 33 MPN/100mL for *Enterococcus*; dotted line shows the single sample standard of 61 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. 2018-2019 *Enterococcus* counts in the Mystic River by storm size and hours after start of rain.**

Dashed line shows MADEP freshwater geometric mean standard of 33 MPN/100mL for *Enterococcus*; dotted line shows the single sample standard of 61 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.

## 5.2 Storm comparisons

### 5.2.1 Charles River

This section contains a more detailed look at sampling results following two specific storm events in the Charles River in 2019. Although obviously no two storms are the same, these storms were selected because they represented two extremes of CSO discharge – The June 21 storm had minimal CSO (a 7 minute discharge at one outfall) and the August 8 storm had discharges at nearly all CSO outfalls.

#### 5.2.1.1 June 21, 2019

The June 21 storm actually followed two smaller rainfall events on June 18 and June 20. Neither of those earlier events caused any CSO discharges according to MWRA's calibrated hydraulic model. Table 5-1 shows the rainfall characteristics of the June 21 storm, and Tables 5-2 and 5-3 show the characteristics of the smaller storms on June 18 and June 20. There was one sample taken on June 17, and the sampling run on June 18 was before all rain. Samples on June 20 were taken during the moderate rain that day. The June 21 storm started in the early morning hours, and continued into the afternoon, so that day's sampling also occurred in the rain.

Table 5-4 shows the CSOs that discharged in the June 21 storm. The only modeled CSO activation was at regulator RE046-100 upstream of the MWR023 outfall, for only seven minutes and an estimated volume of <0.005 million gallons (MG). Discharge time and volume for that regulator are from MWRA's calibrated hydraulic sewer system model. As previously mentioned, the model indicates that there were no CSO discharges in either the June 18 or June 20 rain events.

*Enterococcus* results for the sampling period June 17 to June 25 show a distinct peak on June 21, when samples were collected during the June 21 rain event. Interestingly, results from June 20, when it was also raining while samples are collected, did not show the same magnitude of increase. Counts from June 19, following the afternoon rain on June 18, mostly held steady from samples collected on the morning of June 18, with the exception of a spike at stations 007 and 008 in the mid-Basin. From June 17 to 20, nearly all samples met the state standard of 61 colonies/100mL except for locations in the Upper Basin.

June 21 sampling results showed increases in counts at nearly all locations, with the Upper Basin locations showing the highest counts. Station 006 in the Mid-Basin also showed a substantial increase. This location is downstream of the Cottage Farm facility, which did not discharge during this storm or in the previous two storms on June 18 and 20. Counts at station 145, which is directly downstream of the MWR023 outfall, were high, but lower than results at any of the Upper Basin locations and 006, none of which had any CSO influence in the storms during the sampling period. As noted above, only one of the regulators in the MWR023 system activated, and then only for a few minutes. Discharges from MWR023 are primarily stormwater, even during a CSO activation of one of the many regulators in its system.

Samples collected from June 22 to 25 were during a period of dry weather. Counts generally declined at all locations until June 24 with the exception of spikes at 007 and 145 on June 22, and 011 on June 23.

By June 24, all locations in the Mid-Basin and Lower Basin met state standards. A majority of the locations in the Upper Basin still did not meet standards. There was a minor increase in counts at a number of locations throughout the river on June 25.

*E. coli* counts showed much the same pattern as *Enterococcus*. Counts in the Upper Basin met the state standard of 235 colonies/100mL at about half the locations before the June 21 storm. After that storm, counts spiked to very high levels. The upper reaches of the Upper Basin – where there is no CSO – saw the highest counts. Stations 006 and 145 also saw high counts on June 21. The result at 145 was lower than any of the Upper Basin stations, despite the small CSO discharge from MWR023.

After that peak on June 21, counts declined at the Upper Basin locations for the rest of the sampling period. In the Mid-Basin, there was a mild increase leading to a small peak on June 23. This was not really seen in the *Enterococcus* data. By June 25, nearly all the stations met the state standard. The ones that did not – 001 and 145 – are spatially quite distant from each other so it is unlikely high counts at those locations are related to each other.

**Table 5-1. Rainfall Characteristics for June 21, 2019 Storm.**

Gauge	Storm Start (June 21, EST)	Storm End (June 21, EST)	Duration (hrs)	Total Rainfall (in)	Peak Intensity (in/15 min)	Peak Intensity (in/hr)
Ward St (MWRA)	01:45	15:00	13.25	0.83	0.26	0.64
Longwood (BWSC) <sup>1</sup>	01:45	08:15	6.5	0.76	0.21	0.59
Charlestown (BWSC)	01:45	05:00	3.25	0.76	0.26	0.65
Fresh Pond (USGS) <sup>2</sup>	6/20 07:00	16:00	33	1.02	0.24	0.44

<sup>1</sup> The BWSC Allston gauge was out of service for this storm. Data was substituted from the BWSC Longwood gauge (BWSC008).

<sup>2</sup> This storm is the same storm that is also in Table 5-3.

**Table 5-2. Rainfall Characteristics for June 18, 2019 Storm.**

Gauge	Storm Start (June 18, EST)	Storm End (June 18, EST)	Duration (hrs)	Total Rainfall (in)	Peak Intensity (in/15 min)	Peak Intensity (in/hr)
Ward St (MWRA)	13:15	16:45	3.5	0.1	0.02	0.07
Longwood (BWSC) <sup>1</sup>	13:15	16:30	3.25	0.09	0.02	0.06
Charlestown (BWSC)	14:00	18:15	4.25	0.12	0.02	0.07
Fresh Pond (USGS)	14:00	18:15	4.25	0.12	0.02	0.07

<sup>1</sup> The BWSC Allston gauge was out of service for this storm. Data was substituted from the BWSC Longwood gauge (BWSC008).

**Table 5-3. Rainfall Characteristics for June 20, 2019 Storm.**

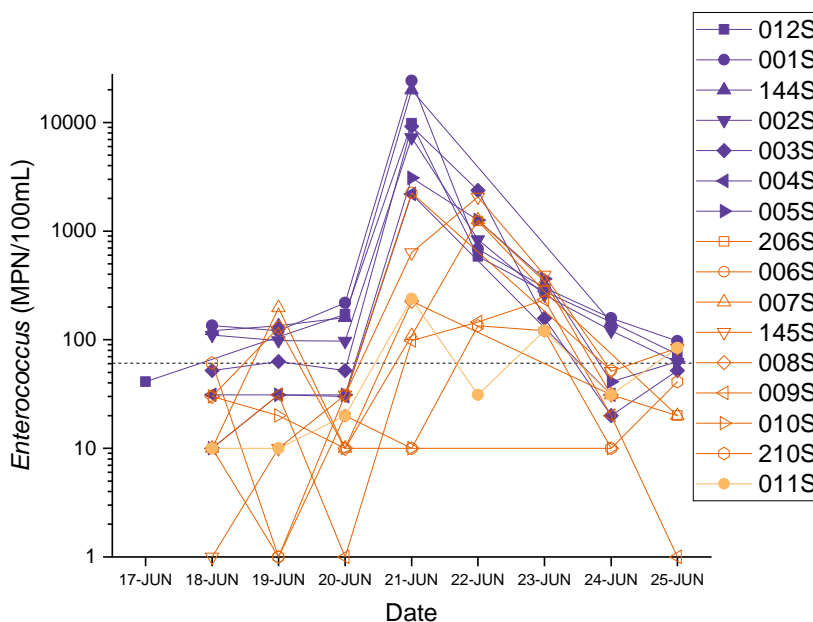
Gauge	Storm Start (June 20, EST)	Storm End (June 20, EST)	Duration (hrs)	Total Rainfall (in)	Peak Intensity (in/15 min)	Peak Intensity (in/hr)
Ward St (MWRA)	05:45	12:15	6.5	0.34	0.15	0.26
Longwood (BWSC) <sup>1</sup>	05:45	13:30	7.75	0.32	0.13	0.23
Charlestown (BWSC)	06:15	11:45	5.5	0.37	0.13	0.28
Fresh Pond (USGS) <sup>2</sup>	07:00	6/21 16:00	33	1.02	0.24	0.44

<sup>1</sup> The BWSC Allston gauge was out of service for this storm. Data was substituted from the BWSC Longwood gauge (BWSC008).

<sup>2</sup> This storm is the same storm that is also in Table 5-1.

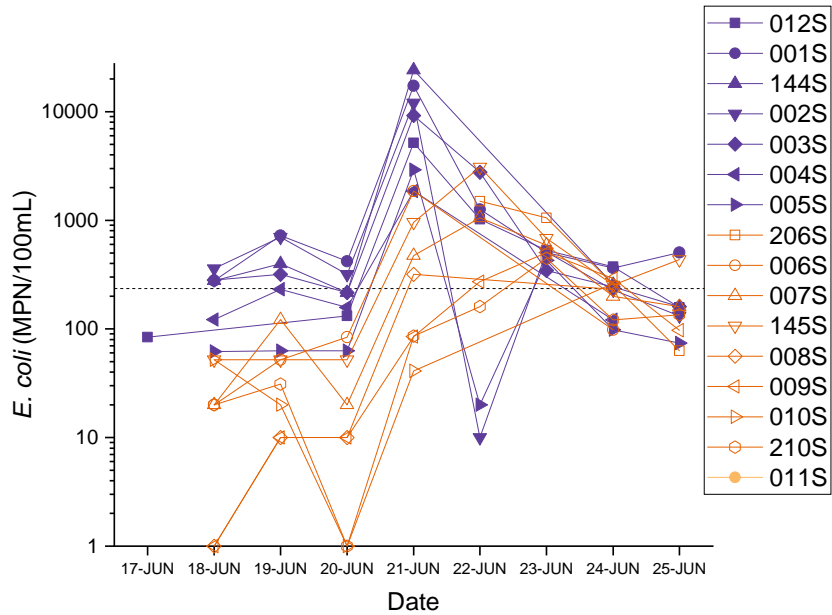
**Table 5-4. CSO Discharges in the June 21, 2019 Storm from the MWRA calibrated hydraulic model.**

Outfall	Discharge Date/Time	Duration (hrs:min)	Volume (MG)	Notes
MWR023	6/21 04:25	0:07	<0.005	Discharge at RE046-100. CSO discharges at MWR023 are majority stormwater.



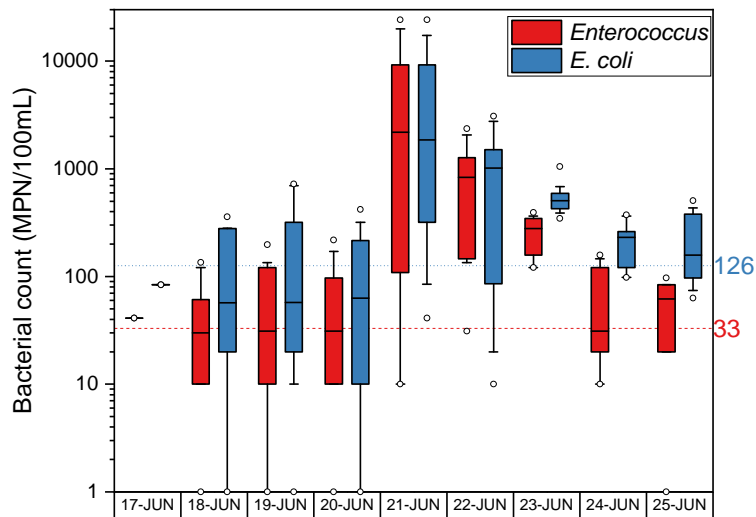
**Figure 5-9. Charles River *Enterococcus* counts, June 17-25, 2019.**

Time series of *Enterococcus* counts before and after the June 21 storm. Dashed line is the MADEP single sample standard of 61 MPN/100mL.



**Figure 5-10. Charles River *E. coli* counts, June 17-25, 2019.**

Time series of *E. coli* counts before and after the June 21 storm. Dashed line is the MADEP single sample standard of 235 MPN/100mL.



**Figure 5-11. Charles River bacteria samples by date, June 17-25, 2019.**

Distribution plot of bacteria samples (both *Enterococcus* and *E. coli*) collected before and after the June 21 storm. The dotted line shows the MADEP *Enterococcus* geometric mean standard and the dashed line the *E. coli* geometric mean standard.

### 5.2.1.2 August 7, 2019

There was a major storm starting in the early afternoon of August 7 and ending in the early hours of August 8. All the rain gauges in the area recorded over two inches of rain in this storm event. Rainfall intensities were quite high, especially near the end of the storm, so there were a number of CSO discharges near the storm's end. Table 5-5 summarizes the rainfall characteristics of this storm. The Fresh Pond, Allston, and Charlestown gauges each registered a small (0.01 inches) rain event at differing times on August 8 and 9. Since the event was minor in rainfall depth and only lasted 15 minutes at each gauge, it is not presented in a table.

Table 5-6 summarizes the discharges from CSOs for this storm. A number of untreated CSO outfalls (CAM005, CAM007, CAM017, MWR018, MWR019, MWR020, MWR023) discharged according to MWRA's calibrated hydraulic model, as well as the Cottage Farm CSO Treatment Facility. For the discharge from Cottage Farm, the volume and discharge duration is from the meters at the facility. Cottage Farm effluent is screened, settled, disinfected, and dechlorinated.

Figure 5-12 shows *Enterococcus* counts from sampling done from August 8 (the morning after the storm ended) to August 13. On August 8, counts were high throughout the Upper Basin, with the highest count at station 144, upstream of any CSOs. Station 003, downstream of CAM005 – which discharged according to the calibrated hydraulic model – has the second highest counts. Elevated counts – although not as high as those in the Upper Basin – were seen further downstream at stations 006 and 145, which are downstream of Cottage Farm and MWR023, respectively. Effluent sampling for *Enterococcus* in the Cottage Farm effluent ranged from <10 to 1300 MPN/100mL (geometric mean of 14 MPN/100mL, 6 samples). This was well below the 7270 MPN/100mL sample collected at station 006 on August 8. Results at station 009, which is near MWR020, showed higher counts than normal. However, counts at station 210, at the CAM017 outfall, were below the state single sample standard.

By August 9, there was a steep decline in counts at all locations except 010 and 210, which saw modest increases, perhaps due to the natural movement of water downstream. On August 10, 60% of the samples throughout the river met the single sample standard. Of the four that did not meet standards, three were in the Upper Basin upstream of any CSOs. The fourth was station 145. Station 145 still did not meet standards, along with station 206 in the Mid-Basin and two locations in the Upper Basin, on August 11. By August 12, only station 012 and 006 did not meet standards, and only barely as both had counts of 63 MPN/100mL. August 13 was a nutrient survey so not all locations were visited, but counts at station 012 decreased enough to meet the state standard.

Figure 5-13 shows the results from the *E. coli* analyses from the same time period. For the most part, results were very similar to the *Enterococcus* results presented above. August 8 *E. coli* results were poor over the entire river, with an especially high result at station 003, downstream of CAM005. Results at station 006 downstream of Cottage Farm were high – 8660 MPN/100mL. However, effluent sampling results at Cottage Farm were at least an order of magnitude lower, ranging from <10 to 884 MPN/100mL (six samples, geometric mean of 85 MPN/100mL). Results at 145 were also elevated, but they were lower than station 007, which is upstream of MWR023. Counts at station 210, at the CAM017 outfall, were higher than the state standard, but only barely.

For the remainder of the sampling period, counts decreased day after day. However, whereas *Enterococcus* saw some significant differences in the magnitude of decreases based on location, *E. coli* results decreased more uniformly. By August 11, 70% of the locations met the state standard, although the three that did not were evenly spread throughout the three regions (001, 145, and 011). By August 12, all locations met the state standard except station 005.

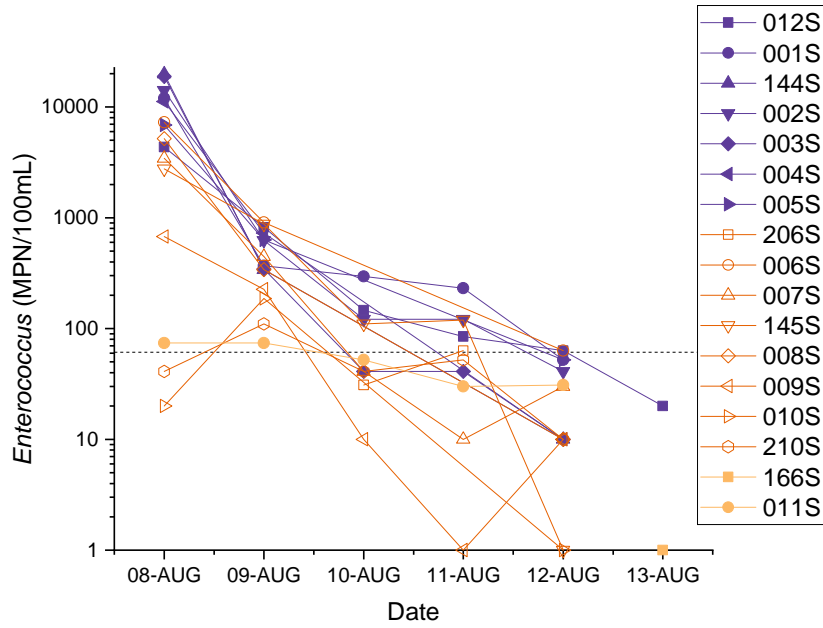
**Table 5-5. Rainfall Characteristics for August 7, 2019 Storm.**

Gauge	Storm Start (Aug 7, EST)	Storm End (Aug 8, EST)	Duration (hrs)	Total Rainfall (in)	Peak Intensity (in/15 min)	Peak Intensity (in/hr)
Ward St (MWRA)	13:30	02:15	12.75	2.29	0.44	1.14
Allston (BWSC)	12:30	01:30	13	2.9	0.49	1.56
Charlestown (BWSC)	12:00	01:15	13.25	2.16	0.31	0.94
Fresh Pond (USGS)	12:30	01:30	13	2.98	0.61	1.41

**Table 5-6. CSO Discharges in the August 7, 2019 Storm from the MWRA calibrated hydraulic model.**

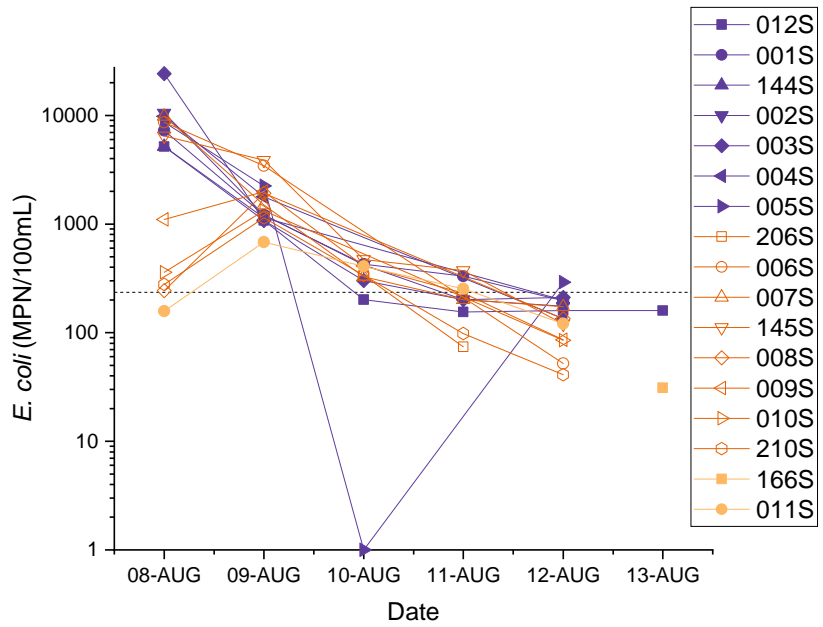
Outfall	Discharge Date	Duration (hrs:min)	Volume (MG)	Notes
CAM005	8/7 22:11	3:01	0.803	
CAM007	8/7 22:30	2:45	3.147	
CAM017	8/7 0:00	1:15	0.95	
MWR018	8/7 23:30	2:15	4.071	
MWR019	8/7 23:30	2:00	2.031	
MWR020	8/7 23:15	5:30	20.711	
MWR023	8/8 0:03	0:45	0.307	Discharges from RE046-100, RE046-105, RE046-381. Discharges from MWR023 are majority stormwater.
MWR201 (Cottage Farm)	8/8 12:50	3:45	19.27	Treated discharge. Volume and duration data from facility meter.





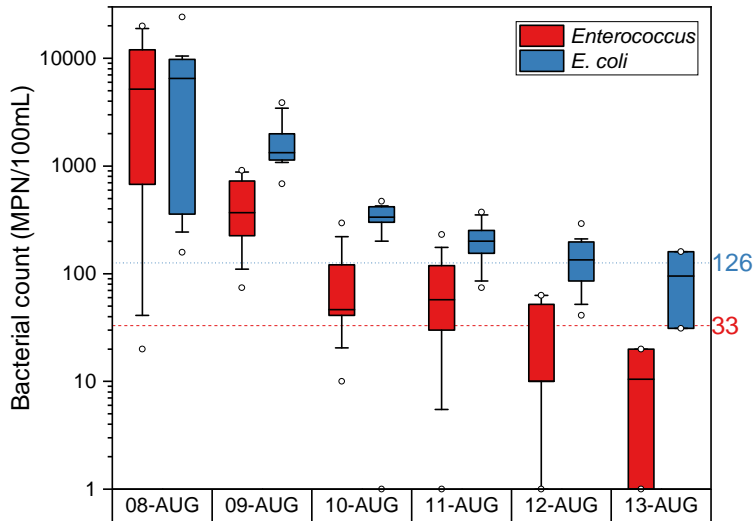
**Figure 5-12. Charles River *Enterococcus* counts, August 8-13, 2019.**

Time series of *Enterococcus* counts after the August 7 storm. Dashed line is the MADEP single sample standard of 61 MPN/100mL.



**Figure 5-13. Charles River *E. coli* counts, August 8-13, 2019.**

Time series of *E. coli* counts after the August 7 storm. Dashed line is the MADEP single sample standard of 235 MPN/100mL.



**Figure 5-14. Charles River bacteria samples by date, August 8-13, 2019.**

Distribution plot of bacteria samples (both *Enterococcus* and *E. coli*) collected after the August 7 storm. The dotted line shows the MADEP *Enterococcus* geometric mean standard and the dashed line the *E. coli* geometric mean standard.

## 5.2.2 Mystic River & Alewife Brook

This section contains a more detailed look at samples following two storm events in the Mystic River and Alewife Brook in 2019. These two storm events were selected because one had numerous CSO discharges and the other did not. The August 28 storm resulted in CSO discharges at four outfalls in Alewife Brook according to MWRA’s calibrated hydraulic model, as well as both outfalls of the Somerville Marginal CSO treatment facility. The November 18 storm did not result in any CSO discharges.

### 5.2.2.1 August 28, 2019

A moderately large storm passed through the area on August 28, beginning in the mid-afternoon and ended in the early hours of August 29. Although the amount of rain was not particularly high (1.13 to 1.37 inches depending on the gauge), intensities were high during the latter part of the storm, which led to a number of untreated CSO discharges in the Alewife Brook, as well as a treated discharge from MWR205A. Table 5-7 shows the rainfall characteristics of this storm.

Table 5-8 shows that, according to MWRA’s calibrated hydraulic model, there were untreated CSO discharges from CAM401A, CAM401B, and SOM001A in the Alewife Brook, all around midnight of August 29. The Somerville Marginal CSO Treatment Facility also discharged through its MWR205A outfall into the freshwater portion of the Mystic. This discharge is disinfected and dechlorinated before discharge.

Sampling for this event began on August 27, so there were two days of baseline data before the post-storm sampling began. Figures 5-15 and 5-16 show the results of *Enterococcus* and *E. coli* monitoring, respectively.

Baseline results for *Enterococcus* were highly variable, including a number of results above the state standard. Counts tend to be fall in a wide range in dry weather in the Alewife Brook and Upper Mystic. Station 308 was especially high, but this was not surprising considering as this location tended to have the highest dry weather counts out of all the locations. Locations in the Lower Mystic Basin generally met the state standard during August 27-28. The previous rain was in the morning of August 23.

Samples taken the morning of August 29 clearly show an increase in *Enterococcus* counts throughout the entire basin. The highest counts in the Alewife were seen at station 308 at the CAM401A outfall and stations 172 and 276, which are downstream of the CAM401B and SOM001A outfalls, respectively. In the Upper Mystic, station 056 near Medford Square and I-93 had very high counts. There are no CSO outfalls near this location. In the Lower Mystic Basin, station 067 near the MWR205A outfall also had elevated counts, although less than the results at 056. The Malden River location, 176, also had very high counts. Treated CSO is discharged from MWR205A, although there is also stormwater that enters into the discharge conduit downstream of the CSO treatment facility.

All locations saw a significant decrease during the August 30 sampling. Locations in the Upper Mystic and Lower Mystic Basin saw a proportionally larger decrease in counts than locations in the Alewife Brook. On August 31, counts continued to decrease in the Alewife Brook but there was a significant increase at station 083 at the outlet of the Mystic Lakes, perhaps from sources upstream of the lakes. Other locations in the Upper Mystic saw small increases. By September 1, none of the Alewife Brook locations met the standard (although this is not uncommon, see Figure 4-7), along with the two furthest upstream stations in the Upper Mystic. Station 056 and locations downstream all met the *Enterococcus* standard.

*E. coli* results for the baseline period show that about a third of the results in Alewife Brook met the state standard for *E. coli*. Both samples at 056 and one sample at 057 did not meet standards – otherwise all locations in the Upper Mystic and Lower Mystic Basin met the standard during August 27-28.

After the storm, all locations on August 29 showed significant increases. As expected, Alewife Brook locations were among the highest, with station 308 being the highest and station 277 the second highest. 277 is upstream of CAM401B and SOM001A, both of which discharged in this storm. Counts decreased along the length of Alewife Brook until station 070 at the mouth, where they increased. Counts increased along the Upper Mystic and Lower Mystic Basin with the lowest counts upstream and the highest downstream, with the exception of the station 167 on the freshwater side of the Amelia Earhart dam, which had the second lowest results in the basin (station 083 was the lowest). Much like *Enterococcus*, the Malden River station (176) showed very high counts, comparable to those seen in the Alewife.

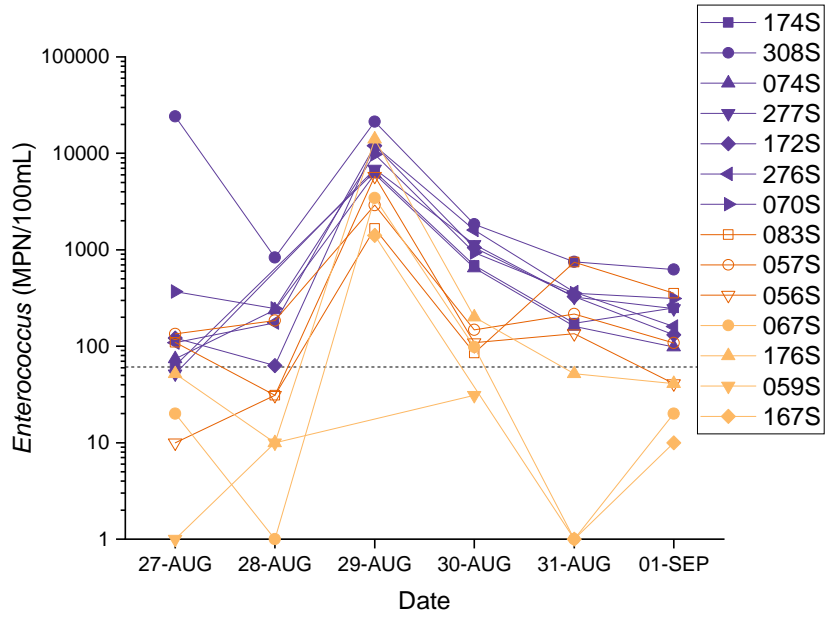
There was a general trend towards decreasing counts all along the Alewife Brook and Mystic River on August 30, with the exception of stations 172 and 276 in the Alewife Brook, which saw small increases. Despite the general downward trend, no locations met state standards. August 31 and September 1 unfortunately saw a general trend of counts leveling off – two of fourteen stations met state standards on August 31, while half of them did on September 1. Spatially, 083 and 067 met standards on August 31, and all stations in Upper Mystic and Lower Mystic Basin except 083 met standards on September 1, as did 172 in the Alewife Brook. There was a noticeable increase at station 308 on September 1, but as noted previously, this station shows very high bacteria counts in all rainfall conditions.

**Table 5-7. Rainfall Characteristics for August 28, 2019 Storm.**

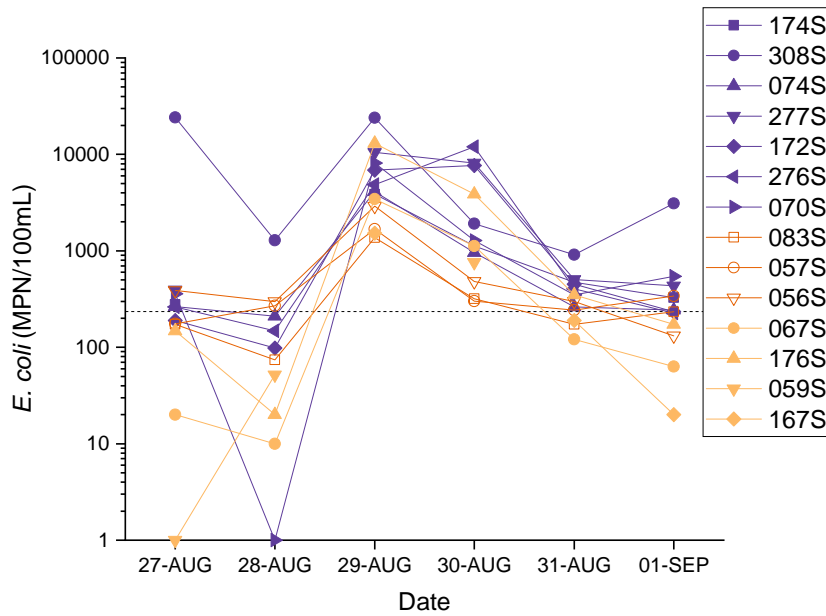
Gauge	Storm Start (Aug 28, EST)	Storm End (Aug 29, EST)	Duration (hrs)	Total Rainfall (in)	Peak Intensity (in/15 min)	Peak Intensity (in/hr)
Somerville Marginal (MWRA)	15:15	01:15	10.25	1.32	0.34	0.7
Charlestown (BWSC)	15:15	03:00	11.75	1.13	0.36	0.6
Fresh Pond (USGS)	14:45	01:00	10.25	1.37	0.21	0.6

**Table 5-8. CSO Discharges in the August 28, 2019 Storm from the MWRA calibrated hydraulic model.**

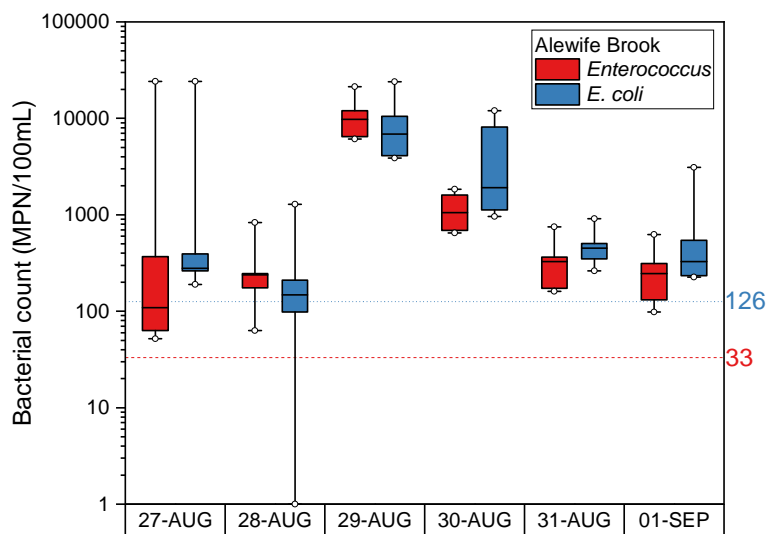
Outfall	Discharge Date/Time	Duration (hrs:min)	Volume (MG)	Notes
CAM401A	8/28 23:49	0:49	0.327	
CAM401B	8/28 23:47	0:42	0.0608	
SOM001A	8/28 0:04	0:26	0.301	
MWR205A (Somerville Marginal)	8/29 00:50	0:40	n/a	Treated, upstream of Amelia Earhart dam. Level sensor only, no volume available. Duration data from facility meter.



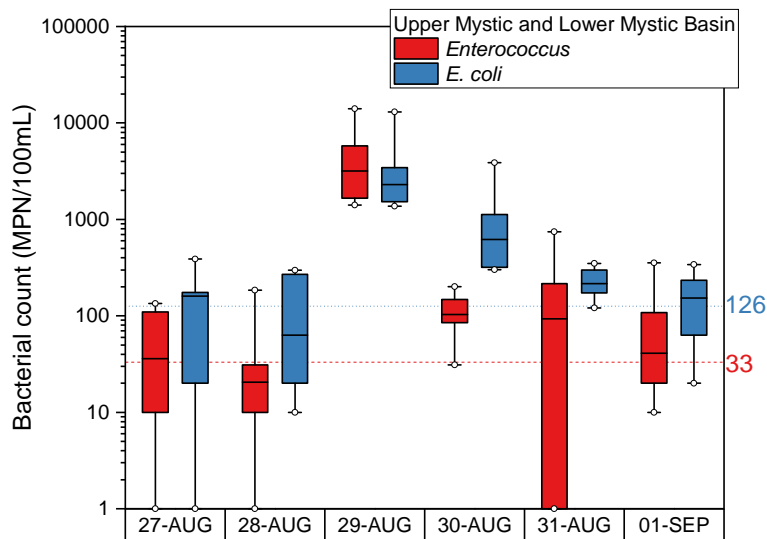
**Figure 5-15. Alewife Brook and Mystic River *Enterococcus* counts, August 27-September 1, 2019.** Time series of *Enterococcus* counts before and after the August 28 storm. Dashed line is the MADEP single sample standard of 61 MPN/100mL.



**Figure 5-16. Alewife Brook and Mystic River *E. coli* counts, August 27-September 1, 2019.** Time series of *E. coli* counts before and after the August 28 storm. Dashed line is the MADEP single sample standard of 235 MPN/100mL.



**Figure 5-17. Alewife Brook bacteria samples by date, August 27-September 1, 2019.** Distribution plot of bacteria samples in Alewife Brook (both *Enterococcus* and *E. coli*) collected before and after the August 28 storm. The dotted line shows the MADEP *Enterococcus* geometric mean standard and the dashed line the *E. coli* geometric mean standard.



**Figure 5-18. Mystic River bacteria samples by date, August 27-September 1, 2019.** Distribution plot of bacteria samples in the Upper Mystic and Lower Mystic Basin (both *Enterococcus* and *E. coli*) collected before and after the August 28 storm. The dotted line shows the MADEP *Enterococcus* geometric mean standard and the dashed line the *E. coli* geometric mean standard.

### 5.2.2.2 November 19, 2019

In the 24 hours between roughly noon on November 18 and noon on November 19, there was a moderate, long duration rain event that measured around half an inch of rain. Rainfall intensity was low. Table 5-9 summarizes this storm. There was also a small storm on November 20, primarily after the sampling that morning. The characteristics of that storm are in Table 5-10. Additionally, at the end of the sampling period, there was a very small rain event (0.01 inches) measured at the Fresh Pond and Somerville Marginal gauges in the early morning. This event is not in a table.

According to the MWRA's calibrated hydraulic model and facility meter data, there were no CSO discharges between November 18 and November 22. Therefore, any water quality impacts are from non-CSO sources.

The biweekly nutrient survey captured some baseline data on November 18 for *Enterococcus*, shown in Figure 5-18. All the baseline data was in the Upper Mystic and Lower Mystic Basin. All locations met the state standard except for 066 in the Upper Mystic. Samples collected on November 19 were high, indicating wet weather influence from the rain that started the previous day. Counts were high all along the Alewife Brook, which is the highest counts at stations 276 and 074. No locations met standards. Of the six locations in the Upper Mystic and Lower Mystic Basin, only two (both in the Lower Mystic Basin) met the standard. Spatially, the Upper Mystic results were lower than the Alewife Brook results, but higher than results in the Lower Mystic Basin.

Sampling on November 20 may have been impacted by the rain – the Fresh Pond gauge has the rain starting as early as 7:15 AM. Regardless of the timing, there seems to have been minimal impact as counts decreased from the previous day at all but two locations – 057 and 176. On November 21, counts continued to decline at all but three locations – 308, 056, and 067. 308, as noted above, is a location with high counts in all weather conditions. 056 is a location that is well downstream of any CSOs, yet can show high bacteria counts in wet weather. 067 is near the MWR205A outfall. While there were no CSOs at the Somerville Marginal CSO facility, stormwater does enter the facility discharge conduit downstream of the facility. The latter two locations could have been affected by the rainfall on November 20 which ended the previous evening. By November 22, seven of the thirteen sampling locations met the standard, with half of those that did not meet in the Lower Mystic Basin, including small increases in the Malden River (176) and at the Amelia Earhart Dam (167).

*E. coli* results (Figure 5-19) showed similar trends to the *Enterococcus* data. November 18 baseline data met the state standard at all but station 177. None of the November 19 samples in the Alewife Brook met the standard, although only station 057 did not meet the standard in the Upper Mystic and Lower Mystic Basin.

Results on November 20 showed decreases at all Alewife Brook locations but increases at two-thirds of the stations in the Upper Mystic and Lower Mystic Basin, including a large increase in station 176 in the Malden River. Only station 057 (the Alewife Brook/Mystic River confluence) and 167 (upstream of the Amelia Earhart Dam) showed decreases. On November 21, four of the seven Alewife Brook locations saw counts decrease, while most locations in the Upper Mystic and Lower Mystic Basin also saw decreases. Counts at stations 056 and 067 increased, perhaps due to the rain the previous day as

mentioned above. Counts at station 167 also increased, although the standard was still met at this location. At the end of the sampling period, November 22, only two of the Alewife Brook stations met the standard, while in the remainder of the river, only one location did not meet the standard (056).

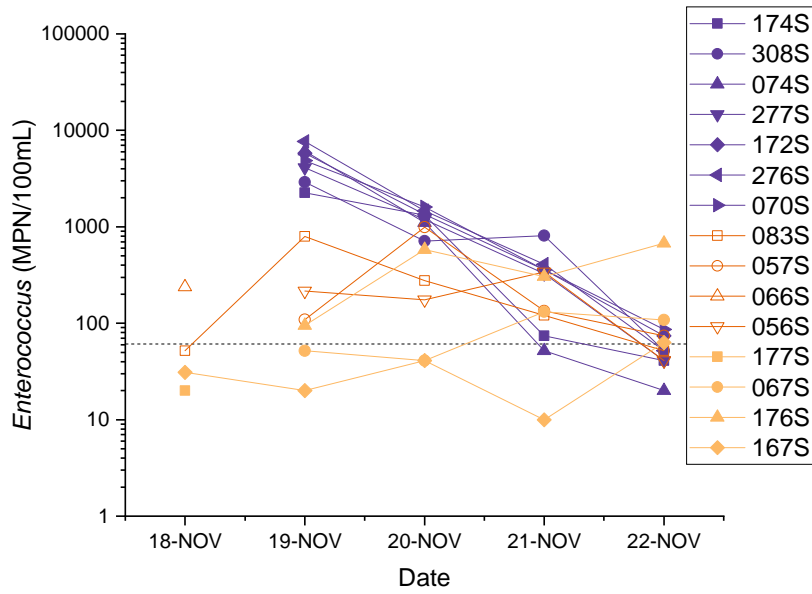
**Table 5-9. Rainfall Characteristics for November 18, 2019 Storm.**

Gauge	Storm Start (Nov 18, EST)	Storm End (Nov 19, EST)	Duration (hrs)	Total Rainfall (in)	Peak Intensity (in/15 min)	Peak Intensity (in/hr)
Somerville Marginal (MWRA)	12:30	11:30	23	0.48	0.04	0.11
Charlestown (BWSC)	12:30	11/18 17:30	5	0.29	0.03	0.08
	11/19 05:30	13:00	7.5	0.25	0.03	0.11
Fresh Pond (USGS)	12:45	11/18 17:45	5	0.23	0.02	0.06
	11/19 05:45	10:45	5	0.23	0.04	0.1

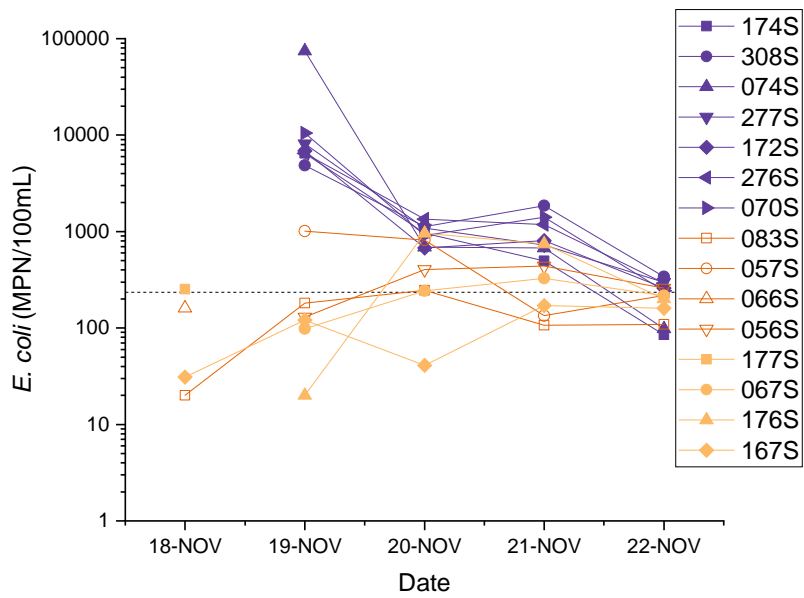
**Table 5-10. Rainfall Characteristics for November 20, 2019 Storm.**

Gauge	Storm Start (Nov 20, EST)	Storm End (Nov 20, EST)	Duration (hrs)	Total Rainfall (in)	Peak Intensity (in/15 min)	Peak Intensity (in/hr)
Somerville Marginal (MWRA)	11:30	19:30	8	0.2	0.02	0.06
Charlestown (BWSC)	10:15	20:15	10	0.21	0.01	0.05
Fresh Pond (USGS)	7:15	18:15	11	0.15	0.01	0.05

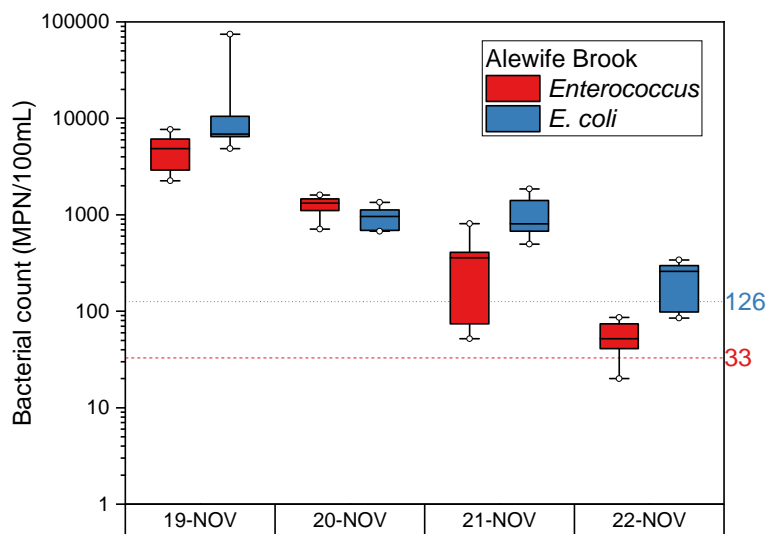




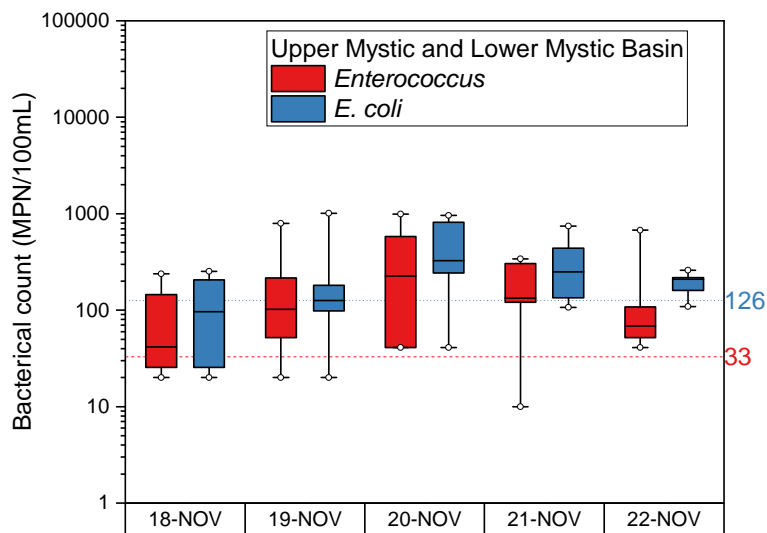
**Figure 5-19. Alewife Brook and Mystic River *Enterococcus* counts, November 18-22, 2019.** Time series of *Enterococcus* counts before and after the November 19 storm. The dashed line is the MADEP single sample standard of 61 MPN/100mL.



**Figure 5-20. Alewife Brook and Mystic River *E. coli* counts, November 18-22, 2019.** Time series of *E. coli* counts before and after the November 19 storm. Dashed line is the MADEP single sample standard of 235 MPN/100mL.



**Figure 5-21. Alewife Brook bacteria samples by date, November 18-22, 2019.** Distribution plot of bacteria samples in Alewife Brook (both *Enterococcus* and *E. coli*) collected before after the November 19 storm. The dotted line shows the MADEP *Enterococcus* geometric mean standard and the dashed line the *E. coli* geometric mean standard.



**Figure 5-22. Mystic River bacteria samples by date, November 18-22, 2019.** Distribution plot of bacteria samples in the Upper Mystic and Lower Mystic Basin (both *Enterococcus* and *E. coli*) collected before after the November 19 storm. The dotted line shows the MADEP *Enterococcus* geometric mean standard and the dashed line the *E. coli* geometric mean standard.

## 6 References

- Bendschneider, K. and Robinson, R.J. 1952. A new spectrophotometric determination of nitrate in seawater. *Journal of Marine Research* 11: 87-96.
- Clesceri, L.S., A.E. Greenberg, and A.D. Eaton. 1998. *Standard Methods for the Examination of Water and Wastewater*. 20th Edition. American Public Health Association, American Water Works Association, Water Environment Federation.
- Fiore, J. and J.E. O'Brien. 1962. Ammonia determination by automatic analysis. *Wastes Engineering*. 33: 352.
- Holm-Hanson, O., Lorenzen, C.J., Holmes, R.W., and J.D.H. Strickland. 1965. Fluorometric determination of chlorophyll. *J. Cons. Int. Explor. Mer.* 30: 3-15.
- Murphy, J. and J. Riley. 1962. A modified single solution for the determination of phosphate in natural waters. *Anal. Chim. Acta.* 27:31.
- MADEP. 2013. Massachusetts surface water quality standards. Massachusetts Department of Environmental Protection, Division of Water Pollution Control, Technical Services Branch. Westborough, MA (Revision of 314 CMR 4.00, effective December 6, 2013).
- MWRA. 2016. Combined Sewer Overflow Control Plan, Annual Progress Report 2015. Massachusetts Water Resources Authority, Boston, MA.
- MWRA. 2020a. (DCN 5000.0). Department of Laboratory Services Quality Assurance Management Plan, Revision 5.0. Massachusetts Water Resources Authority, Boston, MA.
- MWRA. 2020b. Letter dated April 30, 2020 to USEPA and MA DEP regarding CSO Discharge Estimates and Rainfall Analyses for Calendar Year 2019. Massachusetts Water Resources Authority, Boston, MA.
- MWRA. Various dates. Department of Laboratory Services Standard Operating Procedures for various laboratory analyses (Ammonia, Orthophosphate, Nitrate and Nitrite, Total Nitrogen, Total Phosphorus, Total Suspended Solids, Chlorophyll a, Fecal Coliform, *E. coli*, *Enterococcus*).
- Solarzano, L., and J.H. Sharp. 1980a. Determination of total dissolved phosphorus and particulate phosphorus in natural waters. *Limnology and Oceanography*, 25, 754-758.
- Solarzano, L., and Sharp, J. H. 1980b. Determination of total dissolved nitrogen in natural waters. *Limnology and Oceanography*, 25, 750-754.
- US EPA, Office of Water. 1986. Ambient Water Quality for Bacteria – 1986. Washington, D.C. Office of Water. EPA 440/5-84-002.

## **APPENDICES**

### Appendix I

2019 Sampling Program by Storm Characteristics, CSO Activation Records

### Appendix II

Use of local rain gauge data for rainfall characterization

### Appendix III

2019 raw data, laboratory analyses

### Appendix IV

2019 raw data, physical profile results

## Appendix I: 2019 Sampling Program by Storm Characteristics, CSO Activation Records

**Table I-1. Seventeen storm sampling events by storm characteristics at the USGS Fresh Pond rain gauge. CSO activations in bold indicate a CSO activation in the sampled region, Charles or Mystic/Alewife.**

Storm Start	Storm End	Storm Total (in)	Max 1hr Intensity (in)	Max 15-min Intensity (in)	Treated CSO Discharges (Measured)	Untreated CSO Discharges (Modeled)	Region Sampled	Dates Sampled
4/8/2019 4:00	4/8/2019 13:15	0.41	0.13	0.00			CHARLES	4/8/19 - 4/12/19
4/14/2019 23:45	4/15/2019 17:00	0.86	0.65	0.02	Cottage Farm, Prison Point, Somerville-Marginal (Marine), Somerville-Marginal (Freshwater)	<b>CAM005</b> , CAM401A, SOM001A, BOS017	CHARLES	4/15/19 - 4/18/19
4/20/2019 0:15	4/21/2019 2:15	0.34	0.14	0.01			MYSTIC/ALEWIFE	4/20/19 - 4/22/19
4/22/2019 13:15	4/23/2019 7:45	2.15	0.47	0.01	Cottage Farm, Prison Point, Somerville-Marginal (Marine), Somerville-Marginal (Freshwater), Union Park	<b>CAM005</b> , CAM401A	CHARLES	4/23/19 - 4/26/19
4/23/2019 23:00	4/24/2019 3:00	0.12	0.06	0.00				
5/7/2019 19:00	5/7/2019 23:00	0.13	0.07	0.00			MYSTIC/ALEWIFE	5/7/19 - 5/10/19
6/18/2019 14:00	6/18/2019 18:15	0.12	0.07	0.00				
6/20/2019 7:00	6/21/2019 16:00	1.02	0.44	0.02	Prison Point, Somerville-Marginal (Marine), Somerville-Marginal (Freshwater), Union Park	<b>MWR023</b>	CHARLES	6/18/19 - 6/25/19
7/6/2019 16:00	7/6/2019 19:45	1.09	0.82	0.02	Somerville-Marginal (Marine), Somerville-Marginal (Freshwater),	<b>BOS017</b> , CAM401A, CAM401B, SOM001A, MWR023, CAM005	MYSTIC/ALEWIFE	7/5/19 - 7/11/19

Storm Start	Storm End	Storm Total (in)	Max 1hr Intensity (in)	Max 15-min Intensity (in)	Treated CSO Discharges (Measured)	Untreated CSO Discharges (Modeled)	Region Sampled	Dates Sampled
					Cottage Farm, Prison Point, Union Park			
7/12/2019 0:30	7/12/2019 20:45	1.05	0.41	0.01	Somerville-Marginal (Marine)		CHARLES	7/12/19 - 7/17/19
7/22/2019 13:30	7/23/2019 11:15	1.51	0.25	0.01			MYSTIC/ALEWIFE	7/24/19 - 7/28/19
7/31/2019 14:45	7/31/2019 16:15	0.64	0.62	0.03	<b>Somerville-Marginal (Marine), Somerville-Marginal (Freshwater)</b>	<b>SOM001A, BOS017, CAM005</b>	MYSTIC/ALEWIFE	8/1/19 - 8/5/19
8/7/2019 12:30	8/8/2019 1:30	2.98	1.41	0.04	Cottage Farm, Prison Point, Somerville-Marginal (Marine), Somerville-Marginal (Freshwater), Union Park	<b>MWR023, MWR018, MWR019, MWR020, CAM005, CAM007, CAM017, CAM401A, SOM001A, CAM401B, MWR003, CAM001, CAM002, BOS017</b>	CHARLES	8/8/19 - 8/12/19
8/28/2019 14:45	8/29/2019 1:00	1.37	0.60	0.02	<b>Somerville-Marginal (Marine), Somerville-Marginal (Freshwater), Prison Point</b>	<b>CAM401A, CAM401B, BOS017, SOM001A, CAM005</b>	MYSTIC/ALEWIFE	8/27/19 - 9/1/19
9/2/2019 15:45	9/2/2019 22:15	1.41	1.25	0.03	Cottage Farm, Prison Point, Somerville-Marginal (Marine), Somerville-Marginal (Freshwater)	<b>CAM005, CAM007, BOS017, CAM401A, SOM001A, CAM401B, CAM001, CAM002, MWR003</b>	CHARLES	9/3/19 - 9/6/19
9/4/2019 17:30	9/4/2019 18:00	0.27	0.27	0.01	Somerville-Marginal (Marine)			

Storm Start	Storm End	Storm Total (in)	Max 1hr Intensity (in)	Max 15-min Intensity (in)	Treated CSO Discharges (Measured)	Untreated CSO Discharges (Modeled)	Region Sampled	Dates Sampled
10/16/2019 20:30	10/17/2019 13:45	1.39	0.66	0.02	Somerville-Marginal (Marine), Somerville-Marginal (Freshwater), Cottage Farm, Prison Point, Union Park	SOM001A, MWR003, BOS017, CAM401A, CAM401B, MWR003, CAM001, MWR018, MWR019, MWR020, MWR023, CAM005, CAM007	MYSTIC/ALEWIFE	10/17/19 - 10/21/19
10/27/2019 9:00	10/27/2019 20:45	1.21	0.37	0.01	Somerville-Marginal (Marine), Prison Point, Union Park	CAM401A, BOS017	MYSTIC/ALEWIFE	10/28/19 - 10/31/19
11/18/2019 12:45	11/18/2019 17:45	0.23	0.06	0.00			MYSTIC/ALEWIFE	11/19/19 - 11/22/19
11/19/2019 5:45	11/19/2019 10:45	0.23	0.10	0.00				
11/20/2019 7:15	11/20/2019 18:15	0.15	0.05	0.00				
11/24/2019 3:15	11/24/2019 21:15	1.34	0.35	0.01	Prison Point, Somerville-Marginal (Marine), Somerville-Marginal (Freshwater), Union Park	CAM401A	CHARLES	11/25/19 - 11/27/19
11/27/2019 17:15	11/28/2019 12:15	0.28	0.11	0.00				

## **Appendix II: 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.

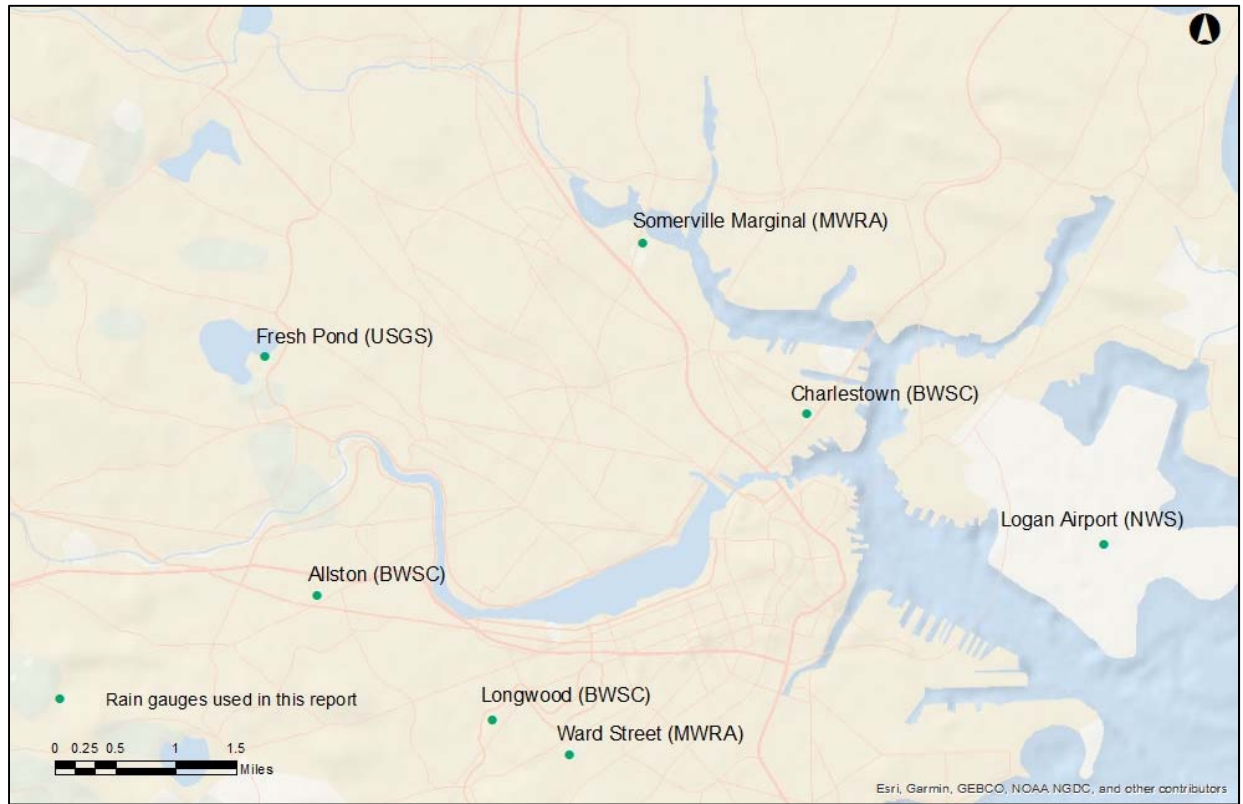
For this report, all rainfall conditions (with several exceptions, see below) are calculated from the rain gauge most local to the sampling station. The pairings of local rain gauges with sampling locations is below in Table 6-1. These local rain gauges are maintained by MWRA, BWSC, and USGS (Figure 6-1). 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 II-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	308	USGS Fresh Pond
144	USGS Fresh Pond	074	USGS Fresh Pond
002	USGS Fresh Pond	277	USGS Fresh Pond
003	USGS Fresh Pond	172	USGS Fresh Pond
004	BWSC Allston	276	USGS Fresh Pond
005	BWSC Allston	070	USGS Fresh Pond
006	BWSC Allston	083	USGS Fresh Pond
206	BWSC Longwood	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 II-1. Map of rain gauges utilized in this report.**

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

### **APPENDIX III**

2019 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.

2019 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	8/26/19 10:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	31	171	
012	10/13/19 8:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.34	20	41	
012	10/12/19 8:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.34	0.36	336	161	
012	10/11/19 9:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.35	0.42	41	1190	
012	10/10/19 9:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.09	0.1	10	86	
012	10/7/19 10:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.16	0.16	0.16	41	63	
012	9/24/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.14	0.14	185	313	
012	9/12/19 10:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.07	0.07	0.07	121	108	
012	8/4/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	146	
012	9/4/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	146	842	
012	10/16/19 10:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.53	0.53	41	31	
012	8/13/19 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20	160	
012	8/12/19 9:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	63	160	
012	8/11/19 8:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	85	155	
012	8/10/19 8:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.38	146	201	
012	8/9/19 8:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	820	1080	
012	8/8/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	4350	5170	
012	8/6/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20	98	
012	8/5/19 10:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	41	146	
012	9/6/19 9:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	74	221	
012	10/29/19 10:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.09	1.52	336	393	
012	1/7/19 10:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.53	20	98	
012	12/16/19 10:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.25	327	512	
012	12/5/19 11:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.38	145	345	
012	11/27/19 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.2	0.2	0.2	262	298	
012	11/26/19 10:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.51	246	301	
012	11/25/19 10:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.51	1.51	359	359	
012	11/18/19 11:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.24	0.24	0.24	52	233	
012	11/5/19 10:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.4	0.4	0.4	30	52	
012	10/14/19 8:42 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.01	52	74	
012	11/1/19 10:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.08	0.17	201	335	
012	10/15/19 10:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	41	109	
012	10/28/19 10:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	1.49	1.49	388	657	
012	10/22/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.16	0.16	0.16	41	52	
012	10/21/19 10:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	41	209	
012	10/20/19 8:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	158	317	
012	10/19/19 8:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.67	432	723	
012	10/18/19 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.67	1.2	1500	2610	
012	10/17/19 10:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.67	1.2	1.2	5170	5170	
012	9/3/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	2100	1620	
012	11/2/19 9:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.08	31	63	
012	5/31/19 10:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.07	0.3	0.3	31	158	
012	6/25/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.13	0.13	0.13	73	158	
012	6/24/19 8:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	146	374	
012	6/23/19 7:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.19	278	529	
012	6/22/19 8:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.19	1.56	583	1020	
012	6/21/19 9:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	9800	5170	
012	6/20/19 8:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	171	132	
012	6/17/19 10:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.11	0.11	41	84	

2019 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	6/14/19 8:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	189	285	
012	7/1/19 10:22 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.16	1.81	143	228	
012	8/3/19 8:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	41	211	
012	6/5/19 10:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.05	0.05	0.09	41	189	
012	9/5/19 8:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	282	368	
012	5/2/19 10:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.06	0.2	42	121	
012	4/19/19 10:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.02	0.02	20	134	
012	4/1/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.09	0.09	20	20	
012	3/19/19 10:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	31	
012	3/6/19 11:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.97	10	20	
012	2/19/19 10:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.31	0.31	10	63	
012	2/7/19 11:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	0.58	0.58	31	86	
012	1/25/19 11:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1	1	391	476.5	
012	6/11/19 10:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.67	0.67	4110	2760	
012	7/25/19 10:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.03	74	98	
012	5/14/19 11:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.97	1.36	364	379	
012	7/7/19 7:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.37	1.37	1350	2600	
012	8/2/19 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.25	285	185	
012	8/1/19 10:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.25	1.25	146	459	
012	7/28/19 8:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	62	132	
012	7/26/19 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	63	185	
012	7/24/19 10:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.03	1.03	97	404	
012	7/18/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.47	0.47	487	1150	
012	7/17/19 8:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	63	213	
012	7/16/19 8:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	52	84	
012	7/10/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	74	143	
012	7/8/19 9:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.37	160	336	
012	7/27/19 8:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	86	110	
012	7/9/19 9:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	52	85	
012	7/11/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.02	0.02	41	131	
012	7/12/19 11:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.81	0.83	0.83	3080	2380	
012	7/13/19 8:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.81	0.83	228	341	
012	7/14/19 8:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.81	135	233	
012	7/15/19 9:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	31	110	
001	8/12/19 9:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	52	197	
001	11/27/19 9:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.2	0.2	0.2	305	464	
001	7/13/19 8:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.81	0.83	496	749	
001	7/12/19 11:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.81	0.83	0.83	2010	2100	
001	7/15/19 8:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	31	278	
001	7/16/19 8:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	52	189	
001	7/17/19 8:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	145	683	
001	8/8/19 8:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	12000	7270	
001	8/9/19 8:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	368	1210	
001	8/10/19 7:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.38	295	426	
001	8/11/19 8:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	231	331	
001	7/14/19 8:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.81	122	259	
001	9/3/19 9:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	3080	3650	
001	9/4/19 8:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	158	413	
001	9/5/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	836	697	

2019 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)
001	9/6/19 8:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	110	350	
001	9/25/19 9:34 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	41	331	
001	9/27/19 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	613	1320	
001	11/1/19 10:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.08	0.17	689	560	
001	11/2/19 9:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.08	86	169	
001	11/26/19 10:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.51	1020	81	
001	4/16/19 10:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.72	0.76	187	459	
001	6/25/19 10:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.13	0.13	0.13	97	504	
001	11/25/19 10:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.51	1.51	1250	1260	
001	4/12/19 9:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	0	63	
001	4/18/19 10:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20	98	
001	3/29/19 10:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	0	52	
001	4/8/19 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	288	259	
001	4/9/19 10:09 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	10	98	
001	6/24/19 8:34 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	158	364	
001	4/11/19 10:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	20	52	
001	4/15/19 10:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.72	0.76	1.04	857	1100	
001	4/17/19 10:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.72	20	108	
001	3/28/19 10:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	0	63	
001	4/23/19 10:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	809	496	
001	4/24/19 10:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	216	495	
001	6/19/19 10:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	121	723	
001	4/10/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	31	161	
001	4/25/19 10:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	31	382	
001	6/22/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.19	1.56	683	1260	
001	6/20/19 8:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	218	419	
001	6/18/19 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	135	278	
001	6/23/19 7:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.19	301	504	
001	6/14/19 8:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	201	455	
001	6/11/19 10:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.67	0.67	3650	3260	
001	6/10/19 10:22 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	20	249	
001	4/26/19 10:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	52	203	
001	6/21/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	24200	17300	
144	9/25/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	63	3650	
144	6/20/19 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	160	216	
144	8/8/19 9:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	19900	5170	
144	6/24/19 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	146	256	
144	7/15/19 9:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20	313	
144	7/16/19 9:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	231	
144	7/17/19 8:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	52	1290	
144	8/9/19 9:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	341	1140	
144	8/12/19 9:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	199	
144	9/3/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	8660	3610	
144	9/4/19 9:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	135	455	
144	9/6/19 9:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	52	323	
144	6/19/19 10:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	134	399	
144	9/27/19 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	197	337	
144	9/5/19 9:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	213	637	
144	3/29/19 10:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	0	31	

2019 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	6/21/19 10:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	19900	24200	
144	6/18/19 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	121	278	
144	3/28/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	0	41	
144	4/8/19 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	63	243	
144	4/9/19 10:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	41	73	
144	4/10/19 9:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	10	63	
144	4/11/19 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	0	63	
144	6/10/19 10:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	52	146	
144	4/23/19 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	669	546	
144	4/24/19 10:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	187	382	
144	4/25/19 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	30	213	
144	4/26/19 9:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	41	97	
144	4/12/19 10:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	0	52	
144	6/14/19 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	288	591	
002	8/11/19 8:09 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	121	201	
002	8/10/19 7:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.38	121	419	
002	8/9/19 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	624	1220	
002	8/8/19 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	14100	10500	
002	7/17/19 8:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	62	265	
002	7/16/19 9:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	185	
002	7/12/19 11:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.81	0.83	0.83	419	1150	
002	7/14/19 8:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.81	52	160	
002	7/13/19 8:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.81	0.83	307	860	
002	8/12/19 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	41	175	
002	11/25/19 10:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.51	1.51	1180	909	
002	7/15/19 9:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	240	
002	9/3/19 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	8160	5480	
002	9/4/19 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	341	733	
002	9/5/19 9:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	134	408	
002	9/6/19 9:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	31	201	
002	9/25/19 9:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	52	1160	
002	9/27/19 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	121	571	
002	11/2/19 9:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.08	10	160	
002	11/26/19 10:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.51	318	467	
002	11/27/19 9:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.2	0.2	0.2	109	336	
002	6/25/19 10:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.13	0.13	0.13	62	132	
002	6/22/19 8:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.19	1.56	833	10	
002	11/1/19 10:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.08	0.17	233	336	
002	3/29/19 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	10	41	
002	6/24/19 9:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	121	228	
002	4/8/19 9:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	41	148	
002	4/9/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	20	135	
002	4/10/19 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	10	63	
002	4/11/19 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	0	20	
002	4/12/19 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	20	96	
002	4/15/19 10:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.72	0.76	1.04	3870	1380	
002	4/16/19 10:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.72	0.76	187	275	
002	4/17/19 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.72	52	146	
002	4/18/19 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	98	160	

2019 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)
002	4/23/19 9:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	384	907	
002	6/19/19 10:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	98	697	
002	3/28/19 9:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	10	10	
002	4/24/19 10:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	448	441	
002	6/20/19 9:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	97	318	
002	6/23/19 7:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.19	259	512	
002	6/18/19 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	110	359	
002	6/14/19 9:56 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	990	645	
002	6/11/19 10:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.67	0.67	697	842	
002	6/10/19 10:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	30	109	
002	4/26/19 9:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	10	98	
002	4/25/19 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	74	161	
002	6/21/19 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	7270	12000	
003	8/11/19 8:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	41	201	
003	8/10/19 7:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.38	41	301	
003	8/9/19 9:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	345	1080	
003	8/8/19 9:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	18900	24200	
003	7/17/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	31	169	
003	7/16/19 9:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	98	
003	7/15/19 9:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	187	
003	7/14/19 7:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.81	41	368	
003	8/12/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	211	
003	7/12/19 11:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.81	0.83	0.83	63	203	
003	11/1/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.08	0.17	201	609	
003	7/13/19 7:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.81	0.83	135	471	
003	9/3/19 9:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	754	1210	
003	9/4/19 9:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	201	1510	
003	9/5/19 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	41	272	
003	9/6/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	52	243	
003	11/27/19 9:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.2	0.2	0.2	97	402	
003	9/27/19 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	52	314	
003	11/2/19 8:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.08	97	364	
003	11/25/19 10:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.51	1.51	2250	3280	
003	11/26/19 10:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.51	216	744	
003	6/25/19 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.13	0.13	0.13	52	161	
003	6/18/19 9:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	52	281	
003	9/25/19 9:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	30	110	
003	4/12/19 9:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	20	98	
003	3/28/19 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	0	20	
003	3/29/19 9:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	0	51	
003	4/8/19 9:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	31	109	
003	4/9/19 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	31	109	
003	6/20/19 9:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	52	216	
003	4/11/19 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	0	63	
003	6/24/19 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20	243	
003	4/15/19 10:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.72	0.76	1.04	350	789	
003	4/16/19 10:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.72	0.76	201	327	
003	4/17/19 9:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.72	52	185	
003	4/18/19 9:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	31	97	



2019 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	4/23/19 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	833	613	
003	6/19/19 9:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	63	318	
003	6/23/19 7:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.19	158	345	
003	4/10/19 9:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	31	282	
003	4/24/19 9:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	292	318	
003	6/22/19 8:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.19	1.56	2360	2760	
003	6/21/19 9:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	9210	9210	
003	6/14/19 9:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	576	583	
003	6/11/19 10:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.67	0.67	201	199	
003	6/10/19 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	31	95	
003	4/26/19 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	31	74	
003	4/25/19 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	63	110	
004	6/21/19 9:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	2190	1860	
004	9/27/19 9:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	0	74	
004	8/9/19 9:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	727	1780	
004	7/16/19 9:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	52	
004	8/8/19 9:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	11200	9800	
004	6/24/19 9:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	31	121	
004	8/12/19 9:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	134	
004	9/3/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	1500	1610	
004	9/4/19 8:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	62	504	
004	9/5/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	63	189	
004	9/25/19 8:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	31	419	
004	6/20/19 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	30	158	
004	7/15/19 9:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	52	
004	9/6/19 8:34 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	20	97	
004	4/9/19 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	10	86	
004	7/17/19 8:56 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	0	41	
004	6/19/19 9:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	31	231	
004	3/28/19 9:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	201	441	
004	4/8/19 9:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	86	110	
004	4/10/19 9:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	41	86	
004	4/11/19 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	20	10	
004	4/12/19 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	0	52	
004	4/24/19 9:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	240	435	
004	4/25/19 9:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	41	134	
004	4/26/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	31	121	
004	6/18/19 8:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	31	122	
004	6/10/19 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	10	41	
004	4/23/19 9:22 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	1020	591	
004	6/14/19 9:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	52	132	
004	3/29/19 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	41	231	
005	6/18/19 8:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	10	62	
005	7/12/19 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.81	0.83	0.83	97	637	
005	6/24/19 8:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	41	98	
005	6/22/19 7:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.19	1.56	1260	20	
005	6/21/19 9:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	3080	2910	
005	6/19/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	31	63	
005	7/15/19 8:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	41	

2019 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)
005	6/14/19 9:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	31	63	
005	9/5/19 9:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	74	393	
005	6/20/19 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	31	63	
005	7/16/19 9:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	0	31	
005	7/17/19 9:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	0	272	
005	7/18/19 9:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.47	0.47	142	528	
005	8/8/19 9:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	6870	8660	
005	8/9/19 8:56 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	631	2250	
005	8/12/19 9:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	52	292	
005	6/11/19 9:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.67	0.67	6130	278	
005	9/4/19 8:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	52	364	
005	6/23/19 6:42 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.19	364	426	
005	9/6/19 8:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	31	63	
005	9/25/19 8:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	31	669	
005	9/27/19 8:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	10	74	
005	9/3/19 9:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	880	1420	
005	4/10/19 9:09 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	10	63	
005	6/25/19 8:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.13	0.13	0.13	63	74	
005	6/10/19 9:22 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	41	10	
005	2/7/19 10:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	0.58	0.58	52	265	
005	3/19/19 9:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	110	
005	3/28/19 9:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	231	464	
005	3/29/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	121	122	
005	4/1/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.09	0.09	20	420	
005	4/9/19 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	63	203	
005	4/11/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	0	63	
005	4/12/19 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	0	63	
005	4/15/19 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.72	0.76	1.04	496	419	
005	5/2/19 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.06	0.2	52	161	
005	6/5/19 10:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.05	0.05	0.09	20	63	
005	5/31/19 10:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.07	0.3	0.3	173	520	
005	4/8/19 9:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	0	41	
005	5/14/19 10:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.97	1.36	84	496	
005	4/16/19 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.72	0.76	20	345	
005	4/26/19 9:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	41	96	
005	4/25/19 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	74	160	
005	4/24/19 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	231	301	
005	4/23/19 9:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	1780	1040	
005	4/19/19 10:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.02	0.02	41	110	
005	4/18/19 8:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	10	97	
005	4/17/19 8:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.72	0	156	
206	7/14/19 7:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.81	31	168	
206	4/18/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	20	107	
206	11/26/19 9:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.51	1380	1610	
206	11/25/19 9:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.51	1.51	907	905	
206	11/2/19 8:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.08	52	185	
206	11/1/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.08	0.17	135	235	
206	8/11/19 7:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	63	74	
206	8/10/19 7:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.38	31	336	

2019 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)
206	11/27/19 8:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.2	0.2	0.2	160	246	
206	4/15/19 9:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.72	0.76	1.04	364	410	
206	7/12/19 10:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.81	0.83	0.83	10	74	
206	6/25/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.13	0.13	0.13	20	63	
206	6/23/19 6:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.19	278	1050	
206	6/11/19 9:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.53	0.67	0.67	145	203	
206	4/17/19 9:02 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.72	10	171	
206	4/16/19 9:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.72	0.76	132	471	
206	6/22/19 7:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.19	1.56	1240	1500	
206	7/13/19 7:12 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.81	0.83	63	301	
006	8/8/19 8:54 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	7270	8660	
006	7/17/19 9:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	0	31	
006	7/16/19 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	31	
006	8/9/19 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	909	3450	
006	6/24/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	52	98	
006	9/25/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	41	601	
006	7/15/19 8:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	135	
006	8/12/19 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	63	52	
006	9/3/19 9:06 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	932	1320	
006	9/4/19 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	52	563	
006	9/6/19 8:16 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	20	156	
006	9/27/19 8:51 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	122	650	
006	4/10/19 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	10	74	
006	6/21/19 9:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	2250	1860	
006	9/5/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	31	74	
006	6/20/19 9:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	31	84	
006	4/12/19 9:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	0	52	
006	3/29/19 9:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	107	146	
006	4/9/19 9:18 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	63	341	
006	4/11/19 9:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	10	41	
006	3/28/19 9:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	443	350	
006	4/23/19 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	1210	1300	
006	6/18/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	10	20	
006	4/8/19 9:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	31	189	
006	6/19/19 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	0	52	
006	4/24/19 9:34 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	359	504	
006	6/14/19 9:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	74	278	
006	6/10/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	10	10	
006	4/26/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	0	148	
006	4/25/19 9:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	134	168	
007	6/22/19 7:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.19	1.56	1270	1050	
007	7/15/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	10	
007	8/8/19 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	3450	9800	
007	8/8/19 8:44 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.38	2.28	2.28	10500	3650	
007	7/17/19 9:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	0	74	
007	7/17/19 9:19 AM	B	CHARLES RIVER	MID-BASIN	4.5	0.43	0.43	0.43	20	107	
007	7/16/19 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	10	
007	7/16/19 8:39 AM	B	CHARLES RIVER	MID-BASIN	3.8	0	0	0	0	0	
007	8/9/19 8:40 AM	B	CHARLES RIVER	MID-BASIN	4.7	0	0.38	2.28	1080	2480	

2019 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)
007	7/15/19 8:40 AM	B	CHARLES RIVER	MID-BASIN	3.7	0	0	0	0	0	
007	7/14/19 7:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.81	10	31	
007	7/13/19 7:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.81	0.83	30	146	
007	7/12/19 10:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.81	0.83	0.83	40	10	
007	6/25/19 9:18 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.13	0.13	0.13	20	161	
007	6/24/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	31	199	
007	8/9/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	448	1500	
007	6/23/19 6:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.19	345	591	
007	9/5/19 8:59 AM	B	CHARLES RIVER	MID-BASIN	3.9	0	0.33	0.33	20	109	
007	6/24/19 8:43 AM	B	CHARLES RIVER	MID-BASIN	4.4	0	0	0	30	345	
007	9/6/19 8:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	0	52	
007	11/27/19 8:35 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.2	0.2	0.2	187	471	
007	11/25/19 9:54 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.51	1.51	335	784	
007	11/2/19 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.08	295	1720	
007	11/1/19 9:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.08	0.17	85	259	
007	9/27/19 8:38 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	20	143	
007	9/27/19 8:38 AM	B	CHARLES RIVER	MID-BASIN	4.3	0	0.27	0.27	20	317	
007	9/25/19 8:27 AM	B	CHARLES RIVER	MID-BASIN	4.5	0	0.01	0.14	41	41	
007	9/4/19 8:30 AM	B	CHARLES RIVER	MID-BASIN	4.1	0.33	0.33	1.44	74	160	
007	9/5/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	0	97	
007	8/10/19 7:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.38	41	327	
007	9/4/19 8:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	132	457	
007	6/21/19 9:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	109	474	
007	9/3/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	529	1670	
007	9/3/19 8:52 AM	B	CHARLES RIVER	MID-BASIN	4.2	0	1.11	1.11	63	109	
007	8/12/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	30	173	
007	8/12/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	5	0	0	0	20	141	
007	8/11/19 7:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	201	
007	9/6/19 8:07 AM	B	CHARLES RIVER	MID-BASIN	4.7	0	0	0.33	31	20	
007	4/9/19 9:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	41	364	
007	4/17/19 9:12 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.72	0	228	
007	4/16/19 9:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.72	0.76	109	246	
007	4/15/19 10:00 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.72	0.76	1.04	20	860	
007	4/12/19 9:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	0	63	
007	4/12/19 9:15 AM	B	CHARLES RIVER	MID-BASIN	4	0.11	0.11	0.12	0	31	
007	4/11/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	10	74	
007	4/11/19 9:08 AM	B	CHARLES RIVER	MID-BASIN	4.2	0	0.01	0.07	41	74	
007	4/18/19 9:06 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	74	
007	4/10/19 8:52 AM	B	CHARLES RIVER	MID-BASIN	4.3	0.01	0.07	0.38	31	148	
007	3/28/19 8:56 AM	B	CHARLES RIVER	MID-BASIN	4	0.01	0.01	0.01	959	419	
007	4/9/19 9:05 AM	B	CHARLES RIVER	MID-BASIN	3.9	0.06	0.37	0.37	86	345	
007	4/8/19 9:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	0	41	
007	4/8/19 9:05 AM	B	CHARLES RIVER	MID-BASIN	4.4	0.31	0.31	0.4	30	97	
007	3/29/19 9:06 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	201	332	
007	3/29/19 9:06 AM	B	CHARLES RIVER	MID-BASIN	4.6	0.03	0.04	0.04	243	862	
007	3/28/19 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	379	259	
007	6/21/19 9:10 AM	B	CHARLES RIVER	MID-BASIN	4	1.19	1.56	1.56	19900	5100	
007	9/25/19 8:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	20	20	
007	4/10/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	31	275	

2019 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)
007	6/14/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	199	650	
007	6/20/19 9:09 AM	B	CHARLES RIVER	MID-BASIN	4.3	0.37	0.37	0.47	96	238	
007	4/23/19 8:57 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.21	2.51	2.54	1310	1070	
007	6/20/19 9:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	10	20	
007	6/19/19 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	197	122	
007	6/19/19 9:04 AM	B	CHARLES RIVER	MID-BASIN	4.5	0	0.1	0.1	31	41	
007	6/18/19 8:25 AM	B	CHARLES RIVER	MID-BASIN	3.9	0.1	0.1	0.21	10	96	
007	6/14/19 9:03 AM	B	CHARLES RIVER	MID-BASIN	4.1	0	0.63	0.63	122	364	
007	6/11/19 9:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.53	0.67	0.67	171	121	
007	4/25/19 8:57 AM	B	CHARLES RIVER	MID-BASIN	4.5	0	0.04	0.25	63	413	
007	4/23/19 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	1170	1170	
007	6/18/19 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	10	20	
007	4/24/19 9:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	336	882	
007	6/10/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	30	41	
007	4/25/19 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	63	187	
007	4/26/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	4.6	0.74	0.74	0.78	20	135	
007	4/26/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	20	173	
007	6/10/19 9:03 AM	B	CHARLES RIVER	MID-BASIN	2.9	0.14	0.14	0.14	51	52	
007	4/24/19 9:21 AM	B	CHARLES RIVER	MID-BASIN	4.4	0.04	0.25	2.55	450	1220	
145	8/11/19 7:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	119	373	
145	11/25/19 9:26 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.51	1.51	238	336	
145	7/13/19 6:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.81	0.83	142	63	
145	7/14/19 6:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.81	10	85	
145	7/12/19 9:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.81	0.83	0.83	0	171	
145	7/15/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	0	
145	7/16/19 8:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	0	
145	7/17/19 9:14 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	0	228	
145	8/8/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	2760	6490	
145	8/9/19 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	880	3870	
145	8/10/19 6:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.38	110	471	
145	8/12/19 8:51 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	120	
145	9/3/19 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	413	1330	
145	9/4/19 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	63	591	
145	9/5/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	20	98	
145	9/6/19 8:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	0	109	
145	9/25/19 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	0	20	
145	9/27/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	10	213	
145	11/27/19 8:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.2	0.2	0.2	657	419	
145	11/2/19 8:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.08	130	74	
145	11/26/19 9:02 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.51	231	616	
145	6/25/19 8:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.13	0.13	0.13	84	435	
145	6/18/19 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	0	52	
145	11/1/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.08	0.17	52	203	
145	4/10/19 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	74	262	
145	6/20/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	31	52	
145	6/24/19 8:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	51	253	
145	3/28/19 9:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	63	368	
145	3/29/19 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	20	110	
145	4/9/19 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	565	4110	

2019 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)
145	4/11/19 9:12 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	0	98	
145	4/12/19 9:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	0	96	
145	4/15/19 9:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.72	0.76	1.04	199	487	
145	4/16/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.72	0.76	487	749	
145	4/17/19 8:35 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.72	84	160	
145	4/18/19 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	31	63	
145	6/19/19 9:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	10	52	
145	6/23/19 6:35 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.19	393	683	
145	4/8/19 9:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	413	907	
145	4/23/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	677	884	
145	6/21/19 9:14 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	631	959	
145	6/22/19 7:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.19	1.56	2060	3080	
145	6/14/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	158	327	
145	6/11/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.53	0.67	0.67	31	84	
145	6/10/19 9:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	62	169	
145	4/26/19 9:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	41	175	
145	4/25/19 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	63	231	
145	4/24/19 9:26 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	253	495	
008	8/8/19 8:40 AM	B	CHARLES RIVER	MID-BASIN	3.7	0.38	2.28	2.28	12000	7700	
008	7/15/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	0	
008	7/17/19 9:25 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.43	0.43	0.43	0	10	
008	7/16/19 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	10	
008	7/16/19 8:33 AM	B	CHARLES RIVER	MID-BASIN	3.3	0	0	0	0	10	
008	7/17/19 9:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	0	41	
008	7/15/19 8:36 AM	B	CHARLES RIVER	MID-BASIN	3.2	0	0	0	0	52	
008	6/21/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	226	318	
008	6/24/19 8:39 AM	B	CHARLES RIVER	MID-BASIN	7	0	0	0	63	246	
008	6/21/19 9:03 AM	B	CHARLES RIVER	MID-BASIN	3.8	1.19	1.56	1.56	2760	2720	
008	6/20/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	10	10	
008	8/8/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	5170	243	
008	9/25/19 8:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	0	10	
008	9/27/19 8:34 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	20	521	
008	8/9/19 8:36 AM	B	CHARLES RIVER	MID-BASIN	3.3	0	0.38	2.28	1040	2280	
008	8/9/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	341	1920	
008	8/12/19 8:43 AM	B	CHARLES RIVER	MID-BASIN	3.6	0	0	0	20	135	
008	8/12/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	134	
008	9/3/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	3.5	0	1.11	1.11	1560	3260	
008	9/3/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	437	1450	
008	9/4/19 8:25 AM	B	CHARLES RIVER	MID-BASIN	3.7	0.33	0.33	1.44	31	359	
008	9/4/19 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	20	369	
008	9/5/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	3.7	0	0.33	0.33	10	108	
008	9/5/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	0	63	
008	9/6/19 8:03 AM	B	CHARLES RIVER	MID-BASIN	3.8	0	0	0.33	10	20	
008	9/25/19 8:23 AM	B	CHARLES RIVER	MID-BASIN	4.4	0	0.01	0.14	10	41	
008	9/27/19 8:34 AM	B	CHARLES RIVER	MID-BASIN	3.6	0	0.27	0.27	30	530	
008	6/20/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	4	0.37	0.37	0.47	20	201	
008	9/6/19 8:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	0	85	
008	4/8/19 9:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	20	195	
008	6/24/19 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	31	231	

2019 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)
008	3/28/19 8:50 AM	B	CHARLES RIVER	MID-BASIN	4.9	0.01	0.01	0.01	97	305	
008	3/28/19 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	10	148	
008	3/29/19 9:01 AM	B	CHARLES RIVER	MID-BASIN	3.1	0.03	0.04	0.04	0	74	
008	6/19/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	130	10	
008	4/8/19 9:01 AM	B	CHARLES RIVER	MID-BASIN	3.4	0.31	0.31	0.4	31	86	
008	4/9/19 8:59 AM	B	CHARLES RIVER	MID-BASIN	3.5	0.06	0.37	0.37	96	373	
008	4/9/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	108	441	
008	4/10/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	3.5	0.01	0.07	0.38	20	279	
008	4/10/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	41	173	
008	4/11/19 9:02 AM	B	CHARLES RIVER	MID-BASIN	3.3	0	0.01	0.07	10	158	
008	4/11/19 9:02 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	10	146	
008	4/12/19 9:11 AM	B	CHARLES RIVER	MID-BASIN	3.9	0.11	0.11	0.12	10	31	
008	4/12/19 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	0	84	
008	6/14/19 8:56 AM	B	CHARLES RIVER	MID-BASIN	3.5	0	0.63	0.63	183	374	
008	3/29/19 9:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	10	171	
008	4/23/19 8:54 AM	B	CHARLES RIVER	MID-BASIN	3.8	0.21	2.51	2.54	985	862	
008	6/18/19 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	30	0	
008	6/14/19 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	97	345	
008	6/10/19 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	10	31	
008	6/19/19 8:59 AM	B	CHARLES RIVER	MID-BASIN	4.3	0	0.1	0.1	30	20	
008	6/10/19 8:56 AM	B	CHARLES RIVER	MID-BASIN	3.4	0.14	0.14	0.14	20	74	
008	4/24/19 9:17 AM	B	CHARLES RIVER	MID-BASIN	3.6	0.04	0.25	2.55	480	794	
008	4/26/19 8:50 AM	B	CHARLES RIVER	MID-BASIN	4	0.74	0.74	0.78	0	96	
008	4/25/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	41	275	
008	4/25/19 8:52 AM	B	CHARLES RIVER	MID-BASIN	3.8	0	0.04	0.25	97	350	
008	4/24/19 9:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	435	857	
008	4/26/19 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	31	52	
008	6/18/19 8:20 AM	B	CHARLES RIVER	MID-BASIN	4.1	0.1	0.1	0.21	10	86	
008	4/23/19 8:54 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	1010	1190	
009	7/16/19 8:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	10	
009	7/17/19 9:33 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.43	0.43	0.43	0	10	
009	7/17/19 9:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	0	10	
009	8/8/19 8:32 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.38	2.28	2.28	0	1190	
009	8/8/19 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	677	1100	
009	8/9/19 8:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	226	1990	
009	7/16/19 8:27 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0	0	0	10	
009	6/23/19 6:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.19	233	504	
009	8/9/19 8:29 AM	B	CHARLES RIVER	MID-BASIN	8.5	0	0.38	2.28	0	209	
009	7/15/19 8:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	10	
009	7/15/19 8:29 AM	B	CHARLES RIVER	MID-BASIN	8.3	0	0	0	0	0	
009	7/14/19 6:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.81	0	41	
009	7/13/19 6:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.81	0.83	0	0	
009	7/12/19 9:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.81	0.83	0.83	0	0	
009	6/25/19 8:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.13	0.13	0.13	0	97	
009	6/24/19 8:32 AM	B	CHARLES RIVER	MID-BASIN	6.4	0	0	0	31	132	
009	6/22/19 7:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.19	1.56	146	272	
009	11/1/19 8:34 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.08	0.17	85	389	
009	6/24/19 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	20	292	
009	9/6/19 7:58 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	10	31	

2019 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)
009	11/27/19 8:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.2	0.2	0.2	243	496	
009	11/26/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.51	413	638	
009	11/25/19 9:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.51	1.51	1120	1620	
009	11/2/19 7:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.08	20	109	
009	8/10/19 6:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.38	10	413	
009	9/27/19 8:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	0	41	
009	6/21/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	98	85	
009	9/27/19 8:29 AM	B	CHARLES RIVER	MID-BASIN	8.4	0	0.27	0.27	0	20	
009	9/25/19 8:17 AM	B	CHARLES RIVER	MID-BASIN	8.5	0	0.01	0.14	10	20	
009	8/11/19 6:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	231	
009	9/6/19 7:58 AM	B	CHARLES RIVER	MID-BASIN	8.5	0	0	0.33	0	63	
009	9/5/19 8:51 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	0	74	
009	9/5/19 8:51 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0.33	0.33	0	31	
009	9/4/19 8:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	52	402	
009	9/4/19 8:21 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.33	0.33	1.44	0	41	
009	9/3/19 8:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	0	97	
009	9/3/19 8:42 AM	B	CHARLES RIVER	MID-BASIN	9.1	0	1.11	1.11	0	10	
009	8/12/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	86	
009	9/25/19 8:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	0	10	
009	4/10/19 8:41 AM	B	CHARLES RIVER	MID-BASIN	8.1	0.01	0.07	0.38	0	10	
009	4/18/19 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	31	146	
009	4/17/19 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.72	41	535	
009	4/16/19 8:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.72	0.76	419	988	
009	4/15/19 9:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.72	0.76	1.04	74	216	
009	4/12/19 9:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	0	52	
009	4/12/19 9:05 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.11	0.11	0.12	0	0	
009	4/11/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	20	145	
009	4/23/19 8:47 AM	B	CHARLES RIVER	MID-BASIN	6.5	0.21	2.51	2.54	1670	1420	
009	4/10/19 8:41 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	20	96	
009	4/8/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	8.2	0.31	0.31	0.4	20	41	
009	4/9/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	10	97	
009	4/9/19 8:52 AM	B	CHARLES RIVER	MID-BASIN	8.3	0.06	0.37	0.37	10	98	
009	4/8/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	20	169	
009	3/29/19 8:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	30	0	
009	3/28/19 8:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	10	74	
009	3/28/19 8:42 AM	B	CHARLES RIVER	MID-BASIN	8.9	0.01	0.01	0.01	0	10	
009	6/21/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	8.3	1.19	1.56	1.56	0	52	
009	8/12/19 8:36 AM	B	CHARLES RIVER	MID-BASIN	9	0	0	0	0	10	
009	4/11/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	6.9	0	0.01	0.07	10	20	
009	6/19/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0.1	0.1	31	0	
009	6/20/19 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	0	10	
009	3/29/19 8:53 AM	B	CHARLES RIVER	MID-BASIN	8.6	0.03	0.04	0.04	10	52	
009	4/23/19 8:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	1050	1400	
009	6/20/19 8:37 AM	B	CHARLES RIVER	MID-BASIN	8.5	0.37	0.37	0.47	0	0	
009	6/19/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	31	10	
009	6/18/19 8:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	10	0	
009	6/18/19 8:13 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.1	0.1	0.21	10	0	
009	6/14/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	0	74	
009	6/14/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	8.9	0	0.63	0.63	0	10	



2019 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)
009	4/26/19 8:43 AM	B	CHARLES RIVER	MID-BASIN	8.4	0.74	0.74	0.78	0	20	
009	4/25/19 8:45 AM	B	CHARLES RIVER	MID-BASIN	8.6	0	0.04	0.25	0	41	
009	6/13/19 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.63	0.63	1.16	30	216	
009	4/24/19 9:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	663	1140	
009	4/25/19 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	142	373	
009	4/24/19 9:10 AM	B	CHARLES RIVER	MID-BASIN	6.9	0.04	0.25	2.55	650	907	
009	4/26/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	41	238	
009	6/10/19 8:49 AM	B	CHARLES RIVER	MID-BASIN	8.5	0.14	0.14	0.14	10	41	
009	6/10/19 8:49 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	31	20	
009	6/11/19 8:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.53	0.67	0.67	41	20	
010	7/15/19 8:20 AM	B	CHARLES RIVER	MID-BASIN	8.6	0	0	0	0	20	
010	8/9/19 8:19 AM	B	CHARLES RIVER	MID-BASIN	7.6	0	0.38	2.28	145	1350	
010	8/8/19 8:25 AM	B	CHARLES RIVER	MID-BASIN	8.1	0.38	2.28	2.28	323	301	
010	7/17/19 9:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	0	10	
010	7/17/19 9:39 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.43	0.43	0.43	0	10	
010	8/8/19 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	20	359	
010	7/16/19 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	0	
010	6/21/19 8:49 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	10	41	
010	7/15/19 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	0	
010	6/24/19 8:26 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	262	
010	6/24/19 8:26 AM	B	CHARLES RIVER	MID-BASIN	8.2	0	0	0	74	218	
010	9/6/19 7:50 AM	B	CHARLES RIVER	MID-BASIN	8.8	0	0	0.33	51	10	
010	6/21/19 8:49 AM	B	CHARLES RIVER	MID-BASIN	8.7	1.19	1.56	1.56	10	20	
010	7/16/19 8:19 AM	B	CHARLES RIVER	MID-BASIN	8.6	0	0	0	0	10	
010	9/5/19 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	0	74	
010	4/23/19 8:43 AM	B	CHARLES RIVER	MID-BASIN	8.5	0.21	2.51	2.54	1130	1300	
010	6/20/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	10	0	
010	9/27/19 8:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	20	41	
010	9/27/19 8:23 AM	B	CHARLES RIVER	MID-BASIN	7.3	0	0.27	0.27	0	41	
010	9/25/19 8:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	0	20	
010	9/5/19 8:44 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0.33	0.33	31	41	
010	9/6/19 7:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	0	20	
010	8/9/19 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	187	1330	
010	9/4/19 8:14 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	0	131	
010	9/4/19 8:14 AM	B	CHARLES RIVER	MID-BASIN	8.3	0.33	0.33	1.44	51	41	
010	9/3/19 8:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	0	31	
010	9/3/19 8:28 AM	B	CHARLES RIVER	MID-BASIN	8.4	0	1.11	1.11	41	51	
010	8/12/19 8:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	85	
010	8/12/19 8:30 AM	B	CHARLES RIVER	MID-BASIN	8.2	0	0	0	0	63	
010	9/25/19 8:13 AM	B	CHARLES RIVER	MID-BASIN	8.4	0	0.01	0.14	10	0	
010	4/10/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	10	131	
010	3/28/19 8:37 AM	B	CHARLES RIVER	MID-BASIN	9.1	0.01	0.01	0.01	0	10	
010	3/28/19 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	20	74	
010	3/29/19 8:45 AM	B	CHARLES RIVER	MID-BASIN	9.2	0.03	0.04	0.04	0	41	
010	3/29/19 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	0	74	
010	4/8/19 8:50 AM	B	CHARLES RIVER	MID-BASIN	8.3	0.31	0.31	0.4	0	20	
010	4/8/19 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	10	85	
010	4/9/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	7.7	0.06	0.37	0.37	0	20	
010	4/24/19 9:04 AM	B	CHARLES RIVER	MID-BASIN	7	0.04	0.25	2.55	906	1270	

2019 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)
010	4/10/19 8:36 AM	B	CHARLES RIVER	MID-BASIN	8.8	0.01	0.07	0.38	10	10	
010	6/20/19 8:40 AM	B	CHARLES RIVER	MID-BASIN	9	0.37	0.37	0.47	10	20	
010	4/11/19 8:46 AM	B	CHARLES RIVER	MID-BASIN	8.8	0	0.01	0.07	10	0	
010	4/11/19 8:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	0	41	
010	4/12/19 8:58 AM	B	CHARLES RIVER	MID-BASIN	8.2	0.11	0.11	0.12	0	20	
010	4/12/19 8:58 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	20	110	
010	6/18/19 8:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	30	52	
010	4/9/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	41	41	
010	6/19/19 8:41 AM	B	CHARLES RIVER	MID-BASIN	8.5	0	0.1	0.1	10	0	
010	4/23/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	657	1410	
010	6/18/19 8:07 AM	B	CHARLES RIVER	MID-BASIN	8.2	0.1	0.1	0.21	41	0	
010	6/14/19 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	10	107	
010	6/14/19 8:39 AM	B	CHARLES RIVER	MID-BASIN	7.7	0	0.63	0.63	31	0	
010	6/10/19 8:41 AM	B	CHARLES RIVER	MID-BASIN	8.8	0.14	0.14	0.14	10	20	
010	4/26/19 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	84	145	
010	4/26/19 8:37 AM	B	CHARLES RIVER	MID-BASIN	7.9	0.74	0.74	0.78	20	110	
010	4/25/19 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	74	146	
010	4/25/19 8:39 AM	B	CHARLES RIVER	MID-BASIN	8.5	0	0.04	0.25	41	122	
010	4/24/19 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	723	884	
010	6/10/19 8:41 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	0	52	
010	6/19/19 8:41 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	20	20	
210	3/28/19 8:34 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	10	51	
210	4/17/19 9:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.72	41	285	
210	4/15/19 10:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.72	0.76	1.04	108	218	
210	4/12/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	0	41	
210	4/11/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	10	74	
210	4/10/19 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	10	134	
210	4/9/19 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	0	96	
210	3/29/19 8:41 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	0	120	
210	4/18/19 9:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	143	
210	4/8/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	10	20	
210	9/25/19 8:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	0	63	
210	7/16/19 8:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	0	
210	7/17/19 9:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	0	10	
210	8/8/19 8:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	41	278	
210	8/9/19 8:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	110	1140	
210	8/11/19 7:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	52	98	
210	9/3/19 8:24 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	41	627	
210	9/4/19 8:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	20	122	
210	7/15/19 8:16 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	0	0	
210	9/6/19 7:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	0	73	
210	8/10/19 7:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.38	41	336	
210	9/27/19 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	20	20	
210	11/1/19 9:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.08	0.17	52	211	
210	11/2/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.08	41	233	
210	11/25/19 10:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.51	1.51	504	613	
210	11/26/19 9:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.51	275	620	
210	11/27/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.2	0.2	0.2	134	364	
210	4/16/19 10:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.72	0.76	86	379	

2019 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)
210	9/5/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	20	132	
210	6/11/19 9:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.53	0.67	0.67	131	472	
210	4/23/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	905	1660	
210	4/24/19 9:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	504	749	
210	4/25/19 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	97	272	
210	8/12/19 8:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	41	
210	6/10/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	0	10	
210	7/14/19 7:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.81	0	0	
210	6/14/19 8:34 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	20	86	
210	6/18/19 8:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	61	20	
210	6/19/19 8:38 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	0	31	
210	7/13/19 7:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.81	0.83	0	30	
210	6/21/19 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	10	86	
210	6/22/19 8:00 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.19	1.56	134	161	
210	6/23/19 7:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.19	121	448	
210	6/24/19 8:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	10	121	
210	6/25/19 9:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.13	0.13	0.13	41	135	
210	7/12/19 10:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.81	0.83	0.83	0	10	
210	6/20/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	20	0	
210	4/26/19 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	74	195	
166	8/13/19 9:07 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	0	31	
166	8/26/19 9:24 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	0	0	
166	9/12/19 9:54 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.07	0.07	0.07	20	41	
166	9/24/19 9:40 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.01	0.14	0.14	0	31	
166	10/7/19 9:46 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.16	0.16	0.16	20	31	
166	10/22/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.16	0.16	0.16	41	110	
166	11/5/19 10:33 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.4	0.4	0.4	5	103.5	
166	11/18/19 10:47 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.24	0.24	0.24	20	52	
166	12/16/19 9:57 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	1.25	355.5	1079.5	
166	7/1/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.16	1.81	63	171	
166	7/18/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.04	0.47	0.47	20	20	
166	12/5/19 10:31 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.38	52	216	
166	3/6/19 10:31 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.97	0	20	
166	6/17/19 9:35 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.11	0.11	0	36	
166	8/6/19 9:40 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	0	10	
166	1/7/19 10:04 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.53	97	836	
166	1/25/19 10:30 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	1	1	211	1090	
166	2/19/19 9:37 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.31	0.31	31	131	
166	3/19/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	0	161	
166	4/1/19 9:39 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.09	0.09	0	63	
166	4/19/19 9:52 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.02	0.02	0.02	20	84	
166	5/2/19 9:48 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.06	0.06	0.2	31	95	
166	5/14/19 10:29 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.15	0.97	1.36	20.5	69	
166	5/31/19 9:57 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.07	0.3	0.3	10	10	
166	6/5/19 10:11 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.05	0.05	0.09	0	20.5	
166	2/7/19 10:14 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.21	0.58	0.58	63	419	
011	6/25/19 8:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.13	0.13	0.13	84	379	
011	7/16/19 8:05 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	0	0	
011	8/9/19 8:03 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.38	2.28	74	683	

2019 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)
011	8/9/19 8:03 AM	B	CHARLES RIVER	LOWER BASIN	6.3	0	0.38	2.28	160	583	
011	8/8/19 8:11 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.38	2.28	2.28	74	158	
011	8/8/19 8:11 AM	B	CHARLES RIVER	LOWER BASIN	5.8	0.38	2.28	2.28	121	359	
011	8/10/19 6:41 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.38	52	408	
011	7/17/19 10:10 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.43	0.43	0.43	0	20	
011	7/17/19 10:10 AM	B	CHARLES RIVER	LOWER BASIN	6.7	0.43	0.43	0.43	31	20	
011	7/16/19 8:05 AM	B	CHARLES RIVER	LOWER BASIN	6.7	0	0	0	0	20	
011	7/15/19 8:07 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	10	31	
011	7/15/19 8:07 AM	B	CHARLES RIVER	LOWER BASIN	5.1	0	0	0	0	63	
011	7/14/19 6:36 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.81	0	94	
011	8/11/19 6:51 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	30	253	
011	7/12/19 9:35 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.81	0.83	0.83	20	20	
011	9/5/19 8:31 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.33	0.33	10	84	
011	6/24/19 8:12 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	31	199	
011	6/24/19 8:12 AM	B	CHARLES RIVER	LOWER BASIN	5.6	0	0	0	61	201	
011	6/23/19 6:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	1.19	121	389	
011	7/13/19 6:34 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.81	0.83	63	110	
011	9/25/19 7:59 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.01	0.14	10	10	
011	4/24/19 8:47 AM	B	CHARLES RIVER	LOWER BASIN	5.4	0.04	0.25	2.55	988	754	
011	6/22/19 7:03 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	1.19	1.56	31	86	
011	11/27/19 8:00 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.2	0.2	0.2	335	435	
011	11/26/19 8:39 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	1.51	309	627	
011	11/25/19 9:04 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	1.51	1.51	169	457	
011	11/2/19 7:50 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.01	0.08	20	243	
011	11/1/19 8:21 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.01	0.08	0.17	85	345	
011	9/4/19 8:02 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.33	0.33	1.44	20	171	
011	9/27/19 8:09 AM	B	CHARLES RIVER	LOWER BASIN	6	0	0.27	0.27	110	109	
011	8/12/19 8:18 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0	0	0	63	171	
011	9/25/19 7:59 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0	0.01	0.14	30	74	
011	9/6/19 7:36 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.33	0	20	
011	9/6/19 7:36 AM	B	CHARLES RIVER	LOWER BASIN	6.5	0	0	0.33	41	84	
011	9/5/19 8:31 AM	B	CHARLES RIVER	LOWER BASIN	2.9	0	0.33	0.33	63	134	
011	9/4/19 8:02 AM	B	CHARLES RIVER	LOWER BASIN	6.9	0.33	0.33	1.44	63	323	
011	9/3/19 8:14 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	1.11	1.11	156	1150	
011	9/3/19 8:14 AM	B	CHARLES RIVER	LOWER BASIN	3.9	0	1.11	1.11	145	657	
011	8/12/19 8:18 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	31	121	
011	9/27/19 8:09 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.27	0.27	10	122	
011	4/9/19 8:36 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.06	0.37	0.37	0	10	
011	4/17/19 8:15 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.72	41	247	
011	4/16/19 8:34 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.72	0.76	108	538	
011	4/15/19 9:20 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.72	0.76	1.04	905	4110	
011	4/12/19 8:47 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.11	0.11	0.12	10	74	
011	4/12/19 8:47 AM	B	CHARLES RIVER	LOWER BASIN	6.4	0.11	0.11	0.12	0	171	
011	4/11/19 8:33 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.01	0.07	10	41	
011	4/11/19 8:33 AM	B	CHARLES RIVER	LOWER BASIN	5.5	0	0.01	0.07	0	85	
011	4/18/19 8:07 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	10	161	
011	4/10/19 8:25 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0.01	0.07	0.38	10	86	
011	4/8/19 8:41 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.31	0.31	0.4	10	20	
011	4/9/19 8:36 AM	B	CHARLES RIVER	LOWER BASIN	4.5	0.06	0.37	0.37	0	52	

2019 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)
011	6/21/19 8:34 AM	S	CHARLES RIVER	LOWER BASIN	0.1	1.19	1.56	1.56	238	520	
011	4/8/19 8:41 AM	B	CHARLES RIVER	LOWER BASIN	5.4	0.31	0.31	0.4	20	134	
011	4/25/19 8:27 AM	B	CHARLES RIVER	LOWER BASIN	6.5	0	0.04	0.25	121	359	
011	3/29/19 8:33 AM	B	CHARLES RIVER	LOWER BASIN	5.5	0.03	0.04	0.04	0	74	
011	3/28/19 8:28 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.01	0.01	0.01	0	41	
011	3/28/19 8:28 AM	B	CHARLES RIVER	LOWER BASIN	5.3	0.01	0.01	0.01	0	41	
011	1/24/19 8:45 AM	S	CHARLES RIVER	LOWER BASIN	0.1	1	1	1	74	794	
011	4/10/19 8:25 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.01	0.07	0.38	20	41	
011	6/19/19 8:29 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.1	0.1	10	0	
011	3/29/19 8:33 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.03	0.04	0.04	0	86	
011	4/23/19 8:33 AM	B	CHARLES RIVER	LOWER BASIN	6.7	0.21	2.51	2.54	379	520	
011	6/21/19 8:34 AM	B	CHARLES RIVER	LOWER BASIN	5.9	1.19	1.56	1.56	259	323	
011	6/20/19 8:26 AM	B	CHARLES RIVER	LOWER BASIN	6	0.37	0.37	0.47	41	0	
011	6/19/19 8:29 AM	B	CHARLES RIVER	LOWER BASIN	6.3	0	0.1	0.1	31	85	
011	6/18/19 7:54 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.1	0.1	0.21	10	86	
011	6/18/19 7:54 AM	B	CHARLES RIVER	LOWER BASIN	5.8	0.1	0.1	0.21	10	63	
011	6/14/19 8:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.63	0.63	30	143	
011	6/14/19 8:17 AM	B	CHARLES RIVER	LOWER BASIN	5.9	0	0.63	0.63	52	243	
011	4/24/19 8:47 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.04	0.25	2.55	932	836	
011	6/10/19 8:09 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.14	0.14	0.14	20	30	
011	6/10/19 8:09 AM	B	CHARLES RIVER	LOWER BASIN	5.2	0.14	0.14	0.14	41	41	
011	4/26/19 8:25 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.74	0.74	0.78	41	161	
011	4/26/19 8:25 AM	B	CHARLES RIVER	LOWER BASIN	5.9	0.74	0.74	0.78	31	122	
011	4/25/19 8:27 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.04	0.25	185	379	
011	6/20/19 8:26 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.37	0.37	0.47	20	41	
011	4/23/19 8:33 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.21	2.51	2.54	395	620	
011	6/11/19 8:35 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.53	0.67	0.67	487	262	
174	9/1/19 7:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	250	327	
174	10/10/19 9:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	146	416	
174	10/11/19 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	269	350	
174	10/13/19 7:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34	708	598	
174	8/21/19 8:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	298	285	
174	10/14/19 8:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	345	265	
174	10/12/19 7:39 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36	3080	3650	
174	8/31/19 8:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3	173	471	
174	8/29/19 9:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	6490	3870	
174	8/22/19 8:54 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	1380	556	
174	8/20/19 8:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	364	496	
174	10/15/19 9:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	148	171	
174	8/5/19 9:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	122	439	
174	11/19/19 10:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	2250	6490	
174	8/4/19 8:54 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	857	249	
174	10/16/19 9:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	249	314	
174	10/17/19 10:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	17300	8160	
174	10/18/19 9:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	5170	4610	
174	10/19/19 8:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67	2910	2760	
174	10/20/19 8:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	1290	1520	
174	10/21/19 9:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	292	443	
174	10/28/19 9:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	2610	1410	

2019 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)
174	10/29/19 10:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52	1180	1610	
174	10/31/19 9:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	110	185	
174	11/20/19 10:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	1320	959	
174	11/21/19 10:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	74	496	
174	11/22/19 10:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	41	85	
174	8/3/19 7:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	158	554	
174	8/27/19 8:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	63	278	
174	10/30/19 8:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	620	397	
174	5/10/19 9:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	110	109	
174	6/26/19 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	3080	2760	
174	5/30/19 9:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	41	504	
174	5/29/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	233	594	
174	5/23/19 10:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	175	278	
174	5/22/19 10:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	84	228	
174	6/27/19 9:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	341	2360	
174	5/20/19 10:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	428	717	
174	4/21/19 7:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22	1210	110	
174	5/9/19 9:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	10	122	
174	5/8/19 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	20	160	
174	5/7/19 9:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	41	74	
174	5/3/19 9:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	0	109	
174	4/22/19 9:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	158	118	
174	8/2/19 9:19 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	187	703	
174	5/21/19 10:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	345	627	
174	7/24/19 9:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	657	1150	
174	7/28/19 7:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	109	233	
174	7/27/19 8:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	565	173	
174	6/28/19 8:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	228	2760	
174	7/25/19 9:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	175	784	
174	8/1/19 9:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	2140	101000	
174	4/20/19 9:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19	110	109	
174	7/11/19 8:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	723	2380	
174	8/30/19 8:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	691	1120	
174	7/10/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	717	4110	
174	7/9/19 9:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	305	1350	
174	7/8/19 9:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	932	1380	
174	7/7/19 6:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37	5790	59400	
174	7/6/19 7:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37	464	4880	
174	7/5/19 9:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	175	1720	
174	7/26/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	96	187	
308	10/12/19 7:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36	6130	19900	
308	10/11/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42		435000	
308	10/10/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1		1410000	
308	9/1/19 7:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	624	3100	
308	8/31/19 8:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3	749	909	
308	8/30/19 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	1840	1920	
308	8/29/19 9:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	21300	24000	
308	8/28/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.65	0.65	0.65	830	1290	
308	8/27/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	24200		

2019 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)
308	8/23/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	563	4610	
308	8/22/19 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	1790	8160	
308	8/21/19 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	233	959	
308	10/13/19 7:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34	852	4110	
308	8/5/19 9:46 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	12000	1410000	
308	10/28/19 10:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	3650	15500	
308	8/20/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	450	4110	
308	10/21/19 9:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	265	2610	
308	11/21/19 10:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	809	1850	
308	8/4/19 9:02 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	886	5480	
308	11/20/19 10:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	712	1120	
308	11/19/19 10:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	2910	4880	
308	10/31/19 9:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	6490	5170	
308	10/20/19 8:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	8660	210000	
308	10/29/19 10:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52	697	3780	
308	10/14/19 8:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	135	3080	
308	11/22/19 10:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	52	341	
308	10/19/19 8:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67	1050	6870	
308	10/18/19 9:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	6490	9210	
308	10/17/19 10:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	9800	11200	
308	10/16/19 10:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	3650	57300	
308	10/15/19 10:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	201000	727000	
308	10/30/19 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	199	1150	
308	5/9/19 9:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	857	5790	
308	6/26/19 9:09 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	5170	9210	
308	5/30/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	2610	2490	
308	5/29/19 9:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	2600	5170	
308	5/23/19 10:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	4110	1790	
308	5/22/19 10:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	243	247	
308	6/27/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	581	1500	
308	5/20/19 10:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	2360	3650	
308	5/21/19 10:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	1920	6870	
308	5/8/19 9:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	448	1790	
308	5/7/19 9:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	512	2010	
308	5/3/19 9:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	906	624	
308	4/22/19 10:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	218	728	
308	4/21/19 7:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22	933	1990	
308	8/3/19 7:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	1940	12000	
308	4/20/19 9:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19	132	1230	
308	8/1/19 9:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	2360	135000	
308	5/10/19 9:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	265	160	
308	8/2/19 9:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	663	50400	
308	6/28/19 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	1400	4880	
308	7/28/19 8:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	6490	548000	
308	7/27/19 8:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	399	9800	
308	7/26/19 9:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	185	663	
308	7/25/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	631	9800	
308	7/24/19 10:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	4350	3650	
308	7/11/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	24200		

2019 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)
308	7/10/19 9:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	419	3870	
308	7/9/19 9:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	789	5790	
308	7/8/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	809	4880	
308	7/7/19 6:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37	2140	17300	
308	7/6/19 7:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37	529	1140	
308	7/5/19 9:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	408	2010	
074	8/22/19 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	437	160	
074	10/12/19 7:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36	3080	4350	
074	10/11/19 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	426	422	
074	10/10/19 9:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	201	650	
074	9/1/19 7:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	98	243	
074	8/31/19 8:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3	161	262	
074	8/30/19 8:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	650	958	
074	8/29/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	6130	4110	
074	8/28/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.65	0.65	0.65	238	211	
074	8/5/19 9:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	246	932	
074	8/23/19 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	143	185	
074	10/13/19 7:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34	327	341	
074	8/21/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	120	243	
074	8/20/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	183	759	
074	8/27/19 8:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	74	265	
074	10/21/19 9:54 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	350	201	
074	8/2/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	195	2360	
074	11/22/19 10:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	20	98	
074	4/20/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19	243	185	
074	11/20/19 10:46 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	1110	691	
074	11/19/19 10:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	6130	74800	
074	10/31/19 9:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	98	158	
074	11/21/19 10:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	52	676	
074	10/28/19 10:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	2100	2220	
074	10/14/19 8:16 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	187	359	
074	10/20/19 8:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	480	886	
074	10/19/19 8:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67	1400	1720	
074	10/18/19 9:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	3870	5480	
074	10/17/19 10:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	7700	6870	
074	10/16/19 9:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	201	199	
074	10/15/19 9:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	86	132	
074	10/30/19 8:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	221	272	
074	5/20/19 10:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	86	605	
074	8/4/19 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	148	776	
074	8/3/19 7:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	246	4110	
074	4/21/19 7:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22	359	563	
074	4/22/19 9:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	41	86	
074	5/3/19 9:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	10	74	
074	5/7/19 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	131	452	
074	5/8/19 9:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	771	11200	
074	5/10/19 9:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	30	135	
074	5/21/19 10:26 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	309	748	
074	5/22/19 10:19 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	0	122	



2019 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)
074	5/23/19 10:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	216	350	
074	5/29/19 9:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	201	419	
074	5/30/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	86	231	
074	6/26/19 9:02 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	1560	3870	
074	7/27/19 8:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	160	1070	
074	8/1/19 9:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	6490	72700	
074	5/9/19 9:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	31	216	
074	7/28/19 7:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	121	199	
074	6/27/19 9:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	213	620	
074	7/26/19 9:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	86	160	
074	7/25/19 9:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	143	281	
074	7/24/19 9:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	301	557	
074	7/11/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	156	464	
074	7/10/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	1330	4880	
074	7/9/19 9:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	465	9800	
074	7/8/19 9:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	471	1330	
074	7/7/19 6:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37	3260	39900	
074	7/6/19 7:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37	119	563	
074	7/5/19 9:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	85	933	
074	6/28/19 8:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	145	776	
277	7/26/19 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	171	243	
277	10/12/19 7:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36	3450	5170	
277	10/11/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	813	112000	
277	10/10/19 9:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	173	282	
277	9/1/19 7:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	246	435	
277	8/31/19 8:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3	323	504	
277	8/30/19 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	1140	8160	
277	8/29/19 9:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	6870	10500	
277	8/27/19 8:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	52	393	
277	8/20/19 8:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	226	591	
277	8/22/19 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	771	748	
277	10/13/19 7:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34	443	545	
277	8/21/19 8:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	134	209	
277	8/5/19 9:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	122	97	
277	8/23/19 8:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	228	216	
277	10/21/19 9:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	576	820	
277	11/22/19 10:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	41	298	
277	11/20/19 10:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	1190	1090	
277	11/19/19 10:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	4110	8160	
277	10/31/19 9:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	158	318	
277	10/30/19 8:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	134	576	
277	11/21/19 10:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	327	727	
277	10/28/19 9:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	2100	1990	
277	10/14/19 7:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	110	146	
277	10/20/19 7:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	402	651	
277	10/19/19 8:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67	1050	1480	
277	10/18/19 9:02 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	3650	5170	
277	10/17/19 9:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	9210	7700	
277	10/16/19 9:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	644	1670	

2019 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)
277	10/15/19 9:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	84	233	
277	10/29/19 9:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52	9800	3450	
277	5/9/19 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	109	249	
277	5/30/19 9:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	74	292	
277	5/29/19 9:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	331	794	
277	5/23/19 10:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	520	605	
277	5/22/19 10:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	30	134	
277	5/21/19 10:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	278	805	
277	6/26/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	2280	1660	
277	5/10/19 9:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	74	168	
277	4/20/19 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19	218	269	
277	5/8/19 8:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	1140	13000	
277	5/7/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	318	1130	
277	5/3/19 9:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	275	490	
277	4/22/19 9:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	31	74	
277	4/21/19 7:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22	789	481	
277	8/4/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	173	158	
277	5/20/19 9:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	298	1010	
277	7/25/19 9:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	657	744	
277	8/2/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	240	1190	
277	8/1/19 9:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	2600	29900	
277	6/27/19 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	121	272	
277	7/28/19 7:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	197	183	
277	8/3/19 7:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	262	265	
277	7/24/19 9:39 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	441	537	
277	7/11/19 8:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	97	134	
277	7/10/19 8:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	86	134	
277	7/9/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	74	156	
277	7/8/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	246	448	
277	7/7/19 6:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37	2910	19900	
277	7/6/19 7:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37	86	243	
277	6/28/19 8:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	84	121	
277	7/27/19 7:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	98	934	
172	10/12/19 7:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36	4880	4110	
172	10/11/19 8:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	620	12000	
172	10/10/19 9:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	213	203	
172	9/1/19 7:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	132	233	
172	8/31/19 8:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3	327	450	
172	8/30/19 8:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	1050	7700	
172	8/29/19 9:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	12000	6870	
172	8/28/19 8:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.65	0.65	0.65	63	98	
172	8/27/19 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	122	189	
172	8/23/19 8:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	187	110	
172	8/22/19 8:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	1050	613	
172	10/13/19 7:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34	206	448	
172	8/20/19 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	86	288	
172	10/29/19 9:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52	9210	2100	
172	8/21/19 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	231	160	
172	10/28/19 9:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	1550	1850	

2019 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	8/3/19 7:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	199	199	
172	8/4/19 8:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	97	148	
172	11/21/19 10:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	359	808	
172	11/20/19 10:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	1350	677	
172	11/19/19 10:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	5790	6870	
172	10/21/19 9:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	175	637	
172	10/30/19 7:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	209	416	
172	10/15/19 9:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	171	135	
172	11/22/19 10:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	74	259	
172	10/20/19 7:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	455	749	
172	10/19/19 8:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67	833	1370	
172	10/18/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	3260	5480	
172	10/17/19 9:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	9800	5480	
172	10/16/19 9:46 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	613	2190	
172	10/31/19 9:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	189	278	
172	5/9/19 9:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	52	262	
172	6/26/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	1720	1310	
172	5/30/19 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	52	243	
172	5/29/19 9:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	413	798	
172	5/23/19 10:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	546	884	
172	5/22/19 10:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	20	110	
172	5/21/19 10:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	272	683	
172	6/27/19 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	209	238	
172	5/10/19 9:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	158	122	
172	4/21/19 7:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22	771	457	
172	5/8/19 8:54 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	1180	14100	
172	5/7/19 8:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	382	1330	
172	5/3/19 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	211	250	
172	4/22/19 9:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	41	160	
172	4/20/19 8:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19	203	183	
172	8/5/19 9:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	122	110	
172	5/20/19 9:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	480	1330	
172	7/26/19 9:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	161	203	
172	8/1/19 9:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	3260	40800	
172	6/28/19 8:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	85	161	
172	7/27/19 7:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	145	809	
172	8/2/19 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	85	487	
172	7/25/19 9:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	146	504	
172	7/24/19 9:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	836	836	
172	7/11/19 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	52	158	
172	7/10/19 8:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	160	131	
172	7/9/19 9:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	158	195	
172	7/8/19 8:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	269	583	
172	7/7/19 6:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37	2480	19900	
172	7/6/19 7:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37	74	158	
172	7/5/19 9:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	97	657	
172	7/28/19 7:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	41	426	
276	10/13/19 7:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34	146	323	
276	10/12/19 7:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36	1400	2850	

2019 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)
276	10/11/19 8:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	504	6130	
276	10/10/19 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	173	275	
276	9/1/19 7:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	160	226	
276	8/31/19 7:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3	364	404	
276	8/30/19 8:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	1610	12000	
276	8/29/19 9:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	12000	4880	
276	8/28/19 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.65	0.65	0.65	175	148	
276	8/27/19 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	109	262	
276	8/23/19 8:26 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	201	281	
276	8/22/19 8:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	959	669	
276	10/14/19 7:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	158	171	
276	8/20/19 8:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	160	203	
276	10/29/19 9:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52	11200	2190	
276	8/21/19 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	160	122	
276	10/28/19 9:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	1780	2220	
276	4/20/19 8:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19	281	228	
276	8/5/19 9:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	85	160	
276	11/21/19 10:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	410	1180	
276	11/20/19 10:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	1470	1350	
276	11/19/19 10:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	7700	6490	
276	10/21/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	187	350	
276	10/30/19 7:53 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	158	411	
276	10/15/19 9:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	122	132	
276	11/22/19 10:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	52	292	
276	10/20/19 7:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	226	591	
276	10/19/19 7:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67	620	1920	
276	10/18/19 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	10500	6870	
276	10/17/19 9:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	8160	5790	
276	10/16/19 9:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	598	1920	
276	10/31/19 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	243	393	
276	5/10/19 9:02 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	20	131	
276	6/27/19 8:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	121	209	
276	6/26/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	2250	1100	
276	5/30/19 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	63	327	
276	5/29/19 8:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	379	624	
276	5/23/19 9:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	886	609	
276	6/28/19 8:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	98	161	
276	5/21/19 10:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	275	733	
276	5/22/19 10:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	10	158	
276	5/9/19 8:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	74	243	
276	5/8/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	1110	9210	
276	5/7/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	759	1780	
276	5/3/19 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	309	240	
276	8/4/19 8:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	52	148	
276	4/22/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	73	171	
276	4/21/19 7:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22	354	512	
276	7/26/19 8:53 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	85	122	
276	8/3/19 7:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	132	269	
276	5/20/19 9:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	1080	882	

2019 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)
276	7/5/19 9:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	109	487	
276	8/1/19 9:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	2220	44800	
276	7/27/19 7:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	143	1190	
276	8/2/19 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	31	539	
276	7/25/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	187	605	
276	7/24/19 9:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	448	547	
276	7/11/19 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	74	156	
276	7/10/19 8:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	74	135	
276	7/9/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	110	146	
276	7/8/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	341	410	
276	7/7/19 6:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37	2610	17300	
276	7/6/19 7:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37	52	122	
276	7/28/19 7:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	85	98	
070	10/11/19 8:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	301	2010	
070	8/30/19 8:19 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	933	1280	
070	7/6/19 7:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37	738	601	
070	10/10/19 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	1370	1110	
070	11/22/19 10:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	86	243	
070	9/1/19 7:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	313	546	
070	8/31/19 7:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3	354	350	
070	8/29/19 9:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	9800	8160	
070	8/28/19 8:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.65	0.65	0.65	246	0	
070	8/27/19 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	368	359	
070	8/23/19 8:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	246	399	
070	8/22/19 8:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	594	4880	
070	8/20/19 8:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	512	2760	
070	10/12/19 7:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36	2910	5480	
070	8/21/19 8:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	520	4350	
070	10/20/19 7:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	504	521	
070	8/5/19 9:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	146	379	
070	11/21/19 10:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	359	1410	
070	11/19/19 10:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	4880	10500	
070	10/31/19 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	160	1520	
070	10/30/19 7:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	332	435	
070	10/29/19 9:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52	657	487	
070	11/20/19 10:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	1610	910	
070	10/21/19 9:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	272	733	
070	10/13/19 7:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34	305	475	
070	10/19/19 7:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67	1190	1840	
070	10/18/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	3450	4350	
070	10/17/19 9:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	8660	6490	
070	10/16/19 9:26 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	185	364	
070	10/15/19 9:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	185	120	
070	10/14/19 7:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01	148	291	
070	10/28/19 9:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	2610	2280	
070	5/9/19 8:46 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	52	345	
070	5/30/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	31	211	
070	5/29/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	171	441	
070	5/23/19 9:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	2250	2480	

2019 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	5/22/19 9:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	63	457	
070	5/21/19 9:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	189	3870	
070	6/26/19 8:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	1720	1230	
070	5/10/19 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	52	86	
070	5/8/19 8:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	20	256	
070	5/7/19 8:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	932	3780	
070	4/22/19 9:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	52	161	
070	4/21/19 7:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22	2010	1780	
070	4/20/19 8:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19	52	235	
070	8/4/19 8:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	203	259	
070	7/8/19 8:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	504	813	
070	5/20/19 9:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	2360	6490	
070	7/27/19 7:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	1560	10500	
070	8/3/19 7:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	160	216	
070	8/2/19 8:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	132	1010	
070	5/3/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	1310	372	
070	6/27/19 8:39 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	487	512	
070	7/28/19 7:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	1140	4880	
070	7/26/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	512	9210	
070	7/25/19 8:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	246	389	
070	7/9/19 8:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	359	328	
070	7/11/19 8:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	292	820	
070	6/28/19 8:09 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	404	697	
070	7/10/19 8:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	496	323	
070	7/5/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	495	1010	
070	7/24/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	435	1050	
070	7/7/19 6:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37	3080	9800	
070	8/1/19 9:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	1550	24200	
083	8/29/19 8:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.3	0.95	0.95	1660	1370	
083	8/31/19 7:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.3	743	173	
083	9/1/19 7:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	354	233	
083	9/24/19 9:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.14	0.14	404	805	
083	10/7/19 9:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.16	0.16	0.16	119	52	
083	8/28/19 8:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.65	0.65	0.65	31	74	
083	8/5/19 8:57 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	63	52	
083	10/10/19 8:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.09	0.1	143	275	
083	10/11/19 8:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.33	0.35	0.42	73	238	
083	9/12/19 9:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.07	0.07	63	146	
083	8/27/19 8:07 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	110	173	
083	8/26/19 8:46 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	31	63	
083	8/23/19 8:03 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	109	327	
083	8/21/19 7:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	109	203	
083	8/6/19 9:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	0	41	
083	8/4/19 8:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	63	98	
083	8/3/19 7:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	110	98	
083	10/12/19 7:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.34	0.36	1720	1400	
083	11/19/19 10:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.24	0.48	0.48	794	181	
083	8/13/19 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20	109	
083	10/28/19 9:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.06	1.49	1.49	318	313	

2019 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)
083	12/16/19 9:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.25	185	97	
083	12/5/19 9:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.38	228	465	
083	11/22/19 9:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.09	0.32	52	109	
083	11/21/19 10:09 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.23	0.47	121	107	
083	11/20/19 10:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.47	0.71	276	246	
083	8/20/19 10:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.17	41	63	
083	11/18/19 10:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.24	0.24	0.24	52	20	
083	8/2/19 8:39 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.25	238	272	
083	10/31/19 8:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.16	0.19	108	146	
083	11/5/19 9:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.4	0.4	0.4	20	20	
083	10/29/19 9:27 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.09	1.52	74	158	
083	10/13/19 7:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.34	74	74	
083	10/22/19 8:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.16	0.16	0.16	104	57.5	
083	10/21/19 9:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	63	97	
083	10/20/19 7:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	63	63	
083	10/19/19 7:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.67	213	627	
083	10/18/19 8:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.67	1.2	556	988	
083	10/17/19 9:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.67	1.2	1.2	2140	2490	
083	10/16/19 9:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.53	0.53	0.53	31	201	
083	10/15/19 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20	31	
083	10/14/19 7:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01	10	74	
083	10/30/19 7:39 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.12	0.18	171	74	
083	4/21/19 6:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.2	0.22	31	74	
083	5/23/19 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.12	0.12	0.12	97	419	
083	5/22/19 9:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.13	41	134	
083	5/21/19 9:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.35	201	557	
083	5/20/19 9:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.13	0.35	0.35	86	145	
083	5/14/19 9:57 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.15	0.97	1.36	97	228	
083	5/10/19 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	10	31	
083	5/9/19 8:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	0	20	
083	5/8/19 10:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	10	85	
083	5/29/19 8:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.3	0.3	285	813	
083	5/2/19 9:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.06	0.06	0.2	31	41	
083	5/3/19 8:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.11	0.17	0.17	0	31	
083	4/20/19 8:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.17	0.19	0.19	20	85	
083	4/19/19 9:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	0	25.5	
083	4/1/19 9:03 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.09	20	52	
083	3/19/19 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20	1190	
083	3/6/19 9:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.97	0	10	
083	1/25/19 9:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1	1	85	134	
083	1/7/19 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.53	0	98	
083	8/1/19 9:10 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.25	1.25	161	708	
083	8/22/19 8:09 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	120	187	
083	5/7/19 9:48 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	20	97	
083	7/27/19 7:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	52	31	
083	4/22/19 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	2.3	2.33	2.5	0	52	
083	7/28/19 7:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	345	504	
083	5/30/19 8:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.53	0	120	
083	7/26/19 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20	74	

2019 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)
083	7/25/19 8:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.03	30	52	
083	7/24/19 9:09 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.03	1.03	134	86	
083	7/18/19 8:54 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.04	0.47	0.47	122	145	
083	7/11/19 10:28 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	20	41	
083	7/10/19 10:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	31	30	
083	7/9/19 10:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	10	31	
083	7/8/19 8:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.37	262	272	
083	6/17/19 9:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.11	0.11	771	189	
083	6/5/19 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.05	0.05	0.09	63	63	
083	6/26/19 10:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.13	30	52	
083	6/27/19 8:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.13	262	135	
083	6/28/19 10:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	10	74	
083	7/5/19 8:54 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	213	228	
083	7/6/19 6:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	1.37	1.37	1.37	145	74	
083	7/7/19 6:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.37	1.37	776	865	
083	7/1/19 8:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.16	1.81	745	438.5	
083	5/31/19 9:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.3	0.3	3650	529	
057	7/25/19 8:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.03	41	110	
057	8/4/19 8:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	52	171	
057	8/3/19 7:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	146	121	
057	8/2/19 8:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.25	52	246	
057	8/1/19 9:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.25	1.25	146	512	
057	7/28/19 7:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	158	292	
057	7/26/19 8:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	74	63	
057	8/5/19 9:03 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	52	146	
057	8/28/19 8:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.65	0.65	0.65	185	269	
057	7/24/19 9:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.03	1.03	173	246	
057	7/27/19 7:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	107	63	
057	8/20/19 10:03 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.17	31	246	
057	8/21/19 8:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	132	464	
057	8/22/19 8:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	142	173	
057	10/10/19 8:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.09	0.1	345	413	
057	8/27/19 8:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	134	175	
057	7/11/19 10:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	20	74	
057	8/29/19 8:56 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.3	0.95	0.95	2910	1680	
057	8/31/19 7:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.3	216	243	
057	9/1/19 7:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	108	341	
057	10/11/19 8:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.33	0.35	0.42	74	74	
057	8/23/19 8:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	158	275	
057	5/29/19 8:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.3	0.3	404	384	
057	4/20/19 8:10 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.17	0.19	0.19	10	41	
057	4/22/19 9:05 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	2.3	2.33	2.5	10	40	
057	5/3/19 8:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.11	0.17	0.17	0	52	
057	5/7/19 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	0	20	
057	5/8/19 10:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	10	189	
057	5/9/19 8:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	41	146	
057	5/10/19 8:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	74	86	
057	5/20/19 9:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.13	0.35	0.35	74	226	
057	5/21/19 9:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.35	153	350	



2019 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	4/21/19 6:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.2	0.22	52	72	
057	5/23/19 9:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.12	0.12	0.12	161	480	
057	7/10/19 10:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	161	146	
057	5/30/19 8:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.53	41	63	
057	6/26/19 10:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.13	86	121	
057	6/27/19 8:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.13	132	254	
057	6/28/19 9:58 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	0	52	
057	7/5/19 8:58 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	259	97	
057	7/6/19 6:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	1.37	1.37	1.37	173	148	
057	7/7/19 6:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.37	1.37	663	435	
057	7/8/19 8:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.37	173	63	
057	7/9/19 9:59 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	41	41	
057	5/22/19 9:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.13	122	354	
057	11/19/19 10:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.24	0.48	0.48	109	1010	
057	10/12/19 7:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.34	0.36	1720	743	
057	11/22/19 9:56 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.09	0.32	74	218	
057	11/20/19 10:07 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.47	0.71	991	816	
057	10/31/19 8:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.16	0.19	41	20	
057	10/30/19 7:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.12	0.18	85	41	
057	10/29/19 9:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.09	1.52	132	197	
057	10/28/19 9:20 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.06	1.49	1.49	216	413	
057	10/21/19 9:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	73	52	
057	10/13/19 7:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.34	84	41	
057	10/19/19 7:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.67	110	262	
057	10/18/19 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.67	1.2	1310	888	
057	10/17/19 9:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.67	1.2	1.2	11200	4610	
057	10/16/19 9:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.53	0.53	0.53	0	31	
057	10/15/19 9:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	31	121	
057	10/14/19 7:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01	41	84	
057	10/20/19 7:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	63	98	
057	11/21/19 10:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.23	0.47	134	134	
066	7/18/19 8:47 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.04	0.47	0.47	410.5	1201.5	
066	8/6/19 8:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	47	36	
066	8/13/19 8:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	86	233	
066	8/26/19 8:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	103.5	123.5	
066	9/12/19 9:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.07	0.07	76	131.5	
066	10/7/19 9:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.16	0.16	0.16	20.5	36	
066	11/5/19 9:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.4	0.4	0.4	31	132	
066	11/18/19 10:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.24	0.24	0.24	238	161	
066	12/16/19 9:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.25	121	146	
066	7/1/19 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.16	1.81	259	331	
066	9/24/19 8:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.14	0.14	213	246	
066	12/5/19 9:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.38	80	130	
066	3/6/19 9:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.97	5	161.5	
066	6/17/19 9:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.11	0.11	84	168	
066	10/22/19 8:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.16	0.16	0.16	41	62	
066	1/25/19 9:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1	1	132	160	
066	2/7/19 9:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.21	0.58	0.58	216	300	
066	2/19/19 8:56 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.31	0.31	31	79.5	

2019 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)
066	1/7/19 9:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.53	20	74.5	
066	3/19/19 8:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	0	20.5	
066	4/1/19 8:56 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.09	159.5	502	
066	4/19/19 9:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	10	63	
066	5/2/19 9:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.06	0.06	0.2	20	143	
066	5/14/19 9:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.15	0.97	1.36	399	521	
066	5/31/19 9:13 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.3	0.3	41	115	
066	6/5/19 9:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.05	0.05	0.09	109	309	
056	10/13/19 7:05 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.34	228	426	
056	8/31/19 7:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.3	135	299	
056	10/11/19 7:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.33	0.35	0.42	145	98	
056	10/10/19 8:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.09	0.1	121	272	
056	9/1/19 6:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	41	132	
056	10/12/19 6:57 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.34	0.36	538	631	
056	8/29/19 8:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.3	0.95	0.95	5790	2910	
056	8/28/19 9:10 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.65	0.65	0.65	31	298	
056	8/27/19 10:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	10	389	
056	8/23/19 9:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	63	631	
056	10/14/19 7:10 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01	121	262	
056	8/21/19 9:33 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	0	134	
056	10/28/19 8:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.06	1.49	1.49	554	717	
056	8/20/19 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.17	41	134	
056	8/5/19 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	0	292	
056	8/22/19 10:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	20	203	
056	10/30/19 7:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.12	0.18	134	213	
056	6/26/19 10:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.13	1210	988	
056	8/4/19 8:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	62	512	
056	11/22/19 9:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.09	0.32	41	259	
056	11/21/19 9:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.23	0.47	341	439	
056	11/20/19 9:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.47	0.71	175	404	
056	10/20/19 7:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	173	269	
056	10/31/19 8:20 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.16	0.19	41	86	
056	10/15/19 8:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	41	331	
056	10/29/19 8:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.09	1.52	201	292	
056	10/21/19 8:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	96	216	
056	10/19/19 7:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.67	368	471	
056	10/18/19 8:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.67	1.2	987	776	
056	10/17/19 9:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.67	1.2	1.2	15500	12000	
056	10/16/19 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.53	0.53	0.53	74	121	
056	11/19/19 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.24	0.48	0.48	216	130	
056	5/9/19 9:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	0	20	
056	5/30/19 10:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.53	73	148	
056	5/29/19 9:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.3	0.3	457	573	
056	8/3/19 7:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20	413	
056	5/22/19 9:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.13	41	336	
056	6/28/19 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	10	109	
056	6/27/19 9:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.13	20	189	
056	5/10/19 9:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	20	107	
056	5/23/19 9:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.12	0.12	0.12	86	487	

2019 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	5/8/19 9:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	52	86	
056	5/7/19 9:20 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	20	108	
056	5/3/19 9:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.11	0.17	0.17	187	146	
056	4/22/19 8:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	2.3	2.33	2.5	10	74	
056	4/21/19 6:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.2	0.22	173	1450	
056	4/20/19 7:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.17	0.19	0.19	495	2190	
056	5/20/19 9:03 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.13	0.35	0.35	171	432	
056	7/27/19 7:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	31	199	
056	8/2/19 8:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.25	10	1310	
056	5/21/19 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.35	216	488	
056	7/28/19 7:10 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	41	201	
056	7/26/19 8:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	10	228	
056	7/25/19 8:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.03	63	146	
056	7/24/19 8:46 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.03	1.03	86	275	
056	7/11/19 10:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	0	86	
056	7/9/19 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	41	187	
056	7/8/19 10:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.37	84	243	
056	7/7/19 6:13 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.37	1.37	4880	72700	
056	7/6/19 6:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	1.37	1.37	1.37	63	472	
056	7/5/19 8:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20	85	
056	7/10/19 9:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	52	146	
056	8/1/19 8:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.25	1.25	269	1840	
177	12/16/19 9:03 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	1.25	134	910	
177	8/6/19 8:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	161	
177	8/13/19 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	20	122	
177	8/26/19 8:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	108	
177	9/12/19 8:34 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.07	0.07	0.07	10	51	
177	9/24/19 8:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.01	0.14	0.14	31	3870	
177	10/7/19 8:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.16	0.16	0.16	10	74	
177	10/22/19 8:12 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.16	0.16	0.16	10	98	
177	11/18/19 9:41 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.24	0.24	0.24	20	253	
177	4/19/19 8:32 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.02	0.02	0.02	146	2490	
177	7/18/19 8:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.04	0.47	0.47	959	13000	
177	11/5/19 9:12 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.4	0.4	0.4	20	110	
177	4/1/19 8:20 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.09	0.09	31	281	
177	7/1/19 8:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.16	1.81	2380	5790	
177	5/14/19 9:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.15	0.97	1.36	1080	987	
177	1/25/19 9:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	1	1	226	335	
177	3/19/19 8:22 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	30	110	
177	5/2/19 8:35 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.06	0.06	0.2	20	84	
177	1/7/19 8:49 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.53	0	158	
177	5/31/19 8:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.07	0.3	0.3	41	389	
177	6/5/19 9:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.05	0.05	0.09	10	160	
177	6/17/19 8:27 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.11	0.11	20	231	
177	2/7/19 9:12 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.21	0.58	0.58	41	199	
067	10/12/19 6:48 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.01	0.34	0.36	30	84	
067	8/5/19 8:23 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	10	0	
067	8/28/19 8:58 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.65	0.65	0.65	0	10	
067	10/11/19 7:28 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.33	0.35	0.42	20	52	

2019 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)
067	9/1/19 6:46 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	20	63	
067	8/29/19 8:08 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.3	0.95	0.95	3450	3450	
067	8/27/19 9:51 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	20	20	
067	8/23/19 9:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.08	0	83	
067	8/22/19 10:02 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.08	0.08	0	0	
067	10/13/19 6:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.01	0.34	63	109	
067	8/20/19 9:21 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.01	0.17	0	31	
067	10/19/19 7:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.67	231	645	
067	8/4/19 8:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	10	20	
067	8/21/19 9:22 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.08	0.08	0.09	10	20	
067	10/21/19 8:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	20	
067	11/22/19 9:30 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.09	0.09	0.32	108	216	
067	11/21/19 9:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.23	0.47	132	327	
067	11/20/19 9:16 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.23	0.47	0.71	41	243	
067	11/19/19 9:20 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.24	0.48	0.48	52	98	
067	10/31/19 8:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.07	0.16	0.19	10	63	
067	10/30/19 7:02 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.09	0.12	0.18	52	211	
067	10/17/19 8:30 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.67	1.2	1.2	1380	932	
067	10/28/19 8:31 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.06	1.49	1.49	464	620	
067	10/14/19 7:02 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.01	51	218	
067	10/20/19 7:15 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	41	98	
067	8/31/19 7:15 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.3	0	121	
067	10/18/19 8:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.67	1.2	1660	1210	
067	8/3/19 6:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	20	
067	10/16/19 8:23 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.53	0.53	0.53	0	10	
067	10/15/19 8:26 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	20	
067	10/29/19 8:32 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.03	0.09	1.52	459	836	
067	5/7/19 9:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.08	0.08	0.09	0	41	
067	5/30/19 10:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.23	0.23	0.53	0	0	
067	5/29/19 9:33 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.3	0.3	0	31	
067	5/23/19 8:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.12	0.12	0.12	0	30	
067	5/21/19 8:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.13	0.35	0	278	
067	5/10/19 9:24 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.01	0.01	0.01	0	31	
067	6/26/19 10:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.13	0.13	0	30	
067	5/8/19 9:23 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.08	0.08	0	20	
067	5/22/19 8:45 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.13	0	201	
067	5/3/19 8:58 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.11	0.17	0.17	0	63	
067	4/22/19 8:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	2.3	2.33	2.5	73	689	
067	4/21/19 6:35 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.03	0.2	0.22	10	1350	
067	4/20/19 7:20 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.17	0.19	0.19	73	305	
067	8/2/19 7:50 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	1.25	20	74	
067	10/10/19 8:19 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.02	0.09	0.1	20	52	
067	5/9/19 9:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.08	0	31	
067	7/25/19 8:03 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	1.03	0	31	
067	8/1/19 8:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	1.25	1.25	0	20	
067	7/28/19 7:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	20	31	
067	5/20/19 8:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.13	0.35	0.35	10	135	
067	7/26/19 8:03 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	52	
067	6/27/19 9:41 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.13	10	63	

2019 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)
067	7/24/19 8:31 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	1.03	1.03	73	474	
067	7/11/19 9:45 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0.02	0.02	0.02	0	0	
067	7/10/19 9:41 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0	0	31	
067	6/28/19 9:20 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0	0	10	
067	7/8/19 9:58 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	1.37	20	404	
067	7/7/19 6:06 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	1.37	1.37	85	160	
067	7/6/19 6:30 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	1.37	1.37	1.37	0	31	
067	7/5/19 8:26 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0	0	41	
067	7/9/19 9:22 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0	0	122	
067	7/27/19 7:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0	10	20	
059	7/10/19 9:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0	0	52	
059	7/11/19 9:31 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0.02	0.02	0.02	0	0	
059	8/20/19 9:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0.01	0.17	10	51	
059	8/21/19 9:06 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0.08	0.08	0.09	10	228	
059	8/22/19 9:48 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0.08	0.08	0	63	
059	8/23/19 8:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0.08	10	10	
059	8/28/19 8:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0.65	0.65	0.65	10	52	
059	8/30/19 9:04 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0.3	0.95	31	759	
059	5/3/19 8:40 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0.11	0.17	0.17	0	52	
059	7/9/19 9:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0	0	74	
059	8/27/19 9:35 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0	0	0	
059	5/9/19 9:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0.08	0	10	
059	7/8/19 9:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	1.37	31	617	
059	5/8/19 9:04 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0.08	0.08	0	74	
059	5/10/19 9:08 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0.01	0.01	0.01	0	0	
059	5/29/19 9:15 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0.3	0.3	0	134	
059	5/30/19 9:45 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0.23	0.23	0.53	0	10	
059	6/26/19 9:56 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0.13	0.13	0	31	
059	6/27/19 9:26 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0.13	10	20	
059	6/28/19 9:06 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0	0	20	
059	5/7/19 8:49 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0.08	0.08	0.09	20	41	
176	4/20/19 7:00 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.17	0.19	0.19	20	10	
176	5/9/19 9:05 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.08	0	85	
176	5/23/19 8:26 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.12	0.12	0.12	20	52	
176	5/21/19 8:18 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.13	0.35	61	63	
176	5/20/19 8:20 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.13	0.35	0.35	31	160	
176	5/10/19 9:14 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.01	0.01	0.01	10	110	
176	5/8/19 9:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.08	0.08	0	30	
176	5/7/19 8:51 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.08	0.08	0.09	0	10	
176	5/3/19 8:46 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.11	0.17	0.17	20	155	
176	5/29/19 9:22 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.3	0.3	379	480	
176	4/21/19 6:05 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.03	0.2	0.22	10	98	
176	4/22/19 7:52 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	2.3	2.33	2.5	41	109	
176	10/18/19 7:45 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.67	1.2	2380	5170	
176	8/28/19 8:48 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.65	0.65	0.65	10	20	
176	8/29/19 7:45 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.3	0.95	0.95	14100	13000	
176	8/30/19 9:08 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.3	0.95	201	3870	
176	8/31/19 7:03 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.3	52	350	
176	9/1/19 6:33 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	41	173	

2019 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)
176	10/10/19 7:56 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.02	0.09	0.1	62	199	
176	10/12/19 6:35 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.01	0.34	0.36	2310	1790	
176	10/13/19 6:42 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.01	0.34	459	669	
176	10/14/19 6:36 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.01	20	10	
176	10/15/19 8:06 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	52	41	
176	8/27/19 9:40 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	52	148	
176	10/17/19 8:27 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.67	1.2	1.2	9210	8160	
176	10/19/19 7:15 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.67	382	399	
176	10/20/19 6:59 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	0	122	
176	10/28/19 8:08 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.06	1.49	1.49	4350	6130	
176	10/29/19 8:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.03	0.09	1.52	1010	1300	
176	10/30/19 6:37 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.09	0.12	0.18	213	480	
176	10/31/19 7:42 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.07	0.16	0.19	97	146	
176	11/19/19 8:53 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.24	0.48	0.48	95	20	
176	11/20/19 8:56 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.23	0.47	0.71	583	959	
176	11/21/19 9:17 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.23	0.47	305	743	
176	11/22/19 8:57 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.09	0.09	0.32	676	201	
176	5/22/19 8:26 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.13	10	41	
176	10/16/19 8:02 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.53	0.53	0.53	10	31	
176	7/8/19 9:49 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	1.37	31	3080	
176	10/21/19 8:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	0	41	
176	8/23/19 8:56 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.08	20	20	
176	6/26/19 9:59 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.13	0.13	31	41	
176	6/27/19 9:30 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.13	10	85	
176	6/28/19 9:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	0	119	
176	7/5/19 10:39 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	10	52	
176	7/7/19 5:57 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	1.37	1.37	413	4880	
176	5/30/19 9:52 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.23	0.23	0.53	52	132	
176	7/9/19 9:12 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	0	323	
176	7/10/19 9:30 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	0	160	
176	7/11/19 9:36 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.02	0.02	0.02	0	63	
176	7/24/19 8:09 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	1.03	1.03	97	880	
176	8/3/19 6:42 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	98	345	
176	8/22/19 9:53 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.08	0.08	0	20	
176	7/6/19 6:20 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	1.37	1.37	1.37	10	0	
176	7/25/19 7:39 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	1.03	10	63	
176	8/20/19 9:13 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.01	0.17	0	41	
176	8/4/19 7:38 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	10	122	
176	8/21/19 9:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.08	0.08	0.09	52	813	
176	8/2/19 7:28 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	1.25	10	1840	
176	8/1/19 8:12 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	1.25	1.25	1450	44100	
176	7/28/19 6:44 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	0	52	
176	7/27/19 6:43 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	10	41	
176	7/26/19 7:43 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	0	41	
176	8/5/19 7:59 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	62	84	
167	10/13/19 6:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0.01	0.34	120	31	
167	10/7/19 8:08 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0.16	0.16	0.16	41	20	
167	10/14/19 6:56 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0	0	0.01	30	41	
167	10/12/19 6:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASI	0.1	0.01	0.34	0.36	173	158	

2019 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)
167	10/15/19 8:19 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	20	20	
167	10/11/19 7:21 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.33	0.35	0.42	98	41	
167	10/10/19 8:11 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.02	0.09	0.1	354	20	
167	9/24/19 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.01	0.14	0.14	0	10	
167	9/12/19 8:12 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.07	0.07	0.07	10	10	
167	9/1/19 6:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	10	20	
167	8/29/19 8:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.3	0.95	0.95	1410	1530	
167	10/16/19 8:16 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.53	0.53	0.53	41	20	
167	8/26/19 7:40 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	31	
167	8/13/19 7:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	31	
167	8/31/19 7:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.3	0	189	
167	10/29/19 8:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.03	0.09	1.52	269	768	
167	11/19/19 9:13 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.24	0.48	0.48	20	121	
167	8/6/19 8:13 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	31	
167	12/16/19 8:51 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	1.25	226	823	
167	11/22/19 9:21 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.09	0.09	0.32	63	160	
167	11/20/19 9:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.23	0.47	0.71	41	41	
167	11/5/19 8:50 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.4	0.4	0.4	52	41	
167	11/18/19 9:21 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.24	0.24	0.24	31	31	
167	10/30/19 6:58 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.09	0.12	0.18	146	240	
167	10/17/19 8:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.67	1.2	1.2	1110	2910	
167	10/28/19 8:22 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.06	1.49	1.49	345	305	
167	10/22/19 7:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.16	0.16	0.16	10	20	
167	10/21/19 8:28 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	10	31	
167	10/20/19 7:10 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	20	122	
167	10/19/19 7:20 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.67	317	676	
167	10/18/19 7:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.67	1.2	2010	2760	
167	10/31/19 7:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.07	0.16	0.19	20	41	
167	4/1/19 8:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.09	0.09	10	52	
167	5/23/19 8:47 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.12	0.12	0.12	0	52	
167	5/22/19 8:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.13	98	228	
167	5/21/19 8:37 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.13	0.35	63	10	
167	5/20/19 8:34 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.13	0.35	0.35	0	41	
167	5/14/19 8:50 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.15	0.97	1.36	10	31	
167	5/2/19 8:15 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.06	0.06	0.2	0	86	
167	5/31/19 8:18 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.07	0.3	0.3	0	41	
167	4/19/19 8:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.02	0.02	0.02	10	86	
167	4/22/19 8:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	2.3	2.33	2.5	20	408	
167	11/21/19 9:30 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.23	0.47	10	171	
167	3/19/19 8:04 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	31	
167	2/7/19 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.21	0.58	0.58	0	63	
167	1/25/19 8:40 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	1	1	743	2280	
167	1/7/19 8:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0.53	0	345	
167	8/5/19 8:15 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	52	41	
167	4/21/19 6:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.03	0.2	0.22	10	131	
167	8/2/19 7:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	1.25	0	301	
167	4/20/19 7:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.17	0.19	0.19	10	96	
167	8/3/19 6:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	63	
167	6/5/19 8:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.05	0.05	0.09	0	10	

2019 MWRA Central Lab Analyses - Bacteria

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	Sample depth (m)	Logan Rainfall Day 1-	Logan Rainfall Day 2-	Logan Rainfall Day 3-	Enterococcus (col/100 mL)	E coli (col/100 mL)	Fecal coliform (col/100 mL)
167	8/1/19 8:27 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	1.25	1.25	119	110	
167	7/28/19 6:51 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	0	20	
167	7/27/19 6:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	10	20	
167	7/26/19 7:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	10	108	
167	7/25/19 7:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	1.03	10	98	
167	7/1/19 7:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.16	1.81	41	201	
167	8/4/19 7:56 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	20	63	
167	6/17/19 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0.11	0.11	10	31	
167	7/5/19 8:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	0	0	10	10	
167	7/6/19 6:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	1.37	1.37	1.37	31	31	
167	7/7/19 6:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	1.37	1.37	201	1940	
167	7/18/19 8:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0.04	0.47	0.47	10	31	
167	7/24/19 8:22 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BAS	0.1	0	1.03	1.03	10	253	
052	9/26/19 8:57 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.27	0.27	0.28	20		127
052	7/11/19 9:22 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.02	0.02	0.02	0		500
052	8/28/19 8:37 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.1	0.65	0.65	0.65	41		95
052	8/21/19 8:56 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.08	0.08	0.09	933		8700
052	8/22/19 9:38 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.08	0.08	6130		53700
052	8/23/19 8:44 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.08	20		36
052	8/27/19 9:20 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		27
052	8/20/19 8:58 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.17	1940		18700
052	8/28/19 8:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.65	0.65	0.65	63		3700
052	8/30/19 8:55 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.6	0	0.3	0.95	10		50
052	9/26/19 8:57 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.3	0.27	0.27	0.28	10		65
052	7/11/19 9:22 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.2	0.02	0.02	0.02	31		40
052	10/16/19 11:50 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.6	0.53	0.53	0.53	0		55
052	10/16/19 11:50 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.53	0.53	0.53	10		155
052	5/10/19 8:59 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.01	85		270
052	8/30/19 8:55 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.3	0.95	10		45.5
052	5/7/19 8:44 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.08	0.08	0.09	1380		2900
052	5/3/19 8:33 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.7	0.11	0.17	0.17	63		95
052	5/29/19 9:07 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.3	0.3	10		0
052	5/3/19 8:33 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.11	0.17	0.17	122		360
052	7/10/19 9:18 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	52		350
052	5/8/19 8:55 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.08	0.08	240		490
052	5/9/19 8:55 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.08	1440		3600
052	5/29/19 9:07 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.6	0	0.3	0.3	0		5
052	7/9/19 9:01 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	20		90.9
052	5/30/19 9:36 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.53	20		27.3
052	6/26/19 9:51 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.13	0.13	41		145
052	6/27/19 9:19 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.13	0		370
052	6/28/19 8:54 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.2	0	0	0	10		15
052	6/28/19 8:54 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	31		550
052	7/8/19 9:31 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	1.37	218		836
052	5/30/19 9:36 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.7	0.23	0.23	0.53	0		0
069	8/20/19 8:50 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.17	10		63.6
069	8/21/19 8:49 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.08	0.08	0.09	86		673
069	8/22/19 9:05 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.08	0.08	52		45.5
069	8/23/19 8:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.08	20		63.6



2019 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)
069	8/27/19 9:15 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		18.2
069	8/28/19 8:28 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.65	0.65	0.65	20		72.7
069	8/30/19 8:45 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.3	0.95	0		18.2
069	10/25/19 8:30 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.43	97		745
069	9/26/19 9:08 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3	0.27	0.27	0.28	10		90
069	10/25/19 8:30 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.9	0.01	0.01	0.43	0		40
069	10/16/19 11:43 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.8	0.53	0.53	0.53	0		5
069	10/16/19 11:43 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.53	0.53	0.53	0		18.2
069	5/9/19 8:47 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.08	10		9.09
069	7/11/19 8:49 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.02	0.02	0.02	10		9.09
069	9/26/19 9:08 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.27	0.27	0.28	0		90.9
069	5/3/19 8:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.11	0.17	0.17	52		220
069	7/10/19 8:47 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		45.5
069	5/29/19 9:00 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.3	0.3	201		440
069	5/3/19 8:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.3	0.11	0.17	0.17	0		25
069	5/7/19 8:30 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.08	0.08	0.09	121		360
069	5/8/19 8:47 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.08	0.08	31		270
069	5/10/19 8:52 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.01	74		310
069	7/8/19 9:20 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	1.37	1240		3900
069	5/30/19 9:26 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.53	0		63.6
069	6/26/19 9:05 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.13	0.13	448		500
069	6/27/19 8:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.13	0		81.8
069	6/28/19 8:33 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		54.5
069	5/30/19 9:26 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.8	0.23	0.23	0.53	10		50
069	7/9/19 8:39 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	10		27.3
137	9/10/19 10:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	10		5
137	9/10/19 10:37 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.5	0	0	0	10		0
137	8/19/19 9:46 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.17	0.17	0		10
137	8/19/19 9:46 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.1	0.01	0.17	0.17	0		0
137	8/7/19 10:10 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	1.9	1.9	1.9	0		20
137	7/3/19 10:28 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		360
137	7/22/19 10:02 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		10
137	7/22/19 10:02 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	9	0	0	0	10		25
137	9/20/19 10:04 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.6	0	0	0	0		0
137	11/7/19 10:56 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.63	10		80
137	8/7/19 10:10 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.7	1.9	1.9	1.9	0		0
137	9/20/19 10:04 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	0		0
137	10/1/19 10:11 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	14.7	0.05	0.05	0.05	0		0
137	10/1/19 10:11 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.05	0.05	0.05	0		530
137	10/24/19 9:49 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.1	0	0.42	0.58	0		5
137	7/3/19 10:28 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.2	0	0	0	0		0
137	11/7/19 10:56 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.6	0.23	0.23	0.63	10		10
137	5/6/19 10:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.6	0	0.01	0.15	0		0
137	11/26/19 11:01 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	14.1	0	0	1.51	0		0
137	11/26/19 11:01 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	1.51	41		55
137	12/4/19 12:05 PM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.3	0	0.38	0.81	10		30
137	12/4/19 12:05 PM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.38	0.81	0		45
137	12/18/19 11:33 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.2	0	0.65	0.65	0		20
137	10/24/19 9:49 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.42	0.58	0		5

2019 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	3/21/19 10:02 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.9	0	0	0	0		0
137	12/18/19 11:33 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.65	0.65	20		85
137	1/3/19 10:20 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	14.1	0.02	0.02	0.4	0		0
137	1/3/19 10:20 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.02	0.02	0.4	10		55
137	1/15/19 10:37 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.6	0	0	0	0		0
137	1/15/19 10:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	10		10
137	2/6/19 10:26 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.8	0.37	0.37	0.37	0		0
137	2/6/19 10:26 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.37	0.37	0.37	0		35
137	2/22/19 10:48 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.6	0	0.42	0.52	0		0
137	2/22/19 10:48 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.42	0.52	0		15
137	5/28/19 10:24 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.7	0.3	0.3	0.53	0		0
137	3/5/19 11:13 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.97	1.06	0		0
137	6/25/19 10:08 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.13	0.13	0.13	10		10
137	3/21/19 10:02 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	10		25
137	4/5/19 10:39 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.8	0.13	0.13	0.53	0		5
137	4/5/19 10:39 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.13	0.13	0.53	0		0
137	4/29/19 10:19 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12	0	0.01	0.67	10		0
137	4/29/19 10:19 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.67	0		30
137	5/6/19 10:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.15	0		55
137	5/28/19 10:24 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.3	0.3	0.53	10		0
137	6/12/19 10:42 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12	0	0.53	0.67	0		20
137	6/12/19 10:42 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.53	0.67	0		45
137	6/25/19 10:08 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.9	0.13	0.13	0.13	0		0
137	3/5/19 11:13 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.9	0	0.97	1.06	0		5

2019 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)	Phaeophytin (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	8/26/19 10:17 AM	S	CHARLES RIVER	UPPER BASIN	0.796	30.4	66.2		1.04	0.24	0.68					1.7	0.87
012	10/7/19 10:18 AM	S	CHARLES RIVER	UPPER BASIN	1.87	30.5	57.4		0.405	0.77	1.32					0.901	0.24
012	9/24/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.331	32.4	64.5		0.422	0.59	1.44					1.08	0.97
012	9/12/19 10:45 AM	S	CHARLES RIVER	UPPER BASIN	1.96	35.4	64.1		0.7	0.39	0.73					1.27	1.14
012	8/13/19 9:51 AM	S	CHARLES RIVER	UPPER BASIN	1.83	23.5	63.6		1.63	2.88	4.18					2.27	1.53
012	8/6/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.82	23.9	61.8		0.988	1.51	2.31					1.96	1.68
012	1/7/19 10:48 AM	S	CHARLES RIVER	UPPER BASIN	3.05	53.6	73.3		0.141	2.53	2.52					1.42	1.89
012	12/16/19 10:44 AM	S	CHARLES RIVER	UPPER BASIN	4.03	47.2	76.3		0.772	2.99	4.75					2.11	1.67
012	12/5/19 11:01 AM	S	CHARLES RIVER	UPPER BASIN	7.76	49.1	85.3		0.502	1.62	3.88					2.13	3.34
012	11/18/19 11:08 AM	S	CHARLES RIVER	UPPER BASIN	9.57	66.5	83.2		1.16	1.35	2.65					2.09	2.52
012	11/5/19 10:57 AM	S	CHARLES RIVER	UPPER BASIN	4.42	38.5	70.9		0.93	1.06	2.52					2.07	1.03
012	10/22/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	3.12	51.1	85		0.725	1.67	3.25					1.72	2.07
012	5/31/19 10:25 AM	S	CHARLES RIVER	UPPER BASIN	6.16	42	80.9		0.84	4.66	6.6					2.19	0.73
012	6/17/19 10:27 AM	S	CHARLES RIVER	UPPER BASIN	6.34	47.2	88		1.23	1.04	1.5					2.94	3.21
012	7/1/19 10:22 AM	S	CHARLES RIVER	UPPER BASIN	3.78	41.8	83.4		1.08	3.8	3.52					2.97	4
012	6/5/19 10:48 AM	S	CHARLES RIVER	UPPER BASIN	2.78	45.1	81.4		0.71	7.15	5.42					2.13	4.61
012	5/2/19 10:39 AM	S	CHARLES RIVER	UPPER BASIN	2.57	25.65	57.45		0.3345	1.79	2.125					1.565	4.6
012	4/19/19 10:36 AM	S	CHARLES RIVER	UPPER BASIN	2.3	34.2	62.8		0.249	5.48	3.86					1.21	5.08
012	4/1/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	1.25	37.8	66.5		0.239	11.8	15.2					1.13	2.92
012	3/19/19 10:26 AM	S	CHARLES RIVER	UPPER BASIN	0.845	46.2	69.7		0.225	8.54	2.81					1.19	1.93
012	3/6/19 11:19 AM	S	CHARLES RIVER	UPPER BASIN	4.82	65.4	96.4		0.385	3.77	2.8					0.95	1.23
012	2/19/19 10:29 AM	S	CHARLES RIVER	UPPER BASIN	2.73	57.3	82.6		0.239	1.08	0.99					0.925	1.69
012	2/7/19 11:05 AM	S	CHARLES RIVER	UPPER BASIN	4.38	60.8	89.8		0.309	2.82	1.37					1.05	2.18
012	1/25/19 11:11 AM	S	CHARLES RIVER	UPPER BASIN	9.915	55.8	85.4		0.471	2.545	2.89					1.73	8.55
012	5/14/19 11:21 AM	S	CHARLES RIVER	UPPER BASIN	5.87	33.9	76.3		0.506	3.47	4.83					1.74	4.41
012	7/18/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	3.86	25.1	54.4		0.921	1.02	1.31					2.25	2
166	8/13/19 9:07 AM	S	CHARLES RIVER	LOWER BASIN	0.581	19	62.9		0.895	43.4	17.2					2.17	2.1
166	8/26/19 9:24 AM	S	CHARLES RIVER	LOWER BASIN	2.82	17.1	58.9		1.04	4.73	4.13					1.53	4.17
166	9/12/19 9:54 AM	S	CHARLES RIVER	LOWER BASIN	0.812	15.4	51.2		0.253	19.2	13.8					1.7	5.2
166	9/24/19 9:40 AM	S	CHARLES RIVER	LOWER BASIN	0.028	13	48.1		0.091	27	14.2					1.3	30.3
166	10/7/19 9:46 AM	S	CHARLES RIVER	LOWER BASIN	1.95	18.9	52.8		0.227	10.1	12.4					1.53	4.44
166	10/22/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	1.75	31.6	56.4		0.621	22.1	20.9					1.82	1.47
166	11/5/19 10:33 AM	S	CHARLES RIVER	LOWER BASIN	7.03	41.6	53.1		1.14	6.72	5.52					2.415	1.775
166	11/18/19 10:47 AM	S	CHARLES RIVER	LOWER BASIN	9.6	49	87.1		1.5	1.5	2.19					1.38	1.95
166	12/16/19 9:57 AM	S	CHARLES RIVER	LOWER BASIN	8.57	53.15	88.15		1.015	0.64	1.095					2.38	3.985
166	7/1/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	4.43	36.4	82		0.574	8.09	7.36					2.51	3.88
166	7/18/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	1.55	19.9	56.2		0.309	7.15	4.8					1.75	4.8
166	12/5/19 10:31 AM	S	CHARLES RIVER	LOWER BASIN	8.09	61.1	95.7		0.751	2.24	2.22					2.75	4.41
166	3/6/19 10:31 AM	S	CHARLES RIVER	LOWER BASIN	4.33	64.9	94.9		0.431	4.09	2.48					0.981	1.6
166	6/17/19 9:35 AM	S	CHARLES RIVER	LOWER BASIN	16	35.25	85.8		0.838	1.06	1.265					2.445	3.74
166	8/6/19 9:40 AM	S	CHARLES RIVER	LOWER BASIN	0.217	17.9	62.3		0.477	21.2	18.9					1.7	3.01
166	1/7/19 10:04 AM	S	CHARLES RIVER	LOWER BASIN	4.96	60.4	78.2		0.265	2.14	1.78					1.58	1.82
166	1/25/19 10:30 AM	S	CHARLES RIVER	LOWER BASIN	9.49	74.2	103		0.563	1.62	1.72					1.79	3.89
166	2/19/19 9:37 AM	S	CHARLES RIVER	LOWER BASIN	4.55	60	85		0.238	2.66	1.68					1.11	2.86
166	3/19/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	3.81	66.3	93.8		0.379	10.4	5.56					1.48	4.64
166	4/1/19 9:39 AM	S	CHARLES RIVER	LOWER BASIN	0.51	43.1	68.6		0.199	12.6	8.28					1.01	3.36
166	4/19/19 9:52 AM	S	CHARLES RIVER	LOWER BASIN	3.13	42.3	68.1		0.311	10.2	5.9					1.32	2.96
166	5/2/19 9:48 AM	S	CHARLES RIVER	LOWER BASIN	5.49	32	65.1		0.643	1.69	1.48					1.67	1.65
166	5/14/19 10:29 AM	S	CHARLES RIVER	LOWER BASIN	11.6	38.55	89.35		0.601	12.4	9.19					1.915	2.46
166	5/31/19 9:57 AM	S	CHARLES RIVER	LOWER BASIN	10.6	40.7	89.9		0.474	35.5	16.1					2.41	0.69
166	6/5/19 10:11 AM	S	CHARLES RIVER	LOWER BASIN	6.46	41.6	89.9		0.265	7.115	4.98					1.96	3.845
166	2/7/19 10:14 AM	S	CHARLES RIVER	LOWER BASIN	4.23	58.1	82.7		0.35	2.31	1.48					1.1	1.18
083	9/24/19 9:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.0892	17.1	41.4		0.331	3.85	4.73					1.01	1.93
083	10/7/19 9:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	2.34	18.1	38.5		0.34	4.17	4.75					0.817	2.8
083	9/12/19 9:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	1.98	21.7	46		0.338	5.62	7.95					1.01	2.49
083	8/26/19 8:46 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.627	25.1	50.9		0.359	0.91	1.44					0.966	1.8
083	8/6/19 9:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	3.05	32.3	63.2		0.373	3.26	4.76					1.16	2.67
083	8/13/19 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	2.73	31.3	59.7		0.784	3.12	3.79					1.09	1.07
083	12/16/19 9:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	21.5	44.2	91.8		0.624	4.01	2.85					1.8	4.08
083	12/5/19 9:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	20.6	57.1	95		0.599	7.14	4.68					2.38	2.69
083	11/18/19 10:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	22.7	40.1	104		0.58	4.79	5.72					1.27	3.12
083	11/5/19 9:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	6.08	27.6	57.7		0.39	4.07	3.53					1.16	1.51
083	10/22/19 8:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	4.935	26.7	57.45		0.53	28.5	22.85					1.315	5.26
083	5/14/19 9:57 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	2.21	65.8	104		0.302	19.6	9.43					1.1	3
083	5/2/19 9:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	8.7	71.7	104		0.313	6.89	3.97					1.3	9.85
083	4/19/19 9:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	13.3	62.85	112.5		0.404	4.685	2.045					1.315	4.89
083	4/1/19 9:03 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	21	86.3	138		0.518	19.1	9.34					1.45	4.57
083	3/19/19 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	21.6	71.5	117		0.61	5.6	2.4					1.76	2.73
083	3/6/19 9:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	27.7	85.4	142		0.59	6.7	3.74					1.18	2.12
083	1/25/19 9:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	25.1	76.2	116		0.67	8.81	3.42					1.78	3.89

2019 MWRA Central Lab Analyses - Nutrients

Station	Day/Time(EST)	Surface/Bottom	Region	Subregion	Ammonium (µM)	Nitrate + nitrite (µM)	Total Nitrogen (µM)	Particulate P (µM)	Phosphate (µM)	Chlorophyll a (µg/L)	Pheophytin (µg/L)	Particulate carbon (µM)	Particulate nitrogen (µM)	Total dissolved N (µM)	Total dissolved P (µM)	Total phosphorus (µM)	Total suspended solids (mg/L)	
083	1/7/19 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	24	82.5	122		0.299	3.54	2.71						1.58	1.11
083	7/18/19 8:54 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	6.97	36.6	64.9		0.118	2.44	2.33						1.3	3.77
083	6/17/19 9:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	11.1	65	102		0.211	2.62	3.29						1.38	2.9
083	6/5/19 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	3.86	70.5	110		0.01	5.46	2.61						1.77	6.95
083	7/1/19 8:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	3.945	53.65	103.5		0.2295	16.55	7.59						1.61	5.565
083	5/31/19 9:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	2.55	67.2	118			1.13	0.86							0.9
066	7/18/19 8:47 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	10.75	30.6	63.25		0.5705	1.705	1.73						1.945	2.07
066	8/6/19 8:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	2.44	28.45	58		0.659	3.715	5.78						1.495	1.455
066	8/13/19 8:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	5.37	29.9	62.1		1.25	3.65	4.73						1.54	1.94
066	8/26/19 8:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.983	23.15	48.7		0.365	2.04	2.51						1.045	1.835
066	9/12/19 9:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	7.885	30	57.45		0.668	6.71	7.345						1.655	2.61
066	10/7/19 9:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	3.055	19.95	40.7		0.44	1.54	2.34						0.9565	1.495
066	11/5/19 9:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	6.73	28.7	58.1		0.474	16.3	13.6						1.3	2.88
066	11/18/19 10:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	23.4	43.4	89.5		0.749	7.44	11.3						1.62	1.65
066	12/16/19 9:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	24	53	98.3		0.659	2.02	2.01						1.51	1.92
066	7/1/19 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	5.88	49	104		0.373	21.1	7.36						2.08	7.81
066	9/24/19 8:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	2.19	16.5	45.8		0.288	6.66	8.32						1.41	2.7
066	12/5/19 9:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	26.3	48.75	94.85		0.2975	5.385	3.045						1.585	3.39
066	3/6/19 9:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	26.6	83.8	140.5		0.5535	5.115	4.36						1.29	2.565
066	6/17/19 9:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	15.9	55.2	98.6		0.388	2.1	1.93						1.67	1.77
066	10/22/19 8:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	6.12	23.7	52.4		0.501	18.6	10.1						1.48	3.35
066	1/25/19 9:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	23.2	74.6	117		0.706	10.7	9.48						2.51	10.1
066	2/7/19 9:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	24.35	77.95	123		0.4245	13	2.765						1.265	2.075
066	2/19/19 8:56 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	24.7	79.05	134.5		0.4005	3.865	1.245						1.225	2.405
066	1/7/19 9:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	23.05	76.7	117		0.369	4.815	2.79						1.635	0.745
066	3/19/19 8:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	23.45	79.75	124.5		0.5165	6.845	3.225						1.485	2.38
066	4/1/19 8:56 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	22.4	83.95	127.5		0.507	11.45	5.365						1.385	4.33
066	4/19/19 9:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	15.1	78.1	118		0.433	4.78	2.44						1.48	4.68
066	5/2/19 9:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	9.81	70	101		0.367	4.08	2.24						1.5	4.15
066	5/14/19 9:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	3.46	61.6	104		0.319	28.6	13.8						1.53	4.75
066	5/31/19 9:13 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	7.11	66.4	98.8		0.164	11.4	4.975						1.02	0.66
066	6/5/19 9:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	5.4	65.7	99.2		0.04	5.83	2.37						1.63	5.04
167	10/7/19 8:08 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.398	0.13	42.5		0.127	51.2	34.2						1.72	3.55
167	9/24/19 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.028	0.025	33		0.01	19.3	16.4						1.15	6.29
167	9/12/19 8:12 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.415	1.26	33.1		0.01	19.7	15.3						1.41	5.56
167	8/26/19 7:40 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.028	0.68	44.1		0.145	9.85	6.46						2.32	10.8
167	8/13/19 7:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.524	2.11	45.4		0.378	49	15.1						2.29	6.62
167	8/6/19 8:13 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.028	0.269	46.1		0.278	28	21.1						2.37	5.12
167	12/16/19 8:51 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	21.5	48.7	91.4		0.632	2.61	3.61						1.73	4.76
167	11/5/19 8:50 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	1.07	18.9	51.3		0.398	50	6.98						1.65	5.49
167	11/18/19 9:21 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	4.91	36.6	77.5		0.542	35.3	28						1.62	7.03
167	10/22/19 7:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	1.79	14.5	39.7		0.369	17.7	31.8						1.51	3.91
167	4/1/19 8:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	11.9	66.1	105		0.459	14.8	9.33						1.21	6.43
167	5/14/19 8:50 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	1.27	45.9	89		0.139	42.2	21.8						1.52	8.84
167	5/2/19 8:15 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	7.15	62.6	97		0.388	15.4	7.05						1.84	5.88
167	5/31/19 8:18 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	6.92	41.4	76.3		0.01	22.9	13.3						1	1.14
167	4/19/19 8:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	7.01	58.4	86.5		0.46	10	3.77						1.46	5.27
167	3/19/19 8:04 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	16.7	69.3	107		0.448	5.04	1.97						1.42	3.88
167	2/7/19 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	14.9	66.4	103		0.43	9.92	3.31						1.22	2.35
167	1/25/19 8:40 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	20.5	38.8	83.6		0.458	3.55	3.69						2.41	17.9
167	1/7/19 8:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	19.8	67.7	105		0.396	4.27	3.07						1.67	3.03
167	6/5/19 8:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	5.1	40.2	82.5		0.052	7.38	4.03						1.2	6.18
167	7/1/19 7:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	10.6	29.4	81.2		0.197	18.2	12.8						2.34	5.63
167	6/17/19 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	17.8	32.7	89.5		0.332	6.25	13.2						2.37	4.64
167	7/18/19 8:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.93	0.432	45.7		0.118	17.9	11.6						3.27	8.9
137	9/10/19 10:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.028	0.346		0.768	0.618	9.64	4.21	76.8	9.65	12.3	1.02			3.09
137	9/10/19 10:37 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.028	0.129			0.623	4.82	5.42							4.11
137	8/19/19 9:46 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.028	0.343		0.555	0.397	2.63	1.77	45.9	6.2	17.6	0.619			2.65
137	8/19/19 9:46 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.266	0.505			0.938	1.01	0.67							1.69
137	8/7/19 10:10 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.028	0.54		0.706	0.274	1.13	0.86	18.1	1.95	13.8	0.895			2.57
137	7/3/19 10:28 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	5.06	7.37		0.647	0.731	2.78	2.66	44.1	6.11	39	1.37			2.52
137	7/22/19 10:02 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.176	0.901		0.441	0.535	3.25	2.2	35.2	5.22	12.3	0.833			3.01
137	7/22/19 10:02 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.69	0.864			0.813	2.25	4.46							12
137	9/20/19 10:04 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.7	0.447			1.99	1.24	2.96							2.17
137	11/7/19 10:56 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	7.41	7.06		0.16	1.03	5.08	2.26	24.2	2.72	23.4	1.16			1.99
137	8/7/19 10:10 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.028	0.243			0.503	1.22	0.87							3.65
137	9/20/19 10:04 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.95	1.61		0.816	1.23	18.8	11.4	76.9	11.5	18.2	1.79			3.77
137	10/1/19 10:11 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.61	0.812			0.867	2.3	3.04							3.96
137	10/1/19 10:11 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.953	1.4		0.756	0.592	12.4	7.05	54.4	7.79	16.4	0.808			2.44
137	10/24/19 9:49 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.3	3.92			1.15	2.19	2.65							3.25

2019 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)	Phaeophytin (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	7/3/19 10:28 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.7	1.26			0.355	1.45	2.07						1.74
137	11/7/19 10:56 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	6.94	6.12			1.06	3.2	2.01						3.01
137	5/6/19 10:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.52	4.24			0.361	0.46	0.57						1.84
137	11/26/19 11:01 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.87	8.09			0.958	0.73	0.56						2.31
137	11/26/19 11:01 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	6.66	15.8		0.508	0.927	2.03	1.13	44.2	4.82	35.6	1.24		2.59
137	12/4/19 12:05 PM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.27	8.33			0.832	1.7	1.34						2.39
137	12/4/19 12:05 PM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	6.02	16.3		0.496	0.852	1.8	2	35.6	3.37	37.2	1.07		2.93
137	12/18/19 11:33 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.68	9.05			0.936	0.17	0.44						1.89
137	10/24/19 9:49 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	6.22	5.77		0.318	0.928	5.39	3.35	33.1	4.4	27.6	1.29		2.13
137	3/21/19 10:02 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.028	5.8			0.323	4.59	1.51						1.87
137	12/18/19 11:33 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	5.69	14.3		0.384	0.909	0.22	0.47	24.1	2.37	33.4	1.08		6.85
137	1/3/19 10:20 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.38	9.61			0.742	0.56	0.62						1.82
137	1/3/19 10:20 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	7.07	28.7		0.326	0.681	0.44	0.66	28	2.52	43.4	0.898		6.02
137	1/15/19 10:37 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.71	7.97			0.578	1.91	0.91						1.92
137	1/15/19 10:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.72	10.8		0.291	0.516	0.92	0.88	20.3	1.93	20.7	0.541		2.72
137	2/6/19 10:26 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.63	7.39			0.678	0.58	0.56						1.78
137	2/6/19 10:26 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	4.54	17.8		0.351	0.692	0.3	0.36	17.9	1.93	34.7	0.814		1.84
137	2/22/19 10:48 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.865	6.98			0.472	1.83	1.18						2.39
137	2/22/19 10:48 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	5.76	23.9		0.449	0.549	1.95	0.8	31.6	3.69	41.6	0.935		1.72
137	5/28/19 10:24 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.02	1.47			0.228	9.04	4.81						3.23
137	3/5/19 11:13 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.21	13.5		0.391	0.6	0.19	0.2	22.5	2.71	38.1	0.687		1.96
137	6/25/19 10:08 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.596	2.24			1.04	0.0833	18.5	9.39	76	10.8	14.2	0.486	3.9
137	3/21/19 10:02 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	5.74	34.1		0.447	0.479	2.07	37.1	4.2	53.6	0.78			2.35
137	4/5/19 10:39 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.683	0.173			0.0746	7.43	2.3						2.81
137	4/5/19 10:39 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.74	5.22		0.465	0.103	1.96	0.68	55	6.24	21.9	0.223		2.59
137	4/29/19 10:19 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	4.32	2.96			0.511	0.33	0.63						2.08
137	4/29/19 10:19 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	5.41	13.3		0.346	0.471	1.02	0.66	28.1	3.54	28.7	0.955		2.21
137	5/6/19 10:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	4.79	22.2		0.63	0.29	8.67	4	57.3	7.43	35.6	0.56		18.5
137	5/28/19 10:24 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	1.01	8.25		0.539	0.0946	9.01	4.15	47.8	6.26	22.2	0.398		2.07
137	6/12/19 10:42 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	6.03	1.41			0.597	3.58	0.91						2.26
137	6/12/19 10:42 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.18	3.15		0.402	0.257	4.3	2.37	29.6	4.06	22.6	0.665		1.87
137	6/25/19 10:08 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.62	2.14			0.511	5.83	3.6						1.93
137	3/5/19 11:13 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.582	6.15			0.637	0.56	0.31						2.05

**APPENDIX IV**

2019 raw data for physical profile results.

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	1/7/19 10:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.53	1.72	0.2	13.33	95.8	0.418		7.62	
012	1/7/19 10:48 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.53	1.72	0.2	13.46	96.7	0.418		7.48	
012	1/25/19 11:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1	1							
012	2/7/19 11:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	0.58	0.58	1.6	0.31	13.07	93.7	0.641	2	7.39	
012	2/19/19 10:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.31	0.31	1.2	0.37	13.77	97.7	0.757	0.4	7.22	
012	3/6/19 11:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.97	1.42	0.46	14.79	105.6	0.937	0.9	7.91	
012	3/19/19 10:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	5.44	0.29	13.23	104.9	0.598	2.6	7.68	
012	4/1/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.09	0.09	10.29	0.27	12.16	108.6	0.553		7.5	
012	4/19/19 10:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.02	0.02	13.599	0.26	10.81	104.2	0.532		7.47	
012	4/19/19 10:36 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.02	0.02	13.597	0.26	10.81	104.2	0.532		7.45	
012	5/2/19 10:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.06	0.2	11.9	0.21	10.71	99.3	0.428		7.46	
012	5/14/19 11:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.97	1.36	12.848	0.24	10.19	96.5		3.13	7.75	
012	5/31/19 10:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.07	0.3	0.3	18.25	0.29	9.31	99	0.596		7.57	
012	6/5/19 10:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.05	0.05	0.09	20.341	0.28	9.23	102.3	0.58		7.67	
012	6/5/19 10:48 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.05	0.05	0.09	20.294	0.28	9.21	102	0.58		7.59	
012	6/11/19 10:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.67	0.67	22.566	0.25	7.36	85.2	0.52	2.61	7.62	
012	6/14/19 8:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	19.393	0.29	8.25	89.8	0.592		7.49	
012	6/17/19 10:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.11	0.11	21.377	0.28	8.81	99.7	0.569	1.13	7.77	
012	6/20/19 8:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47								
012	6/21/19 9:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56								
012	6/22/19 8:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.19	1.56								
012	6/23/19 7:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.19								
012	6/24/19 8:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	21.479	0.27	8.01	90.8	0.549		7.21	
012	6/24/19 8:45 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	21.472	0.27	7.99	90.6	0.549		7.2	
012	6/25/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.13	0.13	0.13	22.56	0.28	8.27	95.8	0.577	0	7.54	
012	7/1/19 10:22 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.16	1.81	24.02	0.29	7.88	93.8	0.604		7.65	
012	7/1/19 10:22 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0.16	1.81	23.996	0.29	7.71	91.7	0.606	11.97	7.58	
012	7/7/19 7:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.37	1.37								
012	7/8/19 9:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.37	26.091	0.25	7.28	90	0.519		7.54	
012	7/9/19 9:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.673	0.26	7.31	89.7	0.537		7.64	
012	7/10/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.546	0.26	7.05	86.3	0.543		7.55	
012	7/11/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.02	0.02	25.726	0.27	7.19	88.3	0.56		7.61	
012	7/12/19 11:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.81	0.83	0.83								
012	7/13/19 8:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.81	0.83								
012	7/14/19 8:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.81								
012	7/15/19 9:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.384	0.26	7.25	88.5	0.549		7.17	
012	7/16/19 8:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.517	0.27	6.96	85.2	0.569		7.25	
012	7/17/19 8:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	26.099	0.28	6.47	80	0.586		6.94	
012	7/18/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.47	0.47	25.416	0.26	6.94	84.8	0.536		7.61	
012	7/24/19 10:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.03	1.03	24.414	0.25	7.7	92.3	0.512		7.46	
012	7/25/19 10:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.03	24.058	0.24	8.38	99.8	0.491	1.72	7.77	
012	7/26/19 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	24.285	0.24	7.86	94	0.49		7.75	
012	7/27/19 8:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0								
012	7/28/19 8:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0								
012	8/1/19 10:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.25	1.25	26.779	0.24	7.32	91.6	0.496	0.94	7.44	
012	8/2/19 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.25	25.915	0.23	7.08	87.2	0.482		7.54	
012	8/3/19 8:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0								
012	8/4/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0								
012	8/5/19 10:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	24.367	0.27	7.63	91.4	0.551	0.63	7.81	
012	8/6/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.042	0.27	7.63	92.5	0.555		7.57	
012	8/8/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	23.065	0.23	7.24	86.4	0.486		7.25	
012	8/9/19 8:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	23.982	0.18	7.49	89	0.372	3.34	7.12	
012	8/10/19 8:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.38								
012	8/11/19 8:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0								
012	8/12/19 9:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.323	0.21	7.78	91.3	0.44		6.92	
012	8/13/19 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.844	0.22	7.41	87.9	0.451		7.58	
012	8/26/19 10:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20.786	0.31	8.11	90.8	0.644		7.93	
012	8/26/19 10:17 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	20.639	0.31	7.61	85	0.646		7.79	
012	9/3/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	21.584	0.24	7.8	88.6	0.491	3.41	7.3	
012	9/4/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	21.963	0.3	7.35	84.1	0.609		7.17	
012	9/5/19 8:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	21.463	0.27	7.58	86	0.564	0.87	7.23	
012	9/6/19 9:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	21.061	0.29	7.61	85.5	0.596		6.97	
012	9/12/19 10:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.07	0.07	0.07	20.648	0.31	7.48	83.5	0.645	0.24	7.51	
012	9/12/19 10:45 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.07	0.07	0.07	20.675	0.31	7.4	82.6	0.645	2.58	7.45	
012	9/24/19 10:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.14	0.14	21.121	0.34	7.93	89.3	0.7		8.17	
012	9/24/19 10:28 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.14	0.14	20.942	0.34	7.13	80	0.7		7.98	
012	10/7/19 10:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.16	0.16	0.16	16.847	0.38	8.63	89.2	0.768		7.82	

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	10/7/19 10:18 AM	B	CHARLES RIVER	UPPER BASIN		0.16	0.16	0.16	16.567	0.38	8.25	84.7	0.768		7.71	
012	10/10/19 9:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.09	0.1	14.476	0.39	8.81	86.5	0.794	2.73	7.69	
012	10/11/19 9:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.35	0.42	13.497	0.39	8.59	82.6	0.791		7.57	
012	10/12/19 8:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.34	0.36								
012	10/13/19 8:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.34								
012	10/14/19 8:42 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.01								
012	10/15/19 10:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	13.618	0.37	9.22	88.9	0.751	0.58	7.77	
012	10/16/19 10:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.53	0.53	12.874	0.36	8.94	84.8	0.739		7.77	
012	10/17/19 10:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.67	1.2	1.2	13.699	0.26	9.57	92.4	0.531	5.48	7.37	
012	10/18/19 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.67	1.2	12.549	0.27	9.78	92	0.549		7.41	
012	10/19/19 8:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.67								
012	10/20/19 8:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0								
012	10/21/19 10:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	12.109	0.28	10.31	96.1	0.569	1.41	7.89	
012	10/22/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.16	0.16	0.16	12.643	0.27	10.47	98.7	0.546	1.75	7.8	
012	10/22/19 9:55 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.16	0.16	0.16	12.637	0.27	10.44	98.4	0.546	2.48	7.76	
012	10/28/19 10:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	1.49	1.49	12.201	0.26	10.2	95.3	0.534	2.62	7.48	
012	10/29/19 10:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.09	1.52	12.126	0.24	10.01	93.3	0.492		7.73	
012	11/1/19 10:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.08	0.17	14.501	0.25	9.78	96.1	0.514	2.41	7.76	
012	11/2/19 9:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.08								
012	11/5/19 10:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.4	0.4	0.4	10.37	0.25	10.57	94.6	0.512		7.67	
012	11/5/19 10:57 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.4	0.4	0.4	10.339	0.25	10.53	94.2	0.512		7.56	
012	11/18/19 11:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.24	0.24	0.24	2.992	0.3	12.9	96	0.618	2.09	7.6	
012	11/18/19 11:08 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.24	0.24	0.24	2.955	0.3	13.01	96.7	0.618	5.43	7.55	
012	11/25/19 10:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.51	1.51	4.727	0.27	12.49	97.3	0.551		7.49	
012	11/26/19 10:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.51	5.022	0.24	12.4	97.3	0.504	2.95	7.43	
012	11/27/19 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.2	0.2	0.2								
012	12/5/19 11:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.38	1.247	0.67	13.67	97.3	1.362		7.49	
012	12/5/19 11:01 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.38	1.224	0.67	13.86	98.6	1.361		7.47	
012	12/16/19 10:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.25	2.945	0.3	13.51	100.4	0.611	2.75	7.75	
012	12/16/19 10:44 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.25	2.947	0.3	13.44	99.9	0.612	2.78	7.59	
001	3/28/19 10:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	7.7	0.26	12.22	102.6	0.525		7.64	
001	3/29/19 10:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	8.45	0.26	10.9	93.2	0.526		7.73	
001	4/8/19 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	11.17	0.28	11.17	101.9	0.564	11.2	7.54	
001	4/9/19 10:09 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	9.698	0.28	11.27	99.3	0.58	2.66	7.53	
001	4/10/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	8.994	0.28	11.58	100.4	0.582	2.52	7.66	0.6
001	4/10/19 9:55 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	8.988	0.28	11.89	102.5	0.582	1.85	7.62	
001	4/11/19 10:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	9.142	0.28	12.18	105.9	0.572	1.81	7.58	
001	4/11/19 10:08 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	9.129	0.28	12.31	107	0.572	1.94	7.56	
001	4/12/19 9:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12								
001	4/15/19 10:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.72	0.76	1.04								
001	4/16/19 10:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.72	0.76	13.133	0.28	11.19	106.6	0.566	3.93	7.65	
001	4/17/19 10:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.72	13.218	0.28	10.9	104.2	0.569	3.5	7.68	
001	4/18/19 10:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	12.873	0.28	10.66	101.1	0.581		7.4	
001	4/23/19 10:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	14.283	0.21	9.63	94.2	0.434	5.73	7.44	0.6
001	4/23/19 10:02 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	14.283	0.21	9.72	95	0.434	8.57	7.38	
001	4/24/19 10:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	14.366	0.23	9.86	96.6	0.48	3.75	7.3	0.6
001	4/24/19 10:24 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	14.357	0.23	9.97	97.7	0.48	4.14	7.24	
001	4/25/19 10:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25								
001	4/26/19 10:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78								
001	6/10/19 10:22 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	23.391	0.31	7.62	89.7	0.632	0.13	7.48	
001	6/11/19 10:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.67	0.67	22.101	0.27	7.23	82.9	0.561	8.36	7.67	
001	6/14/19 8:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	19.347	0.31	7.92	86.1	0.627		7.51	
001	6/18/19 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	21.185	0.29	7.16	80.7	0.594	1.62	7.21	
001	6/19/19 10:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1								
001	6/20/19 8:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47								
001	6/21/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56								
001	6/22/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.19	1.56								
001	6/23/19 7:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.19								
001	6/24/19 8:34 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	21.452	0.28	7.01	79.5	0.585		6.8	
001	6/25/19 10:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.13	0.13	0.13	21.735	0.3	7.42	84.5	0.608	2.77	7.56	
001	7/12/19 11:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.81	0.83	0.83								
001	7/13/19 8:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.81	0.83								
001	7/14/19 8:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.81								
001	7/15/19 8:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.514	0.28	6.64	81.2	0.574		7.1	
001	7/16/19 8:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	25.658	0.29	6.31	77.4	0.6		7.12	
001	7/17/19 8:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	26.026	0.29	6.33	78.2	0.61		6.88	
001	8/8/19 8:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	23.215	0.2	6.86	80.6	0.424		7.22	



2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	8/9/19 8:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	23.542	0.2	6.94	81.8	0.413	1.9	6.86	
001	8/10/19 7:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.38								
001	8/11/19 8:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0								
001	8/12/19 9:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	22.933	0.23	7.06	82.3	0.471		6.68	
001	9/3/19 9:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	21.358	0.23	7.46	84.4	0.484	3.57	7.21	
001	9/4/19 8:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	21.647	0.3	6.47	73.6	0.611		7.1	
001	9/5/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	21.231	0.29	6.59	74.4	0.589	1.1	7.13	
001	9/6/19 8:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	20.443	0.3	6.86	76.3	0.617		6.78	
001	9/25/19 9:34 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	20.111	0.37	7.7	85.1	0.747	1.34	8	
001	9/27/19 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	19.689	0.34	7.22	79.1	0.698	0.66	7.86	
001	11/1/19 10:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.08	0.17	13.629	0.29	8.05	77.6	0.586	3.92	7.35	
001	11/2/19 9:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.08								
001	11/25/19 10:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.51	1.51	5.656	0.36	9.96	79.5	0.738		7.41	
001	11/26/19 10:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.51	6.424	0.34	4.6	37.4	0.698	4.91	7.2	
001	11/27/19 9:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.2	0.2	0.2								
144	3/28/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	7.45	0.26	12.16	101.4	0.539	5	7.55	1.6
144	3/28/19 9:55 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	7.36	0.26	12.14	101.1	0.538	6.9	7.51	
144	3/29/19 10:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	8.35	0.26	10.95	93.4	0.534	8.1	7.72	1.5
144	3/29/19 10:06 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	8.37	0.26	11.04	94.2	0.54	7.8	7.64	
144	4/8/19 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	11.23	0.29	11.1	101.4	0.601	8.3	7.48	1.1
144	4/8/19 9:54 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	10.94	0.3	10.74	97.4	0.618	12.4	7.45	
144	4/9/19 10:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	9.695	0.29	10.91	96.2	0.592	2.55	7.53	0.9
144	4/9/19 10:01 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	9.694	0.29	10.89	96	0.592	4.77	7.49	
144	4/10/19 9:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	8.887	0.29	11.36	98.2	0.589	1.79	7.61	1.3
144	4/10/19 9:47 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	8.881	0.29	11.26	97.3	0.603	2.52	7.53	
144	4/11/19 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	8.782	0.28	11.74	101.2	0.581	1.55	7.55	1.3
144	4/11/19 10:00 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	8.691	0.29	11.8	101.5	0.585	1.72	7.48	
144	4/12/19 10:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	9.258	0.28	11.21	97.8	0.576	1.78	7.51	1.4
144	4/12/19 10:11 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	9.261	0.28	11.33	98.8	0.575	6.93	7.45	
144	4/23/19 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	14.323	0.21	9.49	92.8	0.442	6.6	7.41	0.6
144	4/23/19 9:54 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	14.305	0.21	9.56	93.5	0.443	11.83	7.31	
144	4/24/19 10:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	14.302	0.24	9.55	93.4	0.486	4.41	7.31	0.6
144	4/24/19 10:16 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	14.259	0.24	9.78	95.6	0.489	5.79	7.24	
144	4/25/19 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	14.924	0.24	9.79	97	0.498	4.46	7.2	1
144	4/25/19 10:00 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	14.883	0.24	9.91	98.2	0.498	9.09	7.18	
144	4/26/19 9:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	14.954	0.24	9.53	94.6	0.489	3.7	7.45	0.8
144	4/26/19 9:53 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	14.955	0.24	9.51	94.3	0.492	7.18	7.43	
144	6/10/19 10:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	23.821	0.3	8.06	95.5	0.627	0.28	7.5	1.2
144	6/10/19 10:10 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	22.657	0.31	6.99	81.1	0.636	0.41	7.36	
144	6/14/19 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	19.155	0.29	7.55	81.7	0.588	2.78	7.41	1.4
144	6/14/19 10:04 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	18.764	0.3	7.41	79.6	0.615	3.77	7.33	
144	6/18/19 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	21.391	0.29	6.75	76.4	0.592	0.94	7.24	1.5
144	6/18/19 9:39 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	21.233	0.3	6	67.7	0.608	2.88	7.07	
144	6/19/19 10:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	20.973	0.28	6.66	74.8	0.585	3.74	7.22	0.9
144	6/19/19 10:07 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	20.928	0.29	6.46	72.5	0.589	4.28	7.12	
144	6/20/19 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	21.49	0.28	6.58	74.6	0.584	1.63	7.22	0.9
144	6/20/19 10:04 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	21.482	0.29	6.48	73.5	0.591	2.21	7.15	
144	6/21/19 10:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	20.351	0.21	7.57	84	0.437	6.83	7.31	0.8
144	6/21/19 10:06 AM	B	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	19.989	0.21	7.55	83.1	0.437	9.29	7.23	
144	6/24/19 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	22.112	0.27	7.27	83.4	0.568	0.87	7.16	1
144	6/24/19 9:43 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	21.155	0.3	6.87	77.4	0.611	3	7.03	
144	7/15/19 9:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.204	0.28	6.53	81	0.574	1.44	7.62	1.2
144	7/15/19 9:37 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.169	0.28	6.22	77	0.575	2.54	7.44	
144	7/16/19 9:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.316	0.29	6.43	79.9	0.601	0.08	7.46	0.9
144	7/16/19 9:52 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.203	0.29	6.41	79.4	0.601	0.17	7.35	
144	7/17/19 8:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	26.283	0.3	8.08	100.3	0.625	1.35	7.06	1.4
144	7/17/19 8:27 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	26.182	0.3	7.62	94.3	0.628	7.57	7.01	
144	8/8/19 9:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	23.886	0.18	7.17	85.1	0.386	4.73	7.56	0.7
144	8/8/19 9:47 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	23.811	0.18	7.13	84.5	0.387	5.29	7.51	
144	8/9/19 9:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	24.027	0.18	6.99	83.2	0.383	0.98	7.28	1
144	8/9/19 9:41 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	23.898	0.19	6.88	81.7	0.39	1.2	7.19	
144	8/12/19 9:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.102	0.22	7.28	85.2	0.463	1.88	7.61	1
144	8/12/19 9:38 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.028	0.22	6.88	80.4	0.462	3.23	7.45	
144	9/3/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	21.716	0.2	7.27	82.8	0.412	3.97	7.91	0.6
144	9/3/19 9:55 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	21.049	0.21	6.9	77.6	0.434	7.49	7.71	
144	9/4/19 9:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	22.516	0.26	7.62	88.1	0.548	0.7	7.45	1
144	9/4/19 9:26 AM	B	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	22.203	0.27	7.46	85.8	0.559	4.54	7.39	

## 2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
144	9/5/19 9:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	22.273	0.29	6.77	77.9	0.601	2.36	7.15	1.5
144	9/5/19 9:57 AM	B	CHARLES RIVER	UPPER BASIN		0	0.33	0.33	21.842	0.3	6.3	72	0.627	6.15	7.07	
144	9/6/19 9:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	21.317	0.3	7.81	88.3	0.61	0.56	7.24	
144	9/6/19 9:07 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.33	21.243	0.32	7.75	87.6	0.653	0.65	7.15	
144	9/25/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	21.119	0.38	7.95	89.5	0.78	1.62	7.86	1
144	9/25/19 9:21 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.14	21.025	0.38	7.91	88.9	0.782	1.75	7.74	
144	9/27/19 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	19.898	0.39	8.33	91.6	0.796	3.39	7.87	0.9
144	9/27/19 9:45 AM	B	CHARLES RIVER	UPPER BASIN		0	0.27	0.27	19.854	0.39	7.92	87	0.794	1.3	7.64	
002	3/28/19 9:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	7.17	0.26	11.93	98.8	0.541	4.9	7.65	1.6
002	3/28/19 9:48 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.01	0.01	7.13	0.26	11.88	98.4	0.541	6.8	7.53	
002	3/29/19 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	8.23	0.26	11.02	93.7	0.539	7.4	7.67	1.5
002	3/29/19 10:00 AM	B	CHARLES RIVER	UPPER BASIN		0.03	0.04	0.04	8.22	0.26	11.07	94.2	0.541	3.9	7.62	
002	4/8/19 9:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	11.27	0.29	11.09	101.4	0.602	8.5	7.55	1.1
002	4/8/19 9:49 AM	B	CHARLES RIVER	UPPER BASIN		0.31	0.31	0.4	11.29	0.29	10.55	96.5	0.602	10.6	7.49	
002	4/9/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	9.73	0.29	10.76	94.9	0.594	2.72	7.55	0.9
002	4/9/19 9:55 AM	B	CHARLES RIVER	UPPER BASIN		0.06	0.37	0.37	9.759	0.29	10.64	93.9	0.594	5.18	7.43	
002	4/10/19 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	8.856	0.29	11.11	96	0.596	2.05	7.65	1.2
002	4/10/19 9:40 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.07	0.38	8.807	0.29	11.1	95.7	0.596	7.82	7.6	
002	4/11/19 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	8.46	0.29	11.43	97.8	0.587	1.54	7.54	0.9
002	4/11/19 9:54 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.07	8.391	0.29	11.47	98	0.589	4.45	7.47	
002	4/12/19 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	9.163	0.28	10.97	95.4	0.573	1.95	7.55	1.1
002	4/12/19 10:05 AM	B	CHARLES RIVER	UPPER BASIN		0.11	0.11	0.12	9.123	0.28	11.1	96.4	0.577	4.53	7.42	
002	4/15/19 10:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.72	0.76	1.04								
002	4/16/19 10:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.72	0.76	12.318	0.27	11.63	108.8	0.547	5.51	7.73	
002	4/17/19 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.72	12.437	0.27	10.72	100.6	0.562	3.36	7.72	
002	4/18/19 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	12.425	0.28	10.59	99.4	0.557	7.4		
002	4/23/19 9:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	14.327	0.22	9.41	92.1	0.453	7.76	7.42	0.6
002	4/23/19 9:48 AM	B	CHARLES RIVER	UPPER BASIN		0.21	2.51	2.54	14.317	0.22	9.38	91.7	0.453	11.31	7.31	
002	4/24/19 10:12 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	14.149	0.23	9.59	93.5	0.484	4.98	7.3	0.6
002	4/24/19 10:12 AM	B	CHARLES RIVER	UPPER BASIN		0.04	0.25	2.55	14.122	0.24	9.64	94	0.486	7.31	7.19	
002	4/25/19 9:54 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	14.797	0.24	9.72	96.1	0.504	5.62	7.22	0.6
002	4/25/19 9:54 AM	B	CHARLES RIVER	UPPER BASIN		0	0.04	0.25	14.766	0.24	9.78	96.6	0.504	7.97	7.16	
002	4/26/19 9:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	14.95	0.24	9.4	93.3	0.494	3.78	7.46	0.8
002	4/26/19 9:46 AM	B	CHARLES RIVER	UPPER BASIN		0.74	0.74	0.78	14.955	0.24	9.41	93.3	0.492	5.17	7.44	
002	6/10/19 10:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	23.436	0.31	7.68	90.5	0.631	0.48	7.43	1
002	6/10/19 10:02 AM	B	CHARLES RIVER	UPPER BASIN		0.14	0.14	0.14	22.931	0.31	6.81	79.4	0.632	0.82	7.31	
002	6/11/19 10:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.67	0.67	22.835	0.3	7.22	84.1	0.623	3.2	7.6	
002	6/14/19 9:56 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	18.987	0.28	7.26	78.3	0.578	3.17	7.47	0.9
002	6/14/19 9:56 AM	B	CHARLES RIVER	UPPER BASIN		0	0.63	0.63	18.745	0.28	7.07	75.9	0.578	4.09	7.36	
002	6/18/19 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	21.401	0.3	6.71	76	0.609	1.21	7.17	0.8
002	6/18/19 9:31 AM	B	CHARLES RIVER	UPPER BASIN		0.1	0.1	0.21	21.183	0.3	6.39	72.1	0.62	4.05	7.1	
002	6/19/19 10:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	21.113	0.29	6.75	76	0.593	3.31	7.23	1
002	6/19/19 10:01 AM	B	CHARLES RIVER	UPPER BASIN		0	0.1	0.1	21.025	0.29	6.57	73.8	0.6	6.97	7.14	
002	6/20/19 9:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	21.576	0.29	6.7	76.1	0.601	1.58	7.21	0.9
002	6/20/19 9:58 AM	B	CHARLES RIVER	UPPER BASIN		0.37	0.37	0.47	21.572	0.29	6.44	73.1	0.602	3.32	7.1	
002	6/21/19 10:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	20.551	0.24	7.45	82.9	0.499	4.9	7.32	0.7
002	6/21/19 10:00 AM	B	CHARLES RIVER	UPPER BASIN		1.19	1.56	1.56	20.502	0.24	7.23	80.4	0.499	9.04	7.26	
002	6/22/19 8:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.19	1.56								
002	6/23/19 7:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.19								
002	6/24/19 9:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	22.804	0.28	7.63	88.8	0.572	0.77	7.2	1
002	6/24/19 9:36 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	21.87	0.28	7.18	82.1	0.581	2.94	7.14	
002	6/25/19 10:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.13	0.13	0.13	22.897	0.29	8.28	96.5	0.594	1.75	7.58	
002	7/12/19 11:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.81	0.83	0.83								
002	7/13/19 8:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.81	0.83								
002	7/14/19 8:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.81								
002	7/15/19 9:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.791	0.29	7.67	96.1	0.595	1.64	7.64	1.1
002	7/15/19 9:30 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	26.375	0.29	7.37	91.6	0.598	5.56	7.42	
002	7/16/19 9:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.588	0.29	7.96	99.3	0.609	0.17	7.56	1
002	7/16/19 9:44 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	25.98	0.29	7.89	97.3	0.608	0.51	7.42	
002	7/17/19 8:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	26.369	0.31	8.72	108.4	0.634	1.14	7.11	1.4
002	7/17/19 8:32 AM	B	CHARLES RIVER	UPPER BASIN		0.43	0.43	0.43	26.292	0.31	8.41	104.4	0.634	7.65	7.1	
002	8/8/19 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	23.451	0.17	6.99	82.3	0.355	6.37	7.63	0.8
002	8/8/19 9:40 AM	B	CHARLES RIVER	UPPER BASIN		0.38	2.28	2.28	23.377	0.17	6.96	81.8	0.356	7.57	7.43	
002	8/9/19 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	23.976	0.2	6.64	79	0.411	1.12	7.15	1
002	8/9/19 9:35 AM	B	CHARLES RIVER	UPPER BASIN		0	0.38	2.28	23.815	0.2	6.53	77.4	0.415	2.85	7.07	
002	8/10/19 7:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.38								
002	8/11/19 8:09 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0								

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	8/12/19 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.504	0.22	7.42	87.5	0.465	9.53	7.74	1
002	8/12/19 9:35 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.292	0.23	6.75	79.2	0.472	17.13	7.45	
002	9/3/19 9:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	21.888	0.19	7.3	83.4	0.396	4.32	7.83	1
002	9/3/19 9:51 AM	B	CHARLES RIVER	UPPER BASIN		0	1.11	1.11	21.294	0.18	7.05	79.6	0.383	7.2	7.71	
002	9/4/19 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	22.679	0.25	7.82	90.7	0.512	1.07	7.54	1.1
002	9/4/19 9:19 AM	B	CHARLES RIVER	UPPER BASIN		0.33	0.33	1.44	22	0.23	6.06	69.4	0.482	1.68	7.34	
002	9/5/19 9:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	22.565	0.31	7.43	86.1	0.639	1.81	7.16	1.5
002	9/5/19 9:47 AM	B	CHARLES RIVER	UPPER BASIN		0	0.33	0.33	22.441	0.31	7.4	85.5	0.641	1.98	7.12	
002	9/6/19 9:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	21.816	0.3	8.02	91.6	0.613	0.66	7.39	1.5
002	9/6/19 9:01 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.33	21.728	0.31	7.73	88.1	0.628	2.3	7.21	
002	9/25/19 9:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	21.088	0.38	7.38	83.1	0.785	1.55	8.01	1.5
002	9/25/19 9:16 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.14	20.815	0.39	7.1	79.6	0.787	1.93	7.81	
002	9/27/19 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	20.267	0.39	7.2	79.8	0.801	0.74	7.85	1.2
002	9/27/19 9:39 AM	B	CHARLES RIVER	UPPER BASIN		0	0.27	0.27	20.024	0.4	6.38	70.4	0.818	1.52	7.63	
002	11/1/19 10:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.08	0.17	14.568	0.26	9.12	89.8	0.537	5.45	7.47	
002	11/2/19 9:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.08								
002	11/25/19 10:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.51	1.51	4.775	0.26	12	93.6	0.536		7.59	
002	11/26/19 10:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.51	5.298	0.27	11.97	94.6	0.561	2.66	7.52	
002	11/27/19 9:17 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.2	0.2	0.2								
003	3/28/19 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	6.97	0.27	11.81	97.4	0.551	4.7	7.6	1.6
003	3/28/19 9:35 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.01	0.01	6.91	0.27	11.73	96.6	0.552	9.5	7.53	
003	3/29/19 9:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	7.96	0.27	11.04	93.3	0.546	7	7.74	
003	3/29/19 9:47 AM	B	CHARLES RIVER	UPPER BASIN		0.03	0.04	0.04	7.97	0.27	11.08	93.6	0.545	6.9	7.67	
003	4/8/19 9:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	11.25	0.3	11.14	101.8	0.617	8	7.54	1.1
003	4/8/19 9:38 AM	B	CHARLES RIVER	UPPER BASIN		0.31	0.31	0.4	11.28	0.3	10.48	95.8	0.619	10.6	7.41	
003	4/9/19 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	10.051	0.29	10.4	92.4	0.601	2.69	7.54	0.7
003	4/9/19 9:43 AM	B	CHARLES RIVER	UPPER BASIN		0.06	0.37	0.37	10.06	0.29	10.34	91.9	0.6	4.53	7.47	
003	4/10/19 9:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	8.938	0.29	11	95.2	0.598	2.32	7.61	1
003	4/10/19 9:28 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.07	0.38	8.879	0.29	10.89	94.1	0.598	2.8	7.53	
003	4/11/19 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	8.451	0.29	11.24	96.1	0.598	1.52	7.59	1.4
003	4/11/19 9:43 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.07	8.342	0.29	11.25	95.9	0.598	1.63	7.54	
003	4/12/19 9:53 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	9.139	0.29	11.01	95.7	0.59	1.87	7.53	1.3
003	4/12/19 9:53 AM	B	CHARLES RIVER	UPPER BASIN		0.11	0.11	0.12	9.125	0.29	11.04	95.9	0.589	1.93	7.49	
003	4/15/19 10:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.72	0.76	1.04								
003	4/16/19 10:38 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.72	0.76	12.851	0.27	10.75	101.9	0.56	5.42	7.77	
003	4/17/19 9:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.72	13.062	0.28	10.26	97.7	0.581	5.26	7.71	
003	4/18/19 9:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	12.416	0.28	10.15	95.2	0.58		7.45	
003	4/23/19 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	14.357	0.22	9.27	90.8	0.449	6.17	7.44	0.6
003	4/23/19 9:35 AM	B	CHARLES RIVER	UPPER BASIN		0.21	2.51	2.54	14.341	0.22	9.32	91.2	0.449	10.29	7.31	
003	4/24/19 9:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	14.112	0.23	9.45	92	0.482	5.93	7.31	0.6
003	4/24/19 9:59 AM	B	CHARLES RIVER	UPPER BASIN		0.04	0.25	2.55	14.059	0.23	9.55	93	0.482	12.18	7.19	
003	4/25/19 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	14.634	0.25	9.5	93.6	0.51	5.27	7.22	0.8
003	4/25/19 9:40 AM	B	CHARLES RIVER	UPPER BASIN		0	0.04	0.25	14.582	0.25	9.53	93.8	0.51	10.04	7.18	
003	4/26/19 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	15.042	0.24	9.24	91.8	0.501	3.26	7.45	0.9
003	4/26/19 9:33 AM	B	CHARLES RIVER	UPPER BASIN		0.74	0.74	0.78	15.042	0.24	9.23	91.7	0.502	3.76	7.44	
003	6/10/19 9:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	23.024	0.3	7.79	91	0.625	0.57	7.53	0.7
003	6/10/19 9:43 AM	B	CHARLES RIVER	UPPER BASIN		0.14	0.14	0.14	22.643	0.3	6.95	80.6	0.624	0.59	7.33	
003	6/11/19 10:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.67	0.67	23.074	0.31	7.07	82.7	0.639	3.2	7.58	
003	6/14/19 9:41 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	19.337	0.29	6.93	75.4	0.593	3.74	7.47	0.9
003	6/14/19 9:41 AM	B	CHARLES RIVER	UPPER BASIN		0	0.63	0.63	19.079	0.29	6.65	71.9	0.596	4.56	7.4	
003	6/18/19 9:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	21.77	0.3	7.21	82.2	0.61	1.11	7.23	0.9
003	6/18/19 9:11 AM	B	CHARLES RIVER	UPPER BASIN		0.1	0.1	0.21	21.461	0.3	6.28	71.2	0.612	3.25	7.09	
003	6/19/19 9:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	21.262	0.3	6.41	72.4	0.61	3.07	7.2	0.9
003	6/19/19 9:46 AM	B	CHARLES RIVER	UPPER BASIN		0	0.1	0.1	21.169	0.3	6.21	70	0.611	3.48	7.13	
003	6/20/19 9:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	21.805	0.29	6.83	78	0.603	1.28	7.22	0.8
003	6/20/19 9:44 AM	B	CHARLES RIVER	UPPER BASIN		0.37	0.37	0.47	21.814	0.29	6.78	77.4	0.604	1.46	7.08	
003	6/21/19 9:48 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	20.724	0.24	6.8	76	0.496	6.27	7.31	0.6
003	6/21/19 9:48 AM	B	CHARLES RIVER	UPPER BASIN		1.19	1.56	1.56	20.678	0.24	6.78	75.7	0.493	9.2	7.28	
003	6/22/19 8:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.19	1.56								
003	6/23/19 7:28 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.19								
003	6/24/19 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	22.087	0.27	7.65	87.8	0.562	0.94	7.22	1.1
003	6/24/19 9:24 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	21.525	0.27	7.38	83.8	0.561	2.48	7.17	
003	6/25/19 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.13	0.13	0.13	23.22	0.28	7.82	91.7	0.586	1.28	7.55	
003	7/12/19 11:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.81	0.83	0.83								
003	7/13/19 7:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.81	0.83								
003	7/14/19 7:50 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.81								
003	7/15/19 9:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.486	0.29	6.26	77.9	0.608	2.16	7.6	1.1

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
003	7/15/19 9:15 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	26.246	0.29	5.85	72.6	0.608	2.72	7.42	
003	7/16/19 9:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.675	0.29	6.74	84.2	0.604	0.44	7.5	1.3
003	7/16/19 9:29 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	26.312	0.29	6.38	79.2	0.605	0.64	7.41	
003	7/17/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	26.301	0.3	7.4	91.8	0.614	1.75	7.13	1.2
003	7/17/19 8:46 AM	B	CHARLES RIVER	UPPER BASIN		0.43	0.43	0.43	26.263	0.3	7.21	89.4	0.616	3.35	7.1	
003	8/8/19 9:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	23.121	0.13	6.88	80.5	0.267	9.04	7.76	0.6
003	8/8/19 9:23 AM	B	CHARLES RIVER	UPPER BASIN		0.38	2.28	2.28	22.928	0.12	6.83	79.5	0.263	11.28	7.54	
003	8/9/19 9:18 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	24.964	0.23	6.8	82.4	0.486	1.19	7.24	1
003	8/9/19 9:18 AM	B	CHARLES RIVER	UPPER BASIN		0	0.38	2.28	24.608	0.23	6.53	78.6	0.489	3.28	7.15	
003	8/10/19 7:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.38								
003	8/11/19 8:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0								
003	8/12/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	23.667	0.22	7.38	87.2	0.458	4	7.74	1.2
003	8/12/19 9:25 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.308	0.22	6.77	79.4	0.457	6.8	7.53	
003	9/3/19 9:37 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	22.321	0.29	7.83	90.2	0.596	2.59	7.68	1
003	9/3/19 9:37 AM	B	CHARLES RIVER	UPPER BASIN		0	1.11	1.11	21.807	0.29	7.57	86.4	0.596	5.73	7.55	
003	9/4/19 9:07 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	22.371	0.21	6.92	79.8	0.429	1.6	7.56	0.9
003	9/4/19 9:07 AM	B	CHARLES RIVER	UPPER BASIN		0.33	0.33	1.44	22.225	0.21	6.7	77	0.433	5.86	7.32	
003	9/5/19 9:35 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	22.453	0.26	6.64	76.8	0.54	2.64	7.15	1.4
003	9/5/19 9:35 AM	B	CHARLES RIVER	UPPER BASIN		0	0.33	0.33	22.188	0.26	6.44	74	0.539	5.65	7.11	
003	9/6/19 8:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	22.064	0.31	7.13	81.8	0.634	0.91	7.07	1.4
003	9/6/19 8:46 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.33	22.065	0.31	7.08	81.3	0.634	1.4	7.03	
003	9/25/19 9:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	21.015	0.39	8.13	91.4	0.805	1.59	7.98	1
003	9/25/19 9:02 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.14	20.087	0.95	4.56	50.6	1.859	9.53	7.58	
003	9/27/19 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	20.64	0.45	7.43	83	0.907	0.72	7.83	1.6
003	9/27/19 9:24 AM	B	CHARLES RIVER	UPPER BASIN		0	0.27	0.27	20.483	0.45	7.25	80.8	0.905	1.67	7.75	
003	11/1/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.08	0.17	15.132	0.28	9.73	96.9	0.576	3.19	7.52	
003	11/2/19 8:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.08								
003	11/25/19 10:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.51	1.51	6.023	0.24	11.88	95.6	0.5		7.58	
003	11/26/19 10:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.51	1.51	5.864	0.28	12.29	98.5	0.578	4.44	7.54	
003	11/27/19 9:02 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.2	0.2	0.2								
004	3/28/19 9:23 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	7.15	0.27	12.02	99.5	0.554	4.8	7.63	1.5
004	3/28/19 9:23 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.01	0.01	7.09	0.27	11.92	98.6	0.555	9.4	7.51	
004	3/29/19 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	8.29	0.27	11.06	94.2	0.546	6.8	7.74	1.5
004	3/29/19 9:33 AM	B	CHARLES RIVER	UPPER BASIN		0.03	0.04	0.04	8.24	0.27	11.18	95.1	0.545	7.8	7.68	
004	4/8/19 9:26 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	12.01	0.3	11.28	104.8	0.617	8	7.53	1.1
004	4/8/19 9:26 AM	B	CHARLES RIVER	UPPER BASIN		0.31	0.31	0.4	12.01	0.3	11.25	104.6	0.618	9.9	7.54	
004	4/9/19 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	10.407	0.29	10.47	93.8	0.592	3.3	7.54	0.7
004	4/9/19 9:31 AM	B	CHARLES RIVER	UPPER BASIN		0.06	0.37	0.37	10.407	0.29	10.42	93.4	0.592	7.56	7.47	
004	4/10/19 9:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	9.211	0.3	11.15	97.1	0.607	2.13	7.61	1
004	4/10/19 9:16 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.07	0.38	9.199	0.3	10.94	95.3	0.608	7.21	7.52	
004	4/11/19 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	9.146	0.3	11.8	102.6	0.602	1.7	7.58	1.4
004	4/11/19 9:31 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.07	9.098	0.29	11.86	103	0.602	5.12	7.5	
004	4/12/19 9:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	10.029	0.29	11.66	103.5	0.589	3.24	7.55	1.3
004	4/12/19 9:40 AM	B	CHARLES RIVER	UPPER BASIN		0.11	0.11	0.12	10.102	0.29	11.83	105.2	0.591	3.18	7.52	
004	4/23/19 9:22 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	14.303	0.21	9.18	89.8	0.431	5.75	7.46	0.6
004	4/23/19 9:22 AM	B	CHARLES RIVER	UPPER BASIN		0.21	2.51	2.54	14.293	0.21	9.13	89.3	0.431	6.85	7.36	
004	4/24/19 9:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	14.167	0.23	9.36	91.3	0.484	4.82	7.24	0.7
004	4/24/19 9:46 AM	B	CHARLES RIVER	UPPER BASIN		0.04	0.25	2.55	14.036	0.23	9.38	91.2	0.484	11.53	7.14	
004	4/25/19 9:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	14.749	0.25	9.28	91.6	0.515	4.56	7.17	0.6
004	4/25/19 9:27 AM	B	CHARLES RIVER	UPPER BASIN		0	0.04	0.25	14.619	0.25	9.17	90.3	0.515	10.66	7.14	
004	4/26/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	15.066	0.25	9.06	90.1	0.507	3.15	7.46	0.9
004	4/26/19 9:21 AM	B	CHARLES RIVER	UPPER BASIN		0.74	0.74	0.78	15.09	0.25	9.02	89.7	0.507	3.64	7.43	
004	6/10/19 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	23.98	0.3	9.76	116.1	0.618	0.44	7.58	1
004	6/10/19 9:31 AM	B	CHARLES RIVER	UPPER BASIN		0.14	0.14	0.14	23.085	0.3	7.87	92.1	0.622	0.6	7.37	
004	6/14/19 9:27 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	21.069	0.31	6.98	78.5	0.628	3.04	7.44	1
004	6/14/19 9:27 AM	B	CHARLES RIVER	UPPER BASIN		0	0.63	0.63	20.305	0.31	6.01	66.6	0.628	5.49	7.33	
004	6/18/19 8:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	21.582	0.3	7.31	83	0.616	1.24	7.16	0.9
004	6/18/19 8:55 AM	B	CHARLES RIVER	UPPER BASIN		0.1	0.1	0.21	20.824	0.3	5.89	66	0.622	12.07	7.1	
004	6/19/19 9:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	21.565	0.3	7.36	83.6	0.616	2.63	7.2	0.8
004	6/19/19 9:32 AM	B	CHARLES RIVER	UPPER BASIN		0	0.1	0.1	21.184	0.3	5.75	64.9	0.623	5.14	7.11	
004	6/20/19 9:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	22.08	0.3	7.55	86.6	0.614	0.98	7.17	0.9
004	6/20/19 9:31 AM	B	CHARLES RIVER	UPPER BASIN		0.37	0.37	0.47	21.613	0.3	5.79	65.8	0.617	13.58	7.08	
004	6/21/19 9:36 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	21.102	0.27	6.32	71.2	0.567	4.91	7.28	0.9
004	6/21/19 9:36 AM	B	CHARLES RIVER	UPPER BASIN		1.19	1.56	1.56	21.095	0.28	6.11	68.8	0.568	9.38	7.21	
004	6/24/19 9:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	22.481	0.27	7.56	87.4	0.558	0.81	7.21	1
004	6/24/19 9:08 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	21.812	0.27	7.06	80.6	0.559	4.94	7.12	
004	7/15/19 9:01 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.461	0.27	6.74	83.9	0.566	2.09	7.6	1.2

## 2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	7/15/19 9:01 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	26.096	0.27	6.08	75.1	0.565	2.69	7.24	
004	7/16/19 9:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	27.057	0.29	7.55	95	0.609	0.4	7.46	1
004	7/16/19 9:11 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	26.335	0.29	6.4	79.5	0.602	0.89	7.3	
004	7/17/19 8:56 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	27.192	0.3	8.41	106.1	0.617	1.77	7.18	1
004	7/17/19 8:56 AM	B	CHARLES RIVER	UPPER BASIN		0.43	0.43	0.43	25.711	0.39	3.31	40.7	0.802	6.64	7	
004	8/8/19 9:08 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	23.968	0.18	6.58	78.2	0.387	8.76	7.64	0.6
004	8/8/19 9:08 AM	B	CHARLES RIVER	UPPER BASIN		0.38	2.28	2.28	23.727	0.18	6.35	75.1	0.369	11.04	7.39	
004	8/9/19 9:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	25.036	0.22	6.95	84.3	0.469	1.56	7.14	1.2
004	8/9/19 9:03 AM	B	CHARLES RIVER	UPPER BASIN		0	0.38	2.28	24.388	0.21	6.43	77.1	0.441	4.35	7.08	
004	8/12/19 9:11 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	24.218	0.22	7.66	91.4	0.453	13.89	7.69	1.4
004	8/12/19 9:11 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0	23.783	0.22	6.95	82.3	0.449	6.57	7.5	
004	9/3/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	22.621	0.31	7.46	86.5	0.648	2.98	7.69	1.1
004	9/3/19 9:21 AM	B	CHARLES RIVER	UPPER BASIN		0	1.11	1.11	22.312	0.32	6.99	80.6	0.654	9.04	7.44	
004	9/4/19 8:51 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	22.504	0.29	7.68	88.8	0.595	1.51	7.52	0.9
004	9/4/19 8:51 AM	B	CHARLES RIVER	UPPER BASIN		0.33	0.33	1.44	22.17	0.28	6.5	74.7	0.579	3.45	7.31	
004	9/5/19 9:21 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	22.576	0.22	7.24	83.8	0.466	3.13	7.28	1.3
004	9/5/19 9:21 AM	B	CHARLES RIVER	UPPER BASIN		0	0.33	0.33	22.487	0.43	6.07	70.2	0.872	6.3	6.94	
004	9/6/19 8:34 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	22.188	0.25	7.32	84.1	0.514	1.18	7.35	1.3
004	9/6/19 8:34 AM	B	CHARLES RIVER	UPPER BASIN		0	0	0.33	22.153	0.25	7.07	81.2	0.514	2.82	7.24	
004	9/25/19 8:47 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	20.705	0.57	9.73	108.9	1.136	2.58	8.03	0.8
004	9/25/19 8:47 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.14	20.222	1.22	4.92	54.8	2.375	7.58		
004	9/27/19 9:06 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	20.669	0.5	9.69	108.3	1.007	1.36	8.06	0.8
004	9/27/19 9:06 AM	B	CHARLES RIVER	UPPER BASIN		0	0.27	0.27	20.591	0.93	5.5	61.6	1.826	3.67	7.59	
005	2/7/19 10:31 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	0.58	0.58	2.31	0.34	13.31	97.2	0.709	2.2	7.44	
005	3/19/19 9:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	4.22	0.33	13.17	101.2	0.67	8.9	7.82	
005	3/28/19 9:15 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.01	0.01	7.7	0.27	12.26	102.9	0.555	5.5	7.62	
005	3/28/19 9:15 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.01	0.01	7.63	0.27	12.35	103.5	0.555	6.1	7.61	
005	3/29/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.03	0.04	0.04	8.75	0.27	10.95	94.3	0.545	7.8	7.74	0.6
005	3/29/19 9:25 AM	B	CHARLES RIVER	UPPER BASIN		0.03	0.04	0.04	8.76	0.27	11.27	97.1	0.546	20.3	7.68	
005	4/1/19 9:55 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.09	0.09	9.65	0.29	12	105.6	0.589	7.64		
005	4/8/19 9:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.31	0.31	0.4	10.96	0.3	11.15	101.2	0.612	7.3	7.48	
005	4/9/19 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.37	0.37	10.328	0.29	10.29	92.1	0.588	3.82	7.62	0.6
005	4/9/19 9:24 AM	B	CHARLES RIVER	UPPER BASIN		0.06	0.37	0.37	10.326	0.29	10.12	90.5	0.587	6.21	7.51	
005	4/10/19 9:09 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.01	0.07	0.38	9.278	0.3	11.08	96.7	0.606	2.36	7.62	1
005	4/10/19 9:09 AM	B	CHARLES RIVER	UPPER BASIN		0.01	0.07	0.38	9.283	0.3	10.58	92.3	0.61	7.88	7.47	
005	4/11/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.07	8.906	0.3	11.69	101	0.606	6.28	7.53	0.6
005	4/11/19 9:25 AM	B	CHARLES RIVER	UPPER BASIN		0	0.01	0.07	8.892	0.3	11.69	101	0.606	12.14	7.49	
005	4/12/19 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.11	0.11	0.12	9.528	0.29	11.62	102	0.597	1.69	7.56	0.7
005	4/15/19 9:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.72	0.76	1.04								
005	4/16/19 9:33 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.72	0.76	11.887	0.27	12.18	112.9	0.547	8.89	7.83	
005	4/17/19 8:49 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.72	11.023	0.27	12.01	109.2	0.56	6.15	7.71	
005	4/18/19 8:43 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	12.185	0.28	11.13	103.9	0.581	7.47		
005	4/19/19 10:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.02	0.02	0.02	15.685	0.27	10.63	107.1	0.557	7.64		
005	4/23/19 9:16 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.21	2.51	2.54	14.295	0.19	8.99	87.9	0.396	11.76	7.49	0.6
005	4/24/19 9:39 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.25	2.55	14.205	0.23	9.12	89	0.481	3.47	7.26	0.9
005	4/24/19 9:39 AM	B	CHARLES RIVER	UPPER BASIN		0.04	0.25	2.55	14.164	0.23	9.22	90	0.48	5.47	7.15	
005	4/25/19 9:19 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.04	0.25	14.77	0.25	9.08	89.8	0.516	10.49	7.23	1
005	4/25/19 9:19 AM	B	CHARLES RIVER	UPPER BASIN		0	0.04	0.25	14.654	0.25	9.08	89.5	0.516	10.55	7.18	
005	4/26/19 9:14 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.74	0.74	0.78	14.92	0.25	8.98	89	0.508	2.88	7.42	0.9
005	4/26/19 9:14 AM	B	CHARLES RIVER	UPPER BASIN		0.74	0.74	0.78	14.947	0.25	8.98	89.1	0.507	3.42	7.43	
005	5/2/19 10:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.06	0.06	0.2	12.105	0.23	10.74	100	0.466	7.45		
005	5/14/19 10:46 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.15	0.97	1.36	13.528	0.26	12.3	118.3		2.72	7.81	
005	5/31/19 10:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.07	0.3	0.3	19.433	0.3	11.04	120.2	0.615	7.77		
005	6/5/19 10:29 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.05	0.05	0.09	20.382	0.32	9.61	106.7	0.651	7.72		
005	6/10/19 9:22 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.14	0.14	0.14	23.539	0.3	9.45	111.5	0.621	0.38	7.51	1.2
005	6/10/19 9:22 AM	B	CHARLES RIVER	UPPER BASIN		0.14	0.14	0.14	23.342	0.3	9.28	109.1	0.621	0.82	7.5	
005	6/11/19 9:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.53	0.67	0.67	23.288	0.3	8.25	96.8	0.624	8.27	7.6	
005	6/14/19 9:20 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.63	0.63	21.344	0.3	6.96	78.7	0.616	2.28	7.43	1.1
005	6/14/19 9:20 AM	B	CHARLES RIVER	UPPER BASIN		0	0.63	0.63	21.253	0.3	6.91	78	0.616	10.47	7.37	
005	6/18/19 8:45 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.1	0.1	0.21	21.768	0.3	8.04	91.7	0.618	2.38	7.23	0.8
005	6/18/19 8:45 AM	B	CHARLES RIVER	UPPER BASIN		0.1	0.1	0.21	21.645	0.3	7.55	85.9	0.621	5.5	7.1	
005	6/19/19 9:25 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.1	0.1	21.449	0.3	7.2	81.6	0.615	3.51	7.21	0.9
005	6/19/19 9:25 AM	B	CHARLES RIVER	UPPER BASIN		0	0.1	0.1	21.365	0.3	6.81	77.1	0.616	5.27	7.13	
005	6/20/19 9:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.37	0.37	0.47	22.08	0.3	7.63	87.6	0.617	1.16	7.17	0.9
005	6/20/19 9:24 AM	B	CHARLES RIVER	UPPER BASIN		0.37	0.37	0.47	21.974	0.3	6.82	78.1	0.62	12.13	7.09	
005	6/21/19 9:30 AM	S	CHARLES RIVER	UPPER BASIN	0.1	1.19	1.56	1.56	21.489	0.29	6.66	75.5	0.589	4.01	7.21	0.3
005	6/21/19 9:30 AM	B	CHARLES RIVER	UPPER BASIN		1.19	1.56	1.56	21.424	0.28	6.33	71.8	0.587	14.64	7.17	

## 2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	6/22/19 7:32 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.19	1.56								
005	6/23/19 6:42 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	1.19								
005	6/24/19 8:59 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	22.215	0.27	7.5	86.3	0.563	1.02	7.23	1
005	6/24/19 8:59 AM	B	CHARLES RIVER	UPPER BASIN	0	0	0	0	21.734	0.27	7.18	81.8	0.563	3.3	7.15	
005	6/25/19 8:58 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.13	0.13	0.13	23.33	0.27	8.27	97.2	0.562	1.62	7.48	
005	7/12/19 10:05 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.81	0.83	0.83								
005	7/15/19 8:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.227	0.28	6.43	79.7	0.59	7.29	7.53	
005	7/16/19 9:04 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	26.661	0.29	6.87	85.9	0.61	0.58	7.41	
005	7/17/19 9:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.43	0.43	0.43	26.936	0.3	8.53	107.2	0.624	1.86	7.18	1
005	7/17/19 9:03 AM	B	CHARLES RIVER	UPPER BASIN	0	0.43	0.43	0.43	26.694	0.31	7.84	98	0.646	8.04	7.11	
005	7/18/19 9:52 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.04	0.47	0.47	25.563	0.31	6.11	74.8	0.642		7.57	
005	8/8/19 9:00 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.38	2.28	2.28	24.624	0.23	6.51	78.3	0.486	6.23	7.5	0.7
005	8/8/19 9:00 AM	B	CHARLES RIVER	UPPER BASIN	0	0.38	2.28	2.28	24.615	0.24	6.36	76.5	0.501	8.77	7.33	
005	8/9/19 8:56 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.38	2.28	24.272	0.18	6.58	78.7	0.377	2.24	7.17	0.9
005	8/9/19 8:56 AM	B	CHARLES RIVER	UPPER BASIN	0	0	0.38	2.28	23.964	0.17	6.26	74.4	0.366	7.56	7.11	
005	8/12/19 9:03 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0	24.145	0.21	7.53	89.8	0.448	3.05	7.64	1.3
005	8/12/19 9:03 AM	B	CHARLES RIVER	UPPER BASIN	0	0	0	0	23.83	0.21	6.96	82.5	0.448	12.46	7.45	
005	9/3/19 9:10 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	1.11	1.11	22.739	0.32	7.77	90.3	0.66	8.14	7.72	0.9
005	9/3/19 9:10 AM	B	CHARLES RIVER	UPPER BASIN	0	0	1.11	1.11	22.798	0.32	7.79	90.7	0.661	13.09	7.65	
005	9/4/19 8:44 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0.33	0.33	1.44	22.908	0.32	8.34	97.3	0.655	1.9	7.53	0.8
005	9/4/19 8:44 AM	B	CHARLES RIVER	UPPER BASIN	0	0.33	0.33	1.44	22.874	0.32	8.2	95.6	0.655	7.6	7.35	
005	9/5/19 9:13 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.33	0.33	22.473	0.26	7.5	86.7	0.537	10.76	7.29	
005	9/6/19 8:24 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0	0.33	22.004	0.27	7.14	81.8	0.567	1.45	7.35	1
005	9/6/19 8:24 AM	B	CHARLES RIVER	UPPER BASIN	0	0	0	0.33	22.011	0.28	7.07	81	0.571	5.72	7.28	
005	9/25/19 8:40 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.01	0.14	20.47	0.58	9.16	102	1.161	2.75	8.08	
005	9/25/19 8:40 AM	B	CHARLES RIVER	UPPER BASIN	0	0	0.01	0.14	20.499	0.58	9.15	101	1.164	19.97	7.95	
005	9/27/19 8:57 AM	S	CHARLES RIVER	UPPER BASIN	0.1	0	0.27	0.27	20.173	0.59	9.68	107.1	1.183	2.87	8.07	1
005	9/27/19 8:57 AM	B	CHARLES RIVER	UPPER BASIN	0	0	0.27	0.27	20.325	0.58	8.91	99	1.161	8.65	7.83	
206	4/15/19 9:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.72	0.76	1.04								
206	4/16/19 9:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.72	0.76	12.694	0.26	10.63	100.3	0.543	5.44	7.71	
206	4/17/19 9:02 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.72	13.209	0.27	10.41	99.4	0.56	3.61	7.68	
206	4/17/19 9:02 AM	B	CHARLES RIVER	MID-BASIN	0	0	0	0.72	13.191	0.27	10.34	98.7	0.561	3.72	7.64	
206	4/18/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	13.473	0.28	10.62	102.1	0.58		7.45	
206	4/18/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	0	0	0	0	13.481	0.28	10.55	101.3	0.581		7.4	
206	6/11/19 9:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.53	0.67	0.67	23.443	0.3	7.87	92.6	0.626	3.52	7.59	
206	6/22/19 7:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.19	1.56								
206	6/23/19 6:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.19								
206	6/25/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.13	0.13	0.13								
206	7/12/19 10:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.81	0.83	0.83								
206	7/13/19 7:12 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.81	0.83								
206	7/14/19 7:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.81								
206	8/10/19 7:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.38								
206	8/11/19 7:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0								
206	11/1/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.08	0.17	14.381	0.27	9.46	92.7	0.558	2.58	7.47	
206	11/2/19 8:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.08								
206	11/25/19 9:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.51	1.51	4.578	0.29	11.96	92.8	0.597		7.32	
206	11/26/19 9:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.51								
206	11/27/19 8:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.2	0.2	0.2								
006	3/28/19 9:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	7.53	0.27	12.12	101.4	0.56	4.9	7.62	1.3
006	3/28/19 9:10 AM	B	CHARLES RIVER	MID-BASIN	0	0.01	0.01	0.01	7.44	0.27	12.18	101.6	0.559		7.53	
006	3/29/19 9:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	8.32	0.27	11.07	94.3	0.55	7.1	7.74	1.5
006	3/29/19 9:19 AM	B	CHARLES RIVER	MID-BASIN	0	0.03	0.04	0.04	8.28	0.27	11.23	95.6	0.551	4.8	7.59	
006	4/8/19 9:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	10.99	0.3	11.09	100.8	0.617	9.6	7.5	1
006	4/8/19 9:15 AM	B	CHARLES RIVER	MID-BASIN	0	0.31	0.31	0.4	11.01	0.3	10.83	98.4	0.618	8.9	7.43	
006	4/9/19 9:18 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	10.378	0.29	10.12	90.6	0.591	4.12	7.47	0.6
006	4/9/19 9:18 AM	B	CHARLES RIVER	MID-BASIN	0	0.06	0.37	0.37	10.395	0.29	10.07	90.2	0.591	6.4	7.44	
006	4/10/19 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	9.35	0.3	10.87	95	0.61	2.45	7.66	1.1
006	4/10/19 9:04 AM	B	CHARLES RIVER	MID-BASIN	0	0.01	0.07	0.38	9.345	0.3	10.67	93.3	0.61	3.53	7.6	
006	4/11/19 9:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	8.787	0.32	11.24	96.9	0.609	2.05	7.68	1
006	4/11/19 9:19 AM	B	CHARLES RIVER	MID-BASIN	0	0	0.01	0.07	8.71	0.3	11.22	96.5	0.609	2.98	7.58	
006	4/12/19 9:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	9.212	0.29	11.3	98.5	0.604	2.14	7.59	1
006	4/12/19 9:28 AM	B	CHARLES RIVER	MID-BASIN	0	0.11	0.11	0.12	9.169	0.29	11.1	96.6	0.603	7.27	7.44	
006	4/23/19 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	14.25	0.19	9.12	89.1	0.396	6.84	7.38	0.7
006	4/23/19 9:11 AM	B	CHARLES RIVER	MID-BASIN	0	0.21	2.51	2.54	14.242	0.19	8.98	87.7	0.394	12.4	7.31	
006	4/24/19 9:34 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	14.128	0.23	9.18	89.4	0.479	3.97	7.31	0.6
006	4/24/19 9:34 AM	B	CHARLES RIVER	MID-BASIN	0	0.04	0.25	2.55	14.061	0.23	9.08	88.4	0.479	8.55	7.19	
006	4/25/19 9:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	14.666	0.25	9.11	89.8	0.515	4.5	7.22	1

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	4/25/19 9:13 AM	B	CHARLES RIVER	MID-BASIN		0	0.04	0.25	14.652	0.25	9.09	89.6	0.515	14.25	7.2	
006	4/26/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	14.97	0.25	9.09	90.2	0.51	3.45	7.47	0.9
006	4/26/19 9:08 AM	B	CHARLES RIVER	MID-BASIN		0.74	0.74	0.78	14.974	0.25	9.07	90	0.508	4.17	7.45	
006	6/10/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	22.856	0.32	8.64	100.6	0.649	0.27	7.45	1.5
006	6/10/19 9:08 AM	B	CHARLES RIVER	MID-BASIN		0.14	0.14	0.14	20.25	0.5	4.53	50.2	1.006	0.84	7.23	
006	6/14/19 9:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	20.798	0.29	6.13	68.6	0.603	2.93	7.34	1
006	6/14/19 9:13 AM	B	CHARLES RIVER	MID-BASIN		0	0.63	0.63	20.186	0.38	3.84	42.5	0.783	6.69	7.2	
006	6/18/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	21.406	0.3	7.43	84.2	0.624	0.76	7.26	0.9
006	6/18/19 8:40 AM	B	CHARLES RIVER	MID-BASIN		0.1	0.1	0.21	20.389	0.42	3.6	40	0.844	1.76	7.08	
006	6/19/19 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	21.494	0.3	8.21	93.1	0.624	2.75	7.23	0.9
006	6/19/19 9:11 AM	B	CHARLES RIVER	MID-BASIN		0	0.1	0.1	21.27	0.31	7.09	80.1	0.638	5.88	7.18	
006	6/20/19 9:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	21.844	0.3	7.63	87.1	0.622	1.04	7.18	1
006	6/20/19 9:17 AM	B	CHARLES RIVER	MID-BASIN		0.37	0.37	0.47	21.677	0.3	6.93	78.9	0.621	2.62	7.13	
006	6/21/19 9:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	21.337	0.28	6.67	75.5	0.578	5.08	7.26	0.9
006	6/21/19 9:25 AM	B	CHARLES RIVER	MID-BASIN		1.19	1.56	1.56	21.291	0.28	6.4	72.3	0.573	6.94	7.18	
006	6/24/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	22	0.28	7.35	84.2	0.573	1	7.25	0.8
006	6/24/19 8:52 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	20.931	0.36	4.72	53	0.736	2.85	7.11	
006	7/15/19 8:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.031	0.31	6.04	74.6	0.651	2.12	7.54	1.4
006	7/15/19 8:47 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	25.429	0.41	4.87	59.5	0.832	6.98	7.29	
006	7/16/19 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.314	0.32	6.71	83.3	0.652	0.61	7.47	1.5
006	7/16/19 8:57 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	25.549	0.4	5.74	70.3	0.812	1.13	7.31	
006	7/17/19 9:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	26.403	0.33	7.27	90.4	0.676	1.79	7.12	0.9
006	7/17/19 9:07 AM	B	CHARLES RIVER	MID-BASIN		0.43	0.43	0.43	24.725	0.58	2.01	24.3	1.17	7.25	6.92	
006	8/8/19 8:54 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	24.514	0.24	6.34	76.1	0.498	6.76	7.48	0.7
006	8/8/19 8:54 AM	B	CHARLES RIVER	MID-BASIN		0.38	2.28	2.28	24.4	0.24	6.17	73.9	0.495	10.85	7.37	
006	8/9/19 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	24.048	0.16	6.35	75.5	0.33	2.7	7.15	0.9
006	8/9/19 8:50 AM	B	CHARLES RIVER	MID-BASIN		0	0.38	2.28	23.711	0.49	2.51	29.7	1.001	5.14	6.9	
006	8/12/19 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.677	0.22	7.37	87.2	0.466	10.93	7.71	0.9
006	8/12/19 8:56 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	23.76	0.47	3.88	46	0.95	9.76	7.4	
006	9/3/19 9:06 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	22.71	0.33	7.48	86.9	0.671	4.61	7.73	0.7
006	9/3/19 9:06 AM	B	CHARLES RIVER	MID-BASIN		0	1.11	1.11	22.884	0.9	5.93	69.3	1.786	8.67	7.34	
006	9/4/19 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	22.819	0.33	7.74	90.1	0.673	1.45	7.48	1
006	9/4/19 8:37 AM	B	CHARLES RIVER	MID-BASIN		0.33	0.33	1.44	23.19	0.83	6.68	78.5	1.637	3.36	7.17	
006	9/5/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	22.516	0.39	7.45	86.2	0.801	3.4	7.31	0.9
006	9/5/19 9:08 AM	B	CHARLES RIVER	MID-BASIN		0	0.33	0.33	22.759	0.91	5.45	63.6	1.797	6.25	7.1	
006	9/6/19 8:16 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	22.352	0.39	7.5	86.6	0.806	1.36	7.37	1.1
006	9/6/19 8:16 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.33	22.839	0.76	7.12	83.1	1.514	2.34	7.12	
006	9/25/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	20.512	0.71	8.94	99.8	1.414	2.91	7.99	0.6
006	9/25/19 8:36 AM	B	CHARLES RIVER	MID-BASIN		0	0.01	0.14	20.543	1.4	6.46	72.4	2.7	12.5	7.66	
006	9/27/19 8:51 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	20.157	0.78	8.92	98.8	1.539	1.66	7.97	0.9
006	9/27/19 8:51 AM	B	CHARLES RIVER	MID-BASIN		0	0.27	0.27	20.382	1.34	6.3	70.4	2.594	11.69	7.61	
007	3/28/19 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	7.12	0.28	11.94	98.8	0.574	4.7	7.61	1.5
007	3/28/19 8:56 AM	B	CHARLES RIVER	MID-BASIN	4	0.01	0.01	0.01	7.01	0.28	11.87	98	0.57	11.4	7.53	
007	3/29/19 9:06 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	7.89	0.28	11.24	94.8	0.579	6.8	7.76	1.6
007	3/29/19 9:06 AM	B	CHARLES RIVER	MID-BASIN	4.6	0.03	0.04	0.04	7.88	0.28	12.05	101.6	0.577	11.2	7.71	
007	4/8/19 9:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	10.81	0.32	11.04	99.9	0.644	7.5	7.57	1.4
007	4/8/19 9:05 AM	B	CHARLES RIVER	MID-BASIN	4.4	0.31	0.31	0.4	10.84	0.32	10.62	96.1	0.663	7	7.54	
007	4/9/19 9:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	10.466	0.32	10.77	96.7	0.656	2.49	7.72	1.2
007	4/9/19 9:05 AM	B	CHARLES RIVER	MID-BASIN	3.9	0.06	0.37	0.37	10.465	0.32	10.46	93.9	0.662	5.47	7.59	
007	4/10/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	9.888	0.31	10.56	93.5	0.637	2.99	7.76	0.9
007	4/10/19 8:52 AM	B	CHARLES RIVER	MID-BASIN	4.3	0.01	0.07	0.38	9.822	0.31	9.94	87.8	0.639	4.26	7.62	
007	4/11/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	9.601	0.32	10.68	94	0.684	2.18	7.88	1.3
007	4/11/19 9:08 AM	B	CHARLES RIVER	MID-BASIN	4.2	0	0.01	0.07	8.747	0.34	10.82	93.2	0.618	3.62	7.78	
007	4/12/19 9:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	9.197	0.3	11.3	98.4	0.616	1.8	7.75	1.3
007	4/12/19 9:15 AM	B	CHARLES RIVER	MID-BASIN	4	0.11	0.11	0.12	9.18	0.3	11.16	97.1	0.618	6.38	7.68	
007	4/15/19 10:00 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.72	0.76	1.04								
007	4/16/19 9:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.72	0.76	11.959	0.34	10.63	98.8	0.7	9.56	7.54	
007	4/17/19 9:12 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.72	12.107	0.35	10.41	97.1	0.72	3.78	7.59	
007	4/17/19 9:12 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.72	12.111	0.35	10.35	96.4	0.719	6.12	7.55	
007	4/18/19 9:06 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	12.729	0.31	10.25	96.9	0.633		7.41	
007	4/18/19 9:06 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	12.79	0.31	10.04	95	0.634		7.38	
007	4/23/19 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	14.679	0.21	8.79	86.6	0.435	6.09	7.51	0.8
007	4/23/19 8:57 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.21	2.51	2.54	14.48	0.2	8.76	86	0.412	7.22	7.55	
007	4/24/19 9:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	14.301	0.22	8.78	85.8	0.451	3.69	7.36	0.6
007	4/24/19 9:21 AM	B	CHARLES RIVER	MID-BASIN	4.4	0.04	0.25	2.55	13.822	0.25	8.22	79.6	0.518	6.43	7.2	
007	4/25/19 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	15.101	0.25	9.29	92.4	0.512	2.23	7.33	1
007	4/25/19 8:57 AM	B	CHARLES RIVER	MID-BASIN	4.5	0	0.04	0.25	14.156	0.27	8.2	80	0.564	11.15	7.34	

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
007	4/26/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	15.262	0.25	9.18	91.6	0.519	2.57	7.5	1.1
007	4/26/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	4.6	0.74	0.74	0.78	15.262	0.25	9.12	91.1	0.52	6.83	7.48	
007	6/10/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	22.077	0.38	7.22	82.9	0.773	0.2	7.46	1.4
007	6/10/19 9:03 AM	B	CHARLES RIVER	MID-BASIN	2.9	0.14	0.14	0.14	20.774	0.44	6.98	78.1	0.891	0.45	7.3	
007	6/11/19 9:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.53	0.67	0.67	23.137	0.32	7.62	89.2	0.663	1.23	7.58	
007	6/14/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	20.603	0.32	5.65	63	0.661	2.78	7.42	1
007	6/14/19 9:03 AM	B	CHARLES RIVER	MID-BASIN	4.1	0	0.63	0.63	20.48	0.39	5.64	62.8	0.795	7.63	7.29	
007	6/18/19 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	21.188	0.32	7.04	79.4	0.655	0.64	7.32	1
007	6/18/19 8:25 AM	B	CHARLES RIVER	MID-BASIN	3.9	0.1	0.1	0.21	20.264	0.45	3.96	43.9	0.908	2.29	7.16	
007	6/19/19 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	21.483	0.33	7.2	81.7	0.683	2.01	7.24	1.3
007	6/19/19 9:04 AM	B	CHARLES RIVER	MID-BASIN	4.5	0	0.1	0.1	19.975	0.46	1.86	20.5	0.923	7.25	7.07	
007	6/20/19 9:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	21.927	0.34	6.88	78.8	0.699	0.39	7.23	1.1
007	6/20/19 9:09 AM	B	CHARLES RIVER	MID-BASIN	4.3	0.37	0.37	0.47	19.787	0.46	1.22	13.4	0.929	5.77	7.08	
007	6/21/19 9:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	21.527	0.31	6.62	75.2	0.643	2.83	7.39	1.1
007	6/21/19 9:10 AM	B	CHARLES RIVER	MID-BASIN	4	1.19	1.56	1.56	19.979	0.39	3.97	43.8	0.794	9.89	7.25	
007	6/22/19 7:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.19	1.56								
007	6/23/19 6:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.19								
007	6/24/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	21.903	0.35	6.26	71.5	0.724	0.74	7.3	1
007	6/24/19 8:43 AM	B	CHARLES RIVER	MID-BASIN	4.4	0	0	0	20.721	0.37	3.62	40.5	0.762	6.43	7.14	
007	6/25/19 9:18 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.13	0.13	0.13	23.39	0.32	7.97	93.7	0.664	2.25	7.49	
007	7/12/19 10:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.81	0.83	0.83								
007	7/13/19 7:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.81	0.83								
007	7/14/19 7:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.81								
007	7/15/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.244	0.42	6.97	86.5	0.866	1.48	7.51	1.6
007	7/15/19 8:40 AM	B	CHARLES RIVER	MID-BASIN	3.7	0	0	0	22.907	0.84	0.4	4.6	1.667	10.6	7.15	
007	7/16/19 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.331	0.42	7.87	97.8	0.863	0.49	7.5	1
007	7/16/19 8:39 AM	B	CHARLES RIVER	MID-BASIN	3.8	0	0	0	24.833	0.61	3.06	37	1.222	2.26	7.27	
007	7/17/19 9:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	25.875	0.4	7.15	88.1	0.817	1.59	7.13	1.1
007	7/17/19 9:19 AM	B	CHARLES RIVER	MID-BASIN	4.5	0.43	0.43	0.43	22.541	1.05	0.55	6.4	2.054	11.15	6.86	
007	8/8/19 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	24.75	0.3	6.22	75	0.618	5.73	7.54	1.4
007	8/8/19 8:44 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.38	2.28	2.28	23.176	0.35	5	58.6	0.719	11.07	7.3	
007	8/9/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	24.752	0.39	5.87	70.8	0.801	1.7	7.25	1.2
007	8/9/19 8:40 AM	B	CHARLES RIVER	MID-BASIN	4.7	0	0.38	2.28	23.551	0.98	0.82	9.8	1.924	4.24	7.02	
007	8/10/19 7:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.38								
007	8/11/19 7:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0								
007	8/12/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.834	0.4	7.82	92.8	0.817	3.34	7.58	1.1
007	8/12/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	5	0	0	0	23.331	1.99	1.09	12.9	3.773	5.91	6.91	
007	9/3/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	22.964	0.61	8.34	97.5	1.224	2.77	7.67	0.8
007	9/3/19 8:52 AM	B	CHARLES RIVER	MID-BASIN	4.2	0	1.11	1.11	22.727	2.04	1.31	15.4	3.862	10.96	7.19	
007	9/4/19 8:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	23.288	0.54	8.74	102.7	1.099	1.3	7.5	1.2
007	9/4/19 8:30 AM	B	CHARLES RIVER	MID-BASIN	4.1	0.33	0.33	1.44	22.638	2.04	1.25	14.6	3.854	8.68	7.13	
007	9/5/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	23.045	0.79	7.74	90.7	1.56	2.75	7.47	1
007	9/5/19 8:59 AM	B	CHARLES RIVER	MID-BASIN	3.9	0	0.33	0.33	22.728	1.73	3.93	46	3.294	7.98	7.2	
007	9/6/19 8:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	22.634	0.77	8.08	93.9	1.534	0.93	7.33	1.2
007	9/6/19 8:07 AM	B	CHARLES RIVER	MID-BASIN	4.7	0	0	0.33	22.241	4.35	0.75	8.9	7.84	1.24	6.91	
007	9/25/19 8:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	20.646	1.02	9.56	107.1	2.002	2.18	8.15	0.9
007	9/25/19 8:27 AM	B	CHARLES RIVER	MID-BASIN	4.5	0	0.01	0.14	19.608	4.25	0.5	5.6	7.658		7.05	
007	9/27/19 8:38 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	20.497	1.1	9.57	107	2.153	0.82	8.18	1.5
007	9/27/19 8:38 AM	B	CHARLES RIVER	MID-BASIN	4.3	0	0.27	0.27	19.806	3.58	1.03	11.5	6.529	5.79	7.26	
007	11/1/19 9:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.08	0.17	14.063	0.54	8.61	84	1.085	2.66	7.3	
007	11/2/19 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.08								
007	11/25/19 9:54 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.51	1.51	4.643	0.41	11.83	92	0.83		7.33	
007	11/27/19 8:35 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.2	0.2	0.2								
145	3/28/19 9:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	7.18	0.31	12.03	99.7	0.633	4.7	7.63	1.5
145	3/28/19 9:01 AM	B	CHARLES RIVER	MID-BASIN	0.01	0.01	0.01	0.01	7.35	0.61	11.37	94.8	1.211	7.7	7.36	
145	3/29/19 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	7.88	0.29	11.6	97.8	0.596	6.7	7.74	1.5
145	3/29/19 9:11 AM	B	CHARLES RIVER	MID-BASIN	0.03	0.04	0.04	0.04	7.96	0.43	11.68	98.8	0.865	11.9	7.54	
145	4/8/19 9:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	11.31	0.59	9.97	91.4	1.173	11.3	7.36	0.9
145	4/8/19 9:09 AM	B	CHARLES RIVER	MID-BASIN	0.31	0.31	0.31	0.4	10.65	0.64	9.37	84.6	1.276	9.7	7.28	
145	4/9/19 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	9.844	0.43	9.7	85.8	0.868	6.1	7.36	1
145	4/9/19 9:11 AM	B	CHARLES RIVER	MID-BASIN	0.06	0.37	0.37	0.37	9.817	0.47	9.1	80.5	0.944	11.09	7.27	
145	4/10/19 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	9.639	0.32	10.59	93.2	0.662	3.04	7.65	1
145	4/10/19 8:57 AM	B	CHARLES RIVER	MID-BASIN	0.01	0.07	0.38	0.38	9.166	0.36	9.23	80.3	0.739	6.28	7.45	
145	4/11/19 9:12 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	9.129	0.3	11.21	97.5	0.628	2.12	7.76	1.1
145	4/11/19 9:12 AM	B	CHARLES RIVER	MID-BASIN	0	0.01	0.07	0.07	9.027	0.31	10.81	93.7	0.662	3.48	7.7	
145	4/12/19 9:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	9.249	0.31	11.49	100.2	0.626	1.81	7.63	1.3
145	4/12/19 9:21 AM	B	CHARLES RIVER	MID-BASIN	0.11	0.11	0.11	0.12	9.305	0.41	9.77	85.3	0.836	3.92	7.38	



2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	4/15/19 9:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.72	0.76	1.04								
145	4/16/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.72	0.76	12.217	0.26	10.55	98.5	0.536	9.84	7.76	
145	4/17/19 8:35 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.72	12.175	0.29	9.97	93.1	0.586	4.05	7.57	
145	4/17/19 8:35 AM	B	CHARLES RIVER	MID-BASIN	0	0	0	0.72	12.157	0.29	9.79	91.4	0.591	5.95	7.55	
145	4/18/19 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	12.648	0.3	10.26	96.8	0.62		7.48	
145	4/18/19 8:20 AM	B	CHARLES RIVER	MID-BASIN	0	0	0	0	12.878	0.43	8.31	78.8	0.866		7.23	
145	4/23/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	14.957	0.25	8.91	88.4	0.524	4.43	7.49	0.8
145	4/23/19 9:03 AM	B	CHARLES RIVER	MID-BASIN	0	0.21	2.51	2.54	13.725	0.22	8.87	85.6	0.453	8.5	7.4	
145	4/24/19 9:26 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	14.352	0.22	9.14	89.4	0.464	3.27	7.28	0.9
145	4/24/19 9:26 AM	B	CHARLES RIVER	MID-BASIN	0	0.04	0.25	2.55	13.377	0.26	8.67	83.1	0.538	5.18	7.11	
145	4/25/19 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	14.896	0.25	9.22	91.4	0.507	2.2	7.29	0.8
145	4/25/19 9:04 AM	B	CHARLES RIVER	MID-BASIN	0	0	0.04	0.25	13.549	0.38	8.32	80.1	0.767	6.48	7.13	
145	4/26/19 9:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	15.107	0.26	9.12	90.7	0.527	2.52	7.46	1
145	4/26/19 9:01 AM	B	CHARLES RIVER	MID-BASIN	0	0.74	0.74	0.78	13.835	0.44	7.75	75.1	0.893	4.84	7.27	
145	6/10/19 9:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	21.602	0.42	7.43	84.5	0.847	0.36	7.41	1
145	6/10/19 9:07 AM	B	CHARLES RIVER	MID-BASIN	0	0.14	0.14	0.14	20.912	0.43	6.66	74.7	0.867	0.66	7.32	
145	6/11/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.53	0.67	0.67	23.182	0.34	7.73	90.5	0.706	0	7.61	
145	6/14/19 9:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	20.845	0.3	5.61	62.9	0.623	2.55	7.42	1.1
145	6/14/19 9:08 AM	B	CHARLES RIVER	MID-BASIN	0	0	0.63	0.63	19.513	0.32	4.81	52.5	0.649	6.69	7.31	
145	6/18/19 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	21.671	0.35	6.72	76.5	0.711	0.56	7.24	0.9
145	6/18/19 8:31 AM	B	CHARLES RIVER	MID-BASIN	0	0.1	0.1	0.21	20.951	0.42	4.85	54.5	0.845	4.98	7.08	
145	6/19/19 9:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	21.49	0.36	6.72	76.3	0.743	1.36	7.21	1.2
145	6/19/19 9:10 AM	B	CHARLES RIVER	MID-BASIN	0	0	0.1	0.1	21.049	0.39	4.84	54.4	0.799	2.26	7.15	
145	6/20/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	21.629	0.32	6.38	72.5	0.662	0.85	7.24	1
145	6/20/19 9:03 AM	B	CHARLES RIVER	MID-BASIN	0	0.37	0.37	0.47	18.204	0.62	5.21	55.4	1.23	1.41	7.03	
145	6/21/19 9:14 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	21.45	0.31	6.95	78.8	0.639	3.08	7.3	1
145	6/21/19 9:14 AM	B	CHARLES RIVER	MID-BASIN	0	1.19	1.56	1.56	19.92	0.38	4.55	50.1	0.768	9.24	7.16	
145	6/22/19 7:22 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.19	1.56								
145	6/23/19 6:35 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.19								
145	6/24/19 8:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	21.799	0.33	6.55	74.7	0.684	0.79	7.23	1.1
145	6/24/19 8:47 AM	B	CHARLES RIVER	MID-BASIN	0	0	0	0	21.426	0.32	6.13	69.5	0.666	1.17	7.18	
145	6/25/19 8:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.13	0.13	0.13	23.595	0.32	8.22	97.1	0.66	0	7.5	
145	7/12/19 9:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.81	0.83	0.83								
145	7/13/19 6:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.81	0.83								
145	7/14/19 6:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.81								
145	7/15/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	25.874	0.41	7.39	91.1	0.833	1.6	7.48	1.5
145	7/15/19 8:43 AM	B	CHARLES RIVER	MID-BASIN	0	0	0	0	25.674	0.4	6.73	82.6	0.83	1.88	7.36	
145	7/16/19 8:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.181	0.42	8.3	102.9	0.861	0.62	7.44	1.4
145	7/16/19 8:46 AM	B	CHARLES RIVER	MID-BASIN	0	0	0	0	25.833	0.41	7.62	93.8	0.847	0.79	7.38	
145	7/17/19 9:14 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	26.149	0.43	7.5	93	0.886	2.21	7.1	1
145	7/17/19 9:14 AM	B	CHARLES RIVER	MID-BASIN	0	0.43	0.43	0.43	25.786	0.44	7.35	90.5	0.894	4.01	7.12	
145	8/8/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	24.875	0.32	6.25	75.6	0.666	4.88	7.47	0.9
145	8/8/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	0	0.38	2.28	2.28	23.388	0.22	6.01	70.6	0.456	11.44	7.31	
145	8/9/19 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	24.055	0.27	5.49	65.3	0.558	2.46	7.19	0.7
145	8/9/19 8:45 AM	B	CHARLES RIVER	MID-BASIN	0	0	0.38	2.28	23.501	0.28	5.25	61.9	0.588	2.94	7.14	
145	8/10/19 6:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.38								
145	8/11/19 7:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0								
145	8/12/19 8:51 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.749	0.39	7.85	93	0.803	2.98	7.56	1.2
145	8/12/19 8:51 AM	B	CHARLES RIVER	MID-BASIN	0	0	0	0	19.16	0.64	6.86	74.5	1.281	3.62	7.33	
145	9/3/19 8:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	22.759	0.45	7.82	91	0.907	3.5	7.68	0.6
145	9/3/19 8:57 AM	B	CHARLES RIVER	MID-BASIN	0	0	1.11	1.11	22.629	0.44	6.95	80.7	0.897	3.93	7.49	
145	9/4/19 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	23.342	0.51	8.08	95.1	1.035	1.92	7.47	1
145	9/4/19 8:32 AM	B	CHARLES RIVER	MID-BASIN	0	0.33	0.33	1.44	20.624	0.39	4.17	46.6	0.8	1.94	7.39	
145	9/5/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	22.53	0.63	6.27	72.8	1.254	3.02	7.44	1.3
145	9/5/19 9:03 AM	B	CHARLES RIVER	MID-BASIN	0	0	0.33	0.33	22	0.68	6.89	79.1	1.364	4.52	7.38	
145	9/6/19 8:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	22.158	0.5	8.19	94.3	1.002	1.33	7.38	1.1
145	9/6/19 8:11 AM	B	CHARLES RIVER	MID-BASIN	0	0	0	0.33	21.976	0.51	7.91	90.7	1.024	2.88	7.3	
145	9/25/19 8:31 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	20.594	1.07	9.94	111.3	2.087	2.72	8.19	0.9
145	9/25/19 8:31 AM	B	CHARLES RIVER	MID-BASIN	0	0	0.01	0.14	20.551	1.07	9.79	109.5	2.087	4.26	8.21	
145	9/27/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	20.162	1.03	9.22	102.3	2.008	1.33	7.99	1.2
145	9/27/19 8:43 AM	B	CHARLES RIVER	MID-BASIN	0	0	0.27	0.27	19.94	1.02	8.24	91	2.001	13.88	7.54	
145	11/1/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.08	0.17	14.435	0.43	6.28	61.7	0.867	2.58	7.3	
145	11/2/19 8:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.08								
145	11/25/19 9:26 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.51	1.51	4.454	0.32	12.46	96.4	0.653		7.17	
145	11/26/19 9:02 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.51	6.428	0.23	8.05	65.5	0.478	6.42	7.37	
145	11/27/19 8:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.2	0.2	0.2								
008	3/28/19 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	7.45	0.3	11.77	98.2	0.611	4.7	7.64	1.4

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
008	3/28/19 8:50 AM	B	CHARLES RIVER	MID-BASIN	4.9	0.01	0.01	0.01	7.35	0.78	10.69	89.3	1.549	4.3	7.37	
008	3/29/19 9:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	7.79	0.3	11.19	94.2	0.619	6.8	7.88	1.6
008	3/29/19 9:01 AM	B	CHARLES RIVER	MID-BASIN	3.1	0.03	0.04	0.04	7.51	0.36	11.39	95.2	0.732	7.2	7.76	
008	4/8/19 9:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	10.29	0.35	10.8	96.6	0.715	6.8	7.69	1.4
008	4/8/19 9:01 AM	B	CHARLES RIVER	MID-BASIN	3.4	0.31	0.31	0.4	10.3	0.35	10.9	97.4	0.716	7.1	7.59	
008	4/9/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	10.34	0.34	10.65	95.3	0.686	2.89	7.88	1.2
008	4/9/19 8:59 AM	B	CHARLES RIVER	MID-BASIN	3.5	0.06	0.37	0.37	10.387	0.35	10.38	93	0.709	5.72	7.64	
008	4/10/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	9.87	0.33	10.57	93.5	0.667	2.71	7.86	1.1
008	4/10/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	3.5	0.01	0.07	0.38	9.834	0.34	10.36	91.6	0.687	3.65	7.74	
008	4/11/19 9:02 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	9.506	0.33	10.66	93.5	0.673	2.24	7.88	1.2
008	4/11/19 9:02 AM	B	CHARLES RIVER	MID-BASIN	3.3	0	0.01	0.07	9.248	0.32	10.51	91.6	0.663	7.69	7.15	
008	4/12/19 9:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	9.289	0.32	11.12	97.1	0.645	1.82	7.86	1.5
008	4/12/19 9:11 AM	B	CHARLES RIVER	MID-BASIN	3.9	0.11	0.11	0.12	9.305	0.33	10.14	88.6	0.664	12.11	7.77	
008	4/23/19 8:54 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	14.815	0.25	8.93	88.3	0.514	4.72	7.52	0.9
008	4/23/19 8:54 AM	B	CHARLES RIVER	MID-BASIN	3.8	0.21	2.51	2.54	14.505	0.26	8.72	85.6	0.534	8.55	7.53	
008	4/24/19 9:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	14.312	0.23	8.83	86.4	0.469	3.59	7.47	0.8
008	4/24/19 9:17 AM	B	CHARLES RIVER	MID-BASIN	3.6	0.04	0.25	2.55	14.017	0.24	8.71	84.7	0.489	4.39	7.36	
008	4/25/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	14.601	0.25	8.99	88.5	0.507	2.32	7.49	1
008	4/25/19 8:52 AM	B	CHARLES RIVER	MID-BASIN	3.8	0	0.04	0.25	14.304	0.25	8.8	86.1	0.524	4.87	7.38	
008	4/26/19 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	15.074	0.25	9.07	90.3	0.521	2.18	7.58	1.2
008	4/26/19 8:50 AM	B	CHARLES RIVER	MID-BASIN	4	0.74	0.74	0.78	15.04	0.26	8.92	88.7	0.535	5.61	7.5	
008	6/10/19 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	21.913	0.42	8.04	92.1	0.859	0.35	7.64	1.3
008	6/10/19 8:56 AM	B	CHARLES RIVER	MID-BASIN	3.4	0.14	0.14	0.14	20.918	0.42	6.9	77.4	0.851	1.94	7.44	
008	6/14/19 8:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	20.693	0.4	6.19	69.2	0.809	2.96	7.46	1
008	6/14/19 8:56 AM	B	CHARLES RIVER	MID-BASIN	3.5	0	0.63	0.63	20.327	0.37	5.54	61.5	0.754	4.76	7.39	
008	6/18/19 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	21.421	0.37	6.41	72.6	0.75	0.64	7.38	1.1
008	6/18/19 8:20 AM	B	CHARLES RIVER	MID-BASIN	4.1	0.1	0.1	0.21	20.467	0.49	4.73	52.7	0.999	3.38	7.26	
008	6/19/19 8:59 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	21.325	0.37	6.46	73.1	0.763	1.55	7.26	1.7
008	6/19/19 8:59 AM	B	CHARLES RIVER	MID-BASIN	4.3	0	0.1	0.1	20.18	0.45	4.47	49.4	0.911	9.76	7.14	
008	6/20/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	21.864	0.36	7	80.1	0.732	0.16	7.33	1.4
008	6/20/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	4	0.37	0.37	0.47	20.003	0.47	3.2	35.3	0.948	4.08	7.19	
008	6/21/19 9:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	21.453	0.35	6.7	75.9	0.709	1.57	7.52	1.6
008	6/21/19 9:03 AM	B	CHARLES RIVER	MID-BASIN	3.8	1.19	1.56	1.56	20.609	0.31	6.26	69.8	0.64	6.28	7.38	
008	6/24/19 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	21.878	0.34	6.73	76.9	0.697	0.86	7.47	1
008	6/24/19 8:39 AM	B	CHARLES RIVER	MID-BASIN	7	0	0	0								
008	7/15/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.156	0.41	7.75	95.9	0.836	1.54	7.62	1.6
008	7/15/19 8:36 AM	B	CHARLES RIVER	MID-BASIN	3.2	0	0	0	25.635	0.4	6.27	76.9	0.815	3.23	7.43	
008	7/16/19 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.444	0.43	8.54	106.3	0.877	0.71	7.64	1.3
008	7/16/19 8:33 AM	B	CHARLES RIVER	MID-BASIN	3.3	0	0	0	25.402	0.5	5.23	63.9	1.009	0.57	7.4	
008	7/17/19 9:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	26.041	0.44	8.1	100.2	0.894	2.06	7.17	1.2
008	7/17/19 9:25 AM	B	CHARLES RIVER	MID-BASIN	4.2	0.43	0.43	0.43	23.9	2.07	1.37	16.5	3.911	4.23	6.8	
008	8/8/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	24.602	0.36	6.26	75.3	0.741	5.63	7.55	1.4
008	8/8/19 8:40 AM	B	CHARLES RIVER	MID-BASIN	3.7	0.38	2.28	2.28	24.054	0.58	5.44	65	1.17	7.02	7.36	
008	8/9/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	24.657	0.37	5.9	71.1	0.755	1.84	7.45	0.9
008	8/9/19 8:36 AM	B	CHARLES RIVER	MID-BASIN	3.3	0	0.38	2.28	24.011	0.32	5.39	64.1	0.663	2.77	7.3	
008	8/12/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.828	0.36	7.98	94.6	0.747	2.7	7.69	0.8
008	8/12/19 8:43 AM	B	CHARLES RIVER	MID-BASIN	3.6	0	0	0	23.479	0.41	6.81	80.3	0.842	11.37	7.49	
008	9/3/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	22.681	0.53	7.92	92	1.076	3.18	7.72	0.7
008	9/3/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	3.5	0	1.11	1.11	22.915	1.15	6.7	78.5	2.24	4.11	7.38	
008	9/4/19 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	23.211	0.62	8.57	100.7	1.245	1.16	7.55	1.2
008	9/4/19 8:25 AM	B	CHARLES RIVER	MID-BASIN	3.7	0.33	0.33	1.44	22.824	1.3	6.01	70.3	2.522	2.76	7.36	
008	9/5/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	22.794	0.72	7.71	89.9	1.437	3.06	7.57	0.9
008	9/5/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	3.7	0	0.33	0.33	22.35	0.71	6.59	76.2	1.413	3.71	7.44	
008	9/6/19 8:03 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	22.391	0.75	8.07	93.4	1.489	1.04	7.41	1.2
008	9/6/19 8:03 AM	B	CHARLES RIVER	MID-BASIN	3.8	0	0	0.33	22.799	1.04	6.81	79.6	2.04	2.28	7.26	
008	9/25/19 8:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	20.604	1.04	9.79	109.7	2.04	2.42	8.21	1
008	9/25/19 8:23 AM	B	CHARLES RIVER	MID-BASIN	4.4	0	0.01	0.14	19.916	4.89	0.94	10.7	8.737	1.73	7.36	
008	9/27/19 8:34 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	20.177	1.03	9.37	104.1	2.015	1.2	8.09	1
008	9/27/19 8:34 AM	B	CHARLES RIVER	MID-BASIN	3.6	0	0.27	0.27	20.178	1.13	8.09	89.9	2.208	7.2	7.78	
009	3/28/19 8:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	6.96	0.32	12.18	100.5	0.653	4.7	7.62	1.6
009	3/28/19 8:42 AM	B	CHARLES RIVER	MID-BASIN	8.9	0.01	0.01	0.01	10.94	20.76	4.96	51.3	33.22	14.7	7.16	
009	3/29/19 8:53 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	7.61	0.32	11.61	97.3	0.646	6.6	8.12	1.6
009	3/29/19 8:53 AM	B	CHARLES RIVER	MID-BASIN	8.6	0.03	0.04	0.04	10.79	20.45	9.2	94.6	32.78	8	6.87	
009	4/8/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	10.34	0.36	11.19	100.1	0.736	6.8	7.78	1.3
009	4/8/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	8.2	0.31	0.31	0.4	10.75	20.74	1.12	11.5	33.2	9	7.05	
009	4/9/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	9.949	0.35	11.22	99.5	0.713	1.84	7.8	1.4
009	4/9/19 8:52 AM	B	CHARLES RIVER	MID-BASIN	8.3	0.06	0.37	0.37	10.635	20.49	0.42	4.3	32.842	10.23	7.01	

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	4/10/19 8:41 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	9.619	0.36	11.08	97.5	0.725	1.94	7.92	1.5
009	4/10/19 8:41 AM	B	CHARLES RIVER	MID-BASIN	8.1	0.01	0.07	0.38	10.448	20.29	1.82	18.5	32.552	9.66	6.99	
009	4/11/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	9.456	0.33	10.83	94.9	0.683	2.38	7.88	1.2
009	4/11/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	6.9	0	0.01	0.07	8.446	18.69	0.44	4.3	30.297	0.23	7.15	
009	4/12/19 9:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	9.878	0.34	11.07	98	0.684	1.95	7.82	1.5
009	4/12/19 9:05 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.11	0.11	0.12	10.738	20.67	0.78	8	33.093	11.08	6.92	
009	4/15/19 9:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.72	0.76	1.04								
009	4/16/19 8:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.72	0.76	11.959	0.32	10.56	98.1	0.656	7.12	7.76	
009	4/17/19 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.72								
009	4/17/19 8:25 AM	B	CHARLES RIVER	MID-BASIN	0	0	0	0.72	12.128	0.31	10.02	93.4	0.637	4.3	7.51	
009	4/18/19 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	12.332	0.34	10.22	95.7	0.696		7.55	
009	4/18/19 8:19 AM	B	CHARLES RIVER	MID-BASIN	0	0	0	0	12.353	0.34	10.08	94.5	0.697		7.43	
009	4/23/19 8:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	14.83	0.29	8.69	86	0.587	4.7	7.55	1.1
009	4/23/19 8:47 AM	B	CHARLES RIVER	MID-BASIN	6.5	0.21	2.51	2.54	9.354	17.82	1.07	10.5	28.964	6.62	6.94	
009	4/24/19 9:10 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	14.361	0.23	8.71	85.3	0.475	6.89	7.58	0.8
009	4/24/19 9:10 AM	B	CHARLES RIVER	MID-BASIN	6.9	0.04	0.25	2.55	9.602	19.32	0.62	6.2	31.166	9.05	6.84	
009	4/25/19 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	14.477	0.26	9.02	88.5	0.526	2.36	7.48	1.2
009	4/25/19 8:45 AM	B	CHARLES RIVER	MID-BASIN	8.6	0	0.04	0.25	10.502	20.56	0.73	7.4	32.95	2.1	6.94	
009	4/26/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	14.848	0.26	8.96	88.7	0.541	2	7.54	1.2
009	4/26/19 8:43 AM	B	CHARLES RIVER	MID-BASIN	8.4	0.74	0.74	0.78	10.301	20.24	0.47	4.8	32.49	2.29	6.97	
009	6/10/19 8:49 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	22.263	0.42	8.62	99.3	0.85	0.41	7.59	1.2
009	6/10/19 8:49 AM	B	CHARLES RIVER	MID-BASIN	8.5	0.14	0.14	0.14	10.797	19.94	0.21	2.2	32.031	0.46	6.93	
009	6/11/19 8:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.53	0.67	0.67	22.329	0.42	8.22	94.9	0.861	0	7.53	
009	6/13/19 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.63	0.63	1.16								
009	6/14/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	20.472	0.45	6.58	73.3	0.91	2.62	7.33	1
009	6/14/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	8.9	0	0.63	0.63	11.009	19.58	0.35	3.6	31.494	7.05	6.89	
009	6/18/19 8:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	21.327	0.42	6.26	70.8	0.852	0.5	7.44	1.4
009	6/18/19 8:13 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.1	0.1	0.21	10.988	20.03	0.29	3	32.156	0.45	6.95	
009	6/19/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	21.151	0.42	6.43	72.5	0.856	1.51	7.23	1.4
009	6/19/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0.1	0.1	11.269	19.94	0.55	5.7	32.008	3.98	6.82	
009	6/20/19 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	21.458	0.41	6.49	73.6	0.832	0.12	7.29	1.3
009	6/20/19 8:37 AM	B	CHARLES RIVER	MID-BASIN	8.5	0.37	0.37	0.47	11.025	20	0.68	7	32.107	1.5	6.91	
009	6/21/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	21.388	0.39	6.7	75.9	0.791	1.04	7.51	1.4
009	6/21/19 8:55 AM	B	CHARLES RIVER	MID-BASIN	8.3	1.19	1.56	1.56	11.215	19.82	0.54	5.6	31.836	39.74	6.81	
009	6/22/19 7:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.19	1.56								
009	6/23/19 6:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.19								
009	6/24/19 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	21.958	0.35	6.95	79.5	0.712	0.69	7.29	1
009	6/24/19 8:32 AM	B	CHARLES RIVER	MID-BASIN	6.4	0	0	0	17.943	5.56	0.29	3.2	9.834	6.8	7.43	
009	6/25/19 8:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.13	0.13	0.13	22.752	0.33	7.86	91.3	0.686	0	7.22	
009	7/12/19 9:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.81	0.83	0.83								
009	7/13/19 6:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.81	0.83								
009	7/14/19 6:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.81								
009	7/15/19 8:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.322	0.39	7.5	93.2	0.796	1.51	7.63	1.6
009	7/15/19 8:29 AM	B	CHARLES RIVER	MID-BASIN	8.3	0	0	0	12.324	19.84	0.53	5.6	31.821	3.75	6.92	
009	7/16/19 8:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.659	0.44	8.19	102.4	0.898	0.75	7.59	1.2
009	7/16/19 8:27 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0	0	12.04	20.11	0.58	6.2	32.235	0.59	6.91	
009	7/17/19 9:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	26.43	0.46	9.19	114.5	0.936	2.87	7.29	1.1
009	7/17/19 9:33 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.43	0.43	0.43	12.148	20.17	0.5	5.3	32.314	5.81	6.79	
009	8/8/19 8:32 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	25.386	0.45	7.23	88.4	0.915	2.42	7.57	1.3
009	8/8/19 8:32 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.38	2.28	2.28	12.887	20.09	0.44	4.7	32.179	15.8	6.79	
009	8/9/19 8:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	24.998	0.43	6.65	80.7	0.868	1.54	7.31	1
009	8/9/19 8:29 AM	B	CHARLES RIVER	MID-BASIN	8.5	0	0.38	2.28	13.096	20	0.28	3	32.032	0.9	6.86	
009	8/10/19 6:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.38								
009	8/11/19 6:56 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0								
009	8/12/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.833	0.43	8.36	99.2	0.874	2.89	7.65	1.4
009	8/12/19 8:36 AM	B	CHARLES RIVER	MID-BASIN	9	0	0	0	12.749	20.14	0.47	5.1	32.244	9.21	6.88	
009	9/3/19 8:42 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	23.044	0.82	9.33	109.3	1.632	2.06	7.7	1.3
009	9/3/19 8:42 AM	B	CHARLES RIVER	MID-BASIN	9.1	0	1.11	1.11	16.409	20.34	0.54	6.3	32.487	9.44	6.87	
009	9/4/19 8:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	22.689	0.69	8.18	95.2	1.383	1.16	7.52	1.2
009	9/4/19 8:21 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.33	0.33	1.44	15.761	20.3	0.86	9.8	32.431	2.26	6.84	
009	9/5/19 8:51 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	22.954	0.77	8.43	98.7	1.533	2.72	7.54	1.1
009	9/5/19 8:51 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0.33	0.33	15.532	20.37	0.5	5.7	32.538	13.06	6.76	
009	9/6/19 7:58 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	22.394	0.78	7.94	91.9	1.55	1	7.39	1.3
009	9/6/19 7:58 AM	B	CHARLES RIVER	MID-BASIN	8.5	0	0	0.33	16.092	20.14	0.88	10.1	32.199	1.66	6.74	
009	9/25/19 8:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	20.747	1.07	10.19	114.4	2.097	1.96	8.37	0.9
009	9/25/19 8:17 AM	B	CHARLES RIVER	MID-BASIN	8.5	0	0.01	0.14	16.423	19.63	0.49	5.6	31.451		6.93	
009	9/27/19 8:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	20.262	1.09	9.81	109.1	2.131	3.98	8.34	0.7

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	9/27/19 8:29 AM	B	CHARLES RIVER	MID-BASIN	8.4	0	0.27	0.27	17.238	20.95	0.8	9.5	33.367	2.85	7.06	
009	11/1/19 8:34 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.08	0.17	13.96	0.5	9.63	93.6	0.997	3.27	7.24	
009	11/2/19 7:57 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.08								
009	11/25/19 9:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.51	1.51	4.949	0.35	11.54	90.4	0.711		7.14	
009	11/26/19 8:52 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.51	4.864	0.38	11.65	91.1	0.769	2.99	7.4	
009	11/27/19 8:05 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.2	0.2	0.2								
010	3/28/19 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	6.73	0.33	12.28	100.7	0.679	4.6	7.36	1.5
010	3/28/19 8:37 AM	B	CHARLES RIVER	MID-BASIN	9.1	0.01	0.01	0.01	4.66	23.76	8.36	76.1	38.14	4.4	7.03	
010	3/29/19 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	7.57	0.32	11.42	95.6	0.646	6.7	7.55	1.5
010	3/29/19 8:45 AM	B	CHARLES RIVER	MID-BASIN	9.2	0.03	0.04	0.04	4.54	23.37	10.94	99	37.58	11.2	7.09	
010	4/8/19 8:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	10.37	0.35	11.43	102.4	0.721	7.2	7.43	1.4
010	4/8/19 8:50 AM	B	CHARLES RIVER	MID-BASIN	8.3	0.31	0.31	0.4	4.88	23.71	6.38	58.4	38.05	8.7	7.04	
010	4/9/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	9.845	0.36	10.34	91.5	0.738	1.77	8.05	1.4
010	4/9/19 8:48 AM	B	CHARLES RIVER	MID-BASIN	7.7	0.06	0.37	0.37	4.849	23.62	3.58	32.7	37.918	1.72	6.93	
010	4/10/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	9.614	0.35	11.02	97	0.722	1.88	7.55	1.3
010	4/10/19 8:36 AM	B	CHARLES RIVER	MID-BASIN	8.8	0.01	0.07	0.38	5.032	23.69	3.5	32.1	37.996		6.9	
010	4/11/19 8:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	9.426	0.35	11.09	97.2	0.711	1.95	7.45	1.4
010	4/11/19 8:46 AM	B	CHARLES RIVER	MID-BASIN	8.8	0	0.01	0.07	5.026	23.71	2.83	26	38.025	8.23	7.1	
010	4/12/19 8:58 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	9.657	0.34	11.04	97.2	0.695	1.97	7.54	1.4
010	4/12/19 8:58 AM	B	CHARLES RIVER	MID-BASIN	8.2	0.11	0.11	0.12	4.858	23.55	3.04	27.7	37.816	5.16	6.93	
010	4/23/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	14.891	0.29	8.74	86.6	0.592	4.07	7.29	1.1
010	4/23/19 8:43 AM	B	CHARLES RIVER	MID-BASIN	8.5	0.21	2.51	2.54	5.817	23.2	3.61	33.7	37.173	2.52	7.21	
010	4/24/19 9:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	14.424	0.24	8.61	84.5	0.501	3.85	7.19	0.8
010	4/24/19 9:04 AM	B	CHARLES RIVER	MID-BASIN	7	0.04	0.25	2.55	6.315	23.03	4.38	41.3	36.865	1.82	6.8	
010	4/25/19 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	14.564	0.25	8.95	88.1	0.522	2.34	7.21	1.1
010	4/25/19 8:39 AM	B	CHARLES RIVER	MID-BASIN	8.5	0	0.04	0.25	5.871	23.53	3.07	28.7	37.648	7.5	6.93	
010	4/26/19 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	14.61	0.26	8.94	88	0.534	1.99	7.26	1.3
010	4/26/19 8:37 AM	B	CHARLES RIVER	MID-BASIN	7.9	0.74	0.74	0.78	6.25	22.9	4.17	39.2	36.68	0.52	7.04	
010	6/10/19 8:41 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	22.414	0.43	8.83	102.1	0.869	0.42	7.53	1.4
010	6/10/19 8:41 AM	B	CHARLES RIVER	MID-BASIN	8.8	0.14	0.14	0.14	8.083	23.09	0.72	7	36.786	3.28	7	
010	6/14/19 8:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	9.326	21.99	0.3	3	35.099	6.27	6.81	1.2
010	6/14/19 8:39 AM	B	CHARLES RIVER	MID-BASIN	7.7	0	0.63	0.63								
010	6/18/19 8:07 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	21.429	0.46	6.01	68.2	0.927	0.53	7.18	1.4
010	6/18/19 8:07 AM	B	CHARLES RIVER	MID-BASIN	8.2	0.1	0.1	0.21	8.574	22.84	0.22	2.2	36.387	0	7.02	
010	6/19/19 8:41 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	21.005	0.43	6.25	70.3	0.874	1.56	7.04	1.3
010	6/19/19 8:41 AM	B	CHARLES RIVER	MID-BASIN	8.5	0	0.1	0.1	8.659	22.67	0.61	6.1	36.134	1.74	6.59	
010	6/20/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	21.288	0.42	5.99	67.7	0.849	0.13	7.74	1.4
010	6/20/19 8:40 AM	B	CHARLES RIVER	MID-BASIN	9	0.37	0.37	0.47	8.9	22.81	1.03	10.3	36.325	7.16	6.82	
010	6/21/19 8:49 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	21.207	0.41	5.85	66	0.83	1.23	7.85	1.5
010	6/21/19 8:49 AM	B	CHARLES RIVER	MID-BASIN	8.7	1.19	1.56	1.56	8.549	21.92	0.45	4.4	35.048	12.66	6.82	
010	6/24/19 8:26 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	22.142	0.35	7.26	83.4	0.727	0.57	7.04	1.5
010	6/24/19 8:26 AM	B	CHARLES RIVER	MID-BASIN	8.2	0	0	0	9.781	22.37	1.34	13.7	35.622	4.11	6.84	
010	7/15/19 8:20 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.787	0.42	8.66	108.5	0.857	1.9	7.41	1.6
010	7/15/19 8:20 AM	B	CHARLES RIVER	MID-BASIN	8.6	0	0	0	10.759	22.23	0.56	5.9	35.371	1.25	7.11	
010	7/16/19 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.852	0.42	9.35	117.3	0.87	0.7	7.53	1
010	7/16/19 8:19 AM	B	CHARLES RIVER	MID-BASIN	8.6	0	0	0	10.868	22.97	1.3	13.6	36.427		7.03	
010	7/17/19 9:39 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	26.533	0.47	9.38	117.1	0.954	2.89	7.49	1
010	7/17/19 9:39 AM	B	CHARLES RIVER	MID-BASIN	8.7	0.43	0.43	0.43	11.079	22.5	0.54	5.7	35.737	7.11	7.18	
010	8/8/19 8:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	25.608	0.49	7.82	96	0.997	2.1	7.5	1.3
010	8/8/19 8:25 AM	B	CHARLES RIVER	MID-BASIN	8.1	0.38	2.28	2.28	14.044	22.02	0.45	5	34.943		6.99	
010	8/9/19 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	25.154	0.45	6.89	83.8	0.921	1.35	7.25	1.2
010	8/9/19 8:19 AM	B	CHARLES RIVER	MID-BASIN	7.6	0	0.38	2.28	18.051	20.59	2.12	25.4	32.843	7.8	6.71	
010	8/12/19 8:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	23.837	0.45	8.41	99.8	0.92	11.94	7.37	1
010	8/12/19 8:30 AM	B	CHARLES RIVER	MID-BASIN	8.2	0	0	0	14.056	21.02	0.58	6.4	33.496	0	6.96	
010	9/3/19 8:28 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	23.024	0.84	9.17	107.5	1.665	2.33	7.39	1.1
010	9/3/19 8:28 AM	B	CHARLES RIVER	MID-BASIN	8.4	0	1.11	1.11	15.837	24.39	0.42	5	38.306	8.18	6.96	
010	9/4/19 8:14 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	22.696	0.83	7.83	91.2	1.65	1.15	7.9	1.3
010	9/4/19 8:14 AM	B	CHARLES RIVER	MID-BASIN	8.3	0.33	0.33	1.44	16.974	21.58	0.94	11.1	34.276	4.79	6.87	
010	9/5/19 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	22.986	0.77	8.4	98.4	1.539	2.63	7.26	1
010	9/5/19 8:44 AM	B	CHARLES RIVER	MID-BASIN	8.7	0	0.33	0.33	15.499	22	0.39	4.5	34.891	2.62	6.82	
010	9/6/19 7:50 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	22.327	0.79	7.99	92.4	1.565	1.04	7.01	1.3
010	9/6/19 7:50 AM	B	CHARLES RIVER	MID-BASIN	8.8	0	0	0.33	15.935	20.72	0.95	10.9	33.031	0	6.75	
010	9/25/19 8:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	20.76	1.05	10.01	112.4	2.046	2.24	8.34	1
010	9/25/19 8:13 AM	B	CHARLES RIVER	MID-BASIN	8.4	0	0.01	0.14	16.548	25.22	0.52	6.3	39.473	42.75	7.06	
010	9/27/19 8:23 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	20.47	1.09	10.05	112.3	2.123	0.98	8.25	1
010	9/27/19 8:23 AM	B	CHARLES RIVER	MID-BASIN	7.3	0	0.27	0.27	16.996	23.76	0.29	3.5	37.405	2.69	7.11	
210	3/28/19 8:34 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.01	0.01	6.88	0.34	12.28	101	0.692	4.9	7.41	1.5

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
210	3/28/19 8:34 AM	B	CHARLES RIVER	MID-BASIN		0.01	0.01	0.01	6.83	0.34	12.24	100.6	0.702	5.1	7.36	
210	3/29/19 8:41 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.03	0.04	0.04	7.56	0.32	11.32	94.7	0.662	6.9	7.63	1.5
210	3/29/19 8:41 AM	B	CHARLES RIVER	MID-BASIN		0.03	0.04	0.04	7.54	0.32	11.38	95.2	0.662	7.1	7.59	
210	4/8/19 8:48 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.31	0.31	0.4	10.36	0.35	11.45	102.6	0.721	6.9	7.41	1.2
210	4/8/19 8:48 AM	B	CHARLES RIVER	MID-BASIN		0.31	0.31	0.4	10.39	0.35	11.41	102.2	0.721	9.5	7.41	
210	4/9/19 8:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.06	0.37	0.37	9.842	0.37	11.28	99.7	0.756	1.82	7.6	1.3
210	4/9/19 8:44 AM	B	CHARLES RIVER	MID-BASIN		0.06	0.37	0.37	9.87	0.37	11.25	99.6	0.756	2.04	7.57	
210	4/10/19 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.07	0.38	9.663	0.36	11.1	97.8	0.739	1.71	7.64	1.2
210	4/10/19 8:33 AM	B	CHARLES RIVER	MID-BASIN		0.01	0.07	0.38	9.662	0.37	11.03	97.2	0.743	2.06	7.56	
210	4/11/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.07	9.594	0.35	11.11	97.7	0.718	1.85	7.5	1.5
210	4/11/19 8:43 AM	B	CHARLES RIVER	MID-BASIN		0	0.01	0.07	9.469	0.39	10.53	92.4	0.796	8.14	7.49	
210	4/12/19 8:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.11	0.11	0.12	9.698	0.35	11.07	97.6	0.705	1.91	7.59	1
210	4/12/19 8:55 AM	B	CHARLES RIVER	MID-BASIN		0.11	0.11	0.12	9.505	0.38	10.81	94.9	0.765	1.68	7.53	
210	4/15/19 10:08 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.72	0.76	1.04								
210	4/16/19 10:13 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.72	0.76	12.221	0.36	11.13	104	0.726	3.2	7.6	
210	4/17/19 9:25 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.72	12.392	0.34	10.83	101.6	0.69	4.89	7.64	
210	4/17/19 9:25 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.72	12.371	0.34	10.38	97.3	0.687	5.69	7.63	
210	4/18/19 9:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	12.236	0.36	10.22	95.5	0.732		7.44	
210	4/18/19 9:17 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	12.282	0.36	10.14	94.9	0.733		7.43	
210	4/23/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.21	2.51	2.54	14.92	0.3	8.49	84.2	0.606	4.14	7.29	1
210	4/23/19 8:40 AM	B	CHARLES RIVER	MID-BASIN		0.21	2.51	2.54	14.949	0.3	8.41	83.5	0.622	4.26	7.24	
210	4/24/19 9:01 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.04	0.25	2.55	14.684	0.28	8.66	85.4	0.583	3.18	7.25	1
210	4/24/19 9:01 AM	B	CHARLES RIVER	MID-BASIN		0.04	0.25	2.55	14.545	0.29	8.46	83.2	0.594	4.17	7.19	
210	4/25/19 8:37 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.04	0.25	14.717	0.25	8.81	86.9	0.522	2.45	7.25	1.3
210	4/25/19 8:37 AM	B	CHARLES RIVER	MID-BASIN		0	0.04	0.25	14.513	0.27	8.64	85	0.55	2.8	7.22	
210	4/26/19 8:33 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.74	0.74	0.78	14.439	0.27	8.81	86.5	0.548	1.99	7.29	1.3
210	4/26/19 8:33 AM	B	CHARLES RIVER	MID-BASIN		0.74	0.74	0.78	14.404	0.26	8.79	86.2	0.544	2.05	7.26	
210	6/10/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.14	0.14	0.14	22.335	0.43	8.41	97.1	0.88	0.25	7.48	1.2
210	6/10/19 8:36 AM	B	CHARLES RIVER	MID-BASIN		0.14	0.14	0.14	21.86	0.46	8.26	94.5	0.935	0.36	7.45	
210	6/11/19 9:47 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.53	0.67	0.67	22.282	0.45	7.68	88.6	0.906	0	7.5	
210	6/14/19 8:34 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.63	0.63	20.571	0.49	6.19	69	0.982	2.03	7.09	1.2
210	6/14/19 8:34 AM	B	CHARLES RIVER	MID-BASIN		0	0.63	0.63	20.538	0.49	6.18	68.9	0.982	2.12	7.07	
210	6/18/19 8:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.1	0.1	0.21	21.498	0.46	6.08	69	0.935	0.49	7.21	1.4
210	6/18/19 8:04 AM	B	CHARLES RIVER	MID-BASIN		0.1	0.1	0.21	21.126	0.46	5.93	66.9	0.936	0.64	7.15	
210	6/19/19 8:38 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.1	0.1	20.926	0.44	6.17	69.2	0.889	1.67	7.09	1.3
210	6/19/19 8:38 AM	B	CHARLES RIVER	MID-BASIN		0	0.1	0.1	20.531	0.5	4.97	55.4	1.009	4.49	7.02	
210	6/20/19 8:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.37	0.37	0.47	21.568	0.43	6.31	71.7	0.883	0.14	7.2	1.4
210	6/20/19 8:36 AM	B	CHARLES RIVER	MID-BASIN		0.37	0.37	0.47	21.212	0.46	5.55	62.7	0.941	1.85	7.11	
210	6/21/19 8:45 AM	S	CHARLES RIVER	MID-BASIN	0.1	1.19	1.56	1.56	21.394	0.42	6.46	73.1	0.848	1.11	6.74	1.5
210	6/21/19 8:45 AM	B	CHARLES RIVER	MID-BASIN		1.19	1.56	1.56	21.392	0.42	6.43	72.9	0.852	1.23	6.74	
210	6/22/19 8:00 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.19	1.56								
210	6/23/19 7:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.19								
210	6/24/19 8:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	22.338	0.36	6.91	79.8	0.739	0.37	7.03	1.5
210	6/24/19 8:21 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	21.609	0.35	6.72	76.4	0.716	0.85	6.99	
210	6/25/19 9:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.13	0.13	0.13	22.22	0.35	7.13	82.1	0.711	0	7.42	
210	7/12/19 10:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.81	0.83	0.83								
210	7/13/19 7:30 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.81	0.83								
210	7/14/19 7:36 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.81								
210	7/15/19 8:16 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.954	0.43	8.04	101	0.875	1.69	7.34	1.5
210	7/15/19 8:16 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	26.667	0.5	7.18	89.9	1.022	1.25	7.29	
210	7/16/19 8:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	26.855	0.44	8.77	110.1	0.899	0.58	7.48	1.2
210	7/16/19 8:15 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	26.532	0.43	8.36	104.3	0.872	0.6	7.48	
210	7/17/19 9:44 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.43	0.43	0.43	26.848	0.47	9.08	113.9	0.954	2.84	7.57	0.9
210	7/17/19 9:44 AM	B	CHARLES RIVER	MID-BASIN		0.43	0.43	0.43	26.619	0.47	8.78	109.7	0.962	2.92	7.57	
210	8/8/19 8:21 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.38	2.28	2.28	25.589	0.5	7.73	94.9	1.01	2.21	7.56	1.4
210	8/8/19 8:21 AM	B	CHARLES RIVER	MID-BASIN		0.38	2.28	2.28	25.599	0.5	7.57	92.8	1.009	3.06	7.51	
210	8/9/19 8:15 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.38	2.28	25.384	0.49	6.92	84.5	0.997	1.27	7.29	1.1
210	8/9/19 8:15 AM	B	CHARLES RIVER	MID-BASIN		0	0.38	2.28	25.217	0.57	5.99	73	1.144	2.21	7.22	
210	8/10/19 7:29 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.38								
210	8/11/19 7:55 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0								
210	8/12/19 8:27 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0	24.319	0.45	9.09	108.9	0.923	2.96	7.4	1.2
210	8/12/19 8:27 AM	B	CHARLES RIVER	MID-BASIN		0	0	0	23.818	0.46	8.08	95.9	0.928	4.8	7.38	
210	9/3/19 8:24 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.11	1.11	23.08	0.87	9.3	109.1	1.715	1.91	7.38	0.7
210	9/3/19 8:24 AM	B	CHARLES RIVER	MID-BASIN		0	1.11	1.11	22.931	0.87	8.87	103.7	1.713	3.42	7.4	
210	9/4/19 8:11 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.33	0.33	1.44	22.864	0.86	8.6	100.4	1.693	0.82	7.33	1.2
210	9/4/19 8:11 AM	B	CHARLES RIVER	MID-BASIN		0.33	0.33	1.44	22.788	0.86	8.14	94.9	1.707	0.97	7.3	
210	9/5/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.33	0.33	23.023	0.77	8.48	99.4	1.54	2.66	7.2	1

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
210	9/5/19 8:40 AM	B	CHARLES RIVER	MID-BASIN		0	0.33	0.33	23.012	0.89	7.52	88.1	1.759	3.72	7.19	
210	9/6/19 7:46 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	0.33	22.504	0.82	7.58	87.9	1.622	0.93	7.06	1.3
210	9/6/19 7:46 AM	B	CHARLES RIVER	MID-BASIN		0	0	0.33	22.512	0.83	7.53	87.3	1.639	0.98	7.04	
210	9/25/19 8:09 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.14	20.981	1.05	10.07	113.7	2.061	1.99	8.3	1.2
210	9/25/19 8:09 AM	B	CHARLES RIVER	MID-BASIN		0	0.01	0.14	20.89	1.05	9.84	110.8	2.059	2.6	8.31	
210	9/27/19 8:19 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.27	0.27	20.61	1.09	10.15	113.7	2.134	0.92	8.19	1
210	9/27/19 8:19 AM	B	CHARLES RIVER	MID-BASIN		0	0.27	0.27	20.481	1.1	9.87	110.3	2.153	1.05	8.18	
210	11/1/19 9:17 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.01	0.08	0.17	14.244	0.46	8.93	87.3	0.933	1.92	7.43	
210	11/2/19 8:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0.01	0.08								
210	11/25/19 10:04 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	1.51	1.51	4.594	0.44	11.96	92.9	0.895		7.36	
210	11/26/19 9:40 AM	S	CHARLES RIVER	MID-BASIN	0.1	0	0	1.51	4.945	0.42	11.7	91.7	0.848	2.41	7.32	
210	11/27/19 8:43 AM	S	CHARLES RIVER	MID-BASIN	0.1	0.2	0.2	0.2								
166	1/7/19 10:04 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.53	2.53	0.25	12.7	93.3	0.517		7.85	
166	1/7/19 10:04 AM	B	CHARLES RIVER	LOWER BASIN		0	0	0.53	2.56	0.25	12.84	94.4	0.519		7.73	
166	1/25/19 10:30 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	1	1								
166	2/7/19 10:14 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.21	0.58	0.58	1.32	0.26	13.16	93.6	0.552	1.4	7.65	
166	2/7/19 10:14 AM	B	CHARLES RIVER	LOWER BASIN		0.21	0.58	0.58	1.29	0.27	12.29	87.3	0.565	9	7.49	
166	2/19/19 9:37 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.31	0.31	1.43	0.46	12.97	92.6	0.952	1.9	7.15	
166	3/6/19 10:31 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.97	1.24	0.63	13.62	96.8	1.281	2.3	7.73	
166	3/6/19 10:31 AM	B	CHARLES RIVER	LOWER BASIN		0	0	0.97	1.24	0.63	13.58	96.6	1.282	5	7.67	
166	3/19/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	5.65	0.51	12.64	101	1.038	4	7.78	
166	3/19/19 9:32 AM	B	CHARLES RIVER	LOWER BASIN		0	0	0	5.61	0.51	12.37	98.7	1.038	6	7.66	
166	3/28/19 8:31 AM	S	CHARLES RIVER	LOWER BASIN		0.01	0.01	0.01								1.2
166	3/29/19 8:37 AM	S	CHARLES RIVER	LOWER BASIN		0.03	0.04	0.04								1.5
166	4/1/19 9:39 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.09	0.09	9.4	0.33	12.02	105.2	0.673		7.72	
166	4/1/19 9:39 AM	B	CHARLES RIVER	LOWER BASIN		0	0.09	0.09	9.41	0.33	11.87	103.9	0.673		7.61	
166	4/8/19 8:45 AM	S	CHARLES RIVER	LOWER BASIN		0.31	0.31	0.4								1.4
166	4/9/19 8:40 AM	S	CHARLES RIVER	LOWER BASIN		0.06	0.37	0.37								1.4
166	4/10/19 8:30 AM	S	CHARLES RIVER	LOWER BASIN		0.01	0.07	0.38								1.3
166	4/11/19 8:39 AM	S	CHARLES RIVER	LOWER BASIN		0	0.01	0.07								1.6
166	4/12/19 8:50 AM	S	CHARLES RIVER	LOWER BASIN		0.11	0.11	0.12								1
166	4/19/19 9:52 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.02	0.02	0.02								
166	4/19/19 9:52 AM	B	CHARLES RIVER	LOWER BASIN		0.02	0.02	0.02	13.324	0.37	10.24	98.1	0.756		7.48	
166	4/23/19 8:37 AM	S	CHARLES RIVER	LOWER BASIN		0.21	2.51	2.54								1
166	4/24/19 8:57 AM	S	CHARLES RIVER	LOWER BASIN		0.04	0.25	2.55								1
166	4/25/19 8:32 AM	S	CHARLES RIVER	LOWER BASIN		0	0.04	0.25								1.3
166	4/26/19 8:29 AM	S	CHARLES RIVER	LOWER BASIN		0.74	0.74	0.78								1.3
166	5/2/19 9:48 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.06	0.06	0.2	12.403	0.26	9.27	86.9	0.544		7.5	
166	5/2/19 9:48 AM	B	CHARLES RIVER	LOWER BASIN		0.06	0.06	0.2	12.368	0.27	9.45	88.6	0.546		7.4	
166	5/14/19 10:29 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.15	0.97	1.36	14.462	0.33	8.56	84.1		1.88	7.72	
166	5/14/19 10:29 AM	B	CHARLES RIVER	LOWER BASIN		0.15	0.97	1.36	14.496	0.33	8.39	82.4		6.37	7.63	
166	5/31/19 9:57 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.07	0.3	0.3	18.729	0.38	7.91	85	0.769		7.5	
166	6/5/19 10:11 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.05	0.05	0.09	19.263	0.45	8.88	96.5	0.915		7.63	
166	6/10/19 8:13 AM	S	CHARLES RIVER	LOWER BASIN		0.14	0.14	0.14								0.9
166	6/14/19 8:30 AM	S	CHARLES RIVER	LOWER BASIN		0	0.63	0.63								1.2
166	6/17/19 9:35 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.11	0.11	22.182	0.49	7.09	81.6	0.999	0	7.59	
166	6/17/19 9:35 AM	B	CHARLES RIVER	LOWER BASIN		0	0.11	0.11	20.945	0.49	6.59	74	0.987	4.25	7.55	
166	6/18/19 8:00 AM	S	CHARLES RIVER	LOWER BASIN		0.1	0.1	0.21								1.4
166	6/19/19 7:58 AM	S	CHARLES RIVER	LOWER BASIN		0	0.1	0.1								1.4
166	6/20/19 8:31 AM	S	CHARLES RIVER	LOWER BASIN		0.37	0.37	0.47								1.5
166	6/21/19 8:39 AM	S	CHARLES RIVER	LOWER BASIN		1.19	1.56	1.56								1.6
166	6/24/19 8:17 AM	S	CHARLES RIVER	LOWER BASIN		0	0	0								1.8
166	7/1/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.16	1.81	24.308	0.35	7.94	95	0.713		7.8	
166	7/1/19 9:32 AM	B	CHARLES RIVER	LOWER BASIN		0	0.16	1.81	24.058	0.35	7.72	92	0.719	4.17	7.73	
166	7/15/19 8:13 AM	S	CHARLES RIVER	LOWER BASIN		0	0	0								1.6
166	7/16/19 8:10 AM	S	CHARLES RIVER	LOWER BASIN		0	0	0								1
166	7/17/19 10:08 AM	S	CHARLES RIVER	LOWER BASIN		0.43	0.43	0.43								1
166	7/18/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.04	0.47	0.47	26.125	0.51	8.32	103.1	1.039		7.69	
166	7/18/19 9:32 AM	B	CHARLES RIVER	LOWER BASIN		0.04	0.47	0.47	26.26	0.51	8.14	101.1	1.041		7.65	
166	8/6/19 9:40 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	26.596	0.44	8.92	111.4	0.9		7.73	
166	8/6/19 9:40 AM	B	CHARLES RIVER	LOWER BASIN		0	0	0	26.344	0.47	8.4	104.5	0.968		7.68	
166	8/8/19 8:18 AM	S	CHARLES RIVER	LOWER BASIN		0.38	2.28	2.28								1.4
166	8/9/19 8:12 AM	S	CHARLES RIVER	LOWER BASIN		0	0.38	2.28								1
166	8/12/19 8:24 AM	S	CHARLES RIVER	LOWER BASIN		0	0	0								1.1
166	8/13/19 9:07 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	24.127	0.46	8.96	107	0.93		7.73	
166	8/13/19 9:07 AM	B	CHARLES RIVER	LOWER BASIN		0	0	0	24.136	0.46	8.89	106.1	0.93		7.74	
166	8/26/19 9:24 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	23.321	0.97	7.63	89.9	1.904		7.69	

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	8/26/19 9:24 AM	B	CHARLES RIVER	LOWER BASIN		0	0	0	23.373	0.99	7.77	91.8	1.945		7.67	
166	9/3/19 8:22 AM	S	CHARLES RIVER	LOWER BASIN		0	1.11	1.11								0.6
166	9/4/19 8:08 AM	S	CHARLES RIVER	LOWER BASIN		0.33	0.33	1.44								1.5
166	9/5/19 8:38 AM	S	CHARLES RIVER	LOWER BASIN		0	0.33	0.33								1
166	9/6/19 7:43 AM	S	CHARLES RIVER	LOWER BASIN		0	0	0.33								1.4
166	9/12/19 9:54 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.07	0.07	0.07	21.417	0.95	9.47	107.7	1.868	2.04	7.72	
166	9/12/19 9:54 AM	B	CHARLES RIVER	LOWER BASIN		0.07	0.07	0.07	21.441	0.98	9.37	106.6	1.916	9.5	7.77	
166	9/24/19 9:40 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.01	0.14	0.14	21.637	1.04	11.04	126.2	2.03		8.04	
166	9/24/19 9:40 AM	B	CHARLES RIVER	LOWER BASIN		0.01	0.14	0.14	21.635	1.04	11.17	127.7	2.032		8.32	
166	9/25/19 8:07 AM	S	CHARLES RIVER	LOWER BASIN		0	0.01	0.14								1
166	9/27/19 8:18 AM	S	CHARLES RIVER	LOWER BASIN		0	0.27	0.27								1
166	10/7/19 9:46 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.16	0.16	0.16	17.123	1.39	9.47	99	2.665		7.67	
166	10/7/19 9:46 AM	B	CHARLES RIVER	LOWER BASIN		0.16	0.16	0.16	17.074	1.37	9.44	98.6	2.643		7.75	
166	10/22/19 9:32 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.16	0.16	0.16	12.993	1.06	10.08	96.3	2.067	1.97	7.53	
166	11/5/19 10:33 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.4	0.4	0.4	12.106	0.57	9.05	84.5	1.141		7.4	
166	11/5/19 10:33 AM	B	CHARLES RIVER	LOWER BASIN		0.4	0.4	0.4	11.964	0.55	9.1	84.7	1.093		7.41	
166	11/18/19 10:47 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.24	0.24	0.24	4.473	0.48	11.52	89.3	0.971	2.19	7.53	
166	11/18/19 10:47 AM	B	CHARLES RIVER	LOWER BASIN		0.24	0.24	0.24	4.426	0.48	11.37	88	0.973	4.76	7.47	
166	12/5/19 10:31 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.38	2.234	0.51	12.9	94.2	1.048		7.43	
166	12/5/19 10:31 AM	B	CHARLES RIVER	LOWER BASIN		0	0	0.38	2.09	0.51	12.95	94.2	1.05		7.38	
166	12/16/19 9:57 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	1.25	2.525	0	13.58	99.6	0.013		7.37	
166	12/16/19 9:57 AM	B	CHARLES RIVER	LOWER BASIN		0	0	1.25	3.789	0.71	12.96	98.8	1.429	7.98	7.39	
011	1/24/19 8:45 AM	S	CHARLES RIVER	LOWER BASIN	0.1	1	1	1								
011	3/28/19 8:28 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.01	0.01	0.01	6.71	0.54	12.26	100.6	1.088	5	7.3	1.4
011	3/28/19 8:28 AM	B	CHARLES RIVER	LOWER BASIN		0.01	0.01	0.01	6.54	3.26	11.97	99.6	6.012	6.6	7.12	
011	3/29/19 8:33 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.03	0.04	0.04	7.54	0.37	10.58	88.5	0.754	6.7	7.74	1.7
011	3/29/19 8:33 AM	B	CHARLES RIVER	LOWER BASIN		0.03	0.04	0.04	7.07	3.39	11.4	96.2	6.223	10.7	7.49	
011	4/8/19 8:41 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.31	0.31	0.4	10.36	0.45	11.29	101.2	0.918	6.7	6.88	1.4
011	4/8/19 8:41 AM	B	CHARLES RIVER	LOWER BASIN		0.31	0.31	0.4	9.78	3.46	11.09	99.9	6.324	7.4	7.05	
011	4/9/19 8:36 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.06	0.37	0.37	9.881	0.71	11.2	99.4	1.408	1.84	7.67	1.5
011	4/9/19 8:36 AM	B	CHARLES RIVER	LOWER BASIN		0.06	0.37	0.37	9.865	0.87	11.19	99.3	1.71	1.88	7.61	
011	4/10/19 8:25 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.01	0.07	0.38	9.592	0.6	11.33	99.8	1.194	1.63	7.71	1.5
011	4/10/19 8:25 AM	B	CHARLES RIVER	LOWER BASIN		0.01	0.07	0.38	8.987	6.54	10.75	97	11.472	1.54	7.34	
011	4/11/19 8:33 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.01	0.07	9.438	0.55	11.04	96.8	1.109	1.65	7.47	1.2
011	4/11/19 8:33 AM	B	CHARLES RIVER	LOWER BASIN		0	0.01	0.07	9.17	2.72	10.94	96.7	5.046	1.83	7.25	
011	4/12/19 8:47 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.11	0.11	0.12	9.743	0.52	11.14	98.5	1.049	1.83	7.71	1.2
011	4/12/19 8:47 AM	B	CHARLES RIVER	LOWER BASIN		0.11	0.11	0.12	8.633	9.43	10.39	94.6	16.126	1.71	7.18	
011	4/15/19 9:20 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.72	0.76	1.04								
011	4/16/19 8:34 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.72	0.76	11.696	0.41	11.12	102.7	0.832	3.58	7.91	
011	4/17/19 8:15 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.72	12.49	0.39	10.24	96.3	0.796	3.71	7.19	
011	4/18/19 8:07 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	12.047	0.43	10.27	95.7	0.863		7.62	
011	4/23/19 8:33 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.21	2.51	2.54	15.013	0.41	8.87	88.2	0.828	3.12	7.5	1
011	4/23/19 8:33 AM	B	CHARLES RIVER	LOWER BASIN		0.21	2.51	2.54	15.019	0.42	8.72	86.7	0.851	3.8	7.39	
011	4/24/19 8:47 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.04	0.25	2.55	14.429	0.69	8.71	85.7	1.366	3.6	7.39	0.7
011	4/24/19 8:47 AM	B	CHARLES RIVER	LOWER BASIN		0.04	0.25	2.55	14.367	1.07	8.66	85.3	2.081	3.87	7.18	
011	4/25/19 8:27 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.04	0.25	14.443	0.44	9.08	89.2	0.88	2.59	7.47	1.1
011	4/25/19 8:27 AM	B	CHARLES RIVER	LOWER BASIN		0	0.04	0.25	14.434	0.92	8.85	87.2	1.805	4.43	7.25	
011	4/26/19 8:25 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.74	0.74	0.78	14.378	0.3	8.77	85.9	0.617	2.03	7.55	1.2
011	4/26/19 8:25 AM	B	CHARLES RIVER	LOWER BASIN		0.74	0.74	0.78	13.681	4.23	8.41	83.1	7.619	2.6	7.03	
011	6/10/19 8:09 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.14	0.14	0.14	21.94	0.47	8.33	95.5	0.95	0.3	7.5	1.3
011	6/10/19 8:09 AM	B	CHARLES RIVER	LOWER BASIN		0.14	0.14	0.14	18.577	7.4	5.57	62.2	12.835	0.24	7.04	
011	6/11/19 8:35 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.53	0.67	0.67	21.927	0.5	8	91.6	1.004	0	7.37	
011	6/14/19 8:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.63	0.63	20.765	0.6	6.12	68.5	1.208	1.79	7.01	1.3
011	6/14/19 8:17 AM	B	CHARLES RIVER	LOWER BASIN		0	0.63	0.63	18.714	9.97	5.27	59.9	16.893	2.18	6.76	
011	6/18/19 7:54 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.1	0.1	0.21	21.066	0.54	6.02	67.9	1.086	0.55	7.47	1.5
011	6/18/19 7:54 AM	B	CHARLES RIVER	LOWER BASIN		0.1	0.1	0.21	17.914	12.86	4.22	48	21.356	0.62	6.93	
011	6/19/19 8:29 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.1	0.1	20.911	0.5	5.73	64.4	1.013	1.67	7.1	1.5
011	6/19/19 8:29 AM	B	CHARLES RIVER	LOWER BASIN		0	0.1	0.1	16.639	17.85	4.55	52	28.827	4.76	6.67	
011	6/20/19 8:26 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.37	0.37	0.47	21.27	0.56	6.03	68.2	1.133	0.2	7.13	1.5
011	6/20/19 8:26 AM	B	CHARLES RIVER	LOWER BASIN		0.37	0.37	0.47	16.692	16.74	4.38	49.8	27.184	0.4	6.97	
011	6/21/19 8:34 AM	S	CHARLES RIVER	LOWER BASIN	0.1	1.19	1.56	1.56	21.171	0.73	5.97	67.5	1.456	1.4	6.15	1.4
011	6/21/19 8:34 AM	B	CHARLES RIVER	LOWER BASIN		1.19	1.56	1.56	19.309	7.76	4.74	53.8	13.416	2.73	6.1	
011	6/22/19 7:03 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	1.19	1.56								
011	6/23/19 6:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	1.19								
011	6/24/19 8:12 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	22.394	0.43	6.9	79.7	0.876	0.47	6.59	1.7
011	6/24/19 8:12 AM	B	CHARLES RIVER	LOWER BASIN		0	0	0	18.411	11.99	6.02	68.8	20.021	0.17	6.44	
011	6/25/19 8:17 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.13	0.13	0.13	21.889	0.5	6.9	79	1.02	0	6.95	

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
011	7/12/19 9:35 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.81	0.83	0.83								
011	7/13/19 6:34 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.81	0.83								
011	7/14/19 6:36 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.81								
011	7/15/19 8:07 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	26.731	0.6	7.74	97	1.203	1.52	7.07	1.6
011	7/15/19 8:07 AM	B	CHARLES RIVER	LOWER BASIN	5.1	0	0	0	23.558	9.89	3.38	42.1	16.821	0.83	6.68	
011	7/16/19 8:05 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	26.835	0.68	8.1	101.8	1.358	0.46	7.07	1.4
011	7/16/19 8:05 AM	B	CHARLES RIVER	LOWER BASIN	6.7	0	0	0	21.585	17.06	2.52	31.5	27.702		6.78	
011	7/17/19 10:10 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.43	0.43	0.43	26.875	0.58	8.55	107.4	1.168	1.88	7.38	1.2
011	7/17/19 10:10 AM	B	CHARLES RIVER	LOWER BASIN	6.7	0.43	0.43	0.43	20.709	22.27	6.5	82.6	35.285	3.28	7.16	
011	8/8/19 8:11 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.38	2.28	2.28	25.619	0.68	7.77	95.4	1.368	2.31	7.28	1.4
011	8/8/19 8:11 AM	B	CHARLES RIVER	LOWER BASIN	5.8	0.38	2.28	2.28	23.553	7.58	6.17	75.9	13.168	3.07	6.92	
011	8/9/19 8:03 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.38	2.28	25.316	0.74	7.22	88.3	1.481	1.11	6.92	1.4
011	8/9/19 8:03 AM	B	CHARLES RIVER	LOWER BASIN	6.3	0	0.38	2.28	20.399	18.3	5.62	69.3	29.51	1.03	6.68	
011	8/10/19 6:41 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.38								
011	8/11/19 6:51 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0								
011	8/12/19 8:18 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0	24.129	0.56	8.81	105.2	1.129	2.85	7.09	1.1
011	8/12/19 8:18 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0	0	0	19.186	20.31	5.3	64.7	32.438	2.79	6.56	
011	9/3/19 8:14 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	1.11	1.11	22.977	1.05	8.7	102	2.048	1.98	7.02	1.3
011	9/3/19 8:14 AM	B	CHARLES RIVER	LOWER BASIN	3.9	0	1.11	1.11	22.811	2.51	7.44	87.7	4.687	2.32	6.8	
011	9/4/19 8:02 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.33	0.33	1.44	22.835	0.91	8.47	98.9	1.791	0.79	6.86	1.4
011	9/4/19 8:02 AM	B	CHARLES RIVER	LOWER BASIN	6.9	0.33	0.33	1.44	19.857	23.11	4.6	57.8	36.483	1.51	6.78	
011	9/5/19 8:31 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.33	0.33	22.938	0.85	8.06	94.4	1.684	2.59	6.91	1.1
011	9/5/19 8:31 AM	B	CHARLES RIVER	LOWER BASIN	2.9	0	0.33	0.33	22.999	1.07	7.6	89.2	2.097	3.33	6.89	
011	9/6/19 7:36 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	0.33	22.325	0.94	7.95	92	1.847	0	6.51	1.4
011	9/6/19 7:36 AM	B	CHARLES RIVER	LOWER BASIN	6.5	0	0	0.33	19.702	23.35	3.88	48.7	36.826	1.13	6.51	
011	9/25/19 7:59 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.01	0.14	20.968	1.13	9.65	108.9	2.209	1.54	7.98	1.5
011	9/25/19 7:59 AM	B	CHARLES RIVER	LOWER BASIN	5.7	0	0.01	0.14	18.989	19.32	0.96	11.6	30.995	3.88	7.07	
011	9/27/19 8:09 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.27	0.27	20.617	1.25	9.87	110.7	2.413	0.72	7.68	1.5
011	9/27/19 8:09 AM	B	CHARLES RIVER	LOWER BASIN	6	0	0.27	0.27	18.833	20.18	1.37	16.6	32.248	6.55	6.87	
011	11/1/19 8:21 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.01	0.08	0.17	13.894	0.59	9.32	90.6	1.176	2.01	7.14	
011	11/2/19 7:50 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0.01	0.08								
011	11/25/19 9:04 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	1.51	1.51	4.888	0.57	11.63	91.1	1.146		7.3	
011	11/26/19 8:39 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0	0	1.51	4.983	0.54	11.68	91.7	1.088	2.27	7.3	
011	11/27/19 8:00 AM	S	CHARLES RIVER	LOWER BASIN	0.1	0.2	0.2	0.2								
174	4/20/19 9:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19								
174	4/21/19 7:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22								
174	4/22/19 9:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5								
174	5/3/19 9:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17								
174	5/7/19 9:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09								
174	5/8/19 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08								
174	5/9/19 9:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08								
174	5/10/19 9:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01								
174	5/20/19 10:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35								
174	5/21/19 10:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35								
174	5/22/19 10:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13								
174	5/23/19 10:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12								
174	5/29/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3								
174	5/30/19 9:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53								
174	6/26/19 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13								
174	6/27/19 9:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13								
174	6/28/19 8:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	7/5/19 9:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	7/6/19 7:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37								
174	7/7/19 6:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37								
174	7/8/19 9:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37								
174	7/9/19 9:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	7/10/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	7/11/19 8:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02								
174	7/24/19 9:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03								
174	7/25/19 9:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03								
174	7/26/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	7/27/19 8:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	7/28/19 7:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	8/1/19 9:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25								
174	8/2/19 9:19 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25								
174	8/3/19 7:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	8/4/19 8:54 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								



## 2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
174	8/5/19 9:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	8/20/19 8:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17								
174	8/21/19 8:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09								
174	8/22/19 8:54 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08								
174	8/27/19 8:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	8/29/19 9:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95								
174	8/30/19 8:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95								
174	8/31/19 8:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3								
174	9/1/19 7:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	10/10/19 9:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1								
174	10/11/19 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42								
174	10/12/19 7:39 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36								
174	10/13/19 7:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34								
174	10/14/19 8:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01								
174	10/15/19 9:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	10/16/19 9:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53								
174	10/17/19 10:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2								
174	10/18/19 9:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2								
174	10/19/19 8:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67								
174	10/20/19 8:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	10/21/19 9:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
174	10/28/19 9:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49								
174	10/29/19 10:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52								
174	10/30/19 8:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18								
174	10/31/19 9:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19								
174	11/19/19 10:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48								
174	11/20/19 10:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71								
174	11/21/19 10:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47								
174	11/22/19 10:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32								
308	4/20/19 9:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19								
308	4/21/19 7:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22								
308	4/22/19 10:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	11.726	0.96	4.19	38.8	1.88		7.02	
308	5/3/19 9:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	11.439	0.93	4.29	39.5	1.824		7.05	
308	5/7/19 9:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	11.746	1.04	3.7	34.4	2.03		7.07	
308	5/8/19 9:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	11.898	0.76	3.84	35.7	1.507	14.27	7.14	
308	5/9/19 9:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	12.197	1.01	3.72	34.9	1.968		7.07	
308	5/10/19 9:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	12.204	1.02	3.57	33.5	1.985		7.02	
308	5/20/19 10:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	14.978	0.24	5.49	54.5	0.495		7.41	
308	5/21/19 10:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	13.914	0.63	3.84	37.3	1.249		7.19	
308	5/22/19 10:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	13.827	0.79	4.74	46	1.549	20.83	7.53	
308	5/23/19 10:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	13.587	0.97	3.57	34.5	1.896		7.02	
308	5/29/19 9:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	14.13	0.37	4.51	43.9	0.755		7.4	
308	5/30/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	14.042	0.85	3.18	31.1	1.664	28.43	7.31	
308	6/26/19 9:09 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	19.12	0.23	3.89	42.1	0.479		7.3	
308	6/27/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	18.119	0.59	1.99	21.2	1.185	19.45	7.23	
308	6/28/19 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	17.698	0.77	2.54	26.8	1.529		7.16	
308	7/5/19 9:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	18.317	0.85	2.58	27.6	1.667		7.02	
308	7/6/19 7:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37								
308	7/7/19 6:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37								
308	7/8/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	21.262	0.46	1.95	22.1	0.926		7.28	
308	7/9/19 9:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	19.53	0.75	1.78	19.4	1.485	23.36	7.18	
308	7/10/19 9:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	19.446	0.79	1.48	16.2	1.556		7.01	
308	7/11/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	19.329	0.81	1.56	17	1.592	27.36	7.15	
308	7/24/19 10:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	20.823	0.42	4.25	47.6	0.852		7.28	
308	7/25/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	20.691	0.55	2.48	27.7	1.109	15.57	7.3	
308	7/26/19 9:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	20.436	0.7	2.67	29.8	1.385		7.32	
308	7/27/19 8:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
308	7/28/19 8:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
308	8/1/19 9:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	23.171	0.22	1.81	21.2	0.457	18.26	7.5	
308	8/2/19 9:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	21.626	0.56	0.73	8.3	1.124		7.06	
308	8/3/19 7:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
308	8/4/19 9:02 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
308	8/5/19 9:46 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	20.298	0.81	1.61	17.9	1.602		7.31	
308	8/20/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	20.619	0.85	2.06	23.1	1.687		7.15	
308	8/21/19 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	20.913	0.8	2.25	25.4	1.593	15.53	7.29	
308	8/22/19 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	21.333	0.71	1.21	13.7	1.406	7.05	6.88	
308	8/23/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	20.737	0.8	1.28	14.3	1.578	22.14	7.2	

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
308	8/27/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	19.834	0.88	1.92	21.2	1.724	27.2	7.26	
308	8/28/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.65	0.65	0.65	19.833	0.91	1.29	14.2	1.798		7.05	
308	8/29/19 9:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	21.407	0.06	6.86	77.6	0.136		7.67	
308	8/30/19 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	21.66	0.3	4.61	52.4	0.627		7.38	
308	8/31/19 8:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3								
308	9/1/19 7:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
308	10/10/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	18.208	0.7	1.9	20.2	1.4	18.23	7.2	
308	10/11/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	17.592	0.69	1.5	15.8	1.37		7.13	
308	10/12/19 7:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.36								
308	10/13/19 7:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34								
308	10/14/19 8:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01								
308	10/15/19 10:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	17.074	0.73	3.72	38.7	1.437		7.31	
308	10/16/19 10:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	15.83	0.95	1.63	16.5	1.864		7.23	
308	10/17/19 10:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	14.829	0.08	8.7	86	0.163		7.62	
308	10/18/19 9:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	15.242	0.27	5.17	51.6	0.551		7.26	
308	10/19/19 8:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67								
308	10/20/19 8:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
308	10/21/19 9:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	16.071	0.71	3.81	38.9	1.411	17.86	7.19	
308	10/28/19 10:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	13.71	0.14	8.28	79.9	0.301		7.57	
308	10/29/19 10:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52	15.485	0.42	5.12	51.4	0.859		7.28	
308	10/30/19 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	15.706	0.49	4.79	48.4	0.978	10.38	7.03	
308	10/31/19 9:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	16.228	0.57	3.36	34.4	1.138		7.15	
308	11/19/19 10:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	10.162	0.26	9.52	84.8	0.529	32.87	7.34	
308	11/20/19 10:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	11.104	0.41	4.92	44.8	0.838		7.25	
308	11/21/19 10:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	10.861	0.5	6.51	58.9	0.623	21.57	7.35	
308	11/22/19 10:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	11.251	0.67	4.5	41.2	1.329		7.06	
074	4/20/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19								
074	4/21/19 7:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22								
074	4/22/19 9:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.3	2.5	15.543	0.68	9.95	100.2	1.35		7.44	
074	5/3/19 9:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	11.16	0.55	10.7	97.7	1.108		7.47	
074	5/7/19 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	13.56	0.58	10.36	99.9	1.16		7.55	
074	5/8/19 9:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	15.552	0.56	8.42	84.8	1.121	8.52	7.43	
074	5/9/19 9:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	15.566	0.58	10.28	103.5	1.158		7.51	
074	5/10/19 9:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	14.177	0.59	9.96	97.4	1.172		7.39	
074	5/20/19 10:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	18.424	0.53	6.94	74.2	1.065		7.28	
074	5/21/19 10:26 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	18.845	0.57	9.22	99.5	1.148		7.63	
074	5/22/19 10:19 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	17.945	0.58	8.97	95	1.156	9.63	7.75	
074	5/23/19 10:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	17.604	0.61	9.38	98.6	1.219		7.56	
074	5/29/19 9:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	15.066	0.56	6.5	64.8	1.118		7.34	
074	5/30/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	15.526	0.59	7.05	71	1.17	0.06	7.36	
074	6/26/19 9:02 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	20.792	0.38	5.26	58.9	0.78		7.18	
074	6/27/19 9:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	22.181	0.53	4.68	53.9	1.065	11.44	7.29	
074	6/28/19 8:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	23.196	0.54	4.68	55	1.093		7.22	
074	7/5/19 9:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	25.854	0.53	0.74	9.1	1.084		6.66	
074	7/6/19 7:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37								
074	7/7/19 6:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37								
074	7/8/19 9:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	24.05	0.49	6.28	74.9	0.987		7.37	
074	7/9/19 9:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	23.437	0.52	4.9	57.8	1.055	3.26	7.26	
074	7/10/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	24.087	0.51	3.9	46.6	1.027		7.06	
074	7/11/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	22.941	0.55	4	46.7	1.102	1.45	7.15	
074	7/24/19 9:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	22.774	0.42	5.14	59.7	0.852		7.32	
074	7/25/19 9:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	23.185	0.46	5.09	59.7	0.931	6.86	7.38	
074	7/26/19 9:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	22.656	0.47	5.05	58.6	0.96		7.47	
074	7/27/19 8:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
074	7/28/19 7:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
074	8/1/19 9:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	24.828	0.35	3.51	42.5	0.728	2.83	7.26	
074	8/2/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	22.88	0.49	0.88	10.3	0.99		7.29	
074	8/3/19 7:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
074	8/4/19 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
074	8/5/19 9:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	22.609	0.51	4.28	49.6	1.027	11.61	7.29	
074	8/20/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	22.133	0.57	4.45	51.2	1.144		7.23	
074	8/21/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	22.89	0.5	1.06	12.4	1.015	13.93	7.11	
074	8/22/19 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	22.988	0.41	2.55	29.7	0.838		6.79	
074	8/23/19 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	21.812	0.52	1.75	20.1	1.044	14.38	7.38	
074	8/27/19 8:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	18.256	0.51	0.59	6.2	1.022	38.06	7.11	
074	8/28/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.65	0.65	0.65	18.863	0.54	4.14	44.6	1.078		7.09	
074	8/29/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	22.118	0.37	6.71	77.1	0.761		7.48	

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	8/30/19 8:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	21.461	0.45	2.8	31.7	0.913		7.22	
074	8/31/19 8:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3								
074	9/1/19 7:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
074	10/10/19 9:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	12.915	0.57	3.98	37.9	1.132	11.79	7.22	
074	10/11/19 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	11.903	0.57	3.88	36.1	1.145		7.21	
074	10/12/19 7:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36								
074	10/13/19 7:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34								
074	10/14/19 8:16 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01								
074	10/15/19 9:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	13.378	0.56	6.11	58.6	1.123		7.51	
074	10/16/19 9:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	11.849	0.58	5.91	54.9	1.152		7.4	
074	10/17/19 10:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	14.225	0.34	7.45	72.8	0.692	18.75	7.27	
074	10/18/19 9:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	12.272	0.4	5.73	53.6	0.809		7.25	
074	10/19/19 8:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67								
074	10/20/19 8:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
074	10/21/19 9:54 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	13.627	0.5	6.56	63.4	1.007	4.35	7.29	
074	10/28/19 10:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	12.314	0.37	6.69	62.6	0.757	14.27	7.34	
074	10/30/19 8:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	12.824	0.42	5.84	55.4	0.845	11.02	7.21	
074	10/31/19 9:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	14.621	0.44	4.84	47.7	0.893		7.27	
074	11/19/19 10:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	6.912	0.51	7.46	61.6	1.029	7.62	7.11	
074	11/20/19 10:46 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	6.51	0.5	8.08	66	1.011		7.2	
074	11/21/19 10:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	6.14	0.5	8.75	70.8	1.002	8.49	7.32	
074	11/22/19 10:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	6.839	0.53	8.95	73.4	1.059		7.19	
277	4/20/19 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19								
277	4/21/19 7:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22								
277	4/22/19 9:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	14.993	0.69	9.04	90	1.368		7.33	
277	5/3/19 9:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	11.086	0.57	9.31	84.9	1.135		7.34	
277	5/7/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	12.609	0.61	4.32	40.8	1.215		7.01	
277	5/8/19 8:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	14.949	0.56	7.71	76.6	1.127	17.91	7.37	
277	5/9/19 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	13.837	0.61	7.92	76.8	1.212		7.02	
277	5/10/19 9:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	13.912	0.56	1.34	13	1.127		7.16	
277	5/20/19 9:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	17.477	0.52	3.67	38.5	1.044		7.15	
277	5/21/19 10:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	17.776	0.57	7.4	78	1.135		7.39	
277	5/22/19 10:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	16.72	0.58	8.23	84.9	1.167	15.52	7.67	
277	5/23/19 10:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12								
277	5/29/19 9:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	14.205	0.52	2.95	28.9	1.051		7.17	
277	5/30/19 9:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	14.822	0.59	4.92	48.8	1.183		7.17	
277	6/26/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	20.219	0.37	2.27	25.1	0.759		7.01	
277	6/27/19 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	20.622	0.53	3.87	43.2	1.067	4.04	7.34	
277	6/28/19 8:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	20.906	0.55	1.04	11.7	1.103		7	
277	7/6/19 7:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37								
277	7/7/19 6:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37								
277	7/8/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37	22.66	0.48	2.18	25.3	0.978		7.2	
277	7/9/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	21.725	0.49	0.17	2	0.984		6.91	
277	7/10/19 8:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	22.175	0.52	0.32	3.7	1.048		7.07	
277	7/11/19 8:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	22.043	0.54	1.37	15.8	1.089		6.99	
277	7/24/19 9:39 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	22.424	0.41	4.09	47.2	0.838		7.32	
277	7/25/19 9:11 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	21.907	0.46	2.61	29.9	0.925		7.28	
277	7/26/19 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	21.689	0.48	2.52	28.7	0.978		7.4	
277	7/27/19 7:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
277	7/28/19 7:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
277	8/1/19 9:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	23.721	0.33	1.81	21.5	0.682		7.29	
277	8/2/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	21.798	0.46	0.64	7.3	0.93		7.07	
277	8/3/19 7:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
277	8/4/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
277	8/5/19 9:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	20.953	0.5	1.89	21.2	1.013		7.33	
277	8/20/19 8:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17								
277	8/21/19 8:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	21.452	0.54	2.23	25.3	1.09	1.59	7.25	
277	8/22/19 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	21.761	0.53	1.36	15.5	1.074	0.89	6.85	
277	8/23/19 8:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	21.696	0.54	1.91	21.8	1.083	1.62	7.27	
277	8/27/19 8:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	17.989	0.56	3.72	39.5	1.128	20.14	7.1	
277	8/29/19 9:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	21.697	0.36	6.42	73.1	0.741		7.51	
277	8/30/19 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	21.03	0.44	4.08	45.9	0.897		7.18	
277	8/31/19 8:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3								
277	9/1/19 7:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
277	10/10/19 9:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	12.98	0.55	4.28	40.7	1.109		7.25	
277	10/11/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	11.814	0.58	5.64	52.3	1.161		7.32	
277	10/12/19 7:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36								

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
277	10/13/19 7:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34								
277	10/14/19 7:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01								
277	10/15/19 9:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	12.365	0.58	4.45	41.8	1.16	2.76	7.43	
277	10/16/19 9:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	10.937	0.58	3.87	35.2	1.153		7.44	
277	10/17/19 9:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	14.111	0.32	7.6	74	0.653	32.14	7.35	
277	10/18/19 9:02 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	12.308	0.4	6.03	56.5	0.802		7.24	
277	10/19/19 8:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67								
277	10/20/19 7:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
277	10/21/19 9:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	12.957	0.47	1.31	12.4	0.942		7.22	
277	10/28/19 9:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	12.257	0.36	6.48	60.6	0.728	13.17	7.25	
277	10/29/19 9:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52	12.394	0.41	5.61	52.7	0.837		7.32	
277	10/30/19 8:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	13.017	0.42	5.36	51	0.858		7.08	
277	10/31/19 9:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	14.921	0.45	4.43	44	0.914		7.2	
277	11/19/19 10:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	6.586	0.52	5.13	42	1.041		6.95	
277	11/20/19 10:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	6.563	0.5	7.31	59.7	1		7.26	
277	11/21/19 10:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	5.668	0.48	7.88	62.9	0.973	8.07	7.25	
277	11/22/19 10:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	6.6	0.52	8.5	69.5	1.05		7.26	
172	4/20/19 8:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19								
172	4/21/19 7:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22								
172	4/22/19 9:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	14.826	0.69	7.97	79	1.365		7.35	
172	5/3/19 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	10.931	0.57	8.82	80.2	1.132		7.35	
172	5/7/19 8:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	12.376	0.6	8.95	84	1.203		7.29	
172	5/8/19 8:54 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	14.781	0.56	7.23	71.6	1.125	5.06	7.36	
172	5/9/19 9:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	13.54	0.59	8.2	79	1.186		7.29	
172	5/10/19 9:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	13.794	0.6	7.83	75.9	1.199		7.18	
172	5/20/19 9:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35								
172	5/21/19 10:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	17.828	0.57	7.3	77.1	1.136		7.38	
172	5/22/19 10:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	16.592	0.58	8.16	84	1.168	3.83	7.63	
172	5/23/19 10:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	16.666	0.61	7.68	79.2	1.218		7.24	
172	5/29/19 9:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	14.802	0.52	4.95	49	1.051		7.22	
172	5/30/19 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	14.817	0.59	5.32	52.7	1.177		7.21	
172	6/26/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	20.192	0.36	3.81	42.1	0.735		7.09	
172	6/27/19 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	20.607	0.53	2.93	32.7	1.067	1.35	7.09	
172	6/28/19 8:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	20.721	0.55	2.21	24.7	1.106		6.95	
172	7/5/19 9:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	22.205	0.57	2.22	25.5	1.143	0.58	7.37	
172	7/6/19 7:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37								
172	7/7/19 6:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37								
172	7/8/19 8:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	22.659	0.48	2.37	27.5	0.98		7.23	
172	7/9/19 9:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	21.77	0.52	2.16	24.7	1.047	2.32	6.95	
172	7/10/19 8:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	21.831	0.53	1.52	17.4	1.065		7.05	
172	7/11/19 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	22.001	0.54	1.71	19.6	1.089	0.14	6.94	
172	7/24/19 9:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	22.535	0.41	3.77	43.6	0.84		7.24	
172	7/25/19 9:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	21.865	0.46	3.23	37	0.93	3.68	7.29	
172	7/26/19 9:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	21.509	0.48	2.24	25.4	0.969		7.33	
172	7/27/19 7:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
172	7/28/19 7:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
172	8/1/19 9:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	23.642	0.33	1.07	12.6	0.677	3.34	7.23	
172	8/2/19 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	21.516	0.48	1.62	18.4	0.977		7.05	
172	8/3/19 7:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
172	8/4/19 8:43 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
172	8/5/19 9:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	19.846	0.54	2.3	25.3	1.079	2.68	7.1	
172	8/20/19 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	21.845	0.54	1.55	17.7	1.097		7.07	
172	8/21/19 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	21.525	0.54	2.1	23.8	1.094	1.31	7.12	
172	8/22/19 8:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	21.691	0.54	1.44	16.4	1.081	0.08	6.94	
172	8/23/19 8:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	21.704	0.54	1.79	20.4	1.089	1.3	7.16	
172	8/27/19 8:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	16.787	0.57	2.43	25.1	1.141	1.8	7.23	
172	8/28/19 8:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.65	0.65	0.65	18.428	0.56	1.88	20.1	1.122		7.05	
172	8/29/19 9:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	21.769	0.36	6.01	68.6	0.741		7.41	
172	8/30/19 8:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	21.14	0.45	4.09	46.1	0.907		7.19	
172	8/31/19 8:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3								
172	9/1/19 7:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
172	10/10/19 9:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	13.057	0.56	3.97	37.8	1.113	4	7.11	
172	10/11/19 8:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	11.806	0.59	3.96	36.7	1.175		7.13	
172	10/12/19 7:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36								
172	10/13/19 7:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34								
172	10/15/19 9:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	12.384	0.58	4.31	40.5	1.167	2.45	7.14	
172	10/16/19 9:46 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	10.951	0.58	3.78	34.3	1.152		7.28	

## 2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
172	10/17/19 9:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	14.147	0.32	7.49	73	0.659	24.69	7.29	
172	10/18/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	12.407	0.4	6	56.3	0.807		7.26	
172	10/19/19 8:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67								
172	10/20/19 7:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
172	10/21/19 9:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	12.8	0.5	5.68	53.8	1.013	2.76	7.49	
172	10/28/19 9:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	12.249	0.36	7.43	69.5	0.738	10.7	7.25	
172	10/29/19 9:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52	12.433	0.41	5.67	53.3	0.836		7.3	
172	10/30/19 7:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	12.901	0.42	6.26	59.5	0.854	4.65	7.16	
172	10/31/19 9:12 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	14.611	0.43	4.64	45.8	0.878		7.01	
172	11/19/19 10:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	6.354	0.42	7.66	62.2	0.851	7.72	7.07	
172	11/20/19 10:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	6.584	0.48	6.76	55.3	0.97		7.17	
172	11/21/19 10:41 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	5.682	0.48	8.31	66.4	0.974	5.6	7.25	
172	11/22/19 10:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	6.466	0.52	8.44	68.8	1.056		7.27	
276	4/20/19 8:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19								
276	4/21/19 7:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22								
276	4/22/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	14.698	0.69	7.42	73.4	1.364		7.29	
276	5/3/19 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	10.847	0.57	8.55	77.5	1.135		7.32	
276	5/7/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	12.237	0.62	8.5	79.6	1.239		7.43	
276	5/8/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	14.637	0.56	6.92	68.3	1.119	4.92	7.37	
276	5/9/19 8:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	13.324	0.59	7.89	75.7	1.185		7.35	
276	5/10/19 9:02 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	13.632	0.6	7.56	73	1.192		7.25	
276	5/20/19 9:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	17.199	0.5	5.63	58.6	1.005		7.31	
276	5/21/19 10:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	17.724	0.56	6.88	72.5	1.132		7.33	
276	5/22/19 10:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	16.379	0.58	7.6	77.8	1.164	6.62	7.68	
276	5/23/19 9:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	16.388	0.61	7.52	77.1	1.213		7.51	
276	5/29/19 8:59 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	14.643	0.51	4.89	48.3	1.02		7.37	
276	5/30/19 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	14.684	0.59	5.23	51.7	1.174		7.36	
276	6/26/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	20.132	0.36	4.18	46.1	0.728		7.26	
276	6/27/19 8:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	20.498	0.53	3.08	34.3	1.063	4.16	7.33	
276	6/28/19 8:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	20.673	0.55	2.18	24.3	1.109		7.11	
276	7/5/19 9:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	22.174	0.57	1.88	21.6	1.146	5.29	7.39	
276	7/6/19 7:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37								
276	7/7/19 6:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37								
276	7/8/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	22.433	0.48	2.23	25.8	0.976		7.35	
276	7/9/19 8:57 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	21.63	0.52	2.21	25.1	1.054	0.96	7.21	
276	7/10/19 8:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	21.85	0.53	1.63	18.6	1.066		7.18	
276	7/11/19 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	22.127	0.54	1.7	19.5	1.096	2.87	6.87	
276	7/24/19 9:33 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	22.404	0.41	3.84	44.3	0.835		7.46	
276	7/25/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	21.723	0.46	3.39	38.7	0.928	4.6	7.43	
276	7/26/19 8:53 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	21.496	0.48	2.53	28.7	0.975		7.52	
276	7/27/19 7:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
276	7/28/19 7:40 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
276	8/1/19 9:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	23.545	0.33	0.86	10.2	0.672	3.19	7.34	
276	8/2/19 8:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	21.552	0.48	1.52	17.3	0.972		7.42	
276	8/3/19 7:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
276	8/4/19 8:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
276	8/5/19 9:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	20.094	0.53	3.25	35.9	1.061	6.27	7.55	
276	8/20/19 8:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	22.156	0.54	1.63	18.7	1.082		7.23	
276	8/21/19 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	21.742	0.54	2.74	31.3	1.094	23.75	7.18	
276	8/22/19 8:29 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	21.829	0.54	1.96	22.4	1.081	1.82	7.05	
276	8/23/19 8:26 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	21.936	0.54	2.01	23	1.087	1.69	7.26	
276	8/27/19 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	17.121	0.56	3.35	34.8	1.125	2.26	7.48	
276	8/28/19 8:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.65	0.65	0.65	18.706	0.56	3.23	34.7	1.129		7.31	
276	8/29/19 9:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	21.654	0.36	6.29	71.6	0.739		7.57	
276	8/30/19 8:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	21.168	0.45	3.85	43.5	0.904		7.17	
276	8/31/19 7:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3								
276	9/1/19 7:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
276	10/10/19 9:07 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	12.955	0.56	4.39	41.8	1.119	3.51	7.37	
276	10/11/19 8:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	11.898	0.59	4.01	37.3	1.17		7.3	
276	10/12/19 7:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36								
276	10/13/19 7:32 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34								
276	10/14/19 7:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01								
276	10/15/19 9:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	12.583	0.58	4.89	46.1	1.168	4.43	7.51	
276	10/16/19 9:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	11.171	0.58	3.9	35.6	1.154		7.45	
276	10/17/19 9:37 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	14.144	0.32	7.3	71.2	0.661	37.55	7.36	
276	10/18/19 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	12.388	0.4	6.09	57.2	0.807		7.27	
276	10/19/19 7:58 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67								

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	10/20/19 7:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
276	10/21/19 9:35 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	12.865	0.5	5.54	52.6	1.012	14.96	7.4	
276	10/28/19 9:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	12.22	0.36	6.7	62.6	0.726	10.52	7.42	
276	10/29/19 9:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52	12.429	0.41	5.59	52.6	0.836		7.36	
276	10/30/19 7:53 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	12.918	0.42	6.4	60.8	0.854	5.07	7.2	
276	10/31/19 9:03 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	14.58	0.45	4.83	47.6	0.9		7.23	
276	11/19/19 10:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	6.271	0.43	7.64	61.9	0.867	8.47	7.3	
276	11/20/19 10:24 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	6.653	0.47	7.51	61.5	0.958		7.24	
276	11/21/19 10:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	5.739	0.48	8.02	64.2	0.968	7.85	7.36	
276	11/22/19 10:14 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	6.369	0.53	8.33	67.7	1.059		7.23	
070	4/20/19 8:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.17	0.19	0.19								
070	4/21/19 7:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.2	0.22								
070	4/22/19 9:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	2.3	2.33	2.5	14.91	0.68	7.56	75.2	1.351		7.3	
070	5/3/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.11	0.17	0.17	10.797	0.57	9.07	82.1	1.145		7.36	
070	5/7/19 8:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	12.416	0.62	7.87	74.1	1.239		7.37	
070	5/8/19 8:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	14.797	0.59	6.28	62.2	1.177	3.68	7.38	
070	5/9/19 8:46 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	13.806	0.6	6.54	63.4	1.199		7.26	
070	5/10/19 8:52 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.01	0.01	13.957	0.6	7.39	71.9	1.204		7.22	
070	5/20/19 9:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.13	0.35	0.35	17.456	0.54	5.62	58.9	1.084		7.28	
070	5/21/19 9:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.35	17.574	0.56	6.2	65.1	1.127		7.25	
070	5/22/19 9:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	15.855	0.58	6.89	69.9	1.159	2.29	7.64	
070	5/23/19 9:47 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.12	0.12	0.12	16.416	0.61	6.49	66.6	1.216		7.39	
070	5/29/19 8:50 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.3	14.489	0.5	5.04	49.6	1.006		7.37	
070	5/30/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.23	0.53	14.494	0.58	5.7	56.1	1.163		7.24	
070	6/26/19 8:34 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.13	0.13	19.968	0.4	2.43	26.7	0.811		7.04	
070	6/27/19 8:39 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.13	20.812	0.52	3.25	36.4	1.053	0	7.33	0
070	6/28/19 8:09 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	21.746	0.55	1.81	20.7	1.113		6.98	
070	7/5/19 9:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	24.169	0.57	1.35	16.2	1.153	1.66	7.28	
070	7/6/19 7:00 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	1.37	1.37	1.37								
070	7/7/19 6:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.37	1.37								
070	7/8/19 8:36 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.37	22.409	0.47	1.61	18.6	0.956		7.38	
070	7/9/19 8:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	22.162	0.52	1.68	19.3	1.057		6.63	
070	7/10/19 8:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	23.449	0.53	1.43	16.9	1.065		7.08	
070	7/11/19 8:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.02	0.02	24.466	0.54	1.95	23.5	1.1	2.05	6.55	
070	7/24/19 9:23 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.03	1.03	22.298	0.4	3.94	45.4	0.808		7.5	
070	7/25/19 8:51 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.03	21.948	0.46	3.23	37	0.934	2.35	7.34	
070	7/26/19 8:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	22.65	0.49	2.9	33.7	0.991		7.58	
070	7/27/19 7:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
070	7/28/19 7:31 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
070	8/1/19 9:22 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	1.25	1.25	23.623	0.36	1.74	20.6	0.74	2.44	7.42	
070	8/2/19 8:49 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	1.25	23.091	0.45	1.7	19.9	0.924		7.48	
070	8/3/19 7:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
070	8/4/19 8:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
070	8/5/19 9:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	21.832	0.54	2.12	24.2	1.08	2.47	7.55	
070	8/20/19 8:06 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.17	24.027	0.55	1.67	19.9	1.113		7.23	
070	8/21/19 8:08 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.08	0.08	0.09	23.38	0.55	3.02	35.6	1.108	2.18	7.14	
070	8/22/19 8:21 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.08	0.08	22.897	0.56	2.13	24.8	1.123	0.31	6.81	
070	8/23/19 8:15 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.08	23.511	0.54	1.75	20.7	1.093	2.01	7.15	
070	8/27/19 8:18 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	17.531	0.57	4.58	48	1.133	1.75	7.34	
070	8/28/19 8:17 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.65	0.65	0.65	19.419	0.57	3.81	41.5	1.14		7.17	
070	8/29/19 9:01 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.3	0.95	0.95	20.893	0.31	4.61	51.7	0.636		7.66	
070	8/30/19 8:19 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.3	0.95	21.203	0.43	4.05	45.7	0.873		7.16	
070	8/31/19 7:44 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.3								
070	9/1/19 7:05 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
070	10/10/19 8:55 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.02	0.09	0.1	13.306	0.56	4.38	42	1.114	2.48	7.35	
070	10/11/19 8:25 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.33	0.35	0.42	12.334	0.57	4.76	44.6	1.148		7.35	
070	10/12/19 7:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.01	0.34	0.36								
070	10/13/19 7:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.01	0.34								
070	10/14/19 7:30 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.01								
070	10/15/19 9:10 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	13.716	0.57	5.34	51.7	1.142	2.46	7.46	
070	10/16/19 9:26 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.53	0.53	0.53	12.01	0.49	5.12	47.6	0.994		7.54	
070	10/17/19 9:28 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.67	1.2	1.2	14.008	0.24	6.96	67.7	0.494	19.48	7.49	
070	10/18/19 8:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.67	1.2	12.446	0.39	6.09	57.2	0.799		7.27	
070	10/19/19 7:48 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0.67								
070	10/20/19 7:45 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0								
070	10/21/19 9:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0	0	12.737	0.5	5.42	51.3	0.999	2.59	7.42	
070	10/28/19 9:27 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.06	1.49	1.49	12.263	0.33	6.61	61.9	0.682	10.18	7.51	

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
070	10/29/19 9:38 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.03	0.09	1.52	12.464	0.41	5.99	56.3	0.835			7.39
070	10/30/19 7:42 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.12	0.18	12.927	0.42	6.61	62.8	0.849	3.72		7.16
070	10/31/19 8:56 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.07	0.16	0.19	14.655	0.45	4.83	47.6	0.931			7.18
070	11/19/19 10:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.24	0.48	0.48	6.116	0.49	8.22	66.4	0.995	8.01		7.29
070	11/20/19 10:13 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.23	0.47	0.71	6.901	0.44	5.81	47.9	0.897			7.22
070	11/21/19 10:20 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0	0.23	0.47	5.601	0.49	8.32	66.4	0.986	5.38		7.36
070	11/22/19 10:04 AM	S	MYSTIC/ALEWIFE	ALEWIFE BROOK	0.1	0.09	0.09	0.32	6.622	0.52	7.67	62.8	1.049			7.21
083	1/7/19 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.53	1.56	0.43	12.48	89.4	0.892			7.67
083	1/25/19 9:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1	1								
083	3/6/19 9:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.97	1.67	0.62	13.14	94.5	1.267	13		7.75
083	3/19/19 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	3.51	0.64	12.22	92.4	1.285			7.62
083	4/1/19 9:03 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.09	6.18	0.64	12.44	100.8	1.282			7.69
083	4/19/19 9:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	12.248	0.63	11.23	105.2	1.25			7.46
083	4/20/19 8:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.17	0.19	0.19								
083	4/21/19 6:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.2	0.22								
083	4/22/19 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	2.3	2.33	2.5	13.72	0.58	11.66	112.8	1.154			7.59
083	5/2/19 9:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.06	0.06	0.2	11.909	0.47	9.91	92.1	0.946			7.48
083	5/3/19 8:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.11	0.17	0.17	12.068	0.47	10.08	93.9	0.939			7.68
083	5/7/19 9:48 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	13.601	0.45	11.08	106.9	0.911	9.16		7.55
083	5/8/19 10:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	14.893	0.44	11.03	109.4	0.89	2.07		8.1
083	5/9/19 8:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	14.546	0.44	11.33	111.6	0.893			7.58
083	5/10/19 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	14.119	0.45	9.97	97.2	0.914			6.85
083	5/14/19 9:57 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.15	0.97	1.36	13.502	0.42	10.8	103.9		2.46		7.69
083	5/20/19 9:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.13	0.35	0.35	15.936	0.45	9.36	94.9	0.907			7.58
083	5/21/19 9:29 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.35	16.646	0.44	9.5	97.8	0.885			7.59
083	5/22/19 9:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.13	15.788	0.42	9.34	94.4	0.856	14.09		7.84
083	5/23/19 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.12	0.12	0.12	16.452	0.44	9.47	97.1	0.892			7.79
083	5/29/19 8:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.3	0.3	15.032	0.42	7.67	76.3	0.857			7.2
083	5/30/19 8:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.53	15.914	0.49	7.28	73.9	0.981			7.16
083	5/31/19 9:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.3	0.3	17.684	0.45	5.94	62.5	0.909			7.25
083	6/5/19 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.05	0.05	0.09	19.123	0.45	8.91	96.5	0.905			7.74
083	6/17/19 9:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.11	0.11	20.644	0.44	5.01	55.9	0.891	4.26		7.51
083	6/26/19 10:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.13	22.446	0.43	9.58	110.7	0.868	3.16		8.02
083	6/27/19 8:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.13	22.702	0.42	9.66	112.2	0.857	8.57		7.16
083	6/28/19 10:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	23.833	0.43	10.18	120.9	0.867	4.4		8.62
083	6/28/19 10:04 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	22.733	0.43	8.85	102.9	0.868	7.46		8.4
083	7/1/19 8:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.16	1.81	23.638	0.4	7.94	93.9	0.825			7.97
083	7/5/19 8:54 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	26.043	0.41	4.91	60.7	0.835	0.04		7.49
083	7/6/19 6:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	1.37	1.37	1.37								
083	7/7/19 6:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.37	1.37								
083	7/8/19 8:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.37	25.423	0.39	6.05	74	0.792			7.53
083	7/9/19 10:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	25.847	0.4	7.68	94.6	0.818	1.35		8.31
083	7/10/19 10:23 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	27.365	0.4	8.23	104.1	0.83	0.22		8.49
083	7/10/19 10:23 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	26.555	0.4	7.51	93.7	0.828	3.05		8.46
083	7/11/19 10:28 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	27.344	0.4	5.82	73.6	0.827	0.79		8.19
083	7/11/19 10:28 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	27.227	0.4	5.04	63.7	0.826	1.55		8.05
083	7/18/19 8:54 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.04	0.47	0.47	25.727	0.38	5.63	69.2	0.78			7.58
083	7/24/19 9:09 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.03	1.03	24.828	0.37	7.16	86.6	0.754			7.7
083	7/25/19 8:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.03	1.03	24.708	0.37	7.27	87.7	0.759	3.9		7.4
083	7/26/19 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.936	0.37	6.77	82	0.753			7.78
083	7/27/19 7:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
083	7/28/19 7:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
083	8/1/19 9:10 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.25	1.25	26.702	0.37	3.24	40.5	0.765	0.66		7.5
083	8/2/19 8:39 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.25	1.25	25.735	0.37	5.27	64.8	0.767			7.75
083	8/3/19 7:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
083	8/4/19 8:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
083	8/5/19 8:57 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.816	0.39	5.99	72.4	0.796	6.09		7.81
083	8/6/19 9:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	25.23	0.38	5.5	67	0.787			7.42
083	8/13/19 8:32 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.763	0.38	5.17	62.5	0.777			7.44
083	8/20/19 10:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.17	26.772	0.39	6.65	83.3	0.793	1.18		8.29
083	8/21/19 7:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	25.438	0.38	6.22	76	0.783	0.41		7.09
083	8/22/19 8:09 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	25.061	0.38	6.12	74.3	0.787	2.57		6.59
083	8/23/19 8:03 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	25.148	0.38	6.49	78.9	0.783	0.81		7.25
083	8/26/19 8:46 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	21.227	0.39	7.09	80.1	0.798			7.93
083	8/27/19 8:07 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	21.299	0.4	7.93	89.6	0.814	1.23		7.17
083	8/28/19 8:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.65	0.65	0.65	22.453	0.4	7.55	87.4	0.816			7.1
083	8/29/19 8:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.3	0.95	0.95	23.104	0.37	8.79	102.8	0.758			7.57

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	8/30/19 8:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.3	0.95	22.934	0.35	6.59	76.9	0.709		7.07	
083	8/31/19 7:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.3								
083	9/1/19 7:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
083	9/12/19 9:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.07	0.07	20.945	0.38	6.76	75.9	0.766	11.39	7.56	
083	9/24/19 9:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.14	0.14	21.624	0.4	7.9	89.9	0.817		7.83	
083	10/7/19 9:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.16	0.16	0.16	17.813	0.42	7.28	76.8	0.857		7.68	
083	10/10/19 8:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.09	0.1	15.809	0.42	8.78	88.8	0.86	0.62	7.72	
083	10/11/19 8:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.33	0.35	0.42	14.89	0.43	7.12	70.6	0.863		7.56	
083	10/12/19 7:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.36								
083	10/13/19 7:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.34								
083	10/14/19 7:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01								
083	10/15/19 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	13.943	0.43	7.46	72.5	0.871	2.71	7.73	
083	10/16/19 9:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.53	0.53	0.53	13.395	0.44	6.44	61.9	0.889		7.76	
083	10/17/19 9:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.67	1.2	1.2	14.762	0.41	8.73	86.3	0.824	1.11	7.63	
083	10/18/19 8:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.67	1.2	14.132	0.41	8.05	78.6	0.832		7.26	
083	10/19/19 7:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.67								
083	10/20/19 7:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
083	10/21/19 9:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	13.776	0.43	6.71	64.9	0.866	12.34	7.67	
083	10/22/19 8:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.16	0.16	0.16	13.774	0.42	8.41	81.4	0.859	10.94	7.45	
083	10/28/19 9:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.06	1.49	1.49	13.423	0.41	9.09	87.3	0.826	1.57	7.46	
083	10/29/19 9:27 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.09	1.52	13.426	0.41	8.52	81.9	0.821		7.45	
083	10/30/19 7:39 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.12	0.18	13.441	0.41	8.22	79	0.829	3.87	7.26	
083	10/31/19 8:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.16	0.19	14.532	0.4	5.36	52.8	0.82		7.2	
083	11/5/19 9:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.4	0.4	0.4	12.175	0.42	7.5	70.1	0.84		7.58	
083	11/18/19 10:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.24	0.24	0.24	6.513	0.36	8.98	73.3	0.727	6.4	7.45	
083	11/19/19 10:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.24	0.48	0.48	6.583	0.36	8.76	71.6	0.743	5.9	7.44	
083	11/20/19 10:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.47	0.71	7.244	0.43	8.61	71.6	0.871		7.31	
083	11/21/19 10:09 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.23	0.47	6.606	0.43	8.23	67.3	0.874	5.22	7.44	
083	11/22/19 9:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.09	0.32	7.748	0.44	8.45	71.1	0.888		7.34	
083	12/5/19 9:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.38	4.145	0.69	9.78	75.2	1.374		6.83	
083	12/16/19 9:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.25	3.653	0.5	11.85	89.9	1.022	9.91	7.35	
057	4/20/19 8:10 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.17	0.19	0.19								
057	4/21/19 6:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.2	0.22								
057	4/22/19 9:05 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	2.3	2.33	2.5	13.454	0.58	11.24	108.1	1.153		7.57	
057	5/3/19 8:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.11	0.17	0.17	11.887	0.46	9.72	90.2	0.921		7.43	
057	5/7/19 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	13.537	0.45	11.01	106.1	0.911	1.33	7.45	
057	5/8/19 10:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	14.746	0.44	10.81	106.9	0.889	1.85	8.3	
057	5/9/19 8:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	13.961	0.44	10.74	104.5	0.896		7.58	
057	5/10/19 8:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01	13.944	0.44	10.38	100.9	0.89		7.35	
057	5/20/19 9:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.13	0.35	0.35	16.032	0.43	10.12	102.9	0.878		7.59	
057	5/21/19 9:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.35	16.67	0.43	9.6	98.9	0.878		7.53	
057	5/22/19 9:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.13	15.949	0.43	9.21	93.4	0.862	1.98	7.78	
057	5/23/19 9:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.12	0.12	0.12	16.33	0.44	8.74	89.4	0.889		7.57	
057	5/29/19 8:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.3	0.3	15.094	0.47	5.82	58	0.941		7.21	
057	5/30/19 8:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.53	16.087	0.44	7.34	74.7	0.89		7.27	
057	6/26/19 10:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.13	21.052	0.41	4.46	50.2	0.83	3.22	7.72	
057	6/27/19 8:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.13	22.749	0.42	8.51	99	0.856	8.69	7.3	
057	6/28/19 9:58 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.096	0.42	9.27	110.5	0.865	4.02	8.42	
057	6/28/19 9:58 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0	0	0	0	22.264	0.55	2.48	28.6	1.109	2.95	7.89	
057	7/5/19 8:58 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	26.226	0.41	4.64	57.6	0.834		7.5	
057	7/6/19 6:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	1.37	1.37	1.37								
057	7/7/19 6:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.37	1.37								
057	7/8/19 8:30 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.37	25.369	0.39	6.52	79.6	0.795		7.69	
057	7/9/19 9:59 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.649	0.45	4.76	57.3	0.926	2.22	7.74	
057	7/10/19 10:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	27.218	0.4	6.63	83.7	0.829	0.1	8.19	
057	7/10/19 10:17 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0	0	0	0	25.244	0.49	4.21	51.3	0.987	2.22	8	
057	7/11/19 10:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	27.638	0.4	5.69	72.3	0.826	0.41	8.18	
057	7/11/19 10:24 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	25.669	0.5	3.85	47.3	1.017	4.13	7.78	
057	7/24/19 9:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.03	1.03	24.618	0.37	6.55	78.8	0.756		7.67	
057	7/25/19 8:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.03	24.625	0.37	7.13	85.8	0.763	1.85	7.4	
057	7/26/19 8:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.548	0.37	6.66	80.1	0.755		7.74	
057	7/27/19 7:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
057	7/28/19 7:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
057	8/1/19 9:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.25	1.25	26.779	0.37	4.58	57.3	0.77	6.78	7.5	
057	8/2/19 8:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.25	26.207	0.37	4.33	53.7	0.765		7.62	
057	8/3/19 7:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
057	8/4/19 8:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								



2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
057	8/5/19 9:03 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	25.071	0.37	5.7	69.3	0.764	0.94	7.81	
057	8/20/19 10:03 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.17	26.512	0.39	6.62	82.5	0.805	1.06	8.4	
057	8/21/19 8:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	25.603	0.38	6.07	74.4	0.781	1.45	7.26	
057	8/22/19 8:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	25.093	0.38	6.55	79.6	0.787	3.06	6.9	
057	8/23/19 8:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	25.281	0.39	5.51	67.1	0.794	0.41	7.31	
057	8/27/19 8:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20.779	0.4	7.01	78.5	0.811	0.53	7.39	
057	8/28/19 8:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.65	0.65	0.65	21.976	0.4	6.84	78.3	0.814		7.18	
057	8/29/19 8:56 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.3	0.95	0.95	23.151	0.38	8.55	100.2	0.784		7.69	
057	8/30/19 8:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.3	0.95	23.059	0.38	7.15	83.7	0.784		7.2	
057	8/31/19 7:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.3								
057	9/1/19 7:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
057	10/10/19 8:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.09	0.1	15.766	0.42	8.47	85.6	0.858	1.37	7.64	
057	10/11/19 8:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.33	0.35	0.42	14.639	0.43	7.86	77.5	0.862		7.63	
057	10/12/19 7:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.34	0.36								
057	10/13/19 7:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.34								
057	10/14/19 7:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01								
057	10/15/19 9:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	14.372	0.52	5.94	58.3	1.05	11.15	7.52	
057	10/16/19 9:18 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.53	0.53	0.53	13.743	0.48	6.47	62.6	0.962		7.64	
057	10/17/19 9:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.67	1.2	1.2	14.106	0.28	8	78	0.566	2.74	7.65	
057	10/18/19 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.67	1.2	14.019	0.41	7.68	74.8	0.834		7.3	
057	10/19/19 7:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.67								
057	10/20/19 7:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
057	10/21/19 9:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	14.896	0.42	7.02	69.6	0.858	8.06	7.5	
057	10/28/19 9:20 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.06	1.49	1.49	13.365	0.41	8.39	80.5	0.825	0.85	7.48	
057	10/29/19 9:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.09	1.52	13.29	0.41	7.82	74.9	0.821		7.45	
057	10/30/19 7:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.12	0.18	13.313	0.41	6.71	64.3	0.827	1.02	7.27	
057	10/31/19 8:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.16	0.19	14.11	0.41	7.04	68.6	0.824		7.22	
057	11/19/19 10:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.24	0.48	0.48	6.461	0.44	9.08	74	0.888	2.83	7.32	
057	11/20/19 10:07 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.47	0.71	7.216	0.43	7.01	58.3	0.873		7.26	
057	11/21/19 10:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.23	0.47	7.315	0.43	8.84	73.6	0.868	3.28	7.37	
057	11/22/19 9:56 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.09	0.32	7.58	0.44	8	67.1	0.883		7.31	
066	1/7/19 9:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.53	1.51	0.45	12.4	88.7	0.928		7.77	
066	1/25/19 9:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1	1								
066	2/7/19 9:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.21	0.58	0.58	2.91	0.54	11.94	88.8	1.104	4.4	7.54	
066	2/7/19 9:38 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.21	0.58	0.58	2.9	0.54	11.52	85.7	1.098	4.4	7.43	
066	2/19/19 8:56 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.31	0.31	1.5	0.59	11.5	82.3	1.203	1.7	6.82	
066	2/19/19 8:56 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.31	0.31	1.5	0.59	11.58	82.9	1.203	1.7	6.83	
066	3/6/19 9:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.97	1.74	0.68	11.68	84.2	1.376	2.4	7.83	
066	3/19/19 8:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	4.07	0.69	12.11	92.9	1.379	4	7.61	
066	4/1/19 8:56 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.09	0.09	6.55	0.67	11.9	97.4	1.334		7.87	
066	4/19/19 9:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	11.429	0.61	11.24	103.4	1.221		7.58	
066	4/19/19 9:02 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	11.413	0.61	11.27	103.5	1.219		7.58	
066	5/2/19 9:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.06	0.06	0.2	12.04	0.48	9.55	88.9	0.969		7.58	
066	5/2/19 9:11 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.06	0.06	0.2	12.061	0.48	9.37	87.4	0.968		7.5	
066	5/14/19 9:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.15	0.97	1.36	13.273	0.42	10.39	99.4		3.28	7.69	
066	5/14/19 9:49 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.15	0.97	1.36	13.269	0.42	10.37	99.3		3.33	7.67	
066	5/31/19 9:13 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.3	0.3	17.387	0.46	7.48	78.2	0.934		7.53	
066	5/31/19 9:13 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.3	0.3	17.272	0.47	7.43	77.5	0.939		7.48	
066	6/5/19 9:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.05	0.05	0.09	19.302	0.45	8.11	88.2	0.92		7.85	
066	6/5/19 9:26 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.05	0.05	0.09	19.114	0.46	8.01	86.8	0.929		7.72	
066	6/17/19 9:01 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.11	0.11	20.647	0.45	5.54	61.9	0.916	0	7.61	
066	6/17/19 9:01 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.11	0.11	20.426	0.45	5.1	56.7	0.917	0	7.55	
066	7/1/19 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.16	1.81	23.501	0.41	8.26	97.5	0.831	3.81	7.76	
066	7/18/19 8:47 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.04	0.47	0.47	25.304	0.36	4.09	49.9	0.745		7.65	
066	7/18/19 8:47 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.04	0.47	0.47	25.335	0.36	3.74	45.7	0.748		7.51	
066	8/6/19 8:55 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.691	0.41	4.49	54.1	0.838		7.4	
066	8/13/19 8:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.701	0.4	4.84	58.4	0.812		7.47	
066	8/13/19 8:24 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.696	0.4	4.62	55.8	0.813		7.39	
066	8/26/19 8:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	20.462	0.44	5.72	63.6	0.891		7.83	
066	9/12/19 9:08 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.07	0.07	21.203	0.45	4.23	47.8	0.912	1.45	7.44	
066	9/12/19 9:08 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.07	0.07	21.313	0.45	3.54	40	0.905	3.14	7.33	
066	9/24/19 8:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.14	0.14	21.465	0.42	5.95	67.5	0.862		7.94	
066	9/24/19 8:51 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.14	0.14	21.438	0.43	5.49	62.2	0.871		7.77	
066	10/7/19 9:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.16	0.16	0.16	16.48	0.44	6.58	67.5	0.89		7.77	
066	10/7/19 9:11 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.16	0.16	0.16	15.76	0.44	5.78	58.4	0.894		7.6	
066	10/22/19 8:44 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.16	0.16	0.16	13.607	0.44	7.4	71.4	0.889	1.48	7.42	
066	10/22/19 8:44 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.16	0.16	0.16	13.588	0.44	7.12	68.6	0.887	8.34	7.4	

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	11/5/19 9:42 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.4		0.4	11.636	0.42	7.68	70.8	0.854		7.65	
066	11/18/19 10:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.24	0.24	0.24	5.65	0.46	10.74	85.7	0.939	1.86	7.54	
066	11/18/19 10:04 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.24	0.24	0.24	5.654	0.46	9.54	76.2	0.942	3.61	7.46	
066	12/5/19 9:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.38	4.095	0.57	10.1	77.6	1.147		6.83	
066	12/16/19 9:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.25	3.669	0.51	11.73	89	1.026	2.34	7.45	
056	4/20/19 7:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.17	0.19	0.19								
056	4/21/19 6:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.2	0.22								
056	4/22/19 8:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	2.3	2.33	2.5	13.214	0.6	10.37	99.3	1.19		7.46	
056	5/3/19 9:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.11	0.17	0.17	11.479	0.48	9.42	86.7	0.972	1.86	7.74	1.5
056	5/3/19 9:15 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.11	0.17	0.17	11.391	0.49	9.37	86	0.979	3.66	7.71	
056	5/7/19 9:20 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	13.094	0.48	9.92	94.6	0.969	2.22	7.38	1.4
056	5/7/19 9:20 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.08	0.08	0.09	13.088	0.48	9.9	94.4	0.97	2.52	7.31	
056	5/8/19 9:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	15.666	0.46	10.37	104.6	0.921	2.64	7.93	1.2
056	5/8/19 9:40 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.08	0.08	15.24	0.45	10.3	103	0.917	2.9	7.86	
056	5/9/19 9:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	15.253	0.48	10.44	104.4	0.97	1.93	7.55	1.8
056	5/9/19 9:26 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.08	15.16	0.48	10.36	103.4	0.972	2.68	7.39	
056	5/10/19 9:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.01	0.01								1.1
056	5/20/19 9:03 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.13	0.35	0.35	16.091	0.46	6.18	62.9	0.924		7.2	
056	5/21/19 9:00 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.35	17.246	0.44	8.93	93.1	0.891		7.53	
056	5/22/19 9:06 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.13	16.563	0.46	8.96	92.1	0.931	3.44	7.72	
056	5/23/19 9:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.12	0.12	0.12	16.943	0.49	8.64	89.6	0.991		7.65	
056	5/29/19 9:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.3	0.3	16.334	0.46	6.46	66.1	0.935	0.47	7.81	1.4
056	5/29/19 9:51 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.3	0.3	16.289	0.47	6.26	64	0.952	2.97	7.7	
056	5/30/19 10:26 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.23	0.53	15.369	0.47	5.8	58.1	0.956		7.85	1
056	5/30/19 10:26 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.23	0.23	0.53	15.122	0.48	5.17	51.5	0.969		7.64	
056	6/26/19 10:21 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.13	0.13	22.141	0.42	5.96	68.5	0.857	2.74	7.84	1.2
056	6/26/19 10:21 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.13	0.13	21.437	0.43	4.59	52.1	0.873	11.77	7.64	
056	6/27/19 9:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.13	22.952	0.42	5.5	64.2	0.864	0.53	7.85	1
056	6/27/19 9:53 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.13	22.35	0.43	4.76	55	0.867	1.19	7.64	
056	6/28/19 9:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.037	0.45	6.58	78.5	0.912	2.47	8.06	1.4
056	6/28/19 9:34 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	22.266	0.49	4.72	54.5	0.994	2.63	7.82	
056	7/5/19 8:40 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	25.907	0.45	4.55	56.2	0.927		7.51	
056	7/6/19 6:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	1.37	1.37	1.37								
056	7/7/19 6:13 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.37	1.37								
056	7/8/19 10:11 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.37	25.702	0.41	4	49.2	0.84	0.1	8.54	1.5
056	7/8/19 10:11 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	1.37	25.431	0.41	3.55	43.4	0.845	0.28	8.35	
056	7/9/19 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	25.67	0.42	5.05	62	0.866	0.48	8.03	2
056	7/9/19 9:36 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	25.369	0.42	4.35	53.2	0.865	1.5	7.77	
056	7/10/19 9:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	26.338	0.43	5	62.2	0.888	0.03	8.08	1.8
056	7/10/19 9:53 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	25.425	0.45	4.12	50.4	0.908	2.31	7.9	
056	7/11/19 10:02 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.02	0.02	26.822	0.43	5.43	68.1	0.886	1.85	8.1	1.6
056	7/11/19 10:02 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.02	0.02	0.02	24.718	0.51	3.73	45	1.033	1.57	7.85	
056	7/24/19 8:46 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.03	1.03	23.743	0.36	5.42	64.3	0.744		7.5	
056	7/25/19 8:19 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.03	24.114	0.39	5.93	70.7	0.796	1.62	7.29	
056	7/26/19 8:17 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	24.611	0.38	5.87	70.6	0.787		7.72	
056	7/27/19 7:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
056	7/28/19 7:10 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
056	8/1/19 8:51 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	1.25	1.25	26.619	0.4	3.55	44.3	0.824	1.75	7.74	
056	8/2/19 8:15 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	1.25	25.643	0.4	3.32	40.7	0.81		7.8	
056	8/3/19 7:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
056	8/4/19 8:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
056	8/5/19 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	25.069	0.43	6.34	77	0.87	1.6	7.94	
056	8/20/19 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.17	25.462	0.46	4.97	60.8	0.93	1.92	8.16	0.9
056	8/20/19 9:36 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.01	0.17	23.08	0.63	2.97	34.8	1.263	5.9	7.93	
056	8/21/19 9:33 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.08	0.08	0.09	25.484	0.45	5.38	65.8	0.926	1.26	7.9	2.1
056	8/21/19 9:33 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.08	0.08	0.09	23.316	0.67	2.32	27.3	1.339	4.76	7.67	
056	8/22/19 10:16 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.08	0.08	25.81	0.44	5.79	71.2	0.904		8.34	1.9
056	8/22/19 10:16 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.08	0.08	23.097	0.98	0.89	10.4	1.935		7.94	
056	8/23/19 9:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.08	25.233	0.45	5.91	72	0.922	1.4	8.66	1.5
056	8/23/19 9:25 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0.08	23.46	0.82	1.8	21.3	1.624	3.46	8.22	
056	8/27/19 10:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	21.926	0.48	7.96	91.1	0.967	1.22	8.69	1.5
056	8/27/19 10:04 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0	0	21.114	0.56	5.69	64.2	1.121	0.8	8.18	
056	8/28/19 9:10 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.65	0.65	0.65	20.96	0.48	6.89	77.5	0.964	1.59	8.55	2.1
056	8/28/19 9:10 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0.65	0.65	0.65	20.768	0.48	6.44	72.1	0.978	3.83	8.18	
056	8/29/19 8:25 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.3	0.95	0.95	22.538	0.34	6.94	80.4	0.689		7.37	
056	8/30/19 9:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.3	0.95	23.411	0.39	7.29	85.9	0.791	0.92	7.35	2.2
056	8/30/19 9:31 AM	B	MYSTIC/ALEWIFE	UPPER MYSTIC		0	0.3	0.95	23.134	0.39	6.47	75.8	0.789	1.53	7.23	

## 2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
056	8/31/19 7:22 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.3								
056	9/1/19 6:52 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
056	10/10/19 8:31 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.02	0.09	0.1	15.444	0.43	7.81	78.4	0.87	2.5	7.88	
056	10/11/19 7:43 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.33	0.35	0.42	14.531	0.44	8.11	79.9	0.891		7.71	
056	10/12/19 6:57 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.01	0.34	0.36								
056	10/13/19 7:05 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.01	0.34								
056	10/14/19 7:10 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.01								
056	10/15/19 8:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	14.275	0.49	8.09	79.2	0.987	4.68	7.89	
056	10/16/19 8:41 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.53	0.53	0.53	13.893	0.48	6.41	62.3	0.958		7.92	
056	10/17/19 9:04 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.67	1.2	1.2	13.875	0.16	8.03	77.7	0.343	7.34	7.97	
056	10/18/19 8:14 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.67	1.2	13.533	0.4	7.1	68.4	0.818		7.24	
056	10/19/19 7:34 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0.67								
056	10/20/19 7:24 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0								
056	10/21/19 8:50 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0	0	13.301	0.44	7.25	69.4	0.894	3.81	7.71	
056	10/28/19 8:45 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.06	1.49	1.49	12.951	0.39	7.57	72	0.795	7.08	7.32	
056	10/29/19 8:53 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.03	0.09	1.52	13.119	0.41	7.31	69.7	0.83		7.29	
056	10/30/19 7:12 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.12	0.18	13.344	0.41	7.18	68.9	0.84	2.75	7.14	
056	10/31/19 8:20 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.07	0.16	0.19	14.545	0.42	6.44	63.3	0.852		7.18	
056	11/19/19 9:36 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.24	0.48	0.48	5.037	0.45	9.89	77.7	0.911	14.16	7.53	
056	11/20/19 9:35 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.23	0.47	0.71	6.204	0.44	8.18	66.2	0.901		7.36	
056	11/21/19 9:49 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0	0.23	0.47	6.848	0.43	9.66	79.5	0.866	9.12	7.52	
056	11/22/19 9:38 AM	S	MYSTIC/ALEWIFE	UPPER MYSTIC	0.1	0.09	0.09	0.32	7.051	0.46	8.59	71.1	0.925		7.42	
177	1/7/19 8:49 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.53	1.56	0.46	12.13	86.9	0.939		7.94	
177	1/7/19 8:49 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0.53	1.67	0.46		11.8	84.8	0.936		7.77	
177	1/25/19 9:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	1	1								
177	2/7/19 9:12 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.21	0.58	0.58	3.43	0.75	11.69	88.2	1.497	6.7	7.9	
177	2/7/19 9:12 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.21	0.58	0.58	3.44	0.84	11.13	84.1	1.672	10.5	7.63	
177	3/19/19 8:22 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	4.94	0.67	12.64	99.2	1.332	2.7	8.01	
177	3/19/19 8:22 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0	0	4.92	0.67	12.25	96.2	1.333	7.7	7.78	
177	4/1/19 8:20 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.09	0.09	8.29	0.67	12.11	103.4	1.332		8.13	
177	4/1/19 8:20 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0.09	0.09	8.21	0.67	10.97	93.5	1.334		7.7	
177	4/19/19 8:32 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.02	0.02	11.508	0.62	10.62	97.8	1.234		7.69	
177	4/19/19 8:32 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.02	0.02	11.169	0.66	10.42	95.3	1.321		7.5	
177	5/2/19 8:35 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.06	0.06	0.2	12.137	0.48	10.09	94.2	0.972		7.76	
177	5/2/19 8:35 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.06	0.06	0.2	12.196	0.48	9.81	91.7	0.973		7.45	
177	5/14/19 9:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.15	0.97	1.36	11.924	0.37	10.23	94.9		4.54	7.95	
177	5/14/19 9:14 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.15	0.97	1.36	11.846	0.37	10.06	93.3		5.67	7.77	
177	5/31/19 8:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.07	0.3	0.3	16.902	0.53	6.94	71.9	1.062		7.49	
177	5/31/19 8:43 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.07	0.3	0.3	17.253	4.27	5.1	54.4	7.692		7.06	
177	6/5/19 9:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.05	0.05	0.09	18.894	0.8	8.45	91.4	1.577		7.69	
177	6/5/19 9:01 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.05	0.05	0.09	18.74	7.23	6.47	72.5	12.562		7.06	
177	6/17/19 8:27 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.11	0.11	21.205	0.47	4.74	53.5	0.961	0	7.63	
177	6/17/19 8:27 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.11	0.11	20.738	0.48	3.47	38.9	0.964	7.66	7.41	
177	7/1/19 8:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.16	1.81	22.325	0.34	6.23	71.9	0.697	3.88	7.68	
177	7/1/19 8:17 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.16	1.81	22.083	0.34	5.47	62.8	0.693	11.63	7.45	
177	7/18/19 8:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.04	0.47	0.47	25.539	0.43	2.9	35.5	0.871		7.71	
177	7/18/19 8:25 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.04	0.47	0.47	25.621	0.43	2.63	32.3	0.878		7.51	
177	8/6/19 8:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	25.199	0.43	5.93	72.2	0.886		7.63	
177	8/6/19 8:36 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0	0	24.931	0.5	1.57	19	1.016		7.14	
177	8/13/19 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	23.847	0.42	5.46	64.8	0.858		7.71	
177	8/13/19 7:52 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	23.877	0.43	4.86	57.8	0.871		7.4	
177	8/26/19 8:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	22.142	0.48	6.29	72.4	0.971		8.1	
177	8/26/19 8:00 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	22.053	0.48	5.25	60.2	0.975		7.81	
177	9/12/19 8:34 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.07	0.07	0.07	21.178	0.45	6.15	69.4	0.917	1.4	7.73	
177	9/12/19 8:34 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.07	0.07	0.07	21.228	0.46	5.36	60.6	0.923	16.77	7.4	
177	9/24/19 8:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.01	0.14	0.14	21.095	0.69	8.25	93.1	1.374		8.09	
177	9/24/19 8:17 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.01	0.14	0.14	21.637	5.13	9.61	112.4	9.149		7.67	
177	10/7/19 8:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.16	0.16	0.16	16.48	1.01	8.54	88	1.972		8.17	
177	10/7/19 8:36 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.16	0.16	0.16	16.315	1.97	4.88	50.4	3.711		7.58	
177	10/22/19 8:12 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.16	0.16	0.16	13.391	0.46	7.4	71.1	0.925	1.42	7.63	
177	10/22/19 8:12 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.16	0.16	0.16	13.317	0.46	6.55	62.8	0.923	1.9	7.34	
177	11/5/19 9:12 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.4	0.4	0.4	10.867	0.01	9.47	85.6	0.06		7.78	
177	11/5/19 9:12 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.4	0.4	0.4	10.59	0.45	6.31	56.9	0.9		7.63	
177	11/18/19 9:41 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.24	0.24	0.24	3.904	0.52	12.07	92.2	1.056	1.64	7.77	
177	11/18/19 9:41 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.24	0.24	0.24	4.757	1.22	8.6	67.5	2.383	10.25	7.3	
177	12/16/19 9:03 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	1.25	3.473	0.52	11.74	88.6	1.06	6.91	7.21	
067	4/20/19 7:20 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.17	0.19	0.19								

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	4/21/19 6:35 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.03	0.2	0.22								
067	4/22/19 8:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	2.3	2.33	2.5	15.817	0.66	10.7	108.4	1.31		7.64	
067	5/3/19 8:58 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.11	0.17	0.17	11.29	0.51	10.23	93.7	1.015	2.71	7.86	1
067	5/3/19 8:58 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.11	0.17	0.17	10.877	0.52	10.18	92.3	1.051	3.76	7.8	
067	5/7/19 9:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.08	0.08	0.09	14.083	0.5	11.3	110.2	1.012	3.84	7.52	1
067	5/7/19 9:00 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.08	0.08	0.09	13.947	0.51	11.17	108.6	1.017	4.81	7.44	
067	5/8/19 9:23 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.08	0.08	15.966	0.51	11.38	115.6	1.03	3.52	8.19	1.2
067	5/8/19 9:23 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.08	0.08	15.104	0.8	9.54	95.3	1.584	5.77	7.95	
067	5/9/19 9:14 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.08	16.685	0.51	12.09	124.6	1.027	3.97	7.78	0.8
067	5/9/19 9:14 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.08	16.594	0.51	11.99	123.4	1.032	4.59	7.68	
067	5/10/19 9:24 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.01	0.01	0.01								1
067	5/20/19 8:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.13	0.35	0.35	17.176	0.52	10.19	106.1	1.054		7.72	
067	5/20/19 8:43 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.13	0.35	0.35	17.042	0.54	9.92	103.1	1.084		7.65	
067	5/21/19 8:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.13	0.35	18.176	0.82	9.61	102.4	1.618		7.49	
067	5/22/19 8:45 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.13								
067	5/23/19 8:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.12	0.12	0.12	17.819	0.67	10.58	111.8	1.331		8.04	
067	5/29/19 9:33 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.3	0.3	17.415	1	8.13	85.3	1.963	0.91	7.97	1.2
067	5/29/19 9:33 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.3	0.3	18.32	4.99	5.96	65.3	8.895	2.52	7.53	
067	5/30/19 10:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.23	0.23	0.53	16.415	0.76	8.4	86.2	1.505		7.95	1
067	5/30/19 10:07 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.23	0.23	0.53	16.63	8.21	5.85	63.1	14.113		7.42	
067	6/26/19 10:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.13	0.13	23.157	0.74	9.21	108.1	1.478	3.64	7.89	0.9
067	6/26/19 10:09 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.13	0.13	20.367	8.37	2.23	25.9	14.394	7.19	7.19	
067	6/27/19 9:41 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.13	23.584	0.66	9.64	114.1	1.329	1.33	7.98	1.2
067	6/27/19 9:41 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.13	19.558	17.03	6.44	77.6	27.633	1.78	7.35	
067	6/28/19 9:20 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	24.925	0.79	10.02	121.6	1.576	2.83	8.18	1.1
067	6/28/19 9:20 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	21.071	11.68	3.7	44.5	19.581	13.19	7.34	
067	7/5/19 8:26 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	26.855	0.83	9.01	113.3	1.649		7.45	
067	7/6/19 6:30 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	1.37	1.37	1.37								
067	7/7/19 6:06 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	1.37	1.37								
067	7/8/19 9:58 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	1.37	26.429	0.92	6.77	84.5	1.814	0.96	8.26	0.9
067	7/8/19 9:58 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	1.37	24.53	11.68	3.57	45.7	19.634	3.86	7.53	
067	7/9/19 9:22 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	26.307	0.88	8.21	102.3	1.738	7.19	7.83	1.9
067	7/9/19 9:22 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	24.349	11.31	1.85	23.6	19.046	1.77	7.1	
067	7/10/19 9:41 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	26.847	0.91	10.4	130.8	1.812	0.66	8.29	1.1
067	7/10/19 9:41 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	24.803	9.7	1.85	23.5	16.541	2.17	7.59	
067	7/11/19 9:45 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.02	0.02	27.254	0.9	10.44	132.2	1.781	1.87	8.42	1.2
067	7/11/19 9:45 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.02	0.02	0.02	26.138	3.71	2.24	28.2	6.793	9.13	7.59	
067	7/24/19 8:31 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	1.03	1.03	23.96	0.37	5.15	61.2	0.764		7.47	
067	7/25/19 8:03 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	1.03	24.472	0.34	6.32	75.9	0.699	2.84	7.41	
067	7/26/19 8:03 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	25.189	0.36	7.88	95.9	0.741		7.8	
067	7/27/19 7:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								
067	7/28/19 7:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								
067	8/1/19 8:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	1.25	1.25	27.279	0.75	8.64	109.4	1.502	3.8	7.77	
067	8/2/19 7:50 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	1.25	26.377	0.72	9.5	118.3	1.449		8.18	
067	8/3/19 6:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								
067	8/4/19 8:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								
067	8/5/19 8:23 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	25.762	1.09	9.83	121.3	2.141	3.81	7.93	
067	8/20/19 9:21 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.17	25.945	0.99	10.14	125.6	1.949	3.15	8.85	1
067	8/20/19 9:21 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.01	0.17	25.568	3.73	6.12	76.4	6.816	14.5	8.13	
067	8/21/19 9:22 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.08	0.08	0.09	26.531	1.21	11.86	148.6	2.364	2.59	8.77	0.9
067	8/21/19 9:22 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.08	0.08	0.09	26.267	2.87	7.43	93.5	5.345	9.28	8.13	
067	8/22/19 10:02 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.08	0.08	26.279	1.2	11.15	139.1	2.343		8.97	1.1
067	8/22/19 10:02 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.08	0.08	25.826	2.69	6.27	78.3	5.028		8.22	
067	8/23/19 9:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.08	25.508	1.52	9.84	121.3	2.924	3.22	8.99	0.9
067	8/23/19 9:05 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.08	26.139	2.44	6.4	80.1	4.581	9.54	8.47	
067	8/27/19 9:51 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	22.464	1.33	11.46	133.2	2.574	0.57	8.93	1.2
067	8/27/19 9:51 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	22.467	2.92	10.06	118	5.399	2.93	8.65	
067	8/28/19 8:58 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.65	0.65	0.65	22.348	1.04	10.08	116.7	2.028	1.59	8.55	1.1
067	8/28/19 8:58 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.65	0.65	0.65	21.514	14.53	7.78	95.9	23.917	7.02	7.85	
067	8/29/19 8:08 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.3	0.95	0.95	22.095	0.4	6.88	79	0.811		7.35	
067	8/30/19 9:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.3	0.95	22.55	0.6	7.69	89.2	1.207	1.01	7.14	1.2
067	8/30/19 9:17 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.3	0.95	22.72	1.6	7.52	88	3.067	3.65	6.97	
067	8/31/19 7:15 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.3								
067	9/1/19 6:46 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								
067	10/10/19 8:19 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.09	0.1	14.565	1.47	9.76	96.7	2.822	1.61	7.82	
067	10/11/19 7:28 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.33	0.35	0.42	13.301	1.54	9.18	88.5	2.937		7.45	
067	10/12/19 6:48 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.01	0.34	0.36								

## 2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	10/13/19 6:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0.01	0.34								
067	10/14/19 7:02 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0.01								
067	10/15/19 8:26 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0	14.369	1.61	12.09	119.4	3.063	1.47	7.87	
067	10/16/19 8:23 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.53	0.53	0.53	14.095	1.74	12.79	125.7	3.308		8.16	
067	10/17/19 8:30 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.67	1.2	1.2	14.233	1.52	9.71	95.6	2.91	5.28	7.79	
067	10/18/19 8:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0.67	1.2								
067	10/19/19 7:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0.67								
067	10/20/19 7:15 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0								
067	10/21/19 8:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0	12.826	0.53	11.08	105.1	1.063	1.46	7.92	
067	10/28/19 8:31 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.06	1.49	1.49	11.969	0.39	8.59	79.9	0.785	7.01	7.25	
067	10/29/19 8:32 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.03	0.09	1.52	12.157	0.3	7.16	66.8	0.616		7.4	
067	10/30/19 7:02 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.09	0.12	0.18								
067	10/31/19 8:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.07	0.16	0.19	14.318	0.42	7.6	74.4	0.85		7.08	
067	11/19/19 9:20 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.24	0.48	0.48	3.005	0.57	13.25	98.8	1.162	1.8	7.56	
067	11/20/19 9:16 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.23	0.47	0.71	3.82	0.57	12.97	98.8	1.159		7.35	
067	11/21/19 9:36 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0.23	0.47	3.939	0.59	11.86	90.7	1.198	4.18	7.54	
067	11/22/19 9:30 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.09	0.09	0.32								
059	5/3/19 8:40 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.11	0.17	0.17	11.191	0.53	10.71	97.9	1.067	3.23	8.75	1
059	5/3/19 8:40 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.11	0.11	0.17	0.17	11.181	0.53	10.63	97.2	1.056	4.11	8.56	
059	5/7/19 8:49 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.08	0.08	0.09	14.101	0.59	11.45	111.7	1.18	3.76	7.51	0.8
059	5/8/19 9:04 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0.08	0.08	16.175	0.56	11.59	118.3	1.113	3.4	8.42	1.1
059	5/8/19 9:04 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0.08	0.08	15.92	0.55	11.53	117	1.093	3.78	8.28	
059	5/9/19 9:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0.08	16.469	0.59	12	123.2	1.181	4.2	7.72	0.6
059	5/9/19 9:01 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0.08	0.08	16.388	0.6	11.99	123	1.201	4.41	7.75	
059	5/10/19 9:08 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.01	0.01	0.01								0.6
059	5/29/19 9:15 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0.3	0.3	17.079	1.17	8.61	89.9	2.275	0.9	8.24	0.8
059	5/29/19 9:15 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0.3	0.3	16.891	4.01	8.39	88.8	7.254	0.94	7.84	
059	5/30/19 9:45 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.23	0.23	0.53	16.403	1.19	9.47	97.5	2.303		8.4	1.1
059	5/30/19 9:45 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.23	0.23	0.23	0.53	15	11.95	8.46	90.3	19.957		7.78	
059	6/26/19 9:56 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0.13	0.13	23.046	1.09	10.59	124.3	2.133	3.63	8.86	0.7
059	6/26/19 9:56 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0.13	0.13	22.445	1.21	10.34	120.1	2.353	2.32	8.6	
059	6/27/19 9:26 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0.13	23.552	1.07	10.7	126.8	2.102	1.49	8.56	1.1
059	6/27/19 9:26 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0	0.13	23.235	1.24	10.89	128.4	2.406	1.45	8.46	
059	6/28/19 9:06 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0	25.444	1.03	11.07	135.8	2.034	2.81	8.64	1.3
059	6/28/19 9:06 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0	0	23.357	2.41	8.94	106.4	4.525	5.28	8.15	
059	7/8/19 9:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	1.37	26.697	1.24	7.82	98.3	2.429	0.59	8.45	1
059	7/8/19 9:44 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0	1.37	26.371	1.29	7.6	94.9	2.516	0.97	8.23	
059	7/9/19 9:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0	25.941	1.16	8.78	108.8	2.279	5.13	8.3	
059	7/9/19 9:09 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0	0	25.937	1.29	8.43	104.5	2.517	4.68	8.1	
059	7/10/19 9:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0	26.921	0.98	10.55	132.9	1.932	0.51	8.7	1.1
059	7/10/19 9:25 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0	0	26.849	1.39	9.32	117.5	2.699	1.27	8.41	
059	7/11/19 9:31 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.02	0.02	0.02	27.158	1.17	10.91	138.2	2.298	1.39	8.7	1.5
059	7/11/19 9:31 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.02	0.02	0.02	0.02	26.901	1.96	8.97	113.6	3.741	3.25	8.32	
059	8/20/19 9:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0.01	0.17	26.238	1.35	10.46	130.5	2.625	3.93	8.96	0.9
059	8/20/19 9:07 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0.01	0.17	26.008	1.36	10.35	128.5	2.646	5.79	8.95	
059	8/21/19 9:06 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.08	0.08	0.09	26.151	1.6	11.53	143.8	3.076	3.43	9.03	0.8
059	8/21/19 9:06 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.08	0.08	0.08	0.09	26.143	2.75	10	125.5	5.123	4.79	8.68	
059	8/22/19 9:48 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0.08	0.08	25.965	1.55	11.01	136.8	2.989		8.98	1.1
059	8/22/19 9:48 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0.08	0.08	0.08	25.578	1.92	10.69	132.2	3.657		8.98	
059	8/23/19 8:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0.08	25.637	1.74	10.43	129	3.33	3.46	9.01	0.7
059	8/23/19 8:53 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0	0.08	25.554	1.76	10.08	124.5	3.36	3.7	9.01	
059	8/27/19 9:35 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0	0	21.997	2.17	11.29	130.7	4.093	0.96	7.56	0.9
059	8/27/19 9:35 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0	0	22.001	2.72	10.74	124.8	5.057	2.48	7.89	
059	8/28/19 8:44 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0.65	0.65	0.65	22.127	1.98	11.27	130.7	3.751	3.56	8.06	1
059	8/28/19 8:44 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.65	0.65	0.65	0.65	22.061	2.59	11.4	132.5	4.831	5.3	8.31	
059	8/30/19 9:04 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BA	0.1	0	0.3	0.95	22.965	0.98	9.72	113.9	1.919	1.64	7.04	1
059	8/30/19 9:04 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0	0	0.3	0.95	22.912	1.84	8.35	98.3	3.499	2.35	7.05	
176	4/20/19 7:00 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.17	0.19	0.19								
176	4/21/19 6:05 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.03	0.2	0.22								
176	4/22/19 7:52 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	2.3	2.33	2.5	15.596	0.62	9.31	93.9	1.237		7.26	
176	5/3/19 8:46 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.11	0.17	0.17	10.976	0.53	9.87	89.7	1.056	2.47	8.05	0.5
176	5/3/19 8:46 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0.11	0.11	0.17	0.17	10.88	0.54	9.39	85.2	1.083	13.3	7.85	
176	5/7/19 8:51 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.08	0.08	0.09	14.128	0.72	9.78	95.5	1.42	3.62	7.32	1
176	5/8/19 9:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.08	0.08	16.13	0.69	10.01	102.1	1.361	5.6	8.06	1.2
176	5/9/19 9:05 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.08	17.09	0.67	10.33	107.5	1.329	3.77	7.46	0.8
176	5/9/19 9:05 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0	0.08	16.836	0.68	9.99	103.5	1.359	4.04	7.34	
176	5/10/19 9:14 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.01	0.01	0.01								0.7

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	5/20/19 8:20 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.13	0.35	0.35								
176	5/21/19 8:18 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.13	0.35	17.783	0.57	7.75	81.8	1.134		7.38	
176	5/22/19 8:26 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.13	17.175	0.85	8.22	85.7	1.682	4.63	7.37	
176	5/23/19 8:26 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.12	0.12	0.12	17.528	1.08	8.92	93.9	2.097		7.06	
176	5/29/19 9:22 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.3	0.3	16.253	1.18	7.09	72.7	2.278	1.14	8.09	1.2
176	5/29/19 9:22 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0.3	0.3	16.855	9.66	6.67	72.9	16.402	12.45	7.48	
176	5/30/19 9:52 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.23	0.23	0.53	16.043	1.91	7.5	76.9	3.599		7.76	1
176	5/30/19 9:52 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0.23	0.23	0.53	16.435	2.52	6.35	66	4.683		7.68	
176	6/26/19 9:59 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.13	0.13	22.563	0.85	8.59	99.8	1.679	2.42	8.51	0.8
176	6/26/19 9:59 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0.13	0.13	22.237	0.93	8.21	94.8	1.84	7.05	8.29	
176	6/27/19 9:30 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.13	23.056	0.89	9.07	106.3	1.758	0.53	8.13	0
176	6/27/19 9:30 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0	0.13	22.952	1.07	9.67	113.3	2.091	0.95	7.97	
176	6/28/19 9:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	23.918	0.84	9.51	113.3	1.664	1.4	8.24	1.4
176	6/28/19 9:10 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0	0	23.439	1.41	9.51	112.7	2.732	5.66	8	
176	7/5/19 10:39 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	26.755	0.7	8.83	110.7	1.406	1.69	7.75	
176	7/6/19 6:20 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	1.37	1.37	1.37								
176	7/7/19 5:57 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	1.37	1.37								
176	7/8/19 9:49 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	1.37	25.783	0.73	5.4	66.6	1.457	0.67	8.36	1
176	7/8/19 9:49 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0	1.37	25.535	1.28	5.12	63.1	2.495	4.52	8.06	
176	7/9/19 9:12 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	25.725	0.87	7.11	87.7	1.728	4.35	7.96	0.8
176	7/9/19 9:12 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0	0	25.635	0.91	6.56	80.8	1.801	5.16	7.74	
176	7/10/19 9:30 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	26.812	0.85	8.68	109.1	1.687	2.61	8.19	
176	7/11/19 9:36 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.02	0.02	0.02	26.539	0.99	8.54	106.9	1.957	1.97	8.19	1.2
176	7/11/19 9:36 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0.02	0.02	0.02	26.245	1.48	7.31	91.2	2.857	5.95	7.83	
176	7/24/19 8:09 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	1.03	1.03	22.344	0.48	6.82	78.7	0.976		7.22	
176	7/25/19 7:39 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	1.03	23.262	0.59	9.68	113.9	1.192	3.52	6.82	
176	7/26/19 7:43 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	24.174	0.52	9.03	108	1.053		7.36	
176	7/27/19 6:43 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0								
176	7/28/19 6:44 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0								
176	8/1/19 8:12 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	1.25	1.25	25.754	0.48	4.46	54.9	0.972	6.96	6.97	
176	8/2/19 7:28 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	1.25	24.797	0.65	4.46	53.9	1.302		7.02	
176	8/3/19 6:42 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0								
176	8/4/19 7:38 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0								
176	8/5/19 7:59 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	23.801	0.77	7.79	92.6	1.535	3.43	7.25	
176	8/20/19 9:13 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.01	0.17	26.054	1.07	8.75	108.6	2.112	4.2	8.39	1
176	8/20/19 9:13 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0.01	0.17	24.674	5.73	5.29	65.8	10.166		7.71	
176	8/21/19 9:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.08	0.08	0.09	25.886	1.17	9.33	115.5	2.29	3.14	8.55	1
176	8/21/19 9:10 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0.08	0.08	0.09	25.986	1.57	9.18	114.1	3.024	6.55	8.27	
176	8/22/19 9:53 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.08	0.08	25.523	1.22	8.8	108.3	2.387		8.37	0.9
176	8/22/19 9:53 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0.08	0.08	25.293	1.37	7.82	95.9	2.658		8.19	
176	8/23/19 8:56 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.08	25.621	1.27	8.24	101.6	2.469	3.57	8.63	0.9
176	8/23/19 8:56 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0.08	0.08	25.598	1.76	6.23	77	3.363	10.01	8.25	
176	8/27/19 9:40 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	21.974	2.6	12.36	143.4	4.847	1.25	8.56	0.8
176	8/27/19 9:40 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0	0	22.416	3.06	8.79	103.1	5.639	9.31	8.28	
176	8/28/19 8:48 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.65	0.65	0.65	22.186	2.62	11.33	132	4.874	5.77	8.45	0.7
176	8/28/19 8:48 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0.65	0.65	0.65	22.122	2.83	10.28	119.8	5.252	9.79	8.32	
176	8/29/19 7:45 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.3	0.95	0.95	20.823	0.36	5.65	63.3	0.741		6.98	
176	8/30/19 9:08 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.3	0.95	22.279	0.77	7.63	88.2	1.539	3.43	7.22	1
176	8/30/19 9:08 AM	B	MYSTIC/ALEWIFE	MALDEN RIVER	0	0	0.3	0.95	22.153	2.27	5.16	60	4.259	4.01	6.91	
176	8/31/19 7:03 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.3								
176	9/1/19 6:33 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0								
176	10/10/19 7:56 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.02	0.09	0.1	15.052	2.78	9.34	94.3	5.145	8.87	7.1	
176	10/12/19 6:35 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.01	0.34	0.36								
176	10/13/19 6:42 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.01	0.34								
176	10/14/19 6:36 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.01								
176	10/15/19 8:06 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	13.871	2.11	10.1	99	3.955	1.9	6.28	
176	10/16/19 8:02 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.53	0.53	0.53	14.64	2.17	10.46	104.4	4.069		7.4	
176	10/17/19 8:27 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.67	1.2	1.2	13.929	0.66	8.19	79.7	1.305	13.57	7.64	
176	10/18/19 7:45 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.67	1.2	12.207	0.28	8.5	79.4	0.572		7.39	
176	10/19/19 7:15 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0.67								
176	10/20/19 6:59 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0								
176	10/21/19 8:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0	0	12.667	0.74	10.09	95.5	1.46	1.56	7.33	
176	10/28/19 8:08 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.06	1.49	1.49	11.685	0.22	9.31	85.9	0.461		6.91	
176	10/29/19 8:10 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.03	0.09	1.52	12.288	0.28	7.93	74.2	0.584		7.5	
176	10/30/19 6:37 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.09	0.12	0.18	12.533	0.39	6.8	64.1	0.786		6.73	
176	10/31/19 7:42 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.07	0.16	0.19	13.866	0.42	5.37	52.1	0.857		6.65	
176	11/19/19 8:53 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.24	0.48	0.48	3.938	0.85	13.11	100.4	1.686	2.64	7.15	

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	11/20/19 8:56 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.23	0.47	0.71	4.737	0.86	10.95	85.7	1.703		6.97	
176	11/21/19 9:17 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0	0.23	0.47	4.523	0.91	11.22	87.3	1.801	7.57	7.22	
176	11/22/19 8:57 AM	S	MYSTIC/ALEWIFE	MALDEN RIVER	0.1	0.09	0.09	0.32	5.44	0.83	9.68	77.1	1.654		6.85	
167	1/7/19 8:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.53	1.24	0.81	11.37	81	1.629		7.81	
167	1/7/19 8:25 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.53	4.73	25.53	9.3	85.8	40.71		7.62	
167	1/25/19 8:40 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	1	1								
167	2/7/19 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.21	0.58	0.58	2.74	0.95	11.52	85.5	1.882	3	7.64	
167	2/7/19 8:52 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.21	0.58	0.58	2.57	13.76	10.04	81	23.29	9.3	7.36	
167	3/19/19 8:04 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	4.5	1.01	12.88	100.2	1.998	3.7	7.58	
167	3/19/19 8:04 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	4.93	10.36	11.8	98.8	17.76	2.9	7.33	
167	4/1/19 8:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.09	0.09	9.37	1.1	11.76	103.4	2.138		7.2	
167	4/1/19 8:01 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.09	0.09	8.25	14.37	11.1	103.5	23.81		7.42	
167	4/19/19 8:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.02	0.02	12.429	1.18	10.89	102.8	2.291		7.62	
167	4/19/19 8:09 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.02	0.02	9.574	17.59	9.72	95.5	28.608		7.63	
167	4/20/19 7:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.17	0.19	0.19								
167	4/21/19 6:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.03	0.2	0.22								
167	4/22/19 8:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	2.3	2.33	2.5	16.282	0.76	11.29	115.6	1.499		7.9	
167	5/2/19 8:15 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.06	0.06	0.2	12.173	0.52	10.42	97.4	1.048		7.71	
167	5/2/19 8:15 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.06	0.06	0.2	9.705	21.76	8.17	82.6	34.735		7.5	
167	5/3/19 8:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.11	0.17	0.17								0.6
167	5/7/19 8:47 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.08	0.08	0.09								1
167	5/8/19 9:02 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.08	0.08								1.1
167	5/9/19 8:59 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.08								0.7
167	5/10/19 9:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.01	0.01	0.01								1
167	5/14/19 8:50 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.15	0.97	1.36	12.891	0.69	11.1	105.6		5.5	7.46	
167	5/14/19 8:50 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.15	0.97	1.36	12.321	9.88	9.23	91.8		5.75	7.52	
167	5/20/19 8:34 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.13	0.35	0.35	17.455	0.85	10.17	106.7	1.676		7.72	
167	5/21/19 8:37 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.13	0.35	19.113	1.11	10.11	109.9	2.166		7.48	
167	5/22/19 8:39 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.13	18.119	1.14	10.08	107.5	2.22	5.25	7.51	
167	5/23/19 8:47 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.12	0.12	0.12	17.647	1.15	9.91	104.6	2.237		7.6	
167	5/29/19 9:13 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.3	0.3								1
167	5/30/19 9:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.23	0.23	0.53								1.2
167	5/31/19 8:18 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.07	0.3	0.3	17.511	1.21	9.33	98.3	2.339		7.21	
167	5/31/19 8:18 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.07	0.3	0.3	14.434	17.66	7.46	81.5	28.566		7.31	
167	6/5/19 8:38 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.05	0.05	0.09	19.023	2.08	9.61	104.9	3.924		7.59	
167	6/5/19 8:38 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.05	0.05	0.09	15.731	16.65	6.79	75.7	27.059		7.36	
167	6/17/19 8:07 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.11	0.11	20.713	0.81	6.54	73.2	1.604	0.62	7.24	
167	6/17/19 8:07 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.11	0.11	17.985	13.26	4.65	53.1	21.965	8.19	7.08	
167	6/26/19 9:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.13	0.13								0.8
167	6/27/19 9:23 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.13								1
167	6/28/19 9:04 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								0.7
167	7/1/19 7:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.16	1.81	23.315	1.11	6.97	82.2	2.163	1.32	7	
167	7/1/19 7:53 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.16	1.81	21.015	11.01	5.6	67	18.542	3.66	6.96	
167	7/5/19 8:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	26.368	0.97	10.58	132	1.908	5.67	7.16	
167	7/6/19 6:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	1.37	1.37	1.37								
167	7/7/19 6:00 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	1.37	1.37								
167	7/8/19 9:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	1.37								1
167	7/9/19 9:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								1.5
167	7/10/19 9:24 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								1.2
167	7/11/19 9:28 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.02	0.02								1.5
167	7/18/19 8:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.04	0.47	0.47	25.699	0.78	9.36	115.2	1.561		7.86	
167	7/18/19 8:05 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.04	0.47	0.47	20.496	23.05	3.36	42.8	36.393		7.29	
167	7/24/19 8:22 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	1.03	1.03	23.828	0.61	8.02	95.3	1.224		7.44	
167	7/25/19 7:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	1.03	1.03	24.677	0.56	9.15	110.4	1.136	3.66	7.17	
167	7/26/19 7:55 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	25.175	0.52	9.87	120.2	1.048		7.84	
167	7/27/19 6:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								
167	7/28/19 6:51 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								
167	8/1/19 8:27 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	1.25	1.25	27.61	1.11	8.36	106.7	2.181	3.23	7.37	
167	8/2/19 7:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	1.25	1.25	26.287	1.1	9.58	119.4	2.155		7.75	
167	8/3/19 6:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								
167	8/4/19 7:56 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								
167	8/5/19 8:15 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	24.968	1.54	10.84	132.3	2.97	7.92	7.56	
167	8/6/19 8:13 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	25.4	1.67	9.81	120.7	3.213		7.89	
167	8/6/19 8:13 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	17.98	27.52	2.27	28.2	42.707		7.14	
167	8/13/19 7:17 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	23.949	0.68	9.11	108.6	1.352		7.58	
167	8/13/19 7:17 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	20.992	11.39	6.08	72.9	19.132		7.32	
167	8/20/19 9:04 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.17								0.7

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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)
167	8/21/19 9:05 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.08	0.08	0.09								1
167	8/22/19 9:48 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.08	0.08								1.5
167	8/23/19 8:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0.08								0.8
167	8/26/19 7:40 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	21.494	2.27	10.39	119.2	4.27		8.21	
167	8/26/19 7:40 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0	18.179	28.46	4.66	58.6	44.018		7.54	
167	8/27/19 9:35 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0	0								0.9
167	8/28/19 8:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.65	0.65	0.65								0.8
167	8/29/19 8:01 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.3	0.95	0.95	21.921	0.98	8.03	92.2	1.915		6.99	
167	8/30/19 9:03 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0	0.3	0.95								1
167	8/31/19 7:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.3								
167	9/1/19 6:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								
167	9/12/19 8:12 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.07	0.07	0.07	21.613	1.05	10.37	118.4	2.052	3.72	8.32	
167	9/12/19 8:12 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.07	0.07	0.07	19.282	24.05	3.69	46.1	37.817	1.95	7.48	
167	9/24/19 7:52 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.01	0.14	0.14	21.849	1.97	10.13	116.8	3.735		7.68	
167	9/24/19 7:52 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.01	0.14	0.14	19.053	25.05	3.38	42.4	39.235		7.41	
167	10/7/19 8:08 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.16	0.16	0.16	15.866	3.12	11.55	119	5.728		7.49	
167	10/7/19 8:08 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.16	0.16	0.16	15.769	29.34	4.37	52.7	45.26		7.4	
167	10/10/19 8:11 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.02	0.09	0.1	14.68	2.43	9.81	98	4.53	4.63	7.83	
167	10/11/19 7:21 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.33	0.35	0.42	13.491	2.73	9.88	96.4	5.049		7.41	
167	10/12/19 6:43 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.01	0.34	0.36								
167	10/13/19 6:53 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.01	0.34								
167	10/14/19 6:56 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.01								
167	10/15/19 8:19 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	14.122	2.07	12.27	120.9	3.885	9.43	7.12	
167	10/16/19 8:16 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.53	0.53	0.53	14.061	2.09	11.74	115.6	3.921		7.82	
167	10/17/19 8:42 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.67	1.2	1.2	14.236	2.19	10.21	100.9	4.097	18.24	7.61	
167	10/18/19 7:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.67	1.2	12.371	1.26	9.14	86.2	2.438		7.01	
167	10/19/19 7:20 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0.67								
167	10/20/19 7:10 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0								
167	10/21/19 8:28 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	0	13.051	0.68	11.1	105.9	1.349	3.57	7.66	
167	10/22/19 7:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.16	0.16	0.16	13.106	0.68	12.04	115	1.355	2.38	7.92	
167	10/28/19 8:22 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.06	1.49	1.49	12.318	0.6	9.25	86.7	1.203	10.46	6.88	
167	10/29/19 8:25 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.03	0.09	1.52	12.282	0.42	8.5	79.6	0.84		7.33	
167	10/30/19 6:58 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.09	0.12	0.18	12.853	0.48	7.9	75	0.962		6.99	
167	10/31/19 7:57 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.07	0.16	0.19	14.118	0.45	7.8	76.1	0.914		6.85	
167	11/5/19 8:50 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.4	0.4	0.4	11.066	0.62	11.35	103.5	1.236		7.3	
167	11/5/19 8:50 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.4	0.4	0.4	13.308	28.53	5.61	64.1	4.218		7.06	
167	11/18/19 9:21 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.24	0.24	0.24	1.832	0.81	13.56	98.1	1.632	2.68	6.99	
167	11/18/19 9:21 AM	B	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN		0.24	0.24	0.24	7.3	24.1	7.2	69.9	38.323	8.27	6.77	
167	11/19/19 9:13 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.24	0.48	0.48	2.884	0.73	14	104.2	1.473	1.86	7.43	
167	11/20/19 9:09 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.23	0.47	0.71	3.609	0.71	14.07	106.7	1.415		7.28	
167	11/21/19 9:30 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0.23	0.47	3.965	0.73	13.72	105.1	1.464	3.12	7.45	
167	11/22/19 9:21 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0.09	0.09	0.32	5.865	0.82	13.03	104.9	1.615		7.27	
167	12/16/19 8:51 AM	S	MYSTIC/ALEWIFE	LOWER MYSTIC BASIN	0.1	0	0	1.25	5.049	0.59	11.51	90.6	1.188	11.66	7.05	
052	5/3/19 8:33 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.11	0.17	0.17	10.214	12.16	9.76	93.9	20.346	1.92	7.97	1.5
052	5/3/19 8:33 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.7	0.11	0.17	0.17	8.876	28.39	8.5	88	44.308	3.03	7.83	
052	5/7/19 8:44 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.08	0.08	0.09								1
052	5/8/19 8:55 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.08	0.08	12.662	13.77	9.6	98.5	22.766	2.35	7.88	
052	5/8/19 8:55 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0.08	0.08	10.491	23.57	8.93	93	37.308	3.19	7.83	
052	5/9/19 8:55 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.08								1.5
052	5/10/19 8:59 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.01								0.7
052	5/29/19 9:07 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.3	0.3	13.929	25.72	9.4	106.8	40.228		7.89	2.4
052	5/29/19 9:07 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.6	0	0.3	0.3	12.367	28.16	9.12	101.8	43.74	2.2	7.86	
052	5/30/19 9:36 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.53	13.578	22	9.69	106.8	34.928		8.04	2
052	5/30/19 9:36 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.7	0.23	0.23	0.53	12.009	28.47	8.79	97.6	44.196		7.95	
052	6/26/19 9:51 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.13	0.13	16.957	25.79	10.26	123.9	40.276	1.1	8.05	1.6
052	6/26/19 9:51 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0.13	0.13	15.073	28.9	8.59	101.8	44.675	3.36	8	
052	6/27/19 9:19 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.13	18.018	23.36	10.45	127	36.825	0.41	8.03	1.6
052	6/27/19 9:19 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0	0.13	15.249	28.91	9.56	113.7	44.678	0	7.91	
052	6/28/19 8:54 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	19.408	23.05	11.32	141	36.388	1.39	8.1	1.5
052	6/28/19 8:54 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.2	0	0	0	15.457	28.55	8.37	99.8	44.169	1.79	7.88	
052	7/8/19 9:31 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	1.37	22.228	15.33	6.2	77.9	25.129	1.01	7.92	1.3
052	7/8/19 9:31 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0	1.37	21.412	17.7	6.07	76.1	28.644	0.9	7.82	
052	7/9/19 9:01 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	19.999	25.1	7.23	92.1	39.303	0.9	7.78	1.8
052	7/9/19 9:01 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0	0	17.887	28.77	6.38	79.8	44.449	2.89	7.69	
052	7/10/19 9:18 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	19.114	27.99	7.35	93.8	43.358	0.05	7.92	1.6
052	7/10/19 9:18 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0	0	18.067	29.25	6.58	82.9	45.108	0.48	7.88	
052	7/11/19 9:22 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.02	0.02	0.02	20.343	26.22	8.55	110.4	40.89	1.15	7.91	1.7



## 2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	7/11/19 9:22 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.2	0.02	0.02	0.02	18.519	29.02	6.45	81.9	44.785	4.31	7.8	
052	8/20/19 8:58 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.17	18.414	25.88	6.63	82.5	40.396	3.04	7.68	
052	8/20/19 8:58 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0.01	0.17	18.267	26.52	6.6	82.1	41.307	3.01	7.65	
052	8/21/19 8:56 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.08	0.08	0.09	21.75	16.65	7.36	92.3	27.097	3.57	7.92	1.3
052	8/21/19 8:56 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0.08	0.08	0.09	18.27	27.97	7.14	89.6	43.329	6.16	7.76	
052	8/22/19 9:38 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.08	0.08	19.447	25.56	6.27	79.4	39.947		7.7	
052	8/22/19 9:38 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0.08	0.08	18.68	27.06	6.58	82.9	42.057		7.7	
052	8/23/19 8:44 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.08	18.644	25.58	6.66	83	39.983	1.73	7.85	
052	8/23/19 8:44 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0	0.08	17.249	30.28	6.13	76.5	46.541	2.14	7.73	
052	8/27/19 9:20 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0								2.4
052	8/28/19 8:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.65	0.65	0.65								1
052	8/28/19 8:37 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.1	0.65	0.65	0.65								
052	8/30/19 8:55 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.3	0.95								2.3
052	8/30/19 8:55 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.6	0	0.3	0.95								
052	9/26/19 8:57 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.27	0.27	0.28	19.022	26.47	5.84	73.8	41.224	0.99	7.69	2
052	9/26/19 8:57 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.3	0.27	0.27	0.28	18.222	30.89	5.28	67.4	47.382	3.19	7.5	
052	10/16/19 11:50 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.53	0.53	0.53								2
052	10/16/19 11:50 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.6	0.53	0.53	0.53								
069	5/3/19 8:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.11	0.17	0.17	9.668	12.58	10.27	97.8	21.02	1.66	8.05	2
069	5/3/19 8:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3.3	0.11	0.17	0.17	8.988	28.89	8.75	91.3	45.006	7.91	7.81	
069	5/7/19 8:30 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.08	0.08	0.09								1.2
069	5/8/19 8:47 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.08	0.08	12.709	19.97	9.9	105.8	32.001	7.46	7.93	
069	5/9/19 8:47 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.08								0.6
069	5/10/19 8:52 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.01								
069	5/29/19 9:00 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.3	0.3	13.815	23.81	9.55	106.9	37.519		7.92	1.8
069	5/29/19 9:00 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0.3	0.3	12.681	27.99	9.43	105.9	43.476		7.9	
069	5/30/19 9:26 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.53	13.406	22.82	10.04	110.8	36.11		8.08	2.3
069	5/30/19 9:26 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.8	0.23	0.23	0.53	12.294	27.17	9.86	109.2	42.345		8.01	
069	6/26/19 9:05 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.13	0.13	18.269	24.02	11.21	137.4	37.771	0.99	8.11	1.5
069	6/26/19 9:05 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0.13	0.13	16.858	26.74	10.55	127.9	41.623	1.65	8.06	
069	6/27/19 8:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.13	19.322	23.43	12.11	151	36.932	0.26	8.17	1.8
069	6/27/19 8:37 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0	0.13	16.026	28.34	11.35	136.7	43.868	0.4	8.08	
069	6/28/19 8:33 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	20.182	24.3	12.52	159.4	38.173	1.19	8.2	1
069	7/8/19 9:20 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	1.37	20.866	23.04	7.61	97.4	36.388	93.4	7.9	
069	7/9/19 8:39 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	21.142	24.7	9.08	118	38.747	2	7.88	
069	7/10/19 8:47 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	18.525	29.15	7.57	96.2	44.977	0.52	7.91	
069	7/11/19 8:49 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.02	0.02	0.02	20.993	27.28	9.6	126.3	42.384	0.49	7.99	
069	7/11/19 8:49 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0.02	0.02	0.02	19.442	28.69	8.93	115.1	44.331	1.18	7.96	
069	8/20/19 8:50 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.17	19.135	28.35	8.01	102.4	43.858	3.2	7.78	
069	8/21/19 8:49 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.08	0.08	0.09	19.326	29.03	8.82	113.7	44.811	7.14	7.84	
069	8/22/19 9:05 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.08	0.08	18.845	29.41	8.01	102.6	45.328		7.85	
069	8/23/19 8:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0.08	17.332	30.24	7.32	91.4	46.479	5.5	7.84	
069	8/23/19 8:37 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH		0	0	0.08	17.23	30.29	7.2	89.9	46.555	9.71	7.8	
069	8/27/19 9:15 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0								2.3
069	8/28/19 8:28 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.65	0.65	0.65								1.5
069	8/30/19 8:45 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.3	0.95								1.3
069	9/26/19 9:08 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.27	0.27	0.28	18.557	30.61	6.95	89.1	46.995	1.2	7.79	1.8
069	9/26/19 9:08 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	3	0.27	0.27	0.28	18.134	30.99	5.85	74.6	47.519	5.77	7.73	
069	10/16/19 11:43 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.53	0.53	0.53								2
069	10/16/19 11:43 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.8	0.53	0.53	0.53								
069	10/25/19 8:30 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.01	0.43								2.6
069	10/25/19 8:30 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	2.9	0.01	0.01	0.43								
137	1/3/19 10:20 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.02	0.02	0.4	3.4	19.03	10.85	92.7	31.27	1.8	7.97	3
137	1/3/19 10:20 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	14.1	0.02	0.02	0.4	5.15	31.05	9.65	93.4	48.57	1.8	7.98	
137	1/15/19 10:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	3.31	30.03	11.1	102	47.47		8.05	3.4
137	1/15/19 10:37 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.6	0	0	0	3.44	31.49	10.51	97.8	49.54		8.06	
137	2/6/19 10:26 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.37	0.37	0.37	2.14	26.06	10.73	93.1	41.95	1.5	7.94	3.4
137	2/6/19 10:26 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.8	0.37	0.37	0.37	1.77	31.14	9.9	88.1	49.45	1.5	7.99	
137	2/22/19 10:48 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.42	0.52	2.54	21.28	11.86	100.6	34.8	6	8.06	2.3
137	2/22/19 10:48 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.6	0	0.42	0.52	2.08	30.66	10.82	96.7	48.67	7.5	8.08	
137	3/5/19 11:13 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.97	1.06	1.98	28.49	10.99	96.6	45.55	4.8	8.01	3.4
137	3/5/19 11:13 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.9	0	0.97	1.06	2.01	31.37	10.54	94.5	49.71	4.4	8.02	
137	3/21/19 10:02 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	4.49	19.07	11.33	99.5	31.2	6	8.05	2.6
137	3/21/19 10:02 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.9	0	0	0	3.12	31.74	10.43	96.4	49.96	10.1	7.98	
137	4/5/19 10:39 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.13	0.13	0.53	5.71	27.37	10.79	103.2	43.23	6.5	8.09	3
137	4/5/19 10:39 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.8	0.13	0.13	0.53	4.98	31.34	10.65	102.8	49.01	8.8	8.02	
137	4/29/19 10:19 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.67	9.431	25.24	9.23	94.8	39.772		7.93	2.5

2019 MWRA Central Lab Field Results

Station	Day/Time (EST)	Surface/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	4/29/19 10:19 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12	0	0.01	0.67	8.072	30.78	8.66	89.5	47.764		7.92	
137	5/6/19 10:25 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.01	0.15	10.935	18.32	9.73	99	29.627	1.47	8.03	2.5
137	5/6/19 10:25 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.6	0	0.01	0.15	8.172	30.61	8.89	92	47.515	1.86	7.95	
137	5/28/19 10:24 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.3	0.3	0.53	14.256	24.56	9.83	111.6	38.58		8.04	2.5
137	5/28/19 10:24 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.7	0.3	0.3	0.53	10.445	29.71	9.4	101.7	46.028		7.99	
137	6/12/19 10:42 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.53	0.67	15.877	27.37	8.43	100.7	42.51	4.33	7.94	3.8
137	6/12/19 10:42 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12	0	0.53	0.67	12.593	29.7	7.61	86.2	45.887	4.4	7.88	
137	6/25/19 10:08 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.13	0.13	0.13	16.83	27.92	10.56	128.9	43.265	0	8.05	2
137	6/25/19 10:08 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.9	0.13	0.13	0.13	12.836	30.26	8.11	92.7	46.64	0.17	7.9	
137	7/3/19 10:28 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	19.164	25.91	8.27	104.3	40.45	0.62	7.92	2.7
137	7/3/19 10:28 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	13.2	0	0	0	15.314	29.58	7.5	89.7	45.608	4.33	7.83	
137	7/22/19 10:02 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	20.652	29.02	7.51	99.2	44.803	0.6	7.8	2.1
137	7/22/19 10:02 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	9	0	0	0	18.4	30.35	6.3	80.4	46.638		7.72	
137	8/7/19 10:10 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	1.9	1.9	1.9	20.066	29.37	8.6	112.6	45.277		7.94	3
137	8/7/19 10:10 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	10.7	1.9	1.9	1.9	15.903	30.74	6.45	78.7	47.202	0.39	7.92	
137	8/19/19 9:46 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.01	0.17	0.17	21.061	27.51	8.94	118	42.707	1.08	8	2.5
137	8/19/19 9:46 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.1	0.01	0.17	0.17	14.438	30.97	6.71	79.5	47.563	4.46	7.83	
137	9/10/19 10:37 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	19.48	29.56	8.29	107.4	45.543	0.01	8.1	1.5
137	9/10/19 10:37 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.5	0	0	0	17.164	31.12	2.75	34.4	47.712	0.7	7.93	
137	9/20/19 10:04 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	0	18.665	30.22	6.07	77.9	46.453	2.59	7.78	2.4
137	9/20/19 10:04 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.6	0	0	0	17.701	31.03	3.09	39.1	47.582	2.96	7.62	
137	10/1/19 10:11 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.05	0.05	0.05	17.196	27.74	7.38	90.6	43.011	1.02	7.93	1.7
137	10/1/19 10:11 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	14.7	0.05	0.05	0.05	16.011	31.51	6.02	73.9	48.264	2.7	7.83	
137	10/24/19 9:49 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.42	0.58	13.55	30.89	8.53	98.2	47.499	3.43	7.86	2.5
137	10/24/19 9:49 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.1	0	0.42	0.58	13.4	29.34	7.16	83.1	45.326	0.18	7.87	
137	11/7/19 10:56 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0.23	0.23	0.63	11.61	31.89	8.14	91.6	48.974	2	7.88	2.7
137	11/7/19 10:56 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.6	0.23	0.23	0.63	12.349	33.75	7.46	86.3	51.481	3.47	7.87	
137	11/26/19 11:01 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0	1.51	6.817	24.68	9.82	94.7	39.217	0.35	7.96	2.5
137	11/26/19 11:01 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	14.1	0	0	1.51	6.75	31.23	9.02	90.6	48.558	0.34	7.89	
137	12/4/19 12:05 PM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.38	0.81	5.148	27.53	10.25	96.8	43.541	1.78	7.98	1.5
137	12/4/19 12:05 PM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	11.3	0	0.38	0.81	6.475	33.98	9.21	93.7	52.454	3.93	7.94	
137	12/18/19 11:33 AM	S	MYSTIC/ALEWIFE	MYSTIC MOUTH	0.1	0	0.65	0.65	4.992	28.35	10.65	100.8	44.742	1.16	7.89	3
137	12/18/19 11:33 AM	B	MYSTIC/ALEWIFE	MYSTIC MOUTH	12.2	0	0.65	0.65	5.869	30.99	9.68	95.1	48.361	1.62	7.85	



**Massachusetts Water Resources Authority**  
**100 First Avenue • Boston, MA 02129**  
**[www.mwra.com](http://www.mwra.com)**  
**617-242-6000**