Draft Massachusetts Integrated List of Waters for the Clean Water Act 2024/2026 Reporting Cycles

Appendix 12
Boston Harbor (Proper)
Assessment and Listing Decision Summary

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Watershed Planning Program

The mission of the Watershed Planning Program (WPP) in the Massachusetts Department of Environmental Protection is to protect, enhance, and restore the quality and value of the waters of the Commonwealth. Guided by the federal Clean Water Act, WPP implements this mission statewide through five Sections that each have a different technical focus: (1) Surface Water Quality Standards; (2) Surface Water Quality Monitoring; (3) Data Management and Water Quality Assessment; (4) Total Maximum Daily Load; and (5) Nonpoint Source Management. Together with other MassDEP programs and state environmental agencies, WPP shares in the duty and responsibility to secure the environmental, recreational, and public health benefits of clean water for all people of the Commonwealth.

Acknowledgements

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Disclaimer

References to trade names, commercial products, manufacturers, or distributors in this report constituted neither endorsement nor recommendation by MassDEP.

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Notice of Availability

This report is available on the Massachusetts Department of Environmental Protection website.

Overview of Appendix Contents

This Integrated Report (IR) Appendix functions as a watershed-based Assessment and Listing Decision Summary that catalogs the most recent assessment decisions for each assessment unit (AU) that was updated as part of the 2024/2026 IR cycle.

The appendix begins with 2024/26 Cycle Impairment Changes, a comprehensive table summarizing all impairments that were either added, removed, changed, or unchanged between the 2022 and 2024/2026 reporting cycles. This table presents the overall impairment status at the waterbody scale, across all designated uses. The table does not detail use-specific impairment changes; those details are provided in subsequent sections of the appendix.

Following 2024/26 Cycle Impairment Changes, the appendix provides an individual section for each AU updated during the 2024/2026 cycle. Each AU section details the supporting data and rationale for each designated use attainment determination, including any associated impairment removal decisions. Changes in impairment status at the designated use level are documented in full within the corresponding Designated Use Attainment Decision. AUs where no usable data were available for the 2024/2026 IR cycle are included, but with the assessment information from the 2022 cycle is carried forward.

The following abbreviations are used when referencing designated uses:

- ALU - Aquatic Life Use
- FC - Fish Consumption Use
- SH - Shellfish Harvesting Use
- AES - Aesthetic Use
- PCR - Primary Contact Recreation Use
- SCR - Secondary Contact Recreation Use

When listing an impairment, parentheses and an asterisk (*) are utilized to denote “pollution” or non-pollutant impairments that do not require the development of a Total Maximum Daily Load (TMDL). Where applicable, further explanation of the ATTAINS impairment code is provided within square brackets [].

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2024/26 Cycle Impairment Changes

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Boston Harbor	MA70-01	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
Boston Harbor	MA70-01	5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
Boston Harbor	MA70-01	5	5	PCBs in Fish Tissue	--	Unchanged
Boston Inner Harbor	MA70-02	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
Boston Inner Harbor	MA70-02	5	5	Dissolved Oxygen	--	Unchanged
Boston Inner Harbor	MA70-02	5	5	Enterococcus	R1_MA_2019_01	Unchanged
Boston Inner Harbor	MA70-02	5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
Boston Inner Harbor	MA70-02	5	5	PCBs in Fish Tissue	--	Unchanged
Dorchester Bay	MA70-03	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
Dorchester Bay	MA70-03	5	5	Enterococcus	R1_MA_2019_01	Unchanged
Dorchester Bay	MA70-03	5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
Dorchester Bay	MA70-03	5	5	PCBs in Fish Tissue	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Hingham Bay	MA70-06	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
Hingham Bay	MA70-06	5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
Hingham Bay	MA70-06	5	5	PCBs in Fish Tissue	--	Unchanged
Hingham Bay	MA70-07	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
Hingham Bay	MA70-07	5	5	Estuarine Bioassessments	--	Unchanged
Hingham Bay	MA70-07	5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
Hingham Bay	MA70-07	5	5	PCBs in Fish Tissue	--	Unchanged
Hull Bay	MA70-09	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
Hull Bay	MA70-09	5	5	Estuarine Bioassessments	--	Unchanged
Hull Bay	MA70-09	5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
Hull Bay	MA70-09	5	5	PCBs in Fish Tissue	--	Unchanged
Pleasure Bay	MA70-11	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
Pleasure Bay	MA70-11	5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
Pleasure Bay	MA70-11	5	5	PCBs in Fish Tissue	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Quincy Bay	MA70-04	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
Quincy Bay	MA70-04	5	5	Enterococcus	R1_MA_2019_01	Unchanged
Quincy Bay	MA70-04	5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
Quincy Bay	MA70-04	5	5	PCBs in Fish Tissue	--	Unchanged
Quincy Bay	MA70-05	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
Quincy Bay	MA70-05	5	5	Enterococcus	R1_MA_2019_01	Unchanged
Quincy Bay	MA70-05	5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
Quincy Bay	MA70-05	5	5	PCBs in Fish Tissue	--	Unchanged
Winthrop Bay	MA70-10	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
Winthrop Bay	MA70-10	5	5	Enterococcus	R1_MA_2019_01	Unchanged
Winthrop Bay	MA70-10	5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
Winthrop Bay	MA70-10	5	5	PCBs in Fish Tissue	--	Unchanged

Boston Harbor (MA70-01)

Location:	The area defined by a line from the southerly tip of Deer Island to Boston Lighthouse on Little Brewster Island, then south to Point Allerton; across Hull and West guts; across the mouths of Quincy and Dorchester bays, Boston Inner Harbor and Winthrop Bay (including President Roads and Nantasket Roads).
AU Type:	ESTUARY
AU Size:	18.6 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Contaminated Sediments (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Discharges from Biosolids (SLUDGE) Storage, Application or Disposal (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Upstream Source (Y)	--	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
PCBs in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Upstream Source (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Pathogen TMDL for the Boston Harbor, Weymouth-Weir, and Mystic Watersheds (Report CN 157.1, approved 11/21/2018, ATTAINS Action ID: R1_MA_2019_01)

Recommendations

2024/26 Recommendations
2024IR [Bacteria, Low] Follow-up monitoring should be conducted in Boston Harbor (MA70-01), to confirm if Enterococcus bacteria is impairing the Primary Contact Recreational Use. Monitoring should be conducted in particular at the north-east corner of the AU, in the area of Grandview beach in Winthrop [Beach ID: 3218]. An Alert for Enterococcus was identified since Grandview beach was posted for >10% of the swimming season in 2021 (19%). While 10% of the season at this beach was posted in 2015, there were no other postings in 2014-2020. Note that Grandview beach is located at the north-east corner of the AU, partially associated with Winthrop Bay (MA70-10). This is of low priority;

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Boston Harbor (MA70-01) continues to be assessed as Not Supporting and the prior Cause Unknown [Contaminants in Fish and/or Shellfish] and PCBs in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Boston Harbor in their 2017 Guide to Eating Fish Safely in Massachusetts. The public should refer to the most recent MDPH information for the most up to date meal advice for sensitive and general populations.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Boston Harbor (MA70-01): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 18.5098 sq mi (100%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.4094 sq mi (2%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH1.0	Outer Hull Bay	Prohibited	0.00159	0.0%
GBH2.0	Quincy Bay	Prohibited	4.57495	24.6%
GBH2.5	Orchard Street Beach to Moon Head	Conditionally Restricted	0.00325	0.0%
GBH3.0	Dorchester Bay And Neponset River	Prohibited	3.06802	16.5%
GBH3.1	Moon Head Causeway	Prohibited	0.08557	0.5%
GBH3.10	Long Island	Prohibited	0.17236	0.9%
GBH3.9	Thompson Island	Conditionally Restricted	0.21735	1.2%
GBH4.0	Boston Inner Harbor	Prohibited	0.00664	0.0%
GBH5.0	North Boston Harbor	Prohibited	1.53155	8.2%
GBH5.1	Winthrop Shores	Conditionally Restricted	0.00620	0.0%
GBH5.3	Governors Island	Conditionally Restricted	0.18262	1.0%
GBH5.6	Deer Island	Prohibited	0.03038	0.2%
GBH6.0	Nantasket Roads	Prohibited	8.42468	45.3%
GBH6.1	Stoney Beach	Prohibited	0.15173	0.8%
MB13.0	Outer Boston Harbor Islands	Prohibited	0.05283	0.3%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Boston Harbor (MA70-01) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Boston Harbor (MA70-01) continues to be assessed as Fully Supporting based on bacteria data collected at 5 stations in 2018-2022, although an Alert for Enterococcus is being identified based on MDPH Beach Closure data. Boston Harbor has a beach with MDPH Beach Closure data: Grandview [Beach ID: 3218] beach in Winthrop, at the north-east corner of the AU, partially associated with Winthrop Bay (MA70-10). This beach was rarely, if at all, posted for swimming from 2018-2022. However, an Alert for Enterococcus is being identified since Grandview beach was posted for >10% of the swimming season in 2021 (19%). The shellfish growing areas (18.5097 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Primary Contact Recreation Use of Boston Harbor. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in Boston Harbor from 2011-2022 at 5 stations. Samples were collected from the following stations/sample years: MWRA_044 [N Dorchester Bay, mouth, day marker #5] from 2011-2022 (n=17-27/yr), MWRA_065 [Inner President Rds, red nun #2] from 2011-2022 (n=17-24/yr), MWRA_106 [Long Island, green can #17] from 2011-2022 (n=9-14/yr), MWRA_048 [S Dorchester Bay, off Moon Island] from 2011-2022 (n=17-24/yr) & MWRA_141 [N of Peddocks Island, near Hull Gut] from 2011-2022 (n=9-14/yr). Analysis of the recent five years of the multi-year high frequency Enterococcus datasets from MWRA_044, MWRA_065 & MWRA_048 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml, 0 yrs had >10% of samples exceed the 130 CFU/100ml STV, and cumulatively across years 0% of intervals had GMs >35 CFU/100ml. Analysis of the recent five years of the multi-year moderate frequency Enterococcus datasets from MWRA_106 & MWRA_141 indicated 0 out of 5 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml, 0 yrs had ≥2 samples exceed the 130 CFU/100ml STV, and cumulatively across years 0% of intervals had GMs >35 CFU/100ml. Enterococcus data from MWRA_044, MWRA_048, MWRA_065, MWRA_106, and MWRA_141 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_044	Massachusetts Water Resources Authority	Water Quality	N. Dorchester Bay	North Dorchester Bay, mouth, day marker #5	42.333500	-71.001167
MWRA_048	Massachusetts Water Resources Authority	Water Quality	Moon Island	South Dorchester Bay, off Moon Island	42.309488	-70.989872
MWRA_065	Massachusetts Water Resources Authority	Water Quality	Outer Harbor	Inner President Roads, red nun #2	42.335000	-70.981500
MWRA_106	Massachusetts Water Resources Authority	Water Quality	Outer Harbor	Long Island, green can #17	42.332500	-70.959000
MWRA_141	Massachusetts Water Resources Authority	Water Quality	Outer Harbor	North of Peddocks Island, near Hull Gut	42.305000	-70.930833

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 2)

[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	04/14/11	10/26/11	27	10	109	14
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	18	10	20	10
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	495	19
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	20	10
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	97	12
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	24	10	20	10
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	52	11
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	168	13
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	31	10
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	10	10
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	74	11
MWRA_044	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	10	10
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	04/27/11	10/26/11	20	10	74	11
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	18	10	10	10
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	350	17
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	10	10
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	52	11

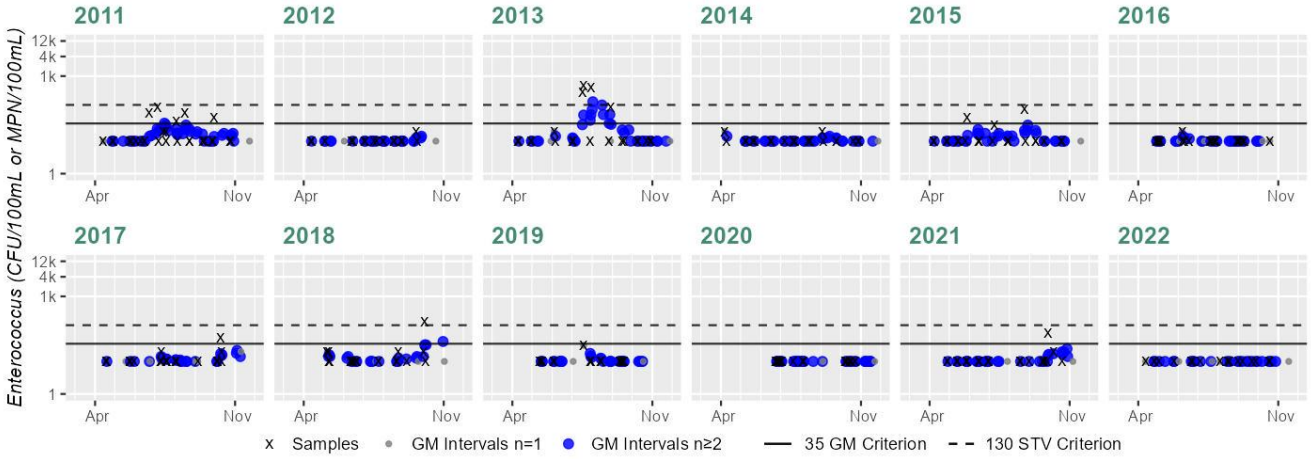
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	24	10	74	11
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	31	10
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	20	10
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	10	10
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	143	12
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	20	10
MWRA_048	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	10	10
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	04/27/11	10/26/11	20	10	10	10
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	18	10	10	10
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	341	15
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	41	10
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	135	12
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	24	10	20	10
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	20	10
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	31	10
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	20	10
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	20	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	41	10
MWRA_065	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	04/07/11	10/18/11	14	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	04/04/12	10/25/12	14	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	04/04/13	10/17/13	14	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	04/02/14	10/21/14	14	10	31	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	04/02/15	10/20/15	14	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	04/06/16	10/19/16	13	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	04/13/17	10/23/17	14	10	20	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	04/03/18	10/25/18	13	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	04/05/19	10/24/19	14	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	06/23/20	10/21/20	9	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	04/06/21	10/13/21	13	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococcus	04/04/22	10/27/22	14	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	04/07/11	10/18/11	14	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	04/04/12	10/25/12	14	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	04/04/13	10/17/13	14	10	20	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	04/02/14	10/21/14	14	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	04/02/15	10/20/15	14	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	04/06/16	10/19/16	13	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	04/13/17	10/23/17	14	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	04/03/18	10/25/18	13	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	04/05/19	10/24/19	14	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	06/23/20	10/21/20	9	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	04/06/21	10/13/21	13	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococcus	04/04/22	10/27/22	14	10	10	10

Station MWRA_044 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	27
SeasGM	14
#GMI	48
#GMI Ex	1
%GMI Ex	2%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	21
SeasGM	19
#GMI	35
#GMI Ex	9
%GMI Ex	25%
n>STV	3
%n>STV	14%

Variable*	Result
Samples	21
SeasGM	10
#GMI	37
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	22
SeasGM	12
#GMI	38
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	24
SeasGM	10
#GMI	34
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	11
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	13
#GMI	24
#GMI Ex	1
%GMI Ex	4%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	10
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	10
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	11
#GMI	30
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	10
#GMI	26
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)

2%

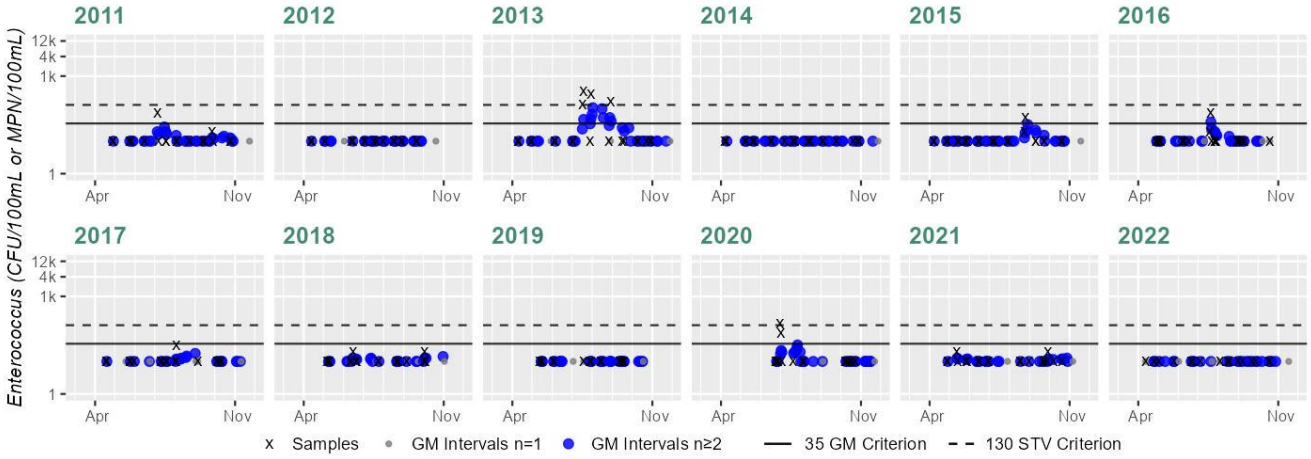
Cumulative %GMI Exceedance Current (Recent 5 Years)

0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_048 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	20
SeasGM	11
#GMI	36
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	21
SeasGM	17
#GMI	35
#GMI Ex	8
%GMI Ex	22%
n>STV	4
%n>STV	19%

Variable*	Result
Samples	21
SeasGM	10
#GMI	37
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	22
SeasGM	11
#GMI	38
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	24
SeasGM	11
#GMI	34
#GMI Ex	1
%GMI Ex	2%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	10
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	24
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	12
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	10
#GMI	30
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	10
#GMI	26
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)

2%

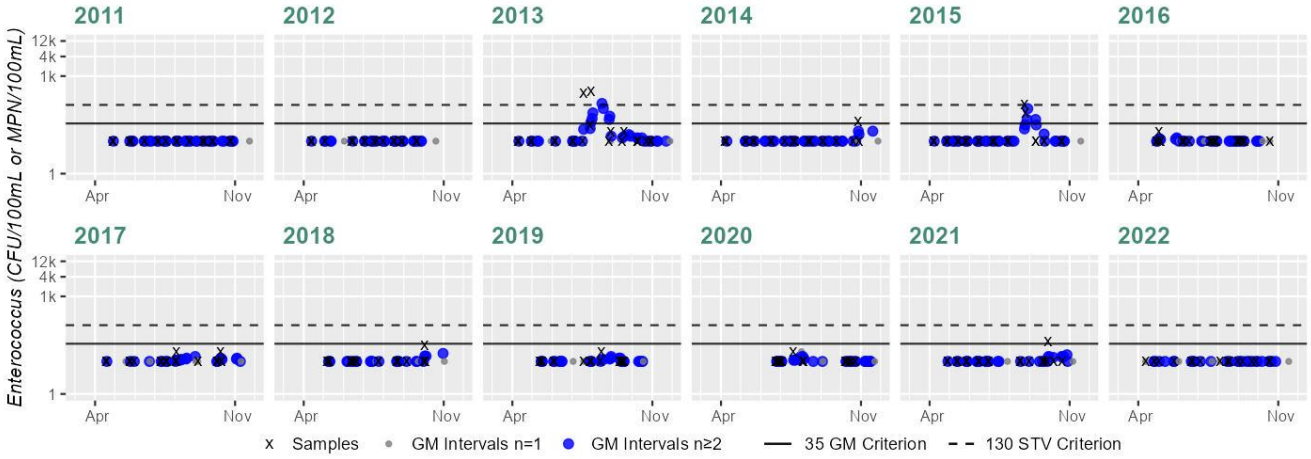
Cumulative %GMI Exceedance Current (Recent 5 Years)

0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_065 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	20
SeasGM	10
#GMI	36
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	21
SeasGM	15
#GMI	35
#GMI Ex	7
%GMI Ex	20%
n>STV	2
%n>STV	9%

Variable*	Result
Samples	21
SeasGM	10
#GMI	37
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	22
SeasGM	12
#GMI	38
#GMI Ex	3
%GMI Ex	7%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	24
SeasGM	10
#GMI	34
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	10
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	24
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	10
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	10
#GMI	30
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	10
#GMI	26
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

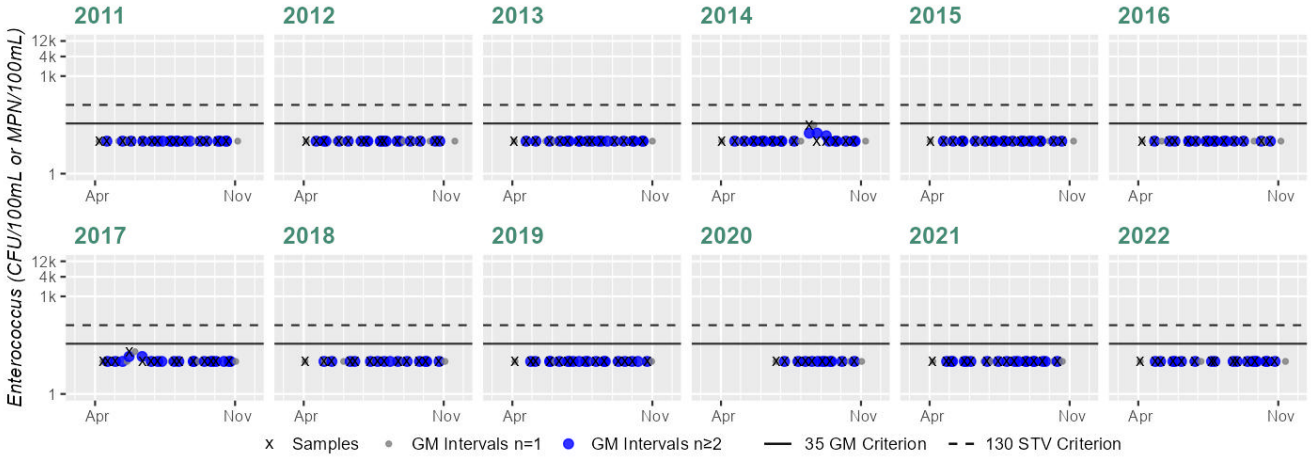
Cumulative %GMI Exceedance Current (2011-2022)
2%

Cumulative %GMI Exceedance Current (Recent 5 Years)
0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_106 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	18
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	20
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	16
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	14
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	9
SeasGM	10
#GMI	11
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	18
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	17
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

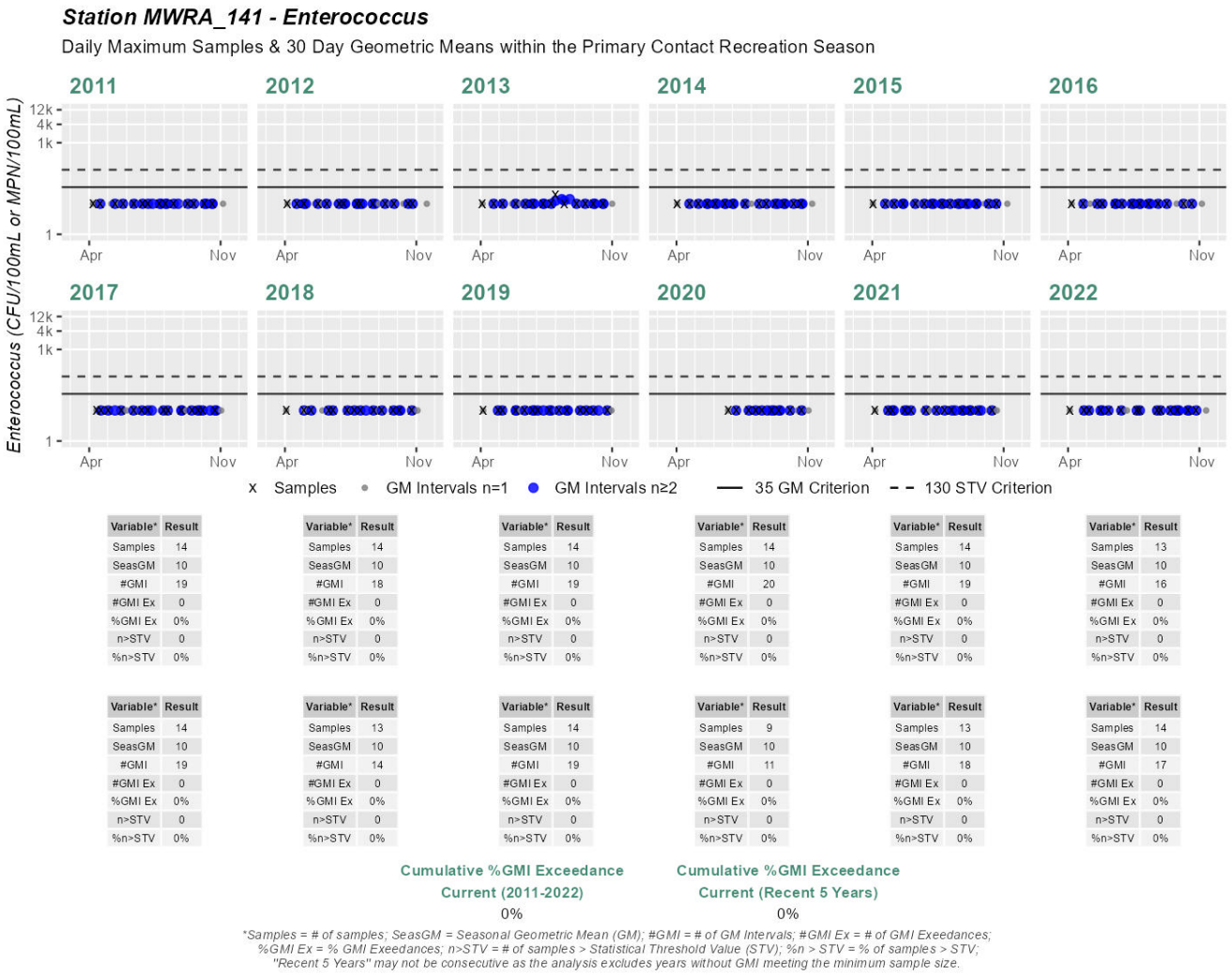
Cumulative %GMI Exceedance Current (2011-2022)

0%

Cumulative %GMI Exceedance Current (Recent 5 Years)

0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*



Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	18
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	20
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	16
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	14
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	9
SeasGM	10
#GMI	11
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	18
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	17
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Beach Postings

MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022) (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 2)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
3218	Grandview/ Winthrop	42.36186, -70.97530	42.35990, -70.97500	0%	10%	0%	0%	0%	0%	0%	19%	0%	1

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Boston Harbor (MA70-01): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 18.5098 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Boston Harbor (MA70-01) continues to be assessed as Fully Supporting based on bacteria data collected at 5 stations in 2018-2022. Boston Harbor has a beach with MDPH Beach Closure data: Grandview [Beach ID: 3218] beach in Winthrop. The beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (18.5097 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Boston Harbor. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Boston Harbor from 1997-2022 at 5 stations. Samples were collected from the following stations/sample years: MWRA_044 [N Dorchester Bay, mouth, day marker #5] from 1997-2010 (historic n=21-37/yr) & 2011-2022 (current n=20-29/yr), MWRA_065 [Inner President Rds, red nun #2] from 1997-2010 (n=7-43/yr) & 2011-2022 (n=20-27/yr), MWRA_106 [Long Island, green can #17] from 1997-2010 (n=21-39/yr) & 2011-2022 (n=18-24/yr), MWRA_048 [S Dorchester Bay, off Moon Island] from 1997-2010 (n=19-26/yr) & 2011-2022 (n=20-27/yr), MWRA_141 [N of Peddocks Island, near Hull Gut] from 1997-2010 (n=20-39/yr) & 2011-2022 (n=18-24/yr). Analysis of the recent five years of the multi-year high frequency Enterococcus datasets from all 5 stations indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml, 0 yrs had >10% of samples exceed the 252 CFU/100ml STV, and cumulatively across years 0% of intervals had GMs >68 CFU/100ml. Enterococcus data from MWRA_044, MWRA_048, MWRA_065, MWRA_106, and MWRA_141 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_044	Massachusetts Water Resources Authority	Water Quality	N. Dorchester Bay	North Dorchester Bay, mouth, day marker #5	42.333500	-71.001167

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_048	Massachusetts Water Resources Authority	Water Quality	Moon Island	South Dorchester Bay, off Moon Island	42.309488	-70.989872
MWRA_065	Massachusetts Water Resources Authority	Water Quality	Outer Harbor	Inner President Roads, red nun #2	42.335000	-70.981500
MWRA_106	Massachusetts Water Resources Authority	Water Quality	Outer Harbor	Long Island, green can #17	42.332500	-70.959000
MWRA_141	Massachusetts Water Resources Authority	Water Quality	Outer Harbor	North of Peddocks Island, near Hull Gut	42.305000	-70.930833

Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)

(MWRA 2024) (MassDEP Undated 1)

[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_044	Massachusetts Water Resources Authority	Enterococci	06/16/97	08/09/97	23	5	10	5
MWRA_044	Massachusetts Water Resources Authority	Enterococci	06/02/98	12/10/98	22	5	30	6
MWRA_044	Massachusetts Water Resources Authority	Enterococci	04/07/99	11/18/99	21	5	5	4
MWRA_044	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	28	5	85	6
MWRA_044	Massachusetts Water Resources Authority	Enterococci	01/02/01	11/19/01	34	5	50	6
MWRA_044	Massachusetts Water Resources Authority	Enterococci	02/11/02	12/18/02	26	5	120	7
MWRA_044	Massachusetts Water Resources Authority	Enterococci	04/23/03	11/26/03	23	5	15	5
MWRA_044	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	30	5	115	7

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_044	Massachusetts Water Resources Authority	Enterococci	03/29/05	12/29/05	26	5	130	8
MWRA_044	Massachusetts Water Resources Authority	Enterococci	01/12/06	12/13/06	29	5	810	10
MWRA_044	Massachusetts Water Resources Authority	Enterococci	04/23/07	12/07/07	24	10	213	11
MWRA_044	Massachusetts Water Resources Authority	Enterococci	03/06/08	12/18/08	29	10	63	12
MWRA_044	Massachusetts Water Resources Authority	Enterococci	01/29/09	11/03/09	37	10	52	11
MWRA_044	Massachusetts Water Resources Authority	Enterococci	01/26/10	10/28/10	28	10	1130	14
MWRA_044	Massachusetts Water Resources Authority	Enterococci	04/14/11	11/09/11	29	10	109	14
MWRA_044	Massachusetts Water Resources Authority	Enterococci	03/13/12	09/20/12	22	10	20	10
MWRA_044	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	495	17
MWRA_044	Massachusetts Water Resources Authority	Enterococci	04/07/14	10/29/14	21	10	20	10
MWRA_044	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	97	12
MWRA_044	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	26	10	20	10
MWRA_044	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	52	11
MWRA_044	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	168	13
MWRA_044	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	31	10
MWRA_044	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	10	10
MWRA_044	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	74	11

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_044	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	10	10
MWRA_048	Massachusetts Water Resources Authority	Enterococci	06/16/97	08/09/97	21	5	5	4
MWRA_048	Massachusetts Water Resources Authority	Enterococci	06/03/98	12/10/98	20	5	5	4
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/08/99	11/18/99	20	5	25	5
MWRA_048	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	26	5	15	5
MWRA_048	Massachusetts Water Resources Authority	Enterococci	01/02/01	11/19/01	25	5	75	6
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/10/02	12/18/02	19	5	45	6
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/30/03	11/26/03	19	5	5	4
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	20	5	25	5
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/28/05	12/29/05	19	5	110	6
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/25/06	12/13/06	24	5	100	6
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/23/07	12/07/07	22	10	10	10
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/23/08	11/07/08	19	10	10	10
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/30/09	11/03/09	21	10	41	11
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/27/10	10/28/10	20	10	20	10
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/27/11	11/09/11	22	10	74	11
MWRA_048	Massachusetts Water Resources Authority	Enterococci	03/13/12	09/20/12	22	10	10	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	350	16
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/07/14	10/29/14	21	10	10	10
MWRA_048	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	52	11
MWRA_048	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	27	10	74	11
MWRA_048	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	31	10
MWRA_048	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	20	10
MWRA_048	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	10	10
MWRA_048	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	143	12
MWRA_048	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	20	10
MWRA_048	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	10	10
MWRA_065	Massachusetts Water Resources Authority	Enterococci	01/13/97	12/22/97	37	5	25	5
MWRA_065	Massachusetts Water Resources Authority	Enterococci	01/05/98	12/21/98	43	5	30	6
MWRA_065	Massachusetts Water Resources Authority	Enterococci	01/06/99	12/23/99	41	5	120	6
MWRA_065	Massachusetts Water Resources Authority	Enterococci	01/10/00	04/11/00	7	5	5	4
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/03/01	11/19/01	23	5	15	5
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/10/02	12/18/02	19	5	35	6
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/30/03	11/26/03	19	5	50	5

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	20	5	10	5
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/28/05	12/29/05	22	5	25	6
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/25/06	12/13/06	24	5	115	8
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/23/07	12/07/07	22	10	31	10
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/23/08	11/07/08	20	10	52	12
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/30/09	11/03/09	21	10	20	10
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/27/10	10/28/10	20	10	145	13
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/27/11	11/09/11	22	10	10	10
MWRA_065	Massachusetts Water Resources Authority	Enterococci	03/13/12	09/20/12	22	10	10	10
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	341	14
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/07/14	10/29/14	21	10	41	10
MWRA_065	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	135	12
MWRA_065	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	27	10	20	10
MWRA_065	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	20	10
MWRA_065	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	31	10
MWRA_065	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	20	10
MWRA_065	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	20	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_065	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	41	10
MWRA_065	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/15/97	12/29/97	32	5	75	5
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/14/98	12/28/98	39	5	120	7
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/11/99	12/22/99	37	5	85	5
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/03/00	12/28/00	39	5	190	5
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/09/01	12/11/01	38	5	10	5
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/08/02	12/19/02	36	5	55	5
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/06/03	12/22/03	28	5	10	5
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/27/04	12/29/04	25	5	5	4
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/20/05	12/22/05	21	5	30	5
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/05/06	12/22/06	23	5	45	5
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/18/07	12/28/07	22	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/08/08	12/18/08	24	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/06/09	12/02/09	24	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/05/10	12/14/10	24	10	41	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/05/11	12/19/11	24	10	10	10

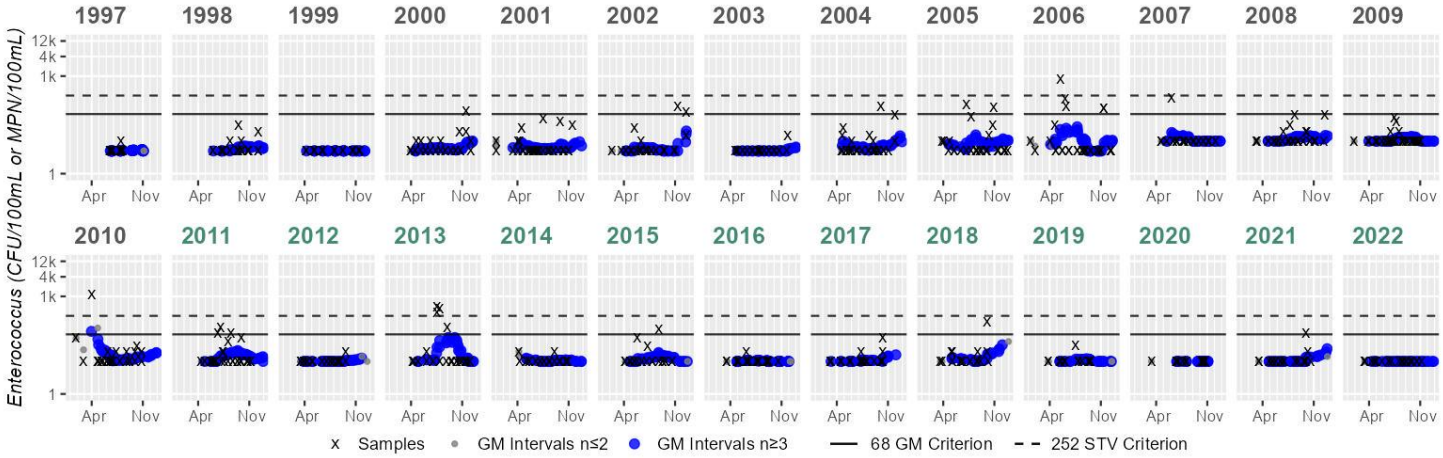
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/05/12	12/20/12	24	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/03/13	12/20/13	24	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/09/14	12/16/14	24	10	31	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/06/15	12/16/15	23	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/06/16	12/14/16	23	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/05/17	12/19/17	24	10	20	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/16/18	12/19/18	23	10	63	12
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/03/19	12/18/19	24	10	52	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/06/20	12/14/20	18	10	52	11
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/04/21	12/20/21	24	10	10	10
MWRA_106	Massachusetts Water Resources Authority	Enterococci	01/20/22	12/21/22	24	10	31	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/15/97	12/29/97	33	5	50	6
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/14/98	12/28/98	39	5	20	5
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/11/99	12/22/99	36	5	10	5
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/03/00	12/28/00	38	5	5	4
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/09/01	12/27/01	39	5	5	4
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/08/02	12/19/02	38	5	5	4

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/06/03	12/22/03	28	5	5	4
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/27/04	12/29/04	25	5	5	4
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/20/05	12/22/05	20	5	55	5
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/05/06	12/22/06	23	5	15	5
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/18/07	12/28/07	23	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/08/08	12/18/08	24	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/06/09	12/02/09	24	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/05/10	12/14/10	24	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/05/11	12/19/11	24	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/05/12	12/20/12	24	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/03/13	12/20/13	24	10	20	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/09/14	12/16/14	24	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/06/15	12/16/15	23	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/06/16	12/14/16	23	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/05/17	12/19/17	24	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/16/18	12/19/18	23	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/03/19	12/18/19	24	10	20	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/06/20	12/14/20	18	10	10	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/04/21	12/20/21	24	10	20	10
MWRA_141	Massachusetts Water Resources Authority	Enterococci	01/20/22	12/21/22	24	10	10	10

Station MWRA_044 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	23	Samples	22	Samples	21	Samples	28	Samples	34	Samples	26	Samples	23	Samples	30	Samples	26	Samples	29	Samples	24	Samples	29	Samples	37
SeasGM	5	SeasGM	6	SeasGM	5	SeasGM	6	SeasGM	6	SeasGM	7	SeasGM	5	SeasGM	7	SeasGM	8	SeasGM	10	SeasGM	11	SeasGM	12	SeasGM	11
#GMI	41	#GMI	39	#GMI	37	#GMI	51	#GMI	57	#GMI	43	#GMI	37	#GMI	49	#GMI	43	#GMI	50	#GMI	39	#GMI	50	#GMI	65
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	3%	%n>STV	0%	%n>STV	0%	%n>STV	0%

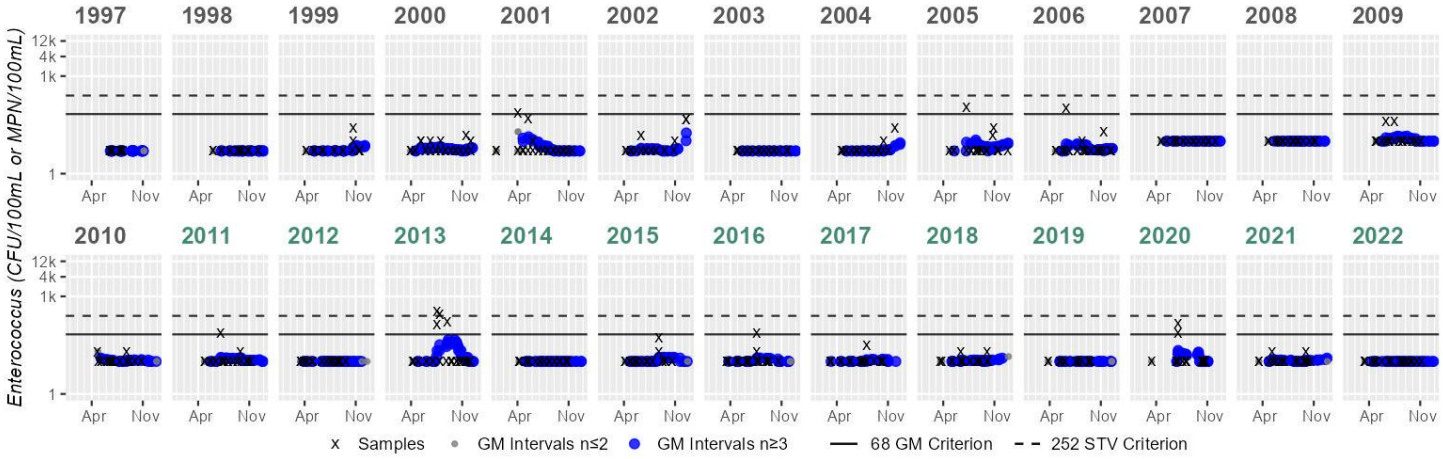
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	28	Samples	29	Samples	22	Samples	25	Samples	21	Samples	22	Samples	26	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	14	SeasGM	14	SeasGM	10	SeasGM	17	SeasGM	10	SeasGM	12	SeasGM	10	SeasGM	11	SeasGM	13	SeasGM	10	SeasGM	10	SeasGM	11	SeasGM	10
#GMI	49	#GMI	53	#GMI	37	#GMI	43	#GMI	37	#GMI	37	#GMI	43	#GMI	38	#GMI	35	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	1	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	2%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	1	n>STV	0	n>STV	0	n>STV	3	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	3%	%n>STV	0%	%n>STV	0%	%n>STV	12%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.

Station MWRA_048 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	21	Samples	20	Samples	20	Samples	26	Samples	25	Samples	19	Samples	19	Samples	20	Samples	19	Samples	24	Samples	22	Samples	19	Samples	21
SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	6	SeasGM	6	SeasGM	5	SeasGM	5	SeasGM	6	SeasGM	6	SeasGM	10	SeasGM	10	SeasGM	11
#GMI	37	#GMI	35	#GMI	35	#GMI	47	#GMI	41	#GMI	31	#GMI	29	#GMI	30	#GMI	29	#GMI	41	#GMI	35	#GMI	31	#GMI	36
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

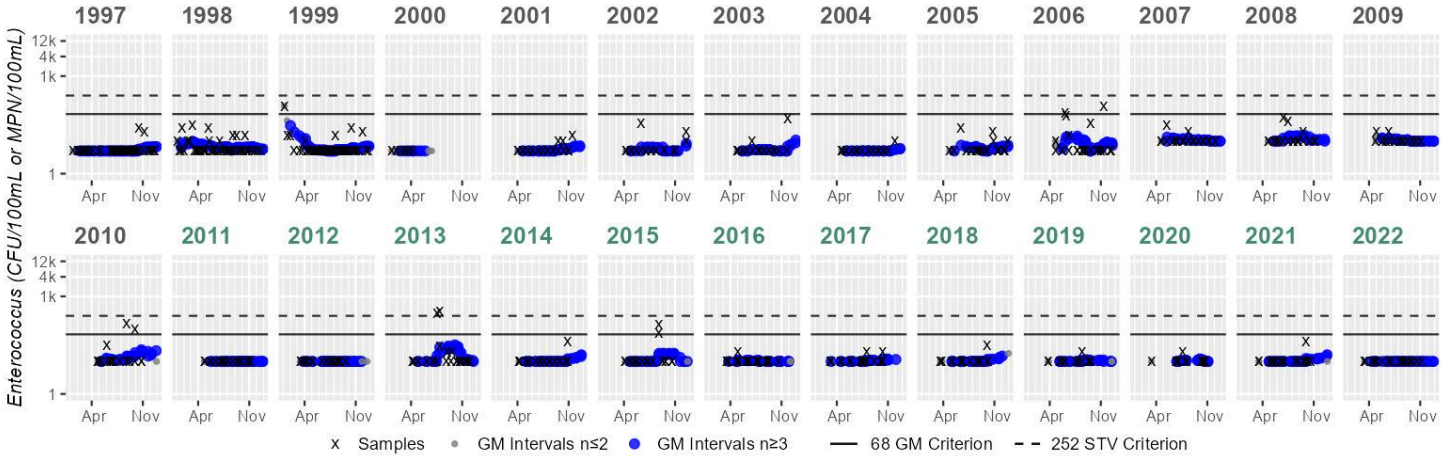
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	20	Samples	22	Samples	22	Samples	25	Samples	21	Samples	22	Samples	27	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	10	SeasGM	11	SeasGM	10	SeasGM	16	SeasGM	10	SeasGM	11	SeasGM	11	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	12	SeasGM	10	SeasGM	10
#GMI	34	#GMI	39	#GMI	37	#GMI	43	#GMI	37	#GMI	37	#GMI	45	#GMI	38	#GMI	35	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	2	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	8%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_065 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	37	Samples	43	Samples	41	Samples	7	Samples	23	Samples	19	Samples	19	Samples	20	Samples	22	Samples	24	Samples	22	Samples	20	Samples	21
SeasGM	5	SeasGM	6	SeasGM	6	SeasGM	5	SeasGM	5	SeasGM	6	SeasGM	5	SeasGM	5	SeasGM	6	SeasGM	8	SeasGM	10	SeasGM	12	SeasGM	10
#GMI	62	#GMI	76	#GMI	70	#GMI	9	#GMI	41	#GMI	31	#GMI	29	#GMI	30	#GMI	35	#GMI	41	#GMI	35	#GMI	33	#GMI	36
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

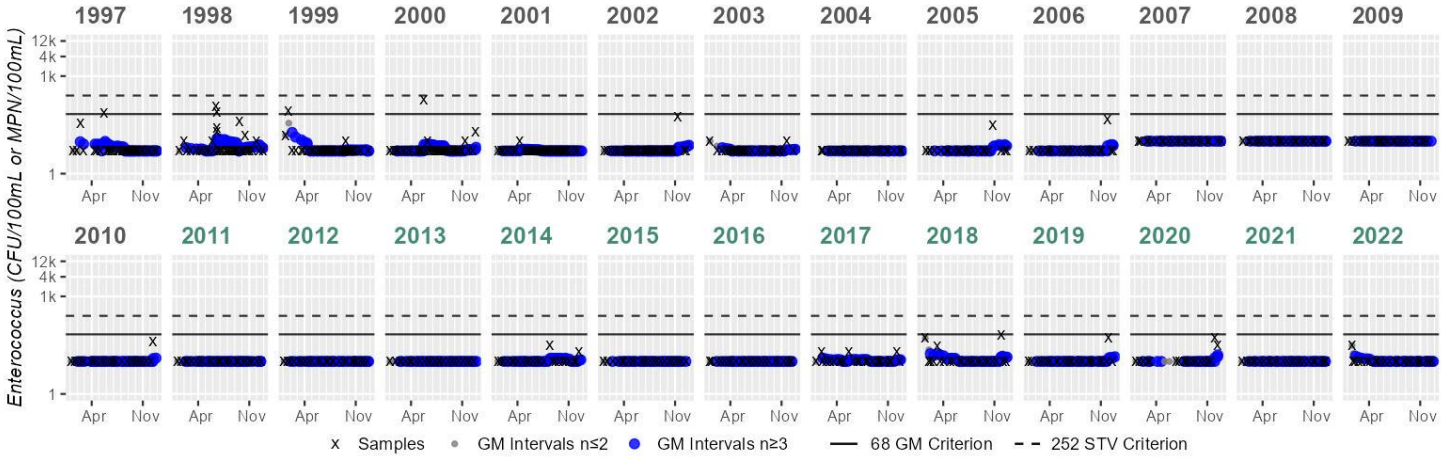
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	20	Samples	22	Samples	22	Samples	25	Samples	21	Samples	22	Samples	27	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	13	SeasGM	10	SeasGM	10	SeasGM	14	SeasGM	10	SeasGM	12	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10
#GMI	34	#GMI	39	#GMI	37	#GMI	43	#GMI	37	#GMI	37	#GMI	45	#GMI	38	#GMI	35	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	2	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	8%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_106 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season

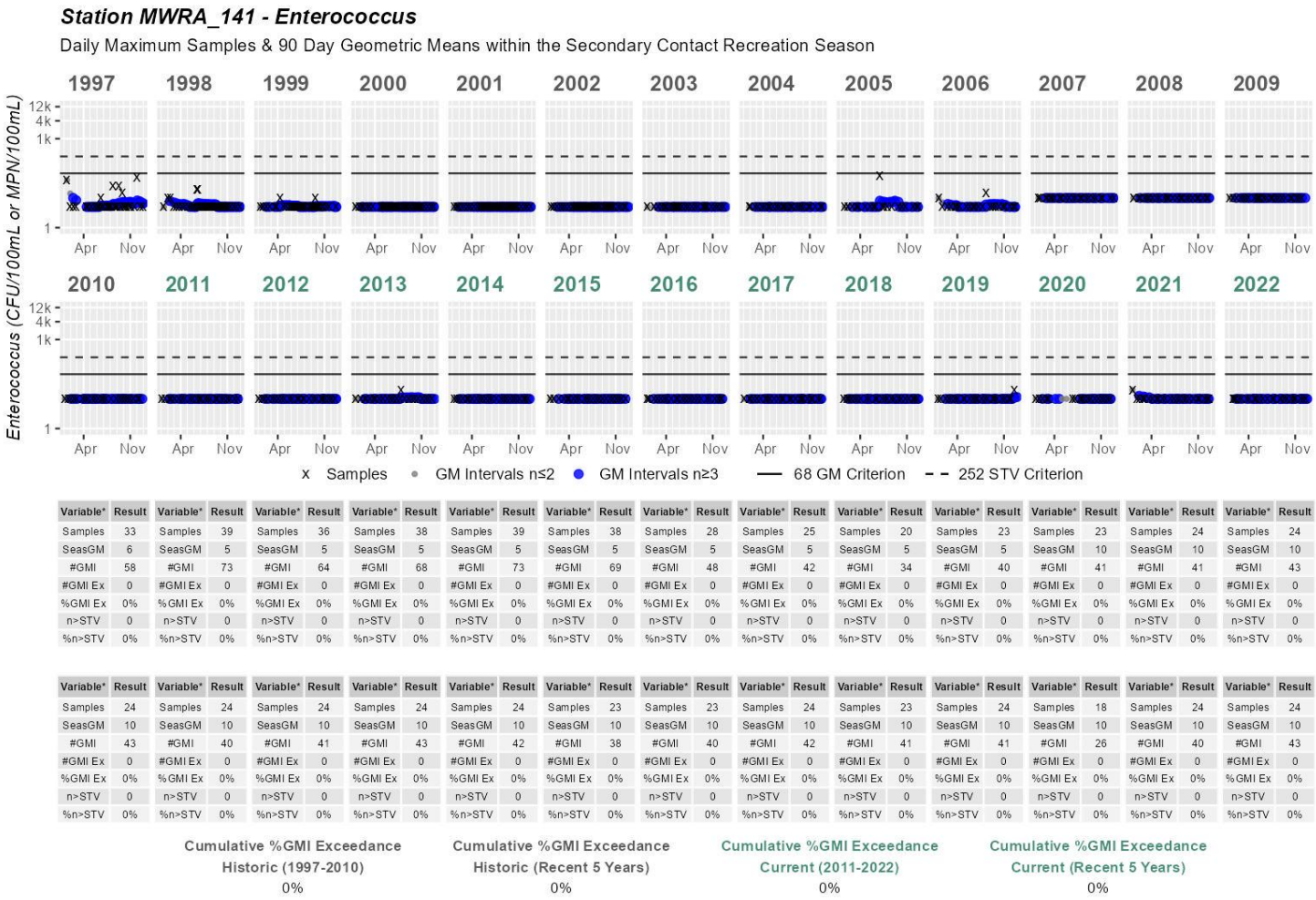


Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	32	Samples	39	Samples	37	Samples	39	Samples	38	Samples	36	Samples	28	Samples	25	Samples	21	Samples	23	Samples	22	Samples	24	Samples	24
SeasGM	5	SeasGM	7	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	10	SeasGM	10	SeasGM	10
#GMI	56	#GMI	73	#GMI	65	#GMI	70	#GMI	71	#GMI	65	#GMI	48	#GMI	42	#GMI	36	#GMI	40	#GMI	39	#GMI	41	#GMI	43
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	24	Samples	24	Samples	24	Samples	24	Samples	24	Samples	23	Samples	23	Samples	24	Samples	23	Samples	24	Samples	18	Samples	24	Samples	24
SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	12	SeasGM	10	SeasGM	11	SeasGM	10	SeasGM	10
#GMI	43	#GMI	40	#GMI	41	#GMI	43	#GMI	42	#GMI	38	#GMI	40	#GMI	42	#GMI	41	#GMI	41	#GMI	26	#GMI	40	#GMI	43
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	33	Samples	39	Samples	36	Samples	38	Samples	39	Samples	38	Samples	28	Samples	25	Samples	20	Samples	23	Samples	23	Samples	24	Samples	24
SeasGM	6	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	10	SeasGM	10	SeasGM	10
#GMI	58	#GMI	73	#GMI	64	#GMI	68	#GMI	73	#GMI	69	#GMI	48	#GMI	42	#GMI	34	#GMI	40	#GMI	41	#GMI	41	#GMI	43
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	24	Samples	24	Samples	24	Samples	24	Samples	24	Samples	23	Samples	23	Samples	24	Samples	23	Samples	24	Samples	18	Samples	24	Samples	24
SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10
#GMI	43	#GMI	40	#GMI	41	#GMI	43	#GMI	42	#GMI	38	#GMI	40	#GMI	42	#GMI	41	#GMI	41	#GMI	26	#GMI	40	#GMI	43
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Boston Harbor (MA70-01): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 18.5098 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Boston Inner Harbor (MA70-02)

Location:	From the Mystic and Chelsea rivers, Chelsea/Boston, to the line between Governors Island and Fort Independence, Boston (East Boston) (including Fort Point, Reserved and Little Mystic channels).
AU Type:	ESTUARY
AU Size:	2.56 SQUARE MILES
Classification/Qualifier:	SB(CSO)

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Enterococcus	R1_MA_2019_01	Unchanged
5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Contaminated Sediments (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Discharges from Biosolids (SLUDGE) Storage, Application or Disposal (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Upstream Source (Y)	--	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--	--
Enterococcus	Combined Sewer Overflows (N)	--	--	--	--	X	X
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Fecal Coliform	Combined Sewer Overflows (N)	--	--	X	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
PCBs in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Upstream Source (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Boston Inner Harbor (MA70-02) continues to be assessed as Not Supporting and the prior PCBs in Fish Tissue and Cause Unknown [Contaminants in Fish and/or Shellfish] impairment is being carried forward. MDPH included a site-specific advisory for Boston Inner Harbor (referred to by MDPH as ''Boston Harbor'') in their 2017 Guide to Eating Fish Safely in Massachusetts. The public should refer to the most recent MDPH information for the most up to date meal advice for sensitive and general populations.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Boston Inner Harbor (MA70-02): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.4537 sq mi (96%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The prohibited shellfish growing area represents 2.4522 sq mi (96%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as a combination of prohibited and conditionally approved, and/or restricted. There is insufficient information available to delist the existing Fecal Coliform impairment so the Shellfish Harvesting Use is evaluated as Not Supporting.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH4.0	Boston Inner Harbor	Prohibited	2.43511	95.2%
GBH5.3	Governors Island	Conditionally Restricted	0.00152	0.1%
GBH6.0	Nantasket Roads	Prohibited	0.01709	0.7%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Boston Inner Harbor (MA70-02) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert

Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Boston Inner Harbor (MA70-02) continues to be assessed as Not Supporting. The prior Enterococcus impairment is being carried forward based on bacteria data not meeting the threshold at 6 stations (most in Fort Point Channel) in 2018-2022. The shellfish growing areas (2.4537 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Use. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples at 10 Inner Harbor stations from 2011-2022; with stations/sample years up to downstream as follows: MWRA_015 [confluence of Mystic River & Chelsea Creek] (n=17-31/yr), MWRA_014 [Charles River mouth, USCG base, near MWR203] (n=17-31/yr), MWRA_138 [Fort Pt Channel mouth, off New England Aquarium, near BOS060 (further offshore than location 019)] (n=9-14/yr), MWRA_075 [Fort Pt Channel, BRdway, BOS070] (n=17-41/yr), MWRA_018 [Fort Pt Channel, Summer St., near BOS064] (n=18-41/yr), MWRA_178 [Fort Pt Channel, Moakley Bridge, upchannel side, near BOS062] (n=18-41/yr), MWRA_154 [Mid channel of Fort Pt Channel] (n=4-17/yr), MWRA_019 [Fort Pt Channel mouth, off New England Aquarium, near BOS060] (n=17-31/yr), MWRA_022 [Reserved Channel, midchannel] (n=17-31/yr) & MWRA_024 [mouth of Inner Harbor, red buoy 10] (n=28-45/yr). While Enterococcus data from MWRA_014, MWRA_015, MWRA_024, and MWRA_138 meet 2024 CALM guidance, data from the remaining 6 stations are indicative of an Enterococcus impairment and only the analyses indicative of impairment will be summarized here. Analysis of the recent five years of the multi-year high fq Enterococcus datasets are as follows: At MWRA_075 5/5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2018-2022, 87-100%), 5 yrs had >10% of samples exceed the 130 CFU/100ml STV (2018-2022, 44-77%) & cumulatively 92% of intervals had GMs >35 CFU/100ml; At MWRA_018 5/5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2018-2022, 58-86%), 5 yrs had >10% of samples exceed the 130 CFU/100ml STV (2018-2022, 21-36%) & cumulatively across years 72% of intervals had GMs >35 CFU/100ml; At MWRA_178 5/5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2018-2022, 44-76%), 5 yrs had >10% of samples exceed the 130 CFU/100ml STV (2018-2022, 15-31%) & cumulatively 60% of intervals had GMs >35 CFU/100ml; At MWRA_019 3/5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2018 & 2020-2021, 12-24%), 3 yrs had >10% of samples exceed the 130 CFU/100ml STV (2018 & 2020-2021, 10-16%) & cumulatively 11% of intervals had GMs >35 CFU/100ml; At MWRA_022 3/5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2020-2022, 15-34%), 2 yrs had >10% of samples exceed the 130 CFU/100ml STV (2020 and 2021, 21 & 10%) & cumulatively across years 12% of intervals had GMs >35 CFU/100ml. Analysis of the multi-year limited fq Enterococcus dataset from MWRA_154 indicated 3 out of 3 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml (2011 and 2013-2014, 50-100%), 2 yrs had ≥2 samples exceed the 130 CFU/100ml STV (2011 & 2014, n=5 & 2) & cumulatively 75% of intervals had GMs >35 CFU/100ml. Enterococcus data from MWRA_019, MWRA_154, MWRA_178, MWRA_018, MWRA_075 & MWRA_022 are indicative of an Enterococcus impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_014	Massachusetts Water Resources Authority	Water Quality	Upper Inner Harbor	Inner Harbor, Charles River mouth, USCG base, near MWR203	42.370500	-71.051500
MWRA_015	Massachusetts Water Resources Authority	Water Quality	Upper Inner Harbor	Inner Harbor, confluence of Mystic River and Chelsea Creek	42.383000	-71.045167
MWRA_018	Massachusetts Water Resources Authority	Water Quality	Fort Point Channel	Inner Harbor, Fort Point Channel, Summer St., near BOS064	42.350591	-71.051625
MWRA_019	Massachusetts Water Resources Authority	Water Quality	Fort Point Channel	Inner Harbor, Fort Point Channel mouth, off New England Aquarium, near BOS060	42.358772	-71.046180
MWRA_022	Massachusetts Water Resources Authority	Water Quality	Reserved Channel	Inner Harbor, Reserved Channel, midchannel	42.342667	-71.028667
MWRA_024	Massachusetts Water Resources Authority	Water Quality	Inner Harbor Mouth	Inner Harbor, mouth of Inner Harbor, red buoy 10	42.344306	-71.008849
MWRA_075	Massachusetts Water Resources Authority	Water Quality	Fort Point Channel	Inner Harbor, Fort Point Channel, Broadway, BOS070	42.344955	-71.059518
MWRA_138	Massachusetts Water Resources Authority	Water Quality	Mid-Inner Harbor	Inner Harbor, Fort Point Channel mouth, off New England Aquarium, near BOS060 (further offshore than location 019)	42.359319	-71.045680
MWRA_154	Massachusetts Water Resources Authority	Water Quality	Fort Point Channel	Mid channel of Fort Point Channel	42.354500	-71.049167
MWRA_178	Massachusetts Water Resources Authority	Water Quality	Fort Point Channel	Inner Harbor, Fort Point Channel, Moakley Bridge, upchannel side, near BOS062	42.353708	-71.049938

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis)

(MWRA 2024) (MassDEP Undated 2)

[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	05/03/11	10/28/11	23	10	481	18
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	05/17/12	10/04/12	20	10	122	12
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	04/24/13	10/31/13	25	10	246	25
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	04/30/14	10/24/14	21	10	233	12

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	04/13/15	10/06/15	26	10	328	17
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	05/09/16	10/12/16	25	10	30	10
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	04/04/17	10/19/17	31	10	714	16
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	04/25/18	10/22/18	25	10	63	14
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	05/03/19	08/30/19	21	10	31	10
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	07/21/20	09/25/20	19	10	934	29
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	04/01/21	09/16/21	19	10	448	18
MWRA_014	Massachusetts Water Resources Authority	Enterococcus	04/14/22	10/17/22	17	10	30	10
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	05/03/11	10/28/11	23	10	670	25
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	04/24/12	10/04/12	28	10	1850	19
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	04/24/13	10/31/13	25	10	1210	31
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	04/30/14	10/24/14	21	10	1170	19
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	04/13/15	10/06/15	26	10	2280	26
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	05/09/16	10/12/16	25	10	134	13
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	04/04/17	10/19/17	31	10	1620	17
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	04/25/18	10/22/18	26	10	676	21
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	05/03/19	08/30/19	21	10	52	15

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	07/21/20	09/25/20	19	10	631	17
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	04/01/21	09/16/21	19	10	576	23
MWRA_015	Massachusetts Water Resources Authority	Enterococcus	04/14/22	10/17/22	17	10	30	11
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	04/05/11	10/28/11	41	10	13000	92
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	04/23/12	10/30/12	24	10	11200	109
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	04/24/13	10/31/13	29	10	9800	41
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	04/08/14	10/24/14	26	10	5790	51
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	04/10/15	10/06/15	29	10	24200	63
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	05/09/16	10/26/16	26	10	173	19
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	04/03/17	10/20/17	28	10	2910	34
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	21	10	13000	49
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	24200	83
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/16/20	19	10	24200	107
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	04/20/21	09/29/21	19	10	7700	60
MWRA_018	Massachusetts Water Resources Authority	Enterococcus	04/13/22	10/24/22	18	10	1990	35
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	04/14/11	10/28/11	23	10	211	16
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	05/17/12	10/04/12	20	10	240	14

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	04/24/13	10/31/13	25	10	1920	31
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	04/30/14	10/24/14	21	10	175	14
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	04/13/15	10/06/15	23	10	199	19
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	05/09/16	10/12/16	25	10	63	11
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	04/04/17	10/19/17	31	10	1660	19
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	04/25/18	10/22/18	25	10	1180	22
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	05/03/19	08/30/19	21	10	52	13
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	07/21/20	09/25/20	19	10	388	20
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	04/01/21	09/16/21	19	10	345	16
MWRA_019	Massachusetts Water Resources Authority	Enterococcus	04/14/22	10/17/22	17	10	31	11
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	05/03/11	10/28/11	21	10	2190	20
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	04/24/12	10/04/12	28	10	3080	22
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	04/24/13	10/31/13	25	10	3650	30
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	04/30/14	10/24/14	21	10	480	21
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	04/13/15	10/06/15	26	10	520	28
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	05/09/16	10/12/16	25	10	20	10
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	04/04/17	10/19/17	31	10	24200	21

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	04/25/18	10/22/18	25	10	175	15
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	05/03/19	08/30/19	21	10	121	15
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	07/21/20	09/25/20	19	10	4110	29
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	04/01/21	09/16/21	19	10	177	19
MWRA_022	Massachusetts Water Resources Authority	Enterococcus	04/14/22	10/17/22	17	10	480	15
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	04/07/11	11/17/11	45	10	246	16
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	04/04/12	10/25/12	42	10	175	11
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	04/04/13	11/21/13	39	10	2100	19
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	04/02/14	10/24/14	35	10	160	11
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	04/02/15	11/05/15	40	10	857	14
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	04/06/16	11/18/16	38	10	52	10
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	04/04/17	11/16/17	45	10	457	13
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	04/03/18	10/25/18	38	10	51	12
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	04/05/19	10/24/19	35	10	31	10
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	06/23/20	10/21/20	28	10	345	13
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	04/01/21	10/13/21	32	10	122	12
MWRA_024	Massachusetts Water Resources Authority	Enterococcus	04/04/22	10/27/22	31	10	31	10

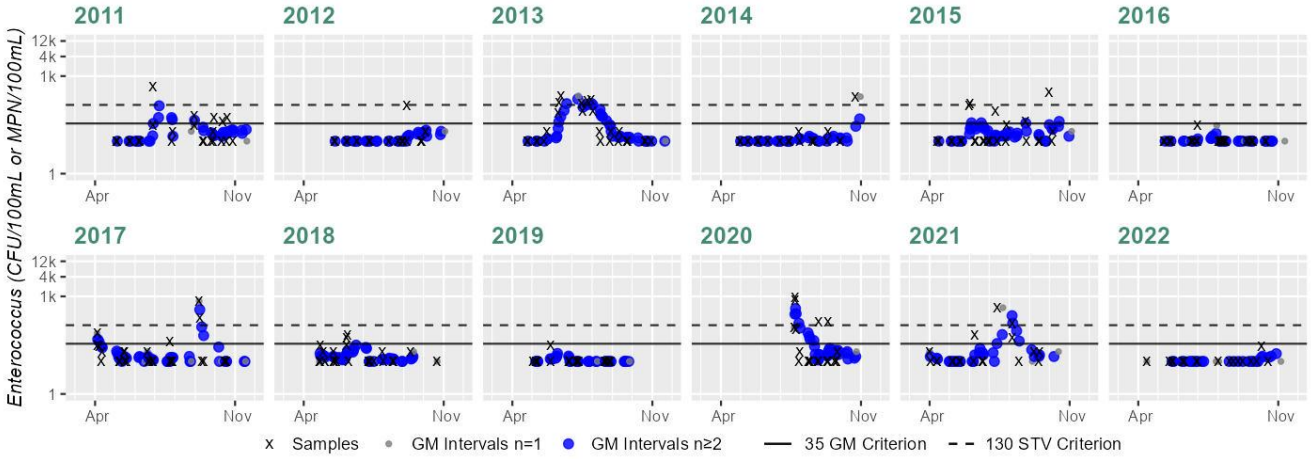
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	04/05/11	10/28/11	41	10	15500	753
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	04/23/12	10/30/12	23	10	73300	793
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	04/24/13	10/31/13	29	10	6870	211
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	04/08/14	10/24/14	26	10	7700	169
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	04/13/15	10/06/15	21	10	3450	78
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	05/09/16	10/26/16	26	10	6490	89
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	04/03/17	10/20/17	28	10	9800	280
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	21	10	12000	179
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	17	10	11200	370
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/16/20	19	10	24300	321
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	04/20/21	09/29/21	18	20	14100	552
MWRA_075	Massachusetts Water Resources Authority	Enterococcus	04/13/22	10/24/22	18	10	5480	175
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	04/07/11	10/18/11	14	10	146	12
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	04/04/12	10/25/12	14	10	20	10
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	04/04/13	10/17/13	14	10	158	15
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	04/02/14	10/21/14	14	10	63	12
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	04/02/15	10/20/15	14	10	20	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	04/06/16	10/19/16	13	10	10	10
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	04/13/17	10/23/17	14	10	63	12
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	04/03/18	10/25/18	13	10	288	18
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	04/05/19	10/24/19	14	10	30	10
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	06/23/20	10/21/20	9	10	161	13
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	04/06/21	10/13/21	13	10	120	15
MWRA_138	Massachusetts Water Resources Authority	Enterococcus	04/04/22	10/27/22	14	10	30	11
MWRA_154	Massachusetts Water Resources Authority	Enterococcus	04/05/11	10/14/11	17	10	4610	64
MWRA_154	Massachusetts Water Resources Authority	Enterococcus	04/23/12	10/30/12	4	63	3080	522
MWRA_154	Massachusetts Water Resources Authority	Enterococcus	05/10/13	07/26/13	4	41	85	54
MWRA_154	Massachusetts Water Resources Authority	Enterococcus	04/08/14	10/23/14	5	20	3450	112
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	04/05/11	10/28/11	41	10	9800	61
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	04/23/12	10/30/12	24	10	14100	49
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	04/24/13	10/31/13	29	10	3450	36
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	04/08/14	10/24/14	26	10	5170	52
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	04/13/15	10/06/15	21	10	402	15
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	05/09/16	10/26/16	26	10	96	15

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	04/03/17	10/20/17	28	10	1720	29
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	20	10	8660	33
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	9610	52
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/16/20	19	10	3080	56
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	04/20/21	09/29/21	19	10	1170	47
MWRA_178	Massachusetts Water Resources Authority	Enterococcus	04/13/22	10/24/22	18	10	860	30

Station MWRA_014 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	23
SeasGM	18
#GMI	35
#GMI Ex	5
%GMI Ex	14%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	20
SeasGM	12
#GMI	34
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	25
SeasGM	25
#GMI	43
#GMI Ex	14
%GMI Ex	32%
n>STV	5
%n>STV	20%

Variable*	Result
Samples	21
SeasGM	12
#GMI	36
#GMI Ex	1
%GMI Ex	2%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	26
SeasGM	17
#GMI	46
#GMI Ex	4
%GMI Ex	8%
n>STV	2
%n>STV	7%

Variable*	Result
Samples	25
SeasGM	10
#GMI	37
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	31
SeasGM	16
#GMI	48
#GMI Ex	5
%GMI Ex	10%
n>STV	2
%n>STV	6%

Variable*	Result
Samples	25
SeasGM	14
#GMI	41
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	21
SeasGM	10
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	29
#GMI	32
#GMI Ex	9
%GMI Ex	28%
n>STV	4
%n>STV	21%

Variable*	Result
Samples	19
SeasGM	18
#GMI	32
#GMI Ex	6
%GMI Ex	18%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	17
SeasGM	10
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

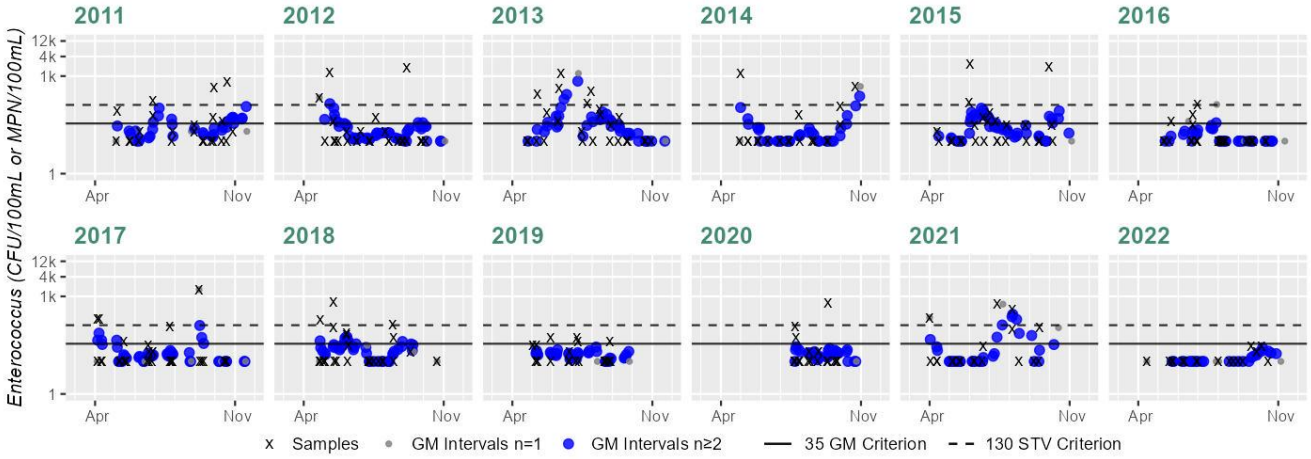
Cumulative %GMI Exceedance Current (2011-2022)
9%

Cumulative %GMI Exceedance Current (Recent 5 Years)
9%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_015 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	23
SeasGM	25
#GMI	35
#GMI Ex	12
%GMI Ex	34%
n>STV	3
%n>STV	13%

Variable*	Result
Samples	28
SeasGM	19
#GMI	50
#GMI Ex	9
%GMI Ex	18%
n>STV	3
%n>STV	10%

Variable*	Result
Samples	25
SeasGM	31
#GMI	43
#GMI Ex	17
%GMI Ex	39%
n>STV	5
%n>STV	20%

Variable*	Result
Samples	21
SeasGM	19
#GMI	36
#GMI Ex	5
%GMI Ex	13%
n>STV	2
%n>STV	9%

Variable*	Result
Samples	26
SeasGM	26
#GMI	46
#GMI Ex	17
%GMI Ex	36%
n>STV	3
%n>STV	11%

Variable*	Result
Samples	25
SeasGM	13
#GMI	37
#GMI Ex	1
%GMI Ex	2%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	31
SeasGM	17
#GMI	48
#GMI Ex	7
%GMI Ex	14%
n>STV	3
%n>STV	9%

Variable*	Result
Samples	26
SeasGM	21
#GMI	43
#GMI Ex	8
%GMI Ex	18%
n>STV	3
%n>STV	11%

Variable*	Result
Samples	21
SeasGM	15
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	17
#GMI	32
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	23
#GMI	32
#GMI Ex	8
%GMI Ex	25%
n>STV	3
%n>STV	15%

Variable*	Result
Samples	17
SeasGM	11
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)

18%

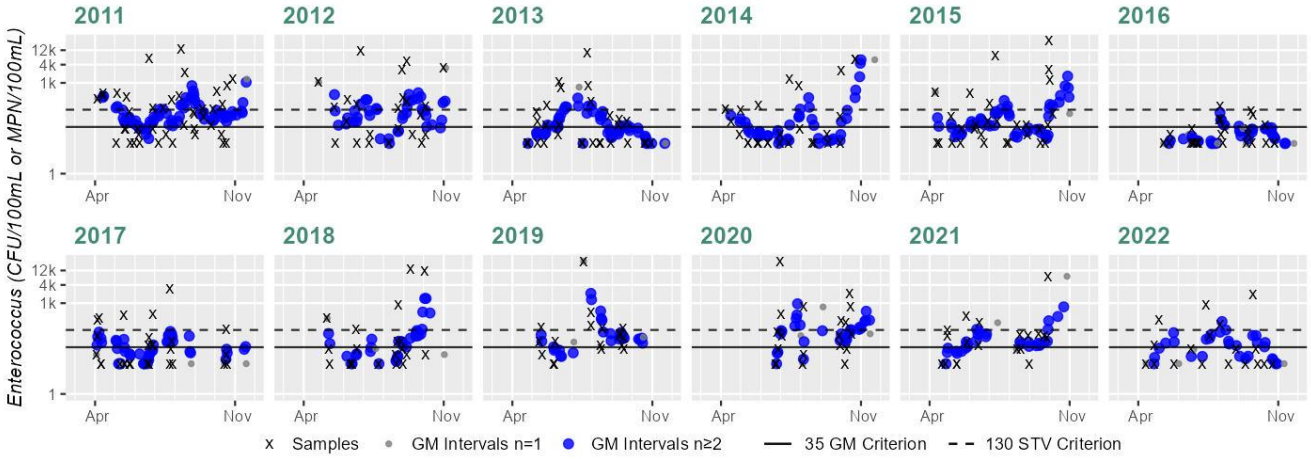
Cumulative %GMI Exceedance Current (Recent 5 Years)

9%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_018 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	41
SeasGM	92
#GMI	71
#GMI Ex	65
%GMI Ex	91%
n>STV	18
%n>STV	43%

Variable*	Result
Samples	24
SeasGM	109
#GMI	41
#GMI Ex	35
%GMI Ex	85%
n>STV	12
%n>STV	50%

Variable*	Result
Samples	29
SeasGM	41
#GMI	51
#GMI Ex	23
%GMI Ex	45%
n>STV	6
%n>STV	20%

Variable*	Result
Samples	26
SeasGM	51
#GMI	46
#GMI Ex	20
%GMI Ex	43%
n>STV	7
%n>STV	26%

Variable*	Result
Samples	29
SeasGM	63
#GMI	52
#GMI Ex	32
%GMI Ex	61%
n>STV	7
%n>STV	24%

Variable*	Result
Samples	26
SeasGM	19
#GMI	39
#GMI Ex	6
%GMI Ex	15%
n>STV	1
%n>STV	3%

Variable*	Result
Samples	28
SeasGM	34
#GMI	46
#GMI Ex	21
%GMI Ex	45%
n>STV	6
%n>STV	21%

Variable*	Result
Samples	21
SeasGM	49
#GMI	31
#GMI Ex	19
%GMI Ex	61%
n>STV	5
%n>STV	23%

Variable*	Result
Samples	18
SeasGM	83
#GMI	29
#GMI Ex	23
%GMI Ex	79%
n>STV	6
%n>STV	33%

Variable*	Result
Samples	19
SeasGM	107
#GMI	29
#GMI Ex	25
%GMI Ex	86%
n>STV	7
%n>STV	36%

Variable*	Result
Samples	19
SeasGM	60
#GMI	30
#GMI Ex	23
%GMI Ex	76%
n>STV	4
%n>STV	21%

Variable*	Result
Samples	18
SeasGM	35
#GMI	29
#GMI Ex	17
%GMI Ex	58%
n>STV	4
%n>STV	22%

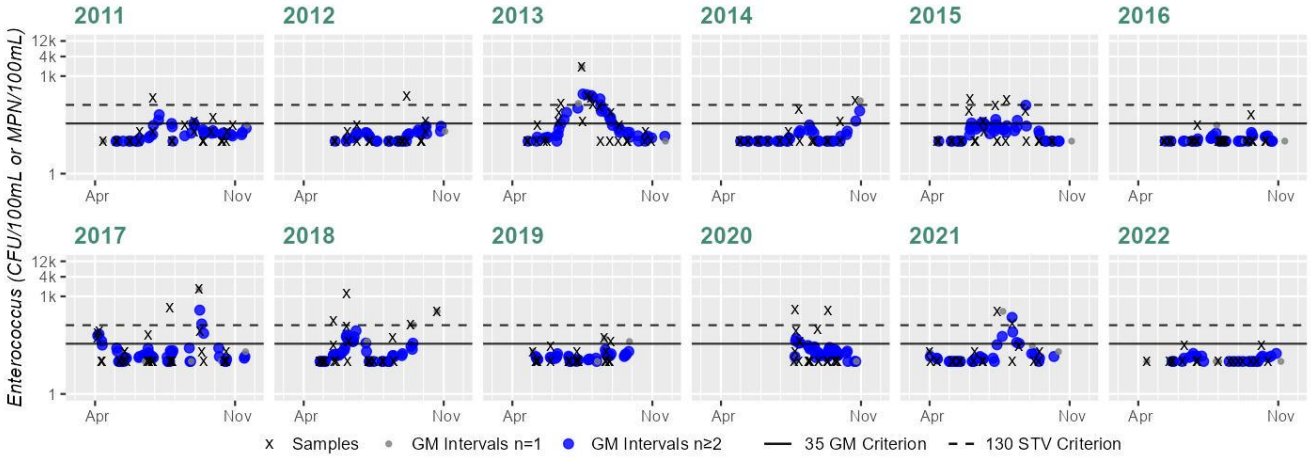
Cumulative %GMI Exceedance Current (2011-2022)
62%

Cumulative %GMI Exceedance Current (Recent 5 Years)
72%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_019 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	23
SeasGM	16
#GMI	39
#GMI Ex	3
%GMI Ex	7%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	20
SeasGM	14
#GMI	34
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	25
SeasGM	31
#GMI	43
#GMI Ex	15
%GMI Ex	34%
n>STV	5
%n>STV	20%

Variable*	Result
Samples	21
SeasGM	14
#GMI	36
#GMI Ex	2
%GMI Ex	5%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	23
SeasGM	19
#GMI	41
#GMI Ex	6
%GMI Ex	14%
n>STV	2
%n>STV	8%

Variable*	Result
Samples	25
SeasGM	11
#GMI	37
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	31
SeasGM	19
#GMI	48
#GMI Ex	6
%GMI Ex	12%
n>STV	2
%n>STV	6%

Variable*	Result
Samples	25
SeasGM	22
#GMI	41
#GMI Ex	10
%GMI Ex	24%
n>STV	4
%n>STV	16%

Variable*	Result
Samples	21
SeasGM	13
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	20
#GMI	32
#GMI Ex	4
%GMI Ex	12%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	19
SeasGM	16
#GMI	32
#GMI Ex	5
%GMI Ex	15%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	17
SeasGM	11
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

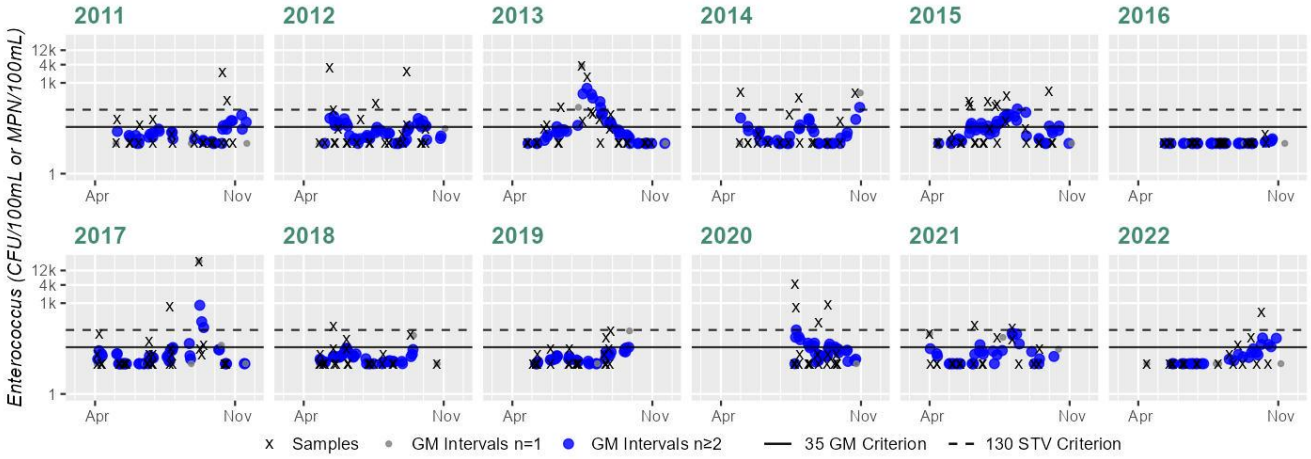
Cumulative %GMI Exceedance Current (2011-2022)
11%

Cumulative %GMI Exceedance Current (Recent 5 Years)
11%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_022 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	21
SeasGM	20
#GMI	33
#GMI Ex	6
%GMI Ex	18%
n>STV	2
%n>STV	9%

Variable*	Result
Samples	28
SeasGM	22
#GMI	50
#GMI Ex	18
%GMI Ex	36%
n>STV	3
%n>STV	10%

Variable*	Result
Samples	25
SeasGM	30
#GMI	43
#GMI Ex	15
%GMI Ex	34%
n>STV	3
%n>STV	12%

Variable*	Result
Samples	21
SeasGM	21
#GMI	36
#GMI Ex	7
%GMI Ex	19%
n>STV	3
%n>STV	14%

Variable*	Result
Samples	26
SeasGM	28
#GMI	46
#GMI Ex	19
%GMI Ex	41%
n>STV	7
%n>STV	26%

Variable*	Result
Samples	25
SeasGM	10
#GMI	37
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	31
SeasGM	21
#GMI	48
#GMI Ex	4
%GMI Ex	8%
n>STV	2
%n>STV	6%

Variable*	Result
Samples	25
SeasGM	15
#GMI	41
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	21
SeasGM	15
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	29
#GMI	32
#GMI Ex	11
%GMI Ex	34%
n>STV	4
%n>STV	21%

Variable*	Result
Samples	19
SeasGM	19
#GMI	32
#GMI Ex	5
%GMI Ex	15%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	17
SeasGM	15
#GMI	25
#GMI Ex	5
%GMI Ex	20%
n>STV	1
%n>STV	5%

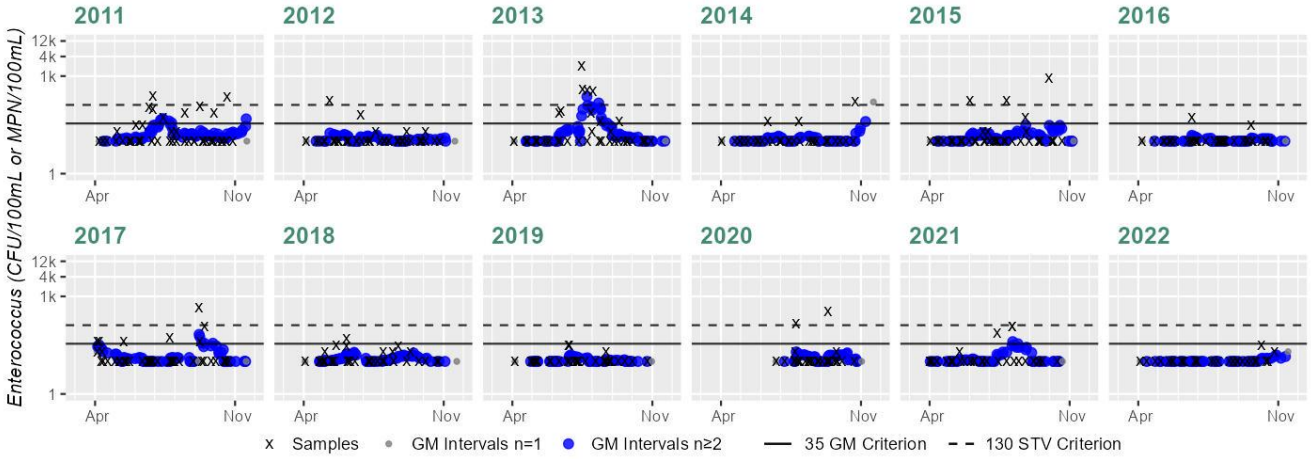
Cumulative %GMI Exceedance Current (2011-2022)
19%

Cumulative %GMI Exceedance Current (Recent 5 Years)
12%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_024 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	45
SeasGM	16
#GMI	79
#GMI Ex	7
%GMI Ex	8%
n>STV	2
%n>STV	4%

Variable*	Result
Samples	42
SeasGM	11
#GMI	75
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	2%

Variable*	Result
Samples	39
SeasGM	19
#GMI	72
#GMI Ex	13
%GMI Ex	18%
n>STV	4
%n>STV	10%

Variable*	Result
Samples	35
SeasGM	11
#GMI	61
#GMI Ex	1
%GMI Ex	1%
n>STV	1
%n>STV	2%

Variable*	Result
Samples	40
SeasGM	14
#GMI	71
#GMI Ex	0
%GMI Ex	0%
n>STV	3
%n>STV	7%

Variable*	Result
Samples	38
SeasGM	10
#GMI	68
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	45
SeasGM	13
#GMI	82
#GMI Ex	5
%GMI Ex	6%
n>STV	1
%n>STV	2%

Variable*	Result
Samples	38
SeasGM	12
#GMI	69
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	35
SeasGM	10
#GMI	60
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	28
SeasGM	13
#GMI	46
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	7%

Variable*	Result
Samples	32
SeasGM	12
#GMI	56
#GMI Ex	1
%GMI Ex	1%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	31
SeasGM	10
#GMI	55
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

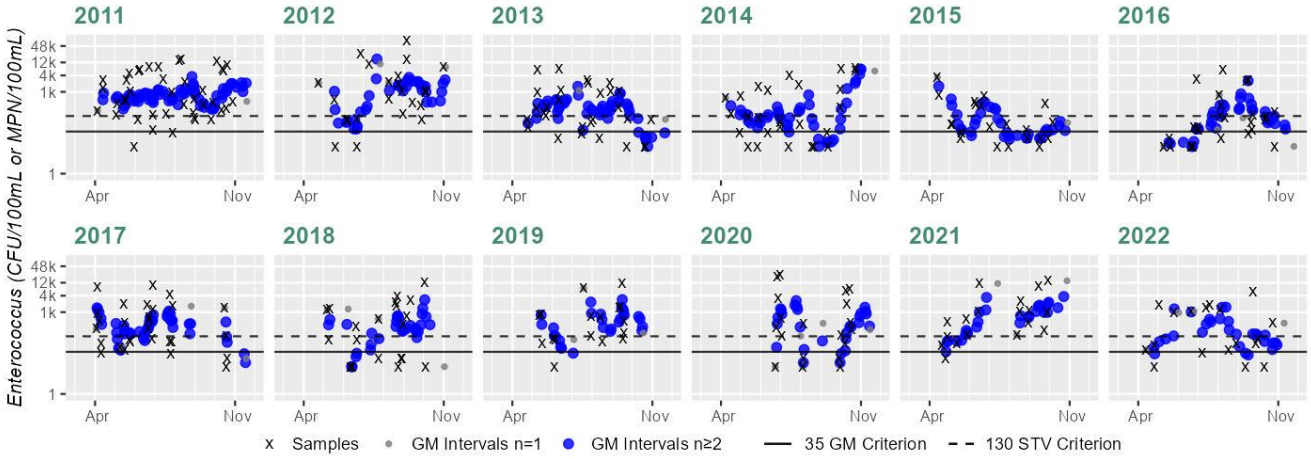
Cumulative %GMI Exceedance Current (2011-2022)
3%

Cumulative %GMI Exceedance Current (Recent 5 Years)
0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_075 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	41
SeasGM	753
#GMI	71
#GMI Ex	71
%GMI Ex	100%
n>STV	34
%n>STV	82%

Variable*	Result
Samples	23
SeasGM	793
#GMI	38
#GMI Ex	38
%GMI Ex	100%
n>STV	17
%n>STV	73%

Variable*	Result
Samples	29
SeasGM	211
#GMI	51
#GMI Ex	44
%GMI Ex	86%
n>STV	16
%n>STV	55%

Variable*	Result
Samples	26
SeasGM	169
#GMI	46
#GMI Ex	39
%GMI Ex	84%
n>STV	12
%n>STV	46%

Variable*	Result
Samples	21
SeasGM	78
#GMI	37
#GMI Ex	23
%GMI Ex	62%
n>STV	7
%n>STV	33%

Variable*	Result
Samples	26
SeasGM	89
#GMI	39
#GMI Ex	33
%GMI Ex	84%
n>STV	9
%n>STV	34%

Variable*	Result
Samples	28
SeasGM	280
#GMI	46
#GMI Ex	44
%GMI Ex	95%
n>STV	16
%n>STV	57%

Variable*	Result
Samples	21
SeasGM	179
#GMI	31
#GMI Ex	27
%GMI Ex	87%
n>STV	11
%n>STV	52%

Variable*	Result
Samples	17
SeasGM	370
#GMI	27
#GMI Ex	26
%GMI Ex	96%
n>STV	11
%n>STV	64%

Variable*	Result
Samples	19
SeasGM	321
#GMI	29
#GMI Ex	26
%GMI Ex	89%
n>STV	13
%n>STV	68%

Variable*	Result
Samples	18
SeasGM	552
#GMI	28
#GMI Ex	28
%GMI Ex	100%
n>STV	14
%n>STV	77%

Variable*	Result
Samples	18
SeasGM	175
#GMI	29
#GMI Ex	26
%GMI Ex	89%
n>STV	8
%n>STV	44%

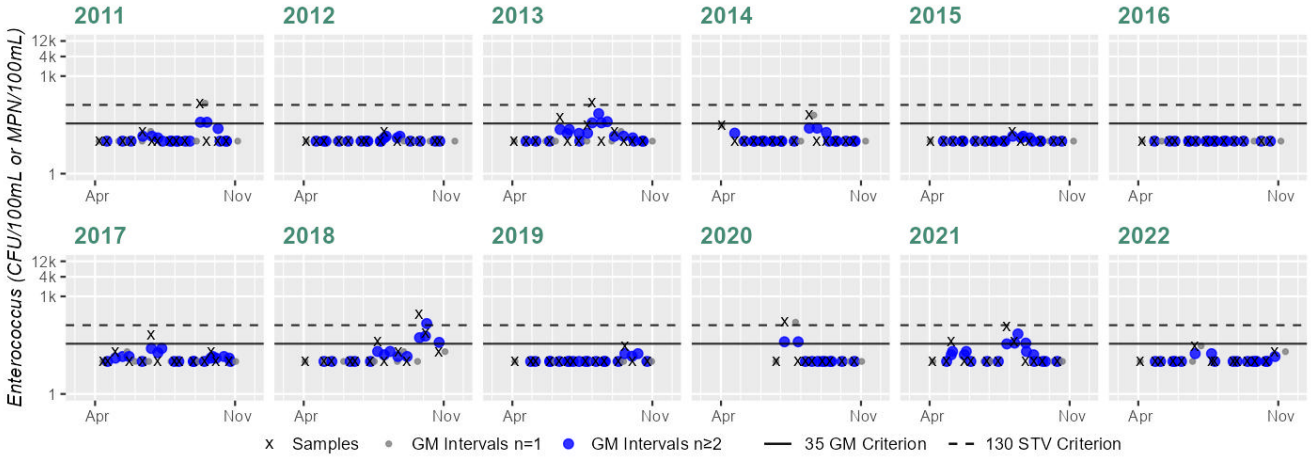
Cumulative %GMI Exceedance Current (2011-2022)
90%

Cumulative %GMI Exceedance Current (Recent 5 Years)
92%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_138 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	14
SeasGM	12
#GMI	19
#GMI Ex	2
%GMI Ex	10%
n>STV	1
%n>STV	7%

Variable*	Result
Samples	14
SeasGM	10
#GMI	18
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	15
#GMI	19
#GMI Ex	4
%GMI Ex	21%
n>STV	1
%n>STV	7%

Variable*	Result
Samples	14
SeasGM	12
#GMI	20
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	16
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	12
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	18
#GMI	14
#GMI Ex	4
%GMI Ex	28%
n>STV	1
%n>STV	7%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	9
SeasGM	13
#GMI	11
#GMI Ex	2
%GMI Ex	18%
n>STV	1
%n>STV	11%

Variable*	Result
Samples	13
SeasGM	15
#GMI	18
#GMI Ex	3
%GMI Ex	16%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	11
#GMI	17
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)

7%

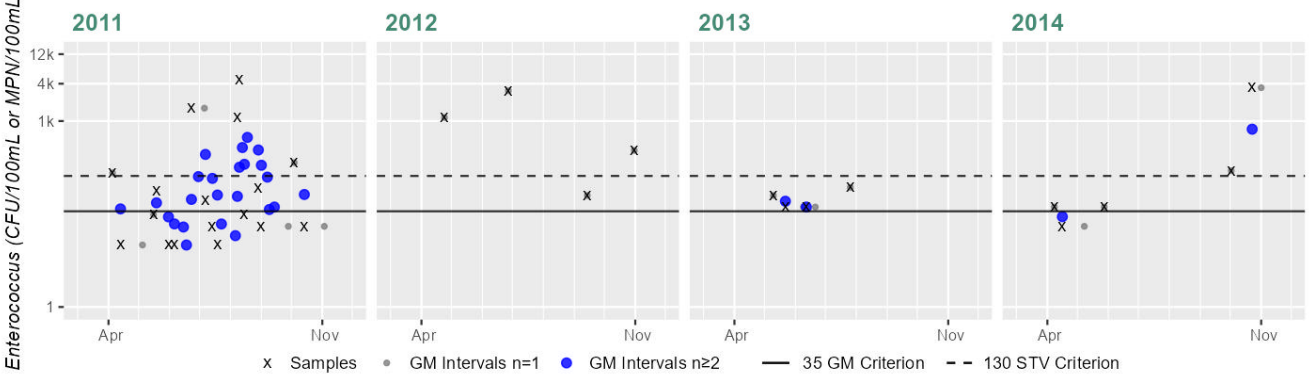
Cumulative %GMI Exceedance Current (Recent 5 Years)

11%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_154 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	17
SeasGM	64
#GMI	24
#GMI Ex	18
%GMI Ex	75%
n>STV	5
%n>STV	29%

Variable*	Result
Samples	4
SeasGM	522
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	3
%n>STV	75%

Variable*	Result
Samples	4
SeasGM	54
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	0
%n>STV	0%

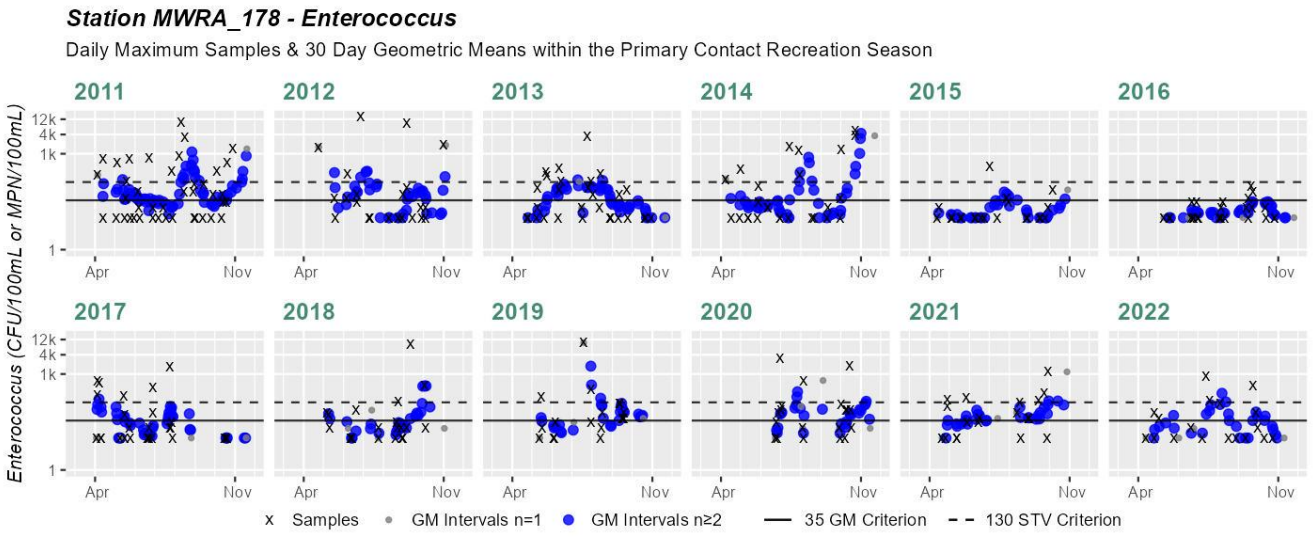
Variable*	Result
Samples	5
SeasGM	112
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	2
%n>STV	40%

Cumulative %GMI Exceedance

Current (2011-2022)

75%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*



Variable*	Result
Samples	41
SeasGM	61
#GMI	71
#GMI Ex	49
%GMI Ex	69%
n>STV	13
%n>STV	31%

Variable*	Result
Samples	24
SeasGM	49
#GMI	41
#GMI Ex	27
%GMI Ex	65%
n>STV	5
%n>STV	20%

Variable*	Result
Samples	29
SeasGM	36
#GMI	51
#GMI Ex	26
%GMI Ex	50%
n>STV	7
%n>STV	24%

Variable*	Result
Samples	26
SeasGM	52
#GMI	46
#GMI Ex	18
%GMI Ex	39%
n>STV	8
%n>STV	30%

Variable*	Result
Samples	21
SeasGM	15
#GMI	37
#GMI Ex	5
%GMI Ex	13%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	26
SeasGM	15
#GMI	39
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	28
SeasGM	29
#GMI	46
#GMI Ex	19
%GMI Ex	41%
n>STV	6
%n>STV	21%

Variable*	Result
Samples	20
SeasGM	33
#GMI	29
#GMI Ex	13
%GMI Ex	44%
n>STV	3
%n>STV	15%

Variable*	Result
Samples	18
SeasGM	52
#GMI	29
#GMI Ex	19
%GMI Ex	65%
n>STV	3
%n>STV	16%

Variable*	Result
Samples	19
SeasGM	56
#GMI	29
#GMI Ex	20
%GMI Ex	68%
n>STV	3
%n>STV	15%

Variable*	Result
Samples	19
SeasGM	47
#GMI	30
#GMI Ex	23
%GMI Ex	76%
n>STV	6
%n>STV	31%

Variable*	Result
Samples	18
SeasGM	30
#GMI	29
#GMI Ex	13
%GMI Ex	44%
n>STV	3
%n>STV	16%

Cumulative %GMI Exceedance Current (2011-2022)
48%

Cumulative %GMI Exceedance Current (Recent 5 Years)
60%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Boston Inner Harbor (MA70-02): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.4537 sq mi (96%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	**Alert**
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Boston Inner Harbor (MA70-02) continues to be assessed as Not Supporting. The prior Enterococcus impairment is being carried forward based on bacteria data not meeting the threshold at 4 stations throughout the historic and current sample windows (1997-2022), all in Fort Point Channel. The shellfish growing areas (2.4537 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Use. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) from 1997-2022 at 10 Inner Harbor stations from 2011-2022; with stations/sample years up to downstream as follows: MWRA_015 [Inner Harbor, confluence of Mystic River and Chelsea Creek] from 1997-2010 (historic n=19-41/yr) & 2011-2022 (current n=19-31/yr); MWRA_014 [Charles River mouth, USCG base, near MWR203] from 1997-2010 (n=19-26/yr) & 2011-2022 (n=19-31/yr); MWRA_138 [Fort Point Channel mouth, off New England Aquarium, near BOS060 (further offshore than location 019)] from 1997-2010 (n=23-40/yr) & 2011-2022 (n=18-24/yr); MWRA_075 [Fort Point Channel, BRdway, BOS070] from 1997 & 2003-2010 (n=19-49/yr) & 2011-2022 (n=19-54/yr); MWRA_018 [Fort Point Channel, Summer St., near BOS064] from 1997-2010 (n=16-50/yr) & 2011-2022 (n=20-54/yr); MWRA_178 [Fort Point Channel, Moakley Bridge, upchannel side, near BOS062] from 2008-2010 (n=40-50/yr) & 2011-2022 (n=20-54/yr); MWRA_154 [Mid channel of Fort Point Channel] from 1998 & 2007-2010 (n=2-26/yr) & 2011-2014 (n=9-27/yr); MWRA_019 [Fort Point Channel mouth, off New England Aquarium, near BOS060] from 1997-2010 (n=19-37/yr) & 2011-2022 (n=19-31/yr); MWRA_022 [Reserved Channel, midchannel] from 1998-2010 (n=19-35/yr) & 2011-2022 (n=19-31/yr) & MWRA_024 [mouth of Inner Harbor, red buoy 10] from 1997-2010 (n=47-74/yr) & 2011-2022 (n=37-58/yr). While Enterococcus data from MWRA_014, MWRA_015, MWRA_019, MWRA_022, MWRA_024, and MWRA_138 meet 2024 CALM guidance, data from the remaining 4 stations are indicative of an Enterococcus impairment and only the analyses indicative of impairment will be summarized here. Analysis of the recent five years of the multi-year high frequency Enterococcus datasets are as follows: At MWRA_075 5 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml (2018-2022, 87-100%), 5 yrs had >10% of samples exceed the 252 CFU/100ml STV (2018-2022, 45-57%) & cumulatively across years 94% of intervals had GMs >68 CFU/100ml. At MWRA_018 4 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml (2018-2021, 34-77%), 4 yrs had >10% of samples exceed the 252 CFU/100ml STV (2018-2020 and 2022, 10-30%) & cumulatively 42% of intervals had GMs >68 CFU/100ml. At MWRA_178 4 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml (2018-2021, 10-29%), 3 yrs had >10% of samples exceed the 252 CFU/100ml STV (2019-2020 & 2022, 10-15%) & cumulatively 16% of intervals had GMs >68 CFU/100ml. At MWRA_154 4 out of 4 sufficient data yrs had intervals where >20% of the GMs were >68 CFU/100ml (2011-2014, 28-58%), 2 yrs had ≥2 samples exceed the 252 CFU/100ml STV (2011 & 2012, n=4 & 5) & cumulatively 41% of intervals had GMs >68 CFU/100ml. Enterococcus data from MWRA_018, MWRA_075, MWRA_154, and MWRA_178 are indicative of an Enterococcus impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_014	Massachusetts Water Resources Authority	Water Quality	Upper Inner Harbor	Inner Harbor, Charles River mouth, USCG base, near MWR203	42.370500	-71.051500
MWRA_015	Massachusetts Water Resources Authority	Water Quality	Upper Inner Harbor	Inner Harbor, confluence of Mystic River and Chelsea Creek	42.383000	-71.045167
MWRA_018	Massachusetts Water Resources Authority	Water Quality	Fort Point Channel	Inner Harbor, Fort Point Channel, Summer St., near BOS064	42.350591	-71.051625
MWRA_019	Massachusetts Water Resources Authority	Water Quality	Fort Point Channel	Inner Harbor, Fort Point Channel mouth, off New England Aquarium, near BOS060	42.358772	-71.046180
MWRA_022	Massachusetts Water Resources Authority	Water Quality	Reserved Channel	Inner Harbor, Reserved Channel, midchannel	42.342667	-71.028667
MWRA_024	Massachusetts Water Resources Authority	Water Quality	Inner Harbor Mouth	Inner Harbor, mouth of Inner Harbor, red buoy 10	42.344306	-71.008849
MWRA_075	Massachusetts Water Resources Authority	Water Quality	Fort Point Channel	Inner Harbor, Fort Point Channel, Broadway, BOS070	42.344955	-71.059518
MWRA_138	Massachusetts Water Resources Authority	Water Quality	Mid-Inner Harbor	Inner Harbor, Fort Point Channel mouth, off New England Aquarium, near BOS060 (further offshore than location 019)	42.359319	-71.045680
MWRA_154	Massachusetts Water Resources Authority	Water Quality	Fort Point Channel	Mid channel of Fort Point Channel	42.354500	-71.049167
MWRA_178	Massachusetts Water Resources Authority	Water Quality	Fort Point Channel	Inner Harbor, Fort Point Channel, Moakley Bridge, upchannel side, near BOS062	42.353708	-71.049938

Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)

(MWRA 2024) (MassDEP Undated 1)

[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_014	Massachusetts Water Resources Authority	Enterococci	07/14/97	09/05/97	21	5	30	5
MWRA_014	Massachusetts Water Resources Authority	Enterococci	05/11/98	12/17/98	19	5	265	20
MWRA_014	Massachusetts Water Resources Authority	Enterococci	03/24/99	11/30/99	22	5	25	6
MWRA_014	Massachusetts Water Resources Authority	Enterococci	04/12/00	12/20/00	26	5	495	14
MWRA_014	Massachusetts Water Resources Authority	Enterococci	04/18/01	12/17/01	23	5	65	10
MWRA_014	Massachusetts Water Resources Authority	Enterococci	03/04/02	12/18/02	21	5	185	11
MWRA_014	Massachusetts Water Resources Authority	Enterococci	05/07/03	12/17/03	19	5	230	12
MWRA_014	Massachusetts Water Resources Authority	Enterococci	05/05/04	11/23/04	19	5	20	7
MWRA_014	Massachusetts Water Resources Authority	Enterococci	05/04/05	12/21/05	23	5	175	11
MWRA_014	Massachusetts Water Resources Authority	Enterococci	05/15/06	12/20/06	25	5	1700	20
MWRA_014	Massachusetts Water Resources Authority	Enterococci	05/09/07	12/13/07	21	10	20	10
MWRA_014	Massachusetts Water Resources Authority	Enterococci	05/14/08	12/12/08	21	10	231	17
MWRA_014	Massachusetts Water Resources Authority	Enterococci	01/07/09	10/28/09	21	10	41	10
MWRA_014	Massachusetts Water Resources Authority	Enterococci	05/05/10	11/12/10	20	10	20	11
MWRA_014	Massachusetts Water Resources Authority	Enterococci	05/03/11	12/22/11	26	10	481	20
MWRA_014	Massachusetts Water Resources Authority	Enterococci	01/27/12	10/04/12	21	10	122	12

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_014	Massachusetts Water Resources Authority	Enterococci	04/24/13	10/31/13	25	10	246	25
MWRA_014	Massachusetts Water Resources Authority	Enterococci	04/30/14	12/26/14	24	10	631	16
MWRA_014	Massachusetts Water Resources Authority	Enterococci	03/27/15	10/06/15	27	10	328	16
MWRA_014	Massachusetts Water Resources Authority	Enterococci	03/28/16	11/18/16	31	10	122	12
MWRA_014	Massachusetts Water Resources Authority	Enterococci	04/04/17	10/19/17	31	10	714	16
MWRA_014	Massachusetts Water Resources Authority	Enterococci	04/25/18	10/22/18	25	10	63	14
MWRA_014	Massachusetts Water Resources Authority	Enterococci	05/03/19	08/30/19	21	10	31	10
MWRA_014	Massachusetts Water Resources Authority	Enterococci	07/21/20	09/25/20	19	10	934	29
MWRA_014	Massachusetts Water Resources Authority	Enterococci	03/23/21	09/16/21	21	10	448	17
MWRA_014	Massachusetts Water Resources Authority	Enterococci	03/22/22	10/17/22	20	10	30	10
MWRA_015	Massachusetts Water Resources Authority	Enterococci	06/30/97	09/05/97	41	5	215	8
MWRA_015	Massachusetts Water Resources Authority	Enterococci	05/11/98	12/17/98	19	5	480	21
MWRA_015	Massachusetts Water Resources Authority	Enterococci	03/24/99	11/30/99	22	5	30	6
MWRA_015	Massachusetts Water Resources Authority	Enterococci	04/12/00	12/20/00	26	5	450	11
MWRA_015	Massachusetts Water Resources Authority	Enterococci	04/18/01	12/17/01	23	5	260	9
MWRA_015	Massachusetts Water Resources Authority	Enterococci	03/04/02	12/18/02	20	5	135	9
MWRA_015	Massachusetts Water Resources Authority	Enterococci	05/07/03	12/17/03	19	5	185	11

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_015	Massachusetts Water Resources Authority	Enterococci	05/05/04	11/23/04	20	5	140	7
MWRA_015	Massachusetts Water Resources Authority	Enterococci	04/04/05	12/21/05	23	5	560	10
MWRA_015	Massachusetts Water Resources Authority	Enterococci	05/16/06	12/20/06	24	5	2600	13
MWRA_015	Massachusetts Water Resources Authority	Enterococci	05/09/07	12/13/07	21	10	10	10
MWRA_015	Massachusetts Water Resources Authority	Enterococci	05/14/08	12/12/08	22	10	538	16
MWRA_015	Massachusetts Water Resources Authority	Enterococci	01/07/09	10/28/09	21	10	74	13
MWRA_015	Massachusetts Water Resources Authority	Enterococci	05/05/10	11/12/10	20	10	256	13
MWRA_015	Massachusetts Water Resources Authority	Enterococci	05/03/11	12/22/11	26	10	670	31
MWRA_015	Massachusetts Water Resources Authority	Enterococci	01/27/12	10/04/12	29	10	1850	19
MWRA_015	Massachusetts Water Resources Authority	Enterococci	04/24/13	10/31/13	25	10	1210	31
MWRA_015	Massachusetts Water Resources Authority	Enterococci	04/30/14	12/26/14	24	10	5480	26
MWRA_015	Massachusetts Water Resources Authority	Enterococci	03/27/15	10/06/15	27	10	2280	27
MWRA_015	Massachusetts Water Resources Authority	Enterococci	03/28/16	11/18/16	31	10	160	15
MWRA_015	Massachusetts Water Resources Authority	Enterococci	04/04/17	10/19/17	31	10	1620	17
MWRA_015	Massachusetts Water Resources Authority	Enterococci	04/25/18	10/22/18	26	10	676	21
MWRA_015	Massachusetts Water Resources Authority	Enterococci	05/03/19	08/30/19	21	10	52	15
MWRA_015	Massachusetts Water Resources Authority	Enterococci	07/21/20	09/25/20	19	10	631	17

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_015	Massachusetts Water Resources Authority	Enterococci	03/23/21	09/16/21	21	10	576	22
MWRA_015	Massachusetts Water Resources Authority	Enterococci	03/22/22	10/17/22	20	10	30	11
MWRA_018	Massachusetts Water Resources Authority	Enterococci	07/14/97	09/03/97	19	5	1250	40
MWRA_018	Massachusetts Water Resources Authority	Enterococci	06/30/98	12/17/98	16	5	39500	79
MWRA_018	Massachusetts Water Resources Authority	Enterococci	03/24/99	11/30/99	20	5	450	12
MWRA_018	Massachusetts Water Resources Authority	Enterococci	01/10/00	12/20/00	25	5	1510	26
MWRA_018	Massachusetts Water Resources Authority	Enterococci	04/18/01	12/17/01	23	5	1560	34
MWRA_018	Massachusetts Water Resources Authority	Enterococci	03/04/02	12/18/02	21	5	205	21
MWRA_018	Massachusetts Water Resources Authority	Enterococci	05/07/03	12/17/03	19	5	2520	33
MWRA_018	Massachusetts Water Resources Authority	Enterococci	04/27/04	12/31/04	45	5	9900	59
MWRA_018	Massachusetts Water Resources Authority	Enterococci	01/10/05	12/21/05	37	5	169000	42
MWRA_018	Massachusetts Water Resources Authority	Enterococci	03/14/06	12/20/06	45	5	16800	152
MWRA_018	Massachusetts Water Resources Authority	Enterococci	04/02/07	12/31/07	47	10	2010	26
MWRA_018	Massachusetts Water Resources Authority	Enterococci	02/06/08	12/11/08	47	10	24200	47
MWRA_018	Massachusetts Water Resources Authority	Enterococci	01/29/09	12/10/09	49	10	14100	41
MWRA_018	Massachusetts Water Resources Authority	Enterococci	01/26/10	11/22/10	50	10	6130	120
MWRA_018	Massachusetts Water Resources Authority	Enterococci	01/19/11	12/22/11	54	10	13000	99

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_018	Massachusetts Water Resources Authority	Enterococci	01/13/12	12/28/12	33	10	11200	110
MWRA_018	Massachusetts Water Resources Authority	Enterococci	01/31/13	12/30/13	34	10	9800	47
MWRA_018	Massachusetts Water Resources Authority	Enterococci	01/15/14	12/03/14	31	10	5790	63
MWRA_018	Massachusetts Water Resources Authority	Enterococci	04/10/15	11/12/15	30	10	24200	66
MWRA_018	Massachusetts Water Resources Authority	Enterococci	03/29/16	11/17/16	32	10	173	20
MWRA_018	Massachusetts Water Resources Authority	Enterococci	04/03/17	10/20/17	28	10	2910	34
MWRA_018	Massachusetts Water Resources Authority	Enterococci	03/21/18	10/05/18	23	10	13000	50
MWRA_018	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	24200	70
MWRA_018	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/16/20	20	10	24200	101
MWRA_018	Massachusetts Water Resources Authority	Enterococci	03/16/21	09/29/21	21	10	7700	50
MWRA_018	Massachusetts Water Resources Authority	Enterococci	03/14/22	10/24/22	20	10	1990	33
MWRA_019	Massachusetts Water Resources Authority	Enterococci	07/14/97	09/05/97	19	5	10	6
MWRA_019	Massachusetts Water Resources Authority	Enterococci	05/11/98	12/17/98	19	5	475	15
MWRA_019	Massachusetts Water Resources Authority	Enterococci	03/24/99	11/30/99	21	5	25	7
MWRA_019	Massachusetts Water Resources Authority	Enterococci	04/12/00	12/20/00	26	5	255	11
MWRA_019	Massachusetts Water Resources Authority	Enterococci	04/18/01	12/17/01	23	5	210	13
MWRA_019	Massachusetts Water Resources Authority	Enterococci	03/04/02	12/18/02	20	5	260	14

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_019	Massachusetts Water Resources Authority	Enterococci	05/07/03	12/17/03	19	5	130	12
MWRA_019	Massachusetts Water Resources Authority	Enterococci	05/05/04	11/23/04	23	5	430	10
MWRA_019	Massachusetts Water Resources Authority	Enterococci	04/04/05	12/21/05	25	5	1200	11
MWRA_019	Massachusetts Water Resources Authority	Enterococci	04/05/06	12/20/06	37	5	3600	29
MWRA_019	Massachusetts Water Resources Authority	Enterococci	05/09/07	12/13/07	36	10	158	12
MWRA_019	Massachusetts Water Resources Authority	Enterococci	03/06/08	12/12/08	37	10	495	21
MWRA_019	Massachusetts Water Resources Authority	Enterococci	01/07/09	10/28/09	32	10	96	13
MWRA_019	Massachusetts Water Resources Authority	Enterococci	02/26/10	11/12/10	24	10	2610	19
MWRA_019	Massachusetts Water Resources Authority	Enterococci	04/14/11	12/22/11	26	10	211	16
MWRA_019	Massachusetts Water Resources Authority	Enterococci	01/27/12	10/04/12	21	10	240	14
MWRA_019	Massachusetts Water Resources Authority	Enterococci	04/24/13	10/31/13	25	10	1920	31
MWRA_019	Massachusetts Water Resources Authority	Enterococci	04/30/14	12/26/14	23	10	175	14
MWRA_019	Massachusetts Water Resources Authority	Enterococci	03/27/15	10/06/15	24	10	199	20
MWRA_019	Massachusetts Water Resources Authority	Enterococci	03/28/16	11/18/16	31	10	428	12
MWRA_019	Massachusetts Water Resources Authority	Enterococci	04/04/17	10/19/17	31	10	1660	19
MWRA_019	Massachusetts Water Resources Authority	Enterococci	04/25/18	10/22/18	25	10	1180	22
MWRA_019	Massachusetts Water Resources Authority	Enterococci	05/03/19	08/30/19	21	10	52	13

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_019	Massachusetts Water Resources Authority	Enterococci	07/21/20	09/25/20	19	10	388	20
MWRA_019	Massachusetts Water Resources Authority	Enterococci	03/23/21	09/16/21	21	10	345	15
MWRA_019	Massachusetts Water Resources Authority	Enterococci	03/22/22	10/17/22	20	10	63	12
MWRA_022	Massachusetts Water Resources Authority	Enterococci	05/11/98	12/17/98	19	5	840	14
MWRA_022	Massachusetts Water Resources Authority	Enterococci	03/24/99	11/30/99	22	5	20	6
MWRA_022	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/20/00	35	5	1930	11
MWRA_022	Massachusetts Water Resources Authority	Enterococci	03/13/01	12/17/01	28	5	245	8
MWRA_022	Massachusetts Water Resources Authority	Enterococci	02/11/02	12/18/02	27	5	250	12
MWRA_022	Massachusetts Water Resources Authority	Enterococci	04/23/03	12/17/03	22	5	975	10
MWRA_022	Massachusetts Water Resources Authority	Enterococci	04/23/04	11/29/04	31	5	550	13
MWRA_022	Massachusetts Water Resources Authority	Enterococci	03/29/05	12/21/05	29	5	795	13
MWRA_022	Massachusetts Water Resources Authority	Enterococci	01/12/06	12/20/06	29	5	2000	17
MWRA_022	Massachusetts Water Resources Authority	Enterococci	05/09/07	12/13/07	21	10	794	13
MWRA_022	Massachusetts Water Resources Authority	Enterococci	05/14/08	12/12/08	21	10	627	13
MWRA_022	Massachusetts Water Resources Authority	Enterococci	01/07/09	10/28/09	22	10	52	13
MWRA_022	Massachusetts Water Resources Authority	Enterococci	05/05/10	11/12/10	20	10	41	11
MWRA_022	Massachusetts Water Resources Authority	Enterococci	05/03/11	12/22/11	24	10	2190	23

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_022	Massachusetts Water Resources Authority	Enterococci	01/27/12	10/04/12	29	10	3080	22
MWRA_022	Massachusetts Water Resources Authority	Enterococci	04/24/13	10/31/13	25	10	3650	30
MWRA_022	Massachusetts Water Resources Authority	Enterococci	04/30/14	12/26/14	24	10	727	24
MWRA_022	Massachusetts Water Resources Authority	Enterococci	03/27/15	10/06/15	27	10	520	30
MWRA_022	Massachusetts Water Resources Authority	Enterococci	03/28/16	11/18/16	31	10	886	11
MWRA_022	Massachusetts Water Resources Authority	Enterococci	04/04/17	10/19/17	31	10	24200	21
MWRA_022	Massachusetts Water Resources Authority	Enterococci	04/25/18	10/22/18	25	10	175	15
MWRA_022	Massachusetts Water Resources Authority	Enterococci	05/03/19	08/30/19	21	10	121	15
MWRA_022	Massachusetts Water Resources Authority	Enterococci	07/21/20	09/25/20	19	10	4110	29
MWRA_022	Massachusetts Water Resources Authority	Enterococci	03/23/21	09/16/21	21	10	177	18
MWRA_022	Massachusetts Water Resources Authority	Enterococci	03/22/22	10/17/22	20	10	480	14
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/06/97	12/29/97	74	5	20	5
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/14/98	12/28/98	56	5	1230	10
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/11/99	12/22/99	59	5	70	6
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/03/00	12/28/00	74	5	400	7
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/09/01	12/27/01	69	5	65	6
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/08/02	12/19/02	65	5	330	8

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/06/03	12/22/03	52	5	90	7
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/27/04	12/29/04	54	5	140	7
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/20/05	12/22/05	50	5	260	9
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/05/06	12/22/06	53	5	1700	11
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/18/07	12/28/07	47	10	84	10
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/08/08	12/18/08	53	10	384	17
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/06/09	12/21/09	61	10	448	12
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/05/10	12/14/10	56	10	2050	14
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/05/11	12/22/11	58	10	246	16
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/05/12	12/20/12	53	10	175	11
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/03/13	12/20/13	49	10	2100	17
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/09/14	12/26/14	48	10	331	12
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/06/15	12/16/15	50	10	857	13
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/06/16	12/14/16	54	10	86	11
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/05/17	12/19/17	55	10	457	13
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/16/18	12/19/18	48	10	98	12
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/03/19	12/18/19	45	10	31	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/06/20	12/14/20	37	10	345	13
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/04/21	12/20/21	45	10	122	12
MWRA_024	Massachusetts Water Resources Authority	Enterococci	01/20/22	12/21/22	44	10	52	10
MWRA_075	Massachusetts Water Resources Authority	Enterococci	07/14/97	09/03/97	19	5	7860	229
MWRA_075	Massachusetts Water Resources Authority	Enterococci	07/30/03	12/25/03	21	5	16800	257
MWRA_075	Massachusetts Water Resources Authority	Enterococci	01/05/04	12/31/04	38	10	72000	625
MWRA_075	Massachusetts Water Resources Authority	Enterococci	01/10/05	11/22/05	19	10	59000	1057
MWRA_075	Massachusetts Water Resources Authority	Enterococci	03/14/06	11/17/06	26	110	63000	4112
MWRA_075	Massachusetts Water Resources Authority	Enterococci	04/02/07	12/31/07	29	10	24200	811
MWRA_075	Massachusetts Water Resources Authority	Enterococci	02/06/08	12/11/08	46	10	33100	493
MWRA_075	Massachusetts Water Resources Authority	Enterococci	02/20/09	12/10/09	46	10	17300	341
MWRA_075	Massachusetts Water Resources Authority	Enterococci	01/26/10	11/22/10	49	41	24200	1036
MWRA_075	Massachusetts Water Resources Authority	Enterococci	01/19/11	12/22/11	54	10	15500	637
MWRA_075	Massachusetts Water Resources Authority	Enterococci	01/13/12	12/28/12	32	10	73300	760
MWRA_075	Massachusetts Water Resources Authority	Enterococci	01/31/13	12/30/13	34	10	8160	245
MWRA_075	Massachusetts Water Resources Authority	Enterococci	01/15/14	12/03/14	31	10	7700	210
MWRA_075	Massachusetts Water Resources Authority	Enterococci	04/13/15	10/06/15	21	10	3450	78

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_075	Massachusetts Water Resources Authority	Enterococci	03/29/16	11/17/16	32	10	6490	82
MWRA_075	Massachusetts Water Resources Authority	Enterococci	04/03/17	10/20/17	28	10	9800	280
MWRA_075	Massachusetts Water Resources Authority	Enterococci	03/21/18	10/05/18	23	10	12000	192
MWRA_075	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	19	10	11200	446
MWRA_075	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/16/20	20	10	24300	306
MWRA_075	Massachusetts Water Resources Authority	Enterococci	03/16/21	09/29/21	20	20	14100	438
MWRA_075	Massachusetts Water Resources Authority	Enterococci	03/14/22	10/24/22	20	10	5480	166
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/06/97	12/29/97	38	5	55	8
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/14/98	12/28/98	40	5	1420	18
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/11/99	12/22/99	37	5	150	11
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/03/00	12/28/00	40	5	240	10
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/09/01	12/27/01	39	5	135	12
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/08/02	12/19/02	39	5	435	11
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/06/03	12/22/03	30	5	175	11
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/27/04	12/29/04	25	5	365	8
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/20/05	12/22/05	23	5	195	14
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/05/06	12/22/06	24	5	270	11

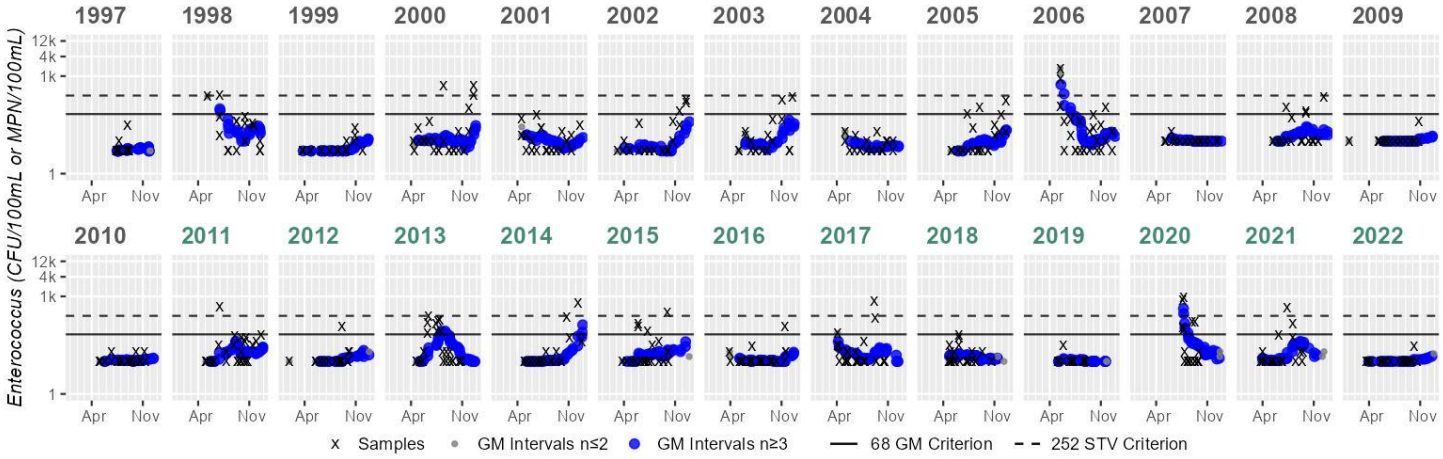
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/18/07	12/28/07	23	10	52	12
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/08/08	12/18/08	24	10	201	14
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/06/09	12/21/09	25	10	185	14
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/05/10	12/14/10	24	10	74	15
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/05/11	12/19/11	24	10	146	13
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/05/12	12/20/12	24	10	31	11
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/03/13	12/20/13	24	10	158	12
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/09/14	12/16/14	24	10	63	12
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/06/15	12/16/15	23	10	20	10
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/06/16	12/14/16	23	10	10	10
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/05/17	12/19/17	24	10	63	13
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/16/18	12/19/18	23	10	359	19
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/03/19	12/18/19	24	10	52	12
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/06/20	12/14/20	18	10	173	14
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/04/21	12/20/21	24	10	120	14
MWRA_138	Massachusetts Water Resources Authority	Enterococci	01/20/22	12/21/22	24	10	98	12
MWRA_154	Massachusetts Water Resources Authority	Enterococci	09/09/98	09/10/98	2	5	5	4

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_154	Massachusetts Water Resources Authority	Enterococci	09/19/07	12/31/07	9	10	259	34
MWRA_154	Massachusetts Water Resources Authority	Enterococci	02/06/08	12/11/08	12	10	2480	39
MWRA_154	Massachusetts Water Resources Authority	Enterococci	02/20/09	12/10/09	19	10	7270	57
MWRA_154	Massachusetts Water Resources Authority	Enterococci	01/26/10	11/22/10	26	10	4880	89
MWRA_154	Massachusetts Water Resources Authority	Enterococci	01/19/11	12/20/11	27	10	4610	59
MWRA_154	Massachusetts Water Resources Authority	Enterococci	01/13/12	12/28/12	12	10	3080	133
MWRA_154	Massachusetts Water Resources Authority	Enterococci	01/31/13	12/30/13	9	20	327	69
MWRA_154	Massachusetts Water Resources Authority	Enterococci	01/15/14	12/03/14	9	20	3450	98
MWRA_178	Massachusetts Water Resources Authority	Enterococci	04/17/08	12/11/08	40	10	6590	32
MWRA_178	Massachusetts Water Resources Authority	Enterococci	01/29/09	12/10/09	49	10	14100	35
MWRA_178	Massachusetts Water Resources Authority	Enterococci	01/26/10	11/22/10	50	10	6870	94
MWRA_178	Massachusetts Water Resources Authority	Enterococci	01/19/11	12/22/11	54	10	9800	66
MWRA_178	Massachusetts Water Resources Authority	Enterococci	01/13/12	12/28/12	33	10	14100	58
MWRA_178	Massachusetts Water Resources Authority	Enterococci	01/31/13	12/30/13	34	10	3450	43
MWRA_178	Massachusetts Water Resources Authority	Enterococci	01/15/14	12/03/14	31	10	5170	59
MWRA_178	Massachusetts Water Resources Authority	Enterococci	04/13/15	10/06/15	21	10	402	15
MWRA_178	Massachusetts Water Resources Authority	Enterococci	03/29/16	11/17/16	32	10	96	15

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_178	Massachusetts Water Resources Authority	Enterococci	04/03/17	10/20/17	28	10	1720	29
MWRA_178	Massachusetts Water Resources Authority	Enterococci	03/21/18	10/05/18	22	10	8660	31
MWRA_178	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	9610	48
MWRA_178	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/16/20	20	10	3080	53
MWRA_178	Massachusetts Water Resources Authority	Enterococci	03/16/21	09/29/21	21	10	1170	40
MWRA_178	Massachusetts Water Resources Authority	Enterococci	03/14/22	10/24/22	20	10	860	28

Station MWRA_014 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	21	Samples	19	Samples	22	Samples	26	Samples	23	Samples	21	Samples	19	Samples	19	Samples	23	Samples	25	Samples	21	Samples	21	Samples	21
SeasGM	5	SeasGM	20	SeasGM	6	SeasGM	14	SeasGM	10	SeasGM	11	SeasGM	12	SeasGM	7	SeasGM	11	SeasGM	20	SeasGM	10	SeasGM	17	SeasGM	10
#GMI	37	#GMI	33	#GMI	39	#GMI	47	#GMI	41	#GMI	36	#GMI	31	#GMI	28	#GMI	38	#GMI	43	#GMI	37	#GMI	36	#GMI	34
#GMI Ex	0	#GMI Ex	2	#GMI Ex	0	#GMI Ex	2	#GMI Ex	0	#GMI Ex	2	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	5	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	6%	%GMI Ex	0%	%GMI Ex	4%	%GMI Ex	0%	%GMI Ex	5%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	11%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	1	n>STV	0	n>STV	3	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	2	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	5%	%n>STV	0%	%n>STV	11%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	8%	%n>STV	0%	%n>STV	0%	%n>STV	0%

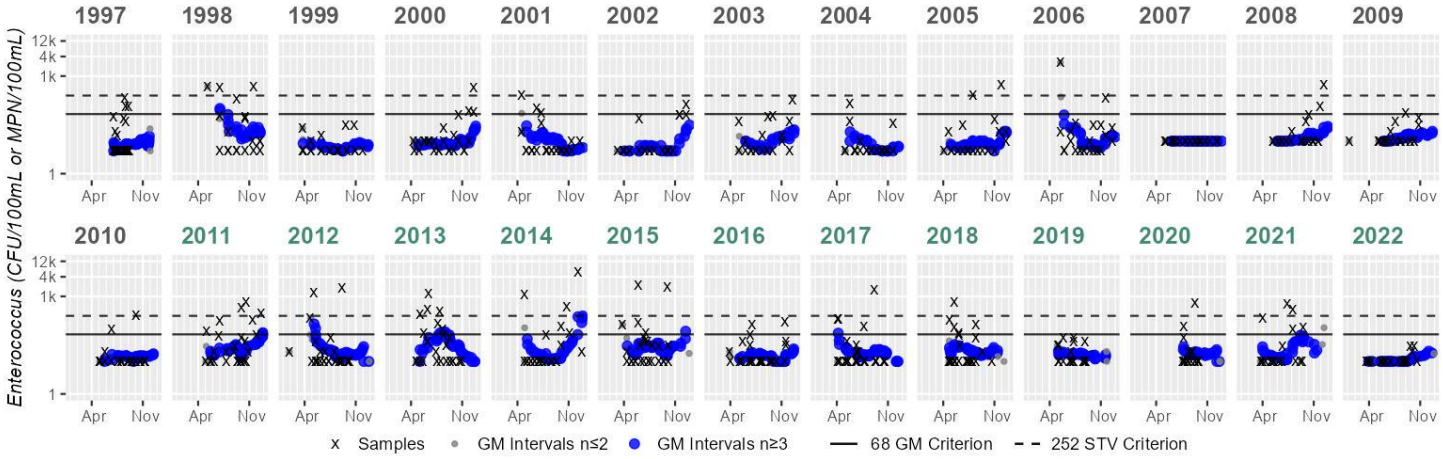
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	20	Samples	26	Samples	21	Samples	25	Samples	24	Samples	27	Samples	31	Samples	31	Samples	25	Samples	21	Samples	19	Samples	21	Samples	20
SeasGM	11	SeasGM	20	SeasGM	12	SeasGM	25	SeasGM	16	SeasGM	16	SeasGM	12	SeasGM	16	SeasGM	14	SeasGM	10	SeasGM	29	SeasGM	17	SeasGM	10
#GMI	35	#GMI	46	#GMI	34	#GMI	42	#GMI	39	#GMI	48	#GMI	54	#GMI	57	#GMI	43	#GMI	35	#GMI	33	#GMI	33	#GMI	33
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	6	#GMI Ex	3	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	5	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	14%	%GMI Ex	7%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	15%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	1	n>STV	1	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	2	n>STV	1	n>STV	0
%n>STV	0%	%n>STV	3%	%n>STV	0%	%n>STV	0%	%n>STV	4%	%n>STV	3%	%n>STV	0%	%n>STV	3%	%n>STV	0%	%n>STV	0%	%n>STV	10%	%n>STV	4%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
2%	2%	2%	2%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_015 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	41	Samples	19	Samples	22	Samples	26	Samples	23	Samples	20	Samples	19	Samples	20	Samples	23	Samples	24	Samples	21	Samples	22	Samples	21
SeasGM	8	SeasGM	21	SeasGM	6	SeasGM	11	SeasGM	9	SeasGM	9	SeasGM	11	SeasGM	7	SeasGM	10	SeasGM	13	SeasGM	10	SeasGM	16	SeasGM	13
#GMI	77	#GMI	33	#GMI	39	#GMI	47	#GMI	41	#GMI	34	#GMI	31	#GMI	29	#GMI	39	#GMI	41	#GMI	37	#GMI	38	#GMI	34
#GMI Ex	0	#GMI Ex	2	#GMI Ex	0	#GMI Ex	2	#GMI Ex	0	#GMI Ex	2	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	1	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	6%	%GMI Ex	0%	%GMI Ex	4%	%GMI Ex	0%	%GMI Ex	5%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	2%	%GMI Ex	0%
n>STV	0	n>STV	3	n>STV	0	n>STV	1	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	2	n>STV	1	n>STV	0	n>STV	1	n>STV	0
%n>STV	0%	%n>STV	15%	%n>STV	0%	%n>STV	3%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	8%	%n>STV	4%	%n>STV	0%	%n>STV	4%	%n>STV	0%

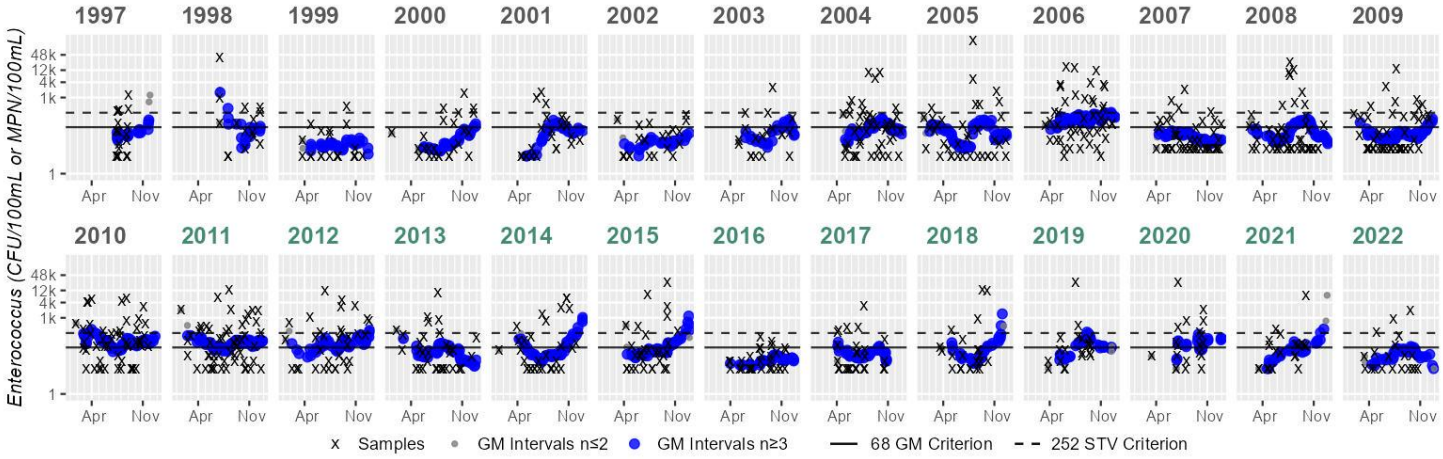
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	20	Samples	26	Samples	29	Samples	25	Samples	24	Samples	27	Samples	31	Samples	31	Samples	26	Samples	21	Samples	19	Samples	21	Samples	20
SeasGM	13	SeasGM	31	SeasGM	19	SeasGM	31	SeasGM	26	SeasGM	27	SeasGM	15	SeasGM	17	SeasGM	21	SeasGM	15	SeasGM	17	SeasGM	22	SeasGM	11
#GMI	35	#GMI	46	#GMI	49	#GMI	42	#GMI	39	#GMI	48	#GMI	54	#GMI	57	#GMI	43	#GMI	35	#GMI	33	#GMI	33	#GMI	33
#GMI Ex	0	#GMI Ex	7	#GMI Ex	2	#GMI Ex	4	#GMI Ex	5	#GMI Ex	1	#GMI Ex	0	#GMI Ex	1	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	15%	%GMI Ex	4%	%GMI Ex	9%	%GMI Ex	12%	%GMI Ex	2%	%GMI Ex	0%	%GMI Ex	1%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	1	n>STV	3	n>STV	2	n>STV	4	n>STV	3	n>STV	2	n>STV	0	n>STV	1	n>STV	1	n>STV	0	n>STV	1	n>STV	2	n>STV	0
%n>STV	5%	%n>STV	11%	%n>STV	6%	%n>STV	16%	%n>STV	12%	%n>STV	7%	%n>STV	0%	%n>STV	3%	%n>STV	3%	%n>STV	0%	%n>STV	5%	%n>STV	9%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
1%	0%	3%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_018 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	19	Samples	16	Samples	20	Samples	25	Samples	23	Samples	21	Samples	19	Samples	45	Samples	37	Samples	45	Samples	47	Samples	47	Samples	49
SeasGM	40	SeasGM	79	SeasGM	12	SeasGM	26	SeasGM	34	SeasGM	21	SeasGM	33	SeasGM	59	SeasGM	42	SeasGM	152	SeasGM	26	SeasGM	47	SeasGM	41
#GMI	33	#GMI	27	#GMI	35	#GMI	43	#GMI	41	#GMI	36	#GMI	31	#GMI	75	#GMI	66	#GMI	81	#GMI	82	#GMI	83	#GMI	87
#GMI Ex	3	#GMI Ex	13	#GMI Ex	0	#GMI Ex	7	#GMI Ex	11	#GMI Ex	1	#GMI Ex	7	#GMI Ex	25	#GMI Ex	20	#GMI Ex	77	#GMI Ex	0	#GMI Ex	31	#GMI Ex	13
%GMI Ex	9%	%GMI Ex	48%	%GMI Ex	0%	%GMI Ex	16%	%GMI Ex	26%	%GMI Ex	2%	%GMI Ex	22%	%GMI Ex	33%	%GMI Ex	30%	%GMI Ex	95%	%GMI Ex	0%	%GMI Ex	37%	%GMI Ex	14%
n>STV	5	n>STV	5	n>STV	1	n>STV	4	n>STV	3	n>STV	0	n>STV	2	n>STV	8	n>STV	7	n>STV	16	n>STV	4	n>STV	8	n>STV	7
%n>STV	26%	%n>STV	31%	%n>STV	5%	%n>STV	16%	%n>STV	13%	%n>STV	0%	%n>STV	10%	%n>STV	17%	%n>STV	18%	%n>STV	35%	%n>STV	8%	%n>STV	17%	%n>STV	14%

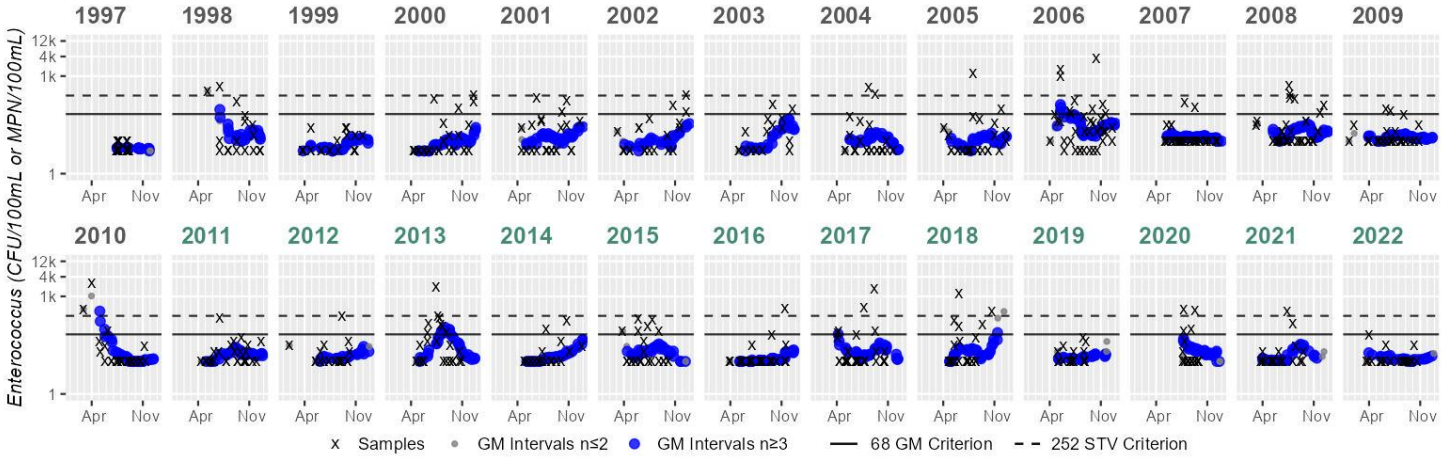
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	50	Samples	54	Samples	33	Samples	34	Samples	31	Samples	30	Samples	32	Samples	28	Samples	23	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	120	SeasGM	99	SeasGM	110	SeasGM	47	SeasGM	63	SeasGM	66	SeasGM	20	SeasGM	34	SeasGM	50	SeasGM	70	SeasGM	101	SeasGM	50	SeasGM	33
#GMI	87	#GMI	96	#GMI	59	#GMI	58	#GMI	52	#GMI	53	#GMI	56	#GMI	51	#GMI	40	#GMI	34	#GMI	31	#GMI	35	#GMI	35
#GMI Ex	75	#GMI Ex	82	#GMI Ex	43	#GMI Ex	17	#GMI Ex	20	#GMI Ex	17	#GMI Ex	0	#GMI Ex	5	#GMI Ex	14	#GMI Ex	23	#GMI Ex	24	#GMI Ex	12	#GMI Ex	1
%GMI Ex	86%	%GMI Ex	85%	%GMI Ex	72%	%GMI Ex	29%	%GMI Ex	38%	%GMI Ex	32%	%GMI Ex	0%	%GMI Ex	9%	%GMI Ex	35%	%GMI Ex	67%	%GMI Ex	77%	%GMI Ex	34%	%GMI Ex	2%
n>STV	16	n>STV	18	n>STV	10	n>STV	5	n>STV	7	n>STV	7	n>STV	0	n>STV	5	n>STV	4	n>STV	2	n>STV	6	n>STV	2	n>STV	3
%n>STV	32%	%n>STV	33%	%n>STV	30%	%n>STV	14%	%n>STV	22%	%n>STV	23%	%n>STV	0%	%n>STV	17%	%n>STV	17%	%n>STV	10%	%n>STV	30%	%n>STV	9%	%n>STV	15%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
35%	46%	43%	42%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_019 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	19	Samples	19	Samples	21	Samples	26	Samples	23	Samples	20	Samples	19	Samples	23	Samples	25	Samples	37	Samples	36	Samples	37	Samples	32
SeasGM	6	SeasGM	15	SeasGM	7	SeasGM	11	SeasGM	13	SeasGM	14	SeasGM	12	SeasGM	10	SeasGM	11	SeasGM	29	SeasGM	12	SeasGM	21	SeasGM	13
#GMI	33	#GMI	33	#GMI	37	#GMI	47	#GMI	41	#GMI	34	#GMI	31	#GMI	35	#GMI	43	#GMI	66	#GMI	62	#GMI	67	#GMI	56
#GMI Ex	0	#GMI Ex	1	#GMI Ex	0	#GMI Ex	1	#GMI Ex	0	#GMI Ex	1	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	4	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	3%	%GMI Ex	0%	%GMI Ex	2%	%GMI Ex	0%	%GMI Ex	2%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	6%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	2	n>STV	0	n>STV	1	n>STV	0	n>STV	1	n>STV	0	n>STV	2	n>STV	1	n>STV	3	n>STV	0	n>STV	2	n>STV	0
%n>STV	0%	%n>STV	10%	%n>STV	0%	%n>STV	3%	%n>STV	0%	%n>STV	5%	%n>STV	0%	%n>STV	8%	%n>STV	4%	%n>STV	8%	%n>STV	0%	%n>STV	5%	%n>STV	0%

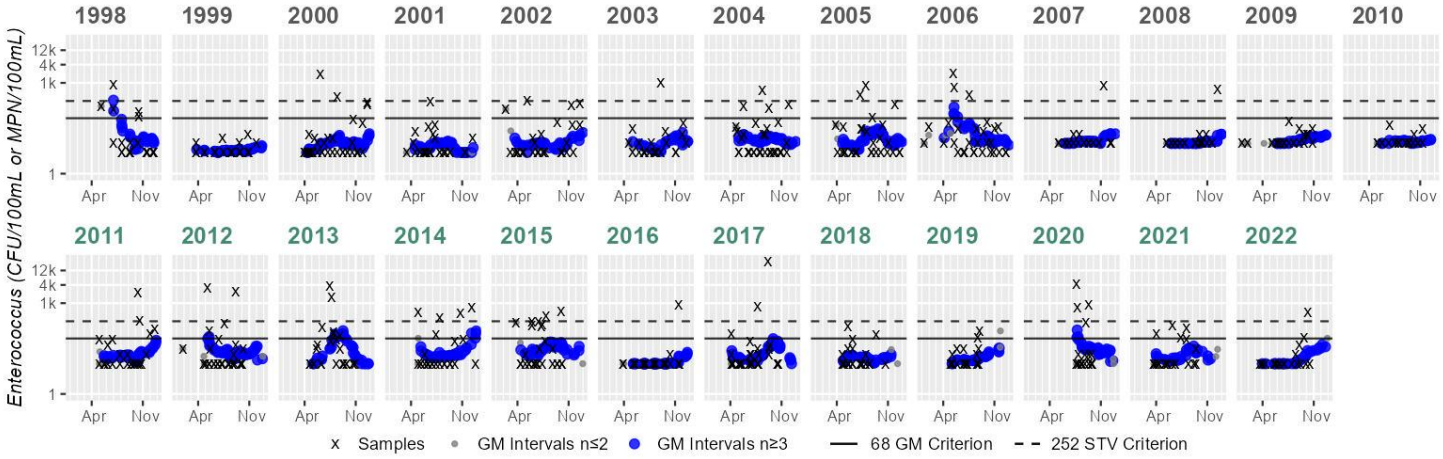
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	24	Samples	26	Samples	21	Samples	25	Samples	23	Samples	24	Samples	31	Samples	31	Samples	25	Samples	21	Samples	19	Samples	21	Samples	20
SeasGM	19	SeasGM	16	SeasGM	14	SeasGM	31	SeasGM	14	SeasGM	20	SeasGM	12	SeasGM	19	SeasGM	22	SeasGM	13	SeasGM	20	SeasGM	15	SeasGM	12
#GMI	42	#GMI	46	#GMI	34	#GMI	42	#GMI	38	#GMI	42	#GMI	54	#GMI	57	#GMI	43	#GMI	35	#GMI	33	#GMI	33	#GMI	33
#GMI Ex	3	#GMI Ex	0	#GMI Ex	0	#GMI Ex	13	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	1	#GMI Ex	1	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	7%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	30%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	1%	%GMI Ex	2%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	2	n>STV	0	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	1	n>STV	2	n>STV	2	n>STV	0	n>STV	2	n>STV	1	n>STV	0
%n>STV	8%	%n>STV	0%	%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	3%	%n>STV	6%	%n>STV	8%	%n>STV	0%	%n>STV	10%	%n>STV	4%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
1%	2%	3%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_022 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	19	Samples	22	Samples	35	Samples	28	Samples	27	Samples	22	Samples	31	Samples	29	Samples	29	Samples	21	Samples	21	Samples	22	Samples	20
SeasGM	14	SeasGM	6	SeasGM	11	SeasGM	8	SeasGM	12	SeasGM	10	SeasGM	13	SeasGM	13	SeasGM	17	SeasGM	13	SeasGM	13	SeasGM	13	SeasGM	11
#GMI	33	#GMI	39	#GMI	65	#GMI	48	#GMI	47	#GMI	36	#GMI	50	#GMI	49	#GMI	49	#GMI	37	#GMI	36	#GMI	34	#GMI	35
#GMI Ex	2	#GMI Ex	0	#GMI Ex	1	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	4	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	6%	%GMI Ex	0%	%GMI Ex	1%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	8%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	1	n>STV	0	n>STV	2	n>STV	0	n>STV	0	n>STV	1	n>STV	1	n>STV	2	n>STV	3	n>STV	1	n>STV	1	n>STV	0	n>STV	0
%n>STV	5%	%n>STV	0%	%n>STV	5%	%n>STV	0%	%n>STV	0%	%n>STV	4%	%n>STV	3%	%n>STV	6%	%n>STV	10%	%n>STV	4%	%n>STV	4%	%n>STV	0%	%n>STV	0%

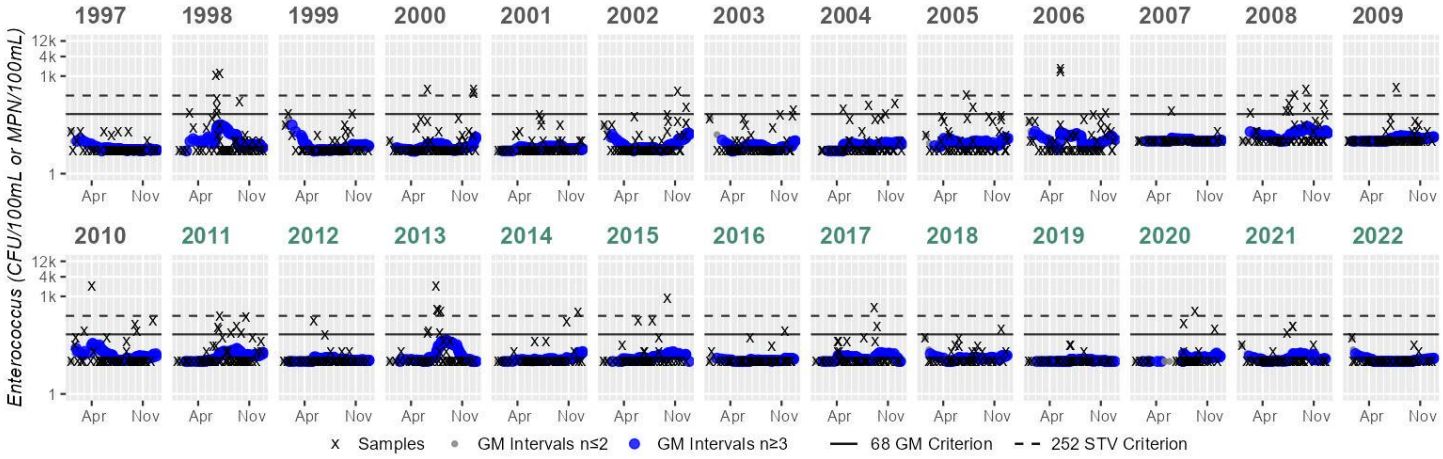
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	24	Samples	29	Samples	25	Samples	24	Samples	27	Samples	31	Samples	31	Samples	25	Samples	21	Samples	19	Samples	21	Samples	20		
SeasGM	23	SeasGM	22	SeasGM	30	SeasGM	24	SeasGM	30	SeasGM	11	SeasGM	21	SeasGM	15	SeasGM	15	SeasGM	29	SeasGM	18	SeasGM	14		
#GMI	42	#GMI	49	#GMI	42	#GMI	39	#GMI	48	#GMI	54	#GMI	57	#GMI	43	#GMI	35	#GMI	33	#GMI	33	#GMI	33		
#GMI Ex	1	#GMI Ex	1	#GMI Ex	13	#GMI Ex	5	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	3	#GMI Ex	0	#GMI Ex	0		
%GMI Ex	2%	%GMI Ex	2%	%GMI Ex	30%	%GMI Ex	12%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	9%	%GMI Ex	0%	%GMI Ex	0%		
n>STV	2	n>STV	2	n>STV	2	n>STV	4	n>STV	2	n>STV	1	n>STV	2	n>STV	0	n>STV	0	n>STV	3	n>STV	0	n>STV	1		
%n>STV	8%	%n>STV	6%	%n>STV	8%	%n>STV	16%	%n>STV	7%	%n>STV	3%	%n>STV	6%	%n>STV	0%	%n>STV	0%	%n>STV	15%	%n>STV	0%	%n>STV	5%		

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
1%	2%	4%	1%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_024 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	74	Samples	56	Samples	59	Samples	74	Samples	69	Samples	65	Samples	52	Samples	54	Samples	50	Samples	53	Samples	47	Samples	53	Samples	61
SeasGM	5	SeasGM	10	SeasGM	6	SeasGM	7	SeasGM	6	SeasGM	8	SeasGM	7	SeasGM	7	SeasGM	9	SeasGM	11	SeasGM	10	SeasGM	17	SeasGM	12
#GMI	134	#GMI	104	#GMI	106	#GMI	129	#GMI	121	#GMI	114	#GMI	91	#GMI	90	#GMI	87	#GMI	90	#GMI	83	#GMI	93	#GMI	103
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	1	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	2	n>STV	0	n>STV	3	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	1	n>STV	2	n>STV	0	n>STV	2	n>STV	1
%n>STV	0%	%n>STV	3%	%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	1%	%n>STV	0%	%n>STV	0%	%n>STV	2%	%n>STV	3%	%n>STV	0%	%n>STV	3%	%n>STV	1%

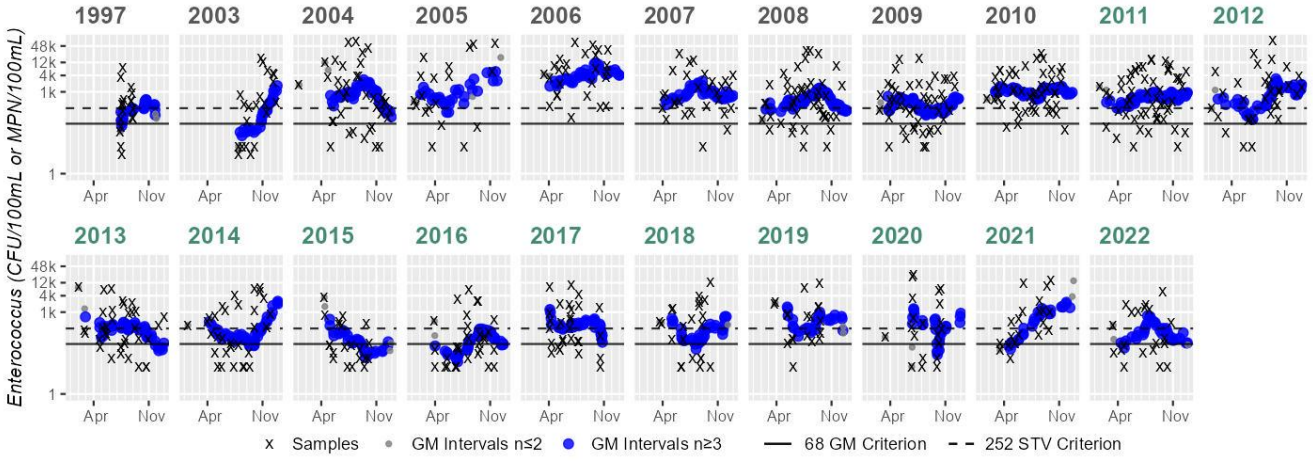
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	56	Samples	58	Samples	53	Samples	49	Samples	48	Samples	50	Samples	54	Samples	55	Samples	48	Samples	45	Samples	37	Samples	45	Samples	44
SeasGM	14	SeasGM	16	SeasGM	11	SeasGM	17	SeasGM	12	SeasGM	13	SeasGM	11	SeasGM	13	SeasGM	12	SeasGM	10	SeasGM	13	SeasGM	12	SeasGM	10
#GMI	102	#GMI	103	#GMI	89	#GMI	88	#GMI	83	#GMI	86	#GMI	95	#GMI	97	#GMI	84	#GMI	78	#GMI	62	#GMI	76	#GMI	80
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	1	n>STV	0	n>STV	0	n>STV	4	n>STV	1	n>STV	1	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	1	n>STV	0	n>STV	0
%n>STV	1%	%n>STV	0%	%n>STV	0%	%n>STV	8%	%n>STV	2%	%n>STV	2%	%n>STV	0%	%n>STV	1%	%n>STV	0%	%n>STV	0%	%n>STV	2%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_075 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result
Samples	19
SeasGM	229
#GMI	33
#GMI Ex	32
%GMI Ex	96%
n>STV	10
%n>STV	52%

Variable*	Result
Samples	21
SeasGM	257
#GMI	37
#GMI Ex	27
%GMI Ex	72%
n>STV	13
%n>STV	61%

Variable*	Result
Samples	38
SeasGM	625
#GMI	63
#GMI Ex	63
%GMI Ex	100%
n>STV	24
%n>STV	63%

Variable*	Result
Samples	19
SeasGM	1057
#GMI	32
#GMI Ex	32
%GMI Ex	100%
n>STV	13
%n>STV	68%

Variable*	Result
Samples	26
SeasGM	4112
#GMI	47
#GMI Ex	47
%GMI Ex	100%
n>STV	25
%n>STV	96%

Variable*	Result
Samples	29
SeasGM	811
#GMI	51
#GMI Ex	51
%GMI Ex	100%
n>STV	21
%n>STV	72%

Variable*	Result
Samples	46
SeasGM	493
#GMI	81
#GMI Ex	81
%GMI Ex	100%
n>STV	28
%n>STV	60%

Variable*	Result
Samples	46
SeasGM	341
#GMI	82
#GMI Ex	82
%GMI Ex	100%
n>STV	26
%n>STV	56%

Variable*	Result
Samples	49
SeasGM	1036
#GMI	85
#GMI Ex	85
%GMI Ex	100%
n>STV	39
%n>STV	79%

Variable*	Result
Samples	54
SeasGM	637
#GMI	96
#GMI Ex	96
%GMI Ex	100%
n>STV	35
%n>STV	64%

Variable*	Result
Samples	32
SeasGM	760
#GMI	57
#GMI Ex	57
%GMI Ex	100%
n>STV	22
%n>STV	68%

Variable*	Result
Samples	34
SeasGM	245
#GMI	58
#GMI Ex	53
%GMI Ex	91%
n>STV	16
%n>STV	47%

Variable*	Result
Samples	31
SeasGM	210
#GMI	52
#GMI Ex	49
%GMI Ex	94%
n>STV	16
%n>STV	51%

Variable*	Result
Samples	21
SeasGM	78
#GMI	36
#GMI Ex	20
%GMI Ex	55%
n>STV	7
%n>STV	33%

Variable*	Result
Samples	32
SeasGM	82
#GMI	56
#GMI Ex	30
%GMI Ex	53%
n>STV	8
%n>STV	25%

Variable*	Result
Samples	28
SeasGM	280
#GMI	51
#GMI Ex	50
%GMI Ex	98%
n>STV	15
%n>STV	53%

Variable*	Result
Samples	23
SeasGM	192
#GMI	40
#GMI Ex	38
%GMI Ex	95%
n>STV	13
%n>STV	56%

Variable*	Result
Samples	19
SeasGM	446
#GMI	32
#GMI Ex	32
%GMI Ex	100%
n>STV	11
%n>STV	57%

Variable*	Result
Samples	20
SeasGM	306
#GMI	31
#GMI Ex	27
%GMI Ex	87%
n>STV	10
%n>STV	50%

Variable*	Result
Samples	20
SeasGM	438
#GMI	33
#GMI Ex	31
%GMI Ex	93%
n>STV	11
%n>STV	55%

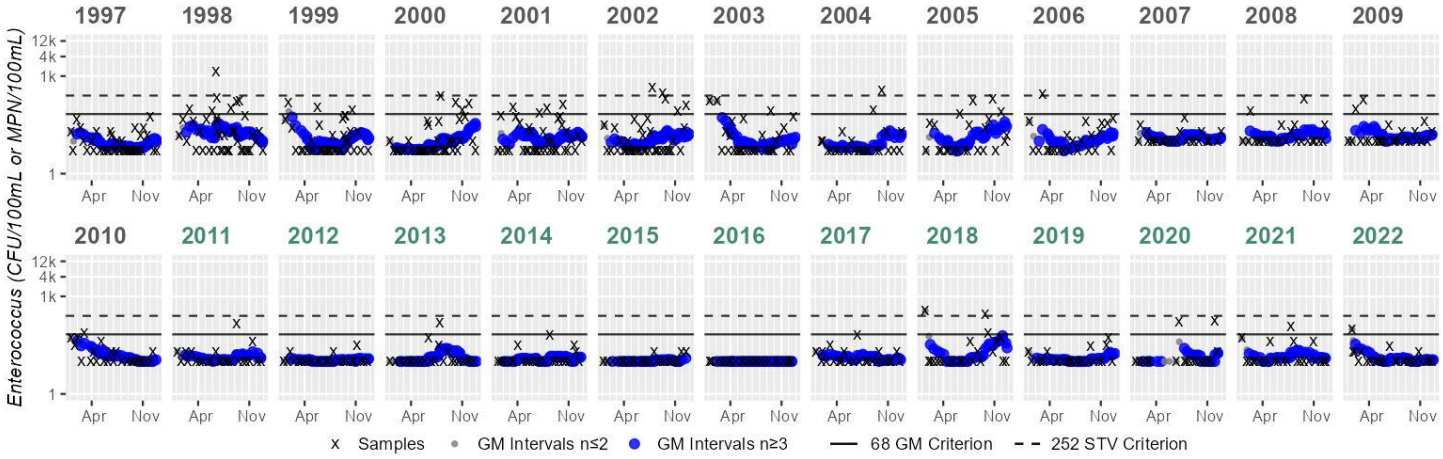
Variable*	Result
Samples	20
SeasGM	166
#GMI	35
#GMI Ex	34
%GMI Ex	97%
n>STV	9
%n>STV	45%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
97%	100%	89%	94%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_138 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	38	Samples	40	Samples	37	Samples	40	Samples	39	Samples	39	Samples	30	Samples	25	Samples	23	Samples	24	Samples	23	Samples	24	Samples	25
SeasGM	8	SeasGM	18	SeasGM	11	SeasGM	10	SeasGM	12	SeasGM	11	SeasGM	11	SeasGM	8	SeasGM	14	SeasGM	11	SeasGM	12	SeasGM	14	SeasGM	14
#GMI	69	#GMI	75	#GMI	66	#GMI	71	#GMI	73	#GMI	71	#GMI	52	#GMI	42	#GMI	40	#GMI	42	#GMI	41	#GMI	41	#GMI	45
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	2	n>STV	0	n>STV	1	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	2%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	5%	%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	0%

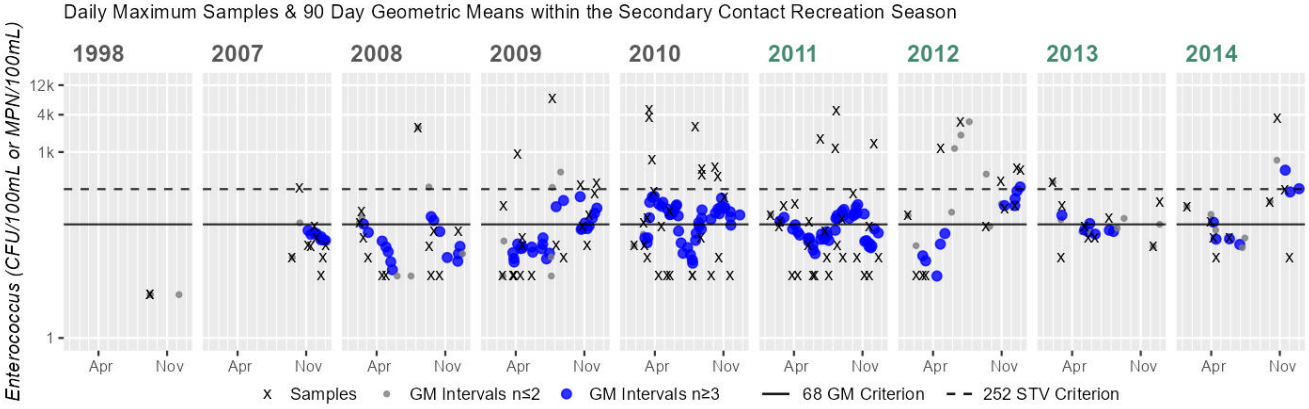
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	24	Samples	24	Samples	24	Samples	24	Samples	24	Samples	23	Samples	23	Samples	24	Samples	23	Samples	24	Samples	18	Samples	24	Samples	24
SeasGM	15	SeasGM	13	SeasGM	11	SeasGM	12	SeasGM	12	SeasGM	10	SeasGM	10	SeasGM	13	SeasGM	19	SeasGM	12	SeasGM	14	SeasGM	14	SeasGM	12
#GMI	43	#GMI	40	#GMI	41	#GMI	43	#GMI	42	#GMI	38	#GMI	40	#GMI	42	#GMI	41	#GMI	41	#GMI	26	#GMI	40	#GMI	43
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	2	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	8%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_154 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result
Samples	2
SeasGM	5
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	9
SeasGM	34
#GMI	13
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	11%

Variable*	Result
Samples	12
SeasGM	39
#GMI	14
#GMI Ex	3
%GMI Ex	21%
n>STV	1
%n>STV	8%

Variable*	Result
Samples	19
SeasGM	57
#GMI	28
#GMI Ex	10
%GMI Ex	35%
n>STV	4
%n>STV	21%

Variable*	Result
Samples	26
SeasGM	89
#GMI	46
#GMI Ex	29
%GMI Ex	63%
n>STV	8
%n>STV	30%

Variable*	Result
Samples	27
SeasGM	59
#GMI	46
#GMI Ex	17
%GMI Ex	36%
n>STV	4
%n>STV	14%

Variable*	Result
Samples	12
SeasGM	133
#GMI	12
#GMI Ex	7
%GMI Ex	58%
n>STV	5
%n>STV	41%

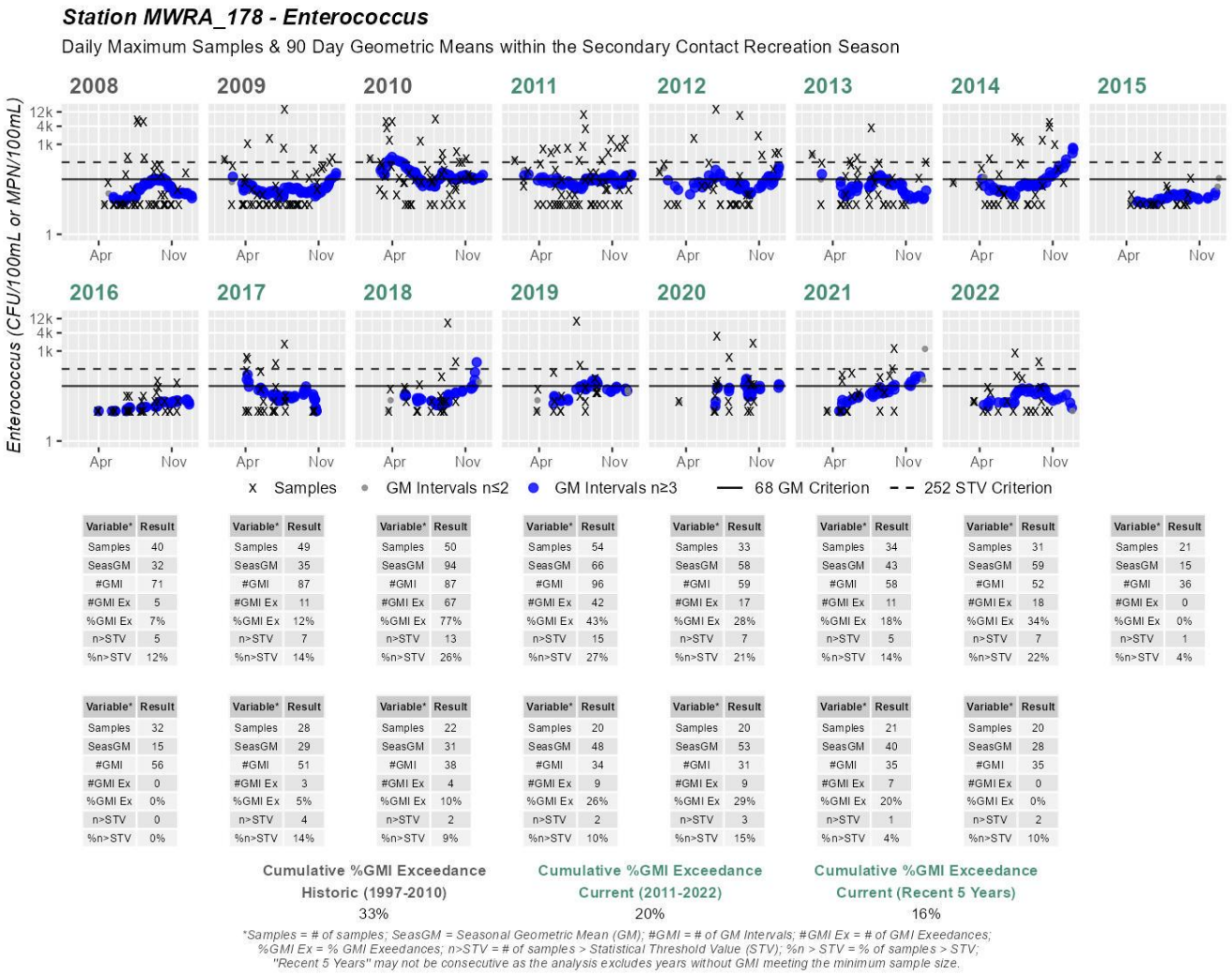
Variable*	Result
Samples	9
SeasGM	69
#GMI	7
#GMI Ex	2
%GMI Ex	28%
n>STV	1
%n>STV	11%

Variable*	Result
Samples	9
SeasGM	98
#GMI	7
#GMI Ex	4
%GMI Ex	57%
n>STV	1
%n>STV	11%

Cumulative %GMI Exceedance Historic (1997-2010)
41%

Cumulative %GMI Exceedance Current (2011-2022)
41%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*



Variable*	Result
Samples	40
SeasGM	32
#GMI	71
#GMI Ex	5
%GMI Ex	7%
n>STV	5
%n>STV	12%

Variable*	Result
Samples	49
SeasGM	35
#GMI	87
#GMI Ex	11
%GMI Ex	12%
n>STV	7
%n>STV	14%

Variable*	Result
Samples	50
SeasGM	94
#GMI	87
#GMI Ex	67
%GMI Ex	77%
n>STV	13
%n>STV	26%

Variable*	Result
Samples	54
SeasGM	66
#GMI	96
#GMI Ex	42
%GMI Ex	43%
n>STV	15
%n>STV	27%

Variable*	Result
Samples	33
SeasGM	58
#GMI	59
#GMI Ex	17
%GMI Ex	28%
n>STV	7
%n>STV	21%

Variable*	Result
Samples	34
SeasGM	43
#GMI	58
#GMI Ex	11
%GMI Ex	18%
n>STV	5
%n>STV	14%

Variable*	Result
Samples	31
SeasGM	59
#GMI	52
#GMI Ex	18
%GMI Ex	34%
n>STV	7
%n>STV	22%

Variable*	Result
Samples	21
SeasGM	15
#GMI	36
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	32
SeasGM	15
#GMI	56
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	28
SeasGM	29
#GMI	51
#GMI Ex	3
%GMI Ex	5%
n>STV	4
%n>STV	14%

Variable*	Result
Samples	22
SeasGM	31
#GMI	38
#GMI Ex	4
%GMI Ex	10%
n>STV	2
%n>STV	9%

Variable*	Result
Samples	20
SeasGM	48
#GMI	34
#GMI Ex	9
%GMI Ex	26%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	20
SeasGM	53
#GMI	31
#GMI Ex	9
%GMI Ex	29%
n>STV	3
%n>STV	15%

Variable*	Result
Samples	21
SeasGM	40
#GMI	35
#GMI Ex	7
%GMI Ex	20%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	20
SeasGM	28
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	10%

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Boston Inner Harbor (MA70-02): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.4537 sq mi (96%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Dorchester Bay (MA70-03)

Location:	From the mouth of the Neponset River, Boston/Quincy to the line between Head Island and the north side of Thompson Island and the line between the south point of Thompson Island, Boston and Chapel Rocks, Quincy.
AU Type:	ESTUARY
AU Size:	3.46 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
5	5	Enterococcus	R1_MA_2019_01	Unchanged
5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Contaminated Sediments (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Discharges from Biosolids (SLUDGE) Storage, Application or Disposal (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Upstream Source (Y)	--	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--
Enterococcus	Combined Sewer Overflows (N)	--	--	--	--	X	X
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Fecal Coliform	Combined Sewer Overflows (N)	--	--	X	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
PCBs in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Upstream Source (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Dorchester Bay (MA70-03) continues to be assessed as Not Supporting and the prior Cause Unknown [Contaminants in Fish and/or Shellfish] and PCBs in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Dorchester Bay (referred to by MDPH as ''Boston Harbor'') in their 2017 Guide to Eating Fish Safely in Massachusetts. The public should refer to the most recent MDPH information for the most up to date meal advice for sensitive and general populations.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Dorchester Bay (MA70-03): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 3.4215 sq mi (99%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.2747 sq mi (8%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH3.0	Dorchester Bay And Neponset River	Prohibited	2.88548	83.4%
GBH3.1	Moon Head Causeway	Prohibited	0.00632	0.2%
GBH3.11	Malibu and Savin Hill Beaches	Prohibited	0.02706	0.8%
GBH3.2	Causeway	Conditionally Restricted	0.12509	3.6%
GBH3.3	Buckley's Bar	Prohibited	0.07329	2.1%
GBH3.4	Neponset River	Prohibited	0.00003	0.0%
GBH3.5	L Street Beach	Prohibited	0.15462	4.5%
GBH3.6	Carson Beach	Conditionally Restricted	0.06067	1.8%
GBH3.9	Thompson Island	Conditionally Restricted	0.08890	2.6%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Dorchester Bay (MA70-03) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Dorchester Bay (MA70-03) continues to be assessed as Not Supporting. The prior Enterococcus impairment is being carried forward based on MDPH Beach Closures data not meeting the threshold at 1 beach in 2019-2021 & bacteria data not meeting the threshold at 1 station in 2018-2022. In addition, one permitee, MA0101192 (5 CSO outfalls) discharges to this segment, which results in a presumptive impairment decision being applied for this use. Dorchester Bay has 6 beaches with MDPH Beach Closure data: Malibu [Beach ID: 2645], Savin Hill [ID: 2643], Carson [ID: 2647], City Point @ WWII Memorial [ID: 2641] & M Street [ID: 2649] DCR beaches in Boston & Nickerson [ID: 3090] beach in Quincy. Beaches were posted for >10% of the swimming season at Malibu in 2019 (32%), 2020 (21%), & 2021 (45%) indicating an Enterococcus impairment. The shellfish growing areas (3.4214 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Use. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples at 7 stations from 2011-2022; with stations/sample years up to downstream as follows: MWRA_040 [S Dorchester Bay, Malibu Bay] (n=17-24/yr), MWRA_140 [S D.Bay, near Columbia Point & Savin Hill Cove] (n=9-14/yr), MWRA_039 [S D.Bay, Fox Point, at UMass-Boston dock] (n=17-37/yr), MWRA_084 [S D.Bay, Columbia Point & Savin Hill Cove, at buoy #12] (n=17-25/yr), MWRA_036 [N D.Bay, Carson Beach, off McCormack Bathhouse, BOS086] (n=17-37/yr), MWRA_033 [N D.Bay, Carson Beach, off L St] (n=17-37/yr), MWRA_038 [N D.Bay] (n=9-14/yr). The most recent five years of Enterococcus data (for 6 out of the 7 sample stations) met 2024 CALM guidance i.e. Analysis of the multi-year high fq dataset at MWRA_040 indicated 2/5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2020 & 2022, 16 & 23%), 1 yr had >10% of samples exceed 130 CFU/100ml STV (2020, 15%) & cumulatively across years 8% of intervals had GMs >35 CFU/100ml. Analysis of the multi-year moderate fq dataset from MWRA_140 indicated 2/5 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml (2020 & 2021, 27 & 55%), 1 yr had ≥2 samples exceed 130 CFU/100ml STV (2020, n=2) & cumulatively 17% of intervals had GMs >35 CFU/100ml. Analysis of the multi-year high fq dataset from MWRA_084 indicated 2/5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2018 & 2020, 12 & 25%), 1 yr had >10% of samples exceed 130 CFU/100ml STV (2020, 15%) & cumulatively 10% of intervals had GMs >35 CFU/100ml. Analysis of the multi-year high fq datasets from both MWRA_033 & MWRA_036 indicated 0/5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml & 0 yrs had >10% of samples exceed 130 CFU/100ml STV; then for station MWRA_038 analysis of this multi-year moderate fq dataset indicated 0/5 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml & 0 yrs had ≥2 samples exceed 130 CFU/100ml STV. However, at Fox Point (station MWRA_039) analysis of the most recent five years of the multi-year high fq Enterococcus dataset indicated 3/5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2020-2022, 19-51%), 2 yrs had >10% of samples exceed the 130 CFU/100ml STV (2020 & 2022, 26 & 11%) & cumulatively 21% of intervals had GMs >35 CFU/100ml, which is indicative of an Enterococcus impairment. Surface water sampling was conducted at Carson & Savin Hill Beach's as part of a May 2022 MDPH study assessing 40 PFAS analytes in surface water & fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (max average 0.20 ng/L PFOA).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_033	Massachusetts Water Resources Authority	Water Quality	Carson Beach	North Dorchester Bay, Carson Beach, off L St.	42.327167	-71.036333
MWRA_036	Massachusetts Water Resources Authority	Water Quality	Carson Beach	North Dorchester Bay, Carson Beach, off McCormack Bathhouse, BOS086	42.326500	-71.045833
MWRA_038	Massachusetts Water Resources Authority	Water Quality	N. Dorchester Bay	North Dorchester Bay	42.321667	-71.021333
MWRA_039	Massachusetts Water Resources Authority	Water Quality	Columbia Point	South Dorchester Bay, Fox Point, at UMass-Boston dock	42.311164	-71.040217
MWRA_040	Massachusetts Water Resources Authority	Water Quality	Malibu Bay	South Dorchester Bay, Malibu Bay	42.306235	-71.051429
MWRA_084	Massachusetts Water Resources Authority	Water Quality	Columbia Point	South Dorchester Bay, Columbia Point and Savin Hill Cove, at buoy #12	42.307833	-71.033333
MWRA_140	Massachusetts Water Resources Authority	Water Quality	Neponset Mouth	South Dorchester Bay, near Columbia Point and Savin Hill Cove	42.305833	-71.040500

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 2)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	04/05/11	10/26/11	37	10	282	14
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	25	10	20	10
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	768	17
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	20	10
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/29/15	31	10	295	16
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	26	10	74	11
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	30	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	74	11
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	10	10
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	63	12
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	31	11
MWRA_033	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	30	10
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	04/05/11	10/26/11	37	10	185	18
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	25	10	134	12
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	22	10	459	18
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	110	11
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/29/15	31	10	109	17
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	26	10	213	13
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	71	11
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	98	12
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	20	10
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	131	12
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	41	11
MWRA_036	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	20	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	04/07/11	10/18/11	14	10	31	11
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	04/04/12	10/25/12	14	10	20	11
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	04/04/13	10/17/13	14	10	20	10
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	04/02/14	10/21/14	14	10	10	10
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	04/02/15	10/20/15	14	10	10	10
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	04/06/16	10/19/16	13	10	10	10
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	04/13/17	10/23/17	14	10	10	10
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	04/03/18	10/25/18	13	10	20	10
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	04/05/19	10/24/19	14	10	10	10
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	06/23/20	10/21/20	9	10	30	11
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	04/06/21	10/13/21	13	10	52	11
MWRA_038	Massachusetts Water Resources Authority	Enterococcus	04/04/22	10/27/22	14	10	30	10
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	04/05/11	11/23/11	37	10	6130	50
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	04/11/12	10/18/12	26	10	395	24
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	708	24
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	317	14
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/29/15	31	10	13000	38

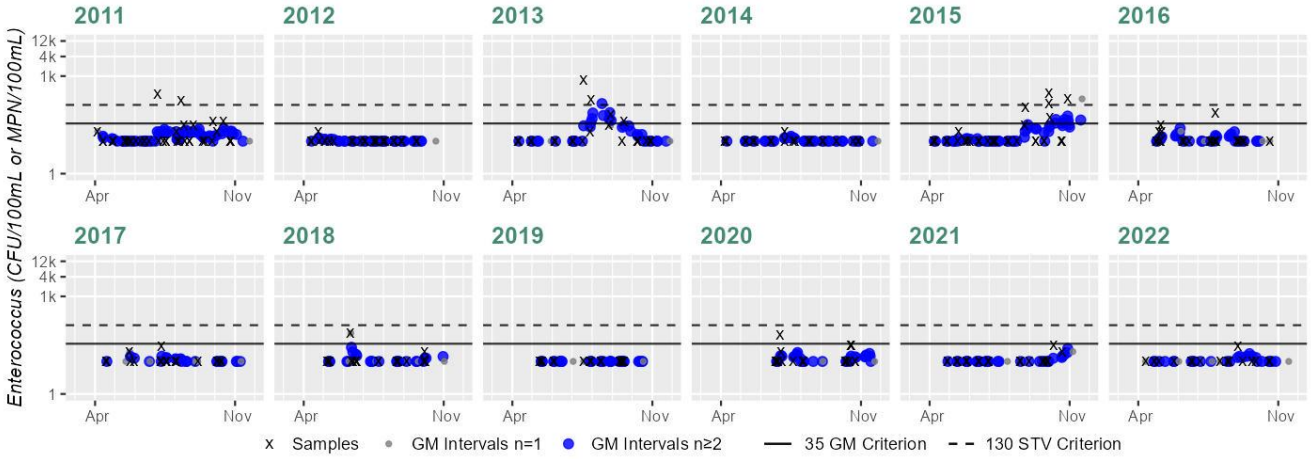
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	26	10	1550	19
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	1120	25
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	31	11
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	537	15
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	1670	33
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	120	21
MWRA_039	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	226	16
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	04/27/11	10/26/11	20	10	63	14
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	18	10	122	15
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	1600	20
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	31	10
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	199	17
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	24	10	145	14
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	404	17
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	110	15
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	332	14
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	839	22

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	31	11
MWRA_040	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	295	18
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	04/14/11	10/26/11	25	10	108	15
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	18	10	20	10
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	364	16
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	63	12
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	130	12
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	24	10	238	12
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	238	18
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	487	15
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	272	13
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	663	23
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	41	12
MWRA_084	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	74	12
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	04/07/11	10/18/11	14	10	108	24
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	04/04/12	10/25/12	14	10	31	11
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	04/04/13	10/17/13	14	10	288	18

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	04/02/14	10/21/14	14	10	135	15
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	04/02/15	10/20/15	14	10	31	11
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	04/06/16	10/19/16	13	10	20	10
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	04/13/17	10/23/17	14	10	41	15
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	04/03/18	10/25/18	13	10	98	17
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	04/05/19	10/24/19	14	10	52	15
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	06/23/20	10/21/20	9	10	272	24
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	04/06/21	10/13/21	13	10	521	39
MWRA_140	Massachusetts Water Resources Authority	Enterococcus	04/04/22	10/27/22	14	10	31	11

Station MWRA_033 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	37
SeasGM	14
#GMI	67
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	5%

Variable*	Result
Samples	25
SeasGM	10
#GMI	44
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	21
SeasGM	17
#GMI	35
#GMI Ex	8
%GMI Ex	22%
n>STV	2
%n>STV	9%

Variable*	Result
Samples	21
SeasGM	10
#GMI	37
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	31
SeasGM	16
#GMI	54
#GMI Ex	8
%GMI Ex	14%
n>STV	3
%n>STV	9%

Variable*	Result
Samples	26
SeasGM	11
#GMI	38
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	10
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	11
#GMI	24
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	12
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	11
#GMI	30
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	10
#GMI	26
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

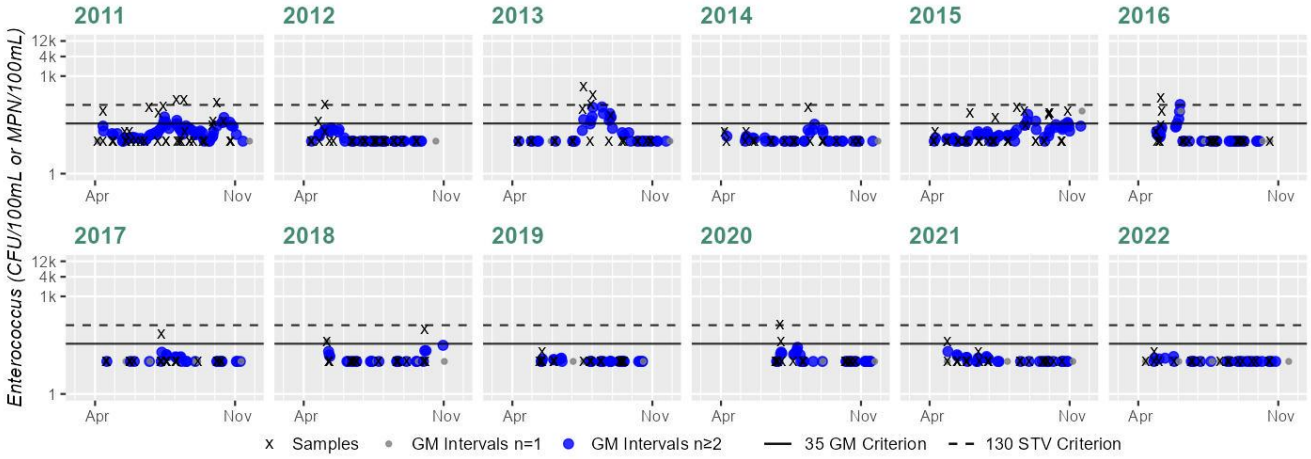
Cumulative %GMI Exceedance Current (2011-2022)
3%

Cumulative %GMI Exceedance Current (Recent 5 Years)
0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_036 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	37
SeasGM	18
#GMI	67
#GMI Ex	8
%GMI Ex	11%
n>STV	3
%n>STV	8%

Variable*	Result
Samples	25
SeasGM	12
#GMI	44
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	22
SeasGM	18
#GMI	37
#GMI Ex	10
%GMI Ex	27%
n>STV	3
%n>STV	13%

Variable*	Result
Samples	21
SeasGM	11
#GMI	37
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	31
SeasGM	17
#GMI	54
#GMI Ex	4
%GMI Ex	7%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	26
SeasGM	13
#GMI	38
#GMI Ex	4
%GMI Ex	10%
n>STV	1
%n>STV	3%

Variable*	Result
Samples	19
SeasGM	11
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	12
#GMI	24
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	12
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	11
#GMI	30
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	10
#GMI	26
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

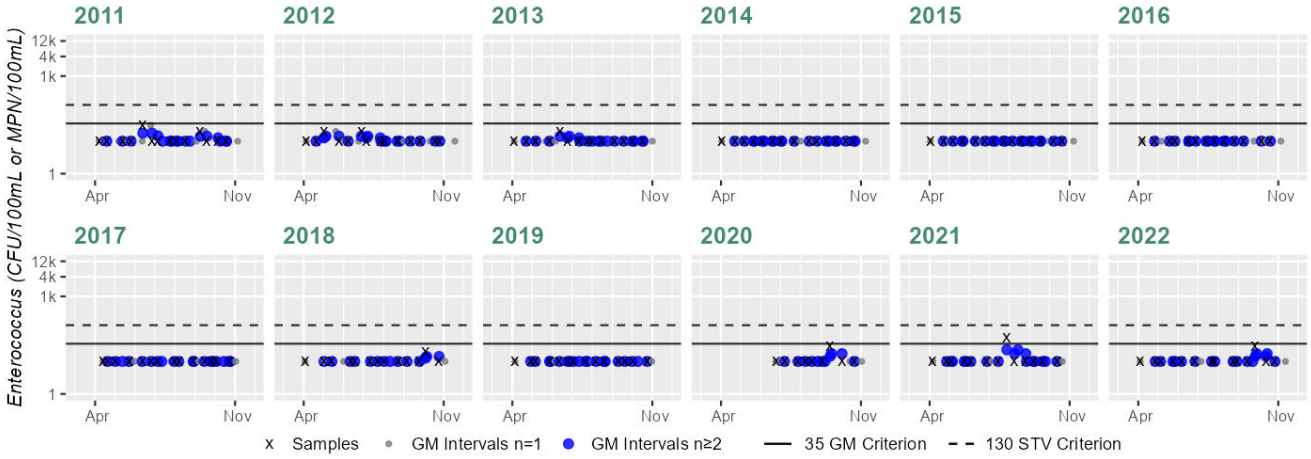
Cumulative %GMI Exceedance Current (2011-2022)
5%

Cumulative %GMI Exceedance Current (Recent 5 Years)
0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_038 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	14
SeasGM	11
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	11
#GMI	18
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	20
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	16
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	14
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	9
SeasGM	11
#GMI	11
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	11
#GMI	18
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	17
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)

0%

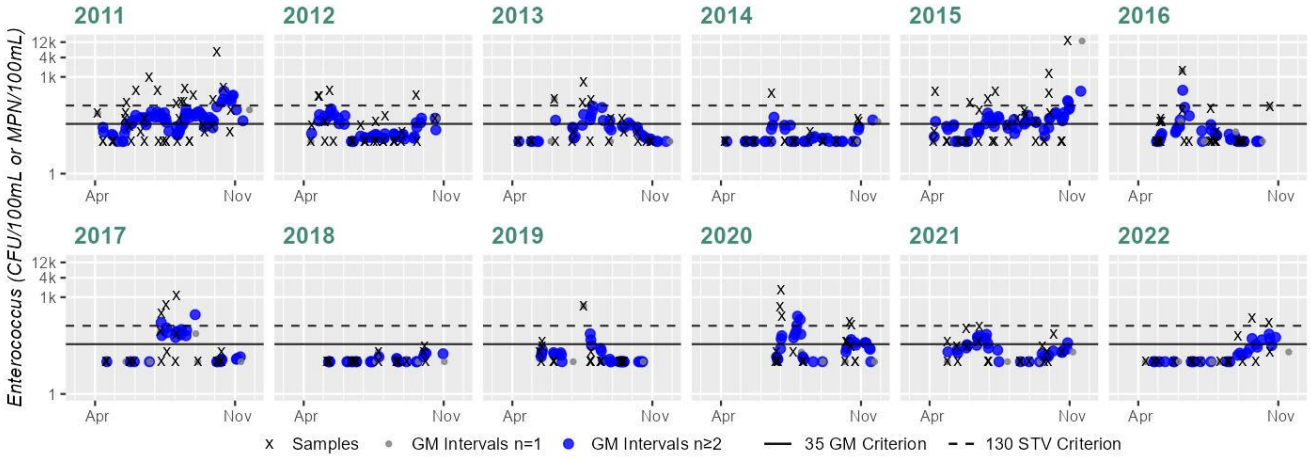
Cumulative %GMI Exceedance Current (Recent 5 Years)

0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_039 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	37
SeasGM	50
#GMI	67
#GMI Ex	45
%GMI Ex	67%
n>STV	12
%n>STV	32%

Variable*	Result
Samples	26
SeasGM	24
#GMI	46
#GMI Ex	15
%GMI Ex	32%
n>STV	4
%n>STV	15%

Variable*	Result
Samples	21
SeasGM	24
#GMI	35
#GMI Ex	10
%GMI Ex	28%
n>STV	4
%n>STV	19%

Variable*	Result
Samples	21
SeasGM	14
#GMI	37
#GMI Ex	2
%GMI Ex	5%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	31
SeasGM	38
#GMI	54
#GMI Ex	28
%GMI Ex	51%
n>STV	7
%n>STV	22%

Variable*	Result
Samples	26
SeasGM	19
#GMI	38
#GMI Ex	4
%GMI Ex	10%
n>STV	1
%n>STV	3%

Variable*	Result
Samples	19
SeasGM	25
#GMI	25
#GMI Ex	13
%GMI Ex	52%
n>STV	3
%n>STV	15%

Variable*	Result
Samples	18
SeasGM	11
#GMI	24
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	15
#GMI	29
#GMI Ex	2
%GMI Ex	6%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	33
#GMI	31
#GMI Ex	16
%GMI Ex	51%
n>STV	5
%n>STV	26%

Variable*	Result
Samples	19
SeasGM	21
#GMI	30
#GMI Ex	7
%GMI Ex	23%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	16
#GMI	26
#GMI Ex	5
%GMI Ex	19%
n>STV	2
%n>STV	11%

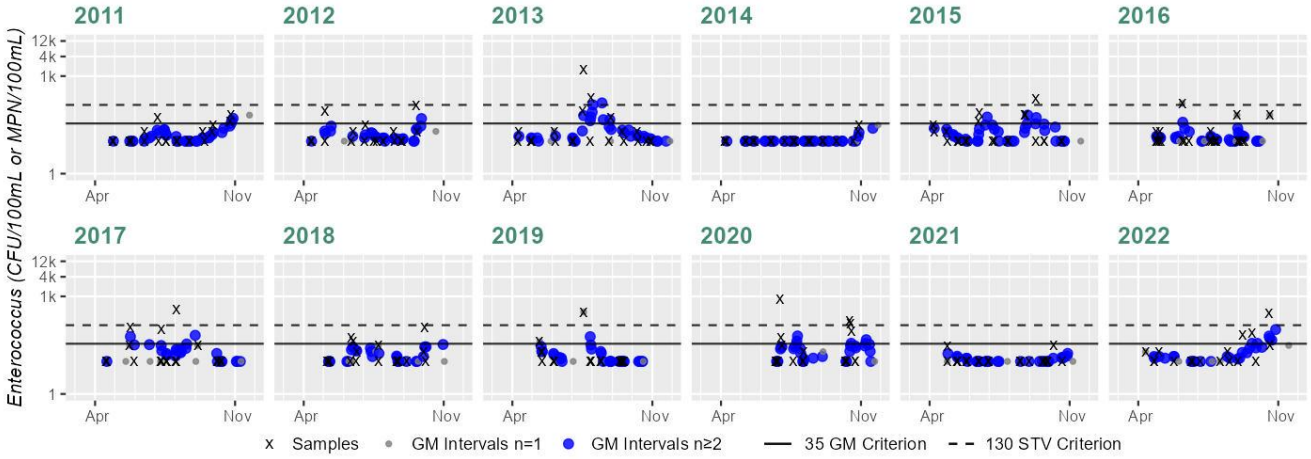
Cumulative %GMI Exceedance Current (2011-2022)
33%

Cumulative %GMI Exceedance Current (Recent 5 Years)
21%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_040 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	20
SeasGM	14
#GMI	36
#GMI Ex	3
%GMI Ex	8%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	15
#GMI	29
#GMI Ex	1
%GMI Ex	3%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	21
SeasGM	20
#GMI	35
#GMI Ex	8
%GMI Ex	22%
n>STV	2
%n>STV	9%

Variable*	Result
Samples	21
SeasGM	10
#GMI	37
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	22
SeasGM	17
#GMI	38
#GMI Ex	3
%GMI Ex	7%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	24
SeasGM	14
#GMI	34
#GMI Ex	1
%GMI Ex	2%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	19
SeasGM	17
#GMI	25
#GMI Ex	2
%GMI Ex	8%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	15
#GMI	24
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	14
#GMI	29
#GMI Ex	1
%GMI Ex	3%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	22
#GMI	31
#GMI Ex	5
%GMI Ex	16%
n>STV	3
%n>STV	15%

Variable*	Result
Samples	19
SeasGM	11
#GMI	30
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	18
#GMI	26
#GMI Ex	6
%GMI Ex	23%
n>STV	1
%n>STV	5%

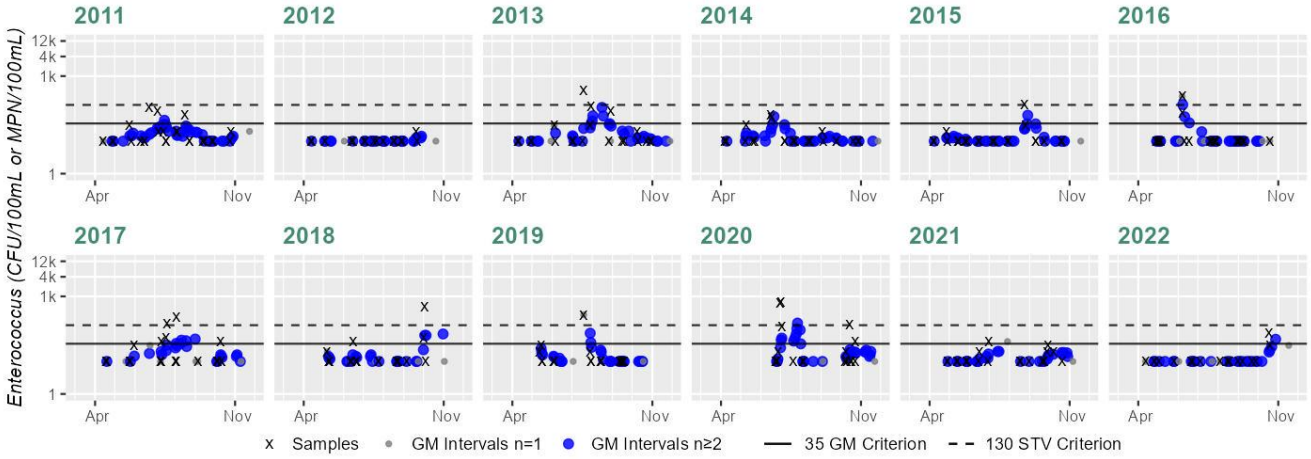
Cumulative %GMI Exceedance Current (2011-2022)
8%

Cumulative %GMI Exceedance Current (Recent 5 Years)
8%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_084 - Enterococcus

Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



Variable*	Result
Samples	25
SeasGM	15
#GMI	44
#GMI Ex	1
%GMI Ex	2%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	21
SeasGM	16
#GMI	35
#GMI Ex	4
%GMI Ex	11%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	21
SeasGM	12
#GMI	37
#GMI Ex	1
%GMI Ex	2%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	22
SeasGM	12
#GMI	38
#GMI Ex	1
%GMI Ex	2%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	24
SeasGM	12
#GMI	34
#GMI Ex	3
%GMI Ex	8%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	19
SeasGM	18
#GMI	25
#GMI Ex	5
%GMI Ex	20%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	18
SeasGM	15
#GMI	24
#GMI Ex	3
%GMI Ex	12%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	13
#GMI	29
#GMI Ex	2
%GMI Ex	6%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	23
#GMI	31
#GMI Ex	8
%GMI Ex	25%
n>STV	3
%n>STV	15%

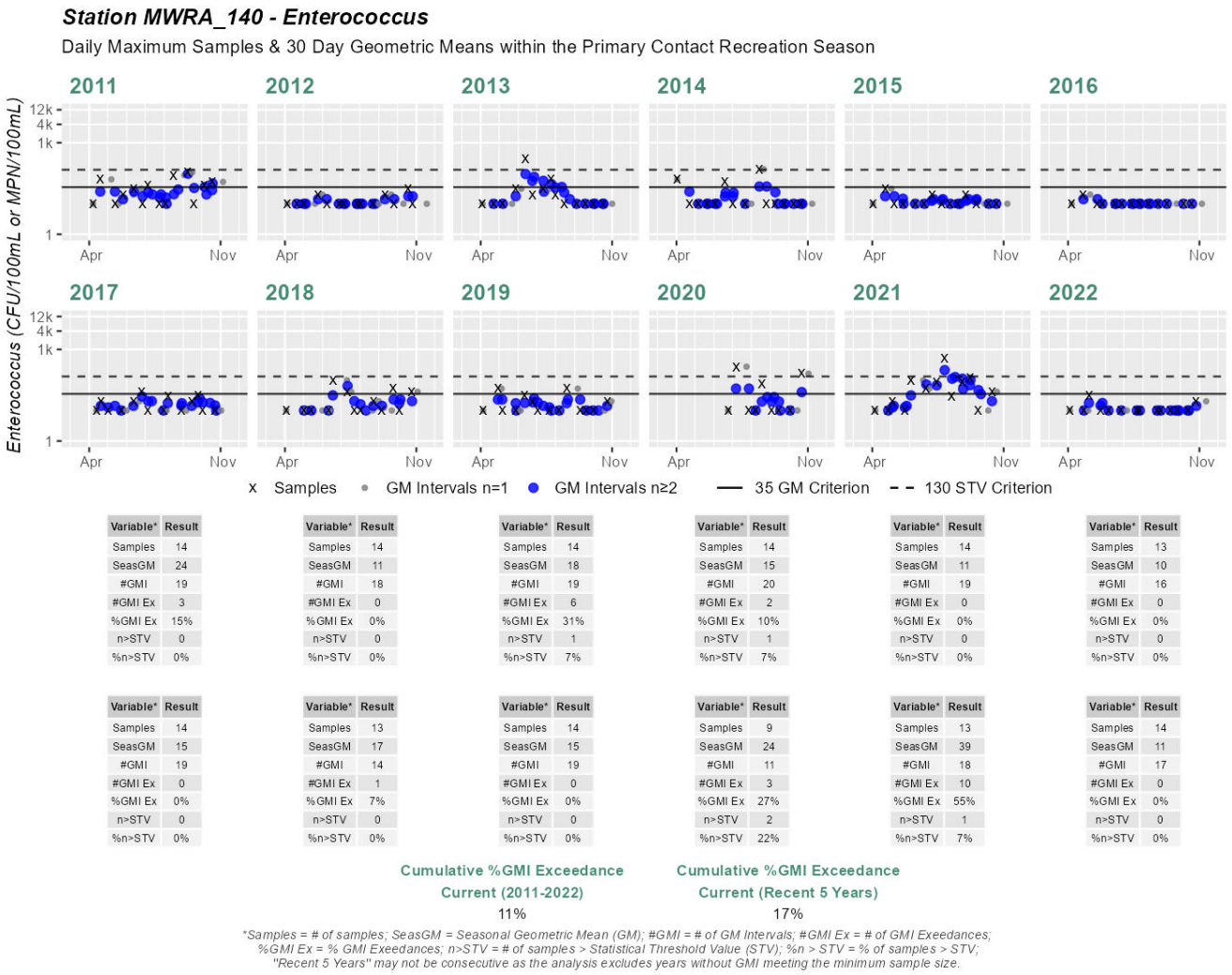
Variable*	Result
Samples	19
SeasGM	12
#GMI	30
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	12
#GMI	26
#GMI Ex	1
%GMI Ex	3%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)
7%

Cumulative %GMI Exceedance Current (Recent 5 Years)
10%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*



Variable*	Result
Samples	14
SeasGM	24
#GMI	19
#GMI Ex	3
%GMI Ex	15%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	11
#GMI	18
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	18
#GMI	19
#GMI Ex	6
%GMI Ex	31%
n>STV	1
%n>STV	7%

Variable*	Result
Samples	14
SeasGM	15
#GMI	20
#GMI Ex	2
%GMI Ex	10%
n>STV	1
%n>STV	7%

Variable*	Result
Samples	14
SeasGM	11
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	16
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	15
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	17
#GMI	14
#GMI Ex	1
%GMI Ex	7%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	15
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	9
SeasGM	24
#GMI	11
#GMI Ex	3
%GMI Ex	27%
n>STV	2
%n>STV	22%

Variable*	Result
Samples	13
SeasGM	39
#GMI	18
#GMI Ex	10
%GMI Ex	55%
n>STV	1
%n>STV	7%

Variable*	Result
Samples	14
SeasGM	11
#GMI	17
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.

Beach Postings

MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022) (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 2)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2641	City Point Beach @ WWII Memorial (DCR)/ Boston	42.33278, -71.02480	42.33227, -71.02080	1%	0%	0%	0%	0%	0%	0%	6%	0%	0
2643	Savin Hill (DCR)/ Boston	42.30788, -71.05290	42.30794, -71.04970	1%	1%	0%	0%	0%	1%	1%	21%	0%	1

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2645	Malibu (DCR)/ Boston	42.30794, -71.04970	42.30484, -71.04800	5%	8%	3%	11%	8%	32%	21%	45%	7%	4
2647	Carson Beach (DCR)/ Boston	42.32328, -71.04680	42.32910, -71.03740	1%	0%	0%	0%	1%	0%	0%	10%	0%	0
2647	Carson Beach (DCR)/ Boston	42.32328, -71.04680	42.32910, -71.03740	1%	0%	0%	0%	1%	0%	0%	10%	0%	0
2649	M Street Beach (DCR)/ Boston	42.32935, -71.03320	42.33065, -71.03040	1%	0%	0%	0%	1%	0%	0%	8%	0%	0
3090	Nickerson/ Quincy	42.30215, -71.01320	42.30175, -71.01330	4%	0%	0%	0%	0%	0%	2%	7%	5%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Dorchester Bay (MA70-03): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 3.4215 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Other Indicators

Summary of MA DPH 2021 and 2022 PFAS in Water Column Data

Data Sources: (MA DPH 2023a, MA DPH 2023b)

Surface water sampling was conducted at Carson Beach on Dorchester Bay (MA70-03) in Boston as part of a May 2022 MA DPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.20 ng/L PFOA).

Data Sources: (MA DPH 2023a, MA DPH 2023b)

Surface water sampling was conducted at Savin Hill Beach on Dorchester Bay (MA70-03) in Boston as part of a May 2022 MA DPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS,

HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.20 ng/L PFOA, PFOS, PFHxS).

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Dorchester Bay (MA70-03) continues to be assessed as Not Supporting. The prior Enterococcus impairment is being carried forward based on MDPH Beach Closures data not meeting the threshold at 1 beach in 2019-2021. In addition, one permitee, MA0101192 (5 CSO outfalls) discharges to this segment, which results in a presumptive impairment decision being applied for this use. Dorchester Bay has 6 beaches with MDPH Beach Closure data: Malibu [Beach ID: 2645], Savin Hill [ID: 2643], Carson [ID: 2647], City Point @ WWII Memorial [ID: 2641] & M Street [ID: 2649] DCR beaches in Boston & Nickerson [ID: 3090] beach in Quincy. Available MDPH Beach Closure data cannot be used to positively assess the Use since beaches were posted for >10% of the swimming season: Malibu in 2019, 2020 & 2021. The shellfish growing areas (3.4214 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Use. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) from 1997-2022 at 7 stations; with stations/sample years up to downstream as follows: MWRA_040 [S D.Bay, Malibu Bay] 1997-2010 (n=12-26/yr) & 2011-2022 (n=20-26/yr), MWRA_140 [S D.Bay, near Columbia Pt & Savin Hill Cove] 1997-2010 (n=21-40/yr) & 2011-2022 (n=18-24/yr), MWRA_039 [S D.Bay, Fox Pt, at UMass-Boston dock] 1997-2010 (n=17-51/yr) & 2011-2022 (n=20-44/yr), MWRA_084 [S D.Bay, Columbia Pt & Savin Hill Cove, at buoy #12] 1997-2010 (n=17-37/yr) & 2011-2022 (n=20-27/yr), MWRA_036 [N D. Bay, Carson Beach, off McCormack Bathhouse, BOS086] 1997-2010 (n=20-47/yr) & 2011-2022 (n=20-43/yr), MWRA_033 [N D.Bay, Carson Beach, off L St] 1997-2010 (historic n=20-47/yr) & 2011-2022 (current n=20-43/yr), MWRA_038 [N D.Bay] 1997-2010 (n=21-35/yr) & 2011-2022 (n=18-24/yr). Since the data from the historic window at 6 of the 7 stations & from the current (recent 5 years) at all stations meets CALM guidance, only the analysis for the data from the current recent IR window will be summarized here. Analysis of the recent five years of the multi-year high fq Enterococcus datasets from MWRA_040, 036, 033 & 038 all indicated 0/5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml, 0 yrs had >10% of samples exceed the 252 CFU/100ml STV & cumulatively across years 0% of intervals had GMs >68 CFU/100ml, which meets 2024 CALM guidance. In the Fox Point area bacteria concentrations were more elevated but still met CALM guidance i.e. analysis of the recent five years of the multi-year high fq Enterococcus datasets from: MWRA_084 indicated 0/5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml, 1 yr had >10% of samples exceed the 252 CFU/100ml STV (2020, 10%) and cumulatively 0% of intervals had GMs >68 CFU/100ml; & at MWRA_140 indicated 1/5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml (2021, 17%), 1 yr had >10% of samples exceed the 252 CFU/100ml STV (2020, 11%) & cumulatively 6% of intervals had GMs >68 CFU/100ml. At station MWRA_039 (close to shore in Savin Hill Cove and just opposite Fox Point), historically data did not meet CALM guidance and additionally data in the current window (2011-2017) also did not meet CALM guidance; however in the current (recent 5 years) window, conditions appear to have improved as analysis of the multi-year high fq Enterococcus dataset from MWRA_039 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml, 1 yr had >10% of samples exceed the 252 CFU/100ml STV (2020, 15%), and cumulatively across years 0% of intervals had GMs >68 CFU/100ml, which meets CALM guidance. Overall, Enterococcus data from MWRA_033,

MWRA_036, MWRA_038, MWRA_039, MWRA_040, MWRA_084, and MWRA_140 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_033	Massachusetts Water Resources Authority	Water Quality	Carson Beach	North Dorchester Bay, Carson Beach, off L St.	42.327167	-71.036333
MWRA_036	Massachusetts Water Resources Authority	Water Quality	Carson Beach	North Dorchester Bay, Carson Beach, off McCormack Bathhouse, BOS086	42.326500	-71.045833
MWRA_038	Massachusetts Water Resources Authority	Water Quality	N. Dorchester Bay	North Dorchester Bay	42.321667	-71.021333
MWRA_039	Massachusetts Water Resources Authority	Water Quality	Columbia Point	South Dorchester Bay, Fox Point, at UMass-Boston dock	42.311164	-71.040217
MWRA_040	Massachusetts Water Resources Authority	Water Quality	Malibu Bay	South Dorchester Bay, Malibu Bay	42.306235	-71.051429
MWRA_084	Massachusetts Water Resources Authority	Water Quality	Columbia Point	South Dorchester Bay, Columbia Point and Savin Hill Cove, at buoy #12	42.307833	-71.033333
MWRA_140	Massachusetts Water Resources Authority	Water Quality	Neponset Mouth	South Dorchester Bay, near Columbia Point and Savin Hill Cove	42.305833	-71.040500

Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)

(MWRA 2024) (MassDEP Undated 1)

[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_033	Massachusetts Water Resources Authority	Enterococci	06/16/97	08/09/97	24	5	150	7

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_033	Massachusetts Water Resources Authority	Enterococci	06/02/98	12/10/98	20	5	30	6
MWRA_033	Massachusetts Water Resources Authority	Enterococci	04/07/99	11/18/99	21	5	15	5
MWRA_033	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	26	5	15	5
MWRA_033	Massachusetts Water Resources Authority	Enterococci	01/02/01	11/19/01	34	5	75	5
MWRA_033	Massachusetts Water Resources Authority	Enterococci	02/11/02	12/18/02	25	5	195	8
MWRA_033	Massachusetts Water Resources Authority	Enterococci	04/23/03	11/26/03	22	5	20	6
MWRA_033	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	29	5	130	8
MWRA_033	Massachusetts Water Resources Authority	Enterococci	03/29/05	12/29/05	26	5	230	8
MWRA_033	Massachusetts Water Resources Authority	Enterococci	01/12/06	12/13/06	30	5	510	10
MWRA_033	Massachusetts Water Resources Authority	Enterococci	04/23/07	12/07/07	24	10	161	11
MWRA_033	Massachusetts Water Resources Authority	Enterococci	03/06/08	12/18/08	29	10	122	13
MWRA_033	Massachusetts Water Resources Authority	Enterococci	01/29/09	12/03/09	43	10	1790	15
MWRA_033	Massachusetts Water Resources Authority	Enterococci	01/26/10	12/13/10	47	10	441	26
MWRA_033	Massachusetts Water Resources Authority	Enterococci	01/19/11	12/08/11	43	10	368	14
MWRA_033	Massachusetts Water Resources Authority	Enterococci	01/13/12	09/20/12	30	10	31	10
MWRA_033	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	768	16
MWRA_033	Massachusetts Water Resources Authority	Enterococci	04/07/14	12/26/14	25	10	143	12

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_033	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/29/15	31	10	295	16
MWRA_033	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	29	10	74	11
MWRA_033	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	30	10
MWRA_033	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	74	11
MWRA_033	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	10	10
MWRA_033	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	63	12
MWRA_033	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	31	10
MWRA_033	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	30	10
MWRA_036	Massachusetts Water Resources Authority	Enterococci	06/16/97	08/09/97	22	5	190	7
MWRA_036	Massachusetts Water Resources Authority	Enterococci	06/02/98	12/10/98	20	5	630	7
MWRA_036	Massachusetts Water Resources Authority	Enterococci	04/07/99	11/18/99	20	5	10	5
MWRA_036	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	26	5	200	6
MWRA_036	Massachusetts Water Resources Authority	Enterococci	01/02/01	11/19/01	33	5	105	6
MWRA_036	Massachusetts Water Resources Authority	Enterococci	02/11/02	12/18/02	26	5	70	7
MWRA_036	Massachusetts Water Resources Authority	Enterococci	04/23/03	11/26/03	22	5	15	5
MWRA_036	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	29	5	555	10
MWRA_036	Massachusetts Water Resources Authority	Enterococci	03/29/05	12/29/05	27	5	2450	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_036	Massachusetts Water Resources Authority	Enterococci	01/12/06	12/13/06	30	5	510	9
MWRA_036	Massachusetts Water Resources Authority	Enterococci	04/17/07	12/07/07	26	10	15500	16
MWRA_036	Massachusetts Water Resources Authority	Enterococci	03/06/08	12/18/08	32	10	413	20
MWRA_036	Massachusetts Water Resources Authority	Enterococci	01/29/09	12/10/09	46	10	1270	19
MWRA_036	Massachusetts Water Resources Authority	Enterococci	01/26/10	12/13/10	47	10	2360	25
MWRA_036	Massachusetts Water Resources Authority	Enterococci	01/19/11	12/08/11	43	10	1550	20
MWRA_036	Massachusetts Water Resources Authority	Enterococci	01/13/12	09/20/12	30	10	645	13
MWRA_036	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	26	10	459	16
MWRA_036	Massachusetts Water Resources Authority	Enterococci	04/07/14	12/26/14	25	10	120	14
MWRA_036	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/29/15	31	10	109	17
MWRA_036	Massachusetts Water Resources Authority	Enterococci	01/11/16	10/18/16	30	10	213	14
MWRA_036	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	71	10
MWRA_036	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	98	12
MWRA_036	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	41	11
MWRA_036	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	131	12
MWRA_036	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	41	11
MWRA_036	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	20	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_038	Massachusetts Water Resources Authority	Enterococci	06/16/97	08/09/97	23	5	10	5
MWRA_038	Massachusetts Water Resources Authority	Enterococci	06/02/98	12/10/98	21	5	65	7
MWRA_038	Massachusetts Water Resources Authority	Enterococci	04/07/99	11/18/99	21	5	65	6
MWRA_038	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	27	5	55	6
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/02/01	11/19/01	35	5	25	5
MWRA_038	Massachusetts Water Resources Authority	Enterococci	02/11/02	12/18/02	26	5	35	6
MWRA_038	Massachusetts Water Resources Authority	Enterococci	04/01/03	12/22/03	25	5	70	6
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/27/04	12/29/04	25	5	10	5
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/20/05	12/22/05	23	5	50	6
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/05/06	12/22/06	25	5	330	8
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/18/07	12/28/07	23	10	20	10
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/08/08	12/18/08	24	10	171	11
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/06/09	12/21/09	25	10	30	10
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/05/10	12/14/10	24	10	52	11
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/05/11	12/19/11	24	10	31	10
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/05/12	12/20/12	24	10	20	10
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/03/13	12/20/13	24	10	20	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/09/14	12/16/14	24	10	20	10
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/06/15	12/16/15	23	10	10	10
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/06/16	12/14/16	23	10	41	10
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/05/17	12/19/17	24	10	10	10
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/16/18	12/19/18	23	10	74	12
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/03/19	12/18/19	24	10	20	10
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/06/20	12/14/20	18	10	52	12
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/04/21	12/20/21	24	10	52	10
MWRA_038	Massachusetts Water Resources Authority	Enterococci	01/20/22	12/21/22	24	10	30	10
MWRA_039	Massachusetts Water Resources Authority	Enterococci	06/16/97	08/09/97	24	5	685	11
MWRA_039	Massachusetts Water Resources Authority	Enterococci	06/17/98	12/10/98	17	5	6000	86
MWRA_039	Massachusetts Water Resources Authority	Enterococci	04/07/99	11/18/99	21	5	450	30
MWRA_039	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	26	5	510	11
MWRA_039	Massachusetts Water Resources Authority	Enterococci	01/02/01	11/19/01	25	5	40	8
MWRA_039	Massachusetts Water Resources Authority	Enterococci	04/10/02	12/18/02	18	5	60	9
MWRA_039	Massachusetts Water Resources Authority	Enterococci	04/30/03	11/26/03	20	5	125	8
MWRA_039	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	20	5	625	14

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_039	Massachusetts Water Resources Authority	Enterococci	04/28/05	12/29/05	22	5	320	15
MWRA_039	Massachusetts Water Resources Authority	Enterococci	04/25/06	12/13/06	25	5	700	20
MWRA_039	Massachusetts Water Resources Authority	Enterococci	04/02/07	12/31/07	38	10	836	21
MWRA_039	Massachusetts Water Resources Authority	Enterococci	02/06/08	12/18/08	36	10	6870	35
MWRA_039	Massachusetts Water Resources Authority	Enterococci	01/29/09	12/28/09	51	10	5790	36
MWRA_039	Massachusetts Water Resources Authority	Enterococci	01/26/10	12/13/10	47	10	3650	56
MWRA_039	Massachusetts Water Resources Authority	Enterococci	01/19/11	12/08/11	44	10	6130	46
MWRA_039	Massachusetts Water Resources Authority	Enterococci	01/13/12	10/18/12	31	10	395	22
MWRA_039	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	708	22
MWRA_039	Massachusetts Water Resources Authority	Enterococci	04/07/14	12/26/14	25	10	1020	18
MWRA_039	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/29/15	31	10	13000	38
MWRA_039	Massachusetts Water Resources Authority	Enterococci	01/11/16	10/18/16	29	10	1550	18
MWRA_039	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	1120	22
MWRA_039	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	31	11
MWRA_039	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	537	15
MWRA_039	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	1670	31
MWRA_039	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	120	19

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_039	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	226	15
MWRA_040	Massachusetts Water Resources Authority	Enterococci	06/16/97	08/09/97	23	5	115	9
MWRA_040	Massachusetts Water Resources Authority	Enterococci	06/17/98	12/10/98	16	5	2700	28
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/07/99	11/18/99	21	5	1550	16
MWRA_040	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	26	5	180	12
MWRA_040	Massachusetts Water Resources Authority	Enterococci	01/02/01	11/19/01	20	5	50	7
MWRA_040	Massachusetts Water Resources Authority	Enterococci	05/23/02	10/29/02	12	5	55	9
MWRA_040	Massachusetts Water Resources Authority	Enterococci	05/21/03	11/26/03	15	5	55	7
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	20	5	195	11
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/28/05	12/29/05	22	5	110	13
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/26/06	12/13/06	23	5	660	13
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/23/07	12/07/07	22	10	110	12
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/23/08	11/07/08	20	10	73	13
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/30/09	11/03/09	21	10	121	14
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/27/10	10/28/10	20	10	2360	20
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/27/11	11/09/11	22	10	63	14
MWRA_040	Massachusetts Water Resources Authority	Enterococci	03/13/12	09/20/12	22	10	122	14

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	1600	21
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/07/14	10/29/14	21	10	31	10
MWRA_040	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	199	17
MWRA_040	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	26	10	145	14
MWRA_040	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	404	16
MWRA_040	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	110	14
MWRA_040	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	332	15
MWRA_040	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	839	22
MWRA_040	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	31	11
MWRA_040	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	295	16
MWRA_084	Massachusetts Water Resources Authority	Enterococci	06/16/97	08/09/97	23	5	25	6
MWRA_084	Massachusetts Water Resources Authority	Enterococci	06/17/98	12/10/98	17	5	610	23
MWRA_084	Massachusetts Water Resources Authority	Enterococci	04/07/99	11/18/99	21	5	220	10
MWRA_084	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	26	5	115	8
MWRA_084	Massachusetts Water Resources Authority	Enterococci	01/02/01	11/19/01	25	5	45	7
MWRA_084	Massachusetts Water Resources Authority	Enterococci	04/10/02	12/18/02	18	5	115	7
MWRA_084	Massachusetts Water Resources Authority	Enterococci	04/30/03	11/26/03	20	5	50	6

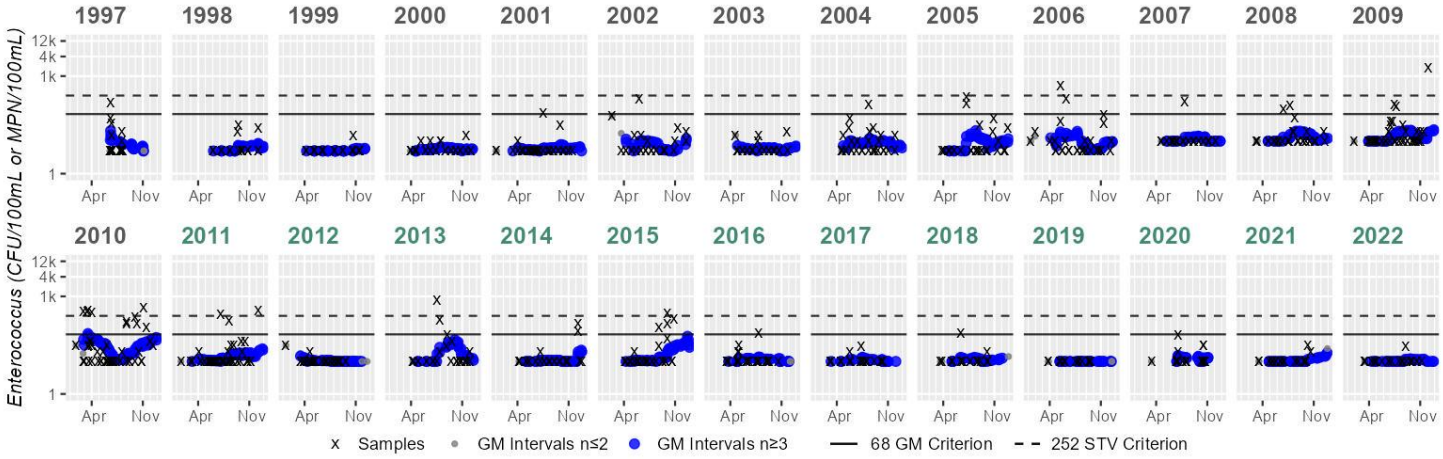
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_084	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	20	5	240	8
MWRA_084	Massachusetts Water Resources Authority	Enterococci	04/28/05	12/29/05	21	5	290	10
MWRA_084	Massachusetts Water Resources Authority	Enterococci	04/25/06	12/13/06	25	5	490	14
MWRA_084	Massachusetts Water Resources Authority	Enterococci	04/23/07	12/07/07	24	10	697	12
MWRA_084	Massachusetts Water Resources Authority	Enterococci	03/06/08	12/18/08	29	10	471	20
MWRA_084	Massachusetts Water Resources Authority	Enterococci	01/29/09	11/03/09	37	10	281	17
MWRA_084	Massachusetts Water Resources Authority	Enterococci	01/26/10	10/28/10	28	10	464	22
MWRA_084	Massachusetts Water Resources Authority	Enterococci	04/14/11	11/09/11	27	10	108	16
MWRA_084	Massachusetts Water Resources Authority	Enterococci	03/13/12	09/20/12	22	10	20	10
MWRA_084	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	364	16
MWRA_084	Massachusetts Water Resources Authority	Enterococci	04/07/14	10/29/14	21	10	63	12
MWRA_084	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	130	12
MWRA_084	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	26	10	238	13
MWRA_084	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	238	16
MWRA_084	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	487	14
MWRA_084	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	272	13
MWRA_084	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	663	22

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_084	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	41	12
MWRA_084	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	74	11
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/06/97	12/29/97	37	5	80	11
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/14/98	12/28/98	39	5	4300	36
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/11/99	12/22/99	37	5	355	13
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/03/00	12/28/00	40	5	530	12
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/09/01	12/27/01	39	5	95	9
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/08/02	12/19/02	39	5	450	12
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/06/03	12/22/03	30	5	230	19
MWRA_140	Massachusetts Water Resources Authority	Enterococci	02/25/04	12/29/04	23	5	385	17
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/20/05	12/22/05	21	5	610	15
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/05/06	12/22/06	24	5	160	14
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/18/07	12/28/07	23	10	74	12
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/08/08	12/18/08	23	10	145	17
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/06/09	12/21/09	24	10	317	15
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/05/10	12/14/10	24	10	833	14
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/05/11	12/19/11	24	10	108	20

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/05/12	12/20/12	24	10	171	13
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/03/13	12/20/13	24	10	288	16
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/09/14	12/16/14	24	10	135	17
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/06/15	12/16/15	22	10	122	13
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/06/16	12/14/16	23	10	243	12
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/05/17	12/19/17	24	10	96	16
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/16/18	12/19/18	23	10	546	28
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/03/19	12/18/19	24	10	295	19
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/06/20	12/14/20	18	10	275	26
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/04/21	12/20/21	24	10	521	26
MWRA_140	Massachusetts Water Resources Authority	Enterococci	01/20/22	12/21/22	24	10	74	13

Station MWRA_033 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	24	Samples	20	Samples	21	Samples	26	Samples	34	Samples	25	Samples	22	Samples	29	Samples	26	Samples	30	Samples	24	Samples	29	Samples	43
SeasGM	7	SeasGM	6	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	8	SeasGM	6	SeasGM	8	SeasGM	8	SeasGM	10	SeasGM	11	SeasGM	13	SeasGM	15
#GMI	43	#GMI	35	#GMI	37	#GMI	47	#GMI	57	#GMI	41	#GMI	35	#GMI	47	#GMI	43	#GMI	52	#GMI	39	#GMI	50	#GMI	76
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	1
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	1%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	1
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	3%	%n>STV	0%	%n>STV	0%	%n>STV	2%

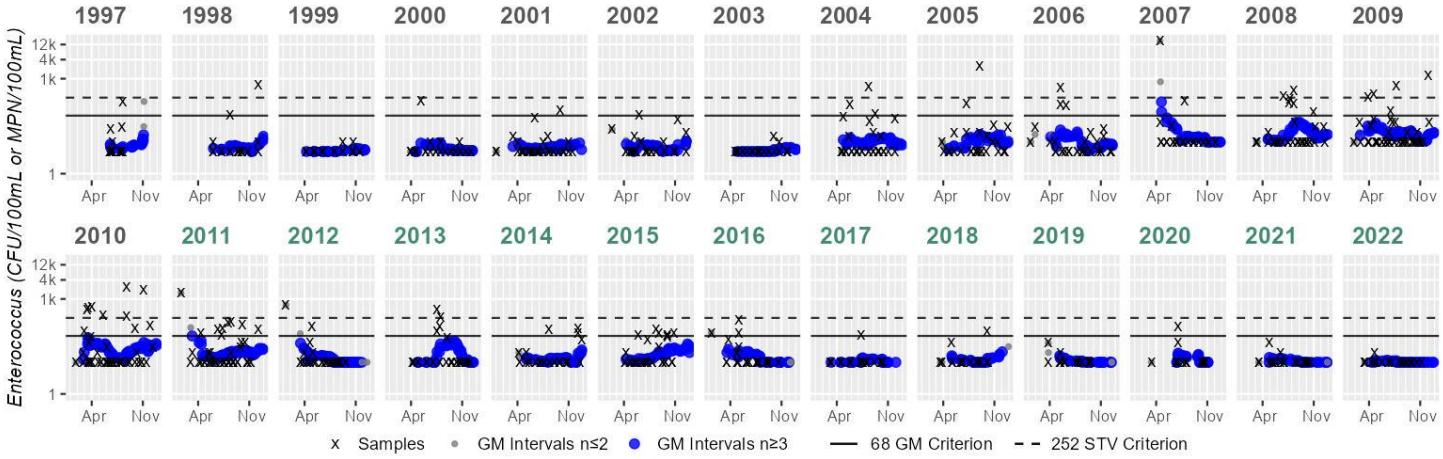
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	47	Samples	43	Samples	30	Samples	25	Samples	25	Samples	31	Samples	29	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	26	SeasGM	14	SeasGM	10	SeasGM	16	SeasGM	12	SeasGM	16	SeasGM	11	SeasGM	10	SeasGM	11	SeasGM	10	SeasGM	12	SeasGM	10	SeasGM	10
#GMI	85	#GMI	80	#GMI	51	#GMI	43	#GMI	45	#GMI	53	#GMI	49	#GMI	38	#GMI	35	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	2	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	2%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	5	n>STV	2	n>STV	0	n>STV	1	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	10%	%n>STV	4%	%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	3%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_036 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	22	Samples	20	Samples	20	Samples	26	Samples	33	Samples	26	Samples	22	Samples	29	Samples	27	Samples	30	Samples	26	Samples	32	Samples	46
SeasGM	7	SeasGM	7	SeasGM	5	SeasGM	6	SeasGM	6	SeasGM	7	SeasGM	5	SeasGM	10	SeasGM	10	SeasGM	9	SeasGM	16	SeasGM	20	SeasGM	19
#GMI	39	#GMI	35	#GMI	35	#GMI	47	#GMI	55	#GMI	42	#GMI	35	#GMI	47	#GMI	45	#GMI	52	#GMI	43	#GMI	56	#GMI	82
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	2	#GMI Ex	0	#GMI Ex	1
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	4%	%GMI Ex	0%	%GMI Ex	1%
n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	1	n>STV	1	n>STV	1	n>STV	1	n>STV	2	n>STV	4
%n>STV	0%	%n>STV	5%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	3%	%n>STV	3%	%n>STV	3%	%n>STV	3%	%n>STV	6%	%n>STV	8%

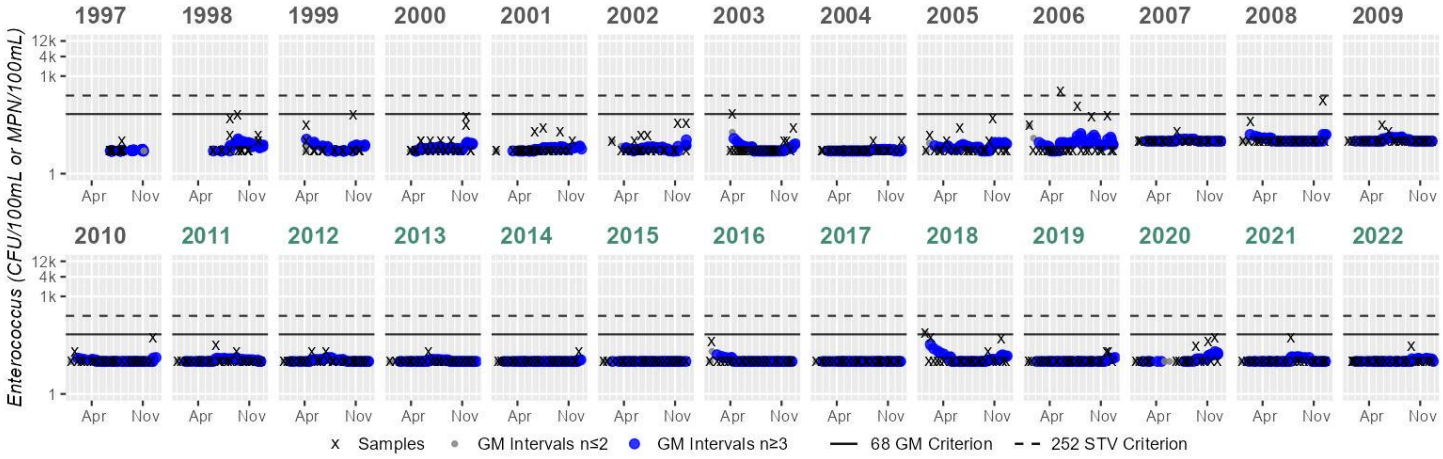
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	47	Samples	43	Samples	30	Samples	26	Samples	25	Samples	31	Samples	30	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	25	SeasGM	20	SeasGM	13	SeasGM	16	SeasGM	14	SeasGM	17	SeasGM	14	SeasGM	10	SeasGM	12	SeasGM	11	SeasGM	12	SeasGM	11	SeasGM	10
#GMI	85	#GMI	80	#GMI	51	#GMI	45	#GMI	45	#GMI	53	#GMI	51	#GMI	38	#GMI	35	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	1	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	1%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	7	n>STV	1	n>STV	1	n>STV	2	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	14%	%n>STV	2%	%n>STV	3%	%n>STV	7%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	1%	0%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_038 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	23	Samples	21	Samples	21	Samples	27	Samples	35	Samples	26	Samples	25	Samples	25	Samples	23	Samples	25	Samples	23	Samples	24	Samples	25
SeasGM	5	SeasGM	7	SeasGM	6	SeasGM	6	SeasGM	5	SeasGM	6	SeasGM	6	SeasGM	5	SeasGM	6	SeasGM	8	SeasGM	10	SeasGM	11	SeasGM	10
#GMI	41	#GMI	37	#GMI	37	#GMI	49	#GMI	59	#GMI	43	#GMI	43	#GMI	42	#GMI	40	#GMI	44	#GMI	41	#GMI	41	#GMI	45
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	0%

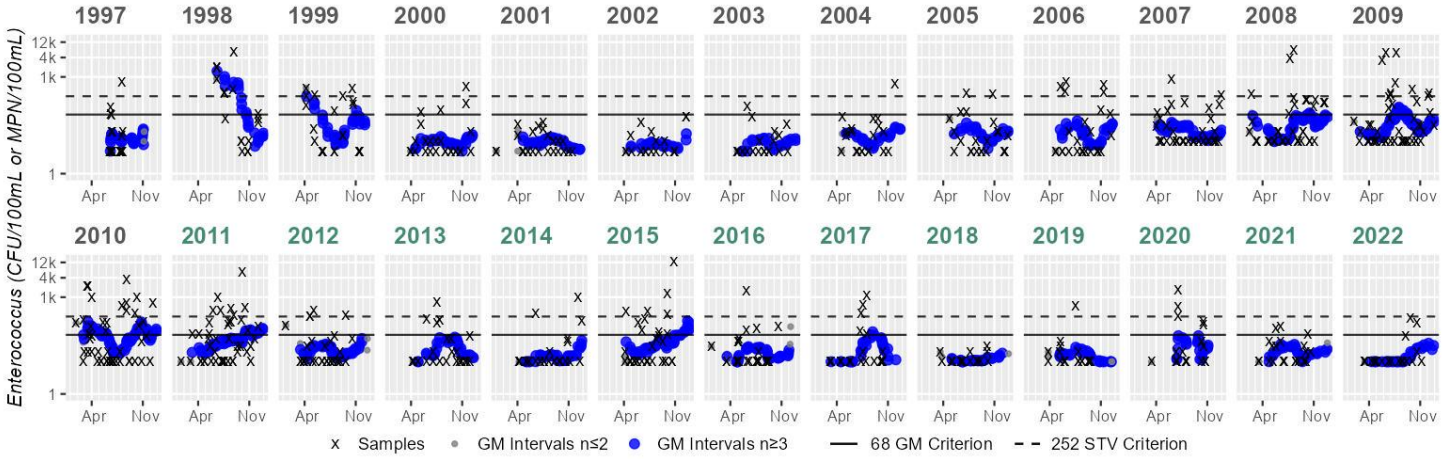
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	24	Samples	24	Samples	24	Samples	24	Samples	24	Samples	23	Samples	23	Samples	24	Samples	23	Samples	24	Samples	18	Samples	24	Samples	24
SeasGM	11	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	12	SeasGM	10	SeasGM	12	SeasGM	10	SeasGM	10
#GMI	43	#GMI	40	#GMI	41	#GMI	43	#GMI	42	#GMI	38	#GMI	40	#GMI	42	#GMI	41	#GMI	41	#GMI	26	#GMI	40	#GMI	43
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_039 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	24	Samples	17	Samples	21	Samples	26	Samples	25	Samples	18	Samples	20	Samples	20	Samples	22	Samples	25	Samples	38	Samples	36	Samples	51
SeasGM	11	SeasGM	86	SeasGM	30	SeasGM	11	SeasGM	8	SeasGM	9	SeasGM	8	SeasGM	14	SeasGM	15	SeasGM	20	SeasGM	21	SeasGM	35	SeasGM	36
#GMI	43	#GMI	29	#GMI	37	#GMI	47	#GMI	41	#GMI	29	#GMI	31	#GMI	30	#GMI	35	#GMI	43	#GMI	65	#GMI	63	#GMI	89
#GMI Ex	0	#GMI Ex	13	#GMI Ex	5	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	3	#GMI Ex	1	#GMI Ex	5	#GMI Ex	14
%GMI Ex	0%	%GMI Ex	44%	%GMI Ex	13%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	6%	%GMI Ex	1%	%GMI Ex	7%	%GMI Ex	15%
n>STV	1	n>STV	7	n>STV	4	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	1	n>STV	2	n>STV	5	n>STV	2	n>STV	3	n>STV	9
%n>STV	4%	%n>STV	41%	%n>STV	19%	%n>STV	3%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	5%	%n>STV	9%	%n>STV	20%	%n>STV	5%	%n>STV	8%	%n>STV	17%

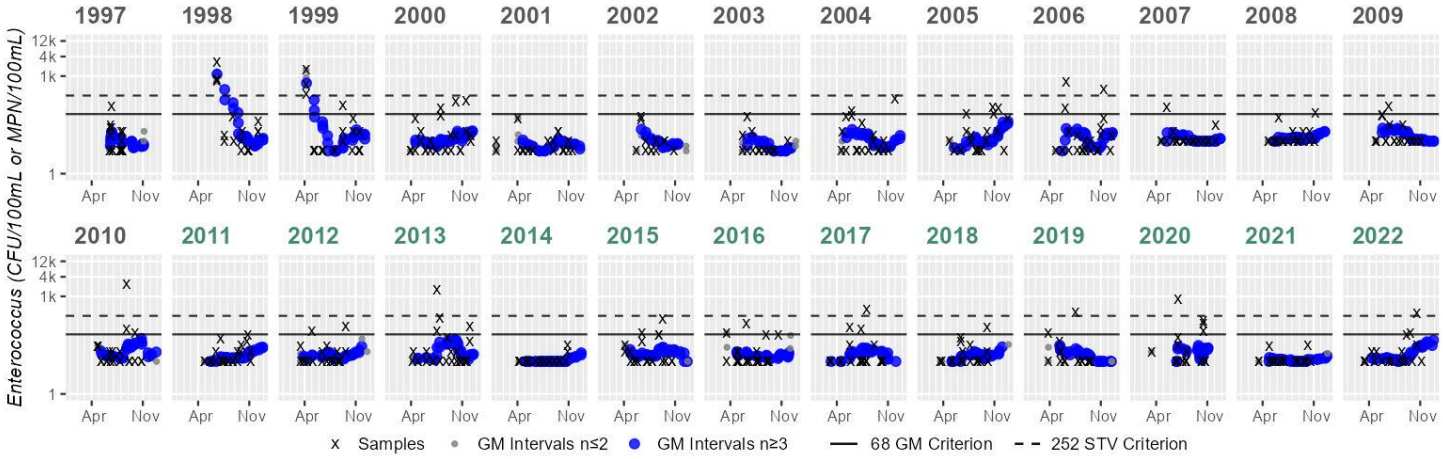
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	47	Samples	44	Samples	31	Samples	25	Samples	25	Samples	31	Samples	29	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	56	SeasGM	46	SeasGM	22	SeasGM	22	SeasGM	18	SeasGM	38	SeasGM	18	SeasGM	22	SeasGM	11	SeasGM	15	SeasGM	31	SeasGM	19	SeasGM	15
#GMI	85	#GMI	82	#GMI	52	#GMI	43	#GMI	45	#GMI	53	#GMI	48	#GMI	38	#GMI	35	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	36	#GMI Ex	21	#GMI Ex	0	#GMI Ex	0	#GMI Ex	1	#GMI Ex	7	#GMI Ex	0	#GMI Ex	1	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	42%	%GMI Ex	25%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	2%	%GMI Ex	13%	%GMI Ex	0%	%GMI Ex	2%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	10	n>STV	7	n>STV	4	n>STV	1	n>STV	2	n>STV	5	n>STV	1	n>STV	3	n>STV	0	n>STV	1	n>STV	3	n>STV	0	n>STV	0
%n>STV	21%	%n>STV	15%	%n>STV	12%	%n>STV	4%	%n>STV	8%	%n>STV	16%	%n>STV	3%	%n>STV	13%	%n>STV	0%	%n>STV	5%	%n>STV	15%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
11%	17%	5%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_040 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	23	Samples	16	Samples	21	Samples	26	Samples	20	Samples	12	Samples	15	Samples	20	Samples	22	Samples	23	Samples	22	Samples	20	Samples	21
SeasGM	9	SeasGM	28	SeasGM	16	SeasGM	12	SeasGM	7	SeasGM	9	SeasGM	7	SeasGM	11	SeasGM	13	SeasGM	13	SeasGM	12	SeasGM	13	SeasGM	14
#GMI	41	#GMI	27	#GMI	37	#GMI	47	#GMI	31	#GMI	19	#GMI	22	#GMI	30	#GMI	35	#GMI	39	#GMI	35	#GMI	33	#GMI	36
#GMI Ex	0	#GMI Ex	6	#GMI Ex	3	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	22%	%GMI Ex	8%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	3	n>STV	3	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	2	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	18%	%n>STV	14%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	8%	%n>STV	0%	%n>STV	0%	%n>STV	0%

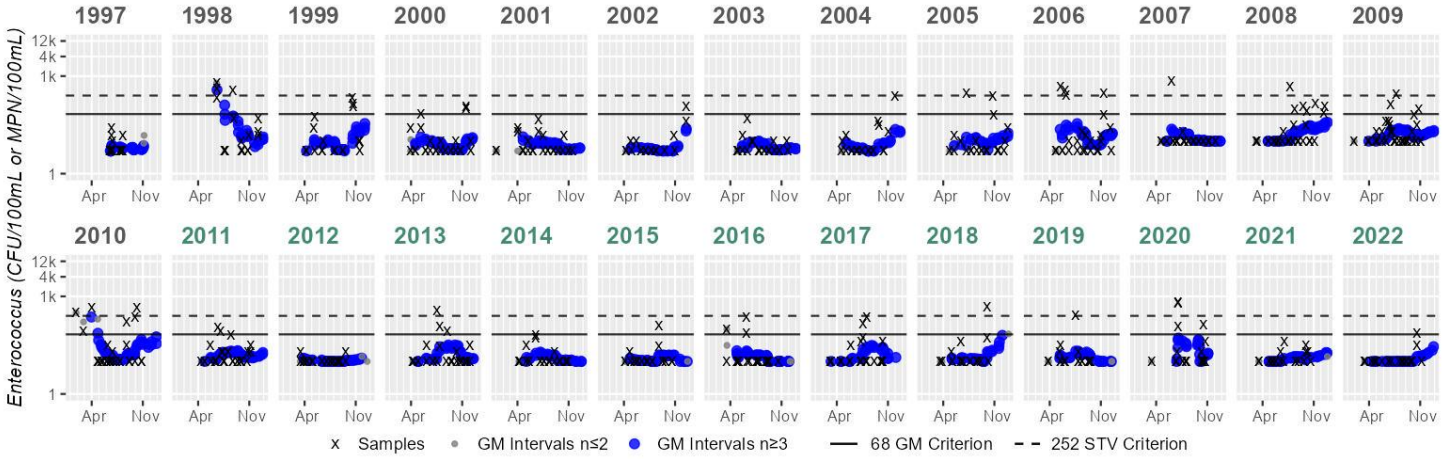
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	20	Samples	22	Samples	22	Samples	25	Samples	21	Samples	22	Samples	26	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	20	SeasGM	14	SeasGM	14	SeasGM	21	SeasGM	10	SeasGM	17	SeasGM	14	SeasGM	16	SeasGM	14	SeasGM	15	SeasGM	22	SeasGM	11	SeasGM	16
#GMI	34	#GMI	39	#GMI	37	#GMI	43	#GMI	37	#GMI	37	#GMI	43	#GMI	38	#GMI	35	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	1	n>STV	0	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	1	n>STV	0	n>STV	1	n>STV	1	n>STV	0	n>STV	1
%n>STV	5%	%n>STV	0%	%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	5%	%n>STV	5%	%n>STV	0%	%n>STV	5%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
1%	0%	0%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Station MWRA_084 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season

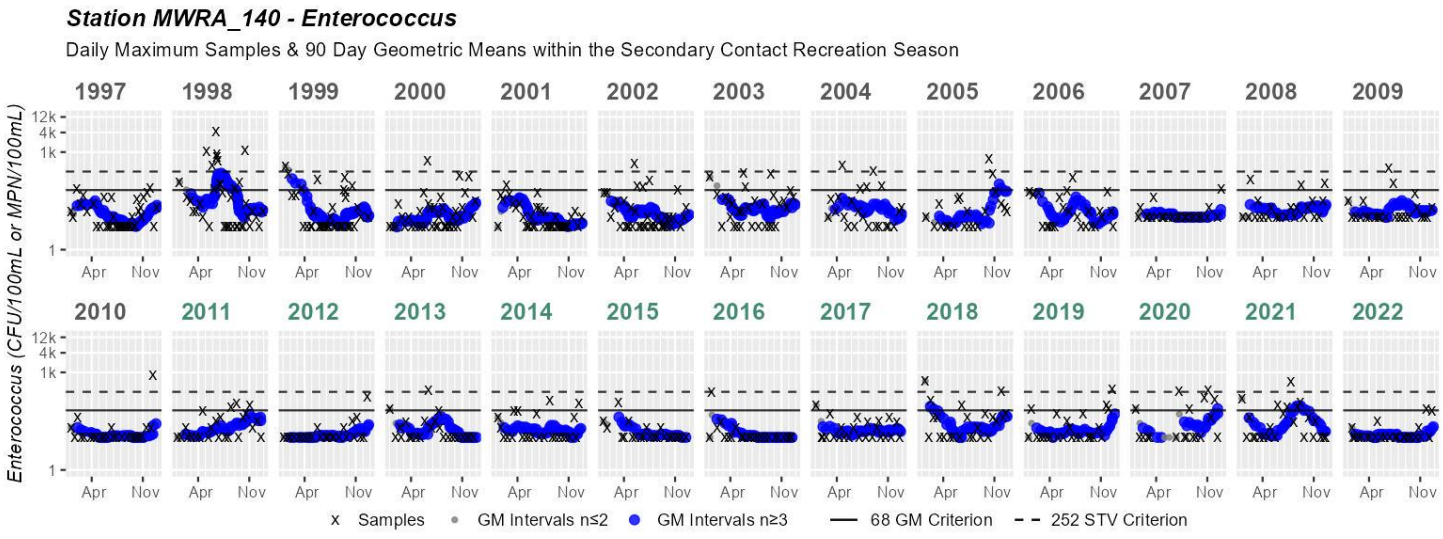


Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	23	Samples	17	Samples	21	Samples	26	Samples	25	Samples	18	Samples	20	Samples	20	Samples	21	Samples	25	Samples	24	Samples	29	Samples	37
SeasGM	6	SeasGM	23	SeasGM	10	SeasGM	8	SeasGM	7	SeasGM	7	SeasGM	6	SeasGM	8	SeasGM	10	SeasGM	14	SeasGM	12	SeasGM	20	SeasGM	17
#GMI	41	#GMI	29	#GMI	37	#GMI	47	#GMI	41	#GMI	30	#GMI	31	#GMI	30	#GMI	33	#GMI	43	#GMI	39	#GMI	50	#GMI	65
#GMI Ex	0	#GMI Ex	2	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	1	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	6%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	2%	%GMI Ex	0%
n>STV	0	n>STV	3	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	1	n>STV	4	n>STV	1	n>STV	1	n>STV	1
%n>STV	0%	%n>STV	17%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	4%	%n>STV	16%	%n>STV	4%	%n>STV	3%	%n>STV	2%

Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	28	Samples	27	Samples	22	Samples	25	Samples	21	Samples	22	Samples	26	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	22	SeasGM	16	SeasGM	10	SeasGM	16	SeasGM	12	SeasGM	12	SeasGM	13	SeasGM	16	SeasGM	14	SeasGM	13	SeasGM	22	SeasGM	12	SeasGM	11
#GMI	49	#GMI	49	#GMI	37	#GMI	43	#GMI	37	#GMI	37	#GMI	43	#GMI	38	#GMI	35	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	2	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	4%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	3	n>STV	0	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	1	n>STV	1	n>STV	2	n>STV	0	n>STV	0
%n>STV	10%	%n>STV	0%	%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	5%	%n>STV	5%	%n>STV	10%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	1%	0%	0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	37	Samples	39	Samples	37	Samples	40	Samples	39	Samples	39	Samples	30	Samples	23	Samples	21	Samples	24	Samples	23	Samples	23	Samples	24
SeasGM	11	SeasGM	36	SeasGM	13	SeasGM	12	SeasGM	9	SeasGM	12	SeasGM	19	SeasGM	17	SeasGM	15	SeasGM	14	SeasGM	12	SeasGM	17	SeasGM	15
#GMI	67	#GMI	73	#GMI	66	#GMI	71	#GMI	73	#GMI	71	#GMI	52	#GMI	38	#GMI	36	#GMI	42	#GMI	41	#GMI	40	#GMI	43
#GMI Ex	0	#GMI Ex	22	#GMI Ex	3	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	2	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	30%	%GMI Ex	4%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	5%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	8	n>STV	1	n>STV	1	n>STV	0	n>STV	1	n>STV	0	n>STV	2	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	1
%n>STV	0%	%n>STV	20%	%n>STV	2%	%n>STV	2%	%n>STV	0%	%n>STV	2%	%n>STV	0%	%n>STV	8%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	4%

Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	24	Samples	24	Samples	24	Samples	24	Samples	24	Samples	22	Samples	23	Samples	24	Samples	23	Samples	24	Samples	18	Samples	24	Samples	24
SeasGM	14	SeasGM	20	SeasGM	13	SeasGM	16	SeasGM	17	SeasGM	13	SeasGM	12	SeasGM	16	SeasGM	28	SeasGM	19	SeasGM	26	SeasGM	26	SeasGM	13
#GMI	43	#GMI	40	#GMI	41	#GMI	43	#GMI	42	#GMI	36	#GMI	40	#GMI	42	#GMI	41	#GMI	41	#GMI	26	#GMI	40	#GMI	43
#GMI Ex	1	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	3	#GMI Ex	1	#GMI Ex	2	#GMI Ex	7	#GMI Ex	0
%GMI Ex	2%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	7%	%GMI Ex	2%	%GMI Ex	7%	%GMI Ex	17%	%GMI Ex	0%
n>STV	1	n>STV	0	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	2	n>STV	1	n>STV	2	n>STV	1	n>STV	0
%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	8%	%n>STV	4%	%n>STV	11%	%n>STV	4%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
3%	0%	2%	6%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Dorchester Bay (MA70-03): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 3.4215 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Hingham Bay (MA70-06)

Location:	The area north of the mouth of the Weymouth Fore River extending on the west along the line between Nut Island and the south point of West Head, and on the east side along a line from Prince Head just east of Pig Rock to the mouth of the Weymouth Fore River (midway between Lower Neck and Manot Beach), Quincy.
AU Type:	ESTUARY
AU Size:	0.96 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Contaminated Sediments (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Discharges from Biosolids (SLUDGE) Storage, Application or Disposal (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Upstream Source (Y)	--	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
PCBs in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Upstream Source (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Pathogen TMDL for the Boston Harbor, Weymouth-Weir, and Mystic Watersheds (Report CN 157.1, approved 11/21/2018, ATTAINS Action ID: R1_MA_2019_01)

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Hingham Bay (MA70-06) continues to be assessed as Not Supporting and the prior Cause Unknown [Contaminants in Fish and/or Shellfish] and PCBs in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Hingham Bay (referred to by MDPH as ''Boston Harbor'') in their 2017 Guide to Eating Fish Safely in Massachusetts. The public should refer to the most recent MDPH information for the most up to date meal advice for sensitive and general populations.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Hingham Bay (MA70-06): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.952 sq mi (100%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.0154 sq mi (2%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH2.0	Quincy Bay	Prohibited	0.00794	0.8%
GBH9.0	Weymouth Fore River	Prohibited	0.92866	97.1%
GBH9.8	Raccoon Island	Conditionally Restricted	0.01543	1.6%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Hingham Bay (MA70-06) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Hingham Bay (MA70-06) continues to be assessed as Fully Supporting based on bacteria data collected at 1 station in 2018-2022 and MDPH Beach closure data. MDPH Beach Closure data for Edgewater beach [Beach ID: 3091] in Quincy indicated that this beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.952 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Primary Contact Recreation Use of Hingham Bay. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in Hingham Bay at MWRA_080 [Hingham Bay, Quincy Yacht Clubred nun #2] from 2011-2022 (n=17-24/yr). Analysis of the recent five years of this multi-year high frequency Enterococcus dataset from MWRA_080 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml, 0 yrs had >10% of samples exceed the 130 CFU/100ml STV and cumulatively across years 0% of intervals had GMs >35 CFU/100ml, which meets 2024 CALM guidance.

Monitoring Stations

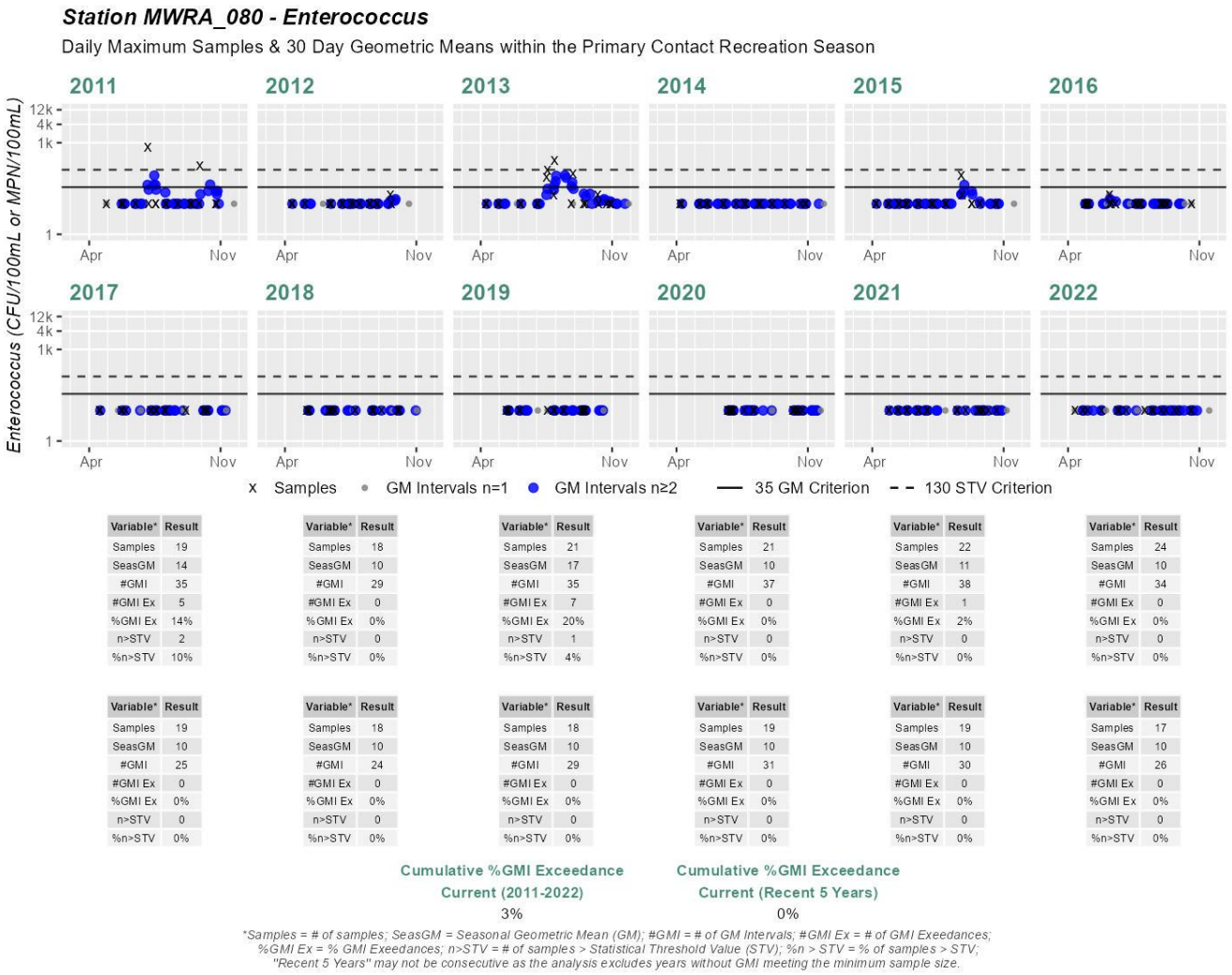
Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_080	Massachusetts Water Resources Authority	Water Quality	Hingham Bay	Hingham Bay, Quincy Yacht Club - red nun #2	42.275500	-70.944833

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 2)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	04/29/11	10/26/11	19	10	712	14
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	18	10	20	10
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	253	17
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	85	11
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	24	10	20	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	10	10



Beach Postings

MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022) (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 2)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
3091	Edgewater/ Quincy	42.26909, -70.95040	42.26119, -70.95090	0%	0%	0%	6%	6%	0%	0%	0%	0%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Hingham Bay (MA70-06): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.952 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Hingham Bay (MA70-06) continues to be assessed as Fully Supporting based on bacteria data collected at 1 station in 2018-2022 and MDPH Beach closure data. MDPH Beach Closure data for Edgewater beach [Beach ID: 3091] in Quincy indicated that this beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.952 sq mi) in this AU are less than 100% approved (0 sq mi, 0%) which means that shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Hingham Bay. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Hingham Bay at MWRA_080 [Hingham Bay, Quincy Yacht Clubred nun #2] from 1997-2000, 2004, and 2006-2010 (historic n=2-42/yr) and 2011-2022 (current n=20-27/yr). Analysis of the recent five years of this multi-year high frequency Enterococcus dataset from MWRA_080 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml, 0 yrs had >10% of samples exceed the 252 CFU/100ml STV and cumulatively across years 0% of intervals had GMs >68 CFU/100ml, which meets 2024 CALM guidance.

Monitoring Stations

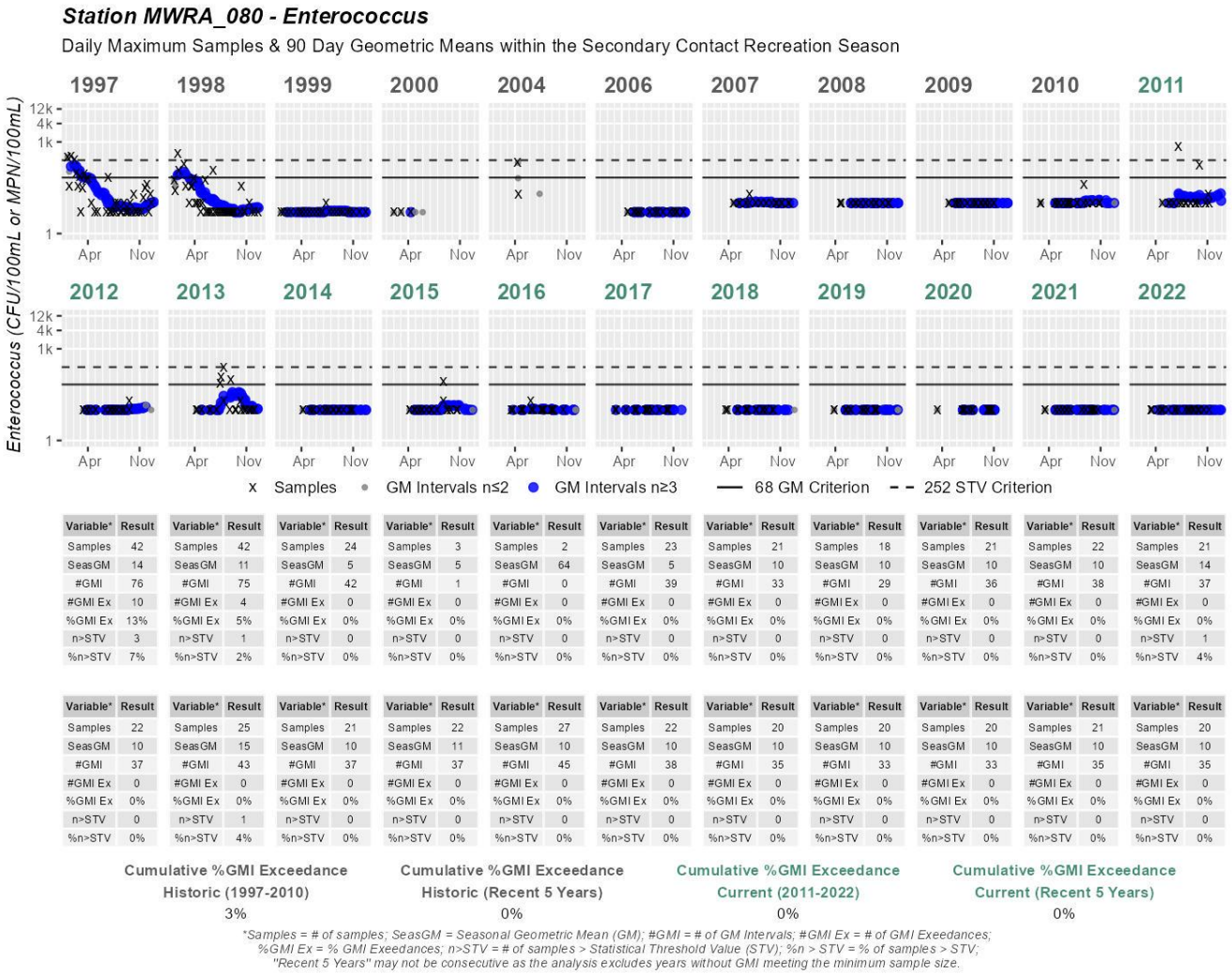
Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_080	Massachusetts Water Resources Authority	Water Quality	Hingham Bay	Hingham Bay, Quincy Yacht Club - red nun #2	42.275500	-70.944833

Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 1)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_080	Massachusetts Water Resources Authority	Enterococci	01/07/97	12/22/97	42	5	340	14
MWRA_080	Massachusetts Water Resources Authority	Enterococci	01/07/98	12/21/98	42	5	410	11
MWRA_080	Massachusetts Water Resources Authority	Enterococci	01/06/99	12/23/99	24	5	10	5
MWRA_080	Massachusetts Water Resources Authority	Enterococci	01/31/00	04/11/00	3	5	5	4
MWRA_080	Massachusetts Water Resources Authority	Enterococci	04/12/04	04/13/04	2	20	210	64
MWRA_080	Massachusetts Water Resources Authority	Enterococci	04/25/06	12/13/06	23	5	5	4
MWRA_080	Massachusetts Water Resources Authority	Enterococci	04/23/07	12/07/07	21	10	20	10
MWRA_080	Massachusetts Water Resources Authority	Enterococci	04/23/08	11/07/08	18	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococci	04/30/09	11/03/09	21	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococci	02/26/10	10/28/10	22	10	41	10
MWRA_080	Massachusetts Water Resources Authority	Enterococci	04/29/11	11/09/11	21	10	712	14
MWRA_080	Massachusetts Water Resources Authority	Enterococci	03/13/12	09/20/12	22	10	20	10
MWRA_080	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	253	15
MWRA_080	Massachusetts Water Resources Authority	Enterococci	04/07/14	10/29/14	21	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	85	11
MWRA_080	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	27	10	20	10
MWRA_080	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	10	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_080	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	10	10
MWRA_080	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	10	10



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	42	Samples	42	Samples	24	Samples	3	Samples	2	Samples	23	Samples	21	Samples	18	Samples	21	Samples	22	Samples	21
SeasGM	14	SeasGM	11	SeasGM	5	SeasGM	5	SeasGM	64	SeasGM	5	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	14
#GMI	76	#GMI	75	#GMI	42	#GMI	1	#GMI	0	#GMI	39	#GMI	33	#GMI	29	#GMI	36	#GMI	38	#GMI	37
#GMI Ex	10	#GMI Ex	4	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	13%	%GMI Ex	5%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	3	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	1
%n>STV	7%	%n>STV	2%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	4%

Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	22	Samples	25	Samples	21	Samples	22	Samples	27	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	10	SeasGM	15	SeasGM	10	SeasGM	11	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10
#GMI	37	#GMI	43	#GMI	37	#GMI	37	#GMI	45	#GMI	38	#GMI	35	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Hingham Bay (MA70-06): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.952 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Hingham Bay (MA70-07)

Location:	The area defined between Peddocks Island and Windmill Point; from Windmill Point southeast to Bumkin Island; from Bumkin Island southeast to Sunset Point; from Sunset Point across the mouth of the Weir River to Worlds End; from Worlds End across the mouth of Hingham Harbor to Crow Point; from Beach Lane, Hingham across the mouth of the Weymouth Back River to Lower Neck; and from Lower Neck midway across the mouth of the Weymouth Fore River.
AU Type:	ESTUARY
AU Size:	4.8 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
5	5	Estuarine Bioassessments	--	Unchanged
5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Contaminated Sediments (Y)	--	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Discharges from Biosolids (SLUDGE) Storage, Application or Disposal (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Upstream Source (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--
Estuarine Bioassessments	Source Unknown (N)	X	--	--	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
PCBs in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Upstream Source (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Pathogen TMDL for the Boston Harbor, Weymouth-Weir, and Mystic Watersheds (Report CN 157.1, approved 11/21/2018, ATTAINS Action ID: R1_MA_2019_01)

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Hingham Bay (MA70-07) continues to be assessed as Not Supporting and the prior Cause Unknown [Contaminants in Fish and/or Shellfish] and PCBs in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Hingham Bay (referred to by MDPH as ''Boston Harbor'') in their 2017 Guide to Eating Fish Safely in Massachusetts. The public should refer to the most recent MDPH information for the most up to date meal advice for sensitive and general populations.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Hingham Bay (MA70-07): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 4.7735 sq mi (100%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.1353 sq mi (3%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH1.0	Outer Hull Bay	Prohibited	3.04077	63.4%
GBH1.1	Spinnaker Island	Conditionally Restricted	0.00075	0.0%
GBH1.2	Whitehead	Conditionally Restricted	0.00406	0.1%
GBH6.0	Nantasket Roads	Prohibited	0.00263	0.1%
GBH6.1	Stoney Beach	Prohibited	0.00032	0.0%
GBH7.0	Weir River and Hingham Harbor	Prohibited	0.83530	17.4%
GBH7.1	Clam Alley	Prohibited	0.00852	0.2%
GBH7.11	Weymouth Back River to Crow Point	Conditionally Restricted	0.06506	1.4%
GBH7.8	Hingham Harbor East	Conditionally Restricted	0.01062	0.2%

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH8.0	Weymouth Back River	Prohibited	0.20235	4.2%
GBH8.1	Stodder's Neck and Hewitts Cove	Conditionally Restricted	0.04837	1.0%
GBH8.5	Eastern Shore Of Eastern Neck in Weymouth	Conditionally Restricted	0.00317	0.1%
GBH9.0	Weymouth Fore River	Prohibited	0.54838	11.4%
GBH9.1	Wessaguesset Beach	Conditionally Restricted	0.00324	0.1%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Hingham Bay (MA70-07) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Hingham Bay (MA70-07) continues to be assessed as Fully Supporting based on MDPH Beach Closure data and Bacteria data collected at 1 station in 2018-2022. Hingham Bay has 3 beaches with MDPH Beach Closure data: Belair [Beach ID: 2908], Kimball [Beach ID: 2906] and North Beach [Beach ID: 2905] beaches in Hingham. All these beaches were rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (4.7735 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Primary Contact Recreation Use. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in Hingham Bay at MWRA_124 [Hingham Bay, Crow Point Flats] from 2011-2022 (n=5-14/yr). Analysis of the recent five years of this multi-year moderate frequency dataset from MWRA_124 indicated 0 out of 5 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml, 0 yrs had ≥2 samples exceed the 130 CFU/100ml STV, and cumulatively across years 0% of intervals had GMs >35 CFU/100ml. Enterococcus data from MWRA_124 meet 2024 CALM guidance.

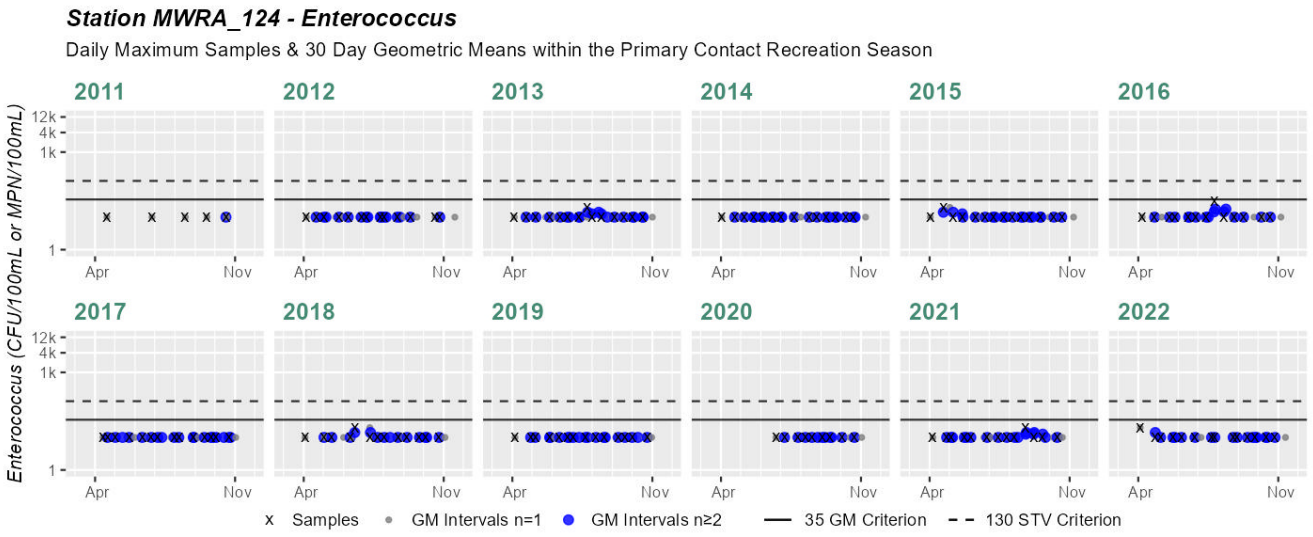
Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_124	Massachusetts Water Resources Authority	Water Quality	Hingham Bay	Hingham Bay, Crow Point Flats	42.272667	-70.897667

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 2)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	04/19/11	10/18/11	5	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	04/04/12	10/25/12	13	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	04/04/13	10/17/13	14	10	20	10
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	04/02/14	10/21/14	14	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	04/02/15	10/20/15	14	10	20	10
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	04/06/16	10/19/16	13	10	31	10
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	04/13/17	10/23/17	14	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	04/03/18	10/25/18	13	10	20	10
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	04/05/19	10/24/19	14	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	06/23/20	10/21/20	9	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	04/06/21	10/13/21	13	10	20	10
MWRA_124	Massachusetts Water Resources Authority	Enterococcus	04/04/22	10/27/22	14	10	20	10



Variable*	Result
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SeasGM	10
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	16
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	20
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	16
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	14
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	9
SeasGM	10
#GMI	11
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	18
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	17
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)
0%

Cumulative %GMI Exceedance Current (Recent 5 Years)
0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Beach Postings

MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022) (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 2)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2905	North Beach/ Hingham	42.26138, -70.89990	42.26180, -70.89800	0%	0%	0%	0%	0%	1%	1%	1%	0%	0
2906	Kimball/ Hingham	42.26166, -70.91200	42.26154, -70.91150	0%	1%	1%	0%	1%	0%	0%	0%	0%	0
2908	Belair/ Hingham	42.26215, -70.90750	42.26233, -70.90740	0%	1%	0%	0%	3%	0%	0%	0%	0%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Hingham Bay (MA70-07): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 4.7735 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Hingham Bay (MA70-07) continues to be assessed as Fully Supporting based on MDPH Beach Closure data and Bacteria data collected at 1 station in 2018-2022. Hingham Bay has 3 beaches with MDPH Beach Closure data: Belair [Beach ID: 2908], Kimball [Beach ID: 2906] and North Beach [Beach ID: 2905] beaches in Hingham. All these beaches were rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (4.7735 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Hingham Bay. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Hingham Bay at MWRA_124 [Hingham Bay, Crow Point Flats] from 1997-2010 (historic n=4-39/yr) and 2011-2022 (current n=6-24/yr). Analysis of the recent five years of this multi-year high frequency dataset from MWRA_124 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml, 0 yrs had >10% of samples exceed the 252 CFU/100ml STV and cumulatively across years 0% of intervals had GMs >68 CFU/100ml, which meets 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_124	Massachusetts Water Resources Authority	Water Quality	Hingham Bay	Hingham Bay, Crow Point Flats	42.272667	-70.897667

Bacteria Data

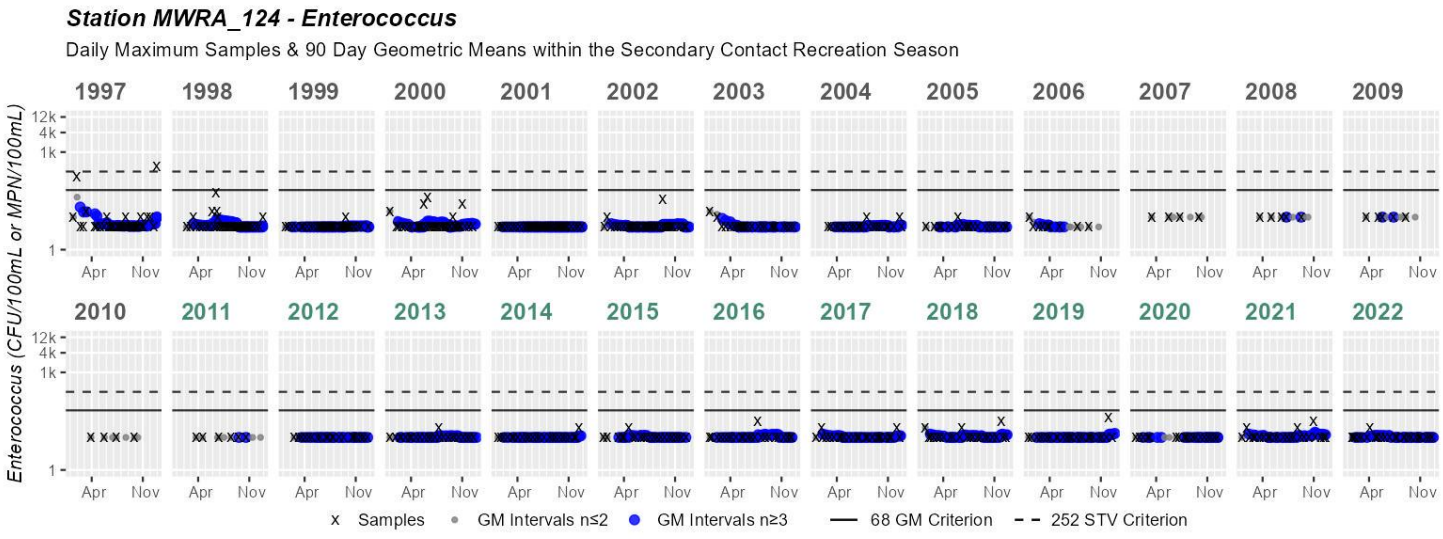
Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)

(MWRA 2024) (MassDEP Undated 1)

[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/15/97	12/29/97	35	5	365	7
MWRA_124	Massachusetts Water Resources Authority	Enterococci	02/11/98	12/28/98	37	5	55	5
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/11/99	12/22/99	36	5	10	5
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/03/00	12/13/00	37	5	40	6
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/09/01	12/27/01	39	5	5	4
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/08/02	12/19/02	36	5	35	5
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/06/03	12/22/03	24	5	15	5
MWRA_124	Massachusetts Water Resources Authority	Enterococci	02/25/04	12/29/04	23	5	10	5
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/20/05	12/22/05	20	5	10	5
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/05/06	09/13/06	9	5	10	5
MWRA_124	Massachusetts Water Resources Authority	Enterococci	03/13/07	09/27/07	4	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	03/19/08	09/08/08	5	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	03/19/09	09/01/09	5	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	03/29/10	09/27/10	4	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	03/23/11	10/18/11	6	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	02/16/12	12/20/12	20	10	10	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/03/13	12/20/13	24	10	20	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/09/14	12/16/14	24	10	20	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/06/15	12/16/15	22	10	20	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/06/16	12/14/16	23	10	31	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/05/17	12/19/17	24	10	20	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/16/18	12/19/18	23	10	31	11
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/03/19	12/18/19	24	10	41	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/06/20	12/14/20	18	10	10	10
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/04/21	12/20/21	24	10	31	11
MWRA_124	Massachusetts Water Resources Authority	Enterococci	01/20/22	12/21/22	24	10	20	10



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	35	Samples	37	Samples	36	Samples	37	Samples	39	Samples	36	Samples	24	Samples	23	Samples	20	Samples	9	Samples	4	Samples	5	Samples	5
SeasGM	7	SeasGM	5	SeasGM	5	SeasGM	6	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	10	SeasGM	10	SeasGM	10
#GMI	62	#GMI	69	#GMI	64	#GMI	66	#GMI	73	#GMI	65	#GMI	40	#GMI	38	#GMI	34	#GMI	9	#GMI	0	#GMI	2	#GMI	2
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	2%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	4	Samples	6	Samples	20	Samples	24	Samples	24	Samples	22	Samples	23	Samples	24	Samples	23	Samples	24	Samples	18	Samples	24	Samples	24
SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	11	SeasGM	10	SeasGM	10	SeasGM	11	SeasGM	10
#GMI	0	#GMI	2	#GMI	35	#GMI	43	#GMI	42	#GMI	36	#GMI	40	#GMI	42	#GMI	41	#GMI	41	#GMI	26	#GMI	40	#GMI	43
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Hingham Bay (MA70-07): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 4.7735 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Hull Bay (MA70-09)

Location:	The area defined east of a line from Windmill Point, Hull to Bumkin Island, Hull and from Bumkin Island to Sunset Point, Hull.
AU Type:	ESTUARY
AU Size:	2.48 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
5	5	Estuarine Bioassessments	--	Unchanged
5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Contaminated Sediments (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Discharges from Biosolids (SLUDGE) Storage, Application or Disposal (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Upstream Source (Y)	--	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--
Estuarine Bioassessments	Source Unknown (N)	X	--	--	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
PCBs in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Upstream Source (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Pathogen TMDL for the Boston Harbor, Weymouth-Weir, and Mystic Watersheds (Report CN 157.1, approved 11/21/2018, ATTAINS Action ID: R1_MA_2019_01)

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Hull Bay (MA70-09) continues to be assessed as Not Supporting and the prior Cause Unknown [Contaminants in Fish and/or Shellfish] and PCBs in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Hull Bay (referred to by MDPH as ''Boston Harbor'') in their 2017 Guide to Eating Fish Safely in Massachusetts. The public should refer to the most recent MDPH information for the most up to date meal advice for sensitive and general populations.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Hull Bay (MA70-09): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.4666 sq mi (99%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.2923 sq mi (12%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH1.0	Outer Hull Bay	Prohibited	2.17434	87.6%
GBH1.1	Spinnaker Island	Conditionally Restricted	0.10401	4.2%
GBH1.2	Whitehead	Conditionally Restricted	0.18830	7.6%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Hull Bay (MA70-09) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Hull Bay (MA70-09) continues to be assessed as Fully Supporting based on MDPH Beach Closure data. Hull Bay has 4 beaches with MDPH Beach Closure data: A Street Bay Side [Beach ID: 2917], Darcy's [Beach ID: 2916], Newport [Beach ID: 2910] and James Ave. [Beach ID: 2912] beaches in Hull. All these beaches were rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (2.4666 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Primary Contact Recreation Use of Hull Bay.

Beach Postings

MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022) (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 2)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2910	Newport/ Hull	42.28595, -70.88080	42.28198, -70.87920	0%	0%	0%	2%	0%	0%	0%	0%	0%	0
2912	James Ave./ Hull	42.30065, -70.90750	42.30246, -70.90450	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
2916	Darcy's/ Hull	42.30436, -70.91810	42.30396, -70.91590	0%	0%	0%	2%	0%	0%	0%	0%	0%	0
2917	A Street Bay Side/ Hull	42.29242, -70.88420	42.29130, -70.88350	0%	0%	0%	2%	1%	0%	0%	0%	0%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Hull Bay (MA70-09): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.4666 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Hull Bay (MA70-09) continues to be assessed as Fully Supporting based on MDPH Beach Closure data. Hull Bay has 4 beaches with MDPH Beach Closure data: A Street Bay Side [Beach ID: 2917], Darcy's [Beach ID: 2916], Newport [Beach ID: 2910] and James Ave. [Beach ID: 2912] beaches in Hull. All these beaches were rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (2.4666 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Hull Bay.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Hull Bay (MA70-09): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.4666 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Pleasure Bay (MA70-11)

Location:	A semi-enclosed bay, the flow restricted through two channels between Castle and Head islands, Boston.
AU Type:	ESTUARY
AU Size:	0.22 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Contaminated Sediments (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Discharges from Biosolids (SLUDGE) Storage, Application or Disposal (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Source Unknown (N)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Upstream Source (Y)	--	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
PCBs in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--	--
PCBs in Fish Tissue	Upstream Source (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Fecal Coliform	TMDL Approved or established by EPA (4a)	Impairment covered under TMDL: Pathogen TMDL for the Boston Harbor, Weymouth-Weir, and Mystic Watersheds (Report CN 157.1, approved 11/21/2018, ATTAINS Action ID: R1_MA_2019_01)

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Pleasure Bay (MA70-11) continues to be assessed as Not Supporting and the prior Cause Unknown [Contaminants in Fish and/or Shellfish] and PCBs in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Pleasure Bay (referred to by MDPH as ''Boston Harbor'') in their 2017 Guide to Eating Fish Safely in Massachusetts. The public should refer to the most recent MDPH information for the most up to date meal advice for sensitive and general populations.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Pleasure Bay (MA70-11): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.2229 sq mi (99%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.2229 sq mi (99%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH3.0	Dorchester Bay And Neponset River	Prohibited	0.00006	0.0%
GBH3.7	Pleasure Bay	Conditionally Restricted	0.22289	99.4%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Pleasure Bay (MA70-11) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Pleasure Bay (MA70-11) continues to be assessed as Fully Supporting based on MDPH Beach Closure data. MDPH Beach Closure data for Pleasure Bay (DCR) beach [Beach ID: 2644] in Boston, was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.2229 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Primary Contact Recreation Use of Pleasure Bay.

Beach Postings

MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022) (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 2)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2644	Pleasure Bay (DCR)/ Boston	42.33308, -71.02190	42.33715, -71.02240	1%	0%	0%	0%	1%	0%	0%	6%	0%	0
2644	Pleasure Bay (DCR)/ Boston	42.33308, -71.02190	42.33715, -71.02240	1%	0%	0%	0%	1%	0%	0%	6%	0%	0
2644	Pleasure Bay (DCR)/ Boston	42.33308, -71.02190	42.33715, -71.02240	1%	0%	0%	0%	1%	0%	0%	6%	0%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Pleasure Bay (MA70-11): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.2229 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Pleasure Bay (MA70-11) continues to be assessed as Fully Supporting based on MDPH Beach Closure data. MDPH Beach Closure data for Pleasure Bay (DCR) [Beach ID: 2644] beach in Boston indicated that this beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.2229 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Pleasure Bay.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Pleasure Bay (MA70-11): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.2229 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Quincy Bay (MA70-04)

Location:	From Bromfield Street near the Wollaston Yacht Club, northeast to N42 17.3 W71 00.1, then southeast to Houghs Neck near Sea Street and Peterson Road (formerly referred to as the "Willows"), Quincy.
AU Type:	ESTUARY
AU Size:	1.51 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
5	5	Enterococcus	R1_MA_2019_01	Unchanged
5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Contaminated Sediments (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Discharges from Biosolids (SLUDGE) Storage, Application or Disposal (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Source Unknown (N)	--	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Upstream Source (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	--
Enterococcus	Source Unknown (N)	--	--	--	--	X	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
PCBs in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--	--
PCBs in Fish Tissue	Upstream Source (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Quincy Bay (MA70-04) continues to be assessed as Not Supporting and the prior PCBs in Fish Tissue and Cause Unknown [Contaminants in Fish and/or Shellfish] impairment is being carried forward. MDPH included a site-specific advisory for Quincy Bay (referred to by MDPH as ''Boston Harbor'') in their 2017 Guide to Eating Fish Safely in Massachusetts. The public should refer to the most recent MDPH information for the most up to date meal advice for sensitive and general populations.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Quincy Bay (MA70-04): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.5006 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH2.0	Quincy Bay	Prohibited	0.98921	65.7%
GBH2.1	Chickatabot Beach and the Moons	Conditionally Restricted	0.29377	19.5%
GBH2.10	Heron Beach Drain	Prohibited	0.00063	0.0%
GBH2.2	Caddy Park	Conditionally Restricted	0.12212	8.1%
GBH2.3	Wollaston Beach Proper	Prohibited	0.07680	5.1%
GBH2.7	Wollaston Beach Southeast	Prohibited	0.01574	1.0%
GBH2.8	Chickatabot Drain	Prohibited	0.00078	0.1%
GBH2.9	Norton Road Drain	Prohibited	0.00151	0.1%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Quincy Bay (MA70-04) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Quincy Bay (MA70-04) continues to be assessed as Not Supporting. The prior Enterococcus impairment is being carried forward based on MDPH Beach Closures data not meeting the threshold at 4 beaches in 2018-2022. Quincy Bay has 6 beaches with MDPH Beach Closure data: Wollaston @ Sachem Street (DCR) [Beach ID: 5599], Wollaston @ Rice Road (DCR) [Beach ID: 5598], Chikatawbot [Beach ID: 3089], Heron [Beach ID: 3092], Merrymount [Beach ID: 3093] and Wollaston @ Channing Street (DCR) [Beach ID: 3099] beaches in Quincy. Beaches were posted for >10% of the swimming season at Chikatawbot in 2020 (11%) and 2022 (18%), Wollaston @ Channing Street (DCR) in 2018 (23%), 2019 (31%), 2020 (32%), 2021 (54%), and 2022 (26%), Wollaston @ Rice Road (DCR) in 2018 (18%), 2019 (26%), 2020 (22%), 2021 (54%), and 2022 (22%) and Wollaston @ Sachem Street (DCR) in 2018 (23%), 2019 (30%), 2020 (32%), 2021 (54%), and 2022 (27%), indicating an Enterococcus impairment. The shellfish growing areas (1.5006 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Primary Contact Recreation Use of Quincy Bay. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in Quincy Bay at MWRA_047 [Quincy Bay, Wollaston Beach, off storm drains 7 and 8 at Sachem St] from 2011-2022 (n=17-24/yr). Analysis of the recent five years of this multi-year high frequency Enterococcus dataset from MWRA_047 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml, 0 yrs had >10% of samples exceed the 130 CFU/100ml STV and cumulatively across years 0% of intervals had GMs >35 CFU/100ml, which meets 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_047	Massachusetts Water Resources Authority	Water Quality	Quincy Bay	Quincy Bay, Wollaston Beach, off storm drains 7 and 8 at Sachem St.	42.280500	-71.007000

Bacteria Data

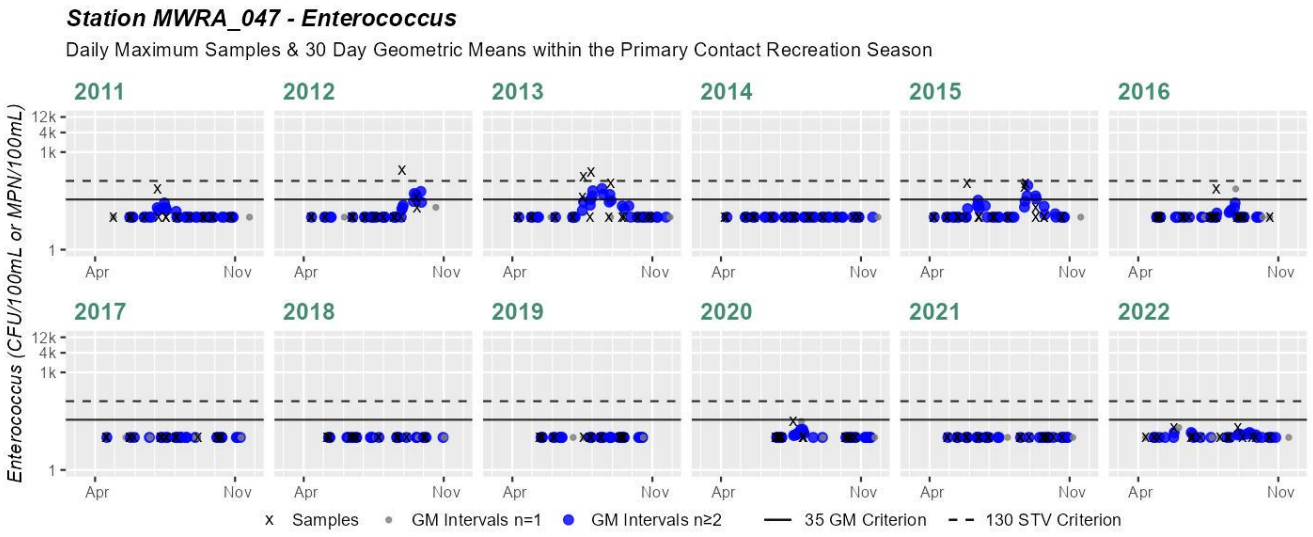
Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis)

(MWRA 2024) (MassDEP Undated 2)

[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	04/29/11	10/26/11	19	10	74	11

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	18	10	282	13
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	247	15
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	110	14
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	24	10	74	10
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	31	10
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	20	10



Variable*	Result
Samples	19
SeasGM	11
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	13
#GMI	29
#GMI Ex	4
%GMI Ex	13%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	21
SeasGM	15
#GMI	35
#GMI Ex	5
%GMI Ex	14%
n>STV	2
%n>STV	9%

Variable*	Result
Samples	21
SeasGM	10
#GMI	37
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	22
SeasGM	14
#GMI	38
#GMI Ex	4
%GMI Ex	10%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	24
SeasGM	10
#GMI	34
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	10
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	24
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	10
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	10
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	10
#GMI	30
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	10
#GMI	26
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)
3%

Cumulative %GMI Exceedance Current (Recent 5 Years)
0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Beach Postings

MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022) (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 2)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
3089	Chikatawbot/ Quincy	42.26563, -70.99030	42.26507, -70.98960	4%	0%	0%	4%	0%	0%	11%	0%	18%	2
3092	Heron/ Quincy	42.26485, -70.97950	42.26395, -70.97200	0%	0%	0%	0%	0%	0%	11%	0%	0%	1
3093	Merrymount/ Quincy	42.26616, -70.99660	42.26593, -70.99410	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
3099	Wollaston @ Channing Street (DCR)/ Quincy	42.28012, -71.01570	42.27770, -71.01140	18%	28%	17%	14%	23%	31%	32%	54%	26%	9
5598	Wollaston @ Rice Road (DCR)/ Quincy	42.27584, -71.00580	42.26659, -70.99600	12%	25%	8%	12%	18%	26%	22%	54%	22%	8
5599	Wollaston @ Sachem Street (DCR)/ Quincy	42.27770, -71.01140	42.27584, -71.00580	16%	30%	17%	15%	23%	30%	32%	54%	27%	9

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Quincy Bay (MA70-04): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.5006 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Quincy Bay (MA70-04) continues to be assessed as Fully Supporting based on bacteria data collected at 1 station in 2018-2022. Quincy Bay has 6 beaches with MDPH Beach Closure data: Wollaston @ Sachem Street (DCR) [Beach ID: 5599], Wollaston @ Rice Road (DCR) [Beach ID: 5598], Chikatawbot [Beach ID: 3089], Heron [Beach ID: 3092], Merrymount [Beach ID: 3093] and Wollaston @ Channing Street (DCR) [Beach ID: 3099] beaches in Quincy. Available MDPH Beach Closure data cannot be used to positively assess the Secondary Contact Recreation Use since beaches were posted for >10% of the swimming season: i.e. Chikatawbot in 2020 and 2022, Wollaston @ Channing Street (DCR) in 2018-2022, Wollaston @ Rice Road (DCR) in 2018-2022 and Wollaston @ Sachem Street (DCR) in 2018-2022. The shellfish growing areas (1.5006 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Quincy Bay. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Quincy Bay at MWRA_047 [Quincy Bay, Wollaston Beach, off storm drains 7 and 8 at Sachem St] from 1997-2000 and 2006-2010 (historic n=3-46/yr) and 2011-2022 (current n=20-27/yr). Since the data from the historic window meets CALM guidance, only the analysis for the data from the current IR window will be summarized here. Analysis of the recent five years (2018-2022) of this multi-year high frequency Enterococcus dataset from MWRA_047 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml, 0 yrs had >10% of samples exceed the 252 CFU/100ml STV and cumulatively across years 0% of intervals had GMs >68 CFU/100ml, which meets 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_047	Massachusetts Water Resources Authority	Water Quality	Quincy Bay	Quincy Bay, Wollaston Beach, off storm drains 7 and 8 at Sachem St.	42.280500	-71.007000

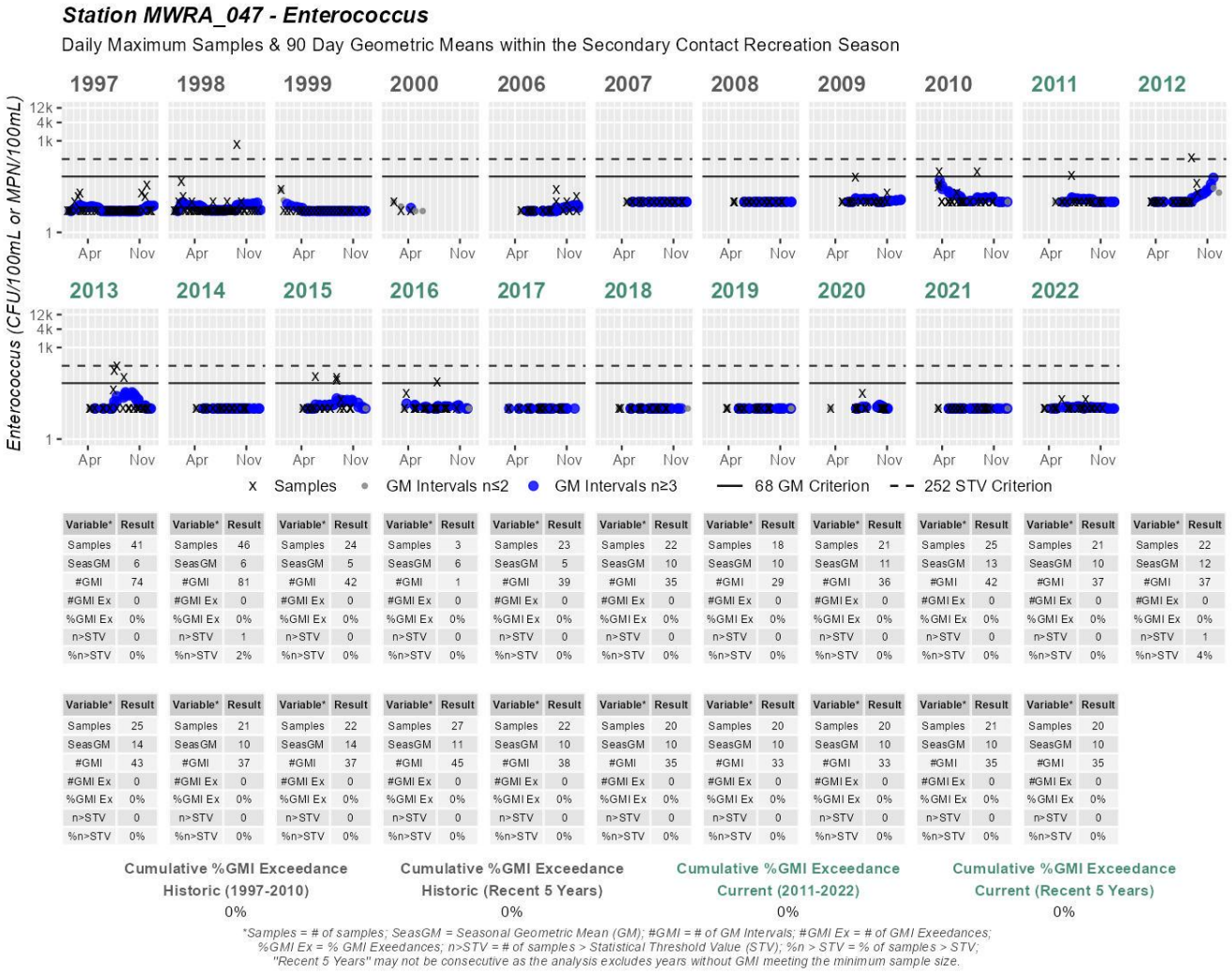
Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 1)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_047	Massachusetts Water Resources Authority	Enterococci	01/07/97	12/22/97	41	5	35	6
MWRA_047	Massachusetts Water Resources Authority	Enterococci	01/07/98	12/21/98	46	5	750	6

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_047	Massachusetts Water Resources Authority	Enterococci	01/06/99	12/23/99	24	5	25	5
MWRA_047	Massachusetts Water Resources Authority	Enterococci	01/31/00	04/11/00	3	5	10	6
MWRA_047	Massachusetts Water Resources Authority	Enterococci	04/25/06	12/13/06	23	5	25	5
MWRA_047	Massachusetts Water Resources Authority	Enterococci	04/23/07	12/07/07	22	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococci	04/23/08	11/07/08	18	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococci	04/30/09	11/03/09	21	10	63	11
MWRA_047	Massachusetts Water Resources Authority	Enterococci	03/18/10	10/28/10	25	10	98	13
MWRA_047	Massachusetts Water Resources Authority	Enterococci	04/29/11	11/09/11	21	10	74	10
MWRA_047	Massachusetts Water Resources Authority	Enterococci	03/13/12	09/20/12	22	10	282	12
MWRA_047	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	247	14
MWRA_047	Massachusetts Water Resources Authority	Enterococci	04/07/14	10/29/14	21	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	110	14
MWRA_047	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	27	10	74	11
MWRA_047	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	31	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_047	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	10	10
MWRA_047	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	20	10



Variable*	1997	1998	1999	2000	2006	2007	2008	2009	2010	2011	2012
Samples	41	46	24	3	23	22	18	21	25	21	22
SeasGM	6	6	5	6	5	10	10	11	13	10	12
#GMI	74	81	42	1	39	35	29	36	42	37	37
#GMI Ex	0	0	0	0	0	0	0	0	0	0	0
%GMI Ex	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
n>STV	0	1	0	0	0	0	0	0	0	0	1
%n>STV	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	4%

Variable*	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Samples	25	21	22	27	22	20	20	20	21	20
SeasGM	14	10	14	11	10	10	10	10	10	10
#GMI	43	37	37	45	38	35	33	33	35	35
#GMI Ex	0	0	0	0	0	0	0	0	0	0
%GMI Ex	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
n>STV	0	0	0	0	0	0	0	0	0	0
%n>STV	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Quincy Bay (MA70-04): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.5006 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Quincy Bay (MA70-05)

Location:	Quincy Bay, north of the class SA waters (segment MA70-04), Quincy to the line between Moon Head and Nut Island, Quincy.
AU Type:	ESTUARY
AU Size:	4.43 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
5	5	Enterococcus	R1_MA_2019_01	Unchanged
5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Contaminated Sediments (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Discharges from Biosolids (SLUDGE) Storage, Application or Disposal (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Source Unknown (N)	--	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Upstream Source (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	--
Enterococcus	Source Unknown (N)	--	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
PCBs in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--	--
PCBs in Fish Tissue	Upstream Source (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Fish Consumption Use for Quincy Bay (MA70-05) continues to be assessed as Not Supporting and the prior Cause Unknown [Contaminants in Fish and/or Shellfish] and PCBs in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Quincy Bay (referred to by MDPH as ''Boston Harbor'') in their 2017 Guide to Eating Fish Safely in Massachusetts. The public should refer to the most recent MDPH information for the most up to date meal advice for sensitive and general populations.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Quincy Bay (MA70-05): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 4.4118 sq mi (100%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.3467 sq mi (8%). The Shellfish Harvesting Use is assessed as not supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing fecal coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH2.0	Quincy Bay	Prohibited	3.93757	88.9%
GBH2.1	Chickatabot Beach and the Moons	Conditionally Restricted	0.00626	0.1%
GBH2.11	Moon Island Drain	Prohibited	0.00036	0.0%
GBH2.3	Wollaston Beach Proper	Prohibited	0.12711	2.9%
GBH2.4	Best Buy	Conditionally Restricted	0.13366	3.0%
GBH2.5	Orchard Street Beach to Moon Head	Conditionally Restricted	0.20680	4.7%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Quincy Bay (MA70-05) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Quincy Bay (MA70-05) continues to be assessed as Not Supporting. The prior Enterococcus impairment is being carried forward based on MDPH Beach Closures data not meeting the threshold at 2 beaches in 2018-2022. Quincy Bay has 4 beaches with MDPH Beach Closure data: Wollaston @ Channing Street (DCR) [Beach ID: 3099], Wollaston @ Milton Street (DCR) [Beach ID: 5597], Parkhurst [Beach ID: 3097] and Orchard Street [Beach ID: 3095] beaches in Quincy. Beaches were posted for >10% of the swimming season at Wollaston @ Channing Street (DCR) in 2018 (23%), 2019 (31%), 2020 (32%), 2021 (54%), and 2022 (26%) and Wollaston @ Milton Street (DCR) in 2018 (17%), 2019 (27%), 2020 (26%), 2021 (54%), and 2022 (23%) indicating an Enterococcus impairment. The shellfish growing areas (4.4117 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Primary Contact Recreation Use of Quincy Bay. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in Quincy Bay at MWRA_139 [Quincy Bay, off Hangmans Island] from 2011-2022 (n=9-14/yr). Analysis of the recent five years of this multi-year moderate frequency Enterococcus dataset from MWRA_139 indicated 0 out of 5 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml, 0 yrs had ≥2 samples exceed the 130 CFU/100ml STV, and cumulatively across years 0% of intervals had GMs >35 CFU/100ml, which meets 2024 CALM guidance. Surface water sampling was conducted at Wollaston Beach on Quincy Bay, in Quincy as part of a May 2022 MDPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.20 ng/L PFOA and PFOS).

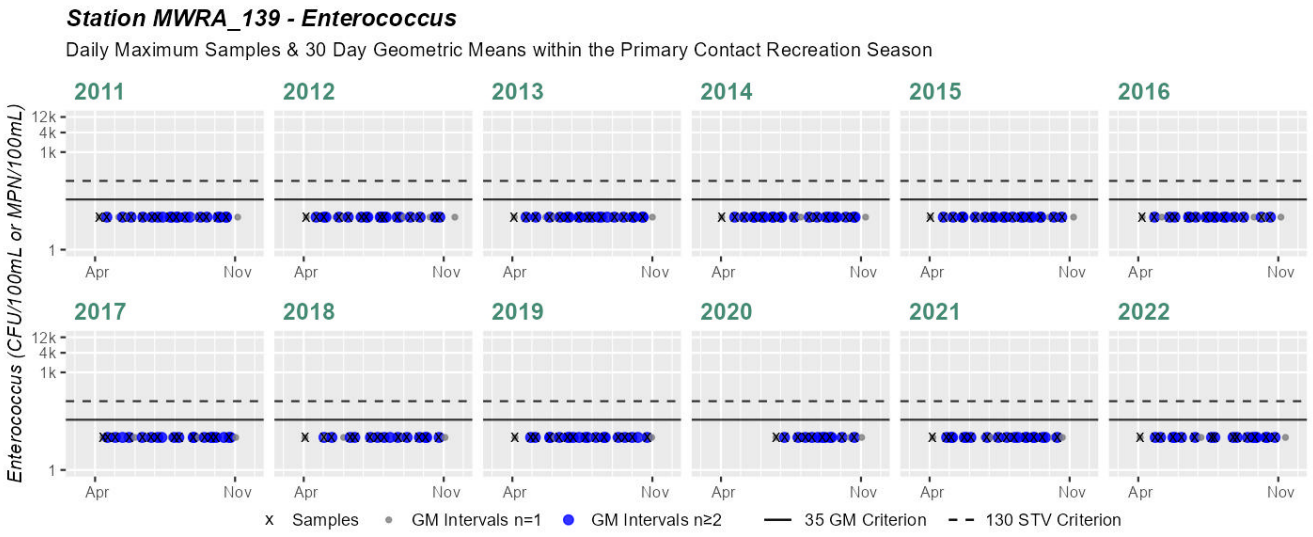
Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_139	Massachusetts Water Resources Authority	Water Quality	Quincy Bay	Quincy Bay, off Hangmans Island	42.286670	-70.968333

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 2)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	04/07/11	10/18/11	14	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	04/04/12	10/25/12	14	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	04/04/13	10/17/13	14	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	04/02/14	10/21/14	14	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	04/02/15	10/20/15	14	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	04/06/16	10/19/16	13	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	04/13/17	10/23/17	14	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	04/03/18	10/25/18	13	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	04/05/19	10/24/19	14	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	06/23/20	10/21/20	9	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	04/06/21	10/13/21	13	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococcus	04/04/22	10/27/22	14	10	10	10



Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	18
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	20
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	16
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	14
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	9
SeasGM	10
#GMI	11
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	13
SeasGM	10
#GMI	18
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	10
#GMI	17
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)
0%

Cumulative %GMI Exceedance Current (Recent 5 Years)
0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Beach Postings

MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022) (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 2)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
3095	Orchard Street/ Quincy	42.29889, -71.00570	42.29787, -71.00600	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
3097	Parkhurst/ Quincy	42.27103, -70.95690	42.27396, -70.95310	0%	0%	0%	0%	3%	0%	0%	0%	0%	0

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
3099	Wollaston @ Channing Street (DCR)/ Quincy	42.28012, -71.01570	42.27770, -71.01140	18%	28%	17%	14%	23%	31%	32%	54%	26%	9
5597	Wollaston @ Milton Street (DCR)/ Quincy	42.28476, -71.02000	42.28012, -71.01570	13%	30%	15%	18%	17%	27%	26%	54%	23%	9

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Quincy Bay (MA70-05): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 4.4118 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Other Indicators

Summary of MA DPH 2021 and 2022 PFAS in Water Column Data

Data Sources: (MA DPH 2023a, MA DPH 2023b)

Surface water sampling was conducted at Wollaston Beach on Quincy Bay (MA70-05) in Quincy as part of a May 2022 MA DPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.20 ng/L PFOA and PFOS).

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Quincy Bay (MA70-05) continues to be assessed as Fully Supporting based on bacteria data collected at 1 station in 2018-2022. Quincy Bay has 4 beaches with MDPH Beach Closure data: Wollaston @ Channing Street (DCR) [Beach ID: 3099], Wollaston @ Milton Street (DCR) [Beach ID: 5597], Parkhurst [Beach ID: 3097] and Orchard Street [Beach ID: 3095] beaches in Quincy. Available MDPH Beach Closure data cannot be used to positively assess the Secondary Contact Recreation Use since beaches were posted for >10% of the swimming season: Wollaston @ Channing Street (DCR) in 2018-2022 and Wollaston @ Milton Street (DCR) in 2018-2022. The shellfish growing areas (4.4117 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Quincy Bay. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Quincy Bay (MA70-05) at MWRA_139 [Quincy Bay, off Hangmans Island] from 1997-2010 (historic n=21-40/yr) and 2011-2022 (current n=18-24/yr). Since the data from the historic window meets CALM guidance, only the analysis for the data from the current IR window will be summarized here. Analysis of the recent five years of this multi-year high frequency Enterococcus dataset from MWRA_139 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml, 0 yrs had >10% of samples exceed the 252 CFU/100ml STV and cumulatively across years 0% of intervals had GMs >68 CFU/100ml, which meets 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_139	Massachusetts Water Resources Authority	Water Quality	Quincy Bay	Quincy Bay, off Hangmans Island	42.286670	-70.968333

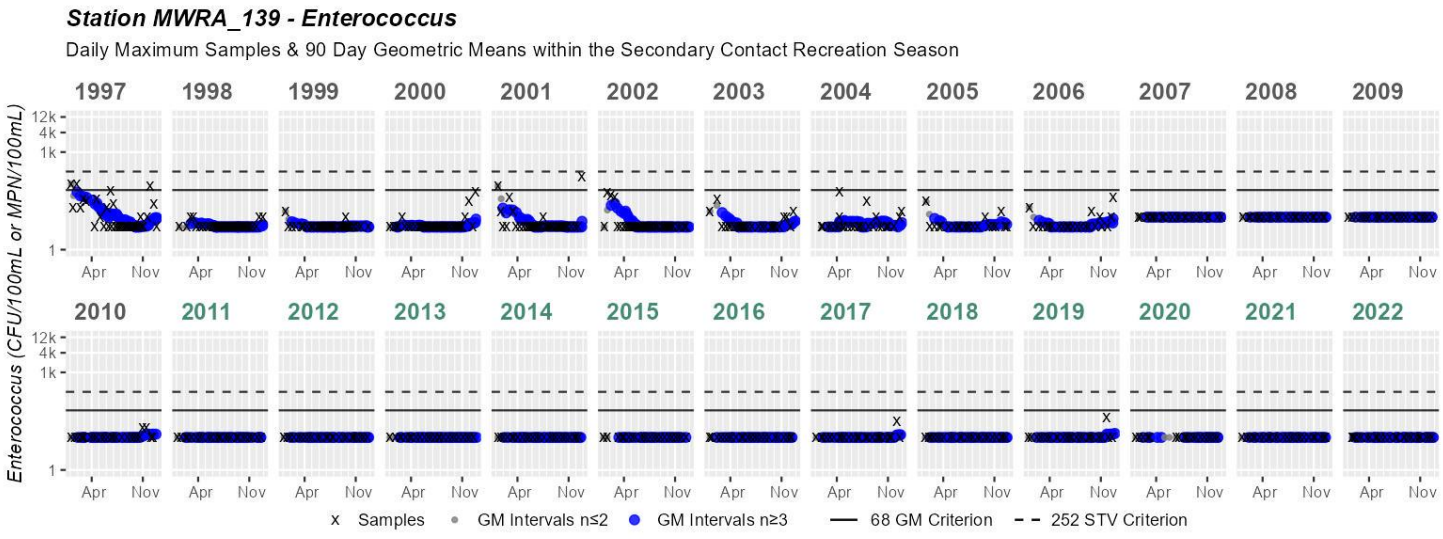
Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 1)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/06/97	12/29/97	37	5	105	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/14/98	12/28/98	38	5	10	5
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/11/99	12/22/99	37	5	15	5

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/03/00	12/28/00	40	5	60	5
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/09/01	12/27/01	39	5	175	6
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/08/02	12/19/02	39	5	55	5
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/06/03	12/22/03	27	5	35	6
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/27/04	12/29/04	27	5	60	6
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/20/05	12/22/05	21	5	30	5
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/05/06	12/22/06	23	5	40	6
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/18/07	12/28/07	23	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/08/08	12/18/08	23	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/06/09	12/21/09	24	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/05/10	12/14/10	26	10	20	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/05/11	12/19/11	24	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/05/12	12/20/12	24	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/03/13	12/20/13	24	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/09/14	12/16/14	24	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/06/15	12/16/15	22	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/06/16	12/14/16	23	10	10	10

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/05/17	12/19/17	24	10	31	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/16/18	12/19/18	23	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/03/19	12/18/19	24	10	41	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/06/20	12/14/20	18	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/04/21	12/20/21	24	10	10	10
MWRA_139	Massachusetts Water Resources Authority	Enterococci	01/20/22	12/21/22	24	10	10	10



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	37	Samples	38	Samples	37	Samples	40	Samples	39	Samples	39	Samples	27	Samples	27	Samples	21	Samples	23	Samples	23	Samples	23	Samples	24
SeasGM	10	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	6	SeasGM	5	SeasGM	6	SeasGM	6	SeasGM	5	SeasGM	6	SeasGM	10	SeasGM	10	SeasGM	10
#GMI	66	#GMI	71	#GMI	66	#GMI	71	#GMI	73	#GMI	71	#GMI	46	#GMI	46	#GMI	36	#GMI	40	#GMI	41	#GMI	40	#GMI	43
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	26	Samples	24	Samples	24	Samples	24	Samples	24	Samples	22	Samples	23	Samples	24	Samples	23	Samples	24	Samples	18	Samples	24	Samples	24
SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10
#GMI	47	#GMI	40	#GMI	41	#GMI	43	#GMI	42	#GMI	36	#GMI	40	#GMI	42	#GMI	41	#GMI	41	#GMI	26	#GMI	40	#GMI	43
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Quincy Bay (MA70-05): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 4.4118 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Winthrop Bay (MA70-10)

Location:	From the tidal flats at Coleridge Street, Boston (East Boston) to a line between Logan International Airport and Point Shirley, Boston/Winthrop.
AU Type:	ESTUARY
AU Size:	1.65 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
5	5	Enterococcus	R1_MA_2019_01	Unchanged
5	5	Fecal Coliform	R1_MA_2019_01	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Contaminated Sediments (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Discharges from Biosolids (SLUDGE) Storage, Application or Disposal (Y)	--	X	--	--	--	--
Cause Unknown [Contaminants in Fish and/or Shellfish]	Upstream Source (Y)	--	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Cause Unknown [Contaminants in Fish and/or Shellfish]	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	--
Enterococcus	Source Unknown (N)	--	--	--	--	X	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
PCBs in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Upstream Source (Y)	--	X	--	--	--	--
PCBs in Fish Tissue	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Fish Consumption Use for Winthrop Bay (MA70-10) continues to be assessed as Not Supporting and the prior PCBs in Fish Tissue and Cause Unknown [Contaminants in Fish and/or Shellfish] impairment is being carried forward. MDPH included a site-specific advisory for Winthrop Bay (referred to by MDPH as ''Boston Harbor'') in their 2017 Guide to Eating Fish Safely in Massachusetts. The public should refer to the most recent MDPH information for the most up to date meal advice for sensitive and general populations.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Winthrop Bay (MA70-10): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.566 sq mi (95%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.6053 sq mi (37%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH5.0	North Boston Harbor	Prohibited	0.81526	49.4%
GBH5.1	Winthrop Shores	Conditionally Restricted	0.13582	8.2%
GBH5.10	Constitution Beach	Prohibited	0.04647	2.8%
GBH5.11	Wood Island - West	Prohibited	0.07449	4.5%
GBH5.12	Donovan Beach	Prohibited	0.01624	1.0%
GBH5.14		Prohibited	0.00625	0.4%
GBH5.15	Crystal Cove	Conditionally Restricted	0.01416	0.9%
GBH5.16		Prohibited	0.00059	0.0%
GBH5.17		Prohibited	0.00078	0.0%
GBH5.18		Prohibited	0.00051	0.0%
GBH5.2	Airport	Conditionally Restricted	0.24109	14.6%
GBH5.3	Governors Island	Conditionally Restricted	0.00324	0.2%
GBH5.4	Wood Island	Conditionally Restricted	0.07853	4.8%
GBH5.5	Snake Island	Conditionally Restricted	0.12012	7.3%
GBH5.8	Belle Isle Creek	Prohibited	0.00004	0.0%
GBH5.9	Orient Heights	Conditionally Restricted	0.01238	0.7%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Winthrop Bay (MA70-10) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Winthrop Bay (MA70-10) continues to be assessed as Not Supporting. The prior Enterococcus impairment is being carried forward based on MDPH Beach Closures data not meeting the threshold at 3 beaches in 2018, 2019, 2021 & 2022. Winthrop Bay has 4 beaches with MDPH Beach Closure data: Constitution (DCR) [Beach ID: 2646] beach in Boston and Donovans [Beach ID: 3219], Pico [Beach ID: 5165] and Grandview [Beach ID: 3218] beaches in Winthrop. Beaches were posted for >10% of the swimming season at Constitution (DCR) in 2019 (18%) and 2021 (22%), Donovans in 2018 (54%), 2021 (91%), and 2022 (26%) and Pico in 2018 (21%) and 2021 (21%), indicating an Enterococcus impairment. The shellfish growing areas (1.5659 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Primary Contact Recreation Use of Winthrop Bay. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in Winthrop Bay at MWRA_130 [Winthrop Harbor, green can #1] from 2011-2022 (n=17-24/yr). Analysis of the recent five years of this multi-year high frequency Enterococcus dataset from MWRA_130 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml, 0 yrs had >10% of samples exceed the 130 CFU/100ml STV and cumulatively across years 0% of intervals had GMs >35 CFU/100ml, which meets 2024 CALM guidance. Surface water sampling was conducted at Constitution Beach on Winthrop Bay in Boston as part of a May 2022 MDPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.20 ng/L PFOA and PFOS).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_130	Massachusetts Water Resources Authority	Water Quality	Winthrop Bay	Winthrop Harbor, green can #1	42.363333	-70.987333

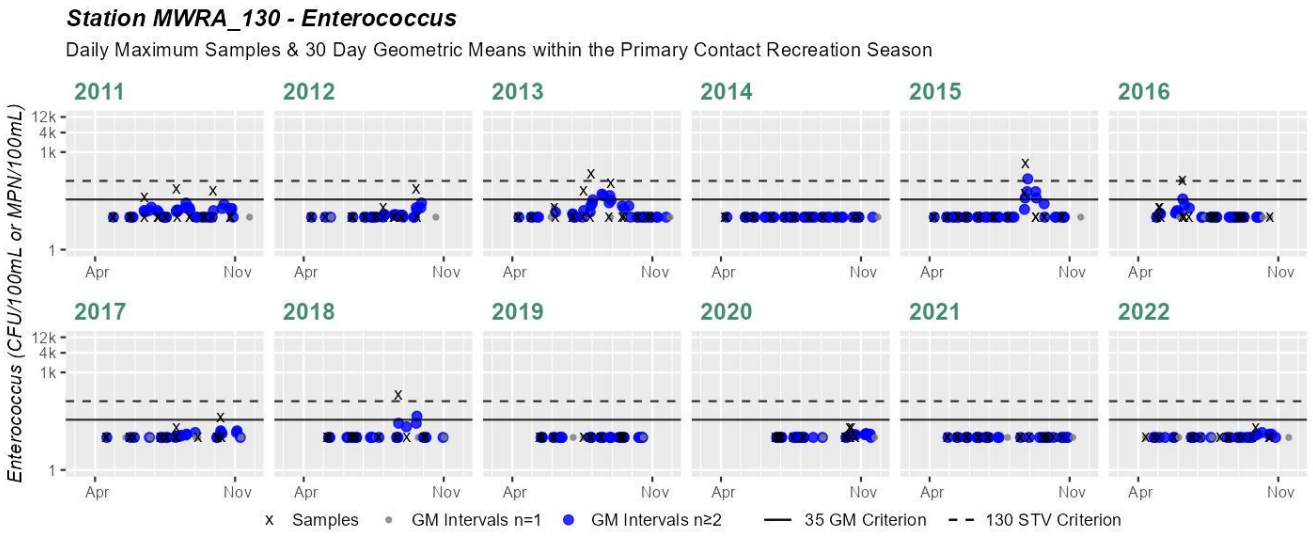
Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis)

(MWRA 2024) (MassDEP Undated 2)

[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	04/27/11	10/26/11	20	10	74	13
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	17	10	74	11
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	211	14
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	10	10
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	435	12
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	24	10	132	11
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	41	11
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	203	11
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	10	10
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	20	10
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	10	10
MWRA_130	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	20	10



Variable*	Result
Samples	20
SeasGM	13
#GMI	36
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	11
#GMI	27
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	21
SeasGM	14
#GMI	35
#GMI Ex	3
%GMI Ex	8%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	21
SeasGM	10
#GMI	37
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	22
SeasGM	12
#GMI	38
#GMI Ex	5
%GMI Ex	13%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	24
SeasGM	11
#GMI	34
#GMI Ex	1
%GMI Ex	2%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	19
SeasGM	11
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	11
#GMI	24
#GMI Ex	1
%GMI Ex	4%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	10
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	10
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	10
#GMI	30
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	10
#GMI	26
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)
2%

Cumulative %GMI Exceedance Current (Recent 5 Years)
0%

**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.*

Beach Postings

MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022) (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 2)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2646	Constitution (DCR)/ Boston	42.38145, -71.01110	42.38420, -71.00560	5%	14%	8%	11%	7%	18%	2%	22%	5%	4
2646	Constitution (DCR)/ Boston	42.38145, -71.01110	42.38420, -71.00560	5%	14%	8%	11%	7%	18%	2%	22%	5%	4
2646	Constitution (DCR)/ Boston	42.38145, -71.01110	42.38420, -71.00560	5%	14%	8%	11%	7%	18%	2%	22%	5%	4
3218	Grandview/ Winthrop	42.36186, -70.97530	42.35990, -70.97500	0%	10%	0%	0%	0%	0%	0%	19%	0%	1

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
3219	Donovans/ Winthrop	42.37761, -70.99230	42.37685, -70.99250	22%	54%	4%	7%	54%	1%	0%	91%	26%	5
5165	Pico/ Winthrop	42.36923, -70.98440	42.36939, -70.98370	10%	3%	0%	0%	21%	0%	0%	21%	7%	2

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Winthrop Bay (MA70-10): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.566 sq mi (95%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Other Indicators

Summary of MA DPH 2021 and 2022 PFAS in Water Column Data

Data Sources: (MA DPH 2023a, MA DPH 2023b)

Surface water sampling was conducted at Constitution Beach on Winthrop Bay (MA70-10) in Boston as part of a May 2022 MA DPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.20 ng/L PFOA and PFOS).

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Winthrop Bay (MA70-10) is assessed as Fully Supporting based on bacteria data collected at 1 station in 2018-2022. Winthrop Bay has 4 beaches with MDPH Beach Closure data: Constitution (DCR) [Beach ID: 2646] beach in Boston and Donovans [Beach ID: 3219], Pico [Beach ID: 5165] and Grandview [Beach ID: 3218] beaches in Winthrop. Available MDPH Beach Closure data cannot be used to positively assess the Secondary Contact Recreation Use since beaches were posted for >10% of the swimming season: Constitution (DCR) in 2019 and 2021, Donovans in 2018, 2021, and 2022 and Pico in 2018 and 2021. The shellfish growing areas (1.5659 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Winthrop Bay. Massachusetts Water Resources Authority (MWRA) staff collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Winthrop Bay at MWRA_130 [Winthrop Harbor, green can #1] from 1998-2010 (historic n=20-63/yr) and 2011-2022 (current n=20-27/yr). Analysis of the recent five years of this multi-year high frequency Enterococcus dataset from MWRA_130 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml, 0 yrs had >10% of samples exceed the 252 CFU/100ml STV and cumulatively across years 0% of intervals had GMs >68 CFU/100ml, which meets 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_130	Massachusetts Water Resources Authority	Water Quality	Winthrop Bay	Winthrop Harbor, green can #1	42.363333	-70.987333

Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)

(MWRA 2024) (MassDEP Undated 1)

[Result units are CFU/100mL or MPN/100mL]

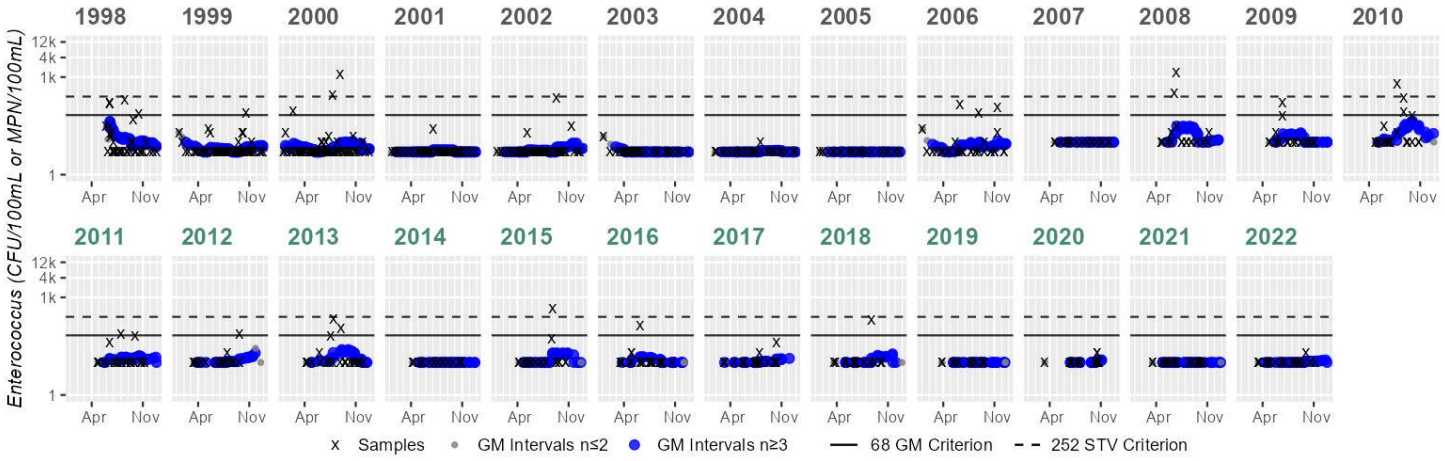
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_130	Massachusetts Water Resources Authority	Enterococci	06/01/98	12/28/98	34	5	205	10
MWRA_130	Massachusetts Water Resources Authority	Enterococci	01/11/99	12/28/99	50	5	80	6
MWRA_130	Massachusetts Water Resources Authority	Enterococci	01/03/00	12/28/00	63	5	1220	6
MWRA_130	Massachusetts Water Resources Authority	Enterococci	01/09/01	12/27/01	39	5	25	5

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_130	Massachusetts Water Resources Authority	Enterococci	01/08/02	12/19/02	39	5	235	5
MWRA_130	Massachusetts Water Resources Authority	Enterococci	01/06/03	12/22/03	26	5	15	5
MWRA_130	Massachusetts Water Resources Authority	Enterococci	01/27/04	12/29/04	25	5	10	5
MWRA_130	Massachusetts Water Resources Authority	Enterococci	01/20/05	12/22/05	22	5	5	4
MWRA_130	Massachusetts Water Resources Authority	Enterococci	01/05/06	12/13/06	30	5	140	7
MWRA_130	Massachusetts Water Resources Authority	Enterococci	04/23/07	12/07/07	22	10	10	10
MWRA_130	Massachusetts Water Resources Authority	Enterococci	04/23/08	11/07/08	21	10	1370	16
MWRA_130	Massachusetts Water Resources Authority	Enterococci	04/30/09	11/03/09	22	10	161	12
MWRA_130	Massachusetts Water Resources Authority	Enterococci	04/27/10	10/28/10	20	10	637	19
MWRA_130	Massachusetts Water Resources Authority	Enterococci	04/27/11	11/09/11	22	10	74	12
MWRA_130	Massachusetts Water Resources Authority	Enterococci	03/13/12	09/20/12	21	10	74	11
MWRA_130	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	211	13
MWRA_130	Massachusetts Water Resources Authority	Enterococci	04/07/14	10/29/14	21	10	10	10
MWRA_130	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	435	12
MWRA_130	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	27	10	132	11
MWRA_130	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	41	11
MWRA_130	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	203	11

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_130	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	10	10
MWRA_130	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	20	10
MWRA_130	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	10	10
MWRA_130	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	20	10

Station MWRA_130 - Enterococcus

Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	34	Samples	50	Samples	63	Samples	39	Samples	39	Samples	26	Samples	25	Samples	22	Samples	30	Samples	22	Samples	21	Samples	22	Samples	20
SeasGM	10	SeasGM	6	SeasGM	6	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	5	SeasGM	7	SeasGM	10	SeasGM	16	SeasGM	12	SeasGM	19
#GMI	61	#GMI	89	#GMI	109	#GMI	73	#GMI	71	#GMI	44	#GMI	42	#GMI	38	#GMI	53	#GMI	35	#GMI	35	#GMI	38	#GMI	34
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	2	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	2	n>STV	0	n>STV	1
%n>STV	0%	%n>STV	0%	%n>STV	3%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	9%	%n>STV	0%	%n>STV	5%

Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	22	Samples	21	Samples	25	Samples	21	Samples	22	Samples	27	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	12	SeasGM	11	SeasGM	13	SeasGM	10	SeasGM	12	SeasGM	11	SeasGM	11	SeasGM	11	SeasGM	10	SeasGM	10	SeasGM	10	SeasGM	10
#GMI	39	#GMI	36	#GMI	43	#GMI	37	#GMI	37	#GMI	45	#GMI	38	#GMI	35	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Historic (Recent 5 Years)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	0%	0%	0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 3)

Summary
Winthrop Bay (MA70-10): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.566 sq mi (95%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Data Sources

Bailey, Logan. "DPH 2022 freshwater beach posting data provided to Laurie Kennedy and Dan Davis (MassDEP Watershed Planning Program) via Excel file (FreshwaterBeachPostings_2022) attached to email (RE: DPH Beach Posting information update needed for 2024 IR)." Additional 2020-2022 freshwater/marine beach posting data downloaded from the Mass Environmental Public Health Tracker tool or EPA BEACON tool, respectively, Environmental Toxicology Program, Bureau of Environmental Health, Massachusetts Department of Public Health, Boston, MA, Sept. 10, 2023.

Bailey, Logan. "RE: Beaches Bill reporting data." Email to Dan Davis (MassDEP Watershed Planning Program) providing an Excel file (DEP_BeachDataRequest) with 2014-2019 data for marine and DCR freshwater beaches, Environmental Toxicology Program, Bureau of Environmental Health, Massachusetts Department of Public Health, Boston, MA, Feb. 2, 2021.

MA DPH. "2022 Emerging Contaminant Surveillance: Results of PFAS in Surface Water and Fish." Environmental Toxicology Program, Bureau of Environmental Health, Massachusetts Department of Public Health, 2023a.

—. "Emerging Contaminants in Surface Water and Fish: Results from Statewide Monitoring." Environmental Toxicology Program, Massachusetts Department of Public Health. December 26, 2023b. https://www.mass.gov/doc/2022-summary-of-sampling-data-for-dcr-waterbodies-0/download (accessed March 2024).

MassDEP. "Open file analysis of external water quality data (potential date range 1997-2022) using 2024 CALM guidance." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 1.

MassDEP. "Open file analysis of external water quality data (potential date range 2011-2022) using 2024 CALM guidance." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 2.

MassDEP. "Open file analysis of shellfish growing area classifications using 2024 CALM guidance." Data published June 2024 and available on MassGIS website, Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 3.

MassGIS. "MassGIS Data: Designated Shellfish Growing Areas, Data provided by Massachusetts Department of Fish and Game's Division of Marine Fisheries." Bureau of Geographic Information, Boston, MA. June 2024. https://www.mass.gov/info-details/massgis-data-designated-shellfish-growing-areas (accessed July 2024).

MWRA. "Bacteria data from Boston Harbor and tributary rivers 2011-2022." Massachusetts Water Resources Authority. 2024. https://www.mwra.com/our-environment/download-environmental-data (accessed Sept 11, 2024).