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

Appendix 9
Boston Harbor: Neponset River Basin and Coastal Drainage Area 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.

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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
Beaver Brook	MA73-19	5	5	Benthic Macroinvertebrates	--	Unchanged
Beaver Brook	MA73-19	5	5	Dissolved Oxygen	--	Unchanged
Beaver Brook	MA73-19	5	5	Escherichia Coli (E. Coli)	--	Added
Beaver Meadow Brook	MA73-20	5	5	Dissolved Oxygen	--	Unchanged
Beaver Meadow Brook	MA73-20	5	5	Escherichia Coli (E. Coli)	2592	Unchanged
Billings Street/East Street Pond	MA73065	4c	4c	(Aquatic Plants (Macrophytes)*)	--	Added
Billings Street/East Street Pond	MA73065	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Blue Hills Reservoir	MA73004	3	3	None	--	Unchanged
Bolivar Pond	MA73005	5	5	(Fanwort*)	--	Unchanged
Bolivar Pond	MA73005	5	5	Turbidity	--	Unchanged
Bubbling Brook	MA73-11	5	5	Benthic Macroinvertebrates	--	Unchanged
Bubbling Brook	MA73-11	5	5	Fish Bioassessments	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Buckmaster Pond	MA73006	3	3	None	--	Unchanged
Clark Pond	MA73008	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Clark Pond	MA73008	4c	4c	(Water Chestnut*)	--	Unchanged
Cobbs Pond	MA73009	5	5	(Aquatic Plants (Macrophytes)*)	--	Added
Cobbs Pond	MA73009	5	5	(Non-Native Aquatic Plants*)	--	Unchanged
Cobbs Pond	MA73009	5	5	Dissolved Oxygen	--	Unchanged
Cobbs Pond	MA73009	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Cobbs Pond	MA73009	5	5	Transparency / Clarity	--	Unchanged
East Branch	MA73-05	5	5	(Flow Regime Modification*)	--	Unchanged
East Branch	MA73-05	5	5	Benthic Macroinvertebrates	--	Unchanged
East Branch	MA73-05	5	5	DDT in Fish Tissue	--	Unchanged
East Branch	MA73-05	5	5	Escherichia Coli (E. Coli)	2592	Unchanged
East Branch	MA73-05	5	5	Fecal Coliform	2592	Unchanged
East Branch	MA73-05	5	5	PCBs in Fish Tissue	--	Unchanged
East Branch	MA73-05	5	5	Unspecified Metals in Sediment	--	Unchanged
Ellis Pond	MA73018	4c	4c	(Fanwort*)	--	Unchanged
Farrington Pond	MA73040	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Flynns Pond	MA73019	3	3	None	--	Unchanged
Forge Pond	MA73020	5	5	Turbidity	--	Unchanged
Ganawatte Farm Pond	MA73037	5	5	(Aquatic Plants (Macrophytes)*)	--	Changed
Ganawatte Farm Pond	MA73037	5	5	Dissolved Oxygen	--	Unchanged
Ganawatte Farm Pond	MA73037	5	5	Nutrient/Eutrophication Biological Indicators	--	Added
Ganawatte Farm Pond	MA73037	5	5	Transparency / Clarity	--	Unchanged
Germany Brook	MA73-15	5	5	Escherichia Coli (E. Coli)	2592	Unchanged
Germany Brook	MA73-15	5	5	Fecal Coliform	2592	Unchanged
Germany Brook	MA73-15	5	5	Phosphorus, Total	--	Unchanged
Glen Echo Pond	MA73022	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Gulliver Creek	MA73-30	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
Gulliver Creek	MA73-30	5	5	Fecal Coliform	2592	Unchanged
Gulliver Creek	MA73-30	5	5	PCBs in Fish Tissue	--	Unchanged
Hammer Shop Pond	MA73023	3	3	None	--	Unchanged
Hawes Brook	MA73-16	5	5	Escherichia Coli (E. Coli)	2592	Unchanged
Hawes Brook	MA73-16	5	5	Fecal Coliform	2592	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Hawes Brook	MA73-16	5	5	Odor	--	Unchanged
Jewells Pond	MA73026	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Lymans Pond	MA73021	3	3	None	--	Unchanged
Massapoag Brook	MA73-21	5	5	(Curly-leaf Pondweed*)	--	Unchanged
Massapoag Brook	MA73-21	5	5	(Fanwort*)	--	Unchanged
Massapoag Brook	MA73-21	5	5	(Non-Native Aquatic Plants*)	--	Unchanged
Massapoag Brook	MA73-21	5	5	Benthic Macroinvertebrates	--	Unchanged
Massapoag Brook	MA73-21	5	5	Escherichia Coli (E. Coli)	--	Added
Massapoag Lake	MA73030	4a	4a	(Non-Native Aquatic Plants*)	--	Unchanged
Massapoag Lake	MA73030	4a	4a	Mercury in Fish Tissue	33880	Unchanged
Memorial Pond	MA73012	5	5	(Aquatic Plants (Macrophytes)*)	--	Changed
Memorial Pond	MA73012	5	5	Nutrient/Eutrophication Biological Indicators	--	Added
Memorial Pond	MA73012	5	5	Turbidity	--	Unchanged
Mill Brook	MA73-08	5	5	(Dewatering*)	--	Unchanged
Mill Brook	MA73-08	5	5	Benthic Macroinvertebrates	--	Unchanged
Mill Brook	MA73-08	5	5	Dissolved Oxygen	--	Unchanged
Mill Brook	MA73-08	5	5	Escherichia Coli (E. Coli)	--	Added

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Mill Brook	MA73-08	5	5	Temperature	--	Unchanged
Mill Brook	MA73-12	2	5	Escherichia Coli (E. Coli)	--	Added
Mine Brook	MA73-09	5	5	Dissolved Oxygen	--	Unchanged
Mother Brook	MA73-28	5	5	(Debris*)	--	Unchanged
Mother Brook	MA73-28	5	5	(Flow Regime Modification*)	--	Unchanged
Mother Brook	MA73-28	5	5	Color	--	Unchanged
Mother Brook	MA73-28	5	5	DDT in Fish Tissue	--	Unchanged
Mother Brook	MA73-28	5	5	Dissolved Oxygen	--	Unchanged
Mother Brook	MA73-28	5	5	Escherichia Coli (E. Coli)	2592	Unchanged
Mother Brook	MA73-28	5	5	Fecal Coliform	2592	Unchanged
Mother Brook	MA73-28	5	5	Mercury in Fish Tissue	--	Unchanged
Mother Brook	MA73-28	5	5	Odor	--	Unchanged
Mother Brook	MA73-28	5	5	PCBs in Fish Tissue	--	Unchanged
Mother Brook	MA73-28	5	5	Phosphorus, Total	--	Unchanged
Mother Brook	MA73-28	5	5	Trash	--	Unchanged
Neponset Reservoir	MA73034	5	5	(Fanwort*)	--	Unchanged
Neponset Reservoir	MA73034	5	5	Algae	--	Unchanged
Neponset Reservoir	MA73034	5	5	Turbidity	--	Unchanged
Neponset River	MA73-01	5	5	(Curly-leaf Pondweed*)	--	Unchanged
Neponset River	MA73-01	5	5	(Fish Passage Barrier*)	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Neponset River	MA73-01	5	5	(Non-Native Aquatic Plants*)	--	Unchanged
Neponset River	MA73-01	5	5	Cadmium	--	Unchanged
Neponset River	MA73-01	5	5	DDT in Fish Tissue	--	Unchanged
Neponset River	MA73-01	5	5	Dissolved Oxygen	--	Unchanged
Neponset River	MA73-01	5	5	Escherichia Coli (E. Coli)	54840	Unchanged
Neponset River	MA73-01	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Neponset River	MA73-01	5	5	PCBs in Fish Tissue	--	Unchanged
Neponset River	MA73-01	5	5	Phosphorus, Total	--	Unchanged
Neponset River	MA73-01	5	5	Unspecified Metals in Sediment	--	Unchanged
Neponset River	MA73-02	5	5	(Debris*)	--	Unchanged
Neponset River	MA73-02	5	5	(Fish Passage Barrier*)	--	Unchanged
Neponset River	MA73-02	5	5	DDT in Fish Tissue	--	Unchanged
Neponset River	MA73-02	5	5	Dissolved Oxygen	--	Unchanged
Neponset River	MA73-02	5	5	Escherichia Coli (E. Coli)	2592	Unchanged
Neponset River	MA73-02	5	5	Fecal Coliform	2592	Unchanged
Neponset River	MA73-02	5	5	Flocculant Masses	--	Removed
Neponset River	MA73-02	5	5	Metals	--	Unchanged
Neponset River	MA73-02	5	5	Oil and Grease	--	Unchanged
Neponset River	MA73-02	5	5	PCBs in Fish Tissue	--	Unchanged
Neponset River	MA73-02	5	5	Scum/Foam	--	Unchanged
Neponset River	MA73-02	5	5	Trash	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Neponset River	MA73-02	5	5	Turbidity	--	Unchanged
Neponset River	MA73-02	5	5	Unspecified Metals in Sediment	--	Unchanged
Neponset River	MA73-03	5	5	(Curly-leaf Pondweed*)	--	Unchanged
Neponset River	MA73-03	5	5	(Debris*)	--	Unchanged
Neponset River	MA73-03	5	5	(Fish Passage Barrier*)	--	Unchanged
Neponset River	MA73-03	5	5	DDT in Fish Tissue	--	Unchanged
Neponset River	MA73-03	5	5	Enterococcus	2592	Unchanged
Neponset River	MA73-03	5	5	Escherichia Coli (E. Coli)	2592	Unchanged
Neponset River	MA73-03	5	5	Fecal Coliform	2592	Unchanged
Neponset River	MA73-03	5	5	Flocculant Masses	--	Removed
Neponset River	MA73-03	5	5	Metals	--	Unchanged
Neponset River	MA73-03	5	5	Oil and Grease	--	Unchanged
Neponset River	MA73-03	5	5	PCBs in Fish Tissue	--	Unchanged
Neponset River	MA73-03	5	5	PCBs in Sediment	--	Unchanged
Neponset River	MA73-03	5	5	Polychlorinated Biphenyls (PCBs)	--	Unchanged
Neponset River	MA73-03	5	5	Scum/Foam	--	Unchanged
Neponset River	MA73-03	5	5	Trash	--	Unchanged
Neponset River	MA73-03	5	5	Unspecified Metals in Sediment	--	Unchanged
Neponset River	MA73-04	5	5	(Debris*)	--	Unchanged
Neponset River	MA73-04	5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Neponset River	MA73-04	5	5	Enterococcus	2592	Unchanged
Neponset River	MA73-04	5	5	Fecal Coliform	2592	Unchanged
Neponset River	MA73-04	5	5	PCBs in Fish Tissue	--	Unchanged
Neponset River	MA73-04	5	5	Trash	--	Unchanged
Neponset River	MA73-04	5	5	Turbidity	--	Unchanged
Pecunit Brook	MA73-25	5	5	Benthic Macroinvertebrates	--	Unchanged
Pecunit Brook	MA73-25	5	5	Escherichia Coli (E. Coli)	54842	Unchanged
Pequid Brook	MA73-22	5	5	Dissolved Oxygen	--	Unchanged
Pequid Brook	MA73-22	5	5	Escherichia Coli (E. Coli)	--	Added
Pettee Pond	MA73036	4a	4a	Mercury in Fish Tissue	42408	Unchanged
Pine Tree Brook	MA73-29	5	5	(Physical Substrate Habitat Alterations*)	--	Unchanged
Pine Tree Brook	MA73-29	5	5	Aquatic Plants (Macrophytes)	--	Removed
Pine Tree Brook	MA73-29	5	5	Dissolved Oxygen	--	Unchanged
Pine Tree Brook	MA73-29	5	5	Escherichia Coli (E. Coli)	2592	Unchanged
Pine Tree Brook	MA73-29	5	5	Fecal Coliform	2592	Unchanged
Pine Tree Brook	MA73-29	5	5	Turbidity	--	Unchanged
Pinewood Pond	MA73039	4c	4c	(Aquatic Plants (Macrophytes)*)	--	Unchanged
Pinewood Pond	MA73039	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Plantingfield Brook	MA73-23	5	4a	(Dewatering*)	--	Unchanged
Plantingfield Brook	MA73-23	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Ponkapoag Pond	MA73043	4a	4a	(Aquatic Plants (Macrophytes)*)	--	Added
Ponkapoag Pond	MA73043	4a	4a	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
Ponkapoag Pond	MA73043	4a	4a	(Fanwort*)	--	Unchanged
Ponkapoag Pond	MA73043	4a	4a	(Non-Native Aquatic Plants*)	--	Unchanged
Ponkapoag Pond	MA73043	4a	4a	Mercury in Fish Tissue	42409	Unchanged
Ponkapog Brook	MA73-27	4a	4a	Escherichia Coli (E. Coli)	2592	Unchanged
Ponkapog Brook	MA73-27	4a	4a	Fecal Coliform	2592	Unchanged
Purgatory Brook	MA73-24	5	5	(Debris*)	--	Unchanged
Purgatory Brook	MA73-24	5	5	Escherichia Coli (E. Coli)	2592	Unchanged
Purgatory Brook	MA73-24	5	5	Fecal Coliform	2592	Unchanged
Purgatory Brook	MA73-24	5	5	Trash	--	Unchanged
Reservoir Pond	MA73048	4a	4a	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
Reservoir Pond	MA73048	4a	4a	(Fanwort*)	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Reservoir Pond	MA73048	4a	4a	(Non-Native Aquatic Plants*)	--	Unchanged
Reservoir Pond	MA73048	4a	4a	Mercury in Fish Tissue	42400	Unchanged
Russell Pond	MA73003	5	5	(Curly-leaf Pondweed*)	--	Unchanged
Russell Pond	MA73003	5	5	Turbidity	--	Unchanged
School Meadow Brook	MA73-06	2	5	Escherichia Coli (E. Coli)	--	Added
Sprague Pond	MA73053	3	2	None	--	Unchanged
Steep Hill Brook	MA73-18	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Town Pond	MA73056	4c	4c	(Fanwort*)	--	Unchanged
Traphole Brook	MA73-17	2	5	Escherichia Coli (E. Coli)	--	Added
Tubwreck Brook	MA73-07	2	2	None	--	Unchanged
Turner Pond	MA73058	4c	4c	(Fanwort*)	--	Unchanged
Turners Pond	MA73059	5	5	Dissolved Oxygen	--	Unchanged
Turners Pond	MA73059	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Turners Pond	MA73059	5	5	Turbidity	--	Unchanged
Unnamed Tributary	MA73-10	3	2	None	--	Unchanged
Unnamed Tributary	MA73-14	3	3	None	--	Unchanged
Unnamed Tributary	MA73-31	4a	4a	Fecal Coliform	2592	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Unnamed Tributary	MA73-32	5	5	Benthic Macroinvertebrates	--	Unchanged
Unnamed Tributary	MA73-32	5	5	Escherichia Coli (E. Coli)	54860	Unchanged
Unnamed Tributary	MA73-33	5	5	Benthic Macroinvertebrates	--	Unchanged
Unnamed Tributary	MA73-33	5	5	Escherichia Coli (E. Coli)	54861	Unchanged
Unnamed Tributary	MA73-33	5	5	Phosphorus, Total	--	Unchanged
Unnamed Tributary	MA73-34	5	5	(Debris*)	--	Unchanged
Unnamed Tributary	MA73-34	5	5	Benthic Macroinvertebrates	--	Unchanged
Unnamed Tributary	MA73-34	5	5	Escherichia Coli (E. Coli)	--	Added
Unnamed Tributary	MA73-34	5	5	Trash	--	Unchanged
Unnamed Tributary	MA73-35	2	2	None	--	Unchanged
Unnamed Tributary	MA73-36	--	3	None	--	Unchanged
Unquity Brook	MA73-26	5	5	(Dewatering*)	--	Unchanged
Unquity Brook	MA73-26	5	5	(Physical Substrate Habitat Alterations*)	--	Unchanged
Unquity Brook	MA73-26	5	5	Dissolved Oxygen	--	Unchanged

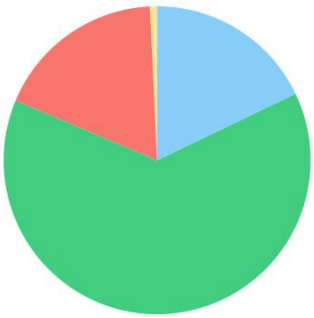
Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Unquity Brook	MA73-26	5	5	Escherichia Coli (E. Coli)	2592	Unchanged
Unquity Brook	MA73-26	5	5	Fecal Coliform	2592	Unchanged
Unquity Brook	MA73-26	5	5	Fish Bioassessments	--	Unchanged
Unquity Brook	MA73-26	5	5	Phosphorus, Total	--	Unchanged
Unquity Brook	MA73-26	5	5	Sedimentation/Siltation	--	Unchanged
Willet Pond	MA73062	4a	4a	Mercury in Fish Tissue	33880	Unchanged
Woods Pond	MA73055	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

Beaver Brook (MA73-19)

Location:	Headwaters (perennial portion), near Moose Hill Street, Sharon through Sawmill Pond to mouth at confluence with Massapoag Brook, Sharon.
AU Type:	RIVER
AU Size:	3.5 MILES
Classification/Qualifier:	B

Beaver Brook (MA73-19)

Watershed Area: 3.12 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.12	3.12	0.92	0.92
Agriculture	0.8%	0.8%	0.2%	0.2%
Developed	17.9%	17.9%	10.3%	10.3%
Natural	63.5%	63.5%	51.3%	51.3%
Wetland	17.9%	17.9%	38.2%	38.2%
Impervious	8.4%	8.4%	4.6%	4.6%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Escherichia Coli (E. Coli)	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Beaver Brook (MA73-19) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Beaver Brook (MA73-19) 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 Beaver Brook (MA73-19) is assessed as Not Supporting based on bacteria data collected at 1 station in 2018-2022, with an Escherichia Coli (E. Coli) impairment being added. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples three-quarters of the way down Beaver Brook at NepRWA_BEB025 [Beaver Brook at Maskwonicut] from 2011-2014 and 2017-2022 (n=5-6/yr). Analysis of the recent five years of the multi-year limited frequency dataset from this station indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 75-100%), 1 yr had ≥2 samples exceed the 410 CFU/100ml STV (2018, n=2), and cumulatively across years 84% of intervals had GMs >126 CFU/100ml, which is indicative of an *E. coli* impairment.

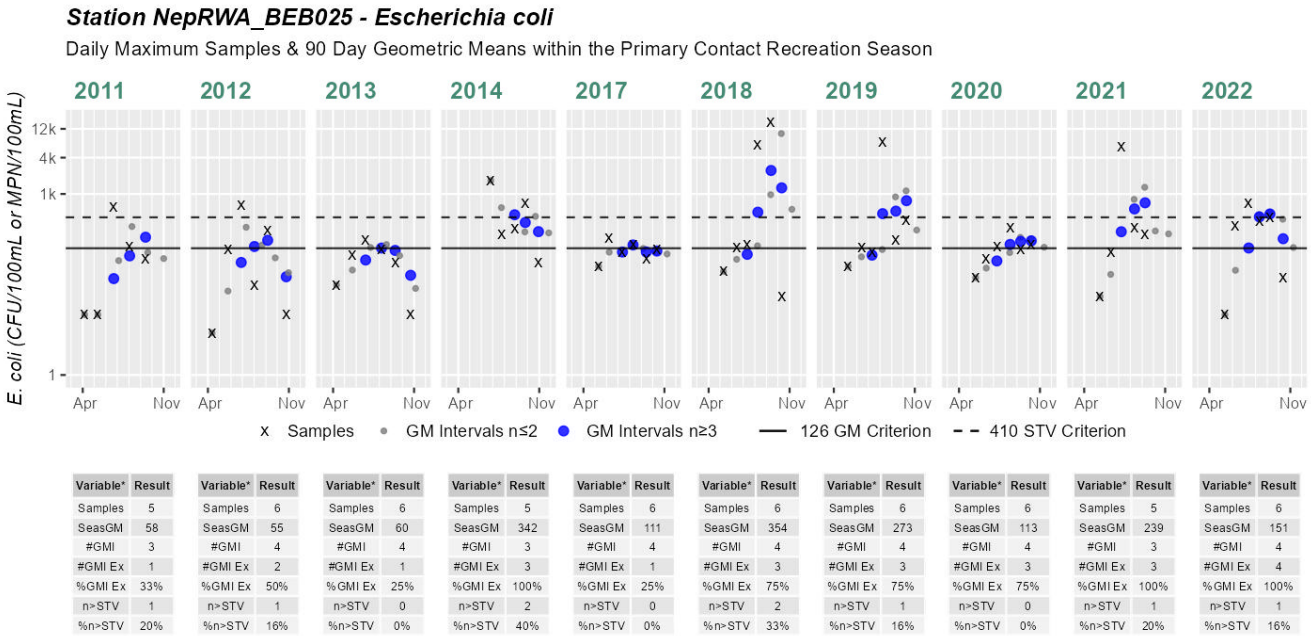
Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_BEB025	Neponset River Watershed Association	Water Quality	Beaver Brook	Beaver Brook @ Maskwonicut	42.133083	-71.177270

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)
(NepRWA 2023) (MassDEP Undated 4)
[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
NepRWA_BEB025	Neponset River Watershed Association	E. coli	04/06/11	09/14/11	5	10	618	58
NepRWA_BEB025	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	650	55
NepRWA_BEB025	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	173	60
NepRWA_BEB025	Neponset River Watershed Association	E. coli	06/26/14	10/30/14	5	74	1670	342
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	63	187	111
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	20	15500	354
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	63	7270	273
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	272	113
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/13/21	09/09/21	5	20	6130	239
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	697	151



Variable*	Result
Samples	5
SeasGM	58
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	55
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	60
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	342
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	111
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	354
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	273
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	113
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	239
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	151
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance Current (2011-2022)
64%

Cumulative %GMI Exceedance Current (Recent 5 Years)
84%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Beaver Brook (MA73-19) is assessed as Not Supporting based on bacteria data collected at 1 station in 2018-2022, with an Escherichia Coli (E. Coli) impairment being added. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Beaver Brook from 2008-2022 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: halfway down the brook at W0557 [Upland Rd, Sharon] from Apr-Sep 2009 (historic n=6) and three-quarters of the way down the brook at NepRWA_BEB025 [Beaver Brook at Maskwonicut] from 2008-2010 (historic n=6/yr) as well as 2011-2014 and 2017-2022 (current n=5-6/yr). Since bacteria data from the historic IR window are all indicative of good water quality conditions, only the analysis from the current IR window will be summarized here. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_BEB025 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2019 and 2021-2022, 50-75%), 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2), and cumulatively across years 52% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0557	MassDEP	Water Quality	Beaver Brook	[Upland Road, Sharon]	42.126040	-71.185260
NepRWA_BEB025	Neponset River Watershed Association	Water Quality	Beaver Brook	Beaver Brook @ Maskwonicut	42.133083	-71.177270

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

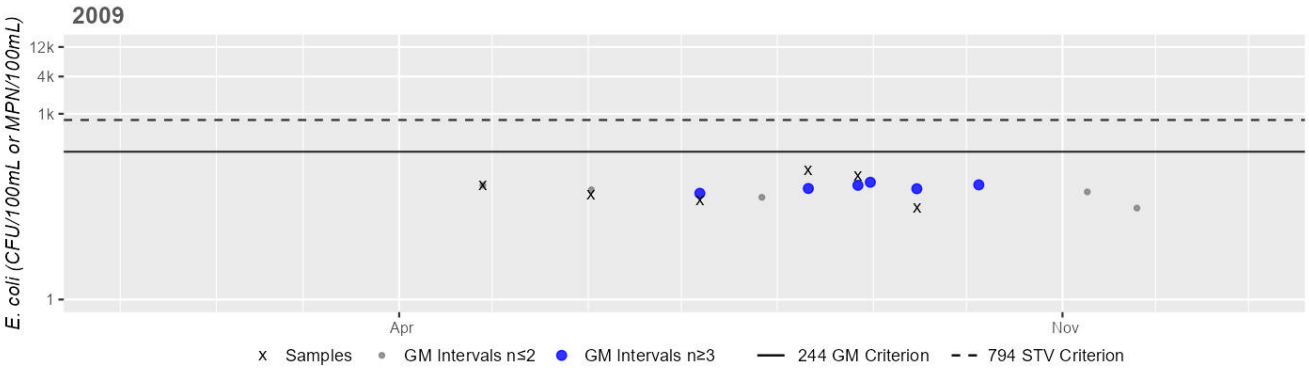
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0557	MassDEP	E. coli	04/28/09	09/15/09	6	30	120	60
NepRWA_BEB025	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	5	556	76
NepRWA_BEB025	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	10	435	55
NepRWA_BEB025	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	31	331	88
NepRWA_BEB025	Neponset River Watershed Association	E. coli	04/06/11	09/14/11	5	10	618	58
NepRWA_BEB025	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	650	55
NepRWA_BEB025	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	173	60
NepRWA_BEB025	Neponset River Watershed Association	E. coli	06/26/14	10/30/14	5	74	1670	342
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	63	187	111
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	20	15500	354
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	63	7270	273

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	272	113
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/13/21	09/09/21	5	20	6130	239
NepRWA_BEB025	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	697	151

Station MASSDEP_W0557 - Escherichia coli

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



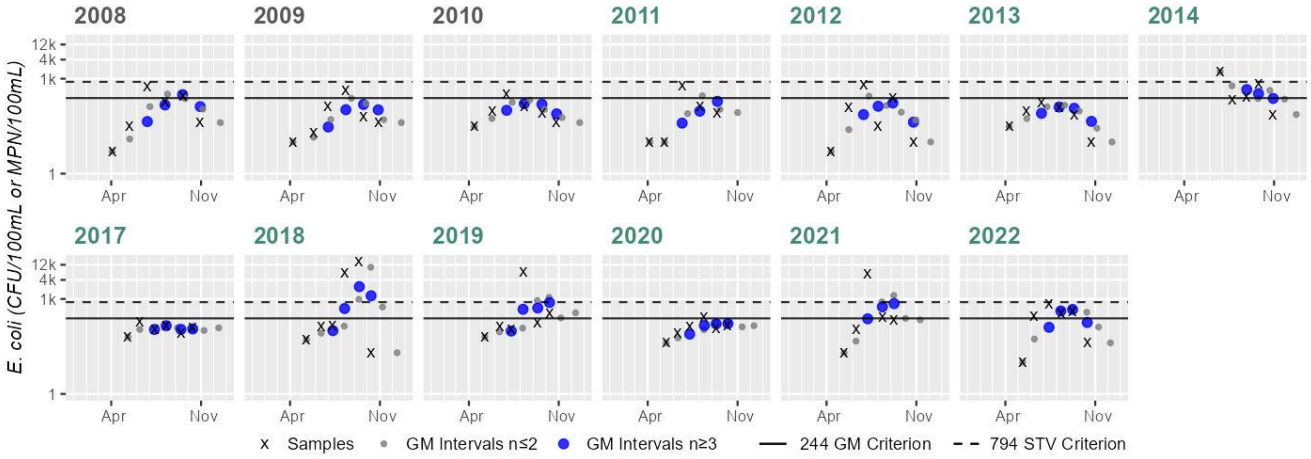
Variable*	Result
Samples	6
SeasGM	60
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
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 NepRWA_BEB025 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	76
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	55
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	88
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	58
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	55
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	60
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	342
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	111
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	354
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	273
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	113
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	239
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	151
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)
8%

Cumulative %GMI Exceedance Current (2011-2022)
32%

Cumulative %GMI Exceedance Current (Recent 5 Years)
52%

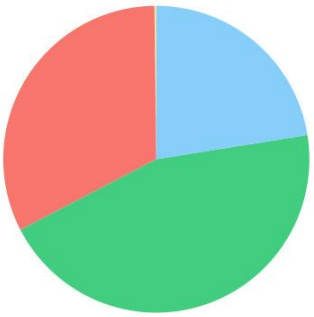
**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Beaver Meadow Brook (MA73-20)

Location:	Headwaters, outlet of Glenn Echo Pond, Stoughton, to mouth at inlet of Bolivar Pond, Canton.
AU Type:	RIVER
AU Size:	3.3 MILES
Classification/Qualifier:	B

Beaver Meadow Brook (MA73-20)

Watershed Area: 2.86 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.86	2.81	1.09	1.09
Agriculture	0.2%	0.1%	0.2%	0%
Developed	32.4%	32%	22%	22%
Natural	44.9%	45.1%	44.3%	44.4%
Wetland	22.5%	22.8%	33.5%	33.6%
Impervious	18.8%	18.5%	12.6%	12.6%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Dissolved Oxygen	--	Unchanged
5	5	Escherichia Coli (E. Coli)	2592	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Beaver Meadow Brook (MA73-20) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Beaver Meadow Brook (MA73-20) 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 Beaver Meadow Brook (MA73-20) continues to be assessed as Not Supporting based on bacteria data collected at 1 station in 2018-2022, with the prior Escherichia Coli (E. Coli) impairment being carried forward. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples over three-quarters of the way down Beaver Meadow Brook at NepRWA_BMB026 [Beaver Meadow Brook at Pine St] from 2011-2014 and 2017-2022 (n=4-6/yr). Analysis of the recent five years of the multi-year limited frequency dataset from this station indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 75-100%), 3 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018 and 2021-2022, n=2-4) and cumulatively across years 94% of intervals had GMs >126 CFU/100ml, which is indicative of an *E. coli* impairment.

Monitoring Stations

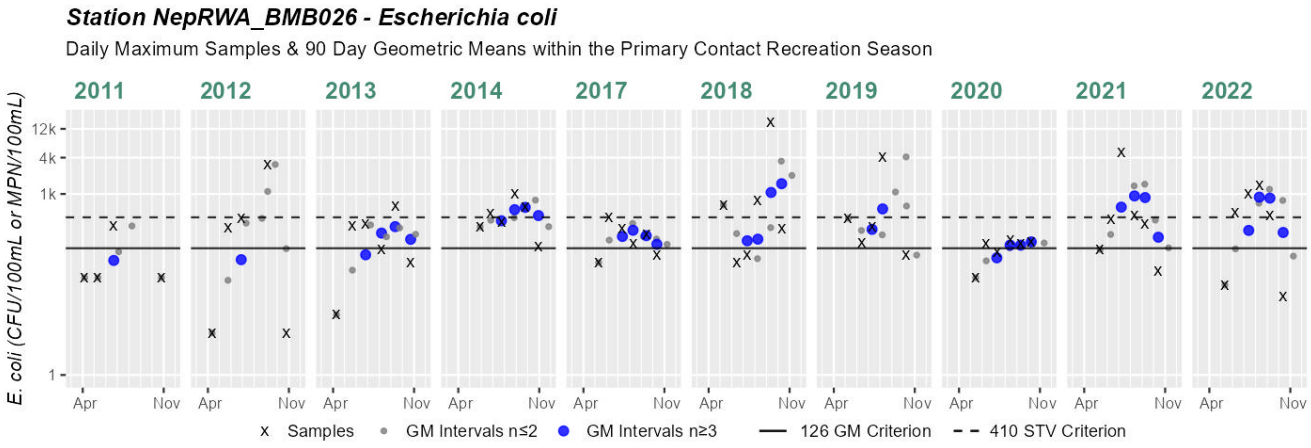
Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_BMB026	Neponset River Watershed Association	Water Quality	Beaver Meadow Brook	Beaver Meadow Brook @ Pine Street	42.148667	-71.129370

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (NepRWA 2023) (MassDEP Undated 4)

[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
NepRWA_BMB026	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	4	41	295	67
NepRWA_BMB026	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	5	3080	96
NepRWA_BMB026	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	624	131
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	135	1020	396
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	73	404	170
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	74	15500	498
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	5	97	4110	369
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	175	118
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	52	4880	340
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	20	1400	239



Variable*	Result
Samples	4
SeasGM	67
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	96
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	131
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	396
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	170
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	498
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	5
SeasGM	369
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	118
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	340
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	239
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Cumulative %GMI Exceedance Current (2011-2022)
87%

Cumulative %GMI Exceedance Current (Recent 5 Years)
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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Beaver Meadow Brook (MA73-20) is assessed as Not Supporting, with an Escherichia Coli (E. Coli) impairment being added, based on bacteria data collected at 1 station in 2018-2022. MassDEP and NepRWA staff/volunteers collected E. coli bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Beaver Meadow Brook (MA73-20) from 2008-2022 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: halfway down the brook at W1945 [Boston Drive, Canton] from Apr-Sep 2009 (historic n=6) and over three-quarters of the way down at NepRWA_BMB026 [Beaver Meadow Brook at Pine St] from 2008-2010 (historic n=5-6/yr) and 2011-2014 and 2017-2022 (current n=4-6/yr). Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_BMB026 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2019 and 2021-2022, 50-100%), 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2022, n=2), and cumulatively across years 55% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment. It should be noted that data in the historic IR window at station W1945 was also indicative of an Escherichia Coli (E. Coli) impairment, with 83% of the GM intervals >244 CFU/100ml for this single year low frequency dataset.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1945	MassDEP	Water Quality	Beaver Meadow Brook	[Boston Drive, Canton]	42.152061	-71.112409
NepRWA_BMB026	Neponset River Watershed Association	Water Quality	Beaver Meadow Brook	Beaver Meadow Brook @ Pine Street	42.148667	-71.129370

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

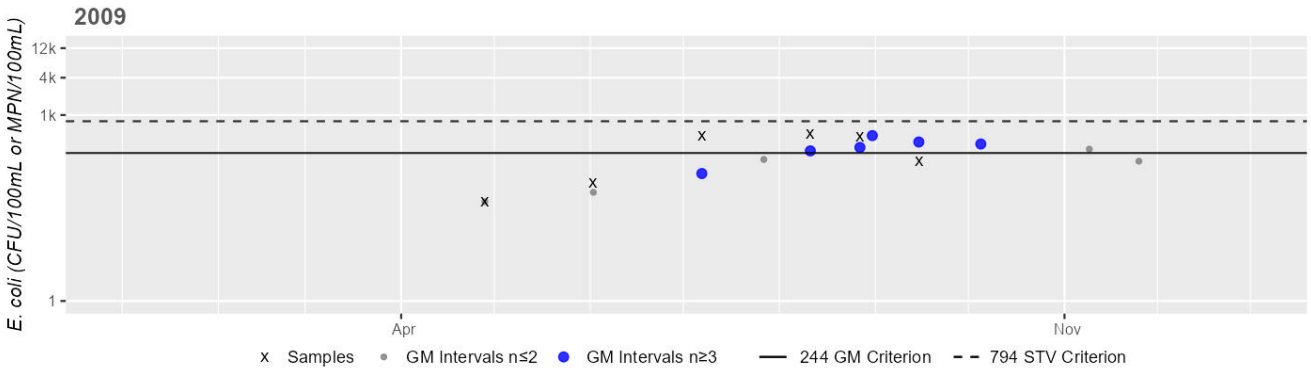
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1945	MassDEP	E. coli	04/28/09	09/15/09	6	40	500	196
NepRWA_BMB026	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	10	546	66
NepRWA_BMB026	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	74	354	143
NepRWA_BMB026	Neponset River Watershed Association	E. coli	04/14/10	09/22/10	5	10	441	104
NepRWA_BMB026	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	4	41	295	67
NepRWA_BMB026	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	5	3080	96
NepRWA_BMB026	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	624	131
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	135	1020	396
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	73	404	170
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	74	15500	498

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	5	97	4110	369
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	175	118
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	52	4880	340
NepRWA_BMB026	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	20	1400	239

Station MASSDEP_W1945 - Escherichia coli

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



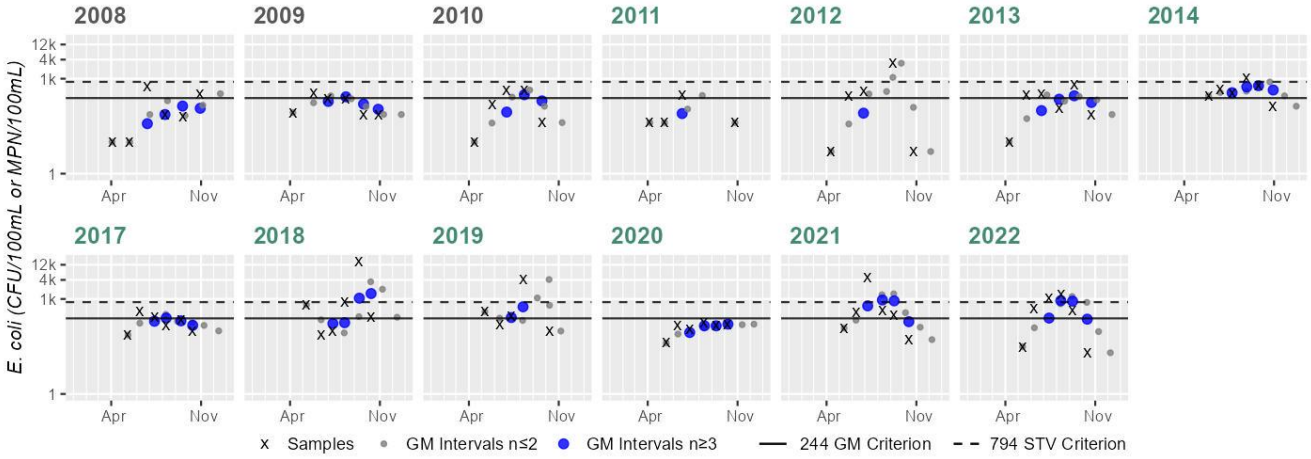
Variable*	Result
Samples	6
SeasGM	196
#GMI	6
#GMI Ex	5
%GMI Ex	83%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
83%

**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 NepRWA_BMB026 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	66
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	143
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	104
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	67
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	96
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	131
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	396
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	170
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	498
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	369
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	118
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	340
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	239
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance Historic (1997-2010)
18%

Cumulative %GMI Exceedance Current (2011-2022)
50%

Cumulative %GMI Exceedance Current (Recent 5 Years)
55%

**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.*

Billings Street/East Street Pond (MA73065)

Location:	Sharon.
AU Type:	FRESHWATER LAKE
AU Size:	2 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Aquatic Plants (Macrophytes)*)	--	Added
4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Aquatic Plants (Macrophytes)*)	Source Unknown (N)	--	--	X	X	X
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary

Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Billings Street/East Street Pond (MA73065) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Billings Street/East Street Pond (MA73065) continues to be assessed as Not Supporting. Since the Non-Native Aquatic Plants impairment was redundantly duplicated across multiple uses for this waterbody, the Non-Native Aquatic Plants impairment impairment is being removed from the Aesthetics Use but will continue to be maintained under the Aquatic Life Use. Since MassDEP staff noted "100% of the pond surface to be dense with aquatic plants" during a summer 1994 synoptic survey (MassDEP 1994) and Google Earth images from June 2015 and June 2019 (Google Earth Pro Undated) show this pond is very filled in (>25% coverage) with submergent and emergent vegetation, an Aquatic Plants (Macrophytes) non-pollutant impairment is being added in the place of the Non-Native Aquatic Plants impairment at this time. No new data are available to evaluate the Aesthetics Use for Billings Street/East Street Pond.

Aesthetic Observations

Billings Street/East Street Pond (MA73065) Google Earth Imagery: Pond Outline (2008) Followed by Imagery from 2015 and 2019 Showing Dense/Very Dense Vegetation Covering >25% of the Pond's Surface (Google Earth Pro Undated)

4/2008
Deborah Sampson Gannett Historic Home
West St
Devils Brook

6/2015
Deborah Sampson Gannet Historic Home
East St
East St
East St

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Billings Street/East Street Pond (MA73065) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). Since the Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Primary Contact Recreation Use.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for Billings Street/East Street Pond (MA73065) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). Since the Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Secondary Contact Recreation Use.

Blue Hills Reservoir (MA73004)

Location:	Quincy.
AU Type:	FRESHWATER LAKE
AU Size:	7 ACRES
Classification/Qualifier:	B

No usable data were available for Blue Hills Reservoir (MA73004) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Bolivar Pond (MA73005)

Location:	Canton.
AU Type:	FRESHWATER LAKE
AU Size:	20 ACRES
Classification/Qualifier:	B

No usable data were available for Bolivar Pond (MA73005) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fanwort*)	--	Unchanged
5	5	Turbidity	--	Unchanged

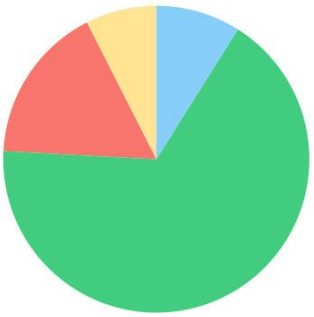
Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Turbidity	Source Unknown (N)	--	--	X	X	X

Bubbling Brook (MA73-11)

Location:	Headwaters (perennial portion), near North Street, Walpole to mouth at inlet Pettee Pond, Walpole/Westwood border.
AU Type:	RIVER
AU Size:	0.9 MILES
Classification/Qualifier:	B

Bubbling Brook (MA73-11)

Watershed Area: 1.39 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.39	1.39	0.36	0.36
Agriculture	7.5%	7.5%	10.5%	10.5%
Developed	16.7%	16.7%	14.6%	14.6%
Natural	66.9%	66.9%	60.8%	60.8%
Wetland	8.9%	8.9%	14.1%	14.1%
Impervious	8.3%	8.3%	6.9%	6.9%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Fish Bioassessments	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--
Fish Bioassessments	Source Unknown (N)	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Bubbling Brook (MA73-11) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Bubbling Brook (MA73-11) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Bubbling Brook (MA73-11) are available, so the Primary Contact Recreation Use is Not Assessed.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Bubbling Brook (MA73-11) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected *E. coli* bacteria samples halfway down Bubbling Brook at W1940 [Trailside Drive, Walpole] from Apr-Sep 2009 (historic n=5). Analysis of this historic single year limited frequency dataset indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 87 CFU/100ml. Historic *E. coli* data from W1940 meet 2024 CALM guidance, however since these data were collected prior to the current IR window (2011-2022) the Secondary Contact Recreation Use cannot be positively assessed using bacteria data.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1940	MassDEP	Water Quality	Bubbling Brook	[Trailside Drive, Walpole]	42.193469	-71.242760

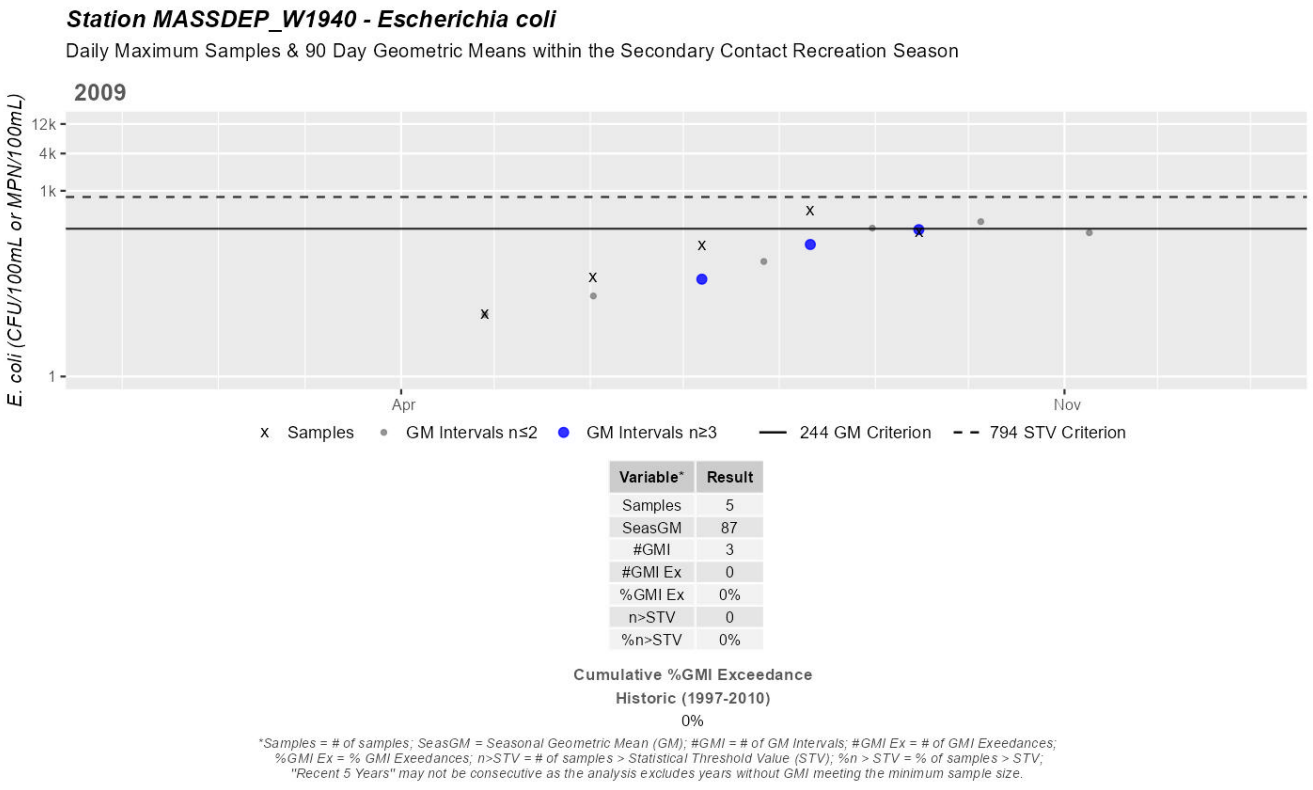
Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5)

[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
W1940	MassDEP	E. coli	04/28/09	09/15/09	5	10	480	87



Buckmaster Pond (MA73006)

Location:	Westwood.
AU Type:	FRESHWATER LAKE
AU Size:	34 ACRES
Classification/Qualifier:	B

No usable data were available for Buckmaster Pond (MA73006) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Clark Pond (MA73008)

Location:	Walpole.
AU Type:	FRESHWATER LAKE
AU Size:	7 ACRES
Classification/Qualifier:	B

No usable data were available for Clark Pond (MA73008) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
4c	4c	(Water Chestnut*)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Cobbs Pond (MA73009)

Location:	Walpole.
AU Type:	FRESHWATER LAKE
AU Size:	14 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Aquatic Plants (Macrophytes)*)	--	Added
5	5	(Non-Native Aquatic Plants*)	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Transparency / Clarity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Aquatic Plants (Macrophytes)*)	Source Unknown (N)	--	--	X	X	X
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X	--	X	X	X
Transparency / Clarity	Source Unknown (N)	X	--	--	X	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Cobbs Pond (MA73009) is Not Assessed.

Aesthetic

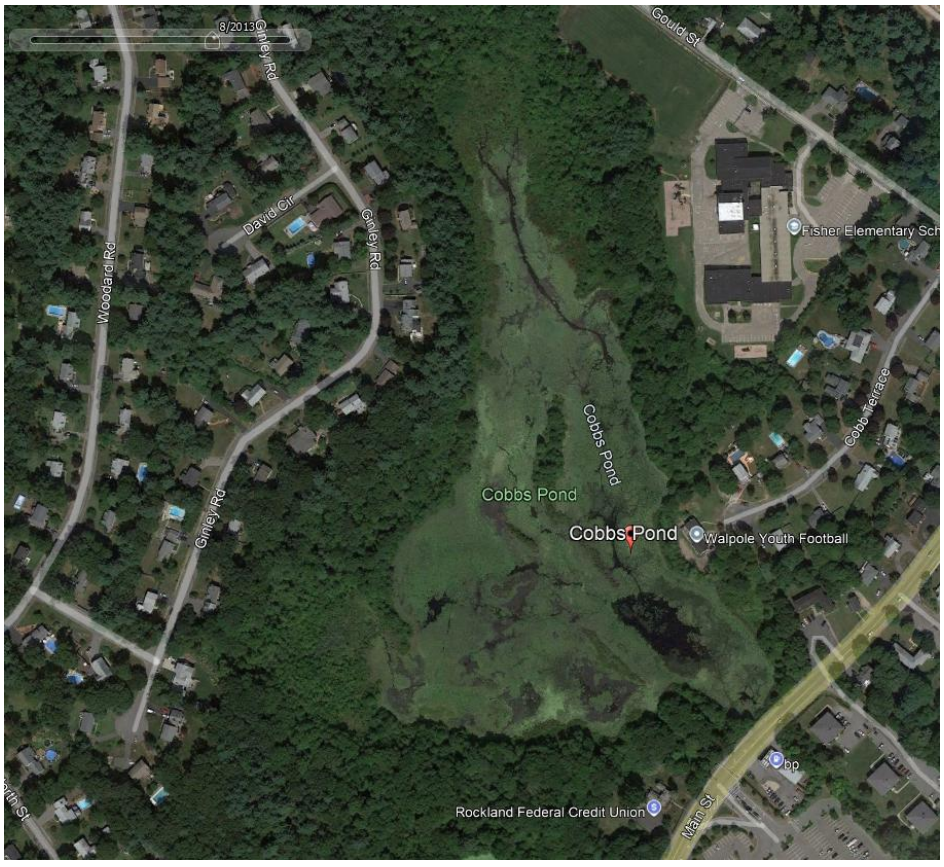
2024/26 Use Attainment	Alert
Not Supporting	NO

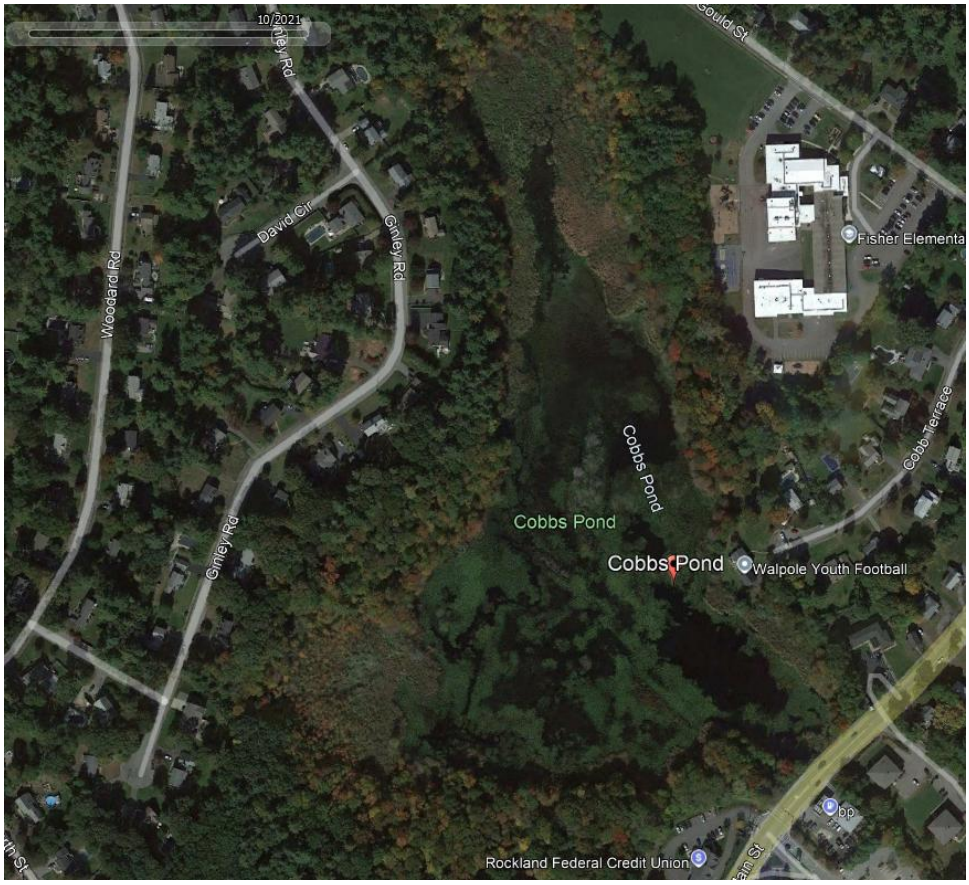
2024/26 Use Attainment Summary
The Aesthetics Use for Cobbs Pond (MA73009) continues to be assessed as as Not Supporting with the Nutrient/Eutrophication Biological Indicators impairment being carried forward. Since the Transparency/Clarity impairment was redundantly duplicated across multiple uses for this waterbody, the Transparency/Clarity impairment is being removed from the Aesthetics Use but will continue to be maintained under the Primary Contact Recreation Use. Since the Non-Native Aquatic Plants impairment was redundantly duplicated across multiple uses for this waterbody, the Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use but will continue to be maintained under the Aquatic Life Use. MassDEP staff noted very dense growths of aquatic plants covering most of the pond during a June 1994 synoptic survey (MassDEP 1994), and Google Earth images from the summer months of 2003 through 2022 (Google Earth Pro Undated) show this pond is very filled in with submergent and emergent vegetation (>25% coverage). Consequently, an Aquatic Plants (Macrophytes) non-pollutant impairment is being added in the place of the Non-Native Aquatic Plants impairment at this time. No new data are available to evaluate the Aesthetics Use for Cobbs Pond.

Aesthetic Observations

Cobbs Pond (MA73009) Google Earth Imagery: Pond Outline (2001) Followed by Imagery from 2013 and 2021 Showing Dense/Very Dense Vegetation Covering >25% of the Pond's Surface (Google Earth Pro Undated)

12/2001
1935
2025
Ginley Rd
Gould St
David Cir
Ginley Rd
Woodard Rd
Fisher
Cobbs Pond
Cobbs Pond
Cobbs Pond
Walpole Youth Footba
Ginley Rd
bp


8/2013
Ginley Rd
Gould St
David Cir
Ginley Rd
Woodard Rd
Fisher Elementary Sch
Cobbs Pond
Cobb Terrace
Cobbs Pond
Cobbs Pond
Walpole Youth Football
Ginley Rd
bp
Rockland Federal Credit Union
Main St



Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Cobbs Pond (MA73009) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Transparency / Clarity impairment is being carried forward and the prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is being carried forward. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). Since the Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Primary Contact Recreation Use.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for Cobbs Pond (MA73009) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. The prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is being carried forward. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). Since the Non-Native Aquatic Plants and Transparency / Clarity impairments are being removed from the Aesthetics Use this cycle, these impairments are also being removed from the Secondary Contact Recreation Use.

East Branch (MA73-05)

Location:	East Branch Neponset River - Headwaters, outlet of Forge Pond, Canton through East Branch Pond to mouth at confluence with Neponset River, Canton (locally known as Canton River).
AU Type:	RIVER
AU Size:	2.6 MILES
Classification/Qualifier:	B

East Branch (MA73-05)

Watershed Area: 28.65 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	28.65	9.92	9.75	3.30
Agriculture	0.5%	0.7%	0.4%	0.3%
Developed	32.2%	37.1%	19.3%	23.9%
Natural	49.3%	45.3%	50.8%	46.2%
Wetland	17.9%	16.9%	29.5%	29.6%
Impervious	17.3%	21.7%	9.9%	13.7%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Flow Regime Modification*)	--	Unchanged
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	DDT in Fish Tissue	--	Unchanged
5	5	Escherichia Coli (E. Coli)	2592	Unchanged
5	5	Fecal Coliform	2592	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	Unspecified Metals in Sediment	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Flow Regime Modification*)	Dam or Impoundment (Y)	X	--	--	--	--
Benthic Macroinvertebrates	Contaminated Sediments (Y)	X	--	--	--	--
Benthic Macroinvertebrates	Dam or Impoundment (Y)	X	--	--	--	--
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--
DDT in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Unspecified Metals in Sediment	Contaminated Sediments (Y)	X	--	--	--	--
Unspecified Metals in Sediment	Historical Source, No Longer Present (N)	X	--	--	--	--
Unspecified Metals in Sediment	Source Unknown (N)	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 East Branch (MA73-05) continues to be assessed as Not Supporting and the prior DDT in Fish Tissue and PCBs in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for East Branch (referred to by MDPH as ''Canton River (between the Neponset River and Neponset Street dam)'') in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent MDPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
There is insufficient information to assess the Aesthetics Use for East Branch (MA73-05). MassDEP staff recorded a limited number of aesthetics observations at three stations in Canton on the East Branch, during the summer of 2017 as part of the MassDEP Bacteria Source Tracking Project (BST). These stations are described from upstream to downstream as follows: close to the upstream end of the AU at Revere Court (W2735, n=2), a third of the way down the AU upstream/east of Neponset Street (W0555, n=2) and halfway down the AU on the northern braid, southeast from the southern end of Riverview Road (W2736, n=2). There were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by field sampling crews at any of the stations, though field staff noted high turbidity at one occasion at W0555.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0555	MassDEP	Water Quality	East Branch	[upstream/east of Neponset Street, Canton]	42.158702	-71.154456
W2735	MassDEP	Water Quality	East Branch	[Revere Court, Canton]	42.154503	-71.146950
W2736	MassDEP	Water Quality	East Branch	[on the northern braid, southeast from the southern end of Riverview Road, Canton]	42.157862	-71.159791

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W0555	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0555 on East Branch (MA73-05) during 2 site visits between Jul 2017 and Sep 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted high turbidity (n=1). However, aesthetic observations are limited (n<3).
W2735	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2735 on East Branch (MA73-05) during 2 site visits between Jul 2017 and Sep 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2736	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2736 on East Branch (MA73-05) during 2 site visits between Jul 2017 and Sep 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W0555	2017	2	0	0
W2735	2017	2	2	0
W2736	2017	2	1	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0555	East Branch	2017	Aquatic Plant Density, Overall	Moderate	1	2
W0555	East Branch	2017	Aquatic Plant Density, Overall	Unobservable	1	2
W0555	East Branch	2017	Color	None	2	2
W0555	East Branch	2017	Odor	None	2	2
W0555	East Branch	2017	Periphyton Density, Filamentous	Unobservable	2	2
W0555	East Branch	2017	Periphyton Density, Film	Unobservable	2	2
W0555	East Branch	2017	Turbidity	Highly Turbid	1	2
W0555	East Branch	2017	Turbidity	Moderately Turbid	1	2
W2735	East Branch	2017	Aquatic Plant Density, Overall	None	2	2
W2735	East Branch	2017	Color	None	2	2

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2735	East Branch	2017	Odor	None	2	2
W2735	East Branch	2017	Periphyton Density, Filamentous	None	2	2
W2735	East Branch	2017	Periphyton Density, Film	Sparse	2	2
W2735	East Branch	2017	Turbidity	Moderately Turbid	2	2
W2736	East Branch	2017	Aquatic Plant Density, Overall	None	1	2
W2736	East Branch	2017	Aquatic Plant Density, Overall	Unobservable	1	2
W2736	East Branch	2017	Color	None	2	2
W2736	East Branch	2017	Odor	None	2	2
W2736	East Branch	2017	Periphyton Density, Filamentous	None	1	2
W2736	East Branch	2017	Periphyton Density, Filamentous	Unobservable	1	2
W2736	East Branch	2017	Periphyton Density, Film	Sparse	1	2
W2736	East Branch	2017	Periphyton Density, Film	Unobservable	1	2
W2736	East Branch	2017	Turbidity	Moderately Turbid	2	2

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for East Branch (MA73-05) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2018-2022. The prior Fecal Coliform impairment is also being carried forward. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in East Branch from 2011-2022 at 3 stations/combined stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at W2735 [Revere Court, Canton] from Jul-Sep 2017 (n=2), a third of the way downstream at combined station W0555 & NepRWA_EAB010 [upstream/E of Neponset St, Canton & E Branch at Neponset St] from 2011-2014 and 2017-2022 (n=6-8/yr), and halfway down the AU at W2736 [on the northern braid, SE from the southern end of Riverview Rd, Canton] from Jul-Sep 2017 (n=2). The available *E. coli* data at W2735 are too limited to assess the Primary Contact Recreation Use according to the 2024 CALM. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from combined station W0555 & NepRWA_EAB010 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 25-100%), 2 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018 and 2022, n=2 & 2) and cumulatively across years 70% of intervals had GMs >126 CFU/100ml, which is indicative of an *E. coli* impairment. The available *E. coli* data at W2736 are too limited to assess the Primary Contact Recreation Use according to the 2024 CALM, although it should be noted that 1 sample exceeded the 410 CFU/100ml STV in 2017 (613 CFU/100ml).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0555	MassDEP	Water Quality	East Branch	[upstream/east of Neponset Street, Canton]	42.158702	-71.154456
W2735	MassDEP	Water Quality	East Branch	[Revere Court, Canton]	42.154503	-71.146950
W2736	MassDEP	Water Quality	East Branch	[on the northern braid, southeast from the southern end of Riverview Road, Canton]	42.157862	-71.159791
NepRWA_EAB010	Neponset River Watershed Association	Water Quality	East Branch	East Branch @ Neponset Street	42.158950	-71.154320

Bacteria Data

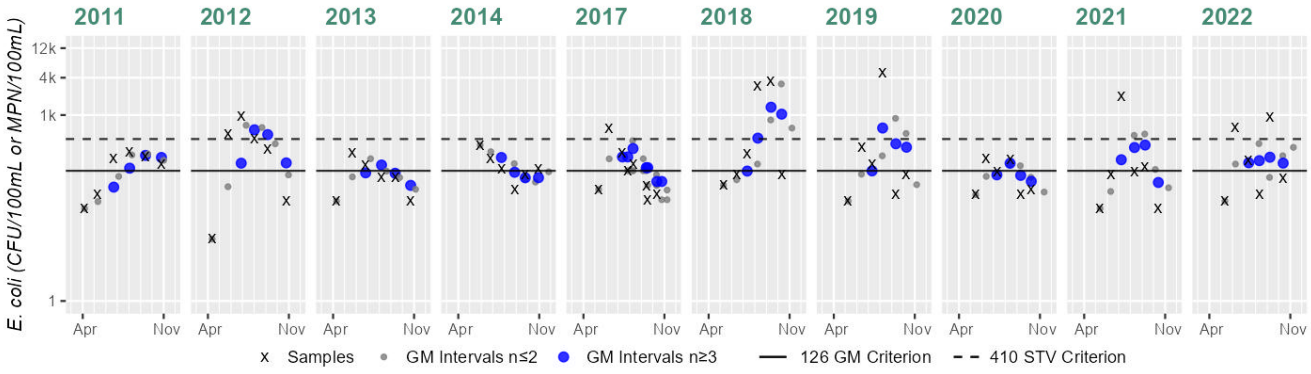
Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)
(MassDEP Undated 10) (MassDEP Undated 6) (NepRWA 2023) (MassDEP Undated 4)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0555	MassDEP	E. coli	07/27/17	09/18/17	2	43	126	73
W2735	MassDEP	E. coli	07/27/17	09/18/17	2	122	276	183

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W2736	MassDEP	E. coli	07/27/17	09/18/17	2	91	613	236
NepRWA_EAB010	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	31	256	119
NepRWA_EAB010	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	959	168
NepRWA_EAB010	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	41	246	92
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	63	327	141
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	52	613	133
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	74	3450	358
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	41	4880	194
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	52	201	96
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	31	2010	124
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	41	933	168

Station MASSDEP_W0555 & NepRWA_EAB010 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	119
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	168
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	92
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	141
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	8
SeasGM	115
#GMI	7
#GMI Ex	5
%GMI Ex	71%
n>STV	1
%n>STV	12%

Variable*	Result
Samples	6
SeasGM	358
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	194
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	96
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	124
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	168
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

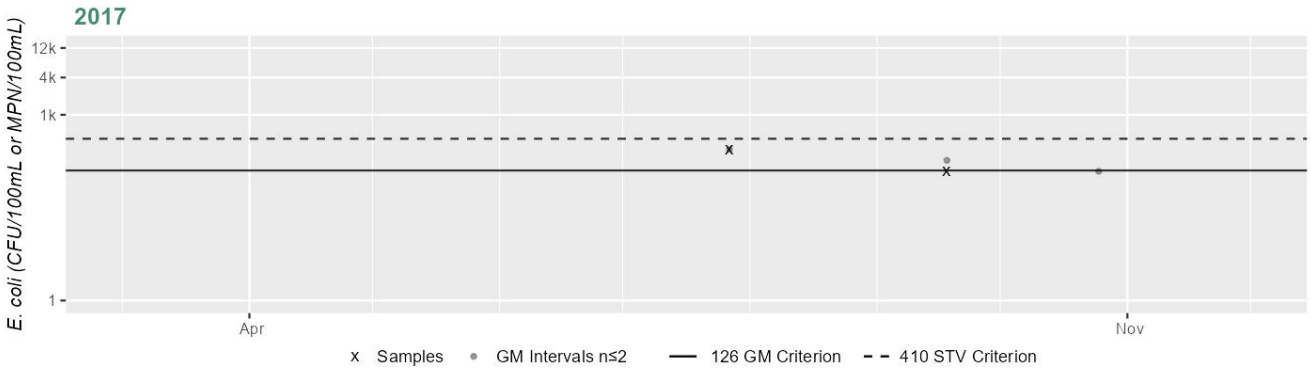
Cumulative %GMI Exceedance
Current (2011-2022)
65%

Cumulative %GMI Exceedance
Current (Recent 5 Years)
70%

**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 MASSDEP_W2735 - Escherichia coli

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



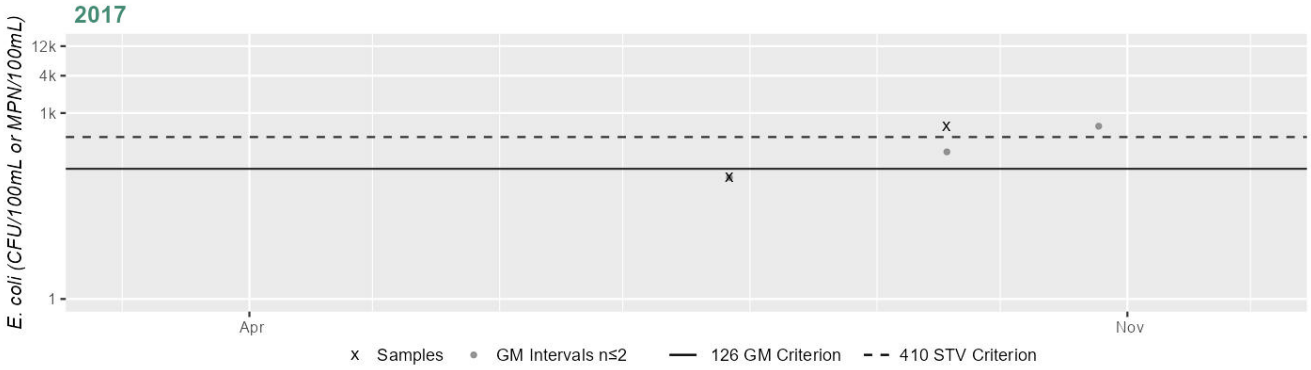
Variable*	Result
Samples	2
SeasGM	183
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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 MASSDEP_W2736 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	236
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	50%

Cumulative %GMI Exceedance
Current (2011-2022)
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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for East Branch (MA73-05) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added based on bacteria data collected at 1 station in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in East Branch from 2008-2022 at 4 stations/combined stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at W2735 [Revere Court, Canton] from Jul-Sep 2017 (n=2), a third of the way downstream at combined station W0555 & NepRWA_EAB010 [upstream/E of Neponset St, Canton & E Branch at Neponset St] from 2008-2010 (historic n=6/yr) and 2011-2014 and 2017-2022 (current n=6-8/yr), also a third of the way downstream at W1963 [~260 ft downstream of Neponset St, Canton] from Apr-Sep 2009 (historic n=6) and halfway down the AU at W2736 [on the northern braid, SE from the southern end of Riverview Rd, Canton] from Jul-Sep 2017 (n=2). The available *E. coli* data at W2735 are too limited to assess the Secondary Contact Recreation Use according to the 2024 CALM. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from combined station W0555 & NepRWA_EAB010 indicated 3 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2019 and 2021, 50-75%) and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2), cumulatively across years 40% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment. The available *E. coli* data at W2736 are too limited to assess the Secondary Contact Recreation Use according to the 2024 CALM. It should be noted that data in the historic IR window at station W0555 & NepRWA_EAB010 was also indicative of an Escherichia Coli (E. Coli) impairment, with cumulatively 25% of the GM intervals >244 CFU/100ml and >20% of GM intervals >244 (in 2008 & 2009), for this multi-year low frequency dataset.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0555	MassDEP	Water Quality	East Branch	[upstream/east of Neponset Street, Canton]	42.158702	-71.154456
W1963	MassDEP	Water Quality	East Branch	[approximately 260 feet downstream of Neponset Street, Canton]	42.158214	-71.155490
W2735	MassDEP	Water Quality	East Branch	[Revere Court, Canton]	42.154503	-71.146950
W2736	MassDEP	Water Quality	East Branch	[on the northern braid, southeast from the southern end of Riverview Road, Canton]	42.157862	-71.159791
NepRWA_EAB010	Neponset River Watershed Association	Water Quality	East Branch	East Branch @ Neponset Street	42.158950	-71.154320

Bacteria Data

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

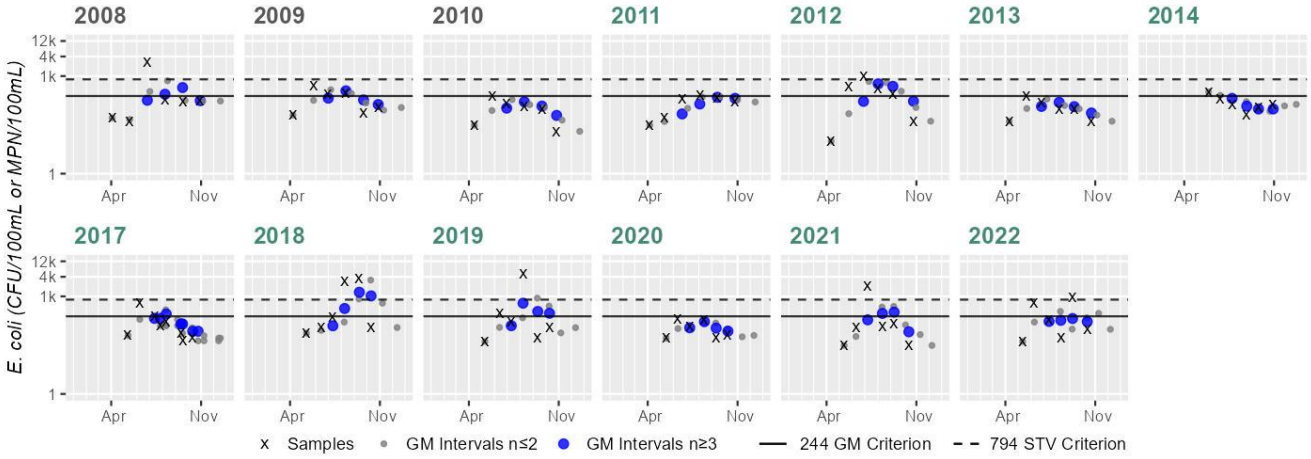
(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

[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
W0555	MassDEP	E. coli	07/27/17	09/18/17	2	43	126	73
W1963	MassDEP	E. coli	04/28/09	09/15/09	6	130	220	157
W2735	MassDEP	E. coli	07/27/17	09/18/17	2	122	276	183
W2736	MassDEP	E. coli	07/27/17	09/18/17	2	91	613	236
NepRWA_EAB010	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	41	2760	177
NepRWA_EAB010	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	63	512	167
NepRWA_EAB010	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	20	246	79
NepRWA_EAB010	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	31	256	119
NepRWA_EAB010	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	959	168
NepRWA_EAB010	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	41	246	92
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	63	327	141
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	52	613	133
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	74	3450	358
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	41	4880	194
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	52	201	96
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	31	2010	124
NepRWA_EAB010	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	41	933	168

Station MASSDEP_W0555 & NepRWA_EAB010 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	177
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	167
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	79
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	119
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	168
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	92
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	141
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	8
SeasGM	115
#GMI	7
#GMI Ex	1
%GMI Ex	14%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	358
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	194
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	96
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	124
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

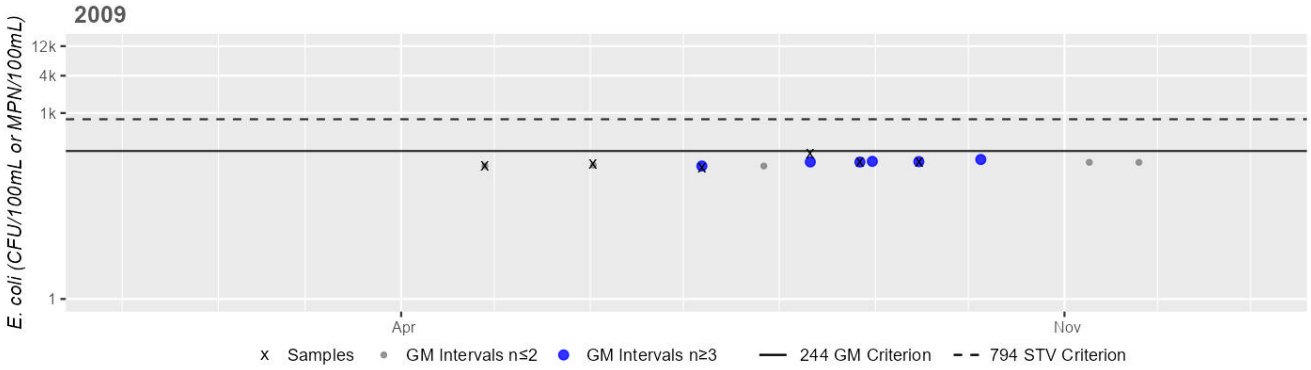
Variable*	Result
Samples	6
SeasGM	168
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
25%	25%	40%

**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 MASSDEP_W1963 - Escherichia coli

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



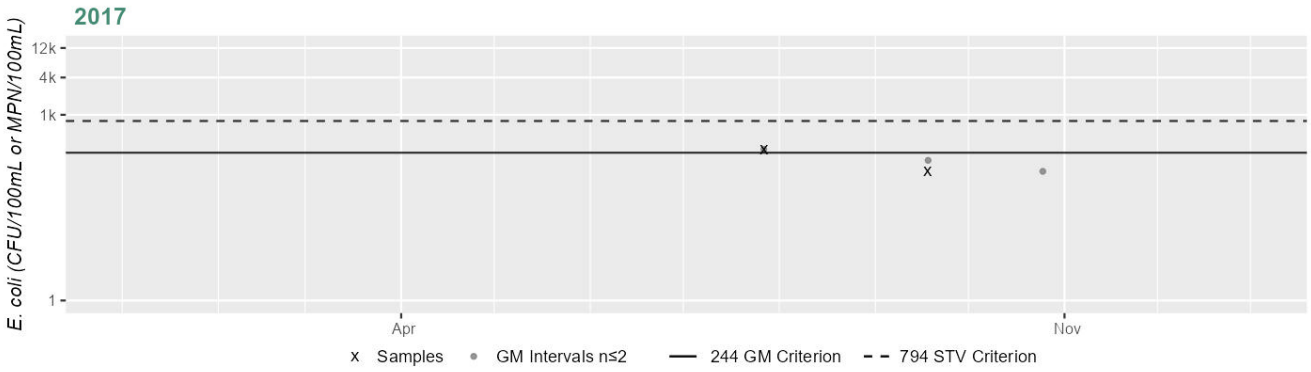
Variable*	Result
Samples	6
SeasGM	157
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
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 MASSDEP_W2735 - Escherichia coli

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



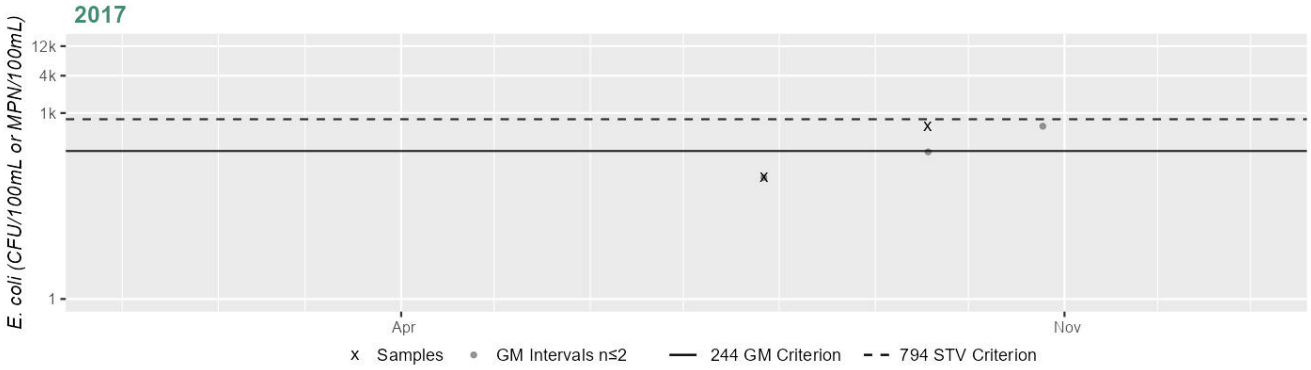
Variable*	Result
Samples	2
SeasGM	183
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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 MASSDEP_W2736 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	236
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

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.*

Ellis Pond (MA73018)

Location:	Norwood.
AU Type:	FRESHWATER LAKE
AU Size:	17 ACRES
Classification/Qualifier:	B

No usable data were available for Ellis Pond (MA73018) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Fanwort*)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Farrington Pond (MA73040)

Location:	Stoughton.
AU Type:	FRESHWATER LAKE
AU Size:	3 ACRES
Classification/Qualifier:	B

No usable data were available for Farrington Pond (MA73040) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Flynns Pond (MA73019)

Location:	Medfield.
AU Type:	FRESHWATER LAKE
AU Size:	7 ACRES
Classification/Qualifier:	B

No usable data were available for Flynns Pond (MA73019) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Forge Pond (MA73020)

Location:	Canton.
AU Type:	FRESHWATER LAKE
AU Size:	19 ACRES
Classification/Qualifier:	B

No usable data were available for Forge Pond (MA73020) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Turbidity	Source Unknown (N)	--	--	X	X	X

Ganawatte Farm Pond (MA73037)

Location:	Walpole/Sharon/Foxborough.
AU Type:	FRESHWATER LAKE
AU Size:	29 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Aquatic Plants (Macrophytes)*)	--	Changed
5	5	Dissolved Oxygen	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Added
5	5	Transparency / Clarity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Aquatic Plants (Macrophytes)*)	Source Unknown (N)	--	--	X	X	X
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	--	--	X	X	X
Transparency / Clarity	Source Unknown (N)	--	--	--	X	--

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Aquatic Plants (Macrophytes)	Not caused by a pollutant (4c)	As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Ganawatte Farm Pond (MA73037, also known as Pine Street Pond) was first listed as impaired for Noxious Aquatic Plants in 1996 and this cause was remapped to Aquatic Plants (Macrophytes) during the 2010 IR cycle (MassDEP 2024). The original impairment was based on a June 1994 synoptic survey conducted by MassDEP staff in which it was noted that 90% of the pond was covered with aquatic plants, including the non-rooted, floating species, *Ceratophyllum* and *Utricularia* spp. (MassDEP 1994, MassDEP 2002). In Google Earth images from June 2015 and October 2021 the pond is almost entirely filled in with plants (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of non-rooted, floating, aquatic macrophytes (*Ceratophyllum*/*Utricularia* spp.). Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant because almost the entire pond was covered in recent years. Note: Ganawatte Farm Pond will remain an impaired lake segment for the 2024/26 cycle, however it is very shallow (1.8 m at deep hole) and likely should not be represented as a lake segment (From 314 CMR 4.0 Definition for Lakes and Ponds --waterbodies having open water, situated in a topographical depression, generally with a maximum depth of greater than two meters). The topic of lake vs. wetland will require a structured evaluation procedure likely to be developed as part of a future CALM guidance manual. This waterbody is filled in with macrophytes during the growing season, has little oxygen, and should likely more appropriately be described as a wetland rather than a lake.

Aquatic Plants (Macrophytes)

1996 WBS Coding Sheet (Ganawatte Farm Pond MA73037, also known as Pine Street Pond) (MassDEP 2002):

WBID: MA73037 WATERSHED: Neponset(73) (Printed 05/13/96)
NAME: Pine Street Pond TYPE: Lake/Pond
CODE: 73037 SIZE: 55.00(acres) CLASS: B
ORW?: Yes or No
Water Supply?: Yes or No

LATITUDE: 42.10667
LONGITUDE: 71.24083 0
Lake/Pond Name: Pine Street Pond, Walpole/Sharon/Foxborough
Ecoregion Name: 0 Ganawatte Farm Pond
Description:

Assessment Date: 9406 9609 Begin Sampling: 9406 Water Quality Limited?: YES or NO
Cycle: 96 End Sampling: 9406 303(d) List?: YES or NO

Lake Specific Information		1996	
Significantly Publicly Owned:	Y	Significantly Publicly Owned:	Y or N
Trophic Status:	E	Trophic Status:	O M E H D U
Trophic Trend:		Trophic Trend:	I S D U
Acidity/Toxics Trend:		Acidity/Toxics Trend:	I S D U
Acidity Effects:		Acidity Effects:	I V N U

Uses	Support	Threat	Partial	Non-Sup	Not-Asses	Not-Attain
OVERALL USE SUPPORT				55.00		
ALUS					55.00	
FISH CONSUMPTION					55.00	
PRIMARY CONTACT				55.00		
SECONDARY CONTACT				55.00		
Aesthetics					55.00	

Nonattainment Causes			1996		
Code	Size	Magnitude	Code	Size	Magnitude
2200- Noxious aquatic plants	55.00	H			

Nonattainment Sources			1996		
Code	Size	Magnitude	Code	Size	Magnitude
9000- SOURCE UNKNOWN	55.00	H			

Assessment Type (Assessment Category = > Evaluated)
1996 Assessment Category = > M I NA
R35

Media/Pollutants Assessed (Toxics Monitoring = > N)
1996 Toxics Monitoring = > YES or NO

Comments:
1996 A 21 JUNE 1994 SYNOPTIC SURVEY INDICATES THAT THE AQUATIC PLANT COVERAGE WAS OVER 90% AND IS LIKELY TO COVER THE ENTIRE POND BY THE END OF THE SUMMER. NO OTHER DATA WAS AVAILABLE TO MAKE ASSESSMENTS.

E: RSN 10/29/96

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1994 Synoptic Survey Field Sheet (MassDEP 1994):

9/8/94

Page 1 of 2

MA73037

Lake/Pond Ganawatte Farm Pond **Date** 21 June 1994

Town/City Foxborough/Sharon/Walpole **Observers** R. Haynes, R. McVoy

Location/type of access (be specific, e.g., public boat ramp at west cove area off Simpson Street):
Informal, foot path off Pine Street (NE side of pond), near outlet

Ownership of Location/Access (specify public or private, name of owner(s), and any use restrictions):
Uncertain

Posted signs (re aquatic plants, fish advisories, access, etc.):
None

Water quality observations (clarity, dissolved organic staining, blooms, et cetera):
Very dark stained water, little turbidity

Record of aquatic plant "species" observed (see note below):

Nymphaea (dominant), Utricularia, Ceratophyllum
Potamogeton sp. (natans?), Pontederia cordata,
Decadon, Brasenia.

Observed aquatic plant density (at observation site and across lake or pond, if practicable):

Over 90%, likely to cover entire pond later in summer

Other notes (e.g., overt pollution, construction, and water uses:

305 b Assessment – Eutrophic

1° Contact - 100% Non-support

2° Contact - 100% Non-support

Causes - Nuisance plants - M (full acreage)

Note: record suspect *M. heterophyllum* plants that may require confirmation once emergent flowering stalks are evident.

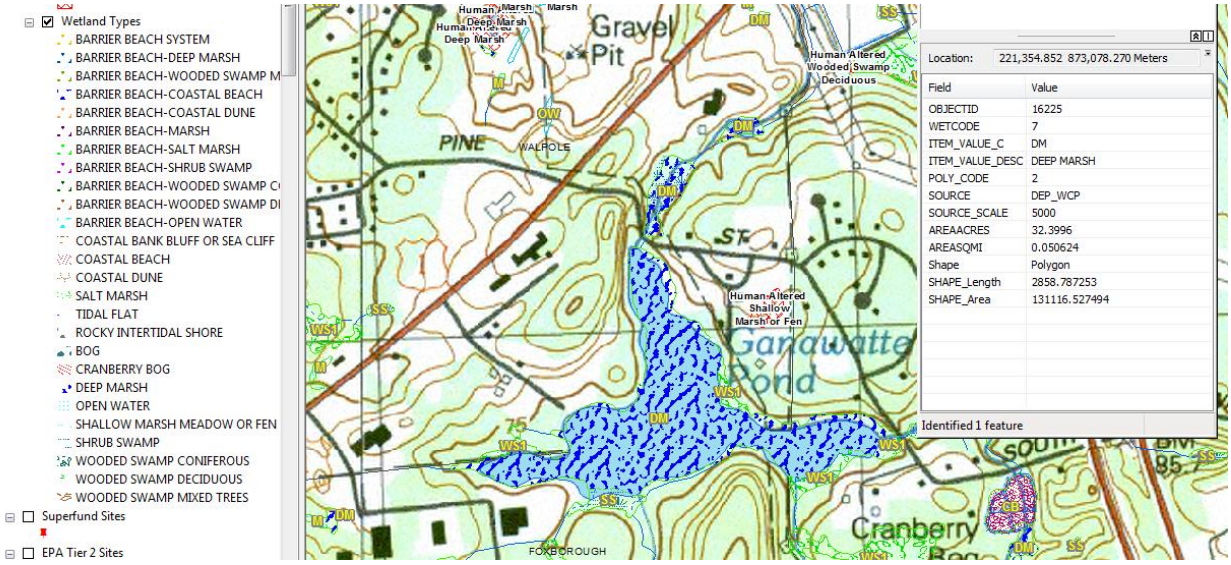
Bill D. note 3/29/19: Ganawatte Farm Pond, Walpole/Foxboro did not register on Google Earth Search, so I had to find it on my own by going to Neponset Reservoir, Foxboro, and proceeding north from its northern most edge ~ 1 mile to locate the Pond.

Google Earth image of Ganawatte Farm Pond, 12/31/2000 (Google Earth Pro Undated):

Google Earth image of Ganawatte Farm Pond, 6/6/2015 (Google Earth Pro Undated):

Google Earth image of Ganawatte Farm Pond, 10/12/2021 (Google Earth Pro Undated):

Ganawatte Farm Pond is mapped as a "deep marsh" according to the MassDEP Detailed Wetlands (2005) datalayer (see screen capture below) (MassGIS 2019). (From 314 CMR 4.0 Definition for Lakes and Ponds—waterbodies having open water, situated in a topographical depression, generally with a maximum depth of greater than 2 meters). This waterbody should be removed as a lake AU.



Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Ganawatte Farm Pond (MA73037) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Ganawatte Farm Pond (MA73037) continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. Additionally a Nutrient/Eutrophication Biological Indicators impairment is being added. Since the Transparency/Clarity impairment was redundantly duplicated across multiple uses for this waterbody, the Transparency/Clarity impairment is being removed from the Aesthetics Use but will continue to be maintained under the Primary Contact Recreation Use. As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Ganawatte Farm Pond (also known as Pine Street Pond) was first listed as impaired for Noxious Aquatic Plants in 1996 and this cause was remapped to Aquatic Plants (Macrophytes) during the 2010 IR cycle (MassDEP 2024). The original impairment was based on a June 1994 synoptic survey conducted by MassDEP staff in which it was noted that 90% of the pond was covered with aquatic plants, including the non-rooted, floating species, *Ceratophyllum* and *Utricularia* spp. (MassDEP 1994, MassDEP 2002). In Google Earth images from June 2015 and October 2021 the pond is almost entirely filled in with plants (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of non-rooted, floating, aquatic macrophytes (*Ceratophyllum*/*Utricularia* spp.). Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant because almost the entire pond was covered in recent years. Note: Ganawatte Farm Pond will remain an impaired lake segment for the 2024/26 cycle, however it is very shallow (1.8 m at deep hole) and likely should not be represented as a lake segment (From 314 CMR 4.0 Definition for Lakes and Ponds –waterbodies having open water, situated in a topographical depression, generally with a maximum depth of greater than two meters). The topic of lake vs. wetland will require a structured evaluation procedure likely to be developed as part of a future CALM guidance manual. This waterbody is filled in with macrophytes during the growing season, has little oxygen, and should likely more appropriately be described as a wetland rather than a lake. No new data is available to evaluate the Aesthetics Use for Ganawatte Farm Pond.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Ganawatte Farm Pond (MA73037) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Transparency / Clarity impairment is being carried forward. The prior pollutant Aquatic Plants (Macrophytes) impairment (from the Aesthetics Use) is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. A Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use).

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

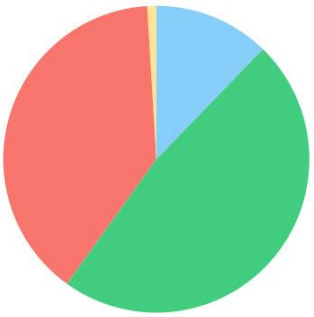
2024/26 Use Attainment Summary
No bacteria or other indicator data for Ganawatte Farm Pond (MA73037) is available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment (from the Aesthetics Use) is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. A Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use). Since the Transparency / Clarity impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Secondary Contact Recreation Use.

Germany Brook (MA73-15)

Location:	Headwaters, east of Winter Street, Norwood to inlet of Ellis Pond, Norwood.
AU Type:	RIVER
AU Size:	2 MILES
Classification/Qualifier:	B

Germany Brook (MA73-15)

Watershed Area: 2.49 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.49	2.49	0.65	0.65
Agriculture	1%	1%	1.2%	1.2%
Developed	39.1%	39.1%	23.8%	23.8%
Natural	47.7%	47.7%	49.4%	49.4%
Wetland	12.3%	12.3%	25.6%	25.6%
Impervious	22%	22%	13.3%	13.3%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Escherichia Coli (E. Coli)	2592	Unchanged
5	5	Fecal Coliform	2592	Unchanged
5	5	Phosphorus, Total	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Germany Brook (MA73-15) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
There is insufficient information to assess the Aesthetics Use for Germany Brook (MA73-15). MassDEP staff recorded a limited number of aesthetics observations at three stations on Germany Brook, during the summer of 2016 as part of the MassDEP Bacteria Source Tracking project (BST). These stations are described from upstream to downstream as follows: halfway down the AU at Sycamore Drive, Westwood (W2649, n=2), a little further downstream ~900 feet south of the northern most crossing of Westover Parkway (adjacent to #76 Westover Parkway), Norwood (W2648, n=1) and close to the downstream end of the AU upstream/north of Nichols Street and inlet of Ellis Pond, Norwood (W0545, n=2). There were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by field sampling crews at any of the stations.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0545	MassDEP	Water Quality	Germany Brook	[upstream/north of Nichols Street and inlet of Ellis Pond, Norwood]	42.184198	-71.224845
W2648	MassDEP	Water Quality	Germany Brook	[approximately 900 feet south of the northern most crossing of Westover Parkway (adjacent to #76 Westover Parkway), Norwood]	42.190435	-71.223582
W2649	MassDEP	Water Quality	Germany Brook	[Sycamore Drive, Westwood]	42.196324	-71.224699

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W0545	2016	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0545 on Germany Brook (MA73-15) during 2 site visits between Jul 2016 and Aug 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2648	2016	1	Aesthetic observations were made by MassDEP field sampling crews at Station W2648 on Germany Brook (MA73-15) during 1 site visit on Jul 12, 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2649	2016	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2649 on Germany Brook (MA73-15) during 2 site visits between Jul 2016 and Aug 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W0545	2016	2	2	0
W2648	2016	1	1	0
W2649	2016	2	2	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0545	Germany Brook	2016	Aquatic Plant Density, Overall	None	2	2
W0545	Germany Brook	2016	Color	None	2	2
W0545	Germany Brook	2016	Odor	None	2	2
W0545	Germany Brook	2016	Periphyton Density, Filamentous	None	2	2
W0545	Germany Brook	2016	Periphyton Density, Film	Sparse	2	2
W0545	Germany Brook	2016	Turbidity	Slightly Turbid	2	2
W2648	Germany Brook	2016	Aquatic Plant Density, Overall	None	1	1
W2648	Germany Brook	2016	Color	None	1	1
W2648	Germany Brook	2016	Odor	None	1	1
W2648	Germany Brook	2016	Periphyton Density, Filamentous	None	1	1
W2648	Germany Brook	2016	Periphyton Density, Film	Sparse	1	1
W2648	Germany Brook	2016	Turbidity	Slightly Turbid	1	1
W2649	Germany Brook	2016	Aquatic Plant Density, Overall	None	2	2
W2649	Germany Brook	2016	Color	None	2	2
W2649	Germany Brook	2016	Odor	None	2	2
W2649	Germany Brook	2016	Periphyton Density, Filamentous	None	2	2
W2649	Germany Brook	2016	Periphyton Density, Film	Moderate	1	2
W2649	Germany Brook	2016	Periphyton Density, Film	Sparse	1	2
W2649	Germany Brook	2016	Turbidity	Slightly Turbid	2	2

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Germany Brook (MA73-15) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2018-2022. The prior Fecal Coliform impairment is also being carried forward. MassDEP and NepRWA staff/volunteers collected *E. coli* bacteria samples in Germany Brook from 2011-2022 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: halfway down the AU at W2649 [Sycamore Drive, Westwood] from Jul-Aug 2016 (n=2), a little further downstream at W2648 [~900 ft S of the northern most crossing of Westover Parkway (adjacent to #76 Westover Parkway), Norwood] from Jul-Aug 2016 (n=2) and close to the downstream end of the AU at combined station W0545 & NepRWA_GEB020 [upstream/N of Nichols St and inlet of Ellis Pond, Norwood & Germany Brook at inlet of Ellis Pond] from 2011-2014 and 2016-2022 (n=2-6/yr). The available *E. coli* data at both stations W2649 & W2648 are too limited to assess the Primary Contact Recreation Use according to the 2024 CALM. However, analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from combined station W0545 & NepRWA_GEB020 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2017-2018 and 2020-2022, 100%), 5 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2017-2018 and 2020-2022, n=3-4) and cumulatively across years 100% of intervals had GMs >126 CFU/100ml, which is indicative of an *E. coli* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0545	MassDEP	Water Quality	Germany Brook	[upstream/north of Nichols Street and inlet of Ellis Pond, Norwood]	42.184198	-71.224845
W2648	MassDEP	Water Quality	Germany Brook	[approximately 900 feet south of the northern most crossing of Westover Parkway (adjacent to #76 Westover Parkway), Norwood]	42.190435	-71.223582
W2649	MassDEP	Water Quality	Germany Brook	[Sycamore Drive, Westwood]	42.196324	-71.224699
NepRWA_GEB020	Neponset River Watershed Association	Water Quality	Germany Brook	Germany Brook @ inlet of Ellis Pond	42.184267	-71.224780

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (MassDEP Undated 10) (MassDEP Undated 6) (NepRWA 2023) (MassDEP Undated 4)

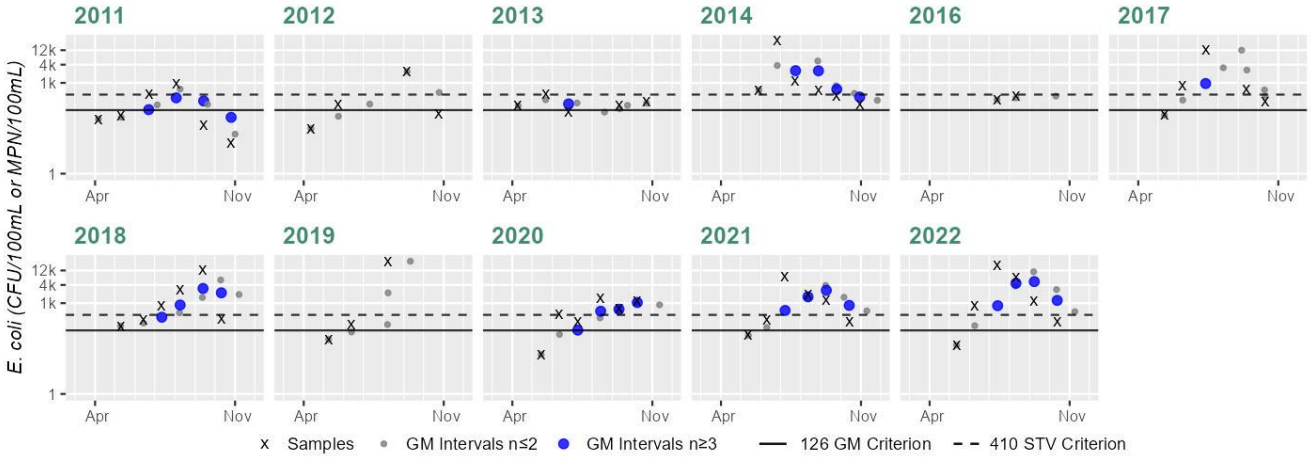
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0545	MassDEP	E. coli	07/12/16	08/10/16	2	276	365	317
W2648	MassDEP	E. coli	07/12/16	08/10/16	2	308	548	410
W2649	MassDEP	E. coli	07/12/16	08/10/16	2	81	225	135

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_GEB020	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	932	97
NepRWA_GEB020	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	4	31	2380	194
NepRWA_GEB020	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	108	435	205
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	197	24200	929
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	86	12000	651
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	175	12000	867
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/09/19	08/08/19	3	63	24200	669
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	1500	367
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	86	7700	695
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	41	17300	1009

Station MASSDEP_W0545 & NepRWA_GEB020 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	97
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	4
SeasGM	194
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	5
SeasGM	205
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	929
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	2
SeasGM	317
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	651
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	3
%n>STV	60%

Variable*	Result
Samples	6
SeasGM	867
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	3
SeasGM	669
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	367
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	695
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	1009
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Cumulative %GMI Exceedance Current (2011-2022)

96%

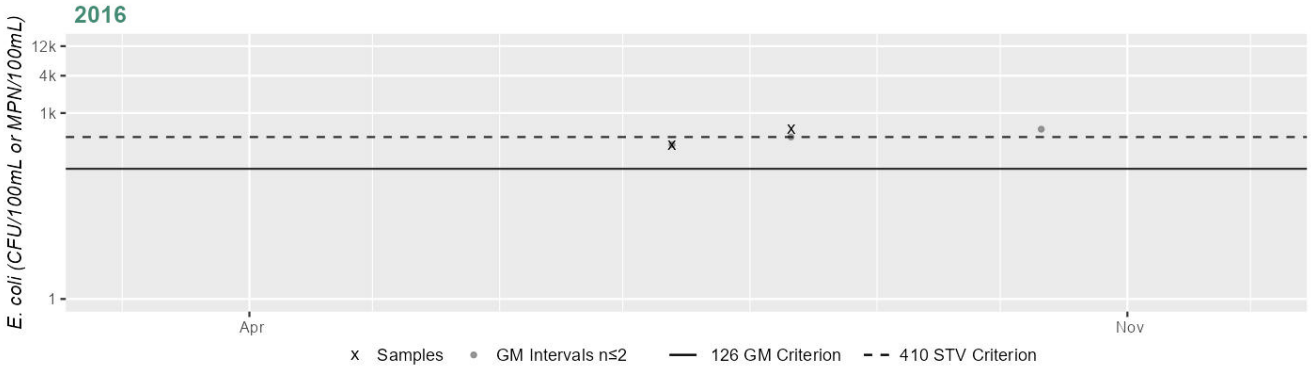
Cumulative %GMI Exceedance Current (Recent 5 Years)

100%

**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 MASSDEP_W2648 - Escherichia coli

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



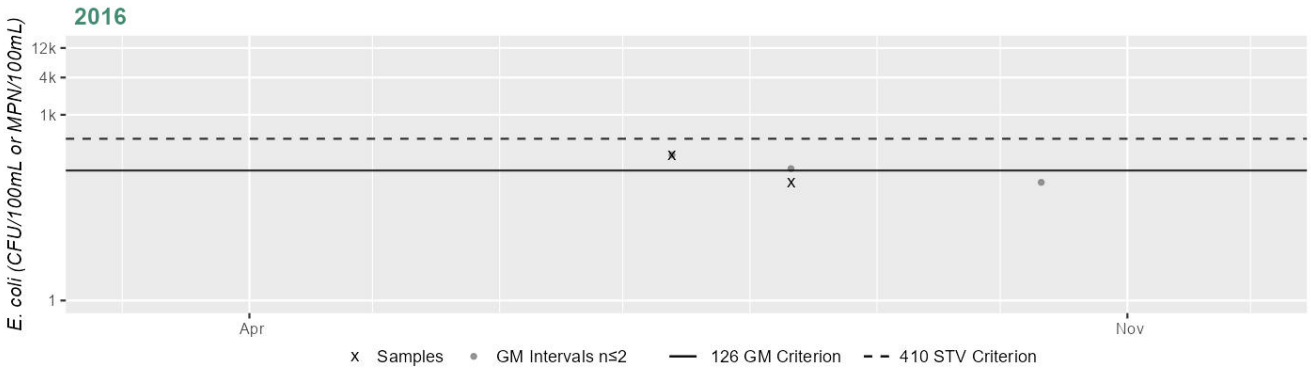
Variable*	Result
Samples	2
SeasGM	410
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	50%

Cumulative %GMI Exceedance
Current (2011-2022)
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 MASSDEP_W2649 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	135
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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.*

Summary Statement for 2011-2019 MassDEP Bacteria Source Tracking (BST) Data (MassDEP Undated 1)

Summary
BST work was conducted in 2013, 2016 & 2017 at 5 sites on the Germany Brook AU (MA73-15), with E.coli concentrations ranging 81 to >2,419.6MPN. BST work was also conducted at 2 stormdrain outfall pipes discharging directly to the brook just downstream of Nichols St during the same time period; dry weather flow was sampled with a max E.coli concentration of >24,196MPN. The Town of Norwood investigated within the drainage infrastructure of Nichols St and narrowed down the location of a human source of bacteria to an illicit cross connection from a house on Devon Rd. However bacteria concentrations still remained elevated after the correction and the Town continues to investigate.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Germany Brook (MA73-15) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. MassDEP and NepRWA staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Germany Brook (MA73-15) from 2008-2022 at 4 stations/combined stations. Samples were collected from the following stations/sample years from upstream to downstream: W2649 [Sycamore Drive, Westwood] from Jul-Aug 2016 (n=2), W2648 [~900 ft S of the northern most crossing of Westover Parkway (adjacent to #76 Westover Parkway), Norwood] from Jul-Aug 2016 (n=2), W1942 [Westover Parkway crossing nearest Leyton Rd, Norwood] from Apr-Sep 2009 (historic n=5), W0545 & NepRWA_GEB020 [upstream/N of Nichols St and inlet of Ellis Pond, Norwood & Germany Brook at inlet of Ellis Pond] from 2008-2010 (historic n=6/yr) and 2011-2014 and 2016-2022 (current n=2-6/yr). The available *E. coli* data at both W2649 & W2648 are too limited to assess the Secondary Contact Recreation Use according to the 2024 CALM. However, analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from W0545 & NepRWA_GEB020 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2017-2018 and 2020-2022, 75-100%), 5 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2017-2018 and 2020-2022, n=2-3), and cumulatively across years 94% of intervals had GMs >244 CFU/100ml, which is indicative of an *E. coli* impairment. It should be noted that data in the historic IR window at station W0545 & NepRWA_GEB020 was also indicative of an Escherichia Coli (E. Coli) impairment, with 83% cumulatively of the GM intervals >244 CFU/100ml for this multi-year low frequency dataset.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0545	MassDEP	Water Quality	Germany Brook	[upstream/north of Nichols Street and inlet of Ellis Pond, Norwood]	42.184198	-71.224845

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1942	MassDEP	Water Quality	Germany Brook	[Westover Parkway crossing nearest Leyton Road, Norwood]	42.186507	-71.223452
W2648	MassDEP	Water Quality	Germany Brook	[approximately 900 feet south of the northern most crossing of Westover Parkway (adjacent to #76 Westover Parkway), Norwood]	42.190435	-71.223582
W2649	MassDEP	Water Quality	Germany Brook	[Sycamore Drive, Westwood]	42.196324	-71.224699
NepRWA_GEB020	Neponset River Watershed Association	Water Quality	Germany Brook	Germany Brook @ inlet of Ellis Pond	42.184267	-71.224780

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

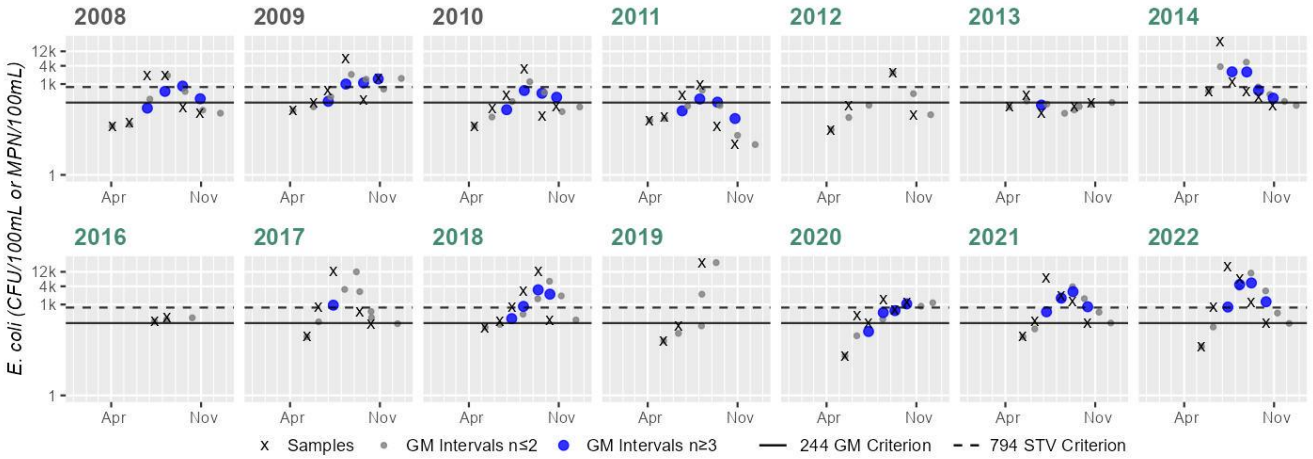
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0545	MassDEP	E. coli	07/12/16	08/10/16	2	276	365	317
W1942	MassDEP	E. coli	04/28/09	09/15/09	5	60	1100	197
W2648	MassDEP	E. coli	07/12/16	08/10/16	2	308	548	410
W2649	MassDEP	E. coli	07/12/16	08/10/16	2	81	225	135
NepRWA_GEB020	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	41	1940	229
NepRWA_GEB020	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	135	6890	628
NepRWA_GEB020	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	41	3260	228
NepRWA_GEB020	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	932	97
NepRWA_GEB020	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	4	31	2380	194
NepRWA_GEB020	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	108	435	205
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	197	24200	929
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	86	12000	651

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	175	12000	867
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/09/19	08/08/19	3	63	24200	669
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	1500	367
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	86	7700	695
NepRWA_GEB020	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	41	17300	1009

Station MASSDEP_W0545 & NepRWA_GEB020 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	229
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	628
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	228
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	97
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	4
SeasGM	194
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	5
SeasGM	205
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	929
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	2
SeasGM	317
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	651
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	867
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	3
SeasGM	669
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	367
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	695
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

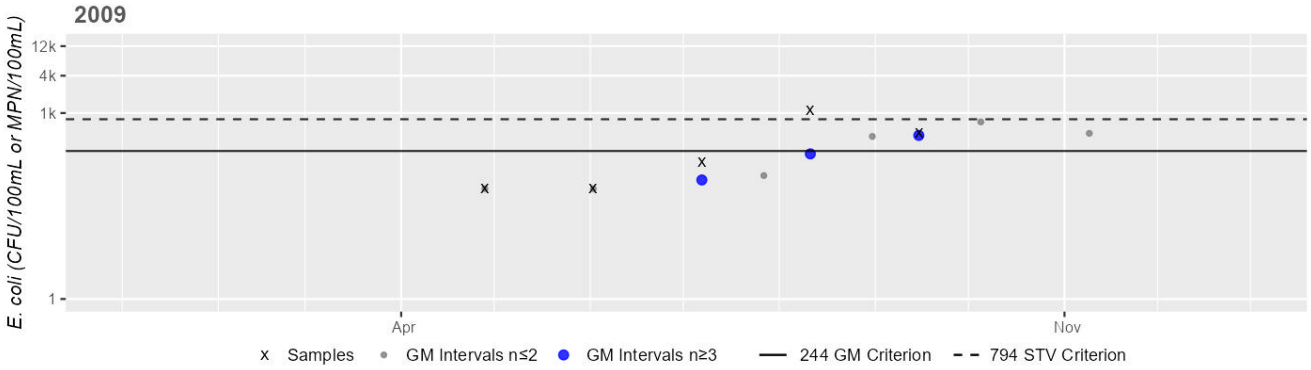
Variable*	Result
Samples	6
SeasGM	1009
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
83%	84%	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 MASSDEP_W1942 - Escherichia coli

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



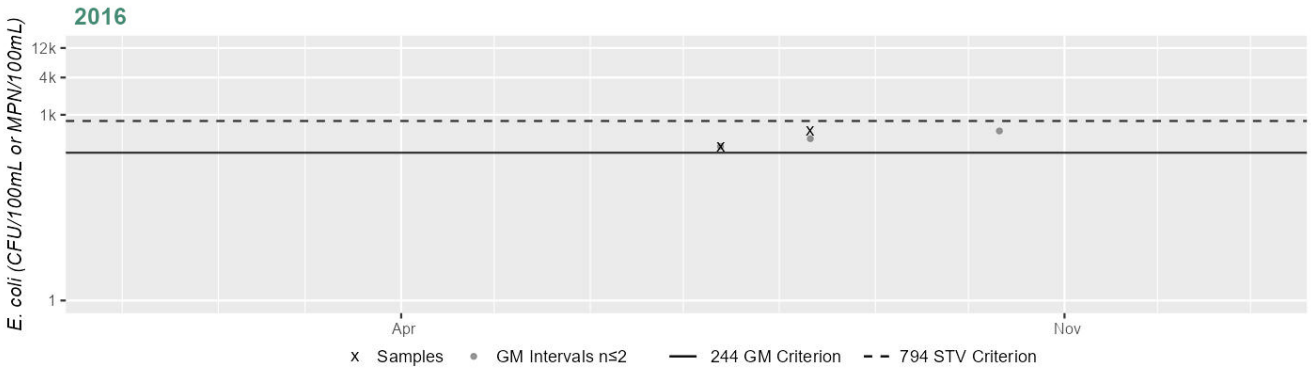
Variable*	Result
Samples	5
SeasGM	197
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	1
%n>STV	20%

Cumulative %GMI Exceedance
Historic (1997-2010)
33%

**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 MASSDEP_W2648 - Escherichia coli

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



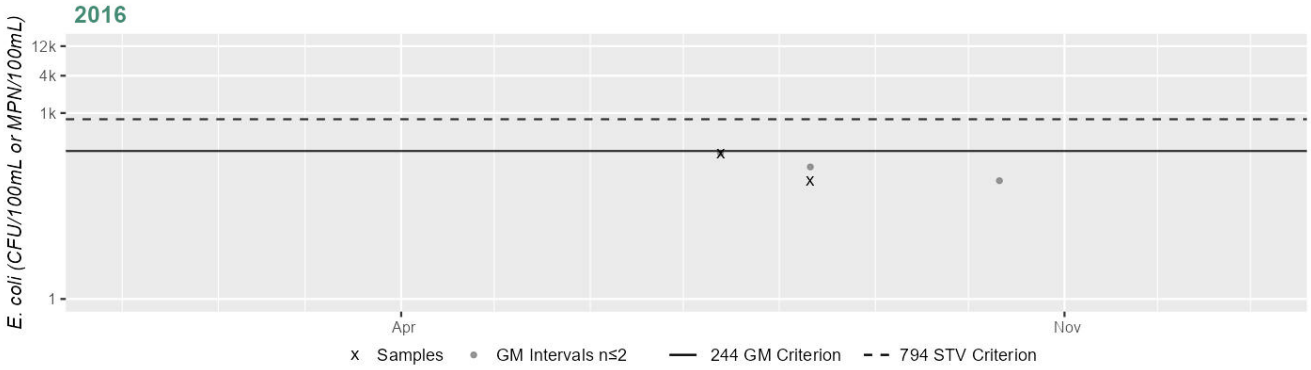
Variable*	Result
Samples	2
SeasGM	410
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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 MASSDEP_W2649 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	135
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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.*

Glen Echo Pond (MA73022)

Location:	Canton/Stoughton.
AU Type:	FRESHWATER LAKE
AU Size:	16 ACRES
Classification/Qualifier:	B

No usable data were available for Glen Echo Pond (MA73022) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Gulliver Creek (MA73-30)

Location:	From confluence Unquity Brook, Milton to confluence Neponset River, Milton (Note: Unquity Brook culverted, confluence not visible on quad).
AU Type:	ESTUARY
AU Size:	0.02 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	2592	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]	Source Unknown (N)	--	X	--	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	--	--	X	--
PCBs in Fish Tissue	Source Unknown (N)	--	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 Gulliver Creek (MA73-30) 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 Gulliver Creek (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
Insufficient Information	NO

2024/26 Use Attainment Summary
Gulliver Creek (MA73-30): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0134 sq mi (73%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0134 sq mi (73%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as entirely prohibited.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 7)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH3.0	Dorchester Bay And Neponset River	Prohibited	0.01344	73.0%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Gulliver Creek (MA73-30) 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 Gulliver Creek (MA73-30) continues to be assessed as Not Supporting. The prior Fecal Coliform impairment is being carried forward since the shellfish growing areas (0.0134 sq mi) in this AU are less than 100% approved (0 sq mi, 0%).

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 7)

Summary
Gulliver Creek (MA73-30): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0134 sq mi (73%). 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
Insufficient Information	NO

2024/26 Use Attainment Summary
No bacteria data are available to assess the Secondary Contact Recreation Use for Gulliver Creek (MA73-30), so it is assessed as having Insufficient Information. The shellfish growing areas (0.0134 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 Gulliver Creek.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 7)

Summary
Gulliver Creek (MA73-30): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0134 sq mi (73%). 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.

Hammer Shop Pond (MA73023)

Location:	Sharon.
AU Type:	FRESHWATER LAKE
AU Size:	2 ACRES
Classification/Qualifier:	B

No usable data were available for Hammer Shop Pond (MA73023) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Hawes Brook (MA73-16)

Location:	Headwaters, outlet of Ellis Pond, Norwood to mouth at confluence with Neponset River, Norwood.
AU Type:	RIVER
AU Size:	1.1 MILES
Classification/Qualifier:	B

Hawes Brook (MA73-16)

Watershed Area: 8.74 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	8.74	6.62	2.67	2.32
Agriculture	2.7%	2.8%	3%	2.7%
Developed	29.2%	34.1%	21.4%	23%
Natural	57.7%	53.8%	59.8%	60.1%
Wetland	10.4%	9.3%	15.8%	14.2%
Impervious	15.8%	18.4%	11.8%	12.7%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Escherichia Coli (E. Coli)	2592	Unchanged
5	5	Fecal Coliform	2592	Unchanged
5	5	Odor	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Odor	Source Unknown (N)	--	--	X	X	X
Odor	Unspecified Urban Stormwater (Y)	--	--	X	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Hawes Brook (MA73-16) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Hawes Brook (MA73-16) continues to be assessed as as Not Supporting with the prior Odor impairment being carried forward. No new data are available to evaluate the Aesthetics Use for Hawes Brook.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Hawes Brook (MA73-16) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 3 stations in 2018-2022. In addition, the prior Fecal Coliform impairment is being carried forward and the prior Odor impairment (from the Aesthetics Use) is also being carried forward. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in Hawes Brook from 2011-2022 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at NepRWA_HAB002 [Hawes Brook at Walpole St] from 2011-2014 and 2017-2022 (n=6/yr), halfway down the AU at NepRWA_HAB006 [Hawes Brook at Endean Park, railRd bridge] from 2011-2014 and 2017-2022 (n=4-6/yr), and about three-quarters of the way down the AU at NepRWA_HAB010 [Hawes Brook at Washington St] from 2011-2014 and 2017-2022 (n=5-6/yr). Analysis of the recent five years of the multi-year limited frequency *E. coli* datasets from all three stations are as follows: NepRWA_HAB002 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2019 and 2021-2022, 25-75%), 1 yr had ≥2 samples exceed the 410 CFU/100ml STV (2021, n=2), and cumulatively across years 40% of intervals had GMs >126 CFU/100ml; NepRWA_HAB006 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2017-2019 and 2021-2022, 100%), 5 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2017-2019 and 2021-2022, n=2-4), and cumulatively across years 100% of intervals had GMs >126 CFU/100ml and NepRWA_HAB010 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 100%), 5 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018-2022, n=2-4), and cumulatively across years 100% of intervals had GMs >126 CFU/100ml. *E. coli* data from NepRWA_HAB002, NepRWA_HAB006, and NepRWA_HAB010 are all indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_HAB002	Neponset River Watershed Association	Water Quality	Hawes Brook	Hawes Brook @ Walpole Street	42.180317	-71.220550
NepRWA_HAB006	Neponset River Watershed Association	Water Quality	Hawes Brook	Hawes Brook @ Endean Park, railroad bridge	42.176144	-71.214233
NepRWA_HAB010	Neponset River Watershed Association	Water Quality	Hawes Brook	Hawes Brook @ Washington Street	42.174033	-71.208200

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (NepRWA 2023) (MassDEP Undated 4)

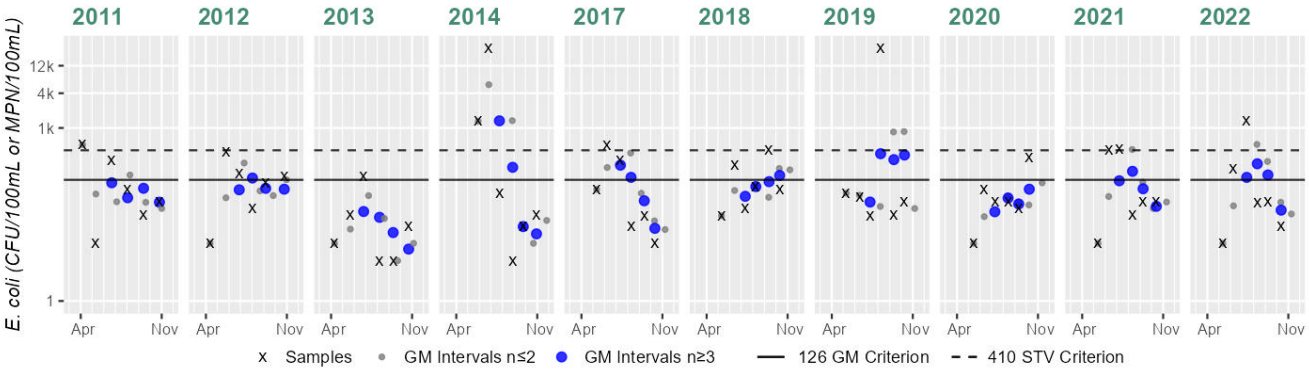
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_HAB002	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	512	76
NepRWA_HAB002	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	379	85
NepRWA_HAB002	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	145	16
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	24200	139
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	495	64
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	30	410	98
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	30	24200	132
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	305	55
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	426	72
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	1350	72
NepRWA_HAB006	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	74	1520	298
NepRWA_HAB006	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	20	1860	245
NepRWA_HAB006	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	31	171	85
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	119	24200	625
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	31	441	213
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/10/18	09/13/18	4	20	4880	617
NepRWA_HAB006	Neponset River Watershed Association	E. coli	06/13/19	10/10/19	4	146	14100	680

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	4	74	1210	349
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	31	3450	325
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	148	4610	550
NepRWA_HAB010	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	31	487	176
NepRWA_HAB010	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	41	1940	265
NepRWA_HAB010	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	836	105
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	63	8660	281
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	52	565	159
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	74	8660	756
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	5	63	13000	492
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	121	1080	406
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	130	24200	968
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	240	24200	2284

Station NepRWA_HAB002 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	76
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	85
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	16
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	139
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	64
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	98
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	132
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	55
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	72
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	72
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

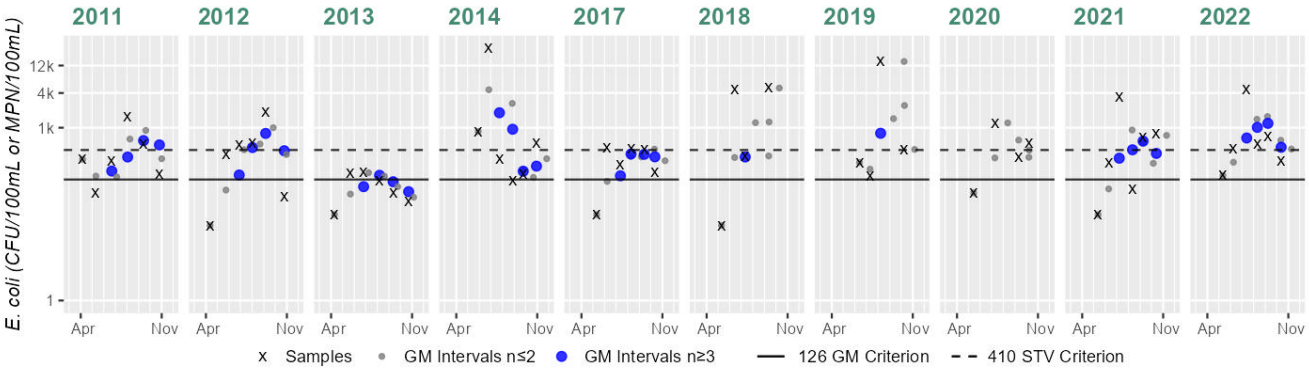
Cumulative %GMI Exceedance Current (2011-2022)
32%

Cumulative %GMI Exceedance Current (Recent 5 Years)
40%

**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 NepRWA_HAB006 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	298
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	245
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	85
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	625
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	213
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	4
SeasGM	617
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	50%

Variable*	Result
Samples	4
SeasGM	680
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	50%

Variable*	Result
Samples	4
SeasGM	349
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	50%

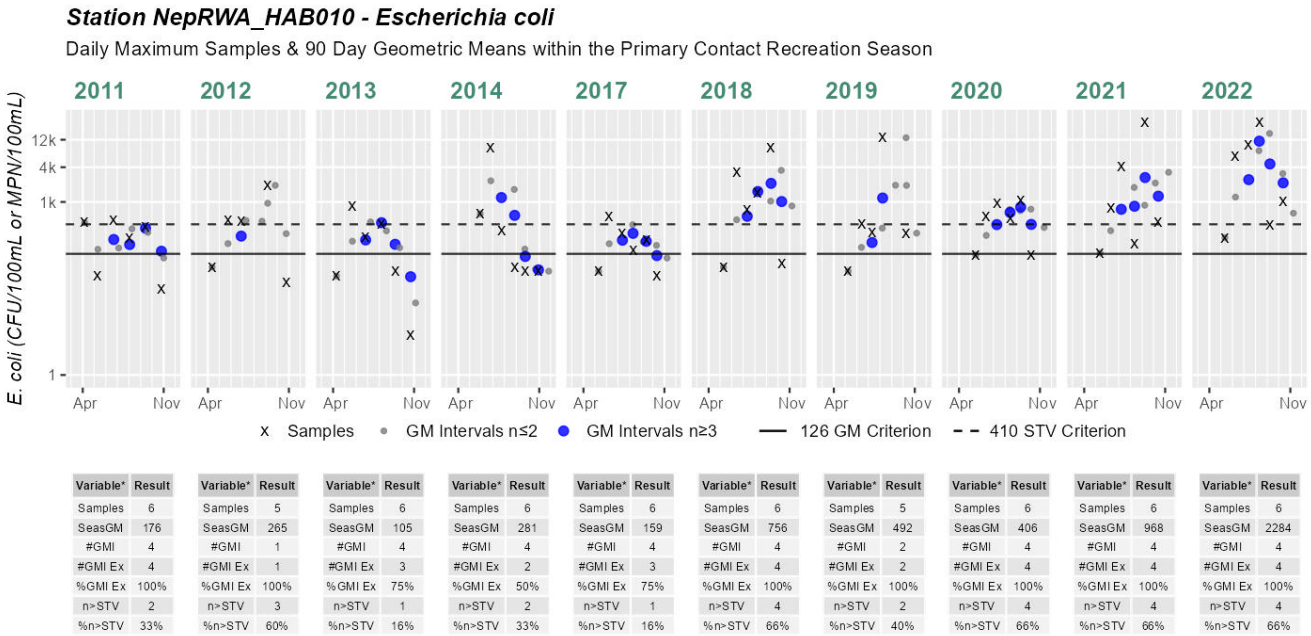
Variable*	Result
Samples	6
SeasGM	325
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	550
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

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

Cumulative %GMI Exceedance Current (Recent 5 Years)
100%

**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	6
SeasGM	176
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	265
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	3
%n>STV	60%

Variable*	Result
Samples	6
SeasGM	105
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	281
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	159
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	756
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	5
SeasGM	492
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	406
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	968
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	2284
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Cumulative %GMI Exceedance Current (2011-2022)
88%

Cumulative %GMI Exceedance Current (Recent 5 Years)
100%

**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.*

Summary Statement for 2011-2019 MassDEP Bacteria Source Tracking (BST) Data (MassDEP Undated 1)

Summary
Prior to 2011, BST work was conducted on an unnamed tributary discharging to roughly the middle of the Hawes Brook AU (MA73-16), between Davis Ave & Alandale Pkwy, with a max dry weather E.coli concentration of 2,987MPN just downstream of Rt.1A & >2,419.6MPN just before the confluence with Hawes Bk. In 2009 human marker analysis indicated “strong evidence” of a human source at the downstream end of the tributary & also halfway up the tributary (just upstream of Rt.1A). Additional BST work was conducted in 2011-2016 at 13 sites on the tributary, with E.coli concentrations ranging 14 to >2,419.6MPN throughout & 680 to 1,100MPN at the confluence . In 2012 a drain outfall discharging from Damon Ct/Windsor Grdns was ruled out as a human source of bacteria. Ultimately, elevated bacteria concentrations were tracked to originating intermittently from “twin culverts” marking the headwaters of the tributary, just downgradient of Arcadia Rd. The Town of Norwood investigated within the drainage infrastructure of these culverts in 2012, 2013 & 2014. The Town reported in 2014 that three direct house (sewer) connections to the stormwater system were found on Fieldbrook Drive and that work was underway to redirect these connections to the sanitary sewer system. In 2015- follow up sampling at the twin culverts indicated improved E.coli concentrations (max E.coli concentration of 290MPN), which proved the corrections to have been successful. Follow up samples have not yet been collected at the downstream end of the tributary post 2015.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Hawes Brook (MA73-16) continues to be assessed as Not Supporting. The prior Odor impairment (from the Aesthetics Use) is being carried forward. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 2 stations in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Hawes Brook from 2008-2022 at 4 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at NepRWA_HAB002 [Hawes Brook at Walpole St] from 2008-2010 (historic n=5-6/yr) and 2011-2014 and 2017-2022 (current n=6/yr), halfway down the AU at NepRWA_HAB006 [Hawes Brook at Endean Park, railRd bridge] from 2008-2010 (historic n=6/yr) and 2011-2014 and 2017-2022 (current n=4-6/yr), about three-quarters of the way down the AU at W0544 [upstream of Washington St, Norwood (above influence of pool discharge pipe on southern bank)] from Apr-Sep 2009 (historic n=5) and NepRWA_HAB010 [Hawes Brook at Washington St] from 2008-2010 (historic n=4-6/yr) and 2011-2014 and 2017-2022 (current n=5-6/yr). Water quality conditions were relatively good at the upstream end of the AU, with analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_HAB002 indicating 1 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2019, 75%), 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, and cumulatively across years only 15% of intervals had GMs >244 CFU/100ml. However, further down the AU conditions worsened with analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_HAB006 indicating 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2017-2019 and 2021-2022, 75-100%), 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2), and cumulatively across years 92% of intervals had GMs >244 CFU/100ml. Also analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_HAB010 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 50-100%), 4 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2018 and 2020-2022, n=2-4), and cumulatively across years 94% of intervals had GMs >244 CFU/100ml. It should be noted that data in the historic IR window at both station's NepRWA_HAB006 and NepRWA_HAB010 were also indicative of an Escherichia Coli (E. Coli) impairment, with cumulatively 41% & 40% respectively of the GM intervals >244 CFU/100ml, for these multi year low frequency datasets. While *E. coli* data from NepRWA_HAB002 meet 2024 CALM guidance, *E. coli* data from NepRWA_HAB006 and NepRWA_HAB010 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0544	MassDEP	Water Quality	Hawes Brook	[upstream of Washington Street, Norwood (above influence of pool discharge pipe on southern bank)]	42.173992	-71.208539

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_HAB002	Neponset River Watershed Association	Water Quality	Hawes Brook	Hawes Brook @ Walpole Street	42.180317	-71.220550
NepRWA_HAB006	Neponset River Watershed Association	Water Quality	Hawes Brook	Hawes Brook @ Endean Park, railroad bridge	42.176144	-71.214233
NepRWA_HAB010	Neponset River Watershed Association	Water Quality	Hawes Brook	Hawes Brook @ Washington Street	42.174033	-71.208200

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

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

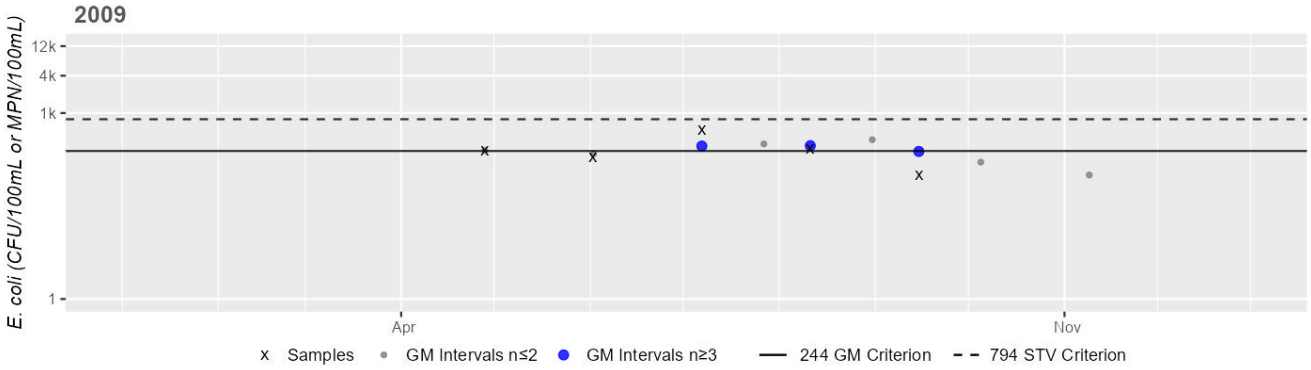
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0544	MassDEP	E. coli	04/28/09	09/15/09	5	100	530	230
NepRWA_HAB002	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	10	670	48
NepRWA_HAB002	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	10	441	98
NepRWA_HAB002	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	5	10	20	11
NepRWA_HAB002	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	512	76
NepRWA_HAB002	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	379	85
NepRWA_HAB002	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	145	16
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	24200	139
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	495	64
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	30	410	98

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	30	24200	132
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	305	55
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	426	72
NepRWA_HAB002	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	1350	72
NepRWA_HAB006	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	85	441	203
NepRWA_HAB006	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	52	932	219
NepRWA_HAB006	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	10	292	69
NepRWA_HAB006	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	74	1520	298
NepRWA_HAB006	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	20	1860	245
NepRWA_HAB006	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	31	171	85
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	119	24200	625
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	31	441	213
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/10/18	09/13/18	4	20	4880	617
NepRWA_HAB006	Neponset River Watershed Association	E. coli	06/13/19	10/10/19	4	146	14100	680
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	4	74	1210	349
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	31	3450	325
NepRWA_HAB006	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	148	4610	550

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_HAB010	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	41	683	164
NepRWA_HAB010	Neponset River Watershed Association	E. coli	04/08/09	08/12/09	4	20	609	161
NepRWA_HAB010	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	5	624	91
NepRWA_HAB010	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	31	487	176
NepRWA_HAB010	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	41	1940	265
NepRWA_HAB010	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	836	105
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	63	8660	281
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	52	565	159
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	74	8660	756
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	5	63	13000	492
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	121	1080	406
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	130	24200	968
NepRWA_HAB010	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	240	24200	2284

Station MASSDEP_W0544 - Escherichia coli

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



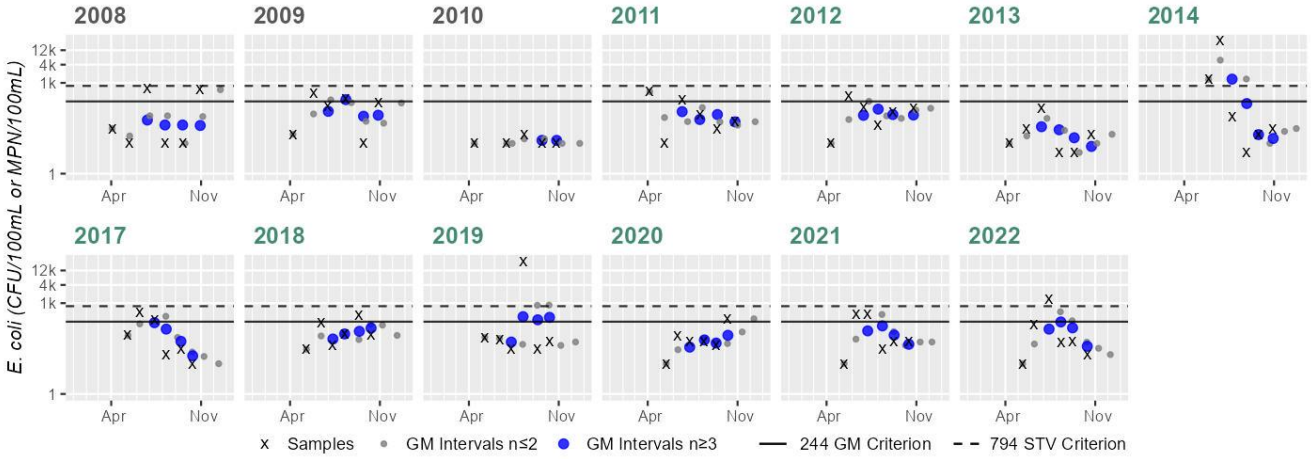
Variable*	Result
Samples	5
SeasGM	230
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
66%

**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 NepRWA_HAB002 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	48
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	98
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	11
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	76
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	85
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	16
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	139
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	64
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	98
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	132
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	55
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	72
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

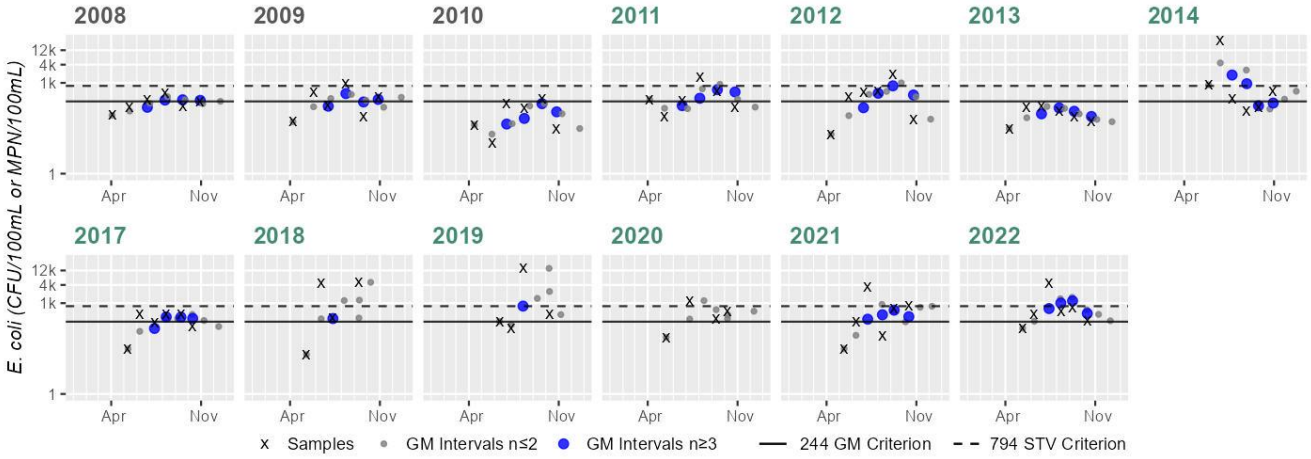
Variable*	Result
Samples	6
SeasGM	72
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
10%	10%	15%

**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 NepRWA_HAB006 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	203
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	219
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	69
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	298
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	245
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	85
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	625
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	213
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	617
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	50%

Variable*	Result
Samples	4
SeasGM	680
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	4
SeasGM	349
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	325
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

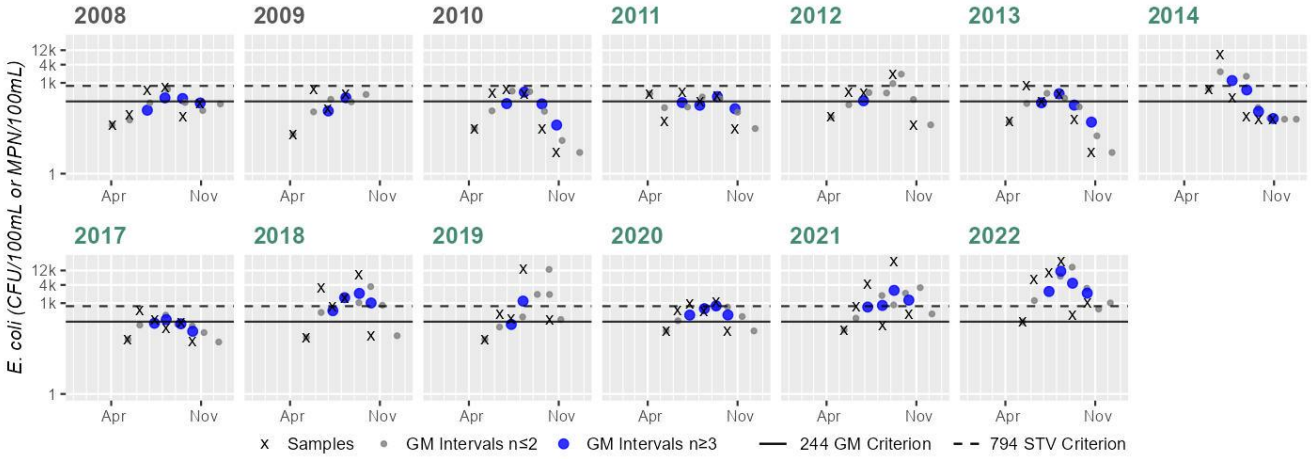
Variable*	Result
Samples	6
SeasGM	550
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
41%	70%	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 NepRWA_HAB010 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	164
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	161
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	91
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	176
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	265
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	105
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	281
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	159
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	756
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	5
SeasGM	492
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	406
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	968
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	2284
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
40%	65%	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.*

Jewells Pond (MA73026)

Location:	Medfield.
AU Type:	FRESHWATER LAKE
AU Size:	4 ACRES
Classification/Qualifier:	B

No usable data were available for Jewells Pond (MA73026) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Lymans Pond (MA73021)

Location:	Westwood.
AU Type:	FRESHWATER LAKE
AU Size:	25 ACRES
Classification/Qualifier:	B

No usable data were available for Lymans Pond (MA73021) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

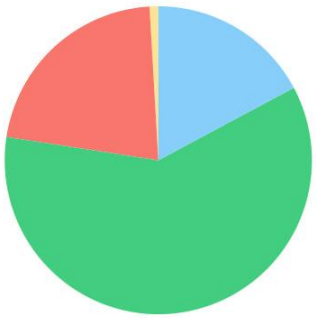
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Massapoag Brook (MA73-21)

Location:	Headwaters, outlet Hammer Shop Pond, Sharon to mouth at inlet Forge Pond, Canton (through former 2010 segment: Manns Pond MA73028).
AU Type:	RIVER
AU Size:	4.2 MILES
Classification/Qualifier:	B

Massapoag Brook (MA73-21)

Watershed Area: 10.39 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	10.39	4.77	4.33	1.56
Agriculture	0.9%	0.9%	0.5%	0.3%
Developed	21.7%	29.3%	14%	19.2%
Natural	60.2%	53.3%	57.2%	46.9%
Wetland	17.2%	16.5%	28.3%	33.5%
Impervious	10.5%	14.6%	6.3%	8.9%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Curly-leaf Pondweed*)	--	Unchanged
5	5	(Fanwort*)	--	Unchanged
5	5	(Non-Native Aquatic Plants*)	--	Unchanged
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Escherichia Coli (E. Coli)	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Curly-leaf Pondweed*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Massapoag Brook (MA73-21) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Massapoag Brook (MA73-21) 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 Massapoag Brook (MA73-21) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in Massapoag Brook from 2011-2022 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: a quarter of the way down the brook at NepRWA_MPB037 [Massapoag Brook at Billings St] from 2011-2014 and 2017-2022 (n=5-6/yr) and close to the downstream end of the AU at NepRWA_MPB088 [Massapoag Brook at Walnut St] from 2011-2014 and 2017-2022 (n=4-6/yr). Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_MPB037 indicated 1 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018, 50%), 1 yr had ≥2 samples exceed the 410 CFU/100ml STV (2018, n=2), and cumulatively across years 10% of intervals had GMs >126 CFU/100ml, which meets 2024 CALM guidance. However, analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_MPB088 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2017-2018 and 2020-2022, 25-100%), 2 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2021 and 2022, n=2 & 4), and cumulatively across years 55% of intervals had GMs >126 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_MPB037	Neponset River Watershed Association	Water Quality	Massapoag Brook	Massapoag Brook @ Billings Street	42.120817	-71.165980
NepRWA_MPB088	Neponset River Watershed Association	Water Quality	Massapoag Brook	Massapoag Brook @Walnut Street	42.150000	-71.149020

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(NepRWA 2023) (MassDEP Undated 4)

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

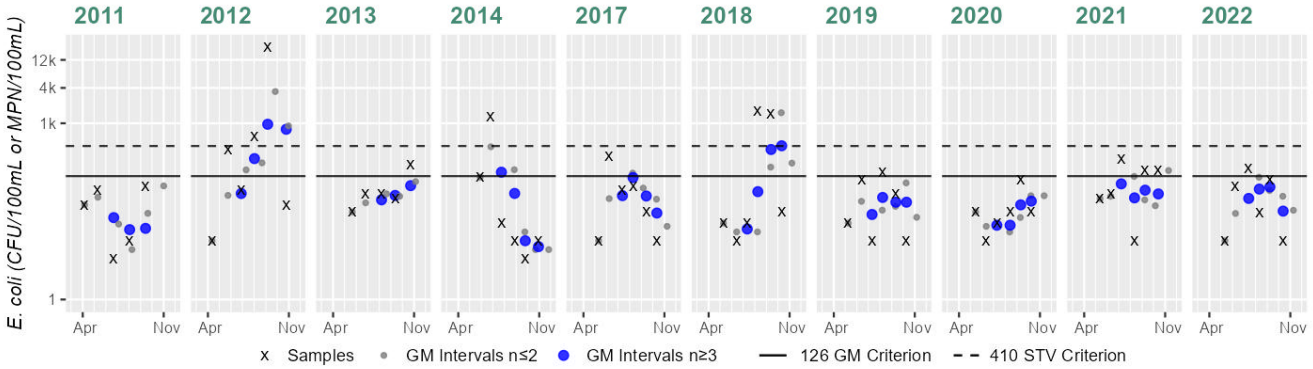
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MPB037	Neponset River Watershed Association	E. coli	04/06/11	09/14/11	5	5	86	26
NepRWA_MPB037	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	19900	224

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/22/13	10/23/13	5	31	199	66
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	1310	34
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	272	41
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	1610	81
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	148	35
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	110	29
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	246	76
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	171	41
NepRWA_MPB088	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	110	49
NepRWA_MPB088	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	5	905	82
NepRWA_MPB088	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	20	285	78
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	20	368	63
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	20	416	66
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	5	41	14100	304
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	4	30	882	91
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	318	69
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	1380	132

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	109	1610	403

Station NepRWA_MPB037 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	26
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	224
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	66
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	34
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	41
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	81
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	35
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	29
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	76
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	41
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

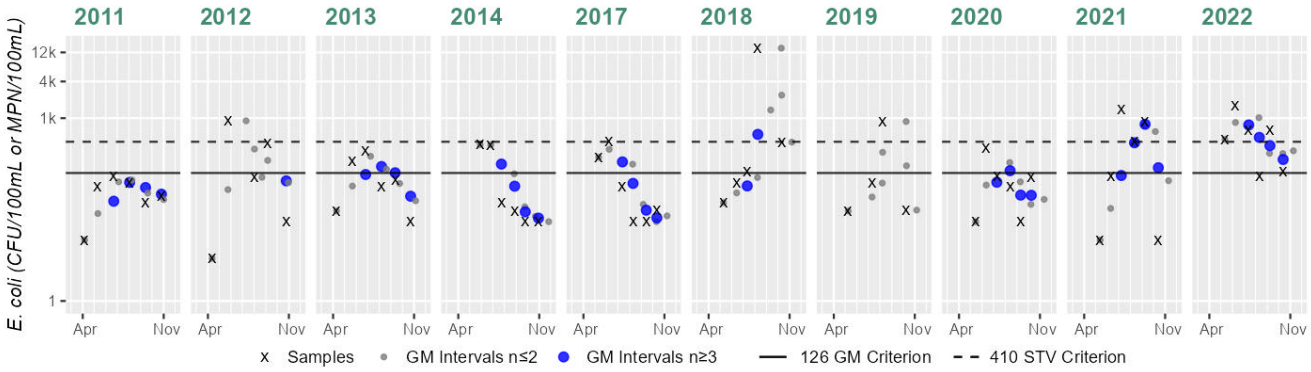
Cumulative %GMI Exceedance Current (2011-2022)
15%

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.*

Station NepRWA_MPB088 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	49
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	82
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	78
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	63
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	66
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	304
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	4
SeasGM	91
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	69
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	132
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	403
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

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

Cumulative %GMI Exceedance Current (Recent 5 Years)
55%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Massapoag Brook (MA73-21) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Massapoag Brook from 2008-2022 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: a quarter of the way down the brook at NepRWA_MPB037 [Massapoag Brook at Billings St] from 2008-2010 (historic n=6/yr) and 2011-2014 and 2017-2022 (current n=5-6/yr), close to the downstream end of the AU at NepRWA_MPB088 [Massapoag Brook at Walnut St] from 2008-2010 (historic n=5-6/yr) and 2011-2014 and 2017-2022 (current n=4-6/yr), and the downstream end at W1946 [Mechanic St, Canton] from Apr-Sep 2009 (historic n=6). Since bacteria data from the historic IR window are all indicative of good water quality conditions, only the analysis from the current IR window (2 stations) will be summarized here. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_MPB037 indicated 1 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018, 50%), 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2), and cumulatively across years 10% of intervals had GMs >244 CFU/100ml, which meets 2024 CALM guidance. However, analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_MPB088 indicated 3 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018 and 2021-2022, 50-75%) and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2021, n=2), cumulatively across years 33% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1946	MassDEP	Water Quality	Massapoag Brook	[Mechanic Street, Canton]	42.152208	-71.145895
NepRWA_MPB037	Neponset River Watershed Association	Water Quality	Massapoag Brook	Massapoag Brook @ Billings Street	42.120817	-71.165980
NepRWA_MPB088	Neponset River Watershed Association	Water Quality	Massapoag Brook	Massapoag Brook @Walnut Street	42.150000	-71.149020

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

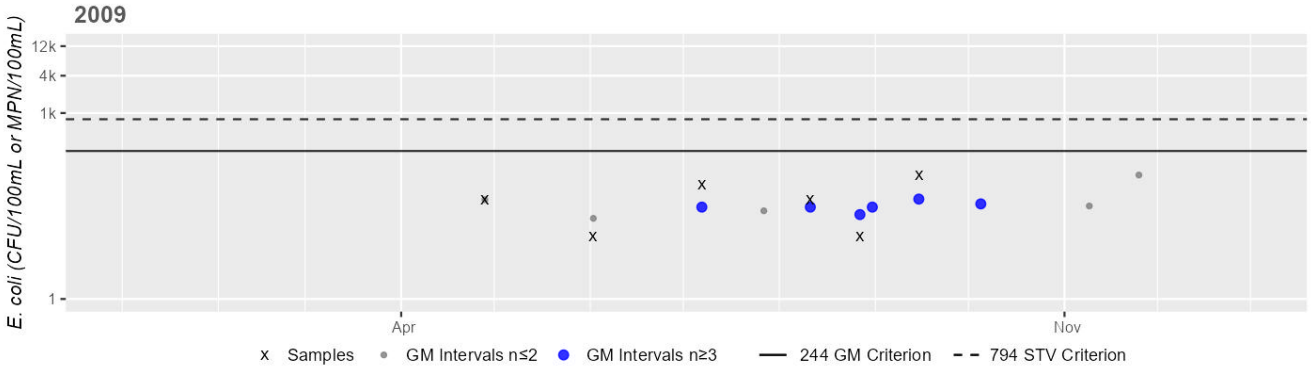
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1946	MassDEP	E. coli	04/28/09	09/15/09	6	10	100	32
NepRWA_MPB037	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	5	158	35
NepRWA_MPB037	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	10	233	60
NepRWA_MPB037	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	5	20	12
NepRWA_MPB037	Neponset River Watershed Association	E. coli	04/06/11	09/14/11	5	5	86	26
NepRWA_MPB037	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	19900	224
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/22/13	10/23/13	5	31	199	66
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	1310	34
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	272	41
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	1610	81
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	148	35
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	110	29
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	246	76
NepRWA_MPB037	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	171	41
NepRWA_MPB088	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	20	495	72
NepRWA_MPB088	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	41	738	130
NepRWA_MPB088	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	5	5	122	24
NepRWA_MPB088	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	110	49

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MPB088	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	5	905	82
NepRWA_MPB088	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	20	285	78
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	20	368	63
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	20	416	66
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	5	41	14100	304
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	4	30	882	91
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	318	69
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	1380	132
NepRWA_MPB088	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	109	1610	403

Station MASSDEP_W1946 - Escherichia coli

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



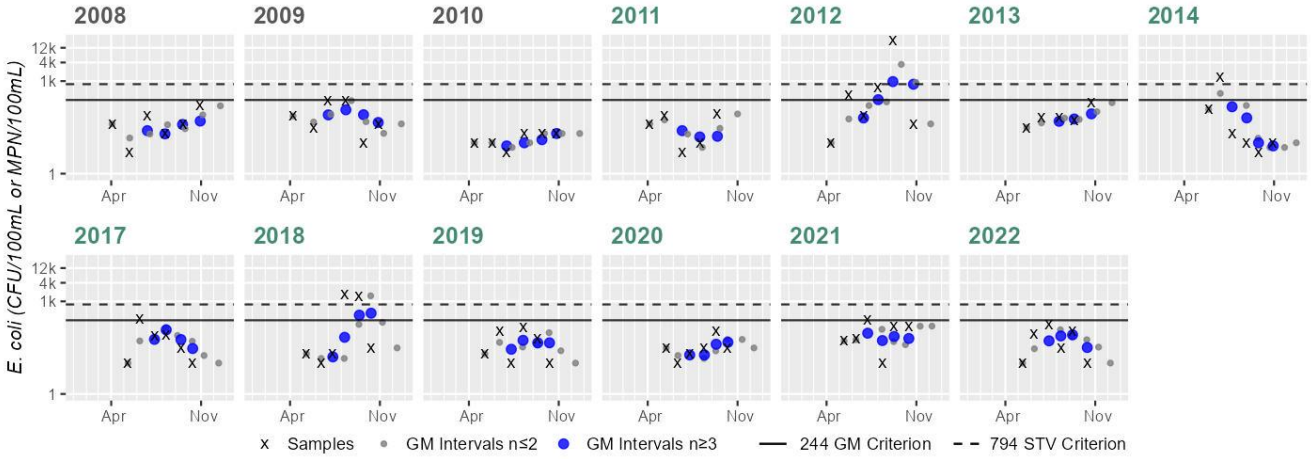
Variable*	Result
Samples	6
SeasGM	32
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
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 NepRWA_MPB037 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	35
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	60
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	12
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	26
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	224
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	66
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	34
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	41
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	81
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	35
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	29
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	76
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

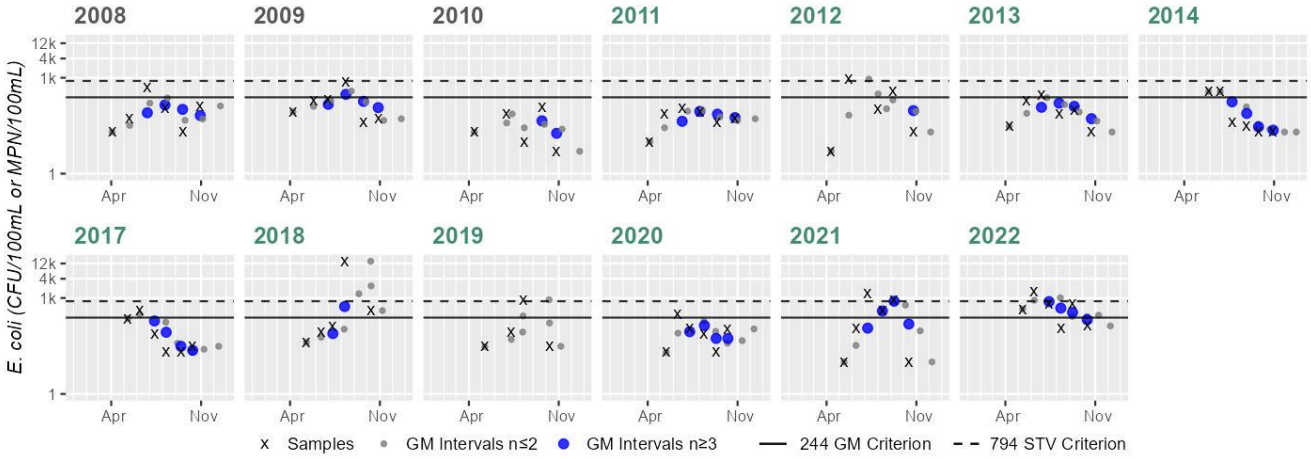
Variable*	Result
Samples	6
SeasGM	41
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	13%	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.*

Station NepRWA_MPB088 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	72
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	130
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	24
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	49
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	82
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	78
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	63
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	66
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	304
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	4
SeasGM	91
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	69
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	132
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	403
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
10%	19%	33%

**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.*

Massapoag Lake (MA73030)

Location:	Sharon.
AU Type:	FRESHWATER LAKE
AU Size:	389 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	(Non-Native Aquatic Plants*)	--	Unchanged
4a	4a	Mercury in Fish Tissue	33880	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Mercury in Fish Tissue	Atmospheric Deposition (Y)	--	X	--	--	--
Mercury in Fish Tissue	Source Unknown (N)	--	X	--	--	--

Recommendations

2024/26 Recommendations
2024IR [Harmful Algal Blooms, Low] Follow-up monitoring should be conducted in Massapoag Lake (MA73030) to determine if Harmful Algal Blooms may be impairing the Recreational and Aesthetic uses. Monitoring should include observational data and collection of cyanobacteria cell count data, as well as continued reporting of algal blooms to MDPH.

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Massapoag Lake (MA73030) continues to be assessed as Not Supporting and the prior Mercury in Fish Tissue impairment is being carried forward. Fish toxics sampling was conducted in Massapoag Lake (MA73030) at station F0326 in 2020 as part of the MassDEP Office of Research and Standards Mercury Initiative. MDPH included a site-specific advisory for Massapoag Lake in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent MDPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Fish Consumption Advisories

Summary of Fish Toxics Sampling and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP Undated 8)

Summary Statement
Fish toxics sampling was conducted in Massapoag Lake (MA73030) at station F0326 in 2020 as part of the MassDEP Office of Research and Standards Mercury Initiative. MA DPH retained the existing site-specific fish consumption advisories for Mercury associated with Massapoag Lake in their January 2025 Freshwater Fish Consumption Advisory List. The site-specific DPH advisories are indicative of a Fish Consumption Use impairment for Mercury in Fish Tissue for Massapoag Lake (MA73030).

Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary
Too limited data are available to assess the Aesthetics Use for Massapoag Lake (MA73030), so it is assessed as having Insufficient Information. However, an Alert is being identified for Harmful Algal Blooms in this waterbody since C-HAB postings (a bloom of 15 days in duration) was reported to MDPH for 2021. During the period 2015 through 2022, C-HAB postings for Massapoag Lake were reported to MDPH based on visual observations for 9 days in 2019 and 15 days in 2021 and no blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, an Alert is being identified for Harmful Algal Blooms and a recommendation for follow-up sampling will be made.

Algal Bloom Information

Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data (Bailey, Logan April 26, 2023) (MassDEP Undated 3)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Massapoag Lake (MA73030) were reported to MDPH based on visual observations for 9 days in 2019 and 15 days in 2021. No blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, an Alert is being identified for C-HABs in this waterbody and a recommendation for follow-up sampling will be made.

Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH (Bailey, Logan April 26, 2023) (MassDEP Undated 3)

[* indicates a C-HAB posting of unknown duration]

DEP Waterbody (DPH Waterbody)	DPH Town	Posting Days 2015	Posting Days 2016	Posting Days 2017	Posting Days 2018	Posting Days 2019	Posting Days 2020	Posting Days 2021	Posting Days 2022
Massapoag Lake	Sharon					9		15	

Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary
No bacteria data are available to assess the Primary Contact Recreation Use for Massapoag Lake (MA73030) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. However, an Alert is being identified for Harmful Algal Blooms in this waterbody since C-HAB postings (a bloom of 15 days in duration) was reported to MDPH for 2021. During the period 2015 through 2022, C-HAB postings for Massapoag Lake were reported to MDPH based on visual observations for 9 days in 2019 and 15 days in 2021 and no blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, an Alert is being identified for Harmful Algal Blooms and a recommendation for follow-up sampling will be made.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary
No bacteria data are available to assess the Secondary Contact Recreation Use for Massapoag Lake (MA73030) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. However, an Alert is being identified for Harmful Algal Blooms in this waterbody since C-HAB postings (a bloom of 15 days in duration) was reported to MDPH for 2021. During the period 2015 through 2022, C-HAB postings for Massapoag Lake were reported to MDPH based on visual observations for 9 days in 2019 and 15 days in 2021 and no blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, an Alert is being identified for Harmful Algal Blooms and a recommendation for follow-up sampling will be made.

Memorial Pond (MA73012)

Location:	Walpole.
AU Type:	FRESHWATER LAKE
AU Size:	8 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Aquatic Plants (Macrophytes)*)	--	Changed
5	5	Nutrient/Eutrophication Biological Indicators	--	Added
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Aquatic Plants (Macrophytes)*)	Source Unknown (N)	--	--	X	X	X
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	--	--	X	X	X
Turbidity	Source Unknown (N)	--	--	X	X	X

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Aquatic Plants (Macrophytes)	Not caused by a pollutant (4c)	As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Memorial Pond (MA73012) was first listed as impaired for Noxious Aquatic Plants in 1992 and this cause was remapped to Aquatic Plants (Macrophytes) during the 2010 IR cycle (MassDEP 2024). The original impairment was based on a June 1994 synoptic survey conducted by MassDEP staff in which it was noted that most of the pond was covered with dense/very dense aquatic plants, including the non-rooted, floating species, *Lemna*/*Ceratophyllum/Spirodela* spp., as well as filamentous algae (MassDEP 1994, MassDEP 2002). Google Earth images from August 2013, June 2015 and October 2020 show high amounts of plant coverage (>25%) (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of non-rooted, floating, aquatic macrophyte species. Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since more than 25% of the pond was covered in aquatic macrophytes in recent years.

Aquatic Plants (Macrophytes)

1996 WBS Coding Sheet (MassDEP 2002) (Note: This assessment unit was incorrectly named "Diamond Pond" on this sheet, however the geographical coordinates correspond with Memorial Pond and the identifier is correct (MA73012)):

WBID: **MA73012** WATERSHED: **Neponset (73)** (Printed 02/03/98)
NAME: **Diamond Pond** TYPE: **Lake/Pond**
CODE: **73012** SIZE: **7.00**(acres) CLASS: **B**

LATITUDE: **42.14556**
LONGITUDE: **71.24778** (420844/711452)
Lake/Pond Name: Diamond Pond(Sawmill Pond), Walpole
Ecoregion Name: (59) Northeastern Coastal Zone
Description:

Assessment Date: 9312 **Begin Sampling:** 8808 **303(d) List?:** Yes
Cycle: 96 **End Sampling:** 8808 **Pathogens Only?:** No

Lake Specific Information
Lake size greater than 10 acres?: No
Significantly Publicly Owned: xxxx
Trophic Status: Eutrophic
Trophic Trend: Unknown
Acidity/Toxics Trend: Unknown
Acidity Effects: Unknown

Uses	Support	Threat	Partial	Non-Sup	Not-Asses	Not-Attain
OVERALL USE SUPPORT			7.00			
ALUS					7.00	
FISH CONSUMPTION					7.00	
PRIMARY CONTACT			7.00			
SECONDARY CONTACT			7.00			
Aesthetics					7.00	

Nonattainment Causes

Code	Size	Magnitude
2200- Noxious aquatic plants	7.00	M

"New"

Code	Size	Magnitude

Nonattainment Sources

Code	Size	Magnitude
9000- SOURCE UNKNOWN	7.00	M

"New"

Code	Size	Magnitude

Assessment Type
(Assessment Category = > Evaluated)
R15- Monitoring data >5 years old
R20- Best professional judgement

"New" Assessment Category = > M E NA

Media/Pollutants Assessed (Toxics Monitoring = > N)

"New" Toxics Monitoring = > YES or NO

Comments:
VERY DENSE GROWTHS OF AQUATIC MACROPHYTES COVER THE ENTIRE POND. HISTORICALLY ALGAL "BLOOMS" REDUCED TRANSPARENCY TO BELOW THE SAFETY CRITERIA (4 FT. SECCHI DISK), BUT THESE DATA ARE TOO OLD TO USE IN MAKING CURRENT ASSESSMENTS.

1996:
Assessment remains same as last based on previous evaluation. Adjustment in cause and source based on EPA guidance.

1994 Synoptic Survey Field Sheet (MassDEP 1994):

9/12/94

Lythrum

changed to 73012

MA 73064

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Lake/Pond Memorial Pond **Date** 24 June 94

Town/City Walpole **Observers** R. Haynes
R. McVoy

Location/type of access (be specific, e.g., public boat ramp at west cove area off Simpson Street):
Park across from Town Hall; foot access.

Ownership of Location/Access (specify public or private, name of owner(s), and any use restrictions):
Town

Posted signs (re aquatic plants, fish advisories, access, etc.):
None

Water quality observations (clarity, dissolved organic staining, blooms, et cetera):
- Greyish blue translucent turbidity in water; oily sheen on surface in places; much debris on bottom.
- Toward outlet, milky turbidity w/ yellowish cast
- Shallow
- Hypereutrophic, ugly!

Record of aquatic plant "species" observed (see note below):

Pontederia, Peltandra, Lythrum Salicaria, Nuphar
Spirodela, Lemna, Ceratophyllum, Scirpus, Typha,
Sparganium, filamentous algae

Observed aquatic plant density **(at observation site and across lake or pond, if practicable):**

Dense → V. dense patches of weeds cover most of pond.

Other notes (e.g., overt pollution, construction, and water uses:

3056 Assessment - Hypereutrophic
1° Contact - 100% Non-support
2° Contact - 100% Non-support

Causes - Turbidity - M (Full acreage)
Noxious plants - M (Full acreage)

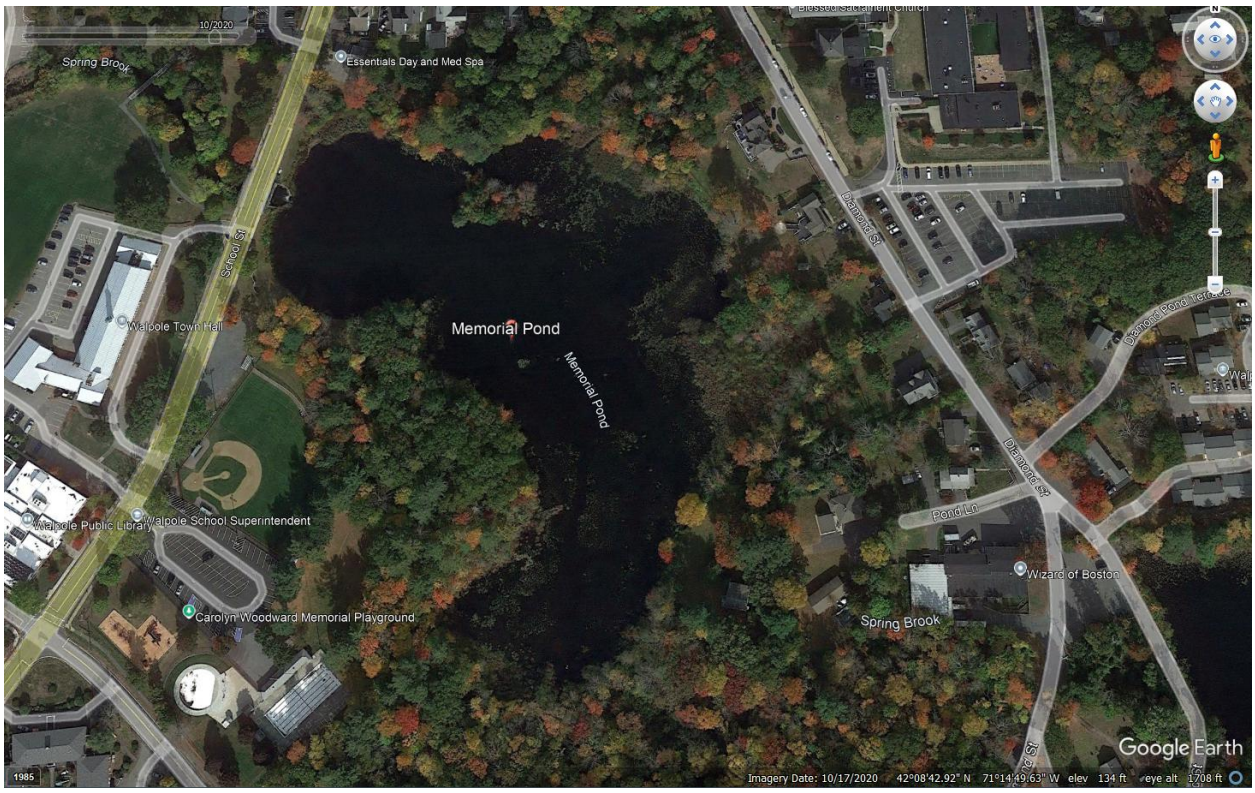
Note: record suspect *M. heterophyllum* plants that may require confirmation once emergent flowering stalks are evident.

Google Earth image of Memorial Pond, 12/31/2000 (Google Earth Pro Undated):

Google Earth image of Memorial Pond, 8/24/2013 (Google Earth Pro Undated):

Google Earth image of Memorial Pond, 6/6/2015 (Google Earth Pro Undated):

Google Earth image of Memorial Pond, 10/17/2020 (Google Earth Pro Undated):



Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Memorial Pond (MA73012) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Memorial Pond (MA73012) continues to be assessed as as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. Additionally a Turbidity impairment is being carried forward and a Nutrient/Eutrophication Biological Indicators impairment added. As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Memorial Pond was first listed as impaired for Noxious Aquatic Plants in 1992 and this cause was remapped to Aquatic Plants (Macrophytes) during the 2010 IR cycle (MassDEP 2024). The original impairment was based on a June 1994 synoptic survey conducted by MassDEP staff in which it was noted that most of the pond was covered with dense/very dense aquatic plants, including the non-rooted, floating species, Lemna/Ceratophyllum/Spirodela spp., as well as filamentous algae (MassDEP 1994, MassDEP 2002). Google Earth images from August 2013, June 2015 and October 2020 show high amounts of plant coverage (>25%) (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of non-rooted, floating, aquatic macrophyte species. Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since more than 25% of the pond was covered in aquatic macrophytes in recent years. No new data are available to evaluate the Aesthetics Use for Memorial Pond.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Memorial Pond (MA73012) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment (from the Aesthetics Use) is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. The Turbidity impairment (from the Aesthetics Use) is being carried forward and a Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use).

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for Memorial Pond (MA73012) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment (from the Aesthetics Use) is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. The Turbidity impairment (from the Aesthetics Use) is being carried forward and a Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use).

Mill Brook (MA73-08)

Location:	From headwaters (perennial portion) north of Hartford Street, Medfield to mouth at inlet of Jewells Pond, Medfield.
AU Type:	RIVER
AU Size:	2.3 MILES
Classification/Qualifier:	B

Mill Brook (MA73-08)

Watershed Area: 3.53 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.53	3.52	1.16	1.16
Agriculture	3%	2.9%	0.5%	0.5%
Developed	15.3%	15.4%	10.6%	10.6%
Natural	68.4%	68.3%	58.3%	58.3%
Wetland	13.3%	13.4%	30.6%	30.6%
Impervious	7.6%	7.7%	4.9%	4.9%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Dewatering*)	--	Unchanged
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Escherichia Coli (E. Coli)	--	Added
5	5	Temperature	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Dewatering*)	Source Unknown (N)	X	--	--	--	--
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Temperature	Source Unknown (N)	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Mill Brook (MA73-08) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Mill Brook (MA73-08) 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 Mill Brook (MA73-08) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples close to the downstream end of Mill Brook at NepRWA_MIB030 [Mine Brook at Nebo St] from 2011-2014 and 2017-2022 (n=4-6/yr). Analysis of the recent five years of this multi-year limited frequency dataset from this station indicated 3 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018 and 2021-2022, 50-100%) and while only 1 yr had ≥2 samples exceed the 410 CFU/100ml STV (2018, n=3), cumulatively across years 54% of intervals had GMs >126 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

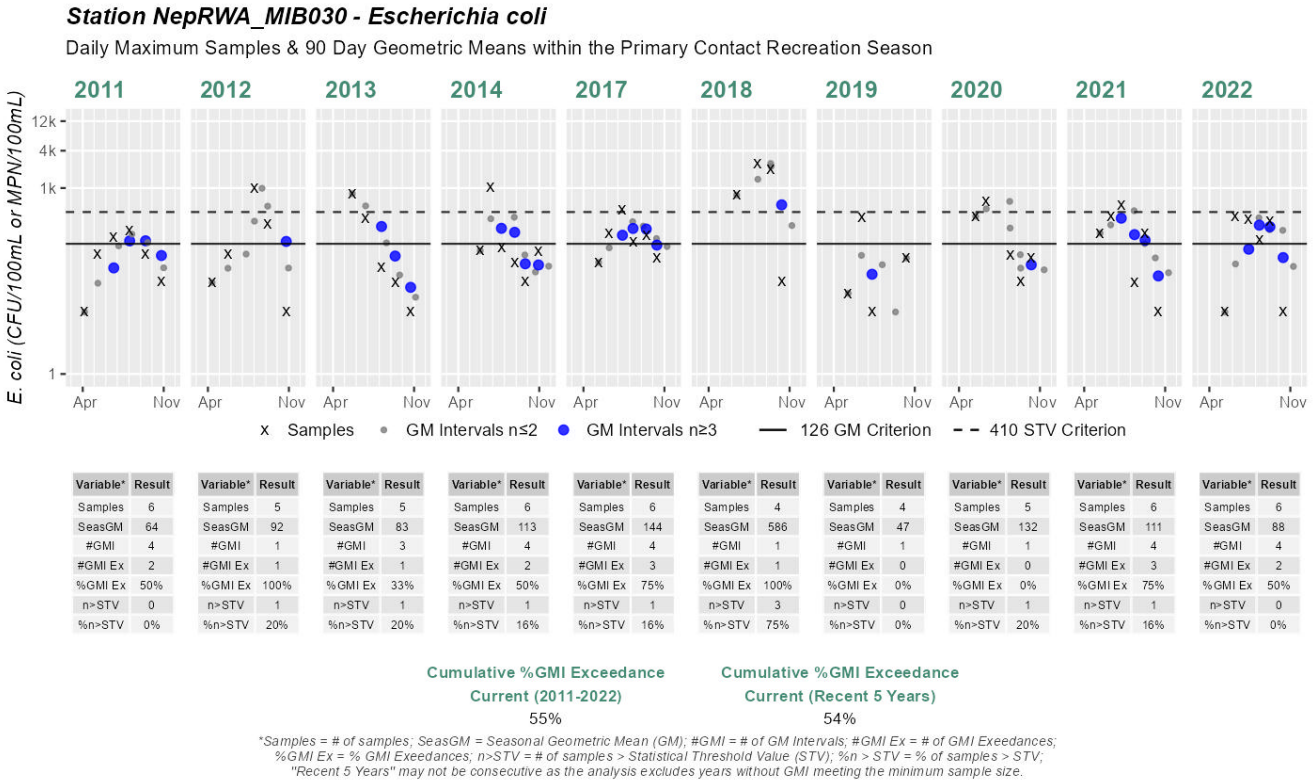
Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_MIB030	Neponset River Watershed Association	Water Quality	Mine Brook	Mine Brook @ Nebo Street	42.186067	-71.282400

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)
(NepRWA 2023) (MassDEP Undated 4)
[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
NepRWA_MIB030	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	203	64
NepRWA_MIB030	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	10	990	92
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/22/13	10/23/13	5	10	809	83
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	31	1040	113
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	63	441	144
NepRWA_MIB030	Neponset River Watershed Association	E. coli	06/14/18	10/11/18	4	31	2490	586
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	4	10	335	47
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	5	31	609	132

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	537	111
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	354	88



Variable*	Result
Samples	6
SeasGM	64
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	92
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	5
SeasGM	83
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	113
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	144
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	4
SeasGM	586
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	3
%n>STV	75%

Variable*	Result
Samples	4
SeasGM	47
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	132
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	111
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	88
#GMI	4
#GMI Ex	2
%GMI Ex	50%
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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Mill Brook (MA73-08) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Mill Brook (MA73-08) from 2008-2022 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: two-thirds of the way down the AU at W1938 [the Mill Brook Rd crossing nearest Nebo St, Medfield] from Apr-Sep 2009 (historic n=5), and close to the downstream end of the AU at NepRWA_MIB030 [Mine Brook at Nebo St] from 2008-2010 (historic n=3-6/yr) and 2011-2014 and 2017-2022 (current n=4-6/yr). Since bacteria data from the historic IR window are all indicative of good water quality conditions, only the analysis from the current IR window (1 station) will be summarized here. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_MIB030 indicated 3 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018 and 2021-2022, 25-100%), 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2) and cumulatively across years 27% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1938	MassDEP	Water Quality	Mill Brook	[the Mill Brook Road crossing nearest Nebo Street, Medfield]	42.193621	-71.279661
NepRWA_MIB030	Neponset River Watershed Association	Water Quality	Mine Brook	Mine Brook @ Nebo Street	42.186067	-71.282400

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

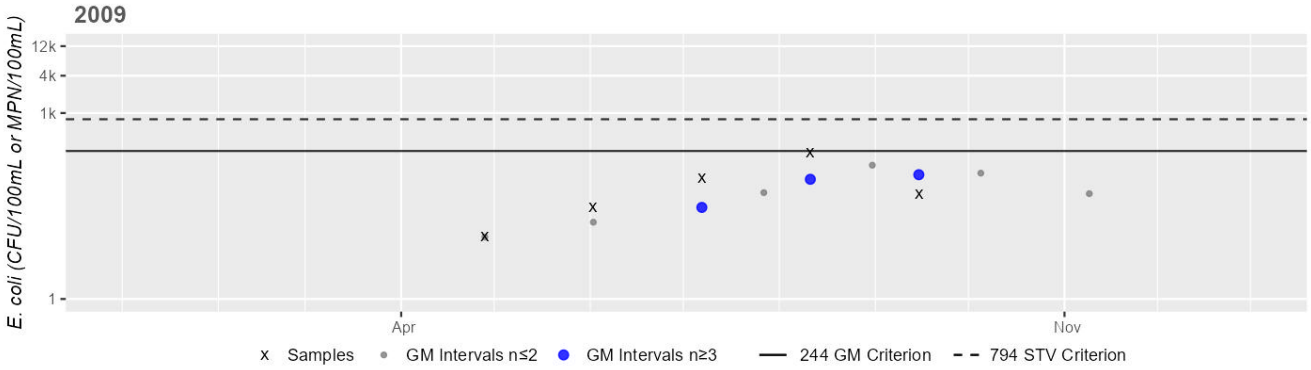
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1938	MassDEP	E. coli	04/28/09	09/15/09	5	10	230	49
NepRWA_MIB030	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	10	292	53
NepRWA_MIB030	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	3	5	63	23
NepRWA_MIB030	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	4	20	211	83

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MIB030	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	203	64
NepRWA_MIB030	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	10	990	92
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/22/13	10/23/13	5	10	809	83
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	31	1040	113
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	63	441	144
NepRWA_MIB030	Neponset River Watershed Association	E. coli	06/14/18	10/11/18	4	31	2490	586
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	4	10	335	47
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	5	31	609	132
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	537	111
NepRWA_MIB030	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	354	88

Station MASSDEP_W1938 - Escherichia coli

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



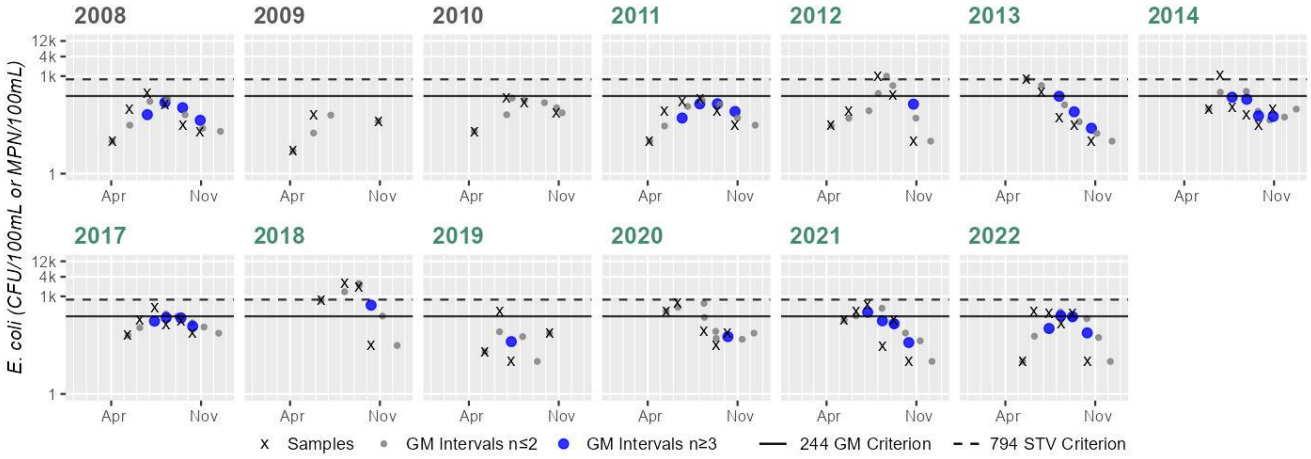
Variable*	Result
Samples	5
SeasGM	49
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
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 NepRWA_MIB030 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	53
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	3
SeasGM	23
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	83
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	64
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	92
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	5
SeasGM	83
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	113
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	144
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	586
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	50%

Variable*	Result
Samples	4
SeasGM	47
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	132
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	111
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	88
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	11%	27%

**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.*

Mill Brook (MA73-12)

Location:	Source northeast of Ledgewood Drive, Dover to inlet of Pettee Pond, Westwood.
AU Type:	RIVER
AU Size:	2.9 MILES
Classification/Qualifier:	B

Mill Brook (MA73-12)

Watershed Area: 2.25 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.25	2.22	0.61	0.61
Agriculture	2.4%	2.4%	2.7%	2.7%
Developed	16.7%	17%	17.2%	17.2%
Natural	66.1%	65.8%	56.9%	56.9%
Wetland	14.8%	14.9%	23.2%	23.2%
Impervious	9.4%	9.6%	9.7%	9.7%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	5	Escherichia Coli (E. Coli)	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert

Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Mill Brook (MA73-12) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Mill Brook (MA73-12) 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 Mill Brook (MA73-12) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples at the downstream end of Mill Brook at NepRWA_MLB024 [Mill Brook at inlet of Petee's Pond] from 2011-2014 and 2017-2022 (n=5-6/yr). Analysis of the recent five years of the multi-year limited frequency dataset from this station indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 50-100%), 3 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018 and 2021-2022, n=2), and cumulatively across years 72% of intervals had GMs >126 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_MLB024	Neponset River Watershed Association	Water Quality	Mill Brook	Mill Brook @ inlet of Petee's Pond	42.189200	-71.240080

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

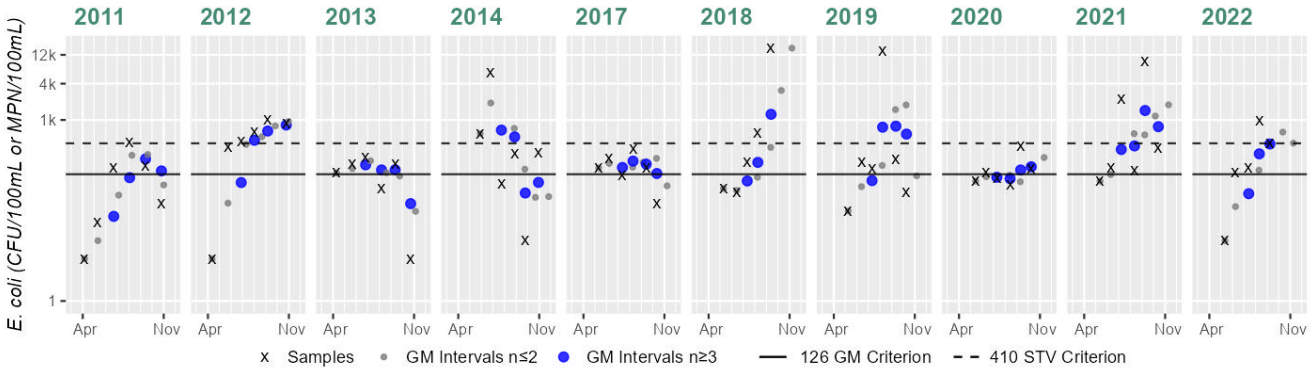
(NepRWA 2023) (MassDEP Undated 4)

[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
NepRWA_MLB024	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	419	60
NepRWA_MLB024	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	1010	275
NepRWA_MLB024	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	240	86
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	10	6130	250
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	41	332	145
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/10/18	09/13/18	5	63	15500	387
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	31	14100	239
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	83	364	137
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	97	9210	500
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/12/22	09/08/22	5	10	959	153

Station NepRWA_MLB024 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	60
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	275
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	86
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	250
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	145
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	387
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	239
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	137
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	500
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	153
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	2
%n>STV	40%

Cumulative %GMI Exceedance Current (2011-2022)
71%

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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Mill Brook (MA73-12) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Mill Brook from 2008-2022 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the downstream end of the AU at W1941 [the Tamarack Rd crossing nearest Briar Lane, Westwood] from Apr-Sep 2009 (historic n=5), and the downstream end of the AU at NepRWA_MLB024 [Mill Brook at inlet of Petee's Pond] from 2008-2010 (historic n=5-6/yr) and 2011-2014 and 2017-2022 (current n=5-6/yr). Since bacteria data from the historic IR window are all indicative of good water quality conditions, only the analysis from the current IR window (1 station) will be summarized here. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_MLB024 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2019 and 2021-2022, 33-100%), and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2021, n=2), cumulatively across years 55% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1941	MassDEP	Water Quality	Mill Brook	[the Tamarack Road crossing nearest Briar Lane, Westwood]	42.193625	-71.237796
NepRWA_MLB024	Neponset River Watershed Association	Water Quality	Mill Brook	Mill Brook @ inlet of Petee's Pond	42.189200	-71.240080

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

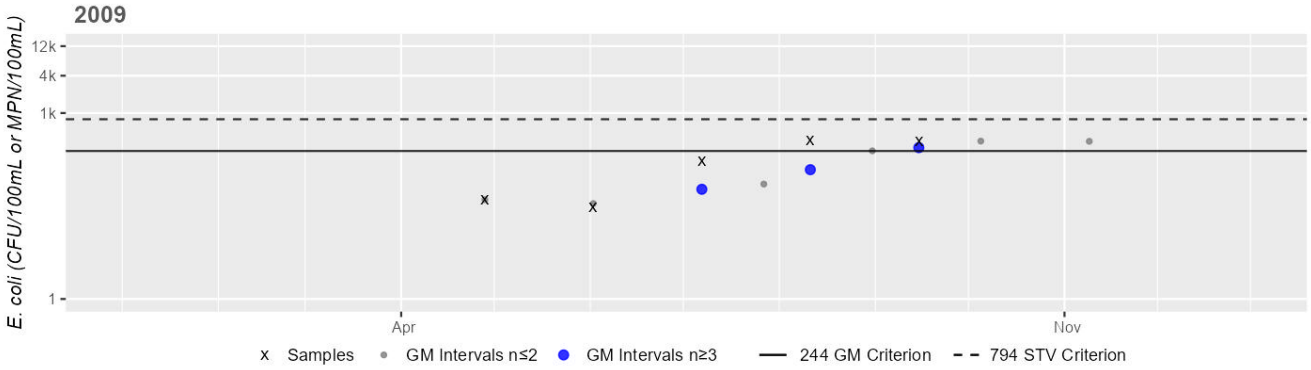
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1941	MassDEP	E. coli	04/28/09	09/15/09	5	30	355	120
NepRWA_MLB024	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	5	1520	55
NepRWA_MLB024	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	10	275	46
NepRWA_MLB024	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	5	5	419	46

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MLB024	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	419	60
NepRWA_MLB024	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	1010	275
NepRWA_MLB024	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	240	86
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	10	6130	250
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	41	332	145
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/10/18	09/13/18	5	63	15500	387
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	31	14100	239
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	83	364	137
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	97	9210	500
NepRWA_MLB024	Neponset River Watershed Association	E. coli	05/12/22	09/08/22	5	10	959	153

Station MASSDEP_W1941 - Escherichia coli

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



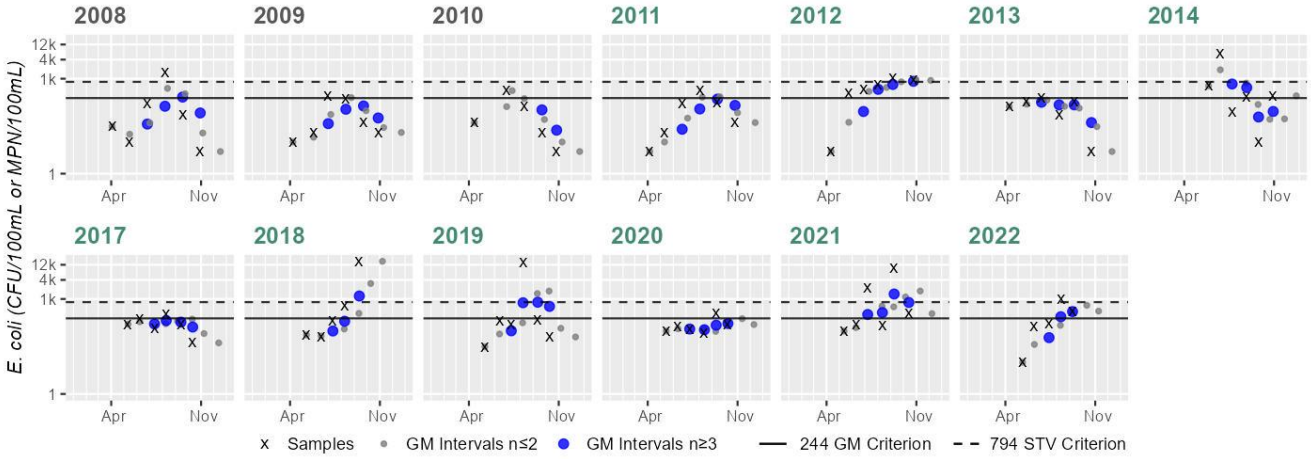
Variable*	Result
Samples	5
SeasGM	120
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
33%

**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 NepRWA_MLB024 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	55
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	46
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	46
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	60
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	275
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	86
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	250
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	145
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	387
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	239
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	137
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	500
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	153
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	1
%n>STV	20%

Cumulative %GMI Exceedance Historic (1997-2010)
10%

Cumulative %GMI Exceedance Current (2011-2022)
39%

Cumulative %GMI Exceedance Current (Recent 5 Years)
55%

**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.*

Mine Brook (MA73-09)

Location:	Headwaters, outlet of Jewells Pond, Medfield, to the inlet of Turner Pond, Walpole.
AU Type:	RIVER
AU Size:	3 MILES
Classification/Qualifier:	B

Mine Brook (MA73-09)

Watershed Area: 5.99 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	5.99	3.70	1.90	1.21
Agriculture	2.4%	1.7%	0.6%	0.8%
Developed	16.6%	17%	10.6%	10.1%
Natural	65.9%	64.2%	56.2%	54.8%
Wetland	15.1%	17.1%	32.7%	34.3%
Impervious	8%	7.9%	4.6%	4.3%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Dissolved Oxygen	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert

Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Mine Brook (MA73-09) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Mine Brook (MA73-09) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Mine Brook (MA73-09) are available, so the Primary Contact Recreation Use is Not Assessed.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Mine Brook (MA73-09) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected *E. coli* bacteria samples close to the upstream end of Mine Brook at W1939 [stream crossing off the northern end of Mill Pond Rd, Walpole] from Apr-Sep 2009 (historic n=5). Analysis of the historic single year limited frequency dataset from this station indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 18 CFU/100ml. Historic *E. coli* data from W1939 meet 2024 CALM guidance. However, since these data were collected prior to the current IR window (2011-2022) the Secondary Contact Recreation Use cannot be positively assessed using bacteria data.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1939	MassDEP	Water Quality	Mine Brook	[stream crossing off the northern end of Mill Pond Road, Walpole]	42.154006	-71.263732

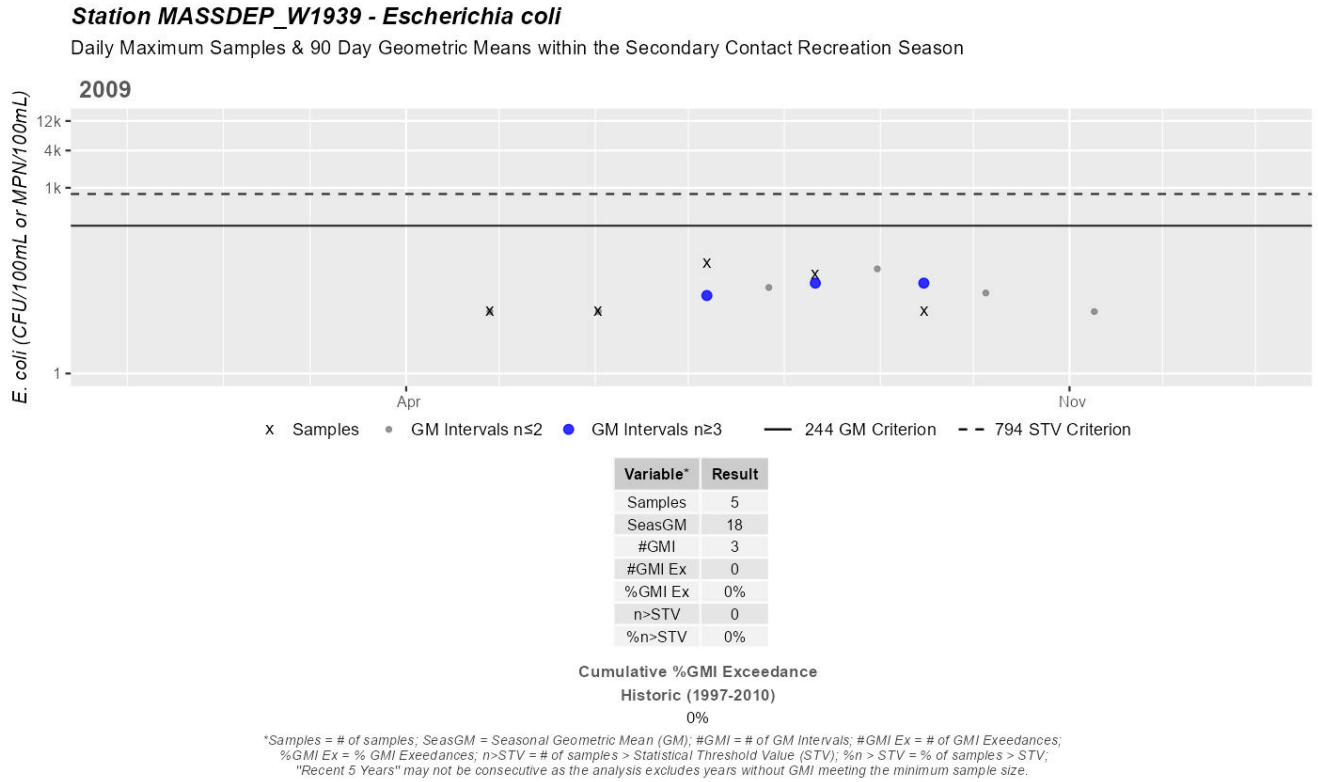
Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5)

[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
W1939	MassDEP	E. coli	04/28/09	09/15/09	5	10	60	18



Variable*	Result
Samples	5
SeasGM	18
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
0%

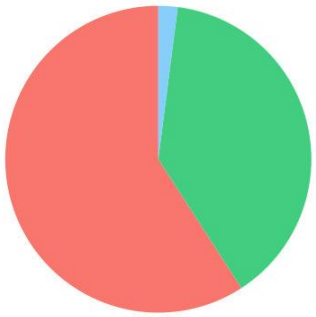
**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Mother Brook (MA73-28)

Location:	Headwaters at the Charles River Diversion control structure, Dedham to mouth at confluence with Neponset River, Boston [Reported as MA72-13 until May 3, 2000].
AU Type:	RIVER
AU Size:	3.7 MILES
Classification/Qualifier:	B

Mother Brook (MA73-28)

Watershed Area: 2.61 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.61	2.61	0.54	0.54
Agriculture	0%	0%	0%	0%
Developed	59.1%	59.1%	53.2%	53.2%
Natural	38.8%	38.8%	40%	40%
Wetland	2%	2%	6.9%	6.9%
Impervious	39.6%	39.6%	38.9%	38.9%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Debris*)	--	Unchanged
5	5	(Flow Regime Modification*)	--	Unchanged
5	5	Color	--	Unchanged
5	5	DDT in Fish Tissue	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Escherichia Coli (E. Coli)	2592	Unchanged
5	5	Fecal Coliform	2592	Unchanged
5	5	Mercury in Fish Tissue	--	Unchanged
5	5	Odor	--	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged
5	5	Trash	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Debris*)	Illegal Dumps or Other Inappropriate Waste Disposal (N)	--	--	X	X	X
(Flow Regime Modification*)	Water Diversions (Y)	X	--	--	--	--
Color	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	X	X
DDT in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Mercury in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Odor	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	X	X
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--
Trash	Illegal Dumps or Other Inappropriate Waste Disposal (N)	--	--	X	X	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 Mother Brook (MA73-28) continues to be assessed as Not Supporting and the prior DDT in Fish Tissue, PCBs in Fish Tissue, and Mercury in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Mother Brook (referred to by MDPH as ''Mother Brook (between Charles River and Knight Street Dam)'' or ''Mother Brook (between the Knight Street Dam and the Neponset River)'') in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent MDPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Mother Brook (MA73-28) continues to be assessed as Not Supporting with the prior Debris, Trash, Odor and Color impairments being carried forward. No new data are available to evaluate the Aesthetics Use for Mother Brook.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Mother Brook (MA73-28) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 2 stations in 2018-2022. The prior Fecal Coliform impairment is being carried forward and the prior Color, Debris, Odor, and Trash impairments (from the Aesthetics Use) are also being carried forward. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in Mother Brook from 2011-2022 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the upstream end at NepRWA_MOB001 [Mother Brook at Washington St] from 2011-2022 (n=4-6/yr) and close to the downstream end at NepRWA_MOB032 [Mother Brook at Reservation] from 2011-2022 (n=5-6/yr). Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_MOB001 indicated 3 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2019 and 2021, 75-100%) and while only 1 yr had ≥2 samples exceed the 410 CFU/100ml STV (2018, n=4), cumulatively across years 55% of intervals had GMs >126 CFU/100ml. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_MOB032 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 50-100%) and while only 1 yr had ≥2 samples exceed the 410 CFU/100ml STV (2018, n=3), cumulatively across years 80% of intervals had GMs >126 CFU/100ml. *E. coli* data from both stations NepRWA_MOB001 and NepRWA_MOB032 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_MOB001	Neponset River Watershed Association	Water Quality	Mother Brook	Mother Brook @ Washington Street	42.255098	-71.164577
NepRWA_MOB032	Neponset River Watershed Association	Water Quality	Mother Brook	Mother Brook @ Reservation	42.250667	-71.129520

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)
(NepRWA 2023) (MassDEP Undated 4)
[Result units are CFU/100mL or MPN/100mL]

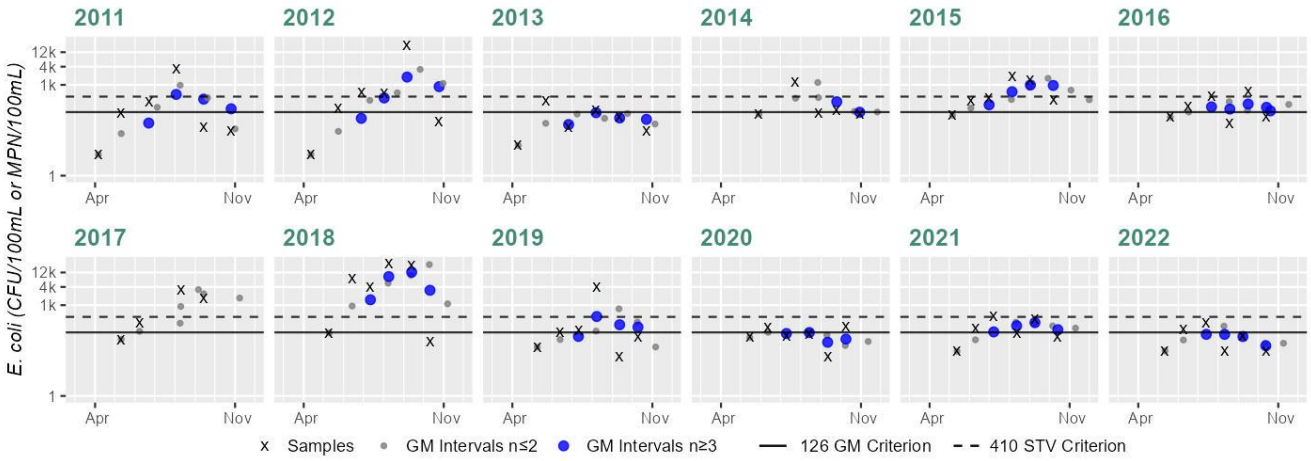
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MOB001	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	3450	94
NepRWA_MOB001	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	19900	261

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MOB001	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	288	59
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	5	109	1200	190
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/06/15	10/07/15	6	98	1940	457
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/19/16	10/13/16	6	52	591	161
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/11/17	09/14/17	4	74	3260	569
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	62	24200	2160
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	3870	132
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	199	93
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	30	437	142
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	31	256	70
NepRWA_MOB032	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	1870	83
NepRWA_MOB032	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	960	83
NepRWA_MOB032	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	20	386	66
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/29/14	09/25/14	5	52	2910	326
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/06/15	10/07/15	6	20	374	168
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/19/16	10/13/16	5	109	571	186
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	52	331	151

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	63	1780	282
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	13000	160
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	31	467	132
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	73	1720	242
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	63	295	147

Station NepRWA_MOB001 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	94
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	261
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	59
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	190
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	457
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	161
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	4
SeasGM	569
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	2160
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	132
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	93
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	142
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	70
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

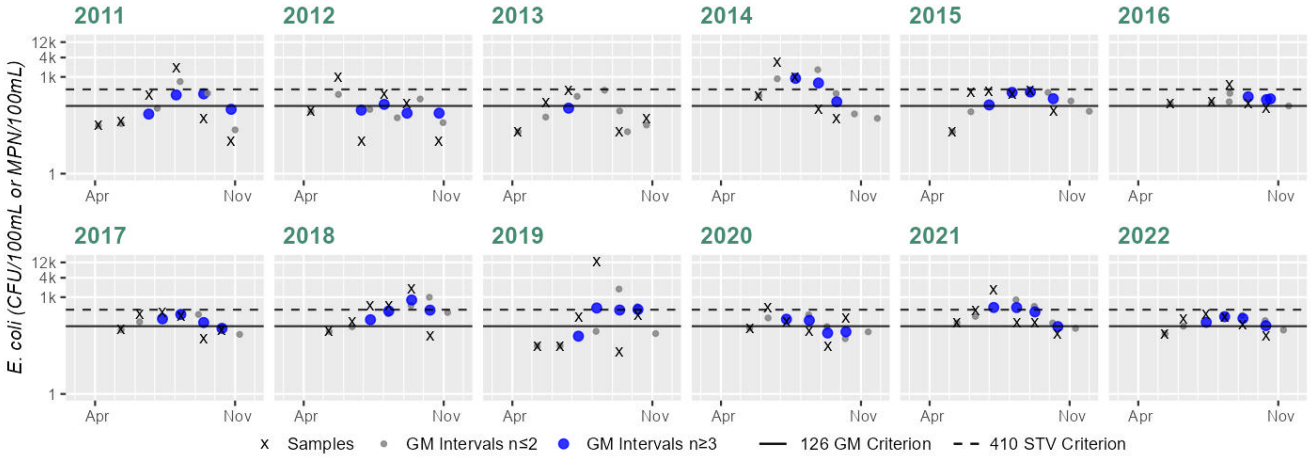
Cumulative %GMI Exceedance Current (2011-2022)
62%

Cumulative %GMI Exceedance Current (Recent 5 Years)
55%

**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 MASSDEP_W1949 & NepRWA_MOB032 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	83
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	83
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	66
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	326
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	168
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	186
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	151
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	282
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	160
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	132
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	242
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	147
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)
74%

Cumulative %GMI Exceedance Current (Recent 5 Years)
80%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Mother Brook (MA73-28) continues to be assessed as Not Supporting. The prior Color, Debris, Odor, and Trash impairments (from the Aesthetics Use) are being carried forward. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 2 stations/combined stations in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Mother Brook from 2006-2022 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the upstream end at NepRWA_MOB001 [Mother Brook at Washington St] from 2006-2010 (historic n=4-6/yr) and 2011-2022 (current n=4-6/yr), and close to the downstream end at combined station W1949 & NepRWA_MOB032 [Reservation Rd, in locality of Hyde Park, Boston & Mother Brook at Reservation] from 2006-2010 (historic n=1-9/yr) and 2011-2022 (current n=5-6/yr). Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_MOB001 indicated 3 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2019 and 2021, 25-100%), and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=4), cumulatively across years 30% of intervals had GMs >244 CFU/100ml. It should be noted that data in the historic IR window at station NepRWA_MOB001 was also indicative of an Escherichia Coli (E. Coli) impairment, with cumulatively 41% of the GM intervals >244 CFU/100ml, for this multi year low frequency dataset. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from W1949 & NepRWA_MOB032 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2019 and 2021-2022, 25-75%), and while 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, cumulatively across years 50% of intervals had GMs >244 CFU/100ml. *E. coli* data from both stations NepRWA_MOB001 and W1949 & NepRWA_MOB032 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1949	MassDEP	Water Quality	Mother Brook	[Reservation Road, in locality of Hyde Park, Boston]	42.250621	-71.129534
NepRWA_MOB001	Neponset River Watershed Association	Water Quality	Mother Brook	Mother Brook @ Washington Street	42.255098	-71.164577
NepRWA_MOB032	Neponset River Watershed Association	Water Quality	Mother Brook	Mother Brook @ Reservation	42.250667	-71.129520

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

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

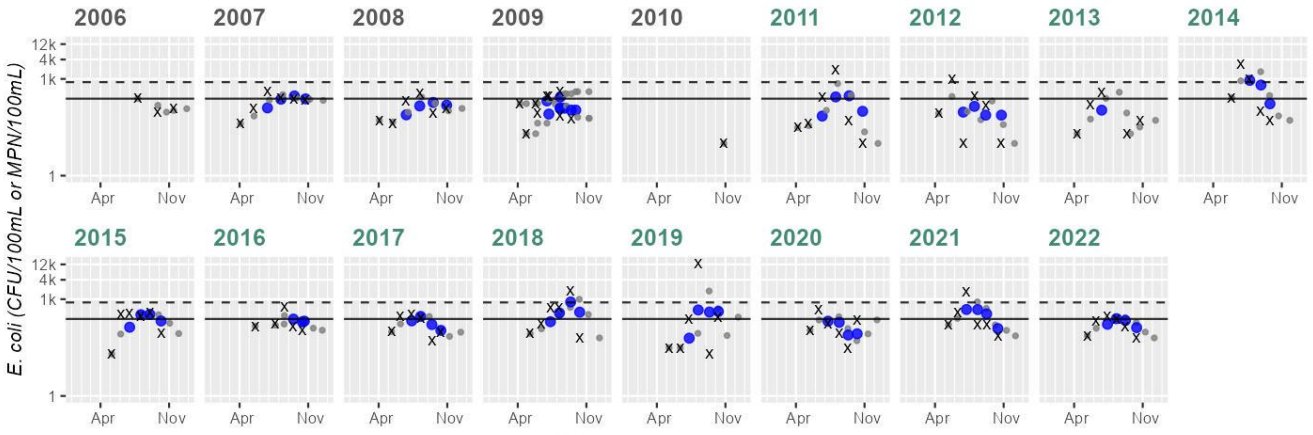
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1949	MassDEP	E. coli	04/28/09	09/15/09	5	20	300	74
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/24/06	11/15/06	4	5	236	45
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/16/07	10/24/07	5	41	368	129
NepRWA_MOB001	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	52	24200	620
NepRWA_MOB001	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	5	52	24200	1017
NepRWA_MOB001	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	41	740	105
NepRWA_MOB001	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	3450	94
NepRWA_MOB001	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	19900	261
NepRWA_MOB001	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	288	59
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	5	109	1200	190
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/06/15	10/07/15	6	98	1940	457
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/19/16	10/13/16	6	52	591	161
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/11/17	09/14/17	4	74	3260	569
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	62	24200	2160
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	3870	132
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	199	93

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	30	437	142
NepRWA_MOB001	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	31	256	70
NepRWA_MOB032	Neponset River Watershed Association	E. coli	07/26/06	11/15/06	3	93	248	140
NepRWA_MOB032	Neponset River Watershed Association	E. coli	04/04/07	10/24/07	6	41	404	174
NepRWA_MOB032	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	41	350	108
NepRWA_MOB032	Neponset River Watershed Association	E. coli	04/08/09	08/12/09	4	171	402	244
NepRWA_MOB032	Neponset River Watershed Association	E. coli	10/27/10	10/27/10	1	10	10	10
NepRWA_MOB032	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	1870	83
NepRWA_MOB032	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	960	83
NepRWA_MOB032	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	20	386	66
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/29/14	09/25/14	5	52	2910	326
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/06/15	10/07/15	6	20	374	168
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/19/16	10/13/16	5	109	571	186
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	52	331	151
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	63	1780	282
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	13000	160
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	31	467	132

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	73	1720	242
NepRWA_MOB032	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	63	295	147

Station MASSDEP_W1949 & NepRWA_MOB032 - Escherichia coli

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



Variable*	Result
Samples	3
SeasGM	140
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	174
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	108
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	9
SeasGM	126
#GMI	8
#GMI Ex	1
%GMI Ex	12%
n>STV	0
%n>STV	0%

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

Variable*	Result
Samples	6
SeasGM	83
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	83
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	66
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	326
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	168
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	186
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	151
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	282
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	160
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	132
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	242
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

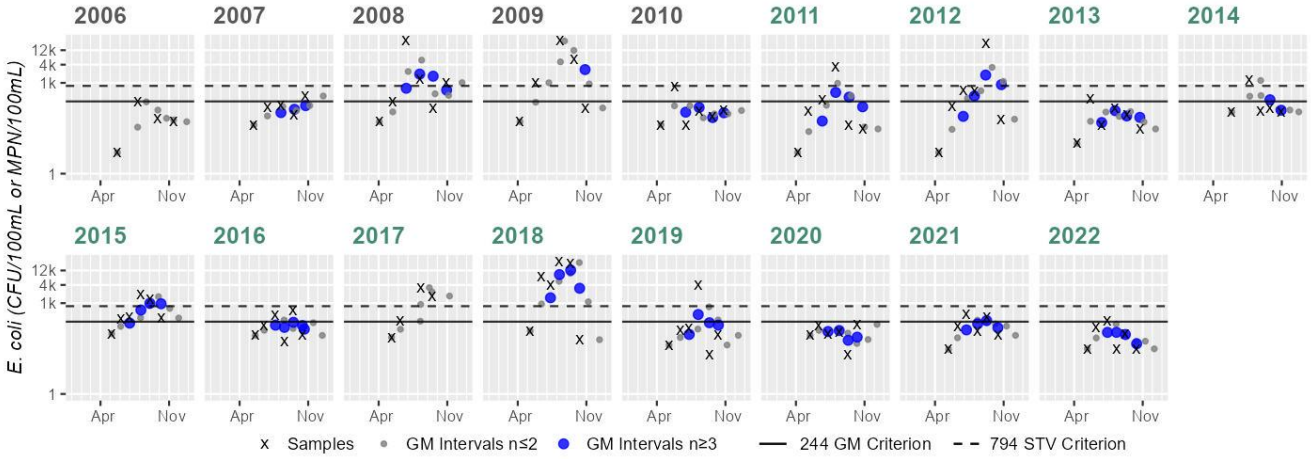
Variable*	Result
Samples	6
SeasGM	147
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
12%	39%	50%

**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 NepRWA_MOB001 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	45
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	129
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	620
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	5
SeasGM	1017
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	3
%n>STV	60%

Variable*	Result
Samples	6
SeasGM	105
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	94
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	261
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	59
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	190
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	457
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	161
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	569
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	2160
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	132
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	93
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	142
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	70
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
41%	34%	30%

**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.*

Neponset Reservoir (MA73034)

Location:	Foxborough.
AU Type:	FRESHWATER LAKE
AU Size:	312 ACRES
Classification/Qualifier:	B: WWF, HQW

No usable data were available for Neponset Reservoir (MA73034) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fanwort*)	--	Unchanged
5	5	Algae	--	Unchanged
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Algae	Source Unknown (N)	X	--	X	X	X
Turbidity	Source Unknown (N)	X	--	X	X	X

Neponset River (MA73-01)

Location:	Outlet of Neponset Reservoir, Foxborough to confluence with East Branch, Canton (through former 2010 segments: Crackrock Pond MA73010 and Bird Pond MA73002) (SARIS note: the upper portion of segment between Neponset Reservoir Dam (NATID: MA03115) and Crackrock Pond Dam not included in SARIS descriptor).
AU Type:	RIVER
AU Size:	13.2 MILES
Classification/Qualifier:	B: WWF

Neponset River (MA73-01)

Watershed Area: 43.79 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	43.79	10.97	13.66	3.01
Agriculture	1.7%	0.2%	1.4%	0%
Developed	31.3%	46.4%	21.6%	29.9%
Natural	53%	40.6%	52.1%	37.5%
Wetland	14%	12.9%	24.8%	32.6%
Impervious	17.3%	27.8%	11.4%	16%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Curly-leaf Pondweed*)	--	Unchanged
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	(Non-Native Aquatic Plants*)	--	Unchanged
5	5	Cadmium	--	Unchanged
5	5	DDT in Fish Tissue	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Escherichia Coli (E. Coli)	54840	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Phosphorus, Total	--	Unchanged
5	5	Unspecified Metals in Sediment	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Curly-leaf Pondweed*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Cadmium	Industrial Point Source Discharge (Y)	X	--	--	--	--
DDT in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	--	--	X	X	X
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--
Unspecified Metals in Sediment	Source Unknown (N)	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 Neponset River (MA73-01) continues to be assessed as Not Supporting and the prior PCBs in Fish Tissue and DDT in Fish Tissue impairments are being carried forward. MDPH included a site-specific advisory for Neponset River (referred to by MDPH as ''Neponset River (between the Hollingsworth & Vose Dam in Walpole and the Walter Baker Dam in Boston)'') in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent MDPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Neponset River (MA73-01) continues to be assessed as as Not Supporting with the prior Nutrient/Eutrophication Biological Indicators impairment being carried forward. MassDEP staff recorded aesthetics observations at four stations throughout this Neponset River AU during the summer's of 2017 and 2018 as part of the MassDEP Bacteria Source Tracking (BST) Project and a number of Special Projects. The station descriptions from upstream to downstream are as follows: close to the upstream end of the AU downstream/north of outlet of Crackrock Pond (north of North Street), Foxborough (W0533 in 2017 and 2018); in the downstream half of the AU ~850 feet downstream from railroad spur north at the Hollingsworth & Vose Dam (NAT ID: MA03136), Walpole (W2737 in 2017); a little further downstream just upstream of the confluence with Hawes Brook, at the footbridge downstream/north of Hollingsworth and Vose, upstream/south of Morse Street, Norwood (W0543 in 2017 and 2018), and closer to the downstream end of the AU but still upstream of the confluence with Traphole Brook (W1933 in 2017). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded at any of the stations, but the data were extremely limited (n=1-2/station/yr). However, Neponset River Watershed Association (NepRWA) did provide documentation during the 2016 public comment period for the Integrated Report that the Crack Rock Pond impoundment in this AU, continues to suffer from excess duckweed growth annually (up to 100% cover) and recent Google Earth images i.e. June 2015 and June 2019 (Google Earth Pro Undated) are consistent with this comment showing a dense coverage of floating and emergent vegetation; so the Aesthetic Use continues to be assessed as as impaired.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0533	MassDEP	Water Quality	Neponset River	[downstream/north of outlet of Crackrock Pond (north of North Street), Foxborough]	42.085924	-71.256688
W0543	MassDEP	Water Quality	Neponset River	[footbridge downstream/north of Hollingsworth and Vose, upstream/south of Morse Street, Norwood]	42.172694	-71.204985
W1933	MassDEP	Water Quality	Neponset River	[approximately 3200 feet downstream of Route 1, north of the eastern end of Vanderbuilt Avenue, Norwood]	42.171871	-71.185944
W2737	MassDEP	Water Quality	Neponset River	[approximately 850 feet downstream from railroad spur north at the Hollingsworth & Vose Dam (NAT ID: MA03136), Walpole (at the Norwood town line)]	42.166680	-71.211223

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W0533	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0533 on Neponset River (MA73-01) during 2 site visits between Oct 2017 and Dec 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W0533	2018	1	Aesthetic observations were made by MassDEP field sampling crews at Station W0533 on Neponset River (MA73-01) during 1 site visit on May 22, 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted an aesthetics impairment flag (n=1). However, aesthetic observations are limited (n<3).
W0543	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0543 on Neponset River (MA73-01) during 2 site visits between Oct 2017 and Dec 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W0543	2018	1	Aesthetic observations were made by MassDEP field sampling crews at Station W0543 on Neponset River (MA73-01) during 1 site visit on May 22, 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W1933	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W1933 on Neponset River (MA73-01) during 2 site visits between Aug 2017 and Oct 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2737	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2737 on Neponset River (MA73-01) during 2 site visits between Aug 2017 and Oct 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W0533	2017	2	2	0
W0533	2018	1	0	0
W0543	2017	2	2	0
W0543	2018	1	0	0
W1933	2017	2	2	0
W2737	2017	2	0	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0533	Neponset River	2017	Aesthetics Impaired?	No	2	2
W0533	Neponset River	2017	Aquatic Plant Density, Overall	None	2	2
W0533	Neponset River	2017	Color	None	2	2
W0533	Neponset River	2017	Objectionable Deposits	No	2	2
W0533	Neponset River	2017	Odor	None	2	2
W0533	Neponset River	2017	Periphyton Density, Filamentous	None	2	2
W0533	Neponset River	2017	Periphyton Density, Film	None	2	2
W0533	Neponset River	2017	Scum	No	2	2
W0533	Neponset River	2017	Turbidity	None	2	2
W0533	Neponset River	2018	Aesthetics Impaired?	Yes	1	1
W0533	Neponset River	2018	Aquatic Plant Density, Overall	None	1	1
W0533	Neponset River	2018	Color	Light Yellow/Tan	1	1
W0533	Neponset River	2018	Objectionable Deposits	No	1	1
W0533	Neponset River	2018	Odor	Raw sewage	1	1
W0533	Neponset River	2018	Periphyton Density, Filamentous	Unobservable	1	1
W0533	Neponset River	2018	Periphyton Density, Film	Unobservable	1	1
W0533	Neponset River	2018	Scum	Yes	1	1
W0533	Neponset River	2018	Turbidity	Slightly Turbid	1	1
W0543	Neponset River	2017	Aesthetics Impaired?	No	2	2
W0543	Neponset River	2017	Aquatic Plant Density, Overall	None	2	2
W0543	Neponset River	2017	Color	None	2	2
W0543	Neponset River	2017	Objectionable Deposits	No	2	2
W0543	Neponset River	2017	Odor	None	2	2

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0543	Neponset River	2017	Periphyton Density, Filamentous	None	2	2
W0543	Neponset River	2017	Periphyton Density, Film	None	2	2
W0543	Neponset River	2017	Scum	No	2	2
W0543	Neponset River	2017	Turbidity	None	2	2
W0543	Neponset River	2018	Aesthetics Impaired?	No	1	1
W0543	Neponset River	2018	Aquatic Plant Density, Overall	None	1	1
W0543	Neponset River	2018	Color	Light Yellow/Tan	1	1
W0543	Neponset River	2018	Objectionable Deposits	No	1	1
W0543	Neponset River	2018	Odor	None	1	1
W0543	Neponset River	2018	Periphyton Density, Filamentous	Unobservable	1	1
W0543	Neponset River	2018	Periphyton Density, Film	Unobservable	1	1
W0543	Neponset River	2018	Scum	Yes	1	1
W0543	Neponset River	2018	Turbidity	None	1	1
W1933	Neponset River	2017	Aquatic Plant Density, Overall	Sparse	2	2
W1933	Neponset River	2017	Color	None	2	2
W1933	Neponset River	2017	Odor	Musty (Basement)	1	2
W1933	Neponset River	2017	Odor	None	1	2
W1933	Neponset River	2017	Periphyton Density, Filamentous	None	2	2
W1933	Neponset River	2017	Periphyton Density, Film	Sparse	2	2
W1933	Neponset River	2017	Turbidity	Slightly Turbid	2	2
W2737	Neponset River	2017	Aquatic Plant Density, Overall	NR	1	2
W2737	Neponset River	2017	Aquatic Plant Density, Overall	Unobservable	1	2
W2737	Neponset River	2017	Color	None	1	2
W2737	Neponset River	2017	Color	NR	1	2
W2737	Neponset River	2017	Odor	None	2	2
W2737	Neponset River	2017	Periphyton Density, Filamentous	NR	1	2
W2737	Neponset River	2017	Periphyton Density, Filamentous	Unobservable	1	2
W2737	Neponset River	2017	Periphyton Density, Film	NR	1	2
W2737	Neponset River	2017	Periphyton Density, Film	Unobservable	1	2
W2737	Neponset River	2017	Turbidity	NR	1	2
W2737	Neponset River	2017	Turbidity	Slightly Turbid	1	2

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for the Neponset River (MA73-01) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 3 stations in 2018-2022. The prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is also being carried forward. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in the Neponset River from 2011-2022 at 6 stations, with stations/sample years from upstream to downstream as follows: close to the upstream end at NepRWA_NER002 [at outlet of Crackrock Pond] from 2011-2014 & 2017-2022 (n=5-6/yr), a third of the way down at NepRWA_NER040 [S. St] from 2011-2014 & 2017-2022 (n=5-6/yr), two-thirds of the way down at NepRWA_NER075 [Hollingsworth & Vose Dam] from 2011-2014 & 2017-2022 (n=5-6/yr) & W2737 [~850 ft downstream from railRd spur N at the Hollingsworth & Vose Dam (T ID: MA03136), Walpole (Norwood town line)] from Aug-Oct 2017 (n=2), three-quarters of the way down at NepRWA_NER080 [Pleasant St Bridge] from 2011-2014 and 2017-2022 (n=4-6/yr), close to the downstream end at W1933 [~3200 ft downstream of Rt. 1, N of the eastern end of Vanderbuilt Avenue, Norwood] from Aug-Oct 2017 (n=2). In general, at the upstream end of the AU (station NepRWA_NER002) the *E. coli* data is indicative of good water quality conditions, however water quality appears to worsen moving downstream. Analysis of the recent five years of the multi-year limited frequency dataset from NepRWA_NER002 indicated 0 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml, 0 yrs had ≥2 samples exceed the 410 CFU/100ml STV and cumulatively across years 0% of intervals had GMs >126 CFU/100ml. However, analysis of the recent five years of the multi-year limited frequency datasets from 3 other stations are as follows: NepRWA_NER040 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 50-100%), 3 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018-2019 and 2022, n=2-3) and cumulatively 75% of intervals had GMs >126 CFU/100ml; NepRWA_NER075 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2019 and 2021-2022, 50-100%), 1 yr had ≥2 samples exceed the 410 CFU/100ml STV (2018, n=2), and cumulatively 55% of intervals had GMs >126 CFU/100ml; NepRWA_NER080 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 100%), 2 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018 and 2022, n=3 & 4) and cumulatively across years 100% of intervals had GMs >126 CFU/100ml. *E. coli* data from stations W2737 and W1933 are too limited according to the 2024 CALM to assess the Primary Contact Recreation Use. Overall, while *E. coli* data from NepRWA_NER002 meet 2024 CALM guidance, the data from NepRWA_NER040, NepRWA_NER075, and NepRWA_NER080 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1933	MassDEP	Water Quality	Neponset River	[approximately 3200 feet downstream of Route 1, north of the eastern end of Vanderbuilt Avenue, Norwood]	42.171871	-71.185944
W2737	MassDEP	Water Quality	Neponset River	[approximately 850 feet downstream from railroad spur north at the Hollingsworth & Vose Dam (NAT ID: MA03136), Walpole (at the Norwood town line)]	42.166680	-71.211223
NepRWA_NER002	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ outlet of Crackrock Pond	42.085800	-71.256520
NepRWA_NER040	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ South Street	42.124650	-71.252380
NepRWA_NER075	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ Hollingsworth & Vose Dam	42.163909	-71.212730
NepRWA_NER080	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ Pleasant Street Bridge	42.177500	-71.200370

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(MassDEP Undated 10) (MassDEP Undated 6) (NepRWA 2023) (MassDEP Undated 4)

[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
W1933	MassDEP	E. coli	08/29/17	10/04/17	2	137	196	163
W2737	MassDEP	E. coli	08/29/17	10/04/17	2	16	30	21
NepRWA_NER002	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	253	21
NepRWA_NER002	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	41	19
NepRWA_NER002	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	226	13
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	1860	32
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	301	47

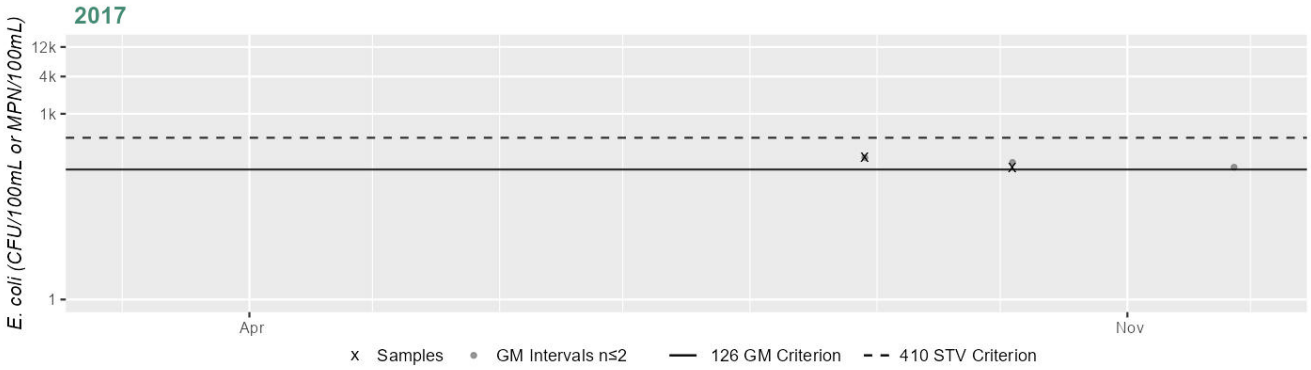
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	5	10	496	55
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	189	51
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	63	25
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	20	156	62
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	259	32
NepRWA_NER040	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	5	10	313	80
NepRWA_NER040	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	2910	260
NepRWA_NER040	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	31	1180	151
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	63	2250	192
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	31	723	119
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	63	6130	330
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	6170	289
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	435	178
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	520	108
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	52	988	253
NepRWA_NER075	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	173	50
NepRWA_NER075	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	20	384	121

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_NER075	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	5	120	27
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/29/14	09/25/14	5	31	17300	184
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	31	568	85
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	41	2140	241
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	5	10	5170	107
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	110	44
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	85	345	135
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	487	96
NepRWA_NER080	Neponset River Watershed Association	E. coli	04/06/11	09/14/11	4	85	457	194
NepRWA_NER080	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	41	2480	254
NepRWA_NER080	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	269	63
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	63	9800	286
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	85	487	153
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	52	2610	436
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	110	10500	387
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	987	245
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	109	3450	357

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	86	8160	525

Station MASSDEP_W1933 - Escherichia coli

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



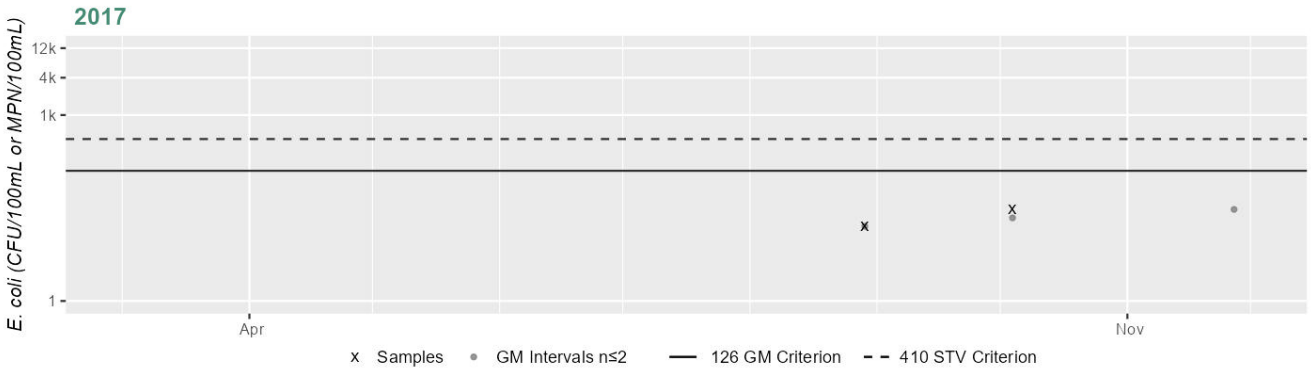
Variable*	Result
Samples	2
SeasGM	163
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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 MASSDEP_W2737 - Escherichia coli

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



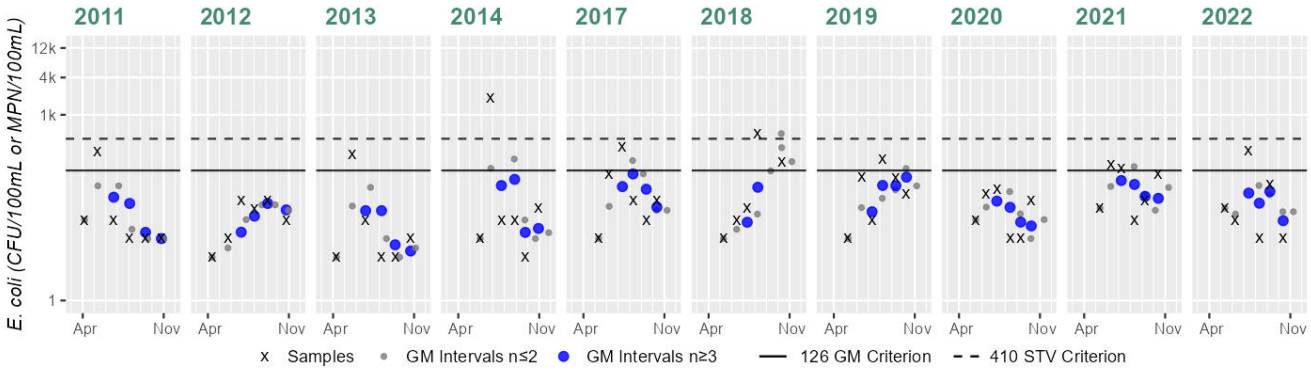
Variable*	Result
Samples	2
SeasGM	21
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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 NepRWA_NER002 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	21
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	19
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	13
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	32
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	47
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	55
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	51
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	25
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	62
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	32
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

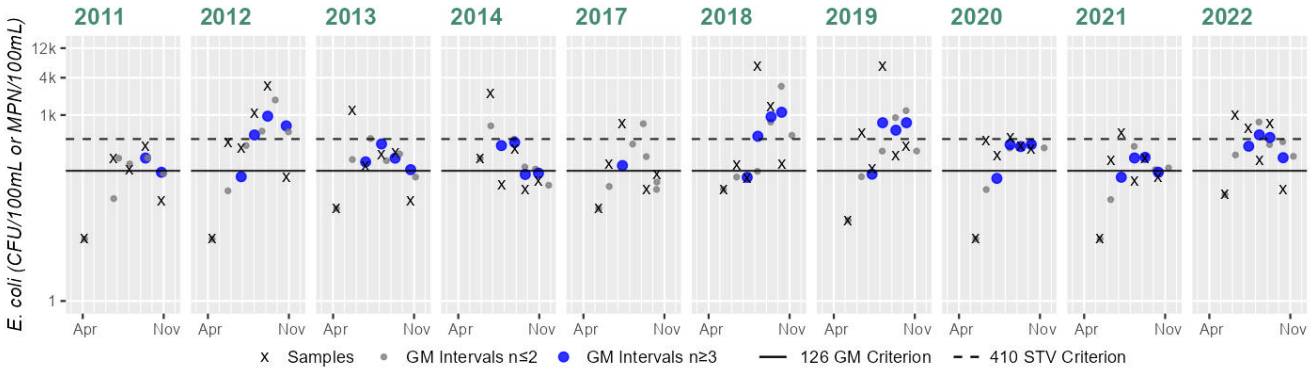
Cumulative %GMI Exceedance
Current (2011-2022)
0%

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 NepRWA_NER040 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	80
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	260
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	151
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	192
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	119
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	330
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	289
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	178
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	108
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	253
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

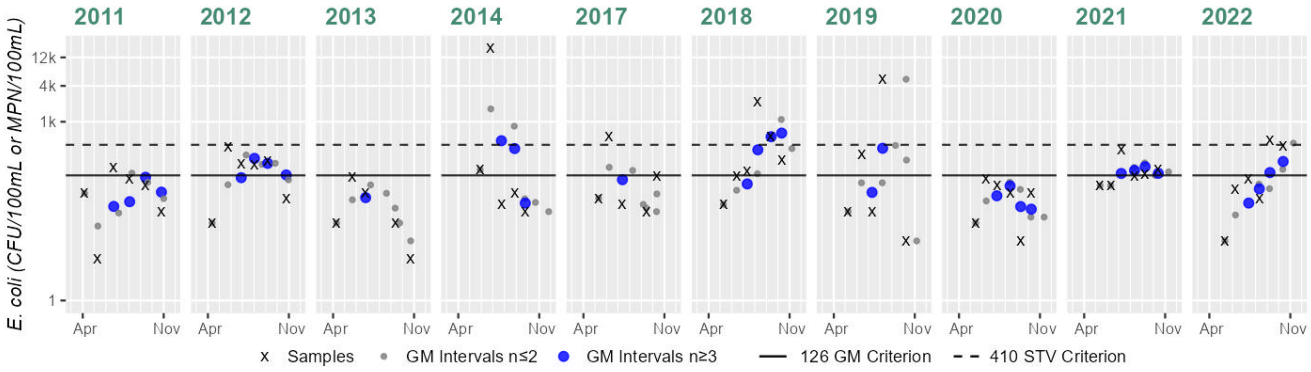
Cumulative %GMI Exceedance Current (2011-2022)
74%

Cumulative %GMI Exceedance Current (Recent 5 Years)
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.*

Station NepRWA_NER075 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	50
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	121
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	27
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	184
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	5
SeasGM	85
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	241
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	107
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	44
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

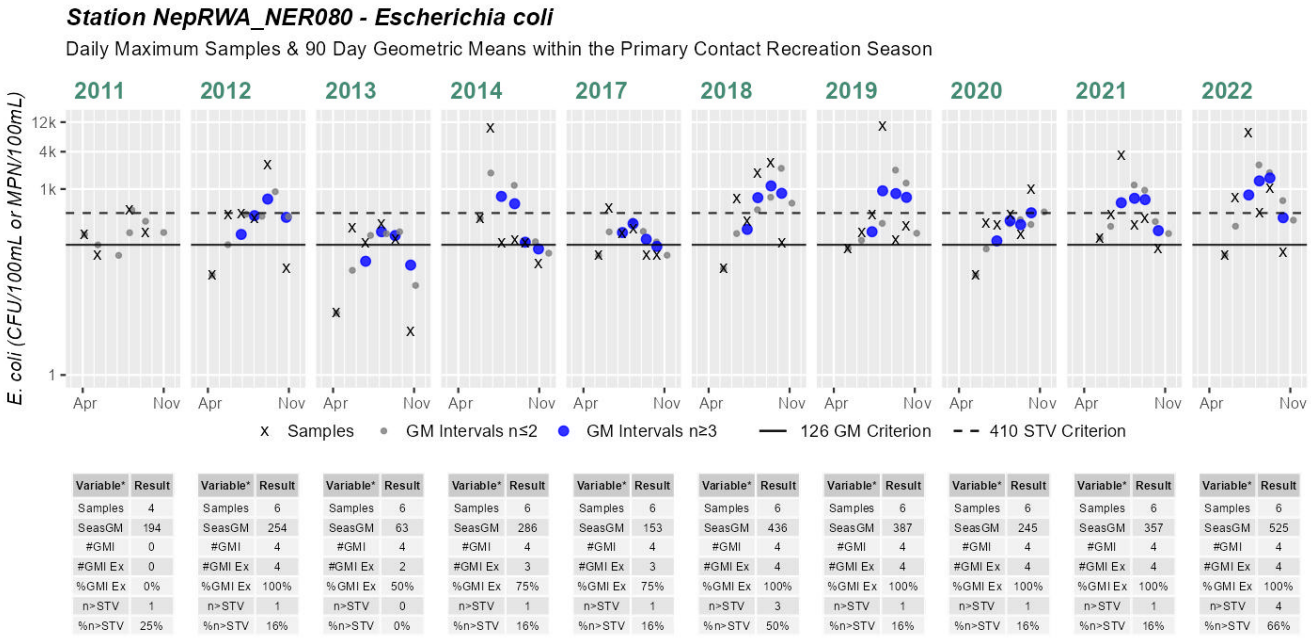
Variable*	Result
Samples	6
SeasGM	135
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	96
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

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

Cumulative %GMI Exceedance Current (Recent 5 Years)
55%

**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	4
SeasGM	194
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	254
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	63
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	286
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	153
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	436
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	387
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	245
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	357
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	525
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Cumulative %GMI Exceedance Current (2011-2022)
88%

Cumulative %GMI Exceedance Current (Recent 5 Years)
100%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for the Neponset River (MA73-01) continues to be assessed as Not Supporting. The prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is being carried forward. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 4 stations (3 in 2018-2022 and 1 in 2017). MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Neponset River from 2008-2022 at 7 stations, with stations/sample years from upstream to downstream as follows: close to the upstream end at NepRWA_NER002 [outlet of Crackrock Pond] from 2008-2010 (historic n=6/yr) as well as 2011-2014 & 2017-2022 (current n=5-6/yr), a third of the way down at NepRWA_NER040 [S. St] from 2008-2010 (historic n=6/yr) as well as 2011-2014 & 2017-2022 (current n=5-6/yr), halfway down at W1943 [parking area crossing SE of the Robbins Rd, Rt. 27 intersection, Walpole] from Apr-Sep 2009 (n=5), two-thirds of the way down at NepRWA_NER075 [Hollingsworth & Vose Dam] from 2008-2010 (historic n=5-6/yr) as well as 2011-2014 & 2017-2022 (current n=5-6/yr) & W2737 [~850 ft downstream from railRd spur N at the Hollingsworth & Vose Dam (T ID: MA03136), Walpole (Norwood town line)] from Aug-Oct 2017 (n=2), three-quarters of the way down at NepRWA_NER080 [Pleasant St Bridge] from 2008-2010 (historic n=5-6/yr) as well as 2011-2014 & 2017-2022 (current n=4-6/yr), close to the downstream end at W1933 [~3200 ft downstream of Rt. 1, N of the eastern end of Vanderbuilt Ave, Norwood] from Apr-Sep 2009 (historic n=6) & Aug-Oct 2017 (current n=2). Only the analysis from the current IR window will be summarized here. In general, at the upstream end of the AU (station NepRWA_NER002) the *E. coli* data is indicative of good water quality conditions, however water quality appears to worsen moving downstream. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_NER002 indicated 0 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml, 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, and cumulatively across years 0% of intervals had GMs >244 CFU/100ml. However, analysis of the recent five years of the multi-year limited frequency datasets from 3 other stations are as follows: NepRWA_NER040 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2020 and 2022, 75%) and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2) cumulatively across years 60% of intervals had GMs >244 CFU/100ml; NepRWA_NER075 indicated 2 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018 and 2019, 75 & 50%) and while 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, cumulatively across years 22% of intervals had GMs >244 CFU/100ml; NepRWA_NER080 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 75-100%), and while just 2 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2018 and 2022, n=2 & 2), cumulatively across years 80% of intervals had GMs >244 CFU/100ml. *E. coli* data from stations W2737 and W1933 are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use. Overall, while *E. coli* data from NepRWA_NER002 meet 2024 CALM guidance, the data from NepRWA_NER040, NepRWA_NER075, and NepRWA_NER080 in the current IR window are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1933	MassDEP	Water Quality	Neponset River	[approximately 3200 feet downstream of Route 1, north of the eastern end of Vanderbuilt Avenue, Norwood]	42.171871	-71.185944
W1943	MassDEP	Water Quality	Neponset River	[parking area crossing southeast of the Robbins Road, Route 27 intersection, Walpole]	42.147119	-71.255889
W2737	MassDEP	Water Quality	Neponset River	[approximately 850 feet downstream from railroad spur north at the Hollingsworth & Vose Dam (NAT ID: MA03136), Walpole (at the Norwood town line)]	42.166680	-71.211223
NepRWA_NER002	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ outlet of Crackrock Pond	42.085800	-71.256520
NepRWA_NER040	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ South Street	42.124650	-71.252380
NepRWA_NER075	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ Hollingsworth & Vose Dam	42.163909	-71.212730
NepRWA_NER080	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ Pleasant Street Bridge	42.177500	-71.200370

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

[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
W1933	MassDEP	E. coli	04/28/09	09/15/09	6	70	1400	244
W1933	MassDEP	E. coli	08/29/17	10/04/17	2	137	196	163
W1943	MassDEP	E. coli	04/28/09	09/15/09	5	10	330	104
W2737	MassDEP	E. coli	08/29/17	10/04/17	2	16	30	21
NepRWA_NER002	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	5	85	21
NepRWA_NER002	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	5	52	11

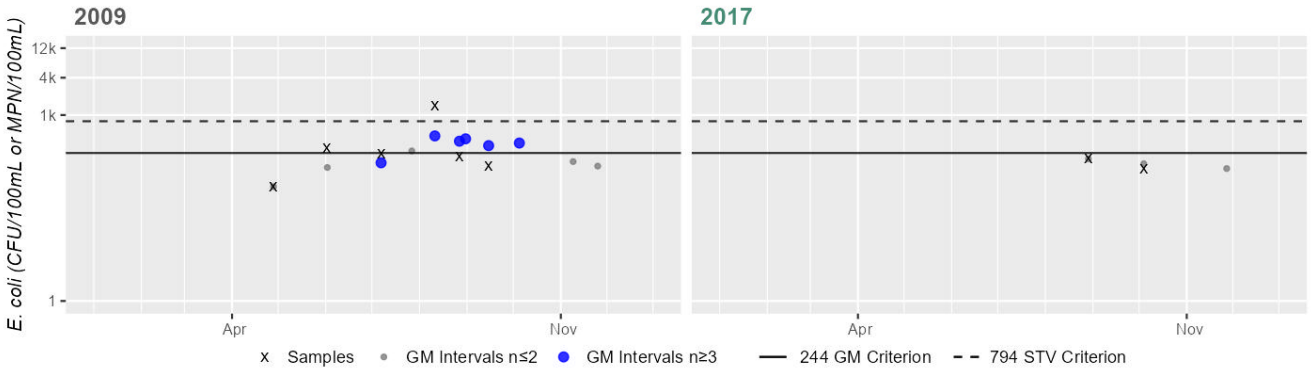
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_NER002	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	10	52	26
NepRWA_NER002	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	253	21
NepRWA_NER002	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	41	19
NepRWA_NER002	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	226	13
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	1860	32
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	301	47
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	5	10	496	55
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	189	51
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	63	25
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	20	156	62
NepRWA_NER002	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	259	32
NepRWA_NER040	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	10	1960	158
NepRWA_NER040	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	5	5480	137
NepRWA_NER040	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	10	1220	193
NepRWA_NER040	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	5	10	313	80
NepRWA_NER040	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	2910	260
NepRWA_NER040	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	31	1180	151

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	63	2250	192
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	31	723	119
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	63	6130	330
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	6170	289
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	435	178
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	520	108
NepRWA_NER040	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	52	988	253
NepRWA_NER075	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	5	31	173	63
NepRWA_NER075	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	20	275	78
NepRWA_NER075	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	10	435	73
NepRWA_NER075	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	173	50
NepRWA_NER075	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	20	384	121
NepRWA_NER075	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	5	120	27
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/29/14	09/25/14	5	31	17300	184
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	31	568	85
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	41	2140	241
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	5	10	5170	107

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	110	44
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	85	345	135
NepRWA_NER075	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	487	96
NepRWA_NER080	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	41	960	175
NepRWA_NER080	Neponset River Watershed Association	E. coli	04/08/09	09/23/09	5	41	512	159
NepRWA_NER080	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	5	63	17300	442
NepRWA_NER080	Neponset River Watershed Association	E. coli	04/06/11	09/14/11	4	85	457	194
NepRWA_NER080	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	41	2480	254
NepRWA_NER080	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	269	63
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	63	9800	286
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	85	487	153
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	52	2610	436
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	110	10500	387
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	987	245
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	109	3450	357
NepRWA_NER080	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	86	8160	525

Station MASSDEP_W1933 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	244
#GMI	6
#GMI Ex	5
%GMI Ex	83%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	2
SeasGM	163
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

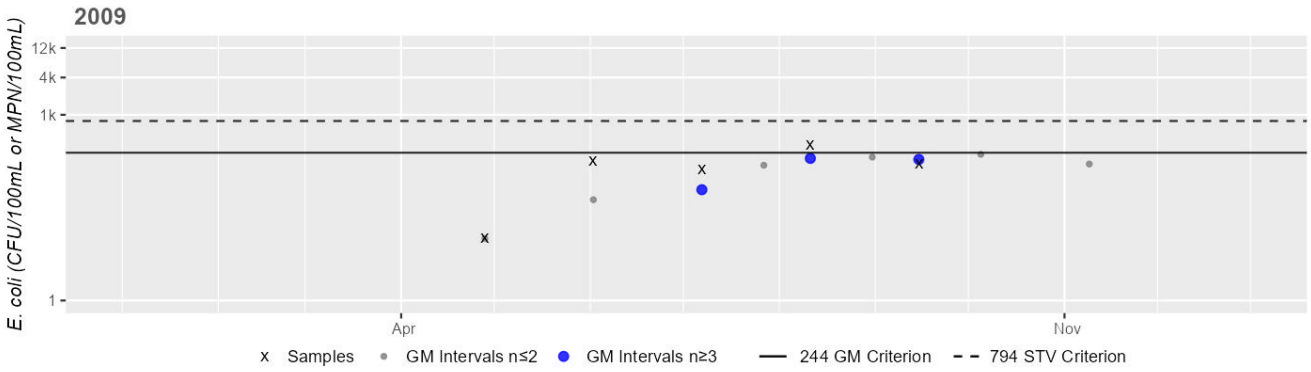
Cumulative %GMI Exceedance
Historic (1997-2010)
83%

Cumulative %GMI Exceedance
Current (2011-2022)
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 MASSDEP_W1943 - Escherichia coli

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



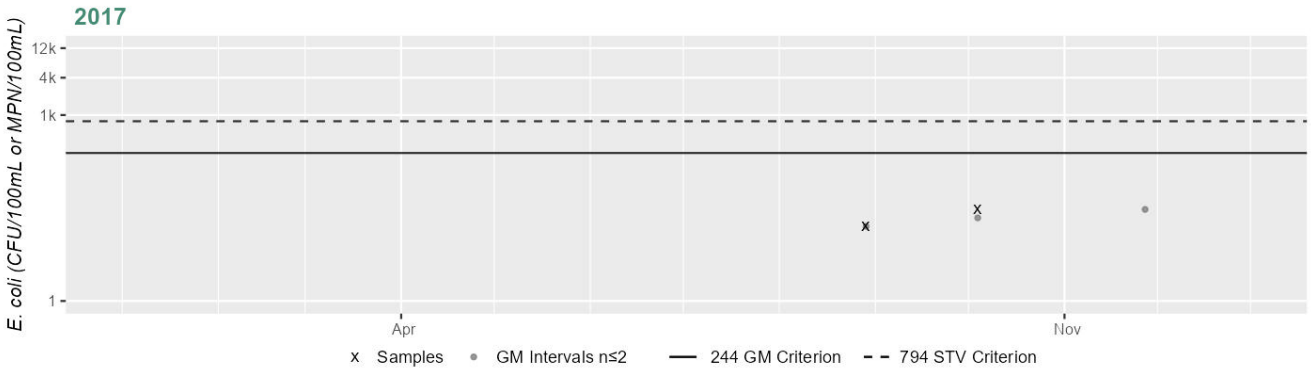
Variable*	Result
Samples	5
SeasGM	104
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
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 MASSDEP_W2737 - Escherichia coli

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



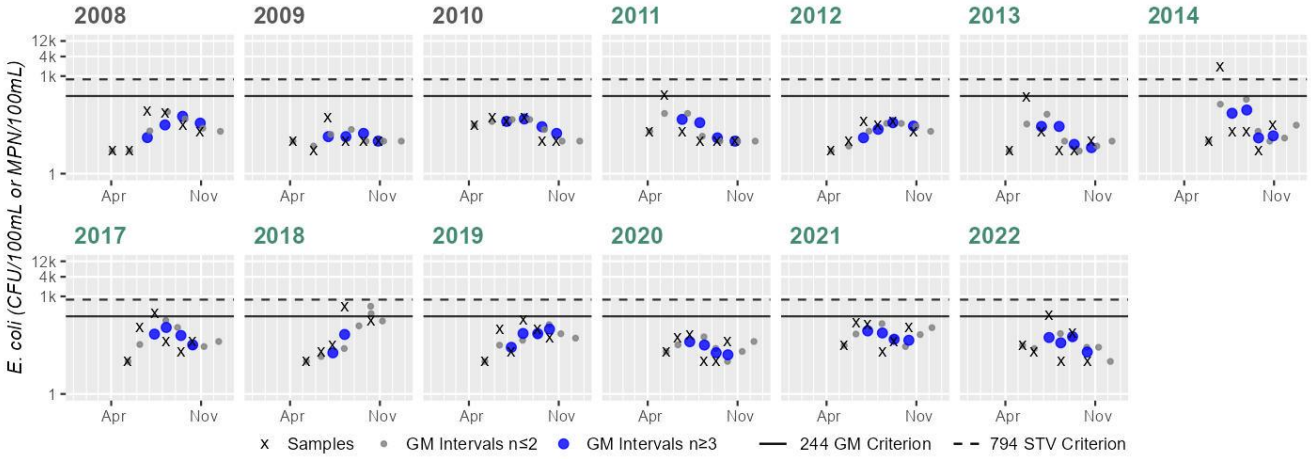
Variable*	Result
Samples	2
SeasGM	21
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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 NepRWA_NER002 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	21
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	11
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	26
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	21
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	19
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	13
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	32
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	47
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	55
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	51
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	25
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	62
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	32
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)
0%

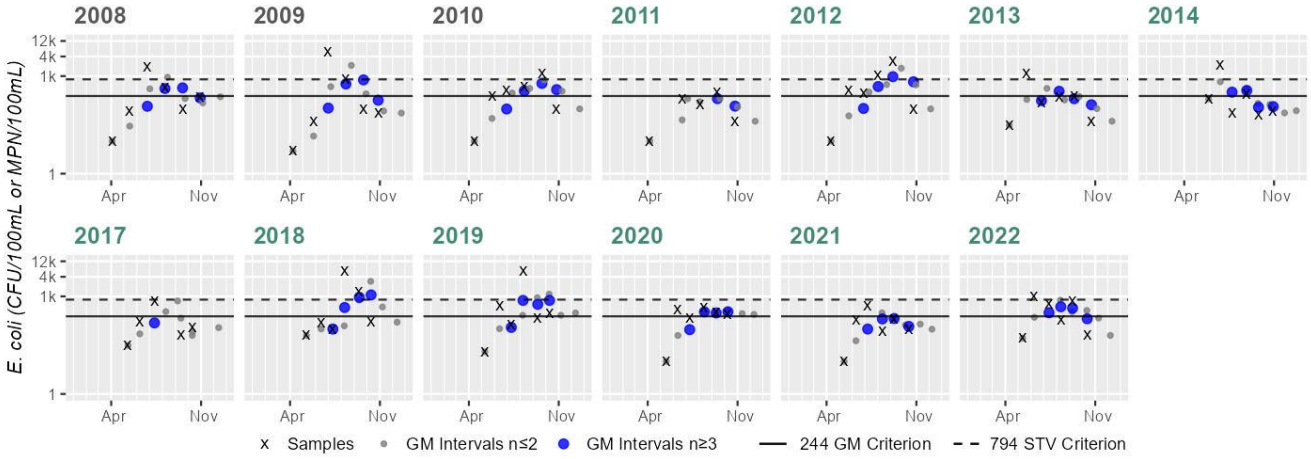
Cumulative %GMI Exceedance Current (2011-2022)
0%

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 NepRWA_NER040 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	158
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	137
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	193
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	80
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	260
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	151
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	192
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	119
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	330
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	289
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	178
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	108
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

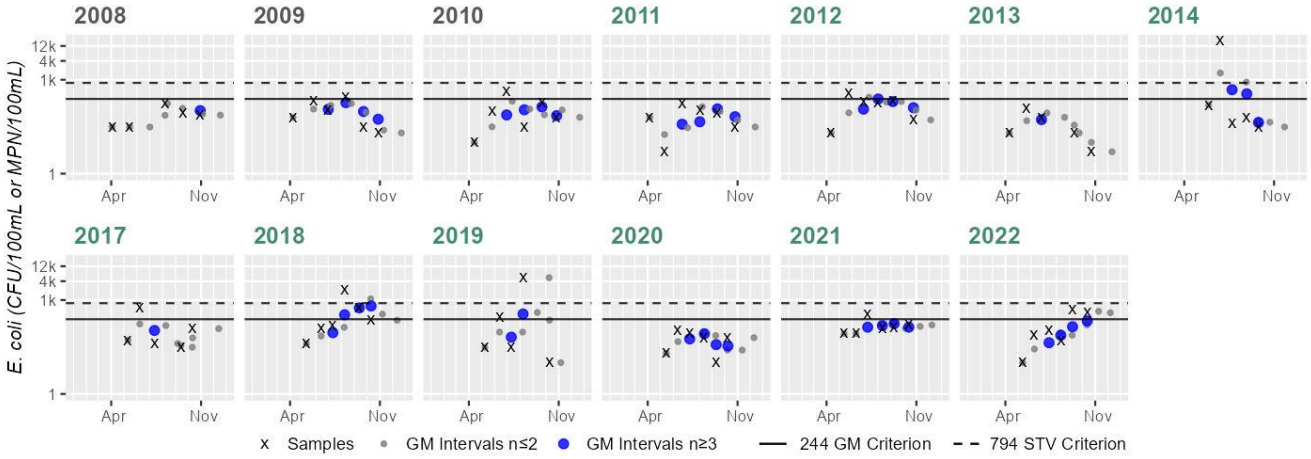
Variable*	Result
Samples	6
SeasGM	253
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
58%	51%	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.*

Station NepRWA_NER075 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	63
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	78
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	73
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	50
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	121
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	27
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	184
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	5
SeasGM	85
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	241
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	107
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	44
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	135
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

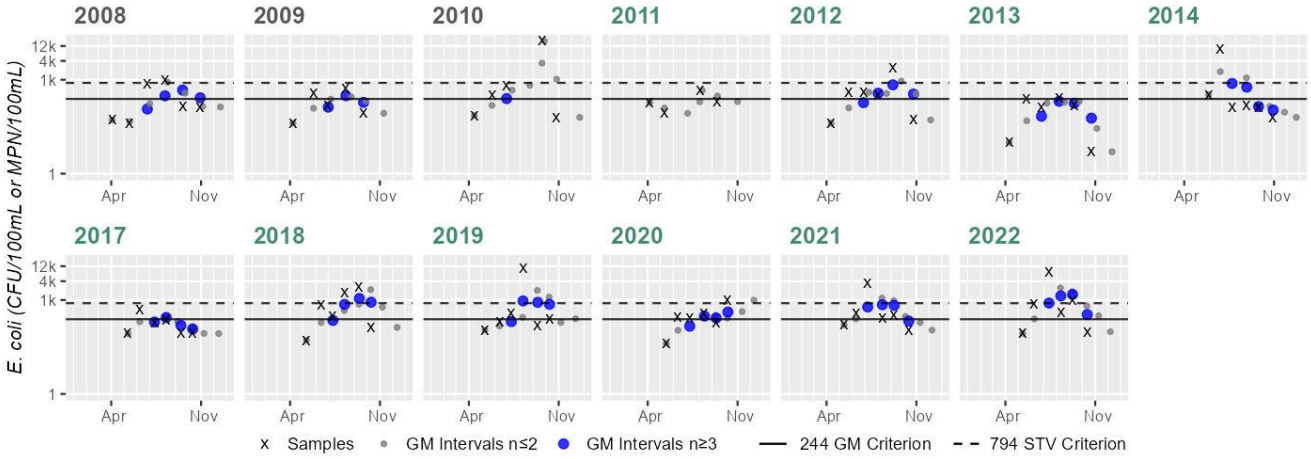
Variable*	Result
Samples	6
SeasGM	96
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	19%	22%

**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 NepRWA_NER080 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	175
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	159
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	442
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	4
SeasGM	194
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	254
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	63
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	286
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	153
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	436
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	387
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	245
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	357
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	525
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
62%	61%	80%

**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.*

Neponset River (MA73-02)

Location:	Confluence with East Branch, Canton to confluence with Mother Brook, Boston.
AU Type:	RIVER
AU Size:	7.7 MILES
Classification/Qualifier:	B: WWF

Neponset River (MA73-02)

Watershed Area: 94.55 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	94.55	27.60	29.51	7.62
Agriculture	1.1%	0.5%	0.9%	0.3%
Developed	32.4%	40.3%	20.8%	24.6%
Natural	49.1%	36.7%	47.8%	30.5%
Wetland	17.4%	22.5%	30.5%	44.5%
Impervious	17.7%	23.2%	10.7%	12.5%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Debris*)	--	Unchanged
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	DDT in Fish Tissue	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Escherichia Coli (E. Coli)	2592	Unchanged
5	5	Fecal Coliform	2592	Unchanged
5	5	Flocculant Masses	--	Removed
5	5	Metals	--	Unchanged
5	5	Oil and Grease	--	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	Scum/Foam	--	Unchanged
5	5	Trash	--	Unchanged
5	5	Turbidity	--	Unchanged

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Unspecified Metals in Sediment	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Debris*)	Illegal Dumps or Other Inappropriate Waste Disposal (N)	--	--	X	X	X
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
DDT in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Metals	Source Unknown (N)	X	--	--	--	--
Oil and Grease	Source Unknown (N)	--	--	X	X	X
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Scum/Foam	Source Unknown (N)	--	--	X	X	X
Trash	Illegal Dumps or Other Inappropriate Waste Disposal (N)	--	--	X	X	X
Turbidity	Source Unknown (N)	--	--	X	X	X
Unspecified Metals in Sediment	Source Unknown (N)	X	--	--	--	--

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Flocculant Masses	Data and/or information lacking to determine WQ status; original basis for listing was incorrect	The ADB impairment "Foam/Flocs/Scum/Oil Slicks" was previously applied to Neponset River (MA73-02) during the 2010 reporting cycle. Oil sheens/globs were noted associated with the sediments and in the water column in this Neponset River AU during a (MassDEP 1995) and later confirmed by MassDEP staff at the very downstream end of the AU at station W1934 (footbridge near eastern end of B Street, (Hyde Park) Boston) during summer 2009, where oily sheens and other kinds of scum were noted on numerous occasions (MassDEP Undated 9). The "Foam/Flocs/Scum/Oil Slicks" impairment code was subsequently divided into more specific codes and applied automatically to this AU for the final 2016 reporting cycle submittal to EPA's new ATTAINS database. Since there was no mention of "Flocculant Masses" in the field observations, this impairment is being removed. The impairments for "Scum/foam" and "Oil and Grease" are being carried forward.

Flocculant Masses

Please see removal comment above.

Recommendations

2024/26 Recommendations
2024IR [Aesthetics, Medium] Conduct follow-up monitoring in Neponset River (MA73-02) at the footbridge near eastern end of B Street, (Hyde Park) Boston {W1934}, to evaluate whether objectionable trash and debris deposits, as well as oily sheens and high turbidity observed by MassDEP in 2009 have worsened or improved.

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert

Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Neponset River (MA73-02) continues to be assessed as Not Supporting and the prior DDT in Fish Tissue and PCBs in Fish Tissue impairments are being carried forward. MDPH included a site-specific advisory for Neponset River (referred to by MDPH as ''Neponset River (between the Hollingsworth & Vose Dam in Walpole and the Walter Baker Dam in Boston)'') in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent MDPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Neponset River (MA73-02) continues to be assessed as as Not Supporting with the prior Scum/Foam, Debris, Turbidity, Oil and Grease and Trash impairments being carried forward. The Flocculant Masses impairment is being removed (see supporting information for removed impairments). MassDEP staff recorded aesthetics observations at four stations throughout this Neponset River AU during the summers of 2017 and 2018 as part of the Bacteria Source Tracking (BST) Project and a number of Special Projects. The station descriptions from upstream to downstream are as follows: close to the upstream end of the AU upstream/southwest of Neponset Street, Norwood (W0549 in 2017 (n=4) and 2018 (n=1)); about halfway down the AU at upstream/southwest of Dedham Street bridge, Canton (W0564 in 2017 and 2018, n=1-2); a little further downstream at Green Lodge Street, Canton (W0568 in 2017 and 2018, n=1-2) and about a mile from the downstream end of the AU at Neponset Valley Parkway, Boston (W2772 in 2017 and 2018, n=1-2). While there were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded at any of the stations, the data were usually extremely limited and also were not collected from the station where the most serious incidences of trash, debris, oily sheens and high turbidity were observed in 2009 i.e. at the footbridge near eastern end of B Street, (Hyde Park) Boston (W1934), so there is not enough evidence to remove these impairments at this time. A recommendation will be made that additional aesthetic observations should be collected specifically at station W1934 to see if conditions have improved since 2009.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0549	MassDEP	Water Quality	Neponset River	[upstream/southwest of Neponset Street, Norwood]	42.168522	-71.167887
W0564	MassDEP	Water Quality	Neponset River	[upstream/southwest of Dedham Street bridge, Canton]	42.196965	-71.155152

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0568	MassDEP	Water Quality	Neponset River	[Green Lodge Street, Canton]	42.209231	-71.145952
W2772	MassDEP	Water Quality	Neponset River	[Neponset Valley Parkway, Boston]	42.234532	-71.122615

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W0549	2017	4	Aesthetic observations were made by MassDEP field sampling crews at Station W0549 on Neponset River (MA73-02) during 4 site visits between Aug 2017 and Dec 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W0549	2018	1	Aesthetic observations were made by MassDEP field sampling crews at Station W0549 on Neponset River (MA73-02) during 1 site visit on May 22, 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted an aesthetics impairment flag (n=1). However, aesthetic observations are limited (n<3).
W0564	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0564 on Neponset River (MA73-02) during 2 site visits between Oct 2017 and Dec 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. During a probe deployment, field staff noted grey water color (n=1). However, aesthetic observations are limited (n<3).
W0564	2018	1	Aesthetic observations were made by MassDEP field sampling crews at Station W0564 on Neponset River (MA73-02) during 1 site visit on May 22, 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W0568	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0568 on Neponset River (MA73-02) during 2 site visits between Oct 2017 and Dec 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W0568	2018	1	Aesthetic observations were made by MassDEP field sampling crews at Station W0568 on Neponset River (MA73-02) during 1 site visit on May 22, 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted an aesthetics impairment flag (n=1). However, aesthetic observations are limited (n<3).

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2772	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2772 on Neponset River (MA73-02) during 2 site visits between Oct 2017 and Dec 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted grey water color (n=1). However, aesthetic observations are limited (n<3).
W2772	2018	1	Aesthetic observations were made by MassDEP field sampling crews at Station W2772 on Neponset River (MA73-02) during 1 site visit on May 22, 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W0549	2017	4	2	0
W0549	2018	1	0	0
W0564	2017	2	2	0
W0564	2018	1	0	0
W0568	2017	2	2	0
W0568	2018	1	0	0
W2772	2017	2	2	0
W2772	2018	1	0	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0549	Neponset River	2017	Aesthetics Impaired?	No	2	2
W0549	Neponset River	2017	Aquatic Plant Density, Overall	None	2	4
W0549	Neponset River	2017	Aquatic Plant Density, Overall	Unobservable	2	4
W0549	Neponset River	2017	Color	None	4	4
W0549	Neponset River	2017	Objectionable Deposits	No	2	2
W0549	Neponset River	2017	Odor	None	4	4
W0549	Neponset River	2017	Periphyton Density, Filamentous	None	2	4
W0549	Neponset River	2017	Periphyton Density, Filamentous	Unobservable	2	4

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0549	Neponset River	2017	Periphyton Density, Film	None	2	4
W0549	Neponset River	2017	Periphyton Density, Film	Unobservable	2	4
W0549	Neponset River	2017	Scum	No	2	2
W0549	Neponset River	2017	Turbidity	Moderately Turbid	1	4
W0549	Neponset River	2017	Turbidity	None	2	4
W0549	Neponset River	2017	Turbidity	Slightly Turbid	1	4
W0549	Neponset River	2018	Aesthetics Impaired?	Yes	1	1
W0549	Neponset River	2018	Aquatic Plant Density, Overall	Sparse	1	1
W0549	Neponset River	2018	Color	Light Yellow/Tan	1	1
W0549	Neponset River	2018	Objectionable Deposits	Yes	1	1
W0549	Neponset River	2018	Odor	None	1	1
W0549	Neponset River	2018	Periphyton Density, Filamentous	Unobservable	1	1
W0549	Neponset River	2018	Periphyton Density, Film	Unobservable	1	1
W0549	Neponset River	2018	Scum	No	1	1
W0549	Neponset River	2018	Turbidity	Moderately Turbid	1	1
W0564	Neponset River	2017	Aesthetics Impaired?	No	2	2
W0564	Neponset River	2017	Aquatic Plant Density, Overall	None	2	2
W0564	Neponset River	2017	Color	Brownish	1	2
W0564	Neponset River	2017	Color	None	1	2
W0564	Neponset River	2017	Objectionable Deposits	No	2	2
W0564	Neponset River	2017	Odor	None	2	2
W0564	Neponset River	2017	Periphyton Density, Filamentous	None	2	2
W0564	Neponset River	2017	Periphyton Density, Film	None	2	2
W0564	Neponset River	2017	Scum	No	2	2
W0564	Neponset River	2017	Turbidity	None	2	2
W0564	Neponset River	2018	Aesthetics Impaired?	No	1	1
W0564	Neponset River	2018	Aquatic Plant Density, Overall	Unobservable	1	1
W0564	Neponset River	2018	Color	Light Yellow/Tan	1	1
W0564	Neponset River	2018	Objectionable Deposits	No	1	1
W0564	Neponset River	2018	Odor	None	1	1
W0564	Neponset River	2018	Periphyton Density, Filamentous	Unobservable	1	1
W0564	Neponset River	2018	Periphyton Density, Film	Unobservable	1	1
W0564	Neponset River	2018	Scum	No	1	1
W0564	Neponset River	2018	Turbidity	Slightly Turbid	1	1
W0568	Neponset River	2017	Aesthetics Impaired?	No	2	2

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0568	Neponset River	2017	Aquatic Plant Density, Overall	None	2	2
W0568	Neponset River	2017	Color	None	2	2
W0568	Neponset River	2017	Objectionable Deposits	No	2	2
W0568	Neponset River	2017	Odor	None	2	2
W0568	Neponset River	2017	Periphyton Density, Filamentous	None	2	2
W0568	Neponset River	2017	Periphyton Density, Film	None	2	2
W0568	Neponset River	2017	Scum	No	2	2
W0568	Neponset River	2017	Turbidity	None	2	2
W0568	Neponset River	2018	Aesthetics Impaired?	Yes	1	1
W0568	Neponset River	2018	Aquatic Plant Density, Overall	Sparse	1	1
W0568	Neponset River	2018	Color	Light Yellow/Tan	1	1
W0568	Neponset River	2018	Objectionable Deposits	Yes	1	1
W0568	Neponset River	2018	Odor	None	1	1
W0568	Neponset River	2018	Periphyton Density, Filamentous	Unobservable	1	1
W0568	Neponset River	2018	Periphyton Density, Film	Unobservable	1	1
W0568	Neponset River	2018	Scum	No	1	1
W0568	Neponset River	2018	Turbidity	Slightly Turbid	1	1
W2772	Neponset River	2017	Aesthetics Impaired?	No	2	2
W2772	Neponset River	2017	Aquatic Plant Density, Overall	None	2	2
W2772	Neponset River	2017	Color	Greyish	1	2
W2772	Neponset River	2017	Color	None	1	2
W2772	Neponset River	2017	Objectionable Deposits	No	2	2
W2772	Neponset River	2017	Odor	None	2	2
W2772	Neponset River	2017	Periphyton Density, Filamentous	None	2	2
W2772	Neponset River	2017	Periphyton Density, Film	None	2	2
W2772	Neponset River	2017	Scum	No	2	2
W2772	Neponset River	2017	Turbidity	None	1	2
W2772	Neponset River	2017	Turbidity	Slightly Turbid	1	2
W2772	Neponset River	2018	Aesthetics Impaired?	No	1	1
W2772	Neponset River	2018	Aquatic Plant Density, Overall	Sparse	1	1
W2772	Neponset River	2018	Color	Light Yellow/Tan	1	1
W2772	Neponset River	2018	Objectionable Deposits	Yes	1	1
W2772	Neponset River	2018	Odor	None	1	1

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2772	Neponset River	2018	Periphyton Density, Filamentous	Unobservable	1	1
W2772	Neponset River	2018	Periphyton Density, Film	Unobservable	1	1
W2772	Neponset River	2018	Scum	No	1	1
W2772	Neponset River	2018	Turbidity	Slightly Turbid	1	1

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for the Neponset River (MA73-02) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 2 stations in 2018-2022. The prior Fecal Coliform impairment is being carried forward and the prior Debris, Oil And Grease, Scum/Foam, Trash, and Turbidity impairments (from the Aesthetics Use) are also being carried forward. The Flocculant Masses impairment (from the Aesthetics Use) is being removed (see supporting information for removed impairments). MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in this Neponset River AU from 2011-2022 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at W0549 [upstream/southW of Neponset St, Norwood] from Aug-Oct 2017 (n=2), a third of the way down at NepRWA_NER125 [Neponset River at Dedham St Bridge] from 2011-2014 and 2017-2022 (n=5-6/yr) and three-quarters of the way down the AU at NepRWA_NER150 [Neponset River at Paul's Bridge] from 2011-2014 and 2017-2022 (n=5-6/yr). The available *E. coli* data at W0549 are too limited according to the 2024 CALM to assess the Primary Contact Recreation Use. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_NER125 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 50-100%) and while just 2 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018 and 2022, n=2 & 2), cumulatively across years 70% of intervals had GMs >126 CFU/100ml. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_NER150 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 75-100%) and while just 2 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018 and 2021, n=3 & 2), cumulatively across years 90% of intervals had GMs >126 CFU/100ml. The data from station NepRWA_NER150 and NepRWA_NER125 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0549	MassDEP	Water Quality	Neponset River	[upstream/southwest of Neponset Street, Norwood]	42.168522	-71.167887
NepRWA_NER125	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ Dedham Street Bridge	42.196767	-71.154980
NepRWA_NER150	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ Paul's Bridge	42.234217	-71.122620

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(MassDEP Undated 10) (MassDEP Undated 6) (NepRWA 2023) (MassDEP Undated 4)

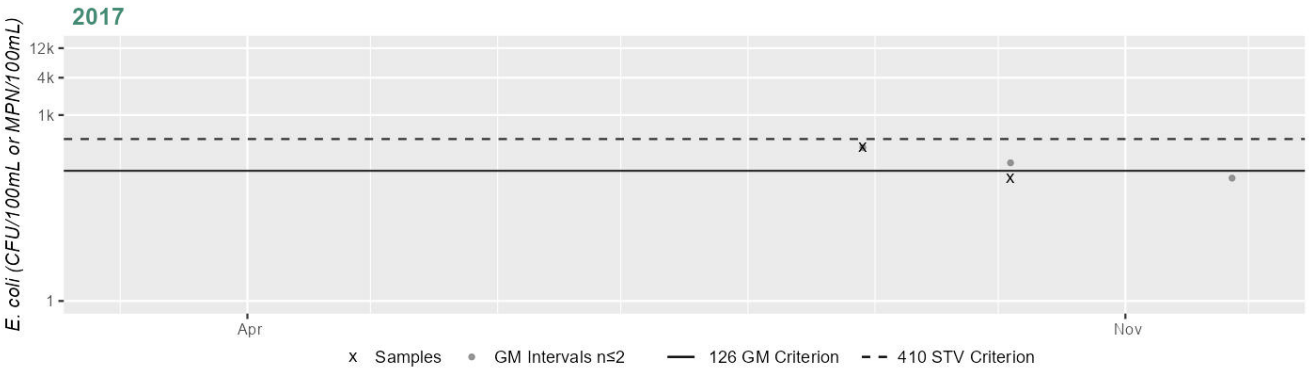
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0549	MassDEP	E. coli	08/29/17	10/04/17	2	96	299	169
NepRWA_NER125	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	41	249	124
NepRWA_NER125	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	97	1560	473
NepRWA_NER125	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	813	98
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	73	2050	459
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	74	1420	243
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	5	63	10500	653
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	63	14100	423
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	63	313	122
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	52	464	118
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	20	862	128
NepRWA_NER150	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	41	1580	153

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_NER150	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	41	880	225
NepRWA_NER150	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	31	1400	186
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	73	3280	341
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/11/17	09/14/17	5	41	1090	186
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	62	4110	327
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	51	9210	264
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	31	410	147
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	52	3870	206
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	712	126

Station MASSDEP_W0549 - Escherichia coli

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



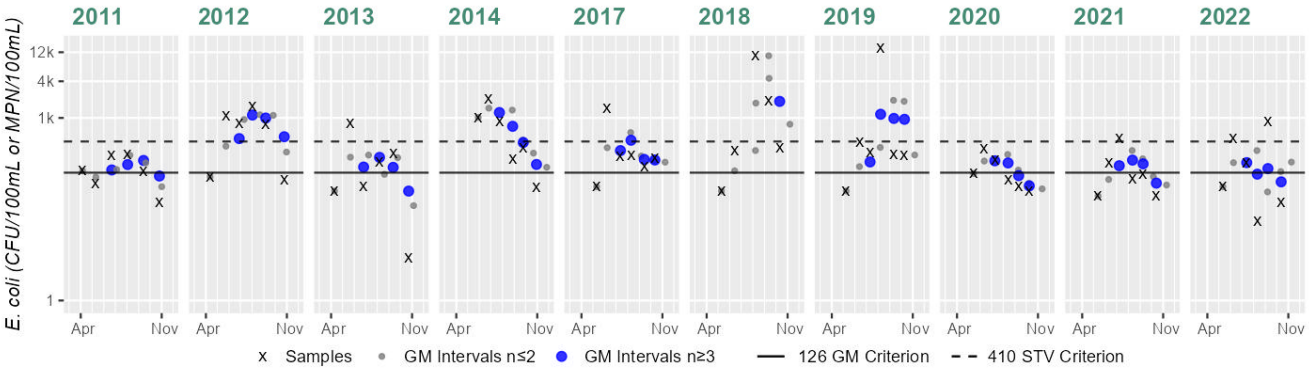
Variable*	Result
Samples	2
SeasGM	169
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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 NepRWA_NER125 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	124
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	473
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	98
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	459
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	243
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	653
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	423
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	122
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	118
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	128
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

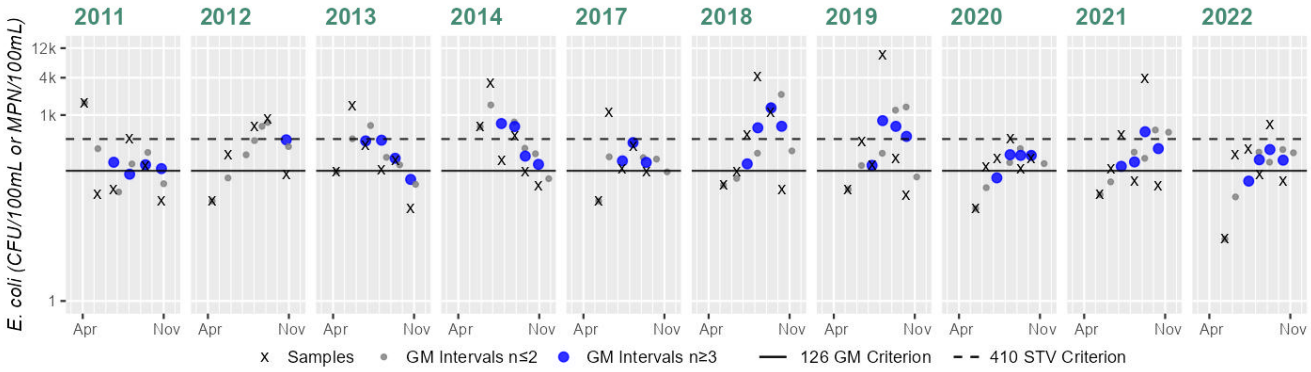
Cumulative %GMI Exceedance
Current (2011-2022)
81%

Cumulative %GMI Exceedance
Current (Recent 5 Years)
70%

**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 NepRWA_NER150 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	153
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	225
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	186
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	341
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	5
SeasGM	186
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	327
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	264
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	147
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	206
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	126
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance Current (2011-2022)
88%

Cumulative %GMI Exceedance Current (Recent 5 Years)
90%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for the Neponset River (MA73-02) continues to be assessed as Not Supporting. The prior Debris, Flocculant Masses, Oil And Grease, Scum/Foam, Trash, and Turbidity impairments (from the Aesthetics Use) are being carried forward. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 2 stations in 2018-2022. The Flocculant Masses impairment (from the Aesthetics Use) is being removed (see supporting information for removed impairments). MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in this Neponset River AU from 2008-2022 at 5 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at W0549 [upstream/southW of Neponset St, Norwood] from Aug-Oct 2017 (n=2), a third of the way down at NepRWA_NER125 [Neponset River at Dedham St Bridge] from 2008-2010 (historic n=6/yr) and 2011-2014 and 2017-2022 (current n=5-6/yr), halfway down at W0568 [Green Lodge St, Canton] from Apr-Sep 2009 (n=6), three-quarters of the way down the AU at NepRWA_NER150 [Neponset River at Paul's Bridge] from 2008-2010 (historic n=5-6/yr) and 2011-2014 and 2017-2022 (current n=5-6/yr), and close to the downstream end of the AU at W1934 [footbridge near eastern end of B St, (Hyde Park) Boston] from Apr-Sep 2009 (n=5). While some bacteria data from the historic IR window are indicative of good water quality conditions, these same locations were either indicative of poor quality conditions in the current IR window or the location was not sampled again in the current IR window, so only the analysis from the current IR window will be summarized here. The available *E. coli* data at station W0549 are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_NER125 indicated 2 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018 and 2019, 100 & 75%), and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2) cumulatively across years 23% of intervals had GMs >244 CFU/100ml. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_NER150 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2019 and 2021-2022, 25-75%), and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2), cumulatively across years 45% of intervals had GMs >244 CFU/100ml. The data from NepRWA_NER125 and NepRWA_NER150 in the current IR window, are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0549	MassDEP	Water Quality	Neponset River	[upstream/southwest of Neponset Street, Norwood]	42.168522	-71.167887
W0568	MassDEP	Water Quality	Neponset River	[Green Lodge Street, Canton]	42.209231	-71.145952
W1934	MassDEP	Water Quality	Neponset River	[footbridge near eastern end of B Street, (Hyde Park) Boston]	42.249895	-71.124569

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_NER125	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ Dedham Street Bridge	42.196767	-71.154980
NepRWA_NER150	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ Paul's Bridge	42.234217	-71.122620

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

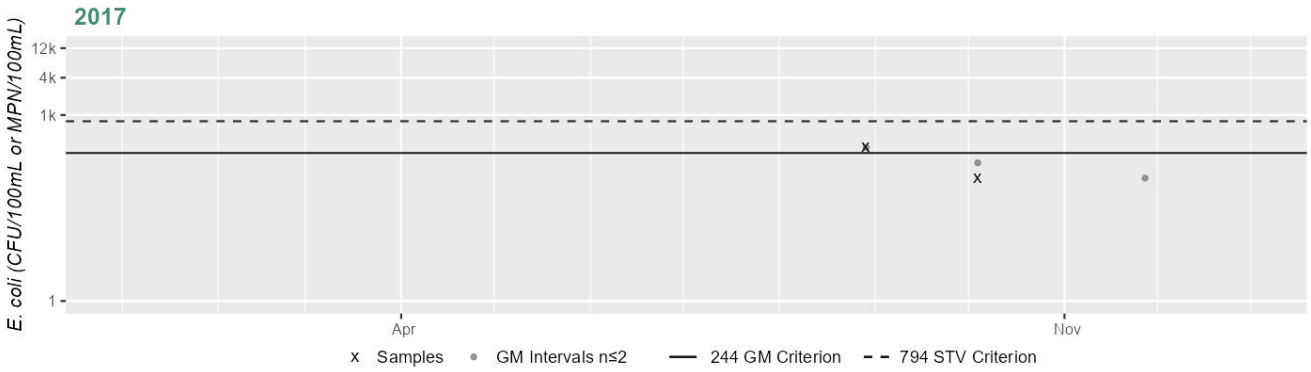
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0549	MassDEP	E. coli	08/29/17	10/04/17	2	96	299	169
W0568	MassDEP	E. coli	04/28/09	09/15/09	6	40	400	129
W1934	MassDEP	E. coli	04/28/09	09/15/09	5	30	2500	480
NepRWA_NER125	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	109	1020	330
NepRWA_NER125	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	74	805	238
NepRWA_NER125	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	10	816	143
NepRWA_NER125	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	41	249	124
NepRWA_NER125	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	97	1560	473
NepRWA_NER125	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	813	98
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	73	2050	459
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	74	1420	243
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	5	63	10500	653
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	63	14100	423

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	63	313	122
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	52	464	118
NepRWA_NER125	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	20	862	128
NepRWA_NER150	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	5	10	13000	141
NepRWA_NER150	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	5	31	275	92
NepRWA_NER150	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	20	301	96
NepRWA_NER150	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	41	1580	153
NepRWA_NER150	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	41	880	225
NepRWA_NER150	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	31	1400	186
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	73	3280	341
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/11/17	09/14/17	5	41	1090	186
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	62	4110	327
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	51	9210	264
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	31	410	147
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	52	3870	206
NepRWA_NER150	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	712	126

Station MASSDEP_W0549 - Escherichia coli

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



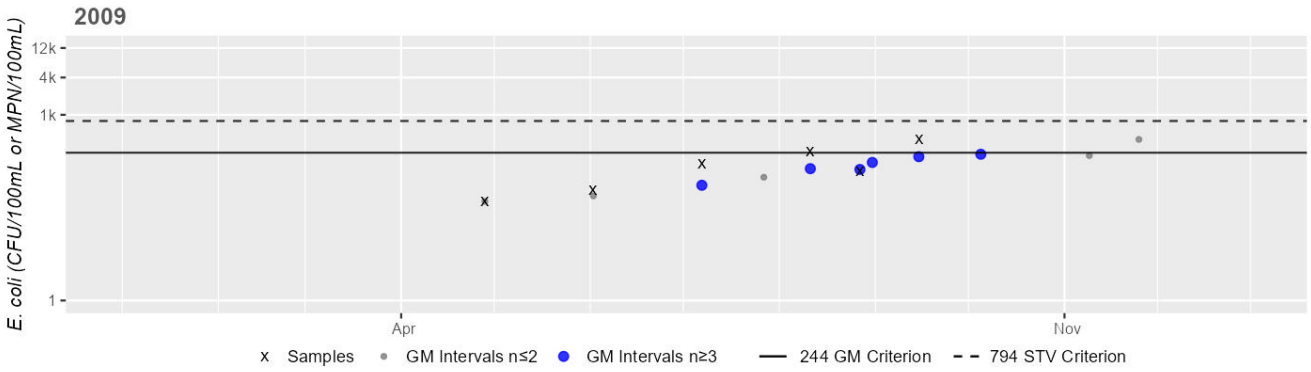
Variable*	Result
Samples	2
SeasGM	169
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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 MASSDEP_W0568 - Escherichia coli

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



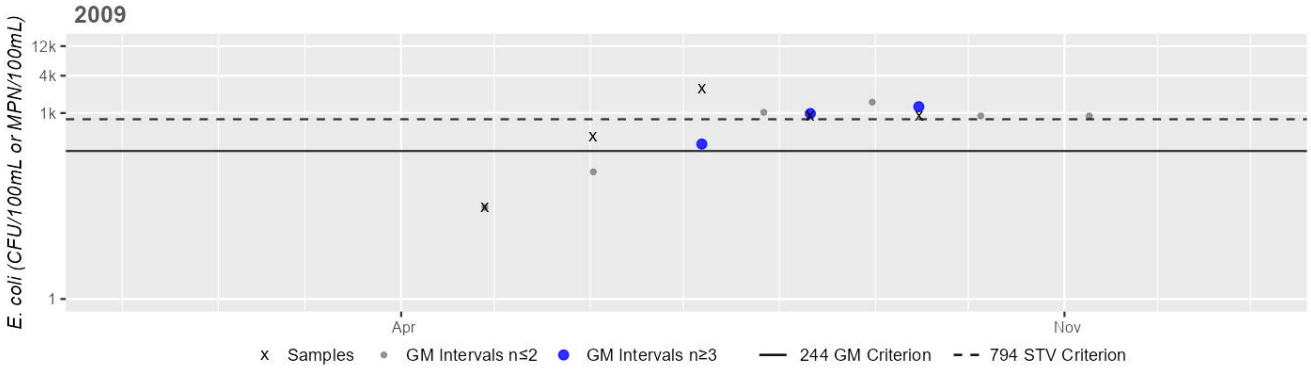
Variable*	Result
Samples	6
SeasGM	129
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
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 MASSDEP_W1934 - Escherichia coli

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



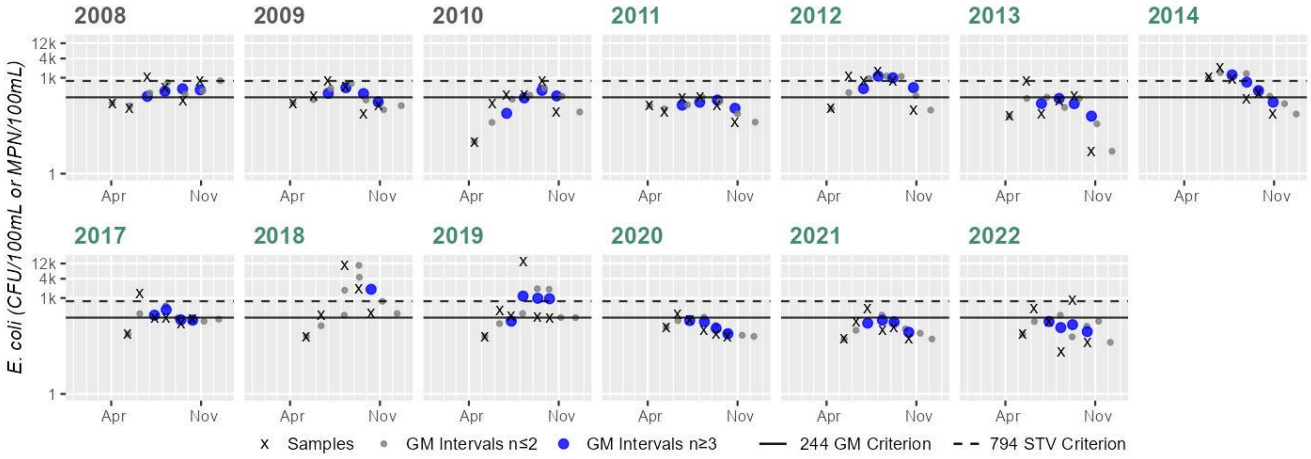
Variable*	Result
Samples	5
SeasGM	480
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	3
%n>STV	60%

Cumulative %GMI Exceedance
Historic (1997-2010)
100%

**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 NepRWA_NER125 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	330
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	238
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	143
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	124
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	473
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	98
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	459
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	243
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	653
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	423
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	122
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	118
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

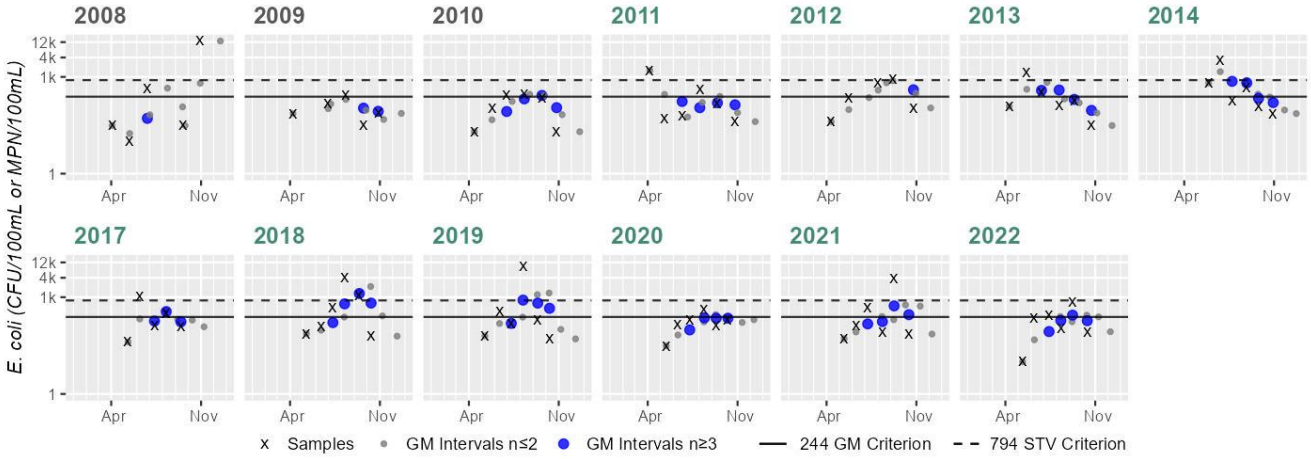
Variable*	Result
Samples	6
SeasGM	128
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
75%	35%	23%

**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 NepRWA_NER150 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	141
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	5
SeasGM	92
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	96
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	153
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	225
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	186
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	341
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	186
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	327
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	264
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	147
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	206
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	126
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)
14%

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

Cumulative %GMI Exceedance Current (Recent 5 Years)
45%

**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.*

Neponset River (MA73-03)

Location:	Confluence with Mother Brook, Boston to Neponset River Baker Chocolate Dam (NATID: MA01093), Milton/Boston.
AU Type:	RIVER
AU Size:	3.7 MILES
Classification/Qualifier:	B: WWF

Neponset River (MA73-03)

Watershed Area: 108.22 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	108.22	9.26	32.40	1.86
Agriculture	1%	0.1%	0.8%	0%
Developed	33.6%	45%	21.6%	29.5%
Natural	49.3%	47.1%	48.2%	49.9%
Wetland	16.1%	7.9%	29.4%	20.6%
Impervious	18.8%	28.3%	11.4%	17.3%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Curly-leaf Pondweed*)	--	Unchanged
5	5	(Debris*)	--	Unchanged
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	DDT in Fish Tissue	--	Unchanged
5	5	Enterococcus	2592	Unchanged
5	5	Escherichia Coli (E. Coli)	2592	Unchanged
5	5	Fecal Coliform	2592	Unchanged
5	5	Flocculant Masses	--	Removed
5	5	Metals	--	Unchanged
5	5	Oil and Grease	--	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	PCBs in Sediment	--	Unchanged
5	5	Polychlorinated Biphenyls (PCBs)	--	Unchanged

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Scum/Foam	--	Unchanged
5	5	Trash	--	Unchanged
5	5	Unspecified Metals in Sediment	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Curly-leaf Pondweed*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Debris*)	Illegal Dumps or Other Inappropriate Waste Disposal (Y)	--	--	X	X	X
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
DDT in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Enterococcus	Source Unknown (N)	--	--	--	X	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Metals	Source Unknown (N)	X	--	--	--	--
Oil and Grease	Source Unknown (N)	--	--	X	X	X
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
PCBs in Sediment	Contaminated Sediments (Y)	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Polychlorinated Biphenyls (PCBs)	Contaminated Sediments (Y)	X	--	--	X	--
Polychlorinated Biphenyls (PCBs)	Source Unknown (N)	X	--	--	X	--
Scum/Foam	Source Unknown (N)	--	--	X	X	X
Trash	Illegal Dumps or Other Inappropriate Waste Disposal (Y)	--	--	X	X	X
Unspecified Metals in Sediment	Source Unknown (N)	X	--	--	--	--

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Flocculant Masses	Data and/or information lacking to determine WQ status; original basis for listing was incorrect	The ADB impairment "Foam/Flocs/Scum/Oil Slicks" was previously applied to Neponset River (MA73-03) during the 2010 reporting cycle. Oil sheens/globs were noted associated with the sediments and in the water column in this Neponset River AU during a 1994 MassDEP Neponset River Basin survey (MassDEP 1995) and later confirmed by MassDEP staff three-quarters of the way down the AU at station W1935 (~3000 feet east of Rt. 28, behind the baseball field off the western end of Meadowbank Avenue, (Mattapan) Boston) during summer 2009, where oily sheens and other kinds of scum were noted on numerous occasions (MassDEP Undated 9). The "Foam/Flocs/Scum/Oil Slicks" impairment code was subsequently divided into more specific codes and applied automatically to this AU for the final 2016 reporting cycle submittal to EPA's new ATTAINS database. Since there was no mention of "Flocculant Masses" in the field observations, this impairment is being removed. The impairments for "Scum/foam" and "Oil and Grease" are being carried forward.

Flocculant Masses

Please see removal comment above.

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Fish Consumption Use for Neponset River (MA73-03) continues to be assessed as Not Supporting and the prior DDT in Fish Tissue and PCBs in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Neponset River (referred to by MDPH as ''Neponset River (between the Hollingsworth & Vose Dam in Walpole and the Walter Baker Dam in Boston)'') in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent MDPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Neponset River (MA73-03) continues to be assessed as as Not Supporting with the prior Scum/Foam, Debris, Oil and Grease and Trash impairments being carried forward. The Flocculant Masses impairment is being removed (see supporting information for removed impairments). No new data are available to evaluate the Aesthetics Use for this Neponset River AU.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for the Neponset River (MA73-03) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) & Enterococcus impairments are being carried forward based on bacteria data not meeting the threshold at 5 stations between 2011 & 2022 & 2 stations between 2014 & 2022 respectively. The prior Fecal Coliform and Polychlorinated Biphenyls (PCBS) impairments are being carried forward & the prior Debris, Oil And Grease, Scum/Foam, & Trash impairments (from the Aesthetics Use) are also being carried forward. The Flocculant Masses impairment (from the Aesthetics Use) is being removed (see supporting information for removed impairments). Massachusetts Water Resources Authority (MWRA) & Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* (EC) & Enterococcus (Ent) bacteria samples from 2011-2022, at 5 stations/sample years from up to downstream as follows: Upstream end at NepRWA_NER165 [Hyde Park Fairmount Ave] 2011-2014 (EC n=3-6/yr); halfway down at NepRWA_NER179 [Brush Hill Rd] 2017-2022 (EC n=4-6/yr); three-quarters of the way down at NepRWA_NER185 [Ryan Playground, Mattapan] 2011-2014 & 2017-2022 (EC n=5-6/yr); close to the downstream end at MWRA_255 [downstream side of pedestrian foot bridge, mid-channel, 150 m upstream of site 055 & the Bake] 2019-2022 (EC & Ent n=9-16/yr); & downstream end at MWRA_055 [above Baker Dam, Milton] 2011-2018 (EC & Ent n=14-16/yr). Analysis of the multi-year limited frequency *E. coli* data from NepRWA_NER165 indicated 3 of 3 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2012-2014, 100%), 3 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2012-2014, n=2-3) & cumulatively across years 100% of intervals had GMs >126 CFU/100ml. Analysis of the multi-year limited fq *E. coli* data from NepRWA_NER179 indicated 5 of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2017-2018 & 2020-2022, 33-100%) & while just 2 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018 & 2021, n=2 & 2), cumulatively 78% of intervals had GMs >126 CFU/100ml. Analysis of the recent 5 years of the multi-year limited fq *E. coli* data from NepRWA_NER185 indicated 5 of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 75-100%), 3 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018 and 2021-2022, n=2-3) & cumulatively 95% of intervals had GMs >126 CFU/100ml. Analysis of the multi-year high fq *E. coli* data from MWRA_255 indicated 4 of 4 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2019-2022, 92-100%), 4 yrs had >10% of samples exceed the 410 CFU/100ml STV (2019-2022, 13-33%) & cumulatively 96% of intervals had GMs >126 CFU/100ml. Analysis of the recent five years of the multi-year high fq *E. coli* data from MWRA_055 indicated 5 of 5 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2014-2018, 100%), 5 yrs had >10% of samples exceed the 410 CFU/100ml STV (2014-2018, 26-53%) & cumulatively 100% of intervals had GMs >126 CFU/100ml. Analysis of the multi-year high fq Enterococcus data from MWRA_255 indicated 4 of 4 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2019-2022, 100%), 4 yrs had >10% of samples exceed the 130 CFU/100ml STV (2019-2022, 33-44%) & cumulatively 100% of intervals had GMs >35 CFU/100ml. Analysis of the recent 5 years of the multi-year high fq Enterococcus data from MWRA_055 indicated 5 of 5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2014-2018, 36-100%), 4 yrs had >10% of samples exceed the 130 CFU/100ml STV (2014 & 2016-2018, 18-42%) & cumulatively 78% of intervals had GMs >35 CFU/100ml. *E. coli* data from NepRWA_NER165, NepRWA_NER179,

MWRA_255, MWRA_055, & NepRWA_NER185 & Enterococcus data from MWRA_255 & MWRA_055 are indicative of *E. coli* and Enterococcus impairments respectively.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_055	Massachusetts Water Resources Authority	Water Quality	Neponset River	Neponset River, above Baker Dam in Milton	42.270818	-71.068878
MWRA_255	Massachusetts Water Resources Authority	Water Quality	Neponset River	Downstream side of pedestrian foot bridge, mid-channel, 150 meters upstream of site 055 and the Bake	42.270657	-71.070707
NepRWA_NER165	Neponset River Watershed Association	Water Quality	Neponset River	Hyde Park - Fairmount Avenue	42.252133	-71.121720
NepRWA_NER179	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ Brush Hill Road	42.264947	-71.095890
NepRWA_NER185	Neponset River Watershed Association	Water Quality	Neponset River	Ryan Playground, Mattapan	42.269383	-71.086620

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 4) (NepRWA 2023) (MassDEP Undated 4)
[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_055	Massachusetts Water Resources Authority	E. coli	04/04/11	10/21/11	15	131	1300	452
MWRA_055	Massachusetts Water Resources Authority	Enterococci	04/04/11	10/21/11	15	10	399	87
MWRA_055	Massachusetts Water Resources Authority	E. coli	04/02/12	10/31/12	16	41	3130	573
MWRA_055	Massachusetts Water Resources Authority	Enterococci	04/02/12	10/31/12	16	10	2010	59
MWRA_055	Massachusetts Water Resources Authority	E. coli	04/01/13	10/28/13	16	52	2850	420
MWRA_055	Massachusetts Water Resources Authority	Enterococci	04/01/13	10/28/13	16	10	959	60
MWRA_055	Massachusetts Water Resources Authority	E. coli	04/01/14	10/27/14	16	107	2060	353

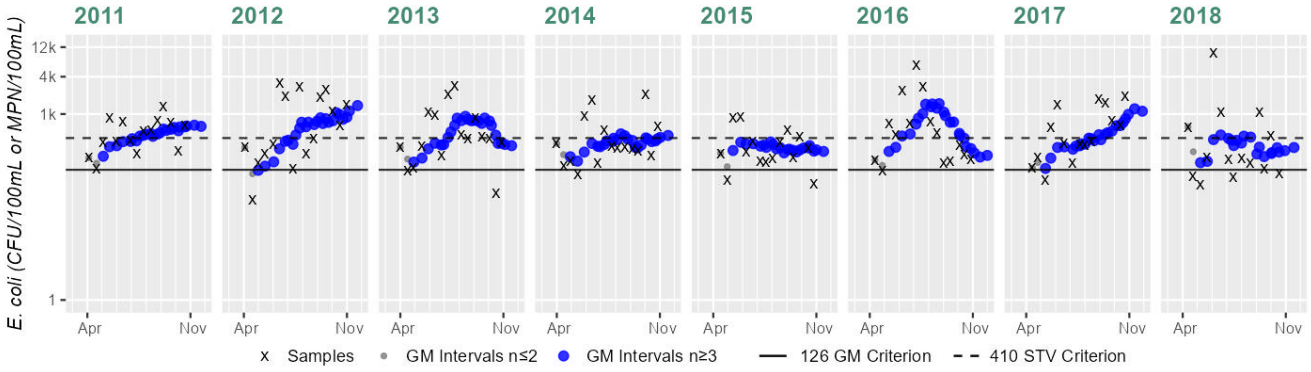
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_055	Massachusetts Water Resources Authority	Enterococci	04/01/14	10/27/14	16	10	1500	60
MWRA_055	Massachusetts Water Resources Authority	E. coli	04/16/15	10/27/15	15	74	882	267
MWRA_055	Massachusetts Water Resources Authority	Enterococci	04/16/15	10/27/15	15	10	109	29
MWRA_055	Massachusetts Water Resources Authority	E. coli	04/11/16	10/27/16	15	122	6130	492
MWRA_055	Massachusetts Water Resources Authority	Enterococci	04/11/16	10/27/16	15	10	1330	58
MWRA_055	Massachusetts Water Resources Authority	E. coli	04/14/17	10/24/17	15	86	1920	464
MWRA_055	Massachusetts Water Resources Authority	Enterococci	04/14/17	10/24/17	15	10	1220	67
MWRA_055	Massachusetts Water Resources Authority	E. coli	04/12/18	10/18/18	14	73	9800	293
MWRA_055	Massachusetts Water Resources Authority	Enterococci	04/12/18	10/18/18	14	30	3260	121
MWRA_255	Massachusetts Water Resources Authority	E. coli	04/01/19	10/22/19	16	41	3080	264
MWRA_255	Massachusetts Water Resources Authority	Enterococci	04/01/19	10/22/19	16	10	2140	100
MWRA_255	Massachusetts Water Resources Authority	E. coli	06/29/20	10/20/20	9	62	6490	425
MWRA_255	Massachusetts Water Resources Authority	Enterococci	06/29/20	10/20/20	9	63	5480	211
MWRA_255	Massachusetts Water Resources Authority	E. coli	04/05/21	12/21/21	15	52	601	204
MWRA_255	Massachusetts Water Resources Authority	Enterococci	04/05/21	12/21/21	15	20	336	99
MWRA_255	Massachusetts Water Resources Authority	E. coli	04/05/22	10/20/22	15	73	3650	364
MWRA_255	Massachusetts Water Resources Authority	Enterococci	04/05/22	10/20/22	15	20	5480	85

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_NER165	Neponset River Watershed Association	E. coli	04/06/11	09/14/11	3	98	676	214
NepRWA_NER165	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	52	1670	366
NepRWA_NER165	Neponset River Watershed Association	E. coli	05/22/13	10/23/13	5	86	1860	347
NepRWA_NER165	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	97	3080	432
NepRWA_NER179	Neponset River Watershed Association	E. coli	06/08/17	10/12/17	5	10	959	102
NepRWA_NER179	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	1220	134
NepRWA_NER179	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	4	63	5480	264
NepRWA_NER179	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	63	3650	239
NepRWA_NER179	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	86	1050	222
NepRWA_NER179	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	63	6870	327
NepRWA_NER185	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	135	738	238
NepRWA_NER185	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	20	4160	458
NepRWA_NER185	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	41	1500	189
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	5	218	3080	507
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	109	1850	446
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	31	2360	349
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	97	6130	377

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	148	3650	407
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	20	1140	218
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	175	2760	386

Station MWRA_055 - Escherichia coli

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



Variable*	Result
Samples	15
SeasGM	452
#GMI	25
#GMI Ex	25
%GMI Ex	100%
n>STV	8
%n>STV	53%

Variable*	Result
Samples	16
SeasGM	573
#GMI	27
#GMI Ex	26
%GMI Ex	96%
n>STV	8
%n>STV	50%

Variable*	Result
Samples	16
SeasGM	420
#GMI	27
#GMI Ex	27
%GMI Ex	100%
n>STV	7
%n>STV	43%

Variable*	Result
Samples	16
SeasGM	353
#GMI	27
#GMI Ex	27
%GMI Ex	100%
n>STV	5
%n>STV	31%

Variable*	Result
Samples	15
SeasGM	267
#GMI	25
#GMI Ex	25
%GMI Ex	100%
n>STV	4
%n>STV	26%

Variable*	Result
Samples	15
SeasGM	492
#GMI	25
#GMI Ex	25
%GMI Ex	100%
n>STV	8
%n>STV	53%

Variable*	Result
Samples	15
SeasGM	464
#GMI	25
#GMI Ex	25
%GMI Ex	100%
n>STV	7
%n>STV	46%

Variable*	Result
Samples	14
SeasGM	293
#GMI	21
#GMI Ex	21
%GMI Ex	100%
n>STV	5
%n>STV	35%

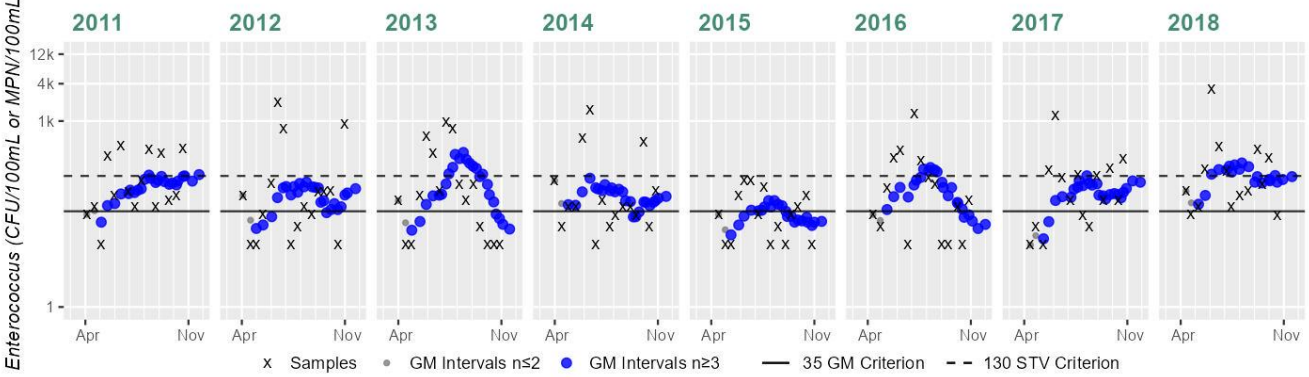
Cumulative %GMI Exceedance Current (2011-2022)
99%

Cumulative %GMI Exceedance Current (Recent 5 Years)
100%

**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_055 - Enterococcus

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



Variable*	Result
Samples	15
SeasGM	87
#GMI	25
#GMI Ex	24
%GMI Ex	96%
n>STV	5
%n>STV	33%

Variable*	Result
Samples	16
SeasGM	59
#GMI	27
#GMI Ex	23
%GMI Ex	85%
n>STV	3
%n>STV	18%

Variable*	Result
Samples	16
SeasGM	60
#GMI	27
#GMI Ex	19
%GMI Ex	70%
n>STV	4
%n>STV	25%

Variable*	Result
Samples	16
SeasGM	60
#GMI	27
#GMI Ex	24
%GMI Ex	88%
n>STV	3
%n>STV	18%

Variable*	Result
Samples	15
SeasGM	29
#GMI	25
#GMI Ex	9
%GMI Ex	36%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	15
SeasGM	58
#GMI	25
#GMI Ex	19
%GMI Ex	76%
n>STV	4
%n>STV	26%

Variable*	Result
Samples	15
SeasGM	67
#GMI	25
#GMI Ex	23
%GMI Ex	92%
n>STV	6
%n>STV	40%

Variable*	Result
Samples	14
SeasGM	121
#GMI	21
#GMI Ex	21
%GMI Ex	100%
n>STV	6
%n>STV	42%

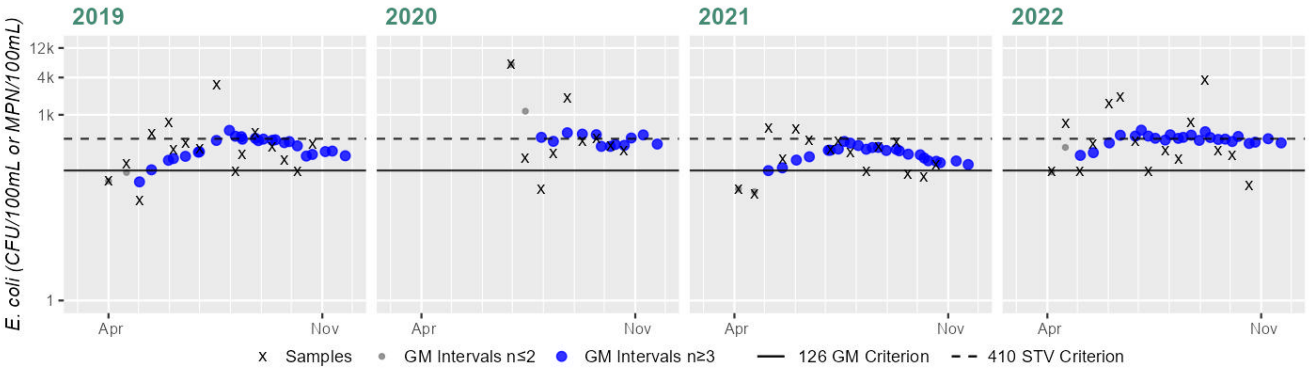
Cumulative %GMI Exceedance
Current (2011-2022)
80%

Cumulative %GMI Exceedance
Current (Recent 5 Years)
78%

**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_255 - Escherichia coli

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



Variable*	Result
Samples	16
SeasGM	264
#GMI	26
#GMI Ex	25
%GMI Ex	96%
n>STV	4
%n>STV	25%

Variable*	Result
Samples	9
SeasGM	425
#GMI	13
#GMI Ex	13
%GMI Ex	100%
n>STV	3
%n>STV	33%

Variable*	Result
Samples	15
SeasGM	204
#GMI	25
#GMI Ex	23
%GMI Ex	92%
n>STV	2
%n>STV	13%

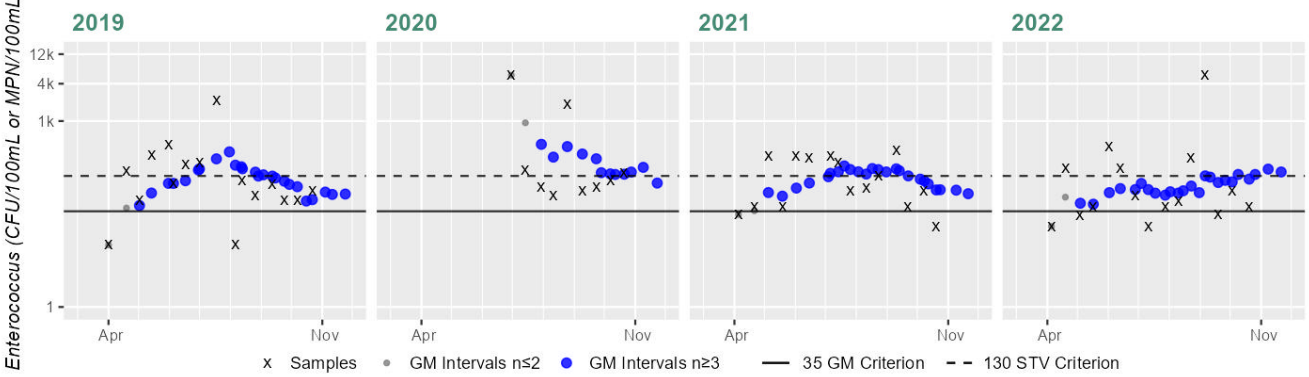
Variable*	Result
Samples	15
SeasGM	364
#GMI	25
#GMI Ex	25
%GMI Ex	100%
n>STV	5
%n>STV	33%

Cumulative %GMI Exceedance
Current (2011-2022)
96%

**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_255 - Enterococcus

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



Variable*	Result
Samples	16
SeasGM	100
#GMI	26
#GMI Ex	26
%GMI Ex	100%
n>STV	6
%n>STV	37%

Variable*	Result
Samples	9
SeasGM	211
#GMI	13
#GMI Ex	13
%GMI Ex	100%
n>STV	4
%n>STV	44%

Variable*	Result
Samples	15
SeasGM	99
#GMI	25
#GMI Ex	25
%GMI Ex	100%
n>STV	6
%n>STV	40%

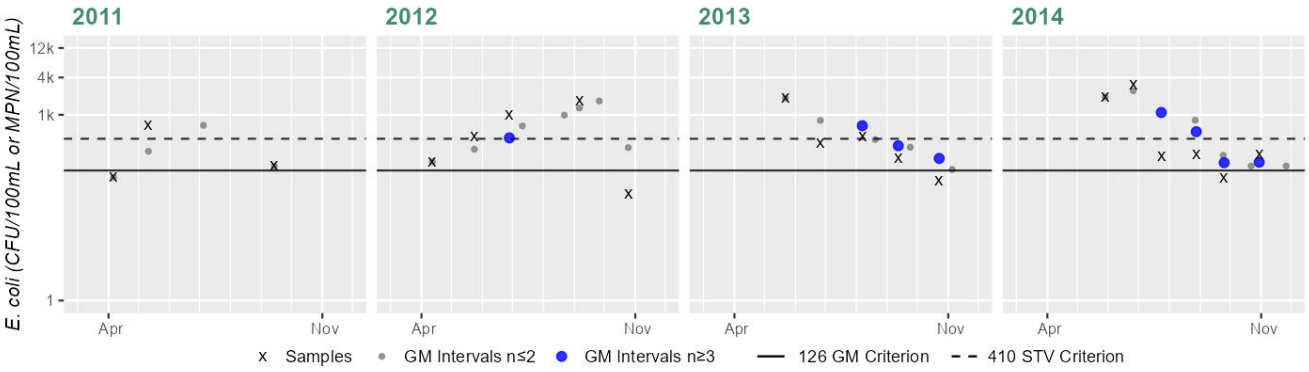
Variable*	Result
Samples	15
SeasGM	85
#GMI	25
#GMI Ex	25
%GMI Ex	100%
n>STV	5
%n>STV	33%

Cumulative %GMI Exceedance
Current (2011-2022)
100%

**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 NepRWA_NER165 - Escherichia coli

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



Variable*	Result
Samples	3
SeasGM	214
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	366
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	3
%n>STV	60%

Variable*	Result
Samples	5
SeasGM	347
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	2
%n>STV	40%

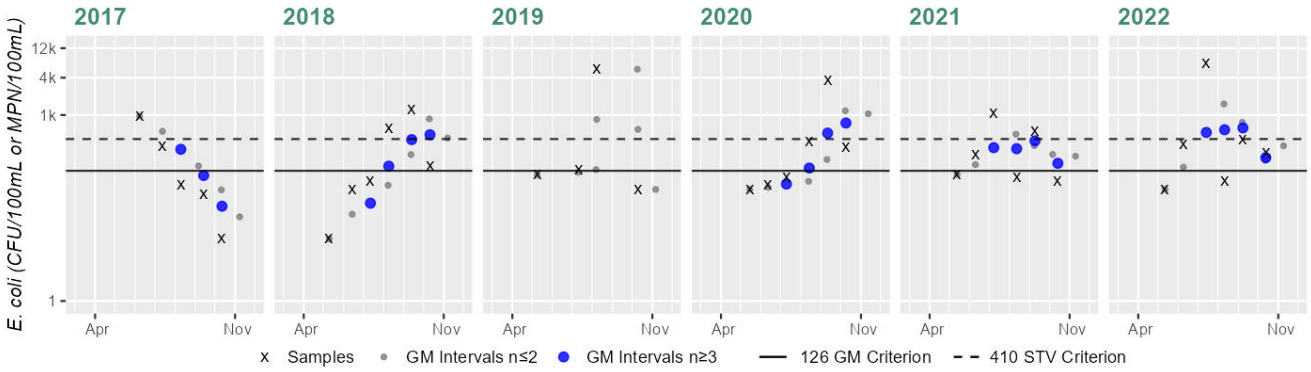
Variable*	Result
Samples	6
SeasGM	432
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance
Current (2011-2022)
100%

**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 NepRWA_NER179 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	102
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	134
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	4
SeasGM	264
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	239
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	222
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

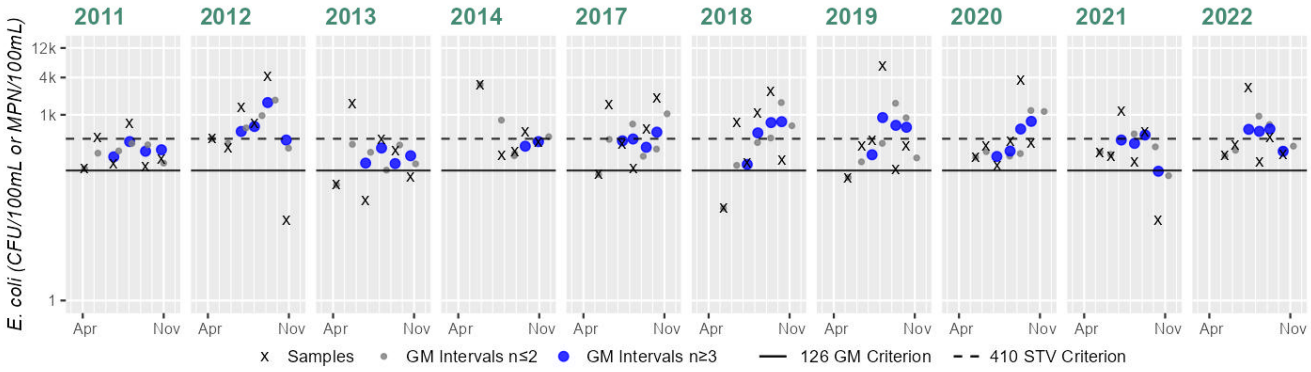
Variable*	Result
Samples	6
SeasGM	327
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance
Current (2011-2022)
78%

**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 MASSDEP_W1935 & NepRWA_NER185 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	238
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	458
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	189
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	507
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	446
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	349
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	377
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	407
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	218
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	386
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance
Current (2011-2022)
97%

Cumulative %GMI Exceedance
Current (Recent 5 Years)
95%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for the Neponset River (MA73-03) continues to be assessed as Not Supporting. The prior Debris, Oil And Grease, Scum/Foam, and Trash impairments (from the Aesthetics Use) are being carried forward. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 5 stations/combined stations in 2011-2022. The Flocculant Masses impairment (from the Aesthetics Use) is being removed (see supporting information for removed impairments). MassDEP, Massachusetts Water Resources Authority (MWRA) & Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in this Neponset River AU, from 2002-2022 at 5 stations. Samples were collected from the following stations/sample years from upstream to downstream: Upstream end at NepRWA_NER165 [Hyde Park Fairmount Avenue] from 2008-2010 (historic n=4-6/yr) & 2011-2014 (current n=3-6/yr); halfway down at NepRWA_NER179 [at Brush Hill Rd] from 2017-2022 (n=4-6/yr); three-quarters of the way down at combined station W1935 & NepRWA_NER185 [~3000 ft E of Rt. 28, behind the baseball field off the western end of Meadowbank Ave, (Mattapan) Boston & Ryan Playground, Mattapan] from 2008-2010 (historic n=5-9/yr) as well as 2011-2014 & 2017-2022 (current n=5-6/yr); close to the downstream end at MWRA_255 [downstream side of pedestrian foot bridge, mid-channel, 150 m upstream of site 055 & the Bake] from 2018-2022 (n=2-26/yr); & downstream end at MWRA_055 [above Baker Dam in Milton] from 2002-2010 (historic n=21-42/yr) & 2011-2018 (current n=23-26/yr). Overall, the *E. coli* data collected in both the historic & the current IR window for this Neponset River AU are all indicative of poor water quality conditions, but only the analysis from the current IR window will be summarized here: Analysis of the multi-year limited frequency *E. coli* dataset from NepRWA_NER165 indicated 3 out of 3 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2012-2014, 50-100%), and while just 2 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2012 and 2014, n=2 & 2), cumulatively across years 62% of intervals had GMs >244 CFU/100ml. Analysis of the multi-year limited frequency *E. coli* dataset from NepRWA_NER179 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2017-2018 and 2020-2022, 33-75%) and while 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, cumulatively across years 57% of intervals had GMs >244 CFU/100ml. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from W1935 & NepRWA_NER185 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 75-100%) and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2), cumulatively across years 80% of intervals had GMs >244 CFU/100ml. Analysis of the multi-year high frequency *E. coli* dataset from MWRA_255 indicated 4 out of 4 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml (2019-2022, 26-90%) and while just 2 yrs had >10% of samples exceed the 794 CFU/100ml STV (2020 and 2022, 20 & 15%), cumulatively across years 59% of intervals had GMs >244 CFU/100ml. Analysis of the recent five years of this multi-year high frequency *E. coli* dataset from MWRA_055 indicated 5 out of 5 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml (2014-2018, 76-95%), 5 yrs had >10% of samples exceed the 794 CFU/100ml STV (2014-2018, 13-28%), and cumulatively across years 87% of intervals had GMs >244 CFU/100ml. The data from NepRWA_NER165, NepRWA_NER179, W1935 & NepRWA_NER185, MWRA_255, and MWRA_055 in the current IR window, are all indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_055	Massachusetts Water Resources Authority	Water Quality	Neponset River	Neponset River, above Baker Dam in Milton	42.270818	-71.068878
MWRA_255	Massachusetts Water Resources Authority	Water Quality	Neponset River	Downstream side of pedestrian foot bridge, mid-channel, 150 meters upstream of site 055 and the Bake	42.270657	-71.070707
W1935	MassDEP	Water Quality	Neponset River	[approximately 3000 feet east of Route 28, behind the baseball field off the western end of Meadowbank Avenue, (Mattapan) Boston]	42.269342	-71.086582
NepRWA_NER165	Neponset River Watershed Association	Water Quality	Neponset River	Hyde Park - Fairmount Avenue	42.252133	-71.121720
NepRWA_NER179	Neponset River Watershed Association	Water Quality	Neponset River	Neponset River @ Brush Hill Road	42.264947	-71.095890
NepRWA_NER185	Neponset River Watershed Association	Water Quality	Neponset River	Ryan Playground, Mattapan	42.269383	-71.086620

Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 3) (MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)
[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_055	Massachusetts Water Resources Authority	E. coli	04/03/02	12/31/02	35	40	11700	344
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/16/03	12/30/03	42	150	1800	394
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/06/04	12/22/04	21	40	60000	441

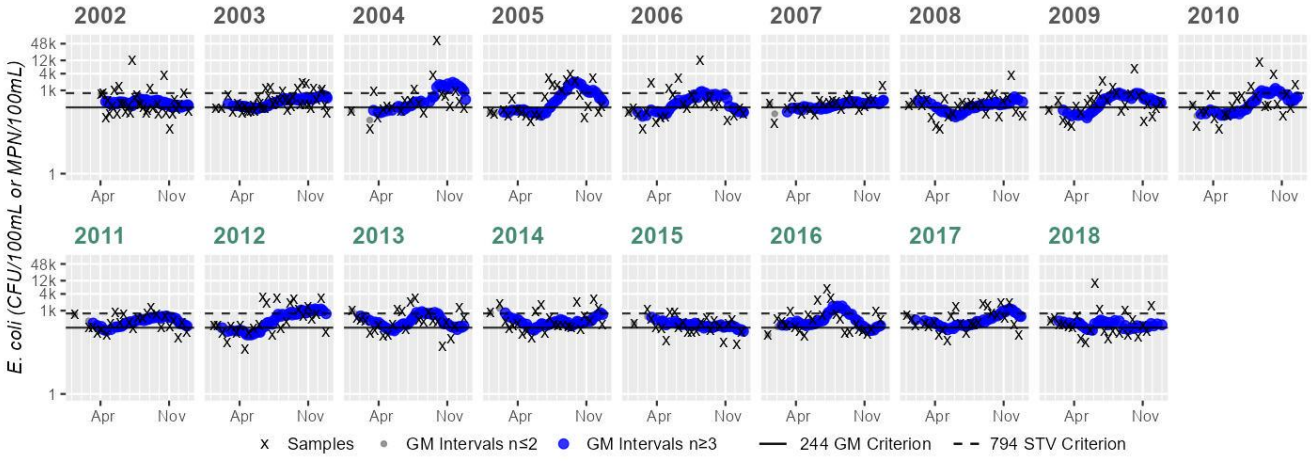
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/05/05	12/19/05	25	75	3640	408
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/04/06	12/27/06	25	40	12400	303
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/09/07	12/27/07	23	63	1420	306
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/09/08	12/29/08	26	41	3450	273
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/13/09	12/28/09	25	52	5790	334
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/27/10	12/13/10	24	41	10500	351
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/10/11	12/27/11	24	107	1300	368
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/11/12	12/26/12	26	41	3130	449
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/08/13	12/23/13	26	52	2850	404
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/06/14	12/22/14	25	107	2610	434
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/20/15	12/21/15	23	63	1080	281
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/04/16	12/20/16	25	122	6130	427
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/03/17	12/20/17	25	86	1960	442
MWRA_055	Massachusetts Water Resources Authority	E. coli	01/18/18	11/27/18	23	73	9800	320
MWRA_255	Massachusetts Water Resources Authority	E. coli	12/10/18	12/26/18	2	74	135	99
MWRA_255	Massachusetts Water Resources Authority	E. coli	01/07/19	12/16/19	26	41	3080	269
MWRA_255	Massachusetts Water Resources Authority	E. coli	01/02/20	12/28/20	20	41	6490	351

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_255	Massachusetts Water Resources Authority	E. coli	01/11/21	12/29/21	26	41	601	155
MWRA_255	Massachusetts Water Resources Authority	E. coli	01/12/22	12/28/22	26	63	3650	296
W1935	MassDEP	E. coli	04/28/09	09/15/09	5	40	1600	244
NepRWA_NER165	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	84	1530	274
NepRWA_NER165	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	110	5170	444
NepRWA_NER165	Neponset River Watershed Association	E. coli	04/14/10	09/22/10	4	10	2250	230
NepRWA_NER165	Neponset River Watershed Association	E. coli	04/06/11	09/14/11	3	98	676	214
NepRWA_NER165	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	52	1670	366
NepRWA_NER165	Neponset River Watershed Association	E. coli	05/22/13	10/23/13	5	86	1860	347
NepRWA_NER165	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	97	3080	432
NepRWA_NER179	Neponset River Watershed Association	E. coli	06/08/17	10/12/17	5	10	959	102
NepRWA_NER179	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	1220	134
NepRWA_NER179	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	4	63	5480	264
NepRWA_NER179	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	63	3650	239
NepRWA_NER179	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	86	1050	222
NepRWA_NER179	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	63	6870	327
NepRWA_NER185	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	5	86	2190	374
NepRWA_NER185	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	4	110	537	247

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_NER185	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	5	30	512	174
NepRWA_NER185	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	135	738	238
NepRWA_NER185	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	20	4160	458
NepRWA_NER185	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	41	1500	189
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	5	218	3080	507
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	109	1850	446
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	31	2360	349
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	97	6130	377
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	148	3650	407
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	20	1140	218
NepRWA_NER185	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	175	2760	386

Station MWRA_055 - Escherichia coli

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



Variable*	Result
Samples	35
SeasGM	344
#GMI	65
#GMI Ex	63
%GMI Ex	96%
n>STV	7
%n>STV	20%

Variable*	Result
Samples	42
SeasGM	394
#GMI	76
#GMI Ex	67
%GMI Ex	88%
n>STV	9
%n>STV	21%

Variable*	Result
Samples	21
SeasGM	441
#GMI	37
#GMI Ex	29
%GMI Ex	78%
n>STV	5
%n>STV	23%

Variable*	Result
Samples	25
SeasGM	408
#GMI	45
#GMI Ex	28
%GMI Ex	62%
n>STV	8
%n>STV	32%

Variable*	Result
Samples	25
SeasGM	303
#GMI	45
#GMI Ex	26
%GMI Ex	57%
n>STV	4
%n>STV	16%

Variable*	Result
Samples	23
SeasGM	306
#GMI	41
#GMI Ex	28
%GMI Ex	68%
n>STV	1
%n>STV	4%

Variable*	Result
Samples	26
SeasGM	273
#GMI	47
#GMI Ex	31
%GMI Ex	65%
n>STV	1
%n>STV	3%

Variable*	Result
Samples	25
SeasGM	334
#GMI	45
#GMI Ex	29
%GMI Ex	64%
n>STV	3
%n>STV	12%

Variable*	Result
Samples	24
SeasGM	351
#GMI	43
#GMI Ex	26
%GMI Ex	60%
n>STV	4
%n>STV	16%

Variable*	Result
Samples	24
SeasGM	368
#GMI	43
#GMI Ex	37
%GMI Ex	86%
n>STV	2
%n>STV	8%

Variable*	Result
Samples	26
SeasGM	449
#GMI	47
#GMI Ex	33
%GMI Ex	70%
n>STV	8
%n>STV	30%

Variable*	Result
Samples	26
SeasGM	404
#GMI	47
#GMI Ex	41
%GMI Ex	87%
n>STV	7
%n>STV	26%

Variable*	Result
Samples	25
SeasGM	434
#GMI	45
#GMI Ex	43
%GMI Ex	95%
n>STV	7
%n>STV	28%

Variable*	Result
Samples	23
SeasGM	281
#GMI	41
#GMI Ex	33
%GMI Ex	80%
n>STV	3
%n>STV	13%

Variable*	Result
Samples	25
SeasGM	427
#GMI	45
#GMI Ex	40
%GMI Ex	88%
n>STV	5
%n>STV	20%

Variable*	Result
Samples	25
SeasGM	442
#GMI	45
#GMI Ex	42
%GMI Ex	93%
n>STV	5
%n>STV	20%

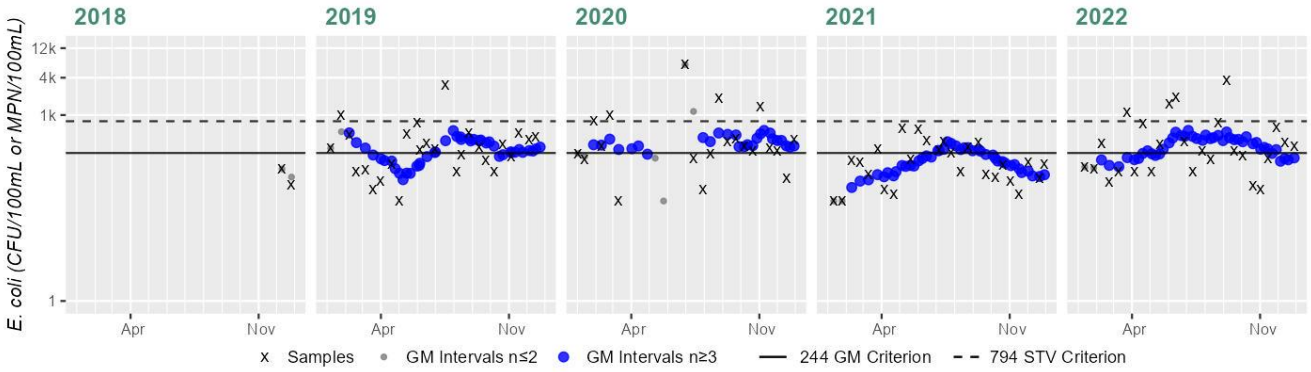
Variable*	Result
Samples	23
SeasGM	320
#GMI	39
#GMI Ex	30
%GMI Ex	76%
n>STV	4
%n>STV	17%

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)
73%	63%	84%	87%

**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_255 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	99
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	26
SeasGM	269
#GMI	45
#GMI Ex	30
%GMI Ex	66%
n>STV	2
%n>STV	7%

Variable*	Result
Samples	20
SeasGM	351
#GMI	30
#GMI Ex	27
%GMI Ex	90%
n>STV	4
%n>STV	20%

Variable*	Result
Samples	26
SeasGM	155
#GMI	46
#GMI Ex	12
%GMI Ex	26%
n>STV	0
%n>STV	0%

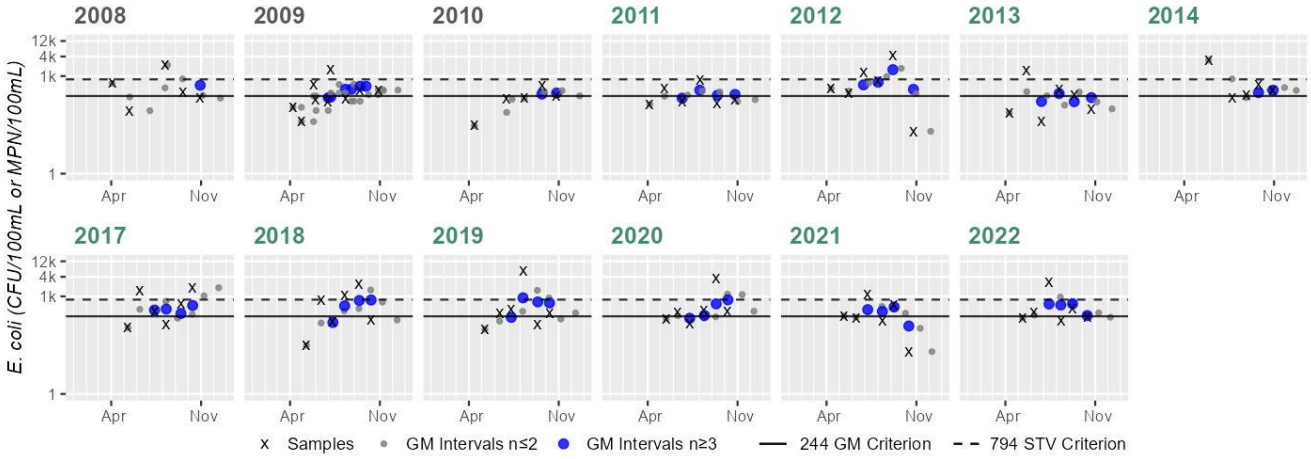
Variable*	Result
Samples	26
SeasGM	296
#GMI	47
#GMI Ex	31
%GMI Ex	65%
n>STV	4
%n>STV	15%

Cumulative %GMI Exceedance
Current (2011-2022)
59%

**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 MASSDEP_W1935 & NepRWA_NER185 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	374
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	9
SeasGM	245
#GMI	6
#GMI Ex	4
%GMI Ex	66%
n>STV	1
%n>STV	11%

Variable*	Result
Samples	5
SeasGM	174
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	238
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	458
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	189
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	507
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	446
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	349
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	377
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	407
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	218
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

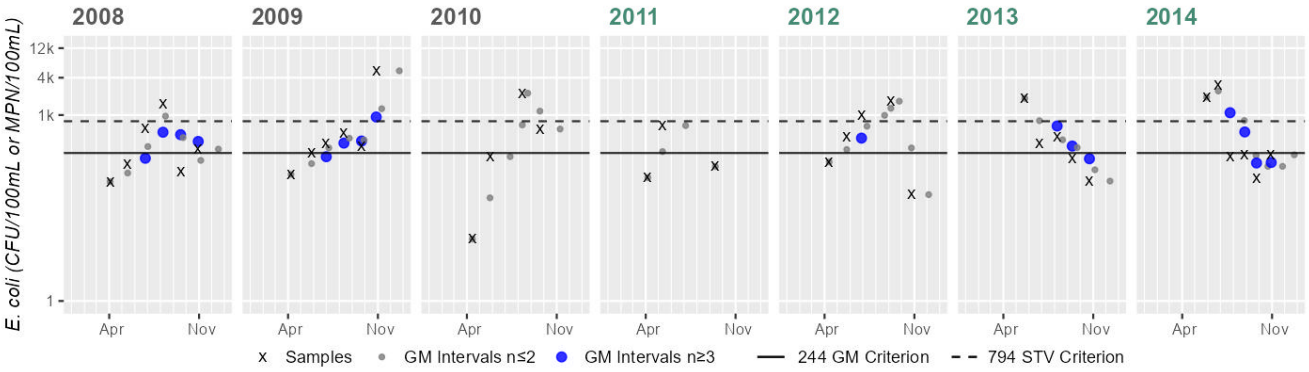
Variable*	Result
Samples	6
SeasGM	386
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
77%	78%	80%

**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 NepRWA_NER165 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	274
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	444
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	4
SeasGM	230
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	3
SeasGM	214
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	366
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	5
SeasGM	347
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	432
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

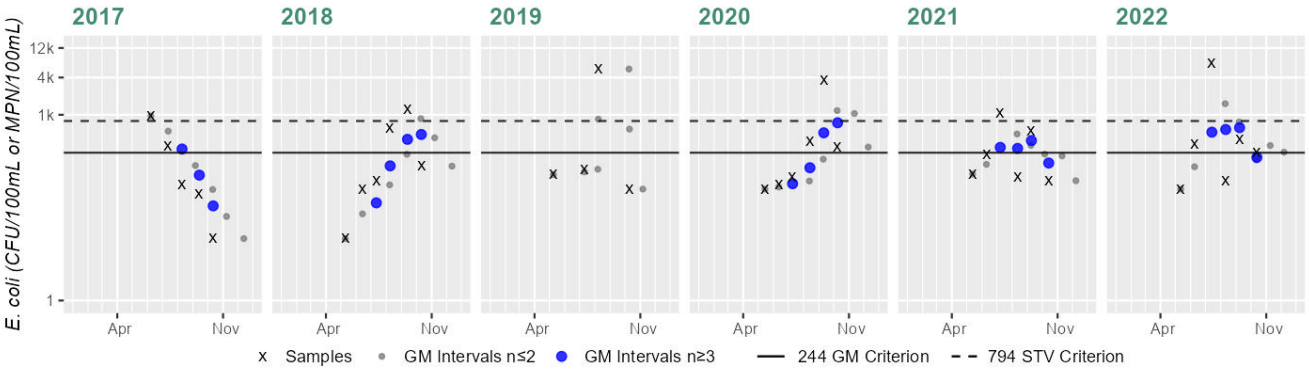
Cumulative %GMI Exceedance
Historic (1997-2010)
75%

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

**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 NepRWA_NER179 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	102
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	134
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	4
SeasGM	264
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	239
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	222
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	327
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance
Current (2011-2022)
57%

**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.*

Neponset River (MA73-04)

Location:	Milton Lower Falls Dam (Neponset River Baker Chocolate Dam, NATID: MA01093), Milton/Boston to mouth at Dorchester Bay, Boston/Quincy.
AU Type:	ESTUARY
AU Size:	0.67 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Debris*)	--	Unchanged
5	5	Cause Unknown [Contaminants in Fish and/or Shellfish]	--	Unchanged
5	5	Enterococcus	2592	Unchanged
5	5	Fecal Coliform	2592	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	Trash	--	Unchanged
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
(Debris*)	Illegal Dumps or Other Inappropriate Waste Disposal (Y)	--	--	--	X	X	X
Cause Unknown [Contaminants in Fish and/or Shellfish]	Source Unknown (N)	--	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Enterococcus	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	--	--	--	X	X
Fecal Coliform	Combined Sewer Overflows (Y)	--	--	X	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	X	--	X	X
Fecal Coliform	Municipal Point Source Discharges (Y)	--	--	X	--	X	X
Fecal Coliform	Source Unknown (N)	--	--	X	--	X	X
Fecal Coliform	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	--	X	--	X	X
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--	--
Trash	Illegal Dumps or Other Inappropriate Waste Disposal (Y)	--	--	--	X	X	X
Turbidity	Combined Sewer Overflows (Y)	--	--	--	X	X	X
Turbidity	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	--	X	X	X
Turbidity	Municipal Point Source Discharges (Y)	--	--	--	X	X	X

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Turbidity	Source Unknown (N)	--	--	--	X	X	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 Neponset River (MA73-04) 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 Neponset River (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
Neponset River (MA73-04): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.6359 sq mi (95%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.6359 sq mi (95%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as entirely prohibited. 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 7)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH3.0	Dorchester Bay And Neponset River	Prohibited	0.42255	63.1%

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH3.3	Buckley's Bar	Prohibited	0.00287	0.4%
GBH3.4	Neponset River	Prohibited	0.21051	31.4%

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Neponset River (MA73-04) continues to be assessed as as Not Supporting with the prior Turbidity, Debris and Trash impairments being carried forward. No new data are available to evaluate the Aesthetics Use for this Neponset Reservoir AU.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for the Neponset River (MA73-04) 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 1 beach in 2018-2022 and bacteria data not meeting the threshold at 4 stations in 2018-2022. The prior Fecal Coliform impairment is being carried forward and the prior Debris, Trash, and Turbidity impairments (from the Aesthetics Use) are also being carried forward. Neponset River MDPH Beach Closure data for Tenean (DCR) beach [Beach ID: 2642] in Boston (located close to the downstream end of the AU on the west bank), indicated that this beach was posted for >10% of the swimming season in 2018 (42%), 2019 (67%), 2020 (48%), 2021 (63%), and 2022 (20%) indicating an Enterococcus impairment. The shellfish growing areas (0.6359 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 Neponset River. Surface water sampling was conducted at Tenean Beach on the Neponset River 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 2.3 ng/L PFOS). Massachusetts Water Resources Authority (MWRA) staff/volunteers collected Enterococcus bacteria samples from 2011-2022 at 4 stations. Samples were collected from the following stations/sample years: halfway down the AU at MWRA_054 [Neponset River, Granite Ave., near BOS095 (closed)] from 2011-2022 (n=17-26/yr); three-quarters of the way down at MWRA_042 [Neponset River, between Neponset Ave and MBTA bridges] from 2011-2022 (n=17-24/yr); then close to the downstream end at MWRA_089 [S Dorchester Bay, Neponset River, Commercial Point, Victory Rd. Park, BOS090 (closed)] from 2011-2022 (n=17-37/yr) and MWRA_041 [S Dorchester Bay, Neponset River, Old Colony Yacht Club, near BOS090 (closed)] from 2011-2022 (n=17-24/yr). Analysis of the recent five years of the multi-year high frequency Enterococcus dataset from MWRA_041 indicated 5 out of 5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2018-2022, 15-70%), 4 yrs had >10% of samples exceed the 130 CFU/100ml STV (2018-2021, 10-23%), and cumulatively across years 43% of intervals had GMs >35 CFU/100ml. Analysis of the recent five years of this multi-year high frequency Enterococcus dataset from MWRA_042 indicated 5 out of 5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2018-2022, 12-77%), 3 yrs had >10% of samples exceed the 130 CFU/100ml STV (2020-2022, 17-36%), and cumulatively across years 51% of intervals had GMs >35 CFU/100ml. Analysis of the recent five years of this multi-year high frequency Enterococcus dataset from MWRA_054 indicated 5 out of 5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2018-2022, 65-100%), 5 yrs had >10% of samples exceed the 130 CFU/100ml STV (2018-2022, 17-63%), and cumulatively across years 82% of intervals had GMs >35 CFU/100ml. Analysis of the recent five years of this multi-year high frequency Enterococcus dataset from MWRA_089 indicated 5 out of 5 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2018-2022, 80-100%), 5 yrs had >10% of samples exceed the 130 CFU/100ml STV (2018-2022, 29-63%), and cumulatively across years 89% of intervals had GMs >35 CFU/100ml. The data from MWRA_041, MWRA_042, MWRA_054, and MWRA_089 are indicative of an Enterococcus impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_041	Massachusetts Water Resources Authority	Water Quality	Neponset Mouth	South Dorchester Bay, Neponset River, Old Colony Yacht Club, near BOS090 (closed)	42.299651	-71.043477
MWRA_042	Massachusetts Water Resources Authority	Water Quality	Neponset River	Neponset River, between Neponset Ave and MBTA bridges	42.284725	-71.038706
MWRA_054	Massachusetts Water Resources Authority	Water Quality	Neponset River	Neponset River, Granite Ave., near BOS095 (closed)	42.277484	-71.052789
MWRA_089	Massachusetts Water Resources Authority	Water Quality	Neponset Mouth	South Dorchester Bay, Neponset River, Commercial Point, Victory Rd. Park, BOS090 (closed)	42.298347	-71.046347

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 4)
[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_041	Massachusetts Water Resources Authority	Enterococcus	04/27/11	10/26/11	20	10	146	24
MWRA_041	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	18	10	1720	19
MWRA_041	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	820	19
MWRA_041	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	85	18
MWRA_041	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	86	15
MWRA_041	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	24	10	712	19
MWRA_041	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	390	31
MWRA_041	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	17	10	1650	50
MWRA_041	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	657	38
MWRA_041	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	2190	53

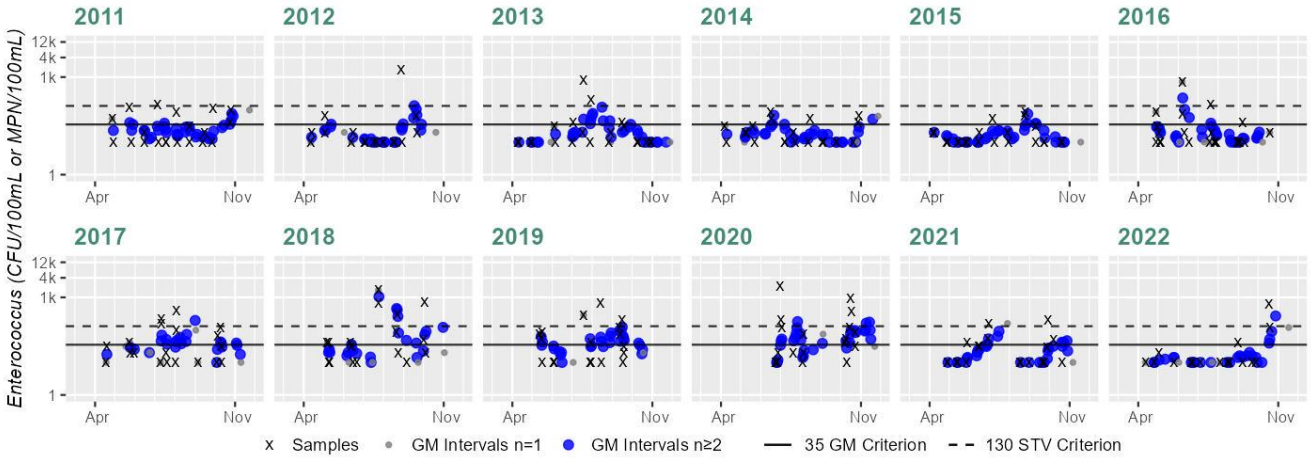
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_041	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	197	20
MWRA_041	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	609	16
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	04/27/11	10/26/11	20	10	480	39
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	18	10	160	18
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	209	24
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	272	23
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	292	23
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	24	10	1100	28
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	1080	60
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	1130	25
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	160	37
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	5480	88
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	359	57
MWRA_042	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	546	28
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	04/27/11	10/26/11	20	10	1190	74
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	04/11/12	09/20/12	18	10	487	68
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	21	10	393	50

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	21	10	448	49
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	669	48
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	26	10	1990	67
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	2480	124
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	18	10	1350	67
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	10	259	68
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	31	11200	202
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	20	389	110
MWRA_054	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	591	54
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	04/05/11	11/23/11	37	10	18700	306
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	04/11/12	10/30/12	26	10	31700	246
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	04/09/13	10/30/13	27	10	27800	151
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	04/07/14	10/29/14	26	10	15500	124
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	04/07/15	10/21/15	22	10	1350	37
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	04/27/16	10/18/16	26	10	6870	54
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	04/18/17	10/12/17	19	10	6490	124
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	05/07/18	10/05/18	17	10	12000	144

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	05/13/19	09/19/19	18	20	4610	187
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	06/22/20	10/23/20	19	10	14100	276
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	04/28/21	10/21/21	19	10	1010	76
MWRA_089	Massachusetts Water Resources Authority	Enterococcus	04/12/22	10/19/22	17	10	13000	93

Station MWRA_041 - Enterococcus

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



Variable*	Result
Samples	20
SeasGM	24
#GMI	36
#GMI Ex	6
%GMI Ex	16%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	19
#GMI	29
#GMI Ex	7
%GMI Ex	24%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	21
SeasGM	19
#GMI	35
#GMI Ex	9
%GMI Ex	25%
n>STV	2
%n>STV	9%

Variable*	Result
Samples	21
SeasGM	18
#GMI	37
#GMI Ex	4
%GMI Ex	10%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	22
SeasGM	15
#GMI	38
#GMI Ex	4
%GMI Ex	10%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	24
SeasGM	19
#GMI	34
#GMI Ex	4
%GMI Ex	11%
n>STV	2
%n>STV	8%

Variable*	Result
Samples	19
SeasGM	31
#GMI	25
#GMI Ex	15
%GMI Ex	60%
n>STV	3
%n>STV	15%

Variable*	Result
Samples	17
SeasGM	50
#GMI	22
#GMI Ex	11
%GMI Ex	50%
n>STV	4
%n>STV	23%

Variable*	Result
Samples	18
SeasGM	38
#GMI	29
#GMI Ex	16
%GMI Ex	55%
n>STV	3
%n>STV	16%

Variable*	Result
Samples	19
SeasGM	53
#GMI	31
#GMI Ex	22
%GMI Ex	70%
n>STV	4
%n>STV	21%

Variable*	Result
Samples	19
SeasGM	20
#GMI	30
#GMI Ex	7
%GMI Ex	23%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	17
SeasGM	16
#GMI	26
#GMI Ex	4
%GMI Ex	15%
n>STV	1
%n>STV	5%

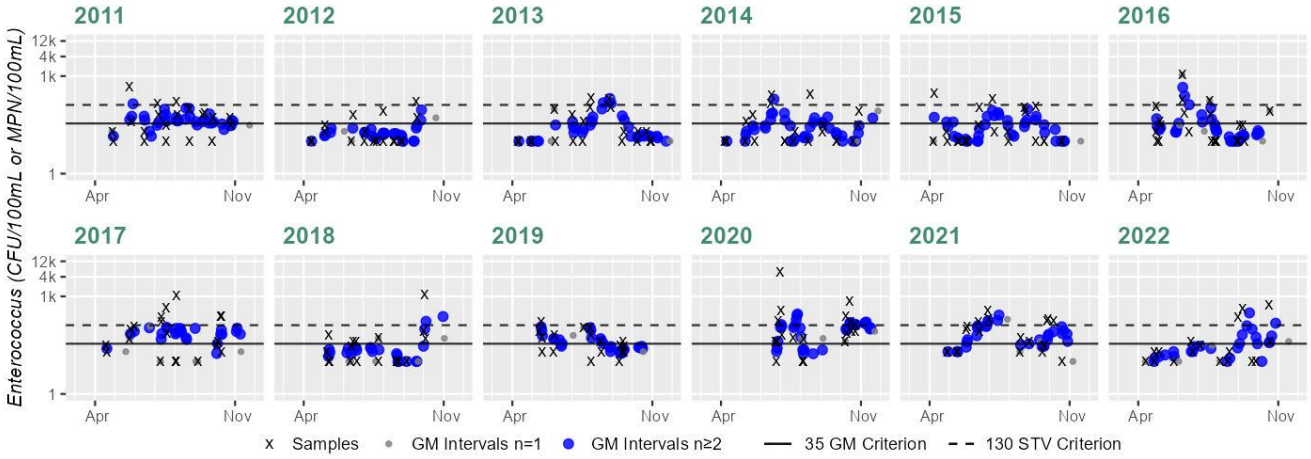
Cumulative %GMI Exceedance Current (2011-2022)
29%

Cumulative %GMI Exceedance Current (Recent 5 Years)
43%

**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_042 - Enterococcus

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



Variable*	Result
Samples	20
SeasGM	39
#GMI	36
#GMI Ex	27
%GMI Ex	75%
n>STV	3
%n>STV	15%

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

Variable*	Result
Samples	21
SeasGM	24
#GMI	35
#GMI Ex	11
%GMI Ex	31%
n>STV	2
%n>STV	9%

Variable*	Result
Samples	21
SeasGM	23
#GMI	37
#GMI Ex	12
%GMI Ex	32%
n>STV	3
%n>STV	14%

Variable*	Result
Samples	22
SeasGM	23
#GMI	38
#GMI Ex	14
%GMI Ex	36%
n>STV	2
%n>STV	9%

Variable*	Result
Samples	24
SeasGM	28
#GMI	34
#GMI Ex	9
%GMI Ex	26%
n>STV	3
%n>STV	12%

Variable*	Result
Samples	19
SeasGM	60
#GMI	25
#GMI Ex	23
%GMI Ex	92%
n>STV	6
%n>STV	31%

Variable*	Result
Samples	18
SeasGM	25
#GMI	24
#GMI Ex	3
%GMI Ex	12%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	37
#GMI	29
#GMI Ex	13
%GMI Ex	44%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	88
#GMI	31
#GMI Ex	24
%GMI Ex	77%
n>STV	7
%n>STV	36%

Variable*	Result
Samples	19
SeasGM	57
#GMI	30
#GMI Ex	22
%GMI Ex	73%
n>STV	6
%n>STV	31%

Variable*	Result
Samples	17
SeasGM	28
#GMI	26
#GMI Ex	10
%GMI Ex	38%
n>STV	3
%n>STV	17%

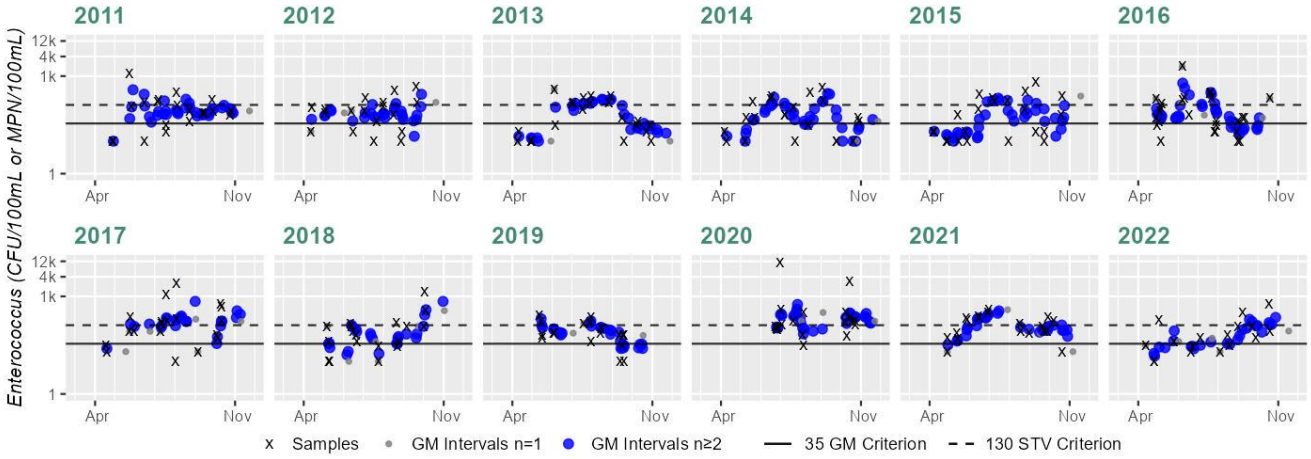
Cumulative %GMI Exceedance Current (2011-2022)
45%

Cumulative %GMI Exceedance Current (Recent 5 Years)
51%

**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_054 - Enterococcus

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



Variable*	Result
Samples	20
SeasGM	74
#GMI	36
#GMI Ex	35
%GMI Ex	97%
n>STV	6
%n>STV	30%

Variable*	Result
Samples	18
SeasGM	68
#GMI	29
#GMI Ex	28
%GMI Ex	96%
n>STV	5
%n>STV	27%

Variable*	Result
Samples	21
SeasGM	50
#GMI	35
#GMI Ex	20
%GMI Ex	57%
n>STV	8
%n>STV	38%

Variable*	Result
Samples	21
SeasGM	49
#GMI	37
#GMI Ex	25
%GMI Ex	67%
n>STV	6
%n>STV	28%

Variable*	Result
Samples	22
SeasGM	48
#GMI	38
#GMI Ex	23
%GMI Ex	60%
n>STV	7
%n>STV	31%

Variable*	Result
Samples	26
SeasGM	67
#GMI	38
#GMI Ex	28
%GMI Ex	73%
n>STV	9
%n>STV	34%

Variable*	Result
Samples	19
SeasGM	124
#GMI	25
#GMI Ex	24
%GMI Ex	96%
n>STV	10
%n>STV	52%

Variable*	Result
Samples	18
SeasGM	67
#GMI	24
#GMI Ex	18
%GMI Ex	75%
n>STV	4
%n>STV	22%

Variable*	Result
Samples	18
SeasGM	68
#GMI	29
#GMI Ex	20
%GMI Ex	68%
n>STV	5
%n>STV	27%

Variable*	Result
Samples	19
SeasGM	202
#GMI	31
#GMI Ex	31
%GMI Ex	100%
n>STV	12
%n>STV	63%

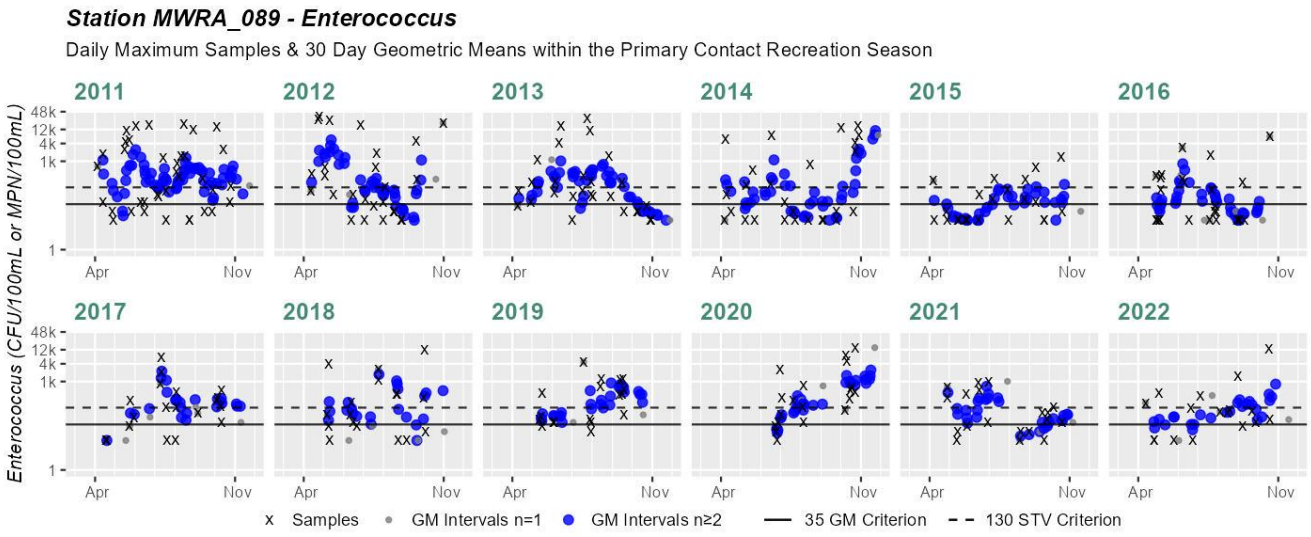
Variable*	Result
Samples	19
SeasGM	110
#GMI	30
#GMI Ex	29
%GMI Ex	96%
n>STV	9
%n>STV	47%

Variable*	Result
Samples	17
SeasGM	54
#GMI	26
#GMI Ex	17
%GMI Ex	65%
n>STV	3
%n>STV	17%

Cumulative %GMI Exceedance Current (2011-2022)
78%

Cumulative %GMI Exceedance Current (Recent 5 Years)
82%

**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	37
SeasGM	306
#GMI	67
#GMI Ex	65
%GMI Ex	97%
n>STV	20
%n>STV	54%

Variable*	Result
Samples	26
SeasGM	246
#GMI	44
#GMI Ex	34
%GMI Ex	77%
n>STV	13
%n>STV	50%

Variable*	Result
Samples	27
SeasGM	151
#GMI	48
#GMI Ex	38
%GMI Ex	79%
n>STV	11
%n>STV	40%

Variable*	Result
Samples	26
SeasGM	124
#GMI	47
#GMI Ex	35
%GMI Ex	74%
n>STV	11
%n>STV	42%

Variable*	Result
Samples	22
SeasGM	37
#GMI	38
#GMI Ex	21
%GMI Ex	55%
n>STV	5
%n>STV	22%

Variable*	Result
Samples	26
SeasGM	54
#GMI	38
#GMI Ex	22
%GMI Ex	57%
n>STV	9
%n>STV	34%

Variable*	Result
Samples	19
SeasGM	124
#GMI	25
#GMI Ex	24
%GMI Ex	96%
n>STV	11
%n>STV	57%

Variable*	Result
Samples	17
SeasGM	144
#GMI	22
#GMI Ex	20
%GMI Ex	90%
n>STV	8
%n>STV	47%

Variable*	Result
Samples	18
SeasGM	187
#GMI	29
#GMI Ex	29
%GMI Ex	100%
n>STV	9
%n>STV	50%

Variable*	Result
Samples	19
SeasGM	276
#GMI	31
#GMI Ex	28
%GMI Ex	90%
n>STV	12
%n>STV	63%

Variable*	Result
Samples	19
SeasGM	76
#GMI	30
#GMI Ex	25
%GMI Ex	83%
n>STV	7
%n>STV	36%

Variable*	Result
Samples	17
SeasGM	93
#GMI	26
#GMI Ex	21
%GMI Ex	80%
n>STV	5
%n>STV	29%

Cumulative %GMI Exceedance Current (2011-2022)
81%

Cumulative %GMI Exceedance Current (Recent 5 Years)
89%

**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 4)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2642	Tenean (DCR)/ Boston	42.29341, -71.04410	42.29180, -71.04240	16%	53%	20%	37%	42%	67%	48%	63%	20%	9

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 7)

Summary
Neponset River (MA73-04): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.6359 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 Tenean Beach on the Neponset River (MA73-04) 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 2.3 ng/L PFOS).

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for the Neponset River (MA73-04) 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 in 2018-2022. The prior Fecal Coliform impairment is being carried forward and the prior Debris, Trash, and Turbidity impairments (from the Aesthetics Use) are also being carried forward. Neponset River has a beach with MDPH Beach Closure data: Tenean (DCR) beach [Beach ID: 2642] in Boston. 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 every year from 2018-2022. The shellfish growing areas (0.6359 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. Massachusetts Water Resources Authority (MWRA) staff/volunteers collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Neponset River from 1997-2022 at 4 stations. Samples were collected from the following stations/sample years: halfway down the AU at MWRA_054 [Neponset River, Granite Ave., near BOS095 (closed)] from 1997-2010 (historic n=13-24/yr) & 2011-2022 (current n=20-28/yr); three-quarters of the way down at MWRA_042 [Neponset River, between Neponset Ave and MBTA bridges] from 1997-2010 (historic n=15-26/yr) and 2011-2022 (current n=20-26/yr); close to the downstream end at MWRA_089 [S Dorchester Bay, Neponset River, Commercial Point, Victory Rd. Park, BOS090 (closed)] from 1997-2010 (historic n=22-50/yr) & 2011-2022 (current n=19-44/yr); and MWRA_041 [S Dorchester Bay, Neponset River, Old Colony Yacht Club, near BOS090 (closed)] from 1997-2010 (historic n=16-26/yr) & 2011-2022 (current n=18-26/yr). While some bacteria data from the historic IR window are indicative of good water quality conditions, these same locations were indicative of poor quality conditions in the current IR window, so only the analysis from the current IR window will be summarized here. Analysis of the recent five years of the multi-year high frequency Enterococcus dataset from MWRA_054 indicated 5 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml (2018-2022, 22-100%), 3 yrs had >10% of samples exceed the 252 CFU/100ml STV (2018, 2020, and 2022, 10-25%), and cumulatively across years 57% of intervals had GMs >68 CFU/100ml. Analysis of the recent five years of the multi-year high frequency Enterococcus dataset from MWRA_042 indicated 2 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml (2020 and 2021, 60 & 40%) and while just 2 yrs had >10% of samples exceed the 252 CFU/100ml STV (2020 and 2022, 15 & 10%), cumulatively across years 21% of intervals had GMs >68 CFU/100ml. Analysis of the recent five years of the multi-year high frequency Enterococcus dataset from MWRA_089 indicated 5 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml (2018-2022, 54-93%), 5 yrs had >10% of samples exceed the 252 CFU/100ml STV (2018-2022, 20-50%), and cumulatively across years 76% of intervals had GMs >68 CFU/100ml. Analysis of the recent five years of this multi-year high frequency Enterococcus dataset from MWRA_041 indicated 2 out of 5 sufficient data yrs had intervals where >10% of the GMs were >68 CFU/100ml (2018 and 2020, 38 & 27%), 3 yrs had >10% of samples exceed the 252 CFU/100ml STV (2018-2020, 10-22%), and cumulatively across years 13% of intervals had GMs >68 CFU/100ml. The data from MWRA_041, MWRA_042, MWRA_054, and MWRA_089 in the current IR window are all indicative of an Enterococcus impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
MWRA_041	Massachusetts Water Resources Authority	Water Quality	Neponset Mouth	South Dorchester Bay, Neponset River, Old Colony Yacht Club, near BOS090 (closed)	42.299651	-71.043477
MWRA_042	Massachusetts Water Resources Authority	Water Quality	Neponset River	Neponset River, between Neponset Ave and MBTA bridges	42.284725	-71.038706
MWRA_054	Massachusetts Water Resources Authority	Water Quality	Neponset River	Neponset River, Granite Ave., near BOS095 (closed)	42.277484	-71.052789
MWRA_089	Massachusetts Water Resources Authority	Water Quality	Neponset Mouth	South Dorchester Bay, Neponset River, Commercial Point, Victory Rd. Park, BOS090 (closed)	42.298347	-71.046347

Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)
(MWRA 2024) (MassDEP Undated 3)
[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_041	Massachusetts Water Resources Authority	Enterococci	06/16/97	08/09/97	23	5	835	17
MWRA_041	Massachusetts Water Resources Authority	Enterococci	06/17/98	12/10/98	16	5	1620	68
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/07/99	11/18/99	21	5	500	17
MWRA_041	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	26	5	460	19
MWRA_041	Massachusetts Water Resources Authority	Enterococci	01/02/01	11/19/01	25	5	80	10
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/10/02	12/18/02	19	5	335	21
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/30/03	11/26/03	20	5	130	13

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	20	5	260	16
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/28/05	12/29/05	23	5	410	16
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/25/06	12/13/06	25	5	4000	31
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/23/07	12/07/07	21	10	41	11
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/23/08	11/07/08	20	10	471	14
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/30/09	11/03/09	21	10	161	18
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/27/10	10/28/10	20	10	441	18
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/27/11	11/09/11	22	10	146	22
MWRA_041	Massachusetts Water Resources Authority	Enterococci	03/13/12	09/20/12	22	10	1720	16
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	820	17
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/07/14	10/29/14	21	10	85	18
MWRA_041	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	86	15
MWRA_041	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	26	10	712	21
MWRA_041	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	390	26
MWRA_041	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	18	10	1650	46
MWRA_041	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	657	34
MWRA_041	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	2190	49

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_041	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	197	20
MWRA_041	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	609	16
MWRA_042	Massachusetts Water Resources Authority	Enterococci	06/16/97	08/09/97	23	5	545	31
MWRA_042	Massachusetts Water Resources Authority	Enterococci	06/17/98	12/09/98	15	30	930	144
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/07/99	11/18/99	21	5	940	29
MWRA_042	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	26	5	715	31
MWRA_042	Massachusetts Water Resources Authority	Enterococci	01/02/01	11/19/01	25	5	220	16
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/10/02	12/18/02	19	5	450	31
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/30/03	11/26/03	20	5	175	28
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	20	5	595	39
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/28/05	12/29/05	22	5	1800	50
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/25/06	12/13/06	25	5	2400	71
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/23/07	12/07/07	21	10	161	17
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/23/08	11/07/08	20	10	1470	24
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/30/09	11/03/09	21	10	282	24
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/27/10	10/28/10	20	10	2100	25
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/27/11	11/09/11	22	10	480	41

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_042	Massachusetts Water Resources Authority	Enterococci	03/13/12	09/20/12	22	10	160	17
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	25	10	209	25
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/07/14	10/29/14	21	10	272	23
MWRA_042	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	292	23
MWRA_042	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	26	10	1100	31
MWRA_042	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	1080	48
MWRA_042	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	1130	22
MWRA_042	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	160	32
MWRA_042	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	5480	79
MWRA_042	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	359	52
MWRA_042	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	546	25
MWRA_054	Massachusetts Water Resources Authority	Enterococci	06/16/97	08/09/97	23	5	1750	98
MWRA_054	Massachusetts Water Resources Authority	Enterococci	06/17/98	12/10/98	16	55	830	206
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/07/99	11/18/99	19	5	1480	65
MWRA_054	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	24	5	1500	62
MWRA_054	Massachusetts Water Resources Authority	Enterococci	03/01/01	11/01/01	23	5	220	35
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/10/02	12/18/02	13	5	440	32

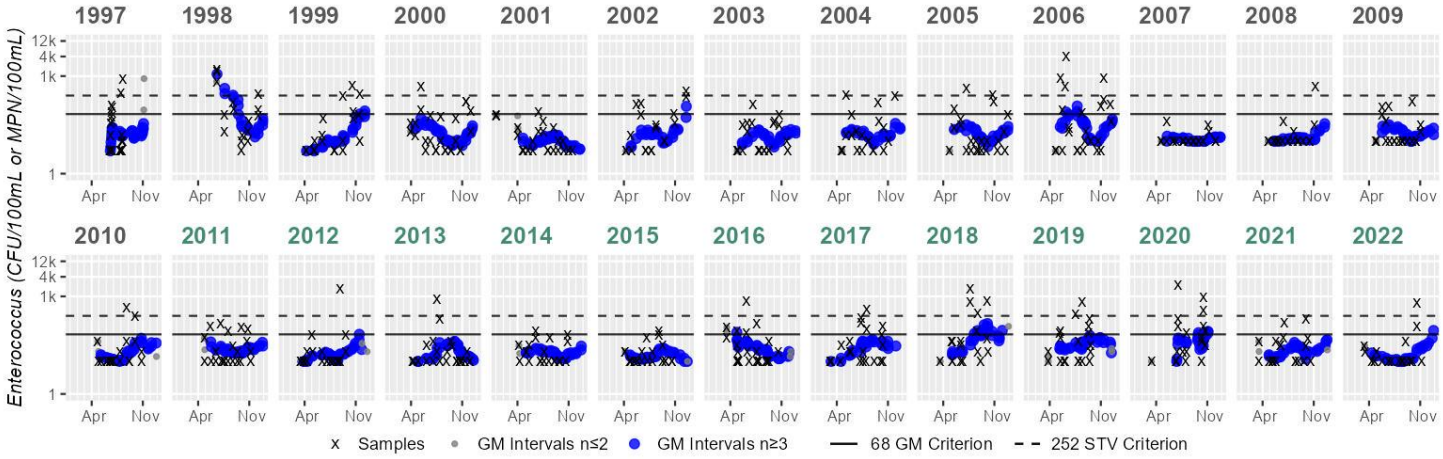
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/30/03	11/26/03	14	5	210	48
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	15	5	980	75
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/28/05	12/29/05	22	10	2900	179
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/25/06	12/13/06	24	10	2000	140
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/24/07	12/07/07	20	10	452	27
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/23/08	11/07/08	20	10	1560	39
MWRA_054	Massachusetts Water Resources Authority	Enterococci	05/26/09	11/03/09	19	10	865	73
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/27/10	10/28/10	20	10	5480	52
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/27/11	11/09/11	22	10	1190	67
MWRA_054	Massachusetts Water Resources Authority	Enterococci	03/13/12	09/20/12	22	10	487	60
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/09/13	12/05/13	24	10	393	55
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/07/14	10/29/14	21	10	448	49
MWRA_054	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	669	48
MWRA_054	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	28	10	1990	74
MWRA_054	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	2480	102
MWRA_054	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	20	10	1350	58
MWRA_054	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	259	56

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_054	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	11200	174
MWRA_054	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	20	389	94
MWRA_054	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	591	45
MWRA_089	Massachusetts Water Resources Authority	Enterococci	01/29/97	12/09/97	37	5	23000	489
MWRA_089	Massachusetts Water Resources Authority	Enterococci	02/25/98	12/09/98	22	30	87000	819
MWRA_089	Massachusetts Water Resources Authority	Enterococci	03/24/99	12/16/99	36	5	56000	311
MWRA_089	Massachusetts Water Resources Authority	Enterococci	03/29/00	12/06/00	26	5	36000	56
MWRA_089	Massachusetts Water Resources Authority	Enterococci	01/02/01	11/19/01	31	10	12100	100
MWRA_089	Massachusetts Water Resources Authority	Enterococci	03/21/02	12/18/02	25	5	45000	50
MWRA_089	Massachusetts Water Resources Authority	Enterococci	02/05/03	11/26/03	24	5	57000	180
MWRA_089	Massachusetts Water Resources Authority	Enterococci	04/20/04	11/30/04	23	5	40200	294
MWRA_089	Massachusetts Water Resources Authority	Enterococci	03/29/05	12/29/05	30	5	26000	95
MWRA_089	Massachusetts Water Resources Authority	Enterococci	01/19/06	12/13/06	38	5	15400	133
MWRA_089	Massachusetts Water Resources Authority	Enterococci	04/02/07	12/31/07	38	10	9800	67
MWRA_089	Massachusetts Water Resources Authority	Enterococci	02/06/08	12/18/08	36	10	59400	178
MWRA_089	Massachusetts Water Resources Authority	Enterococci	01/29/09	12/28/09	50	10	17300	164
MWRA_089	Massachusetts Water Resources Authority	Enterococci	01/26/10	12/13/10	47	10	19900	204

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
MWRA_089	Massachusetts Water Resources Authority	Enterococci	01/19/11	12/08/11	44	10	18700	272
MWRA_089	Massachusetts Water Resources Authority	Enterococci	01/13/12	12/18/12	34	10	31700	244
MWRA_089	Massachusetts Water Resources Authority	Enterococci	01/31/13	12/30/13	36	10	27800	190
MWRA_089	Massachusetts Water Resources Authority	Enterococci	01/15/14	12/26/14	34	10	15500	137
MWRA_089	Massachusetts Water Resources Authority	Enterococci	04/07/15	10/21/15	22	10	1350	37
MWRA_089	Massachusetts Water Resources Authority	Enterococci	03/16/16	10/18/16	28	10	6870	51
MWRA_089	Massachusetts Water Resources Authority	Enterococci	03/06/17	10/12/17	22	10	6490	88
MWRA_089	Massachusetts Water Resources Authority	Enterococci	03/20/18	10/05/18	19	10	12000	117
MWRA_089	Massachusetts Water Resources Authority	Enterococci	03/26/19	09/19/19	20	10	5170	190
MWRA_089	Massachusetts Water Resources Authority	Enterococci	03/11/20	10/23/20	20	10	14100	247
MWRA_089	Massachusetts Water Resources Authority	Enterococci	03/16/21	10/21/21	21	10	1010	90
MWRA_089	Massachusetts Water Resources Authority	Enterococci	03/14/22	11/08/22	20	10	13000	72

Station MWRA_041 - 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	25	Samples	19	Samples	20	Samples	20	Samples	23	Samples	25	Samples	21	Samples	20	Samples	21
SeasGM	17	SeasGM	68	SeasGM	17	SeasGM	19	SeasGM	10	SeasGM	21	SeasGM	13	SeasGM	16	SeasGM	16	SeasGM	31	SeasGM	11	SeasGM	14	SeasGM	18
#GMI	41	#GMI	27	#GMI	37	#GMI	47	#GMI	41	#GMI	31	#GMI	31	#GMI	30	#GMI	37	#GMI	43	#GMI	34	#GMI	33	#GMI	36
#GMI Ex	0	#GMI Ex	9	#GMI Ex	3	#GMI Ex	1	#GMI Ex	0	#GMI Ex	2	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	8	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	33%	%GMI Ex	8%	%GMI Ex	2%	%GMI Ex	0%	%GMI Ex	6%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	18%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	2	n>STV	4	n>STV	2	n>STV	1	n>STV	0	n>STV	1	n>STV	0	n>STV	1	n>STV	2	n>STV	4	n>STV	0	n>STV	1	n>STV	0
%n>STV	8%	%n>STV	25%	%n>STV	9%	%n>STV	3%	%n>STV	0%	%n>STV	5%	%n>STV	0%	%n>STV	5%	%n>STV	8%	%n>STV	16%	%n>STV	0%	%n>STV	5%	%n>STV	0%

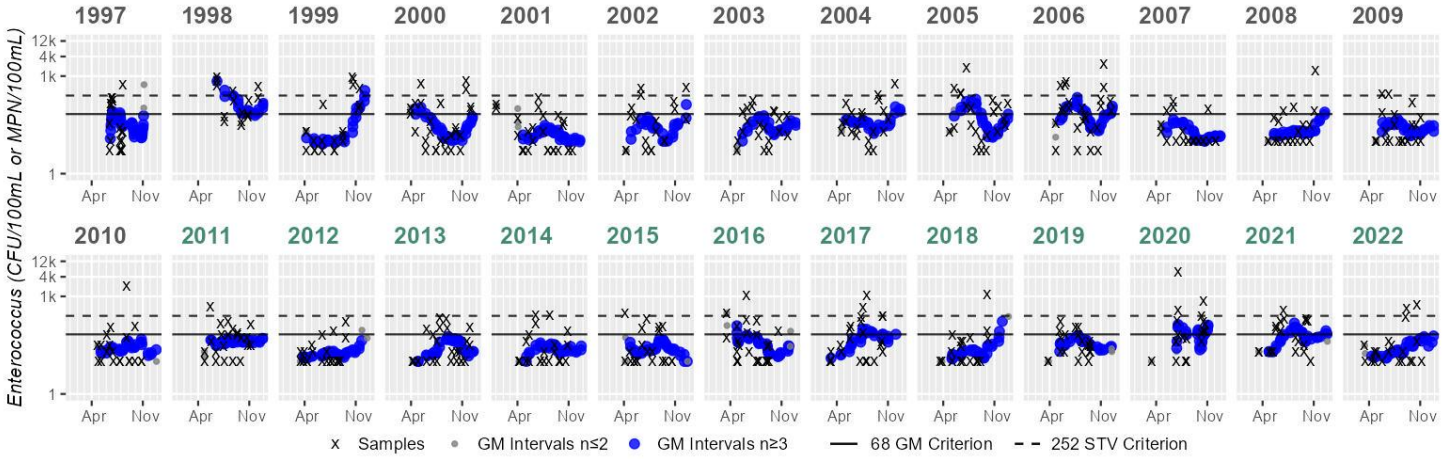
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	20	Samples	22	Samples	22	Samples	25	Samples	21	Samples	22	Samples	26	Samples	22	Samples	18	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	18	SeasGM	22	SeasGM	16	SeasGM	17	SeasGM	18	SeasGM	15	SeasGM	21	SeasGM	26	SeasGM	46	SeasGM	34	SeasGM	49	SeasGM	20	SeasGM	16
#GMI	34	#GMI	39	#GMI	37	#GMI	43	#GMI	37	#GMI	37	#GMI	43	#GMI	38	#GMI	31	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	0	#GMI Ex	0	#GMI Ex	1	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	1	#GMI Ex	0	#GMI Ex	12	#GMI Ex	0	#GMI Ex	9	#GMI Ex	0	#GMI Ex	1
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	2%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	2%	%GMI Ex	0%	%GMI Ex	38%	%GMI Ex	0%	%GMI Ex	27%	%GMI Ex	0%	%GMI Ex	2%
n>STV	1	n>STV	0	n>STV	1	n>STV	1	n>STV	0	n>STV	0	n>STV	1	n>STV	1	n>STV	4	n>STV	2	n>STV	3	n>STV	0	n>STV	1
%n>STV	5%	%n>STV	0%	%n>STV	4%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	3%	%n>STV	4%	%n>STV	22%	%n>STV	10%	%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)
4%	4%	5%	13%

**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_042 - 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	15	Samples	21	Samples	26	Samples	25	Samples	19	Samples	20	Samples	20	Samples	22	Samples	25	Samples	21	Samples	20	Samples	21
SeasGM	31	SeasGM	144	SeasGM	29	SeasGM	31	SeasGM	16	SeasGM	31	SeasGM	28	SeasGM	39	SeasGM	50	SeasGM	71	SeasGM	17	SeasGM	24	SeasGM	24
#GMI	41	#GMI	25	#GMI	37	#GMI	47	#GMI	41	#GMI	31	#GMI	31	#GMI	30	#GMI	35	#GMI	43	#GMI	34	#GMI	33	#GMI	36
#GMI Ex	4	#GMI Ex	24	#GMI Ex	11	#GMI Ex	8	#GMI Ex	0	#GMI Ex	2	#GMI Ex	0	#GMI Ex	5	#GMI Ex	12	#GMI Ex	24	#GMI Ex	0	#GMI Ex	2	#GMI Ex	0
%GMI Ex	9%	%GMI Ex	96%	%GMI Ex	29%	%GMI Ex	17%	%GMI Ex	0%	%GMI Ex	6%	%GMI Ex	0%	%GMI Ex	16%	%GMI Ex	34%	%GMI Ex	55%	%GMI Ex	0%	%GMI Ex	6%	%GMI Ex	0%
n>STV	1	n>STV	5	n>STV	4	n>STV	3	n>STV	0	n>STV	3	n>STV	0	n>STV	2	n>STV	4	n>STV	5	n>STV	0	n>STV	1	n>STV	2
%n>STV	4%	%n>STV	33%	%n>STV	19%	%n>STV	11%	%n>STV	0%	%n>STV	15%	%n>STV	0%	%n>STV	10%	%n>STV	18%	%n>STV	20%	%n>STV	0%	%n>STV	5%	%n>STV	9%

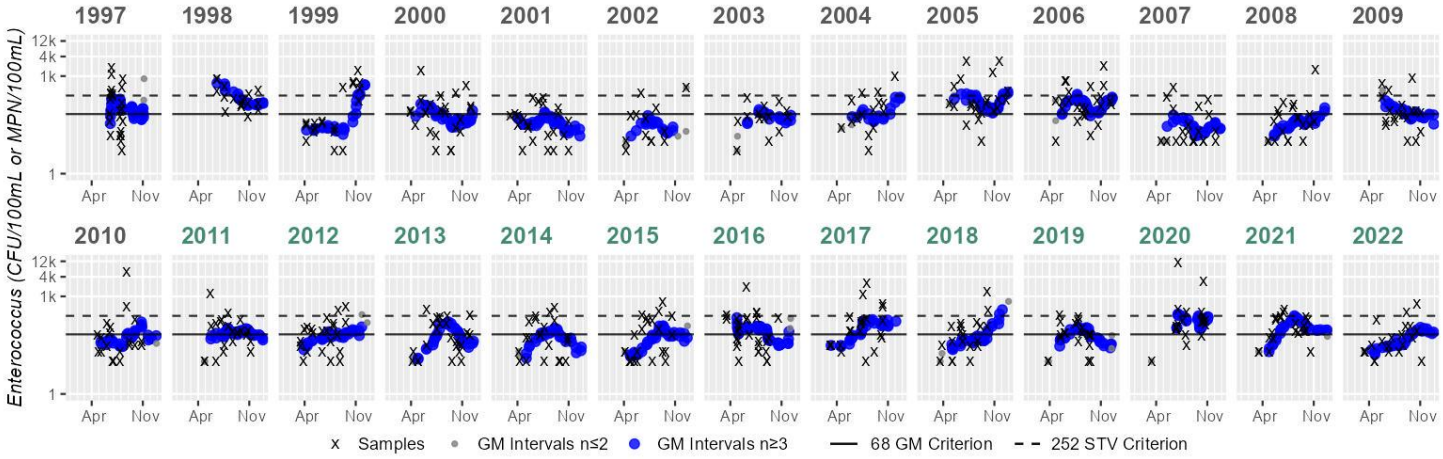
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	20	Samples	22	Samples	22	Samples	25	Samples	21	Samples	22	Samples	26	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	25	SeasGM	41	SeasGM	17	SeasGM	25	SeasGM	23	SeasGM	23	SeasGM	31	SeasGM	48	SeasGM	22	SeasGM	32	SeasGM	79	SeasGM	52	SeasGM	25
#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	2	#GMI Ex	13	#GMI Ex	2	#GMI Ex	0	#GMI Ex	20	#GMI Ex	14	#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	34%	%GMI Ex	5%	%GMI Ex	0%	%GMI Ex	60%	%GMI Ex	40%	%GMI Ex	0%
n>STV	1	n>STV	1	n>STV	0	n>STV	0	n>STV	2	n>STV	1	n>STV	2	n>STV	2	n>STV	1	n>STV	0	n>STV	3	n>STV	1	n>STV	2
%n>STV	5%	%n>STV	4%	%n>STV	0%	%n>STV	0%	%n>STV	9%	%n>STV	4%	%n>STV	7%	%n>STV	9%	%n>STV	5%	%n>STV	0%	%n>STV	15%	%n>STV	4%	%n>STV	10%

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)
18%	14%	11%	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_054 - 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	19	Samples	24	Samples	23	Samples	13	Samples	14	Samples	15	Samples	22	Samples	24	Samples	20	Samples	20	Samples	19
SeasGM	98	SeasGM	206	SeasGM	65	SeasGM	62	SeasGM	35	SeasGM	32	SeasGM	48	SeasGM	75	SeasGM	179	SeasGM	140	SeasGM	27	SeasGM	39	SeasGM	73
#GMI	41	#GMI	27	#GMI	33	#GMI	43	#GMI	41	#GMI	19	#GMI	21	#GMI	21	#GMI	36	#GMI	41	#GMI	32	#GMI	33	#GMI	32
#GMI Ex	31	#GMI Ex	27	#GMI Ex	12	#GMI Ex	16	#GMI Ex	2	#GMI Ex	0	#GMI Ex	5	#GMI Ex	9	#GMI Ex	36	#GMI Ex	39	#GMI Ex	0	#GMI Ex	3	#GMI Ex	16
%GMI Ex	75%	%GMI Ex	100%	%GMI Ex	36%	%GMI Ex	37%	%GMI Ex	4%	%GMI Ex	0%	%GMI Ex	23%	%GMI Ex	42%	%GMI Ex	100%	%GMI Ex	95%	%GMI Ex	0%	%GMI Ex	9%	%GMI Ex	50%
n>STV	8	n>STV	6	n>STV	6	n>STV	3	n>STV	0	n>STV	2	n>STV	0	n>STV	3	n>STV	6	n>STV	6	n>STV	1	n>STV	1	n>STV	3
%n>STV	34%	%n>STV	37%	%n>STV	31%	%n>STV	12%	%n>STV	0%	%n>STV	15%	%n>STV	0%	%n>STV	20%	%n>STV	27%	%n>STV	25%	%n>STV	5%	%n>STV	5%	%n>STV	15%

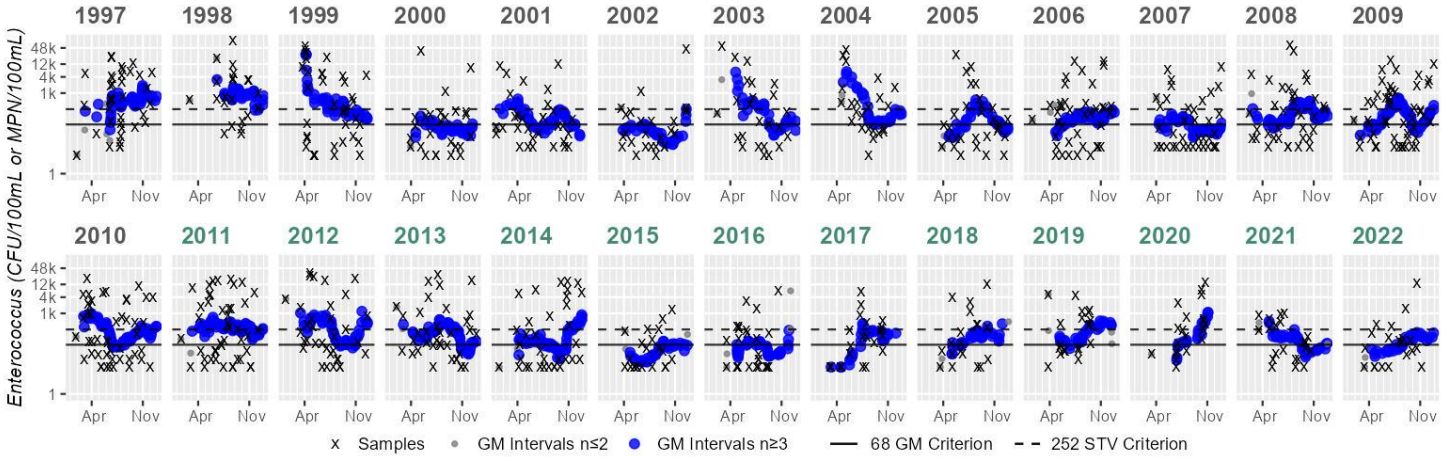
Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	20	Samples	22	Samples	22	Samples	24	Samples	21	Samples	22	Samples	28	Samples	22	Samples	20	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	52	SeasGM	67	SeasGM	60	SeasGM	55	SeasGM	49	SeasGM	48	SeasGM	74	SeasGM	102	SeasGM	58	SeasGM	56	SeasGM	174	SeasGM	94	SeasGM	45
#GMI	34	#GMI	39	#GMI	37	#GMI	41	#GMI	37	#GMI	37	#GMI	47	#GMI	38	#GMI	35	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	7	#GMI Ex	24	#GMI Ex	14	#GMI Ex	16	#GMI Ex	13	#GMI Ex	13	#GMI Ex	31	#GMI Ex	28	#GMI Ex	8	#GMI Ex	16	#GMI Ex	33	#GMI Ex	29	#GMI Ex	13
%GMI Ex	20%	%GMI Ex	61%	%GMI Ex	37%	%GMI Ex	39%	%GMI Ex	35%	%GMI Ex	35%	%GMI Ex	65%	%GMI Ex	73%	%GMI Ex	22%	%GMI Ex	48%	%GMI Ex	100%	%GMI Ex	82%	%GMI Ex	37%
n>STV	2	n>STV	2	n>STV	2	n>STV	2	n>STV	2	n>STV	3	n>STV	4	n>STV	4	n>STV	2	n>STV	1	n>STV	5	n>STV	2	n>STV	2
%n>STV	10%	%n>STV	9%	%n>STV	9%	%n>STV	8%	%n>STV	9%	%n>STV	13%	%n>STV	14%	%n>STV	18%	%n>STV	10%	%n>STV	5%	%n>STV	25%	%n>STV	9%	%n>STV	10%

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)
44%	37%	53%	57%

**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_089 - 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	22	Samples	36	Samples	26	Samples	31	Samples	25	Samples	24	Samples	23	Samples	30	Samples	38	Samples	38	Samples	36	Samples	50
SeasGM	489	SeasGM	819	SeasGM	311	SeasGM	56	SeasGM	100	SeasGM	50	SeasGM	180	SeasGM	294	SeasGM	95	SeasGM	133	SeasGM	67	SeasGM	178	SeasGM	164
#GMI	64	#GMI	37	#GMI	65	#GMI	47	#GMI	56	#GMI	43	#GMI	39	#GMI	36	#GMI	50	#GMI	68	#GMI	66	#GMI	63	#GMI	88
#GMI Ex	63	#GMI Ex	37	#GMI Ex	64	#GMI Ex	12	#GMI Ex	34	#GMI Ex	7	#GMI Ex	27	#GMI Ex	35	#GMI Ex	28	#GMI Ex	61	#GMI Ex	29	#GMI Ex	57	#GMI Ex	61
%GMI Ex	98%	%GMI Ex	100%	%GMI Ex	98%	%GMI Ex	25%	%GMI Ex	60%	%GMI Ex	16%	%GMI Ex	69%	%GMI Ex	97%	%GMI Ex	56%	%GMI Ex	89%	%GMI Ex	43%	%GMI Ex	90%	%GMI Ex	69%
n>STV	23	n>STV	16	n>STV	18	n>STV	3	n>STV	7	n>STV	4	n>STV	10	n>STV	12	n>STV	9	n>STV	15	n>STV	11	n>STV	15	n>STV	21
%n>STV	62%	%n>STV	72%	%n>STV	50%	%n>STV	11%	%n>STV	22%	%n>STV	16%	%n>STV	41%	%n>STV	52%	%n>STV	30%	%n>STV	39%	%n>STV	28%	%n>STV	41%	%n>STV	42%

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	34	Samples	36	Samples	34	Samples	22	Samples	28	Samples	22	Samples	19	Samples	20	Samples	20	Samples	21	Samples	20
SeasGM	204	SeasGM	272	SeasGM	244	SeasGM	190	SeasGM	137	SeasGM	37	SeasGM	51	SeasGM	88	SeasGM	117	SeasGM	190	SeasGM	247	SeasGM	90	SeasGM	72
#GMI	85	#GMI	82	#GMI	58	#GMI	63	#GMI	61	#GMI	37	#GMI	47	#GMI	38	#GMI	33	#GMI	33	#GMI	33	#GMI	35	#GMI	35
#GMI Ex	76	#GMI Ex	82	#GMI Ex	54	#GMI Ex	53	#GMI Ex	45	#GMI Ex	8	#GMI Ex	19	#GMI Ex	28	#GMI Ex	28	#GMI Ex	31	#GMI Ex	29	#GMI Ex	22	#GMI Ex	19
%GMI Ex	89%	%GMI Ex	100%	%GMI Ex	93%	%GMI Ex	84%	%GMI Ex	73%	%GMI Ex	21%	%GMI Ex	40%	%GMI Ex	73%	%GMI Ex	84%	%GMI Ex	93%	%GMI Ex	87%	%GMI Ex	62%	%GMI Ex	54%
n>STV	21	n>STV	21	n>STV	14	n>STV	12	n>STV	12	n>STV	3	n>STV	6	n>STV	6	n>STV	7	n>STV	10	n>STV	10	n>STV	7	n>STV	4
%n>STV	44%	%n>STV	47%	%n>STV	41%	%n>STV	33%	%n>STV	35%	%n>STV	13%	%n>STV	21%	%n>STV	27%	%n>STV	36%	%n>STV	50%	%n>STV	50%	%n>STV	33%	%n>STV	20%

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)
73%	76%	75%	76%

**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 7)

Summary
Neponset River (MA73-04): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.6359 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.

Pecunit Brook (MA73-25)

Location:	Headwaters east of Carey Circle and west of Pecunit Street, Canton to mouth at confluence with Neponset River, Canton.
AU Type:	RIVER
AU Size:	1.8 MILES
Classification/Qualifier:	B

Pecunit Brook (MA73-25)

Watershed Area: 1.03 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.03	1.03	0.26	0.26
Agriculture	0.3%	0.3%	0%	0%
Developed	41.3%	41.3%	28.2%	28.2%
Natural	44.6%	44.6%	41.2%	41.2%
Wetland	13.8%	13.8%	30.6%	30.6%
Impervious	12.2%	12.2%	9.7%	9.7%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Escherichia Coli (E. Coli)	54842	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Pecunit Brook (MA73-25) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Pecunit Brook (MA73-25) continues to be assessed as Fully Supporting based on the general lack of objectionable conditions observed by MassDEP staff during the summers of 2016-2018. MassDEP staff recorded aesthetics observations at one station halfway down Pecunit Brook, during the summers of 2016-2018 as part of the MassDEP Bacteria Source Tracking project (BST) and other special projects, upstream/southeast of Elm Street, Canton (W0565, n=2, 5 & 1 respectively). There were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by field sampling crews, although staff noted significant trash deposits at this station in May 2018.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0565	MassDEP	Water Quality	Pecunit Brook	[upstream/southeast of Elm Street, Canton]	42.188962	-71.144241

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W0565	2016	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0565 on Pecunit Brook (MA73-25) during 2 site visits between Jul 2016 and Aug 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W0565	2017	5	Aesthetic observations were made by MassDEP field sampling crews at Station W0565 on Pecunit Brook (MA73-25) during 5 site visits between Jul 2017 and Dec 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W0565	2018	1	Aesthetic observations were made by MassDEP field sampling crews at Station W0565 on Pecunit Brook (MA73-25) during 1 site visit on May 22, 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted an aesthetics impairment flag (n=1). However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W0565	2016	2	2	0
W0565	2017	5	5	0
W0565	2018	1	0	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0565	Pecunit Brook	2016	Aquatic Plant Density, Overall	None	2	2
W0565	Pecunit Brook	2016	Color	None	2	2
W0565	Pecunit Brook	2016	Odor	None	2	2
W0565	Pecunit Brook	2016	Periphyton Density, Filamentous	None	2	2
W0565	Pecunit Brook	2016	Periphyton Density, Film	None	1	2
W0565	Pecunit Brook	2016	Periphyton Density, Film	Sparse	1	2
W0565	Pecunit Brook	2016	Turbidity	Slightly Turbid	2	2
W0565	Pecunit Brook	2017	Aesthetics Impaired?	No	2	2
W0565	Pecunit Brook	2017	Aquatic Plant Density, Overall	None	3	5
W0565	Pecunit Brook	2017	Aquatic Plant Density, Overall	Sparse	2	5

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0565	Pecunit Brook	2017	Color	Light Yellow/Tan	1	5
W0565	Pecunit Brook	2017	Color	None	4	5
W0565	Pecunit Brook	2017	Objectionable Deposits	No	2	2
W0565	Pecunit Brook	2017	Odor	None	5	5
W0565	Pecunit Brook	2017	Periphyton Density, Filamentous	None	5	5
W0565	Pecunit Brook	2017	Periphyton Density, Film	None	3	5
W0565	Pecunit Brook	2017	Periphyton Density, Film	Sparse	2	5
W0565	Pecunit Brook	2017	Scum	No	2	2
W0565	Pecunit Brook	2017	Turbidity	None	2	5
W0565	Pecunit Brook	2017	Turbidity	Slightly Turbid	3	5
W0565	Pecunit Brook	2018	Aesthetics Impaired?	Yes	1	1
W0565	Pecunit Brook	2018	Aquatic Plant Density, Overall	Sparse	1	1
W0565	Pecunit Brook	2018	Color	Light Yellow/Tan	1	1
W0565	Pecunit Brook	2018	Objectionable Deposits	Yes	1	1
W0565	Pecunit Brook	2018	Odor	None	1	1
W0565	Pecunit Brook	2018	Periphyton Density, Filamentous	Unobservable	1	1
W0565	Pecunit Brook	2018	Periphyton Density, Film	Unobservable	1	1
W0565	Pecunit Brook	2018	Scum	No	1	1
W0565	Pecunit Brook	2018	Turbidity	None	1	1

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Pecunit Brook (MA73-25) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 combined station in 2018-2022. MassDEP and NepRWA staff/volunteers collected *E. coli* bacteria samples halfway down Pecunit Brook at combined station W0565 & NepRWA_PEB008 [upstream/SE of Elm St, Canton & Elm St, Canton] from 2011-2022 (n=5-9/yr). Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from W0565 & NepRWA_PEB008 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 50-100%) and while just 2 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018 and 2022, n=3 & 4), cumulatively across years 77% of intervals had GMs >126 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0565	MassDEP	Water Quality	Pecunit Brook	[upstream/southeast of Elm Street, Canton]	42.188962	-71.144241
NepRWA_PEB008	Neponset River Watershed Association	Water Quality	Pecunit Brook	Elm Street, Canton	42.189117	-71.144380

Bacteria Data

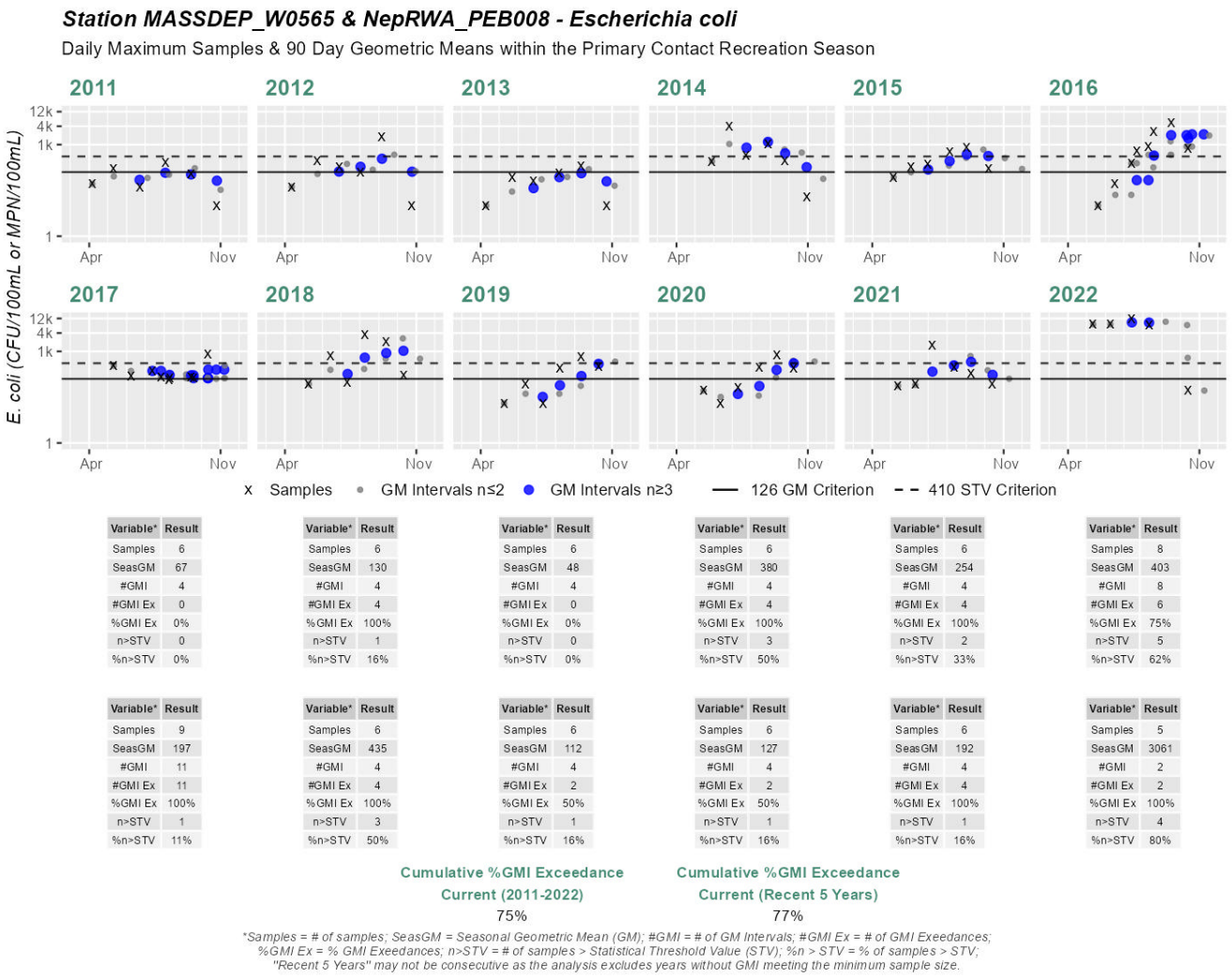
Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(MassDEP Undated 10) (MassDEP Undated 6) (NepRWA 2023) (MassDEP Undated 4)

[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
W0565	MassDEP	E. coli	07/12/16	08/09/16	2	246	866	461
W0565	MassDEP	E. coli	07/27/17	09/18/17	3	121	147	132
NepRWA_PEB008	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	262	67
NepRWA_PEB008	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	1790	130
NepRWA_PEB008	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	203	48
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	20	3870	380
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/06/15	10/07/15	6	85	813	254
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/19/16	10/13/16	6	10	5170	386
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	135	833	240
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	85	3450	435
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	683	112
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	780	127
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	74	1610	192

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	5	52	12000	3061



Variable*	Result
Samples	6
SeasGM	67
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	130
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	48
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	380
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	254
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	8
SeasGM	403
#GMI	8
#GMI Ex	6
%GMI Ex	75%
n>STV	5
%n>STV	62%

Variable*	Result
Samples	9
SeasGM	197
#GMI	11
#GMI Ex	11
%GMI Ex	100%
n>STV	1
%n>STV	11%

Variable*	Result
Samples	6
SeasGM	435
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	112
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	127
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	192
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	3061
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	4
%n>STV	80%

*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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Pecunit Brook (MA73-25) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 combined station in 2018-2022. MassDEP and NepRWA staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Pecunit Brook from 2006-2022 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: halfway down the brook at combined station W0565 & NepRWA_PEB008 [upstream/SE of Elm St, Canton & Elm St, Canton] from 2006-2010 (historic n=4-6/yr) and 2011-2022 (current n=5-9/yr), and three-quarters of the way down at W1948 [~360 ft upstream of Interstate 95, Canton] from Apr-Sep 2009 (historic n=6). Since bacteria data from the historic IR window are all indicative of good water quality conditions, only the analysis from the current IR window (1 combined station) will be summarized here. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from W0565 & NepRWA_PEB008 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 25-100%) and while just 2 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2018 and 2022, n=2 & 4), cumulatively across years 55% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0565	MassDEP	Water Quality	Pecunit Brook	[upstream/southeast of Elm Street, Canton]	42.188962	-71.144241
W1948	MassDEP	Water Quality	Pecunit Brook	[approximately 360 feet upstream of Interstate 95, Canton]	42.192754	-71.149068
NepRWA_PEB008	Neponset River Watershed Association	Water Quality	Pecunit Brook	Elm Street, Canton	42.189117	-71.144380

Bacteria Data

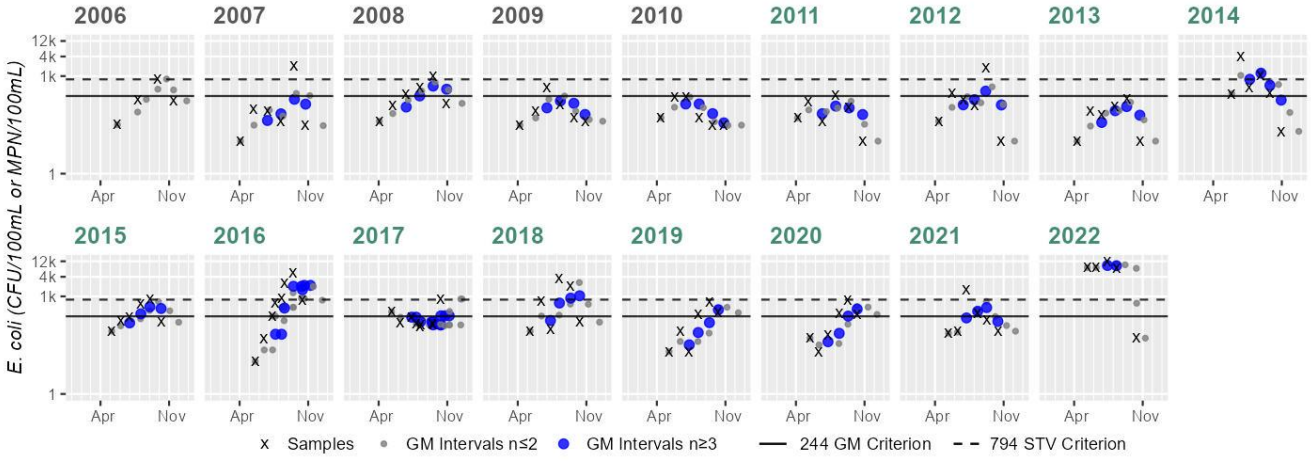
Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)
(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0565	MassDEP	E. coli	07/12/16	08/09/16	2	246	866	461
W0565	MassDEP	E. coli	07/27/17	09/18/17	3	121	147	132
W1948	MassDEP	E. coli	04/28/09	09/15/09	6	10	220	80
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/24/06	11/15/06	4	32	816	171
NepRWA_PEB008	Neponset River Watershed Association	E. coli	04/04/07	10/24/07	6	10	2100	76

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PEB008	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	41	988	210
NepRWA_PEB008	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	31	441	83
NepRWA_PEB008	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	30	233	71
NepRWA_PEB008	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	262	67
NepRWA_PEB008	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	1790	130
NepRWA_PEB008	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	203	48
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	20	3870	380
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/06/15	10/07/15	6	85	813	254
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/19/16	10/13/16	6	10	5170	386
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	135	833	240
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	85	3450	435
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	683	112
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	780	127
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	74	1610	192
NepRWA_PEB008	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	5	52	12000	3061

Station MASSDEP_W0565 & NepRWA_PEB008 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	171
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	76
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	210
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	83
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	71
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	67
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	130
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	48
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	380
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	254
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	8
SeasGM	403
#GMI	8
#GMI Ex	6
%GMI Ex	75%
n>STV	3
%n>STV	37%

Variable*	Result
Samples	9
SeasGM	197
#GMI	11
#GMI Ex	3
%GMI Ex	27%
n>STV	1
%n>STV	11%

Variable*	Result
Samples	6
SeasGM	435
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	112
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	127
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	192
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

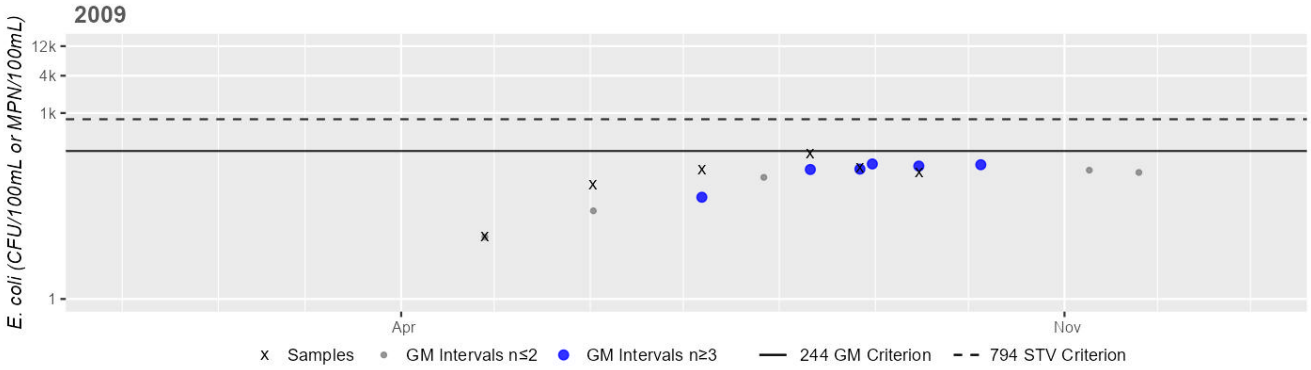
Variable*	Result
Samples	5
SeasGM	3061
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	4
%n>STV	80%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
18%	45%	55%

**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 MASSDEP_W1948 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	80
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
0%

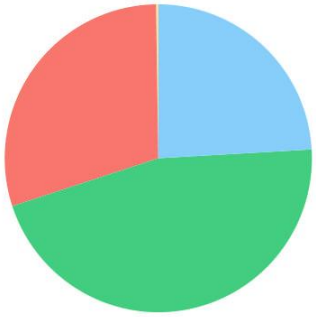
**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Pequid Brook (MA73-22)

Location:	Headwaters east of York Street, Canton to mouth at inlet of Forge Pond, Canton (excluding the approximately 1.3 miles through Reservoir Pond, segment MA73048).
AU Type:	RIVER
AU Size:	2.8 MILES
Classification/Qualifier:	B

Pequid Brook (MA73-22)

Watershed Area: 6.50 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	6.50	4.91	1.96	1.46
Agriculture	0.2%	0.3%	0%	0.1%
Developed	29.8%	29.2%	19.6%	17%
Natural	45.9%	44.1%	52.2%	54.6%
Wetland	24.1%	26.4%	28.1%	28.4%
Impervious	16.1%	15.9%	11.2%	9.8%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Dissolved Oxygen	--	Unchanged
5	5	Escherichia Coli (E. Coli)	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Pequid Brook (MA73-22) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Pequid Brook (MA73-22) continues to be assessed as as Fully Supporting based on the general lack of objectionable conditions observed by MassDEP staff throughout the AU during summer 2013. MassDEP staff recorded aesthetics observations at four stations in Canton on Pequid Brook, during the summer of 2013 as part of the MassDEP Bacteria Source Tracking project. These stations are described from upstream to downstream as follows: close to the upstream end of the AU at York Street (W0560, n=2), a little further downstream at Del Pond Drive (W2422, n=2), at the outlet of Reservoir Pond, downstream at Pleasant Street (W2426, n=2) and close to the downstream end of the AU at Sherman Street (W0559, n=2). There were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by field sampling crews at any of the stations.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0559	MassDEP	Water Quality	Pequid Brook	[Sherman Street, Canton]	42.158634	-71.139934
W0560	MassDEP	Water Quality	Pequid Brook	[York Street, Canton]	42.176704	-71.095818
W2422	MassDEP	Water Quality	Pequid Brook	[Del Pond Drive, Canton]	42.172268	-71.112251
W2426	MassDEP	Water Quality	Pequid Brook	[outlet Reservoir Pond, downstream at Pleasant Street, Canton]	42.168037	-71.133801

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W0559	2013	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0559 on Pequid Brook (MA73-22) during 2 site visits between Jun 2013 and Aug 2013. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted high turbidity (n=1). However, aesthetic observations are limited (n<3).
W0560	2013	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0560 on Pequid Brook (MA73-22) during 2 site visits between Jun 2013 and Aug 2013. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2422	2013	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2422 on Pequid Brook (MA73-22) during 2 site visits between Jun 2013 and Aug 2013. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2426	2013	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2426 on Pequid Brook (MA73-22) during 2 site visits between Jun 2013 and Aug 2013. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W0559	2013	2	0	0
W0560	2013	2	2	0
W2422	2013	2	1	0
W2426	2013	2	2	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0559	Pequid Brook	2013	Aquatic Plant Density, Overall	Unobservable	2	2
W0559	Pequid Brook	2013	Color	Light Yellow/Tan	2	2
W0559	Pequid Brook	2013	Odor	None	2	2

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0559	Pequid Brook	2013	Periphyton Density, Filamentous	Unobservable	2	2
W0559	Pequid Brook	2013	Periphyton Density, Film	Unobservable	2	2
W0559	Pequid Brook	2013	Turbidity	Highly Turbid	1	2
W0559	Pequid Brook	2013	Turbidity	Moderately Turbid	1	2
W0560	Pequid Brook	2013	Aquatic Plant Density, Overall	None	1	2
W0560	Pequid Brook	2013	Aquatic Plant Density, Overall	Sparse	1	2
W0560	Pequid Brook	2013	Color	Light Yellow/Tan	2	2
W0560	Pequid Brook	2013	Odor	None	1	2
W0560	Pequid Brook	2013	Odor	Other (Metallic)	1	2
W0560	Pequid Brook	2013	Periphyton Density, Filamentous	Moderate	1	2
W0560	Pequid Brook	2013	Periphyton Density, Filamentous	None	1	2
W0560	Pequid Brook	2013	Periphyton Density, Film	Moderate	1	2
W0560	Pequid Brook	2013	Periphyton Density, Film	Sparse	1	2
W0560	Pequid Brook	2013	Turbidity	Moderately Turbid	2	2
W2422	Pequid Brook	2013	Aquatic Plant Density, Overall	None	2	2
W2422	Pequid Brook	2013	Color	Brownish	1	2
W2422	Pequid Brook	2013	Color	Light Yellow/Tan	1	2
W2422	Pequid Brook	2013	Odor	Musty (Basement)	1	2
W2422	Pequid Brook	2013	Odor	None	1	2
W2422	Pequid Brook	2013	Periphyton Density, Filamentous	None	1	2
W2422	Pequid Brook	2013	Periphyton Density, Filamentous	Unobservable	1	2
W2422	Pequid Brook	2013	Periphyton Density, Film	None	1	2
W2422	Pequid Brook	2013	Periphyton Density, Film	Unobservable	1	2
W2422	Pequid Brook	2013	Turbidity	Moderately Turbid	2	2
W2426	Pequid Brook	2013	Aquatic Plant Density, Overall	None	1	2
W2426	Pequid Brook	2013	Aquatic Plant Density, Overall	Sparse	1	2
W2426	Pequid Brook	2013	Color	Light Yellow/Tan	2	2
W2426	Pequid Brook	2013	Odor	Musty (Basement)	1	2
W2426	Pequid Brook	2013	Odor	None	1	2
W2426	Pequid Brook	2013	Periphyton Density, Filamentous	None	1	2

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2426	Pequid Brook	2013	Periphyton Density, Filamentous	Sparse	1	2
W2426	Pequid Brook	2013	Periphyton Density, Film	Moderate	1	2
W2426	Pequid Brook	2013	Periphyton Density, Film	Sparse	1	2
W2426	Pequid Brook	2013	Turbidity	Moderately Turbid	1	2
W2426	Pequid Brook	2013	Turbidity	Slightly Turbid	1	2

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Pequid Brook (MA73-22) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 2 stations/combined stations in 2018-2022. MassDEP and NepRWA staff/volunteers collected *E. coli* bacteria samples in Pequid Brook in 2011-2022 at 4 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the upstream end of the brook at W0560 [York St, Canton] from Jun-Aug 2013 (n=2), a little further downstream (just upstream of Reservoir Pond) at W2422 & NepRWA_PQB036 [Del Pond Drive, Canton & Del Pond Drive] from 2011-2014 and 2017-2022 (n=4-8/yr), just downstream of the pond at W2426 [outlet Reservoir Pond, downstream at Pleasant St, Canton] from Jun-Aug 2013 (n=2), and close to the downstream end of the AU at W0559 & NepRWA_PQB040 [Sherman St, Canton] from 2011-2014 and 2017-2022 (n=5-8/yr). The available *E. coli* data at W0560 and W2426 are too limited to assess the Primary Contact Recreation Use according to the 2024 CALM. However, analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from W2422 & NepRWA_PQB036 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 75-100%), 4 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018-2019 and 2021-2022, n=3), and cumulatively across years 83% of intervals had GMs >126 CFU/100ml. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from W0559 & NepRWA_PQB040 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 75-100%), 3 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2020-2022, n=2-4), and cumulatively across years 83% of intervals had GMs >126 CFU/100ml. *E. coli* data from W2422 & NepRWA_PQB036 and W0559 & NepRWA_PQB040 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0559	MassDEP	Water Quality	Pequid Brook	[Sherman Street, Canton]	42.158634	-71.139934
W0560	MassDEP	Water Quality	Pequid Brook	[York Street, Canton]	42.176704	-71.095818
W2422	MassDEP	Water Quality	Pequid Brook	[Del Pond Drive, Canton]	42.172268	-71.112251
W2426	MassDEP	Water Quality	Pequid Brook	[outlet Reservoir Pond, downstream at Pleasant Street, Canton]	42.168037	-71.133801
NepRWA_PQB036	Neponset River Watershed Association	Water Quality	Pequit Brook	Del Pond Drive	42.172450	-71.112200
NepRWA_PQB040	Neponset River Watershed Association	Water Quality	Pequit Brook	Sherman Street, Canton	42.158672	-71.140036

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (MassDEP Undated 10) (MassDEP Undated 6) (NepRWA 2023) (MassDEP Undated 4)

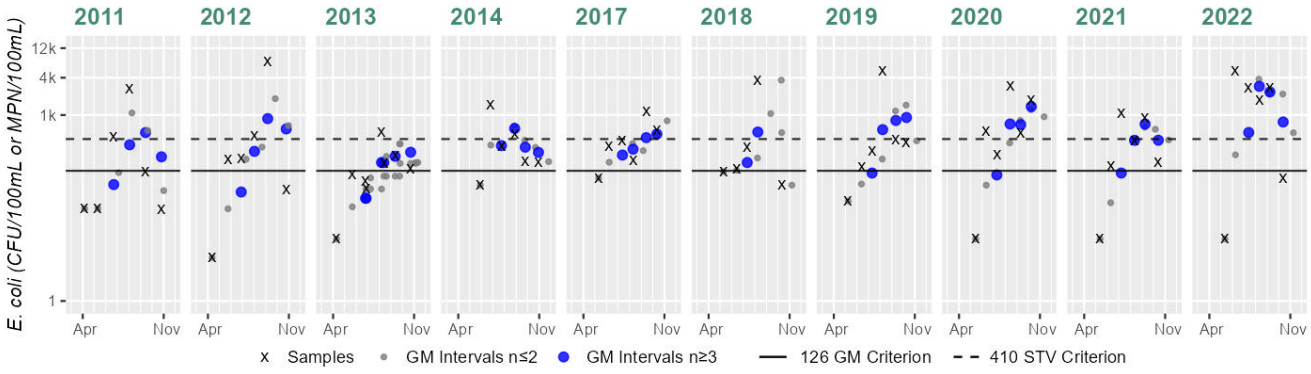
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0559	MassDEP	E. coli	06/27/13	08/13/13	2	64	166	103
W0560	MassDEP	E. coli	06/27/13	08/13/13	2	77	236	134
W2422	MassDEP	E. coli	06/27/13	08/13/13	2	78	214	129
W2426	MassDEP	E. coli	06/27/13	08/13/13	2	23	49	33
NepRWA_PQB036	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	197	51
NepRWA_PQB036	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	9800	407
NepRWA_PQB036	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	830	233
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	4	52	1330	213
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	10	504	104
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	3260	364
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	11200	386
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/14/20	09/10/20	4	41	594	216

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	5	52	1860	436
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	5	31	1870	362
NepRWA_PQB040	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	30	2610	126
NepRWA_PQB040	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	7270	184
NepRWA_PQB040	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	537	106
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	74	1450	283
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	96	1130	334
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	5	74	3650	266
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	41	5170	325
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	2910	384
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	1050	213
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	5170	635

Station MASSDEP_W0559 & NepRWA_PQB040 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	126
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	184
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	8
SeasGM	105
#GMI	6
#GMI Ex	4
%GMI Ex	66%
n>STV	1
%n>STV	12%

Variable*	Result
Samples	6
SeasGM	283
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	334
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	266
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	325
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	384
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	213
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	635
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

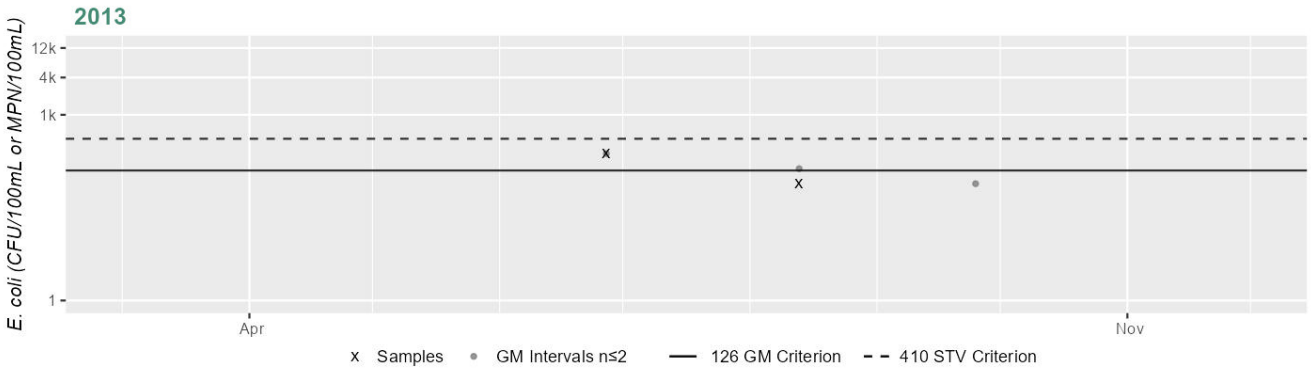
Cumulative %GMI Exceedance Current (2011-2022)
82%

Cumulative %GMI Exceedance Current (Recent 5 Years)
83%

**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 MASSDEP_W0560 - Escherichia coli

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



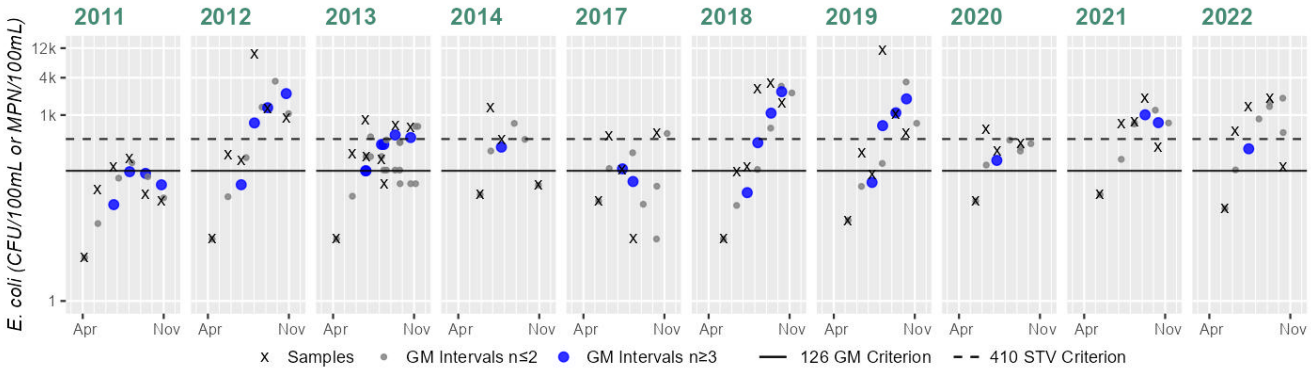
Variable*	Result
Samples	2
SeasGM	134
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)
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 MASSDEP_W2422 & NepRWA_PQB036 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	51
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	407
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	8
SeasGM	201
#GMI	6
#GMI Ex	4
%GMI Ex	66%
n>STV	3
%n>STV	37%

Variable*	Result
Samples	4
SeasGM	213
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	5
SeasGM	104
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	364
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	386
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	4
SeasGM	216
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	5
SeasGM	436
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	3
%n>STV	60%

Variable*	Result
Samples	5
SeasGM	362
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	3
%n>STV	60%

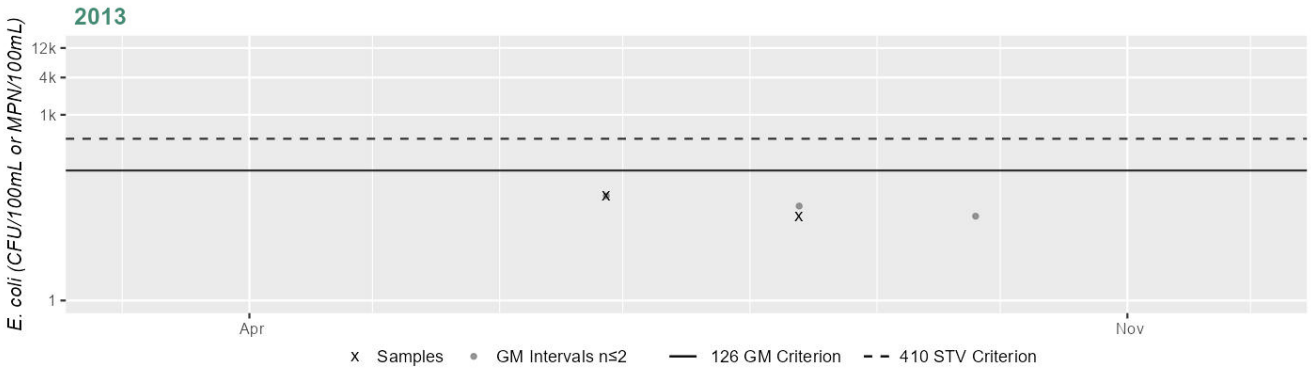
Cumulative %GMI Exceedance Current (2011-2022)
65%

Cumulative %GMI Exceedance Current (Recent 5 Years)
83%

**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 MASSDEP_W2426 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	33
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)
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.*

Summary Statement for 2011-2019 MassDEP Bacteria Source Tracking (BST) Data (MassDEP Undated 1)

Summary
BST work was conducted in 2013 on the Pequit Brook AU (MA73-22). E.coli concentrations ranged 23 to 308MPN. No correctable sources were ever found.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Pequid Brook (MA73-22) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 2 stations/combined stations in 2018-2022. MassDEP and NepRWA staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Pequid Brook from 2008-2022 at 4 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the upstream end of the brook at W0560 [York St, Canton] from Jun-Aug 2013 (n=2), a little further downstream (just upstream of Reservoir Pond) at W2422 & NepRWA_PQB036 [Del Pond Drive, Canton & Del Pond Drive] from 2008-2010 (historic n=4-6/yr) and 2011-2014 and 2017-2022 (current n=4-8/yr), just downstream of the pond at W2426 [outlet Reservoir Pond, downstream at Pleasant St, Canton] from Jun-Aug 2013 (n=2) and close to the downstream end of the AU at W0559 & NepRWA_PQB040 [Sherman St, Canton] from 2008-2010 (historic n=5-12/yr) and 2011-2014 and 2017-2022 (current n=5-8/yr). The available *E. coli* data at W0560 and W2426 are too limited to assess the Secondary Contact Recreation Use according to the 2024 CALM. However, analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from W2422 & NepRWA_PQB036 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2019 and 2021-2022, 75-100%), 3 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2018-2019 and 2022, n=2-3), and cumulatively across years 75% of intervals had GMs >244 CFU/100ml. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from W0559 & NepRWA_PQB040 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 50-100%), 3 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2020-2022, n=2-4), and cumulatively across years 77% of intervals had GMs >244 CFU/100ml. *E. coli* data from W2422 & NepRWA_PQB036 and W0559 & NepRWA_PQB040 are indicative of an Escherichia Coli (E. Coli) impairment. It should be noted that data in the historic IR window at station W0559 & NepRWA_PQB040 was also indicative of an Escherichia Coli (E. Coli) impairment, with 21% cumulatively of the GM intervals >244 CFU/100ml for this multi-year low frequency dataset.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0559	MassDEP	Water Quality	Pequid Brook	[Sherman Street, Canton]	42.158634	-71.139934

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0560	MassDEP	Water Quality	Pequid Brook	[York Street, Canton]	42.176704	-71.095818
W2422	MassDEP	Water Quality	Pequid Brook	[Del Pond Drive, Canton]	42.172268	-71.112251
W2426	MassDEP	Water Quality	Pequid Brook	[outlet Reservoir Pond, downstream at Pleasant Street, Canton]	42.168037	-71.133801
NepRWA_PQB036	Neponset River Watershed Association	Water Quality	Pequit Brook	Del Pond Drive	42.172450	-71.112200
NepRWA_PQB040	Neponset River Watershed Association	Water Quality	Pequit Brook	Sherman Street, Canton	42.158672	-71.140036

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

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

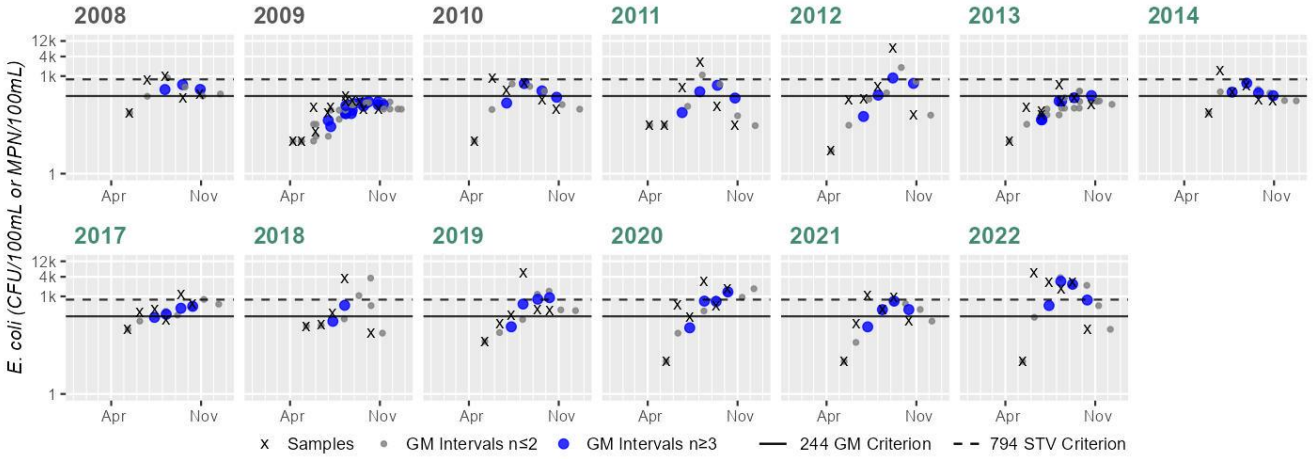
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0559	MassDEP	E. coli	04/28/09	09/15/09	6	10	170	67
W0559	MassDEP	E. coli	06/27/13	08/13/13	2	64	166	103
W0560	MassDEP	E. coli	06/27/13	08/13/13	2	77	236	134
W2422	MassDEP	E. coli	06/27/13	08/13/13	2	78	214	129
W2426	MassDEP	E. coli	06/27/13	08/13/13	2	23	49	33
NepRWA_PQB036	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	5	288	35
NepRWA_PQB036	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	5	216	51
NepRWA_PQB036	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	4	10	122	61
NepRWA_PQB036	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	197	51
NepRWA_PQB036	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	9800	407
NepRWA_PQB036	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	830	233
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	4	52	1330	213

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	10	504	104
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	3260	364
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	11200	386
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/14/20	09/10/20	4	41	594	216
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	5	52	1860	436
NepRWA_PQB036	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	5	31	1870	362
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/14/08	10/29/08	5	74	1010	320
NepRWA_PQB040	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	10	238	75
NepRWA_PQB040	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	10	880	182
NepRWA_PQB040	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	30	2610	126
NepRWA_PQB040	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	7270	184
NepRWA_PQB040	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	537	106
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	74	1450	283
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	96	1130	334
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	5	74	3650	266
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	41	5170	325
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	2910	384

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	1050	213
NepRWA_PQB040	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	5170	635

Station MASSDEP_W0559 & NepRWA_PQB040 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	320
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	12
SeasGM	71
#GMI	16
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	182
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	126
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	184
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	8
SeasGM	105
#GMI	6
#GMI Ex	1
%GMI Ex	16%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	283
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	334
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	266
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	325
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	384
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	213
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	635
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Cumulative %GMI Exceedance Historic (1997-2010)
21%

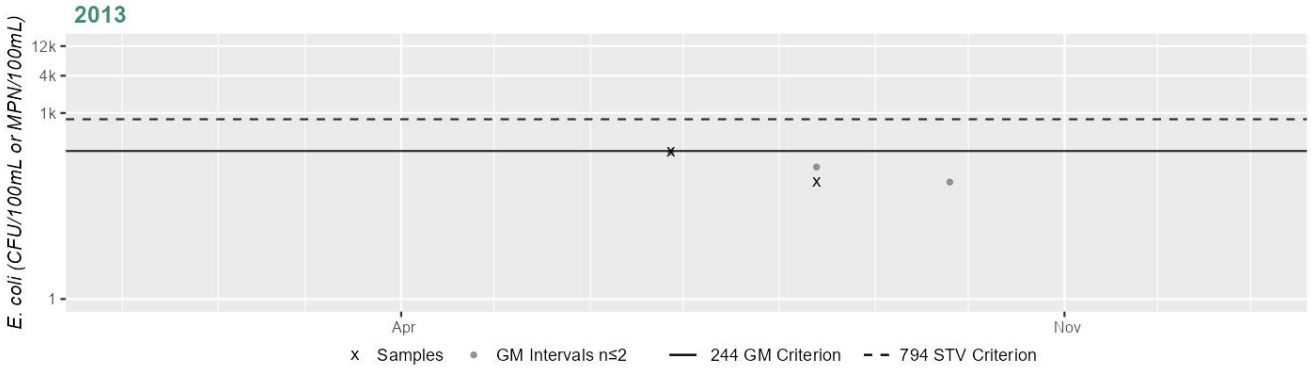
Cumulative %GMI Exceedance Current (2011-2022)
67%

Cumulative %GMI Exceedance Current (Recent 5 Years)
77%

**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 MASSDEP_W0560 - Escherichia coli

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



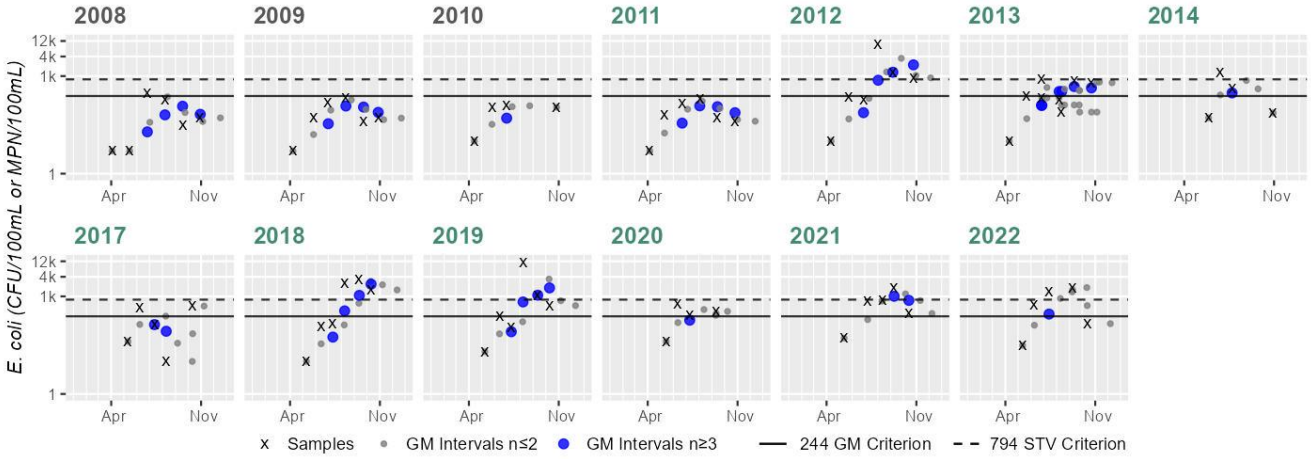
Variable*	Result
Samples	2
SeasGM	134
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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 MASSDEP_W2422 & NepRWA_PQB036 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	35
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	51
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	61
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	51
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	407
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	8
SeasGM	201
#GMI	6
#GMI Ex	4
%GMI Ex	66%
n>STV	1
%n>STV	12%

Variable*	Result
Samples	4
SeasGM	213
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	5
SeasGM	104
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	364
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	386
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	4
SeasGM	216
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	436
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	20%

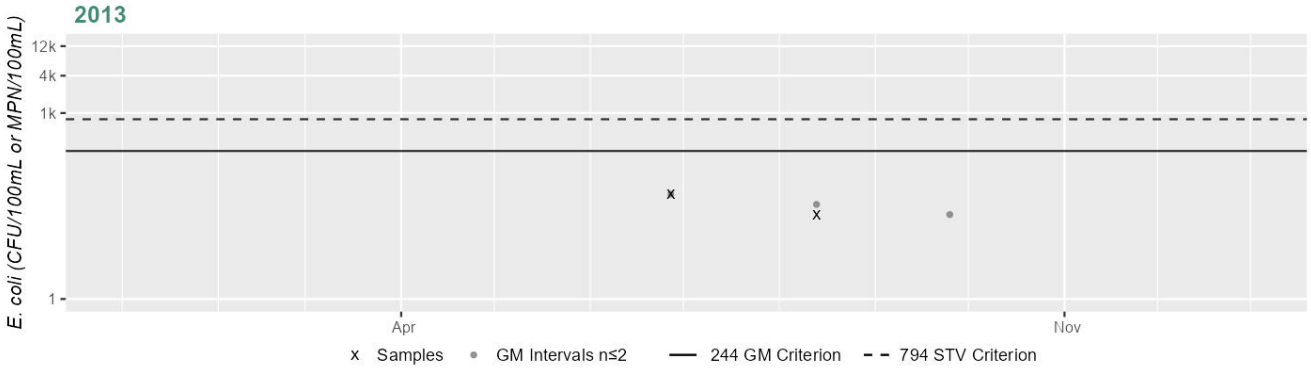
Variable*	Result
Samples	5
SeasGM	362
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	40%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
0%	58%	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.*

Station MASSDEP_W2426 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	33
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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.*

Pettee Pond (MA73036)

Location:	Walpole/Westwood.
AU Type:	FRESHWATER LAKE
AU Size:	10 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Mercury in Fish Tissue	42408	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Mercury in Fish Tissue	Atmospheric Deposition (Y)	--	X	--	--	--
Mercury in Fish Tissue	Source Unknown (N)	--	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 Pettee Pond (MA73036) continues to be assessed as Not Supporting and the prior Mercury in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Pettee Pond in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent MDPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Pettee Pond (MA73036) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Pettee Pond (MA73036) are available, so the Primary Contact Recreation Use is Not Assessed.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

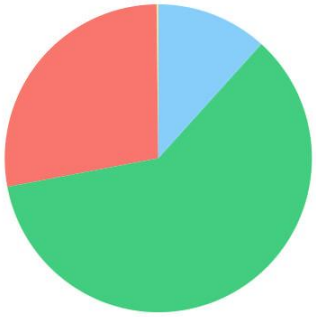
2024/26 Use Attainment Summary
No bacteria or other indicator data for Pettee Pond (MA73036) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.

Pine Tree Brook (MA73-29)

Location:	Headwaters, outlet Hillside Pond, Milton to mouth at confluence with the Neponset River, Milton (through former 2010 segment: Pope's Pond MA73044).
AU Type:	RIVER
AU Size:	4.6 MILES
Classification/Qualifier:	B

Pine Tree Brook (MA73-29)

Watershed Area: 7.65 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	7.65	5.83	1.82	1.38
Agriculture	0.2%	0.1%	0%	0%
Developed	27.8%	34.4%	18.1%	22.9%
Natural	60.3%	53.3%	57.7%	50.7%
Wetland	11.7%	12.3%	24.2%	26.3%
Impervious	14.4%	17.8%	8.4%	10.5%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Physical Substrate Habitat Alterations*)	--	Unchanged
5	5	Aquatic Plants (Macrophytes)	--	Removed
5	5	Dissolved Oxygen	--	Unchanged
5	5	Escherichia Coli (E. Coli)	2592	Unchanged
5	5	Fecal Coliform	2592	Unchanged
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Physical Substrate Habitat Alterations*)	Source Unknown (N)	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Turbidity	Source Unknown (N)	--	--	X	X	X

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Aquatic Plants (Macrophytes)	Data and/or information lacking to determine WQ status; original basis for listing was incorrect	As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Pine Tree Brook (MA73-29) includes the run-of-river impoundment, Popes Pond (formerly MA73044), that was first listed as impaired for Noxious Aquatic Plants in 1996, and this cause was remapped to Aquatic Plants (Macrophytes) during the 2010 IR cycle (MassDEP 2024). In 2012, the impairment was applied to the river AU when the two were merged. The original pond impairment was based on an August 1994 synoptic survey conducted by MassDEP staff in which it was noted that the observation site had a 75-100% density of the non-rooted, submerged species, *Ceratophyllum echinatum* (MassDEP 1994, MassDEP 2002). Most Google Earth images of Popes Pond since 2010 show plant coverages <25% (Google Earth Pro Undated). Popes Pond comprises only ~5.5% of the length of the Pine Tree Brook AU, since this impounded portion of the Pine Tree Brook "river" AU comprises <10% of the total AU river length, the Aquatic Plants (Macrophytes) impairment should be delisted because the impounded area is not considered to well represent the AU.

Aquatic Plants (Macrophytes)

1996 WBS Coding Sheet for Popes Pond (formerly MA73044) (MassDEP 2002):

WBID: **MA73044** WATERSHED: **Neponset (73)** (Printed 02/03/98)
NAME: **Popes Pond** TYPE: **Lake/Pond**
CODE: **73044** SIZE: **13.00**(acres) CLASS: **B**

LATITUDE: **42.24861**
LONGITUDE: **71.09639** (421455/710547)
Lake/Pond Name: Popes Pond, Milton
Ecoregion Name: ()
Description:

Assessment Date: 9609 **Begin Sampling:** 9408 **303(d) List?:** Yes
Cycle: 96 **End Sampling:** 9408 **Pathogens Only?:** No

Lake Specific Information
Lake size greater than 10 acres?: Yes
Significantly Publicly Owned: xxxx
Trophic Status: Hypereutrophic
Trophic Trend: Unknown
Acidity/Toxics Trend: Unknown
Acidity Effects: Unknown

Uses	Support	Threat	Partial	Non-Sup	Not-Asses	Not-Attain
OVERALL USE SUPPORT			13.00			
ALUS					13.00	
FISH CONSUMPTION					13.00	
PRIMARY CONTACT			13.00			
SECONDARY CONTACT			13.00			
Aesthetics					13.00	

Nonattainment Causes			"New"		
Code	Size	Magnitude	Code	Size	Magnitude
2200- Noxious aquatic plants	6.50	M			
2500- Turbidity	6.50	M			

Nonattainment Sources			"New"		
Code	Size	Magnitude	Code	Size	Magnitude
9000- SOURCE UNKNOWN	13.00	M			

Assessment Type "New" Assessment Category => M E NA
(Assessment Category => Monitored)
R35- Primary Producer Surveys

Media/Pollutants Assessed (Toxics Monitoring => N) "New" Toxics Monitoring => YES or NO

Comments:
1996:
A 9 AUGUST 1994 SYNOPTIC SURVEY INDICATES THAT FLOATING LEAF AND EMERGENT PLANTS ARE NOT COMMON (< 5% COVERAGE). COONTAIL IS ABUNDANT - DENSITY IS 75% TO 100% AT OBSERVATION SITE. TURBIDITY WAS A CAUSE OF USE IMPAIRMENT TO THE POND AS THE SECCHI DISK READING WAS ONLY ABOUT 1 FOOT. THE WATER WAS TURBID AND VERY BROWN. NO OTHER DATA WAS AVAILABLE TO MAKE ASSESSMENTS.

1994 Synoptic Survey Field Sheet for Popes Pond (MassDEP 1994):

Entered 9/19/94

9/22/94

[redacted] Lythrum

Neponset R.

Page 1 of 2

73044

Lake/Pond Popes Pond Date 8-5-54

Town/City Milton Observers Haynes

DeCesare

Location/type of access (be specific, e.g., public boat ramp at west cove area off Simpson Street):

SW end of Pond off Summer Street (House No. 124) *

Property behind No. 124 leads to path along west side of Pond. No signs posted.

* Blue Hills Parkway

Ownership of Location/Access (specify public or private, name of owner(s), and any use restrictions):

Unknown

Posted signs (re aquatic plants, fish advisories, access, etc.):

None Observed

Water quality observations (clarity, dissolved organic staining, blooms, et cetera):

Turbid

Brown (Disgustingly so!)

Secchi much < 4 feet (≈ 1 foot)

Record of aquatic plant "species" observed (see note below):

* ~~Lythrum salicaria~~

Pontederia cordata

Ceratoph. echinatum (most common plant)

Potamogeton (narrow-leaf species, but nearly dead)

Peltandra

Observed aquatic plant density **(at observation site and across lake or pond, if practicable):**

floating leaf & emergent plants are not common (≤ 5% Cover)

✓ Control is abundant - density ie 75-100% at observation sites

Other notes (e.g., overt pollution, construction, and water uses:

Margin of pond forested

305b - Hypereutrophic

1° Contact - 100% Partial support

2° Contact - 100% "

Causes - Turbidity - M (50% Acreage) Noxious plants - M (50% acreage)

Note: record suspect *M. heterophyllum* plants that may require confirmation once emergent flowering stalks are evident.

Google Earth image of Popes Pond, 8/24/2013 (Google Earth Pro Undated):

Google Earth image of Popes Pond, 6/6/2015 (Google Earth Pro Undated):

MassDEP staff did not observe excessive filamentous algae during summer 2009 at Pine Tree Brook, water quality station W0573 (Eliot Street crossing, Milton) (MassDEP Undated 2).

Nutrient Relate Data

Unique ID	Water Body	Count.x	NH4 Violations	Year	Count	TP Average	TP Max	Field Sheets	Filamentous Dense or Very Dense	Max Daily DO Shift	Max Saturation
W0573	PINE TREE BROOK	5	0	2009	5	0.034	0.077	6	0	2.9	112

Recommendations

2024/26 Recommendations
2024/2026 IR[Turbidity, Medium] Conduct follow-up sampling in Pine Tree Brook (MA73-29) within the Popes Pond impoundment i.e. upstream of Bluehills Parkway and station {W0575}, to evaluate the status of the Turbidity impairment to the Aesthetics and Recreational uses. The Popes Pond impoundment specifically has not been observed by MassDEP staff since the 1994 synoptic survey. An aesthetics survey is recommended for the Popes Pond impoundment, to see if water quality conditions have improved since 1994. This is a medium priority 2024/2026 IR [Aquatic Plants (Macrophytes), Medium] Conduct follow-up sampling in Pine Tree Brook (MA73-29) at Unquity Road (near Harland Street), Milton {W0576} to determine the status of the dense and very dense macrophytes in this area. An Alert was identified for Aquatic Plants (Macrophytes) in 2006 due to the dense macrophytes observed at this site. At this time there is insufficient information to remove the Alert.

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Pine Tree Brook (MA73-29) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	YES

2024/26 Use Attainment Summary

The Aesthetics Use for Pine Tree Brook (MA73-29) continues to be assessed as Not Supporting, with the prior Turbidity impairment being carried forward. The prior impairment for Aquatic Plants (Macrophytes) is being removed, however the prior Alert identified for Aquatic Plants (Macrophytes) at Unquity Road (near Harland Street), Milton is being maintained. As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Pine Tree Brook includes the run-of-river impoundment, Popes Pond (formerly MA73044), that was first listed as impaired for Noxious Aquatic Plants in 1996, and this cause was remapped to Aquatic Plants (Macrophytes) during the 2010 IR cycle (MassDEP 2024). In 2012, the impairment was applied to the river AU when the two were merged. The original pond impairment (for Turbidity) was based on an August 1994 synoptic survey conducted by MassDEP staff, during which it was also noted that the observation site had a 75-100% density of the non-rooted, submerged species "Coontail" *Ceratophyllum echinatum* (MassDEP 1994, MassDEP 2002). However, most Google Earth images of Popes Pond since 2010 show plant coverages <25% (Google Earth Pro Undated). Popes Pond comprises only ~5.5% of the length of the Pine Tree Brook AU and since this impounded portion of the Pine Tree Brook "river" AU comprises <10% of the total AU river length, the Aquatic Plants (Macrophytes) impairment is being delisted because the impounded area is not considered to well represent the riverine AU. However, since the Popes Pond impoundment specifically has not been observed by MassDEP staff since the 1994 synoptic survey, there is insufficient information to delist the Turbidity impairment at this time. An aesthetics survey is recommended for the Popes Pond impoundment, to see if water quality conditions have improved since 1994. Additionally MassDEP staff recorded aesthetics observations a third of the way down the AU (about a quarter mile upstream of Popes Pond) ~500 feet upstream/south from Canton Ave, Milton (W2385), between May and September 2013 (n=8). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted grey water color on one occasion and trash on eight occasions. The prior Alert identified for Aquatic Plants (Macrophytes), due to dense and very dense macrophytes observed at Unquity Road (near Harland Street), Milton (W0576) in 2006, is being maintained since there is insufficient information to remove the Alert.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2385	MassDEP	Water Quality	Pine Tree Brook	[approximately 500 feet upstream/south from Canton Avenue, Milton]	42.243430	-71.094378

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2385	2013	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2385 on Pine Tree Brook (MA73-29) during 8 site visits between May 2013 and Sep 2013. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted grey water color (n=1) and objectionable deposits (n=8).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2385	2013	8	7	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2385	Pine Tree Brook	2013	Aesthetics Impaired?	No	6	8
W2385	Pine Tree Brook	2013	Aesthetics Impaired?	NR	2	8
W2385	Pine Tree Brook	2013	Aquatic Plant Density, Overall	None	5	8
W2385	Pine Tree Brook	2013	Aquatic Plant Density, Overall	NR	1	8
W2385	Pine Tree Brook	2013	Aquatic Plant Density, Overall	Sparse	1	8
W2385	Pine Tree Brook	2013	Aquatic Plant Density, Overall	Unobservable	1	8
W2385	Pine Tree Brook	2013	Color	Brownish	1	8
W2385	Pine Tree Brook	2013	Color	Greyish	1	8
W2385	Pine Tree Brook	2013	Color	Light Yellow/Tan	6	8
W2385	Pine Tree Brook	2013	Objectionable Deposits	Yes	8	8
W2385	Pine Tree Brook	2013	Odor	None	8	8
W2385	Pine Tree Brook	2013	Periphyton Density, Filamentous	None	7	8
W2385	Pine Tree Brook	2013	Periphyton Density, Filamentous	Unobservable	1	8
W2385	Pine Tree Brook	2013	Periphyton Density, Film	None	6	8
W2385	Pine Tree Brook	2013	Periphyton Density, Film	Sparse	1	8
W2385	Pine Tree Brook	2013	Periphyton Density, Film	Unobservable	1	8
W2385	Pine Tree Brook	2013	Scum	No	7	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2385	Pine Tree Brook	2013	Scum	Yes	1	8
W2385	Pine Tree Brook	2013	Turbidity	Moderately Turbid	1	8
W2385	Pine Tree Brook	2013	Turbidity	None	4	8
W2385	Pine Tree Brook	2013	Turbidity	Slightly Turbid	3	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Pine Tree Brook (MA73-29) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 4 stations in 2018-2022. The prior Fecal Coliform impairment is being carried forward and the prior Turbidity impairment (from the Aesthetics Use) is also being carried forward. Since the Aquatic Plants (Macrophytes) impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Primary Contact Recreation Use. The prior Alert for Aquatic Plants (Macrophytes) is being removed from the Recreational Uses but continues to be maintained under the Aesthetics Use. MassDEP and NepRWA staff/volunteers collected *E. coli* bacteria samples in Pine Tree Brook from 2011-2022 at 5 stations. Samples were collected from the following stations/sample years from upstream to downstream: a quarter of the way down the AU at NepRWA_UTP013 [Unnamed Tributary of Pine Tree Brook at Harland St, Milton] from 2019-2020 (n=6-8/yr), a third of the way down at W2385 [~500 ft upstream/S from Canton Avenue, Milton] from May-Sep 2013 (n=5), halfway down at NepRWA_PTB028 [Blue Hills Parkway, Milton] from 2011-2014 and 2017-2022 (n=5-6/yr), three-quarters of the way down at NepRWA_PTB035 [Brook Rd, Milton] from 2011-2014 and 2017-2022 (n=4-6/yr) and the downstream end of the AU at NepRWA_PTB047 [Central Avenue, Milton] from 2011-2014 and 2017-2022 (n=4-6/yr). While *E. coli* data from station W2385 meets 2024 CALM guidance, *E. coli* data from the other 4 stations are all indicative of poor water quality and are summarized as follows; Analysis of the multi-year moderate frequency dataset from NepRWA_UTP013 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2019 and 2020, 80 & 75%), 2 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2019 and 2020, n=3 & 2), and cumulatively across years 78% of intervals had GMs >126 CFU/100ml. Analysis of the recent five years of the multi-year limited frequency dataset from NepRWA_PTB028 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2021, 50-75%), 3 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2019 and 2021-2022, n=2-3), and cumulatively across years 53% of intervals had GMs >126 CFU/100ml. Analysis of the recent five years of the multi-year limited frequency dataset from both NepRWA_PTB035 & NepRWA_PTB047 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 100%), 5 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018-2022, n=3-5), and cumulatively across years 100% of intervals had GMs >126 CFU/100ml. The data from NepRWA_UTP013, NepRWA_PTB035, NepRWA_PTB028, and NepRWA_PTB047 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2385	MassDEP	Water Quality	Pine Tree Brook	[approximately 500 feet upstream/south from Canton Avenue, Milton]	42.243430	-71.094378
NepRWA_PTB028	Neponset River Watershed Association	Water Quality	Pine Tree Brook	Blue Hills Parkway, Milton	42.252433	-71.093770

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_PTB035	Neponset River Watershed Association	Water Quality	Pine Tree Brook	Brook Road, Milton	42.259100	-71.084130
NepRWA_PTB047	Neponset River Watershed Association	Water Quality	Pine Tree Brook	Central Avenue, Milton	42.269483	-71.072750
NepRWA_UTP013	Neponset River Watershed Association	Water Quality	Unnamed Tributary of Pine Tree Brook	Unnamed Tributary of Pine Tree Brook @ Harland Street, Milton	42.234717	-71.088611

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)
(MassDEP Undated 10) (MassDEP Undated 6) (NepRWA 2023) (MassDEP Undated 4)
[Result units are CFU/100mL or MPN/100mL]

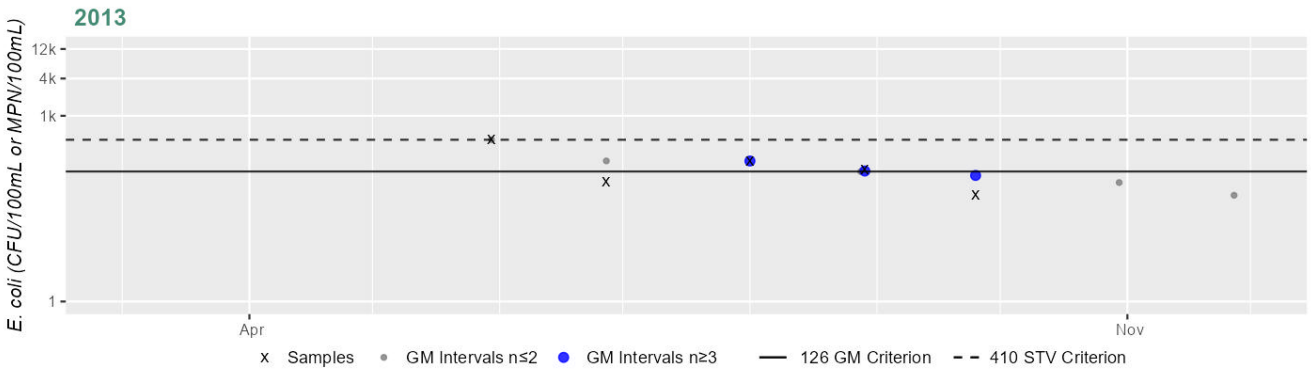
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W2385	MassDEP	E. coli	05/30/13	09/25/13	5	52	410	135
NepRWA_PTB028	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	1940	80
NepRWA_PTB028	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	4350	152
NepRWA_PTB028	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	359	70
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	5	52	9800	309
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	3080	111
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	51	2760	152
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	5	31	3610	317
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	717	130
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	30	8160	216
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	5	10	1670	331
NepRWA_PTB035	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	20	24200	229

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PTB035	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	41	15500	344
NepRWA_PTB035	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	51	1380	168
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	5	323	24200	1002
NepRWA_PTB035	Neponset River Watershed Association	E. coli	06/08/17	09/14/17	4	487	1860	775
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	5	63	2140	356
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	96	3260	522
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/14/20	09/10/20	5	52	1660	430
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	156	3260	485
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	295	24200	1585
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/11/11	09/14/11	4	201	9800	655
NepRWA_PTB047	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	31	4110	442
NepRWA_PTB047	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	20	933	275
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	145	6130	756
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	173	960	439
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	63	11200	993
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	5	199	1260	514
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	345	10500	821

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	243	4880	840
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	134	1150	520
NepRWA_UTP013	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	8	4	2419	200
NepRWA_UTP013	Neponset River Watershed Association	E. coli	05/21/20	10/15/20	6	43	2419	162

Station MASSDEP_W2385 - Escherichia coli

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



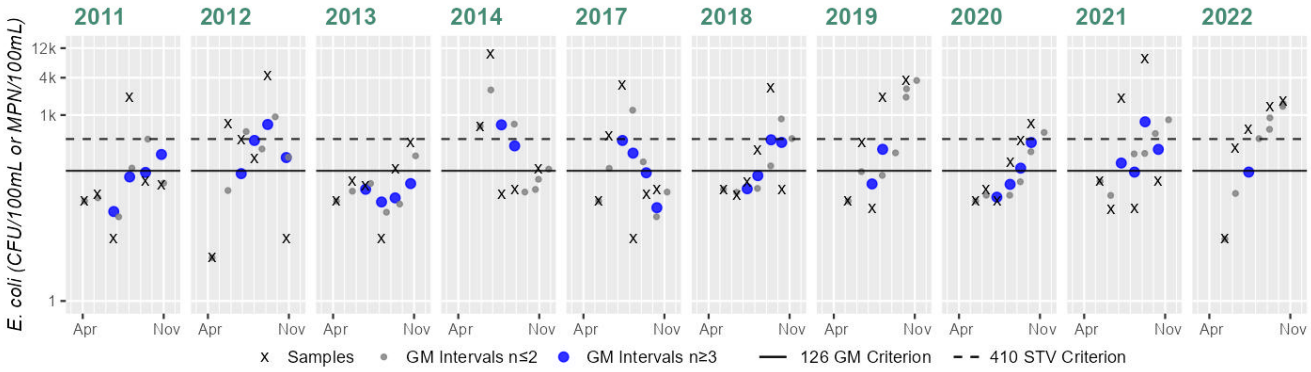
Variable*	Result
Samples	5
SeasGM	135
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
66%

**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 MASSDEP_W0575 & NepRWA_PTB028 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	80
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	152
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	70
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	309
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	111
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	152
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	317
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	130
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	216
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	331
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	3
%n>STV	60%

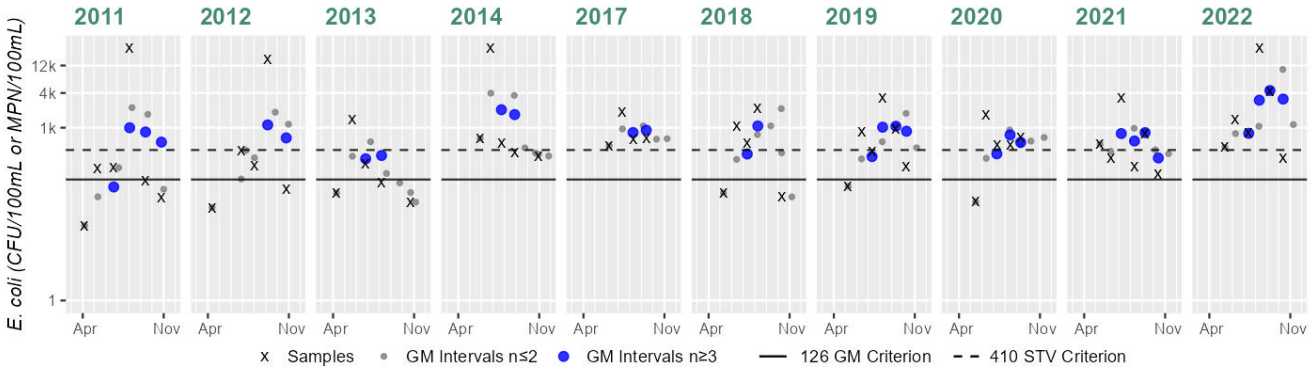
Cumulative %GMI Exceedance Current (2011-2022)
48%

Cumulative %GMI Exceedance Current (Recent 5 Years)
53%

**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 NepRWA_PTB035 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	229
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	344
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	5
SeasGM	168
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	5
SeasGM	1002
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	3
%n>STV	60%

Variable*	Result
Samples	4
SeasGM	775
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	4
%n>STV	100%

Variable*	Result
Samples	5
SeasGM	356
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	3
%n>STV	60%

Variable*	Result
Samples	6
SeasGM	522
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	5
SeasGM	430
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	4
%n>STV	80%

Variable*	Result
Samples	6
SeasGM	485
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	1585
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

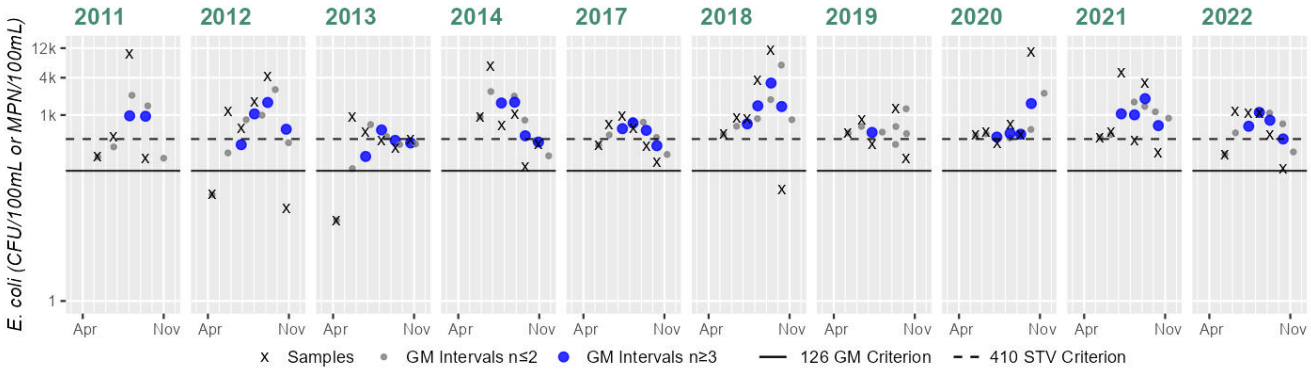
Cumulative %GMI Exceedance Current (2011-2022)
96%

Cumulative %GMI Exceedance Current (Recent 5 Years)
100%

**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 MASSDEP_W0573 & NepRWA_PTB047 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	655
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	2
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	442
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	275
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	756
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	439
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	993
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	5
SeasGM	514
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	3
%n>STV	60%

Variable*	Result
Samples	6
SeasGM	821
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	840
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	520
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

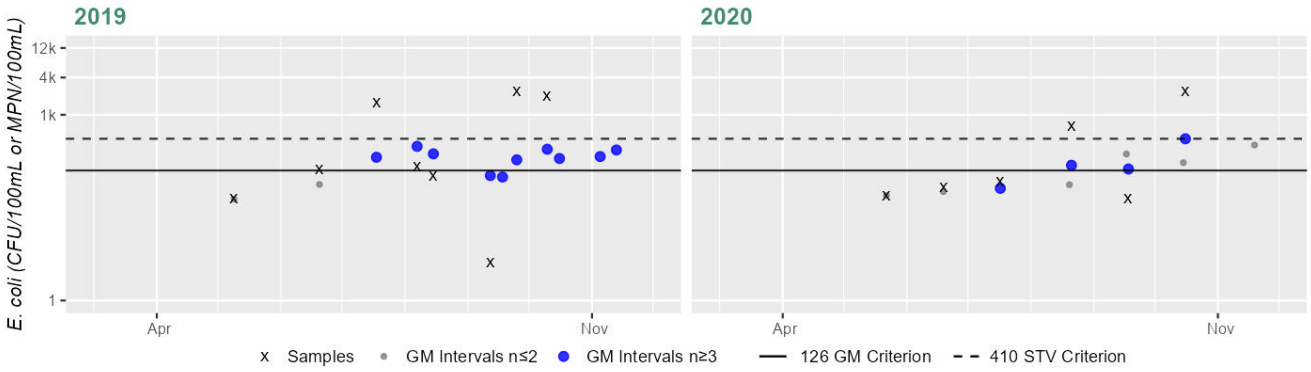
Cumulative %GMI Exceedance
Current (2011-2022)
100%

Cumulative %GMI Exceedance
Current (Recent 5 Years)
100%

**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 NepRWA_UTP013 - Escherichia coli

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



Variable*	Result
Samples	8
SeasGM	200
#GMI	10
#GMI Ex	8
%GMI Ex	80%
n>STV	3
%n>STV	37%

Variable*	Result
Samples	6
SeasGM	162
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance
Current (2011-2022)
78%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Pine Tree Brook (MA73-29) continues to be assessed as Not Supporting. The prior Turbidity impairment (from the Aesthetics Use) is being carried forward. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 4 stations in 2018-2022. Since the Aquatic Plants (Macrophytes) impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Secondary Contact Recreation Use. The prior Alert for Aquatic Plants (Macrophytes) is being removed from the Recreational Uses but continues to be maintained under the Aesthetics Use. MassDEP and NepRWA staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Pine Tree Brook from 2006-2022 at 8 stations. Samples were collected from the following stations/sample years from upstream to downstream: a quarter of the way down the AU at NepRWA_UTP013 [Unnamed Tributary of Pine Tree Brook at Harland St, Milton] from 2019-2020 (n=6-8/yr) & W0576 [Unquity Rd (near Harland St), Milton] from May-Aug 2006 (n=5), a third of the way down at W2385 [~500 ft upstream/S from Canton Avenue, Milton] from May-Sep 2013 (n=5), halfway down at combined station W0575 & NepRWA_PTB028 [Blue Hills Parkway, Milton] in 2006 & 2008-2010 (historic n=5-6/yr) as well as 2011-2014 & 2017-2022 (current n=5-6/yr), three-quarters of the way down at NepRWA_PTB035 [Brook Rd, Milton] from 2008-2010 (historic n=6/yr) as well as 2011-2014 & 2017-2022 (current n=4-6/yr), & W0574 [Central Avenue, Milton] from May-Aug 2006 (n=5), close to the downstream end at W1624 [School St, Milton] in Aug 2006 (n=1) & the downstream end of the AU at combined station W0573 & NepRWA_PTB047 [Eliot St crossing, (Milton Village) Milton & Central Avenue, Milton] in 2006 & 2008-2010 (historic n=1-11/yr) as well as 2011-2014 & 2017-2022 (current n=4-6/yr). While *E. coli* data from station W2385 meets 2024 CALM guidance, *E. coli* data from the 4 other stations/combined stations with data in the current IR window, are all indicative of poor water quality and are summarized as follows; Analysis of the multi-year moderate frequency dataset from NepRWA_UTP013 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2019 and 2020, 30 & 25%), 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2019, n=3), and cumulatively across years 28% of intervals had GMs >244 CFU/100ml. Analysis of the recent five years of this multi-year limited frequency dataset from W0575 & NepRWA_PTB028 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2021, 25-50%), 3 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2019 and 2021-2022, n=2), and cumulatively across years 40% of intervals had GMs >244 CFU/100ml. Analysis of the recent five years of the multi-year limited frequency dataset from both NepRWA_PTB035 & combined station W0573 & NepRWA_PTB047 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 100%), 4 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2018-2019 and 2021-2022, n=2-4), and cumulatively across years 100% of intervals had GMs >244 CFU/100ml. *E. coli* data from stations NepRWA_UTP013, W0575 & NepRWA_PTB028, NepRWA_PTB035, and W0573 & NepRWA_PTB047 are all indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0573	MassDEP	Water Quality	Pine Tree Brook	[Eliot Street crossing, (Milton Village) Milton]	42.269480	-71.072817
W0574	MassDEP	Water Quality	Pine Tree Brook	[Central Avenue, Milton]	42.259331	-71.081061
W0575	MassDEP	Water Quality	Pine Tree Brook	[Blue Hills Parkway, Milton]	42.252441	-71.093767
W0576	MassDEP	Water Quality	Pine Tree Brook	[Unquity Road (near Harland Street), Milton]	42.235819	-71.090062
W1624	MassDEP	Water Quality	Pine Tree Brook	[School Street, Milton]	42.265947	-71.073539
W2385	MassDEP	Water Quality	Pine Tree Brook	[approximately 500 feet upstream/south from Canton Avenue, Milton]	42.243430	-71.094378
NepRWA_PTB028	Neponset River Watershed Association	Water Quality	Pine Tree Brook	Blue Hills Parkway, Milton	42.252433	-71.093770
NepRWA_PTB035	Neponset River Watershed Association	Water Quality	Pine Tree Brook	Brook Road, Milton	42.259100	-71.084130
NepRWA_PTB047	Neponset River Watershed Association	Water Quality	Pine Tree Brook	Central Avenue, Milton	42.269483	-71.072750
NepRWA_UTP013	Neponset River Watershed Association	Water Quality	Unnamed Tributary of Pine Tree Brook	Unnamed Tributary of Pine Tree Brook @ Harland Street, Milton	42.234717	-71.088611

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

[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
W0573	MassDEP	E. coli	05/09/06	07/11/06	4	118	613	303
W0573	MassDEP	E. coli	04/28/09	09/15/09	6	30	4900	335
W0574	MassDEP	E. coli	05/09/06	08/23/06	5	44	272	153
W0575	MassDEP	E. coli	05/09/06	08/23/06	5	14	365	121
W0576	MassDEP	E. coli	05/09/06	08/23/06	5	20	238	96
W1624	MassDEP	E. coli	08/23/06	08/23/06	1	579	579	579
W2385	MassDEP	E. coli	05/30/13	09/25/13	5	52	410	135
NepRWA_PTB028	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	5	495	60
NepRWA_PTB028	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	31	359	145

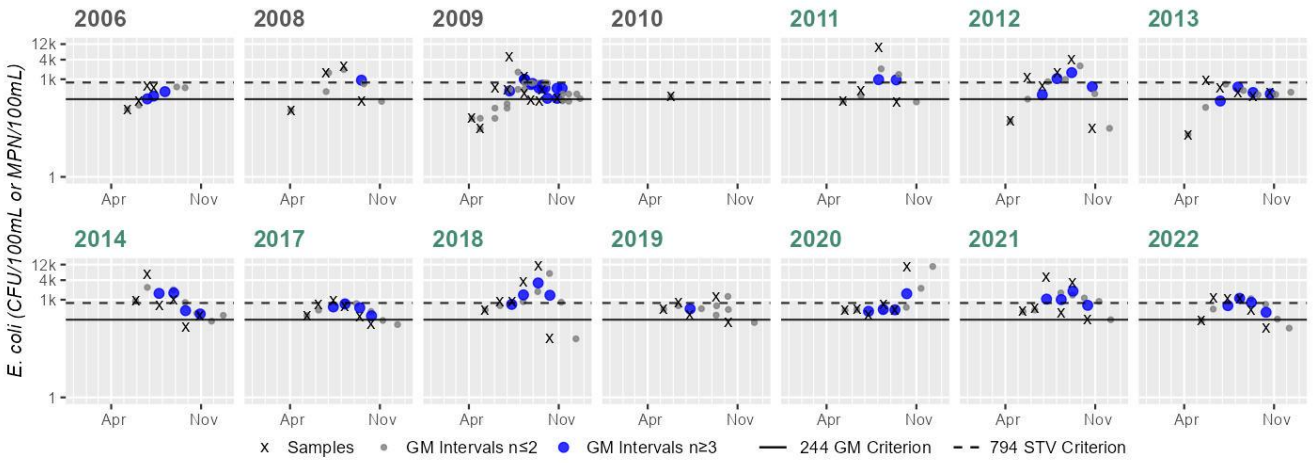
Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PTB028	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	10	218	40
NepRWA_PTB028	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	1940	80
NepRWA_PTB028	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	4350	152
NepRWA_PTB028	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	10	359	70
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	5	52	9800	309
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	3080	111
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	51	2760	152
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	5	31	3610	317
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	717	130
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	30	8160	216
NepRWA_PTB028	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	5	10	1670	331
NepRWA_PTB035	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	30	2380	339
NepRWA_PTB035	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	52	906	292
NepRWA_PTB035	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	20	677	160
NepRWA_PTB035	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	20	24200	229
NepRWA_PTB035	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	41	15500	344
NepRWA_PTB035	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	51	1380	168

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	5	323	24200	1002
NepRWA_PTB035	Neponset River Watershed Association	E. coli	06/08/17	09/14/17	4	487	1860	775
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	5	63	2140	356
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	96	3260	522
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/14/20	09/10/20	5	52	1660	430
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	156	3260	485
NepRWA_PTB035	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	295	24200	1585
NepRWA_PTB047	Neponset River Watershed Association	E. coli	04/02/08	09/17/08	4	110	2490	548
NepRWA_PTB047	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	5	63	1190	339
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/26/10	05/26/10	1	299	299	299
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/11/11	09/14/11	4	201	9800	655
NepRWA_PTB047	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	31	4110	442
NepRWA_PTB047	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	20	933	275
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	145	6130	756
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	173	960	439
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	63	11200	993
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	5	199	1260	514

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	345	10500	821
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	243	4880	840
NepRWA_PTB047	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	134	1150	520
NepRWA_UTP013	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	8	4	2419	200
NepRWA_UTP013	Neponset River Watershed Association	E. coli	05/21/20	10/15/20	6	43	2419	162

Station MASSDEP_W0573 & NepRWA_PTB047 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	303
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	548
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	50%

Variable*	Result
Samples	11
SeasGM	337
#GMI	13
#GMI Ex	13
%GMI Ex	100%
n>STV	2
%n>STV	18%

Variable*	Result
Samples	1
SeasGM	299
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	655
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	442
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	275
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	756
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	439
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	993
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	5
SeasGM	514
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	821
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	840
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	520
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Cumulative %GMI Exceedance Historic (1997-2010)
100%

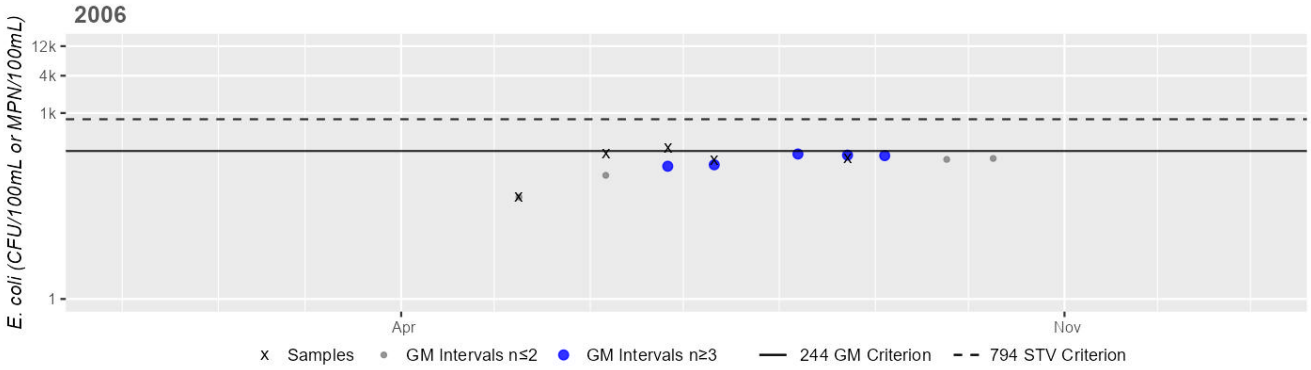
Cumulative %GMI Exceedance Current (2011-2022)
97%

Cumulative %GMI Exceedance Current (Recent 5 Years)
100%

**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 MASSDEP_W0574 - Escherichia coli

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



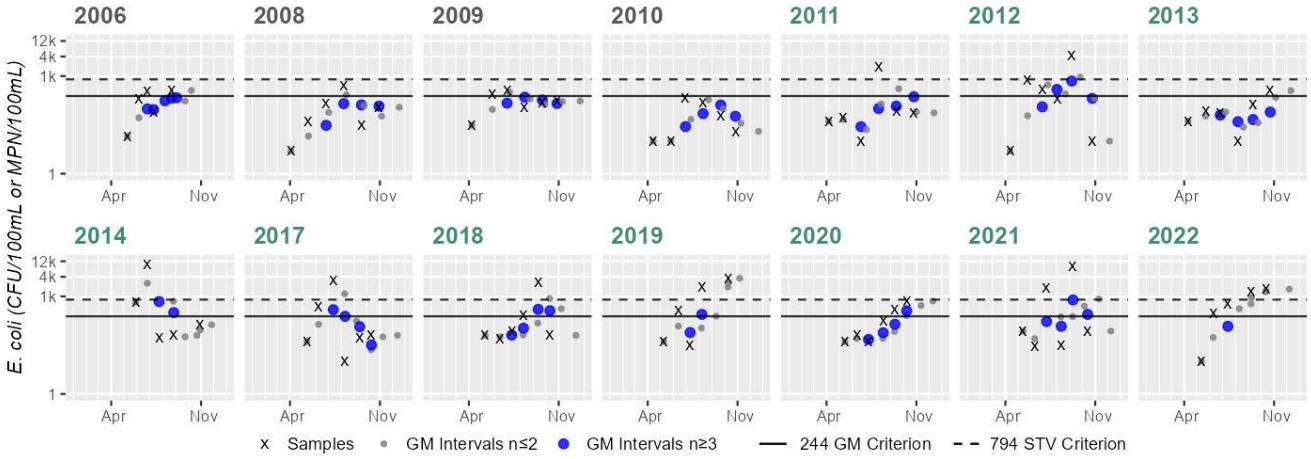
Variable*	Result
Samples	5
SeasGM	153
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
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 MASSDEP_W0575 & NepRWA_PTB028 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	121
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	60
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	145
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	40
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	80
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	152
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	70
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	309
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	111
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	152
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	317
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	130
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	216
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	331
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	40%

Cumulative %GMI Exceedance Historic (1997-2010)
0%

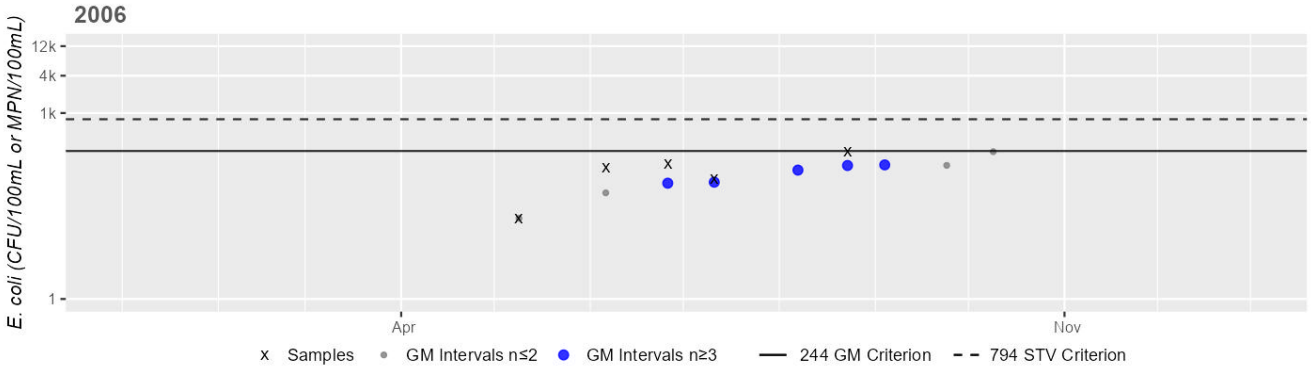
Cumulative %GMI Exceedance Current (2011-2022)
33%

Cumulative %GMI Exceedance Current (Recent 5 Years)
40%

**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 MASSDEP_W0576 - Escherichia coli

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



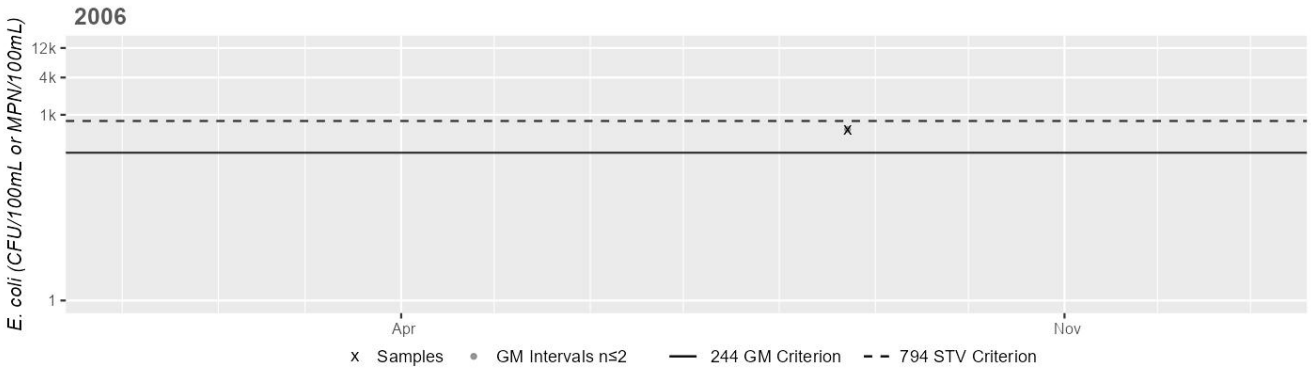
Variable*	Result
Samples	5
SeasGM	96
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
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 MASSDEP_W1624 - Escherichia coli

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



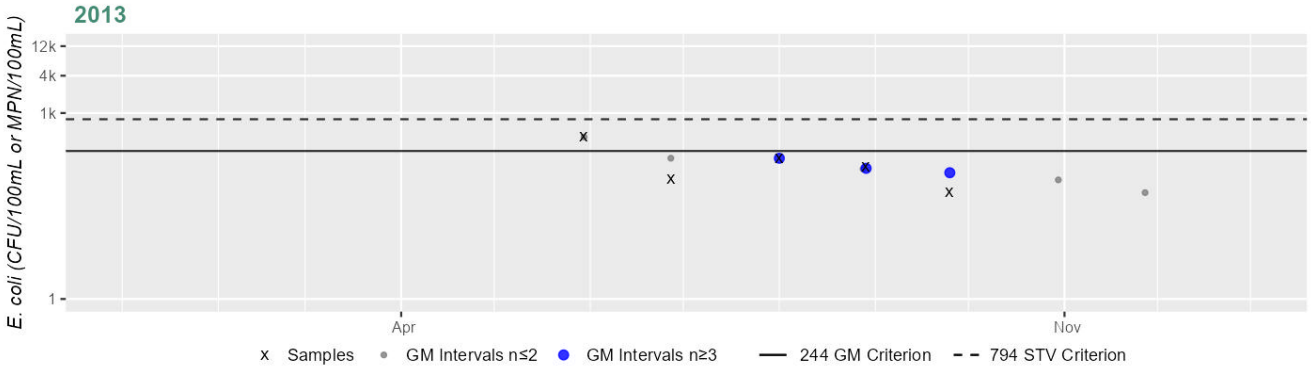
Variable*	Result
Samples	1
SeasGM	579
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
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 MASSDEP_W2385 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	135
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

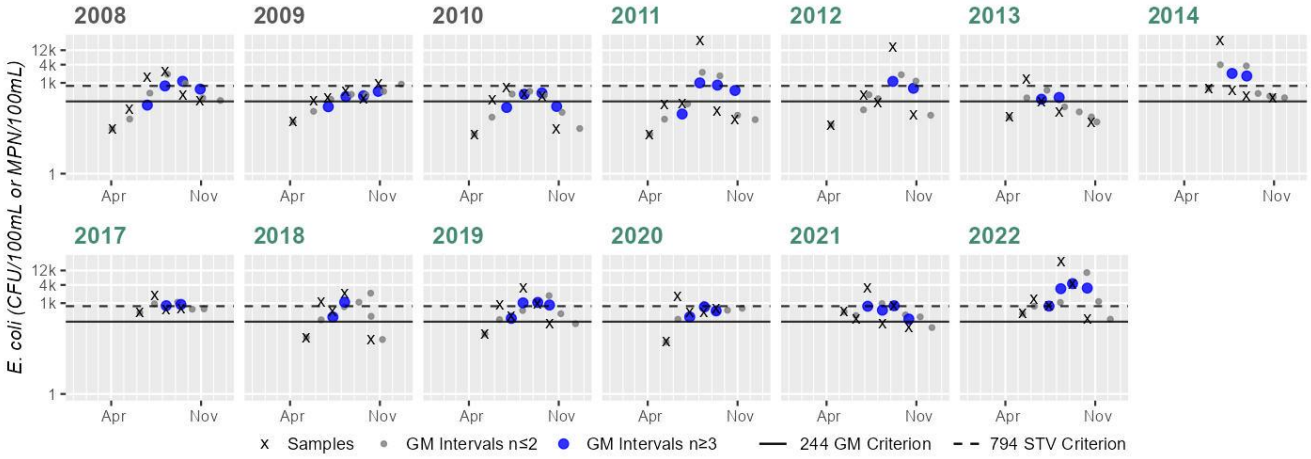
Current (2011-2022)

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 NepRWA_PTB035 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	339
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	292
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	160
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	229
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	344
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	5
SeasGM	168
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	5
SeasGM	1002
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	4
SeasGM	775
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	5
SeasGM	356
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	522
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	5
SeasGM	430
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	485
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

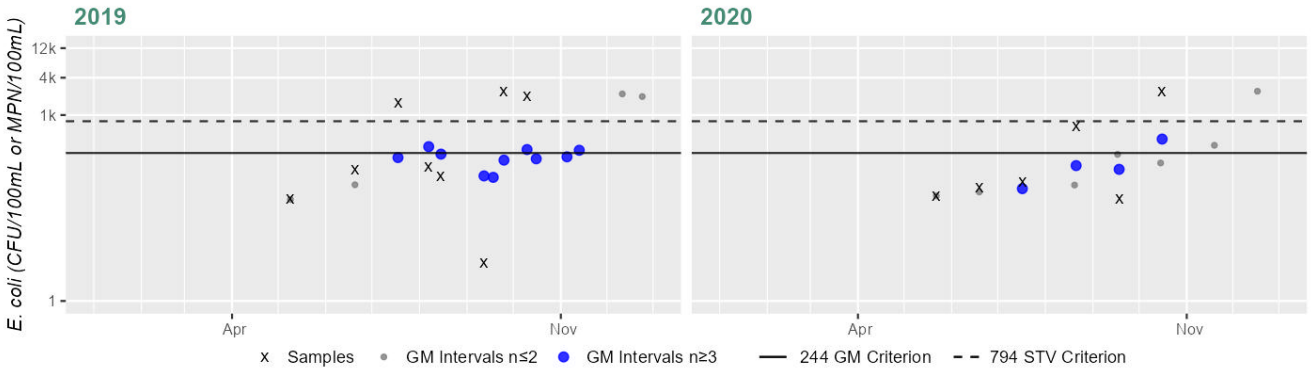
Variable*	Result
Samples	6
SeasGM	1585
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
66%	96%	100%

**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 NepRWA_UTP013 - Escherichia coli

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



Variable*	Result
Samples	8
SeasGM	200
#GMI	10
#GMI Ex	3
%GMI Ex	30%
n>STV	3
%n>STV	37%

Variable*	Result
Samples	6
SeasGM	162
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance
Current (2011-2022)
28%

**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.*

Pinewood Pond (MA73039)

Location:	Stoughton.
AU Type:	FRESHWATER LAKE
AU Size:	25 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Aquatic Plants (Macrophytes)*)	--	Unchanged
4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Aquatic Plants (Macrophytes)*)	Source Unknown (N)	--	--	X	X	X
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary

Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Pinewood Pond (MA73039) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Pinewood Pond (MA73039) continues to be assessed as as Not Supporting with the Aquatic Plants (Macrophytes) impairment being carried forward. Since the Non-Native Aquatic Plants impairment was redundantly duplicated across multiple uses for this waterbody, the Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use but will continue to be maintained under the Aquatic Life Use. No new data are available to evaluate the Aesthetics Use for Pinewood Pond.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Pinewood Pond (MA73039) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Aquatic Plants (Macrophytes) impairment (from the Aesthetics Use) is being carried forward. Since the Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Primary Contact Recreation Use.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

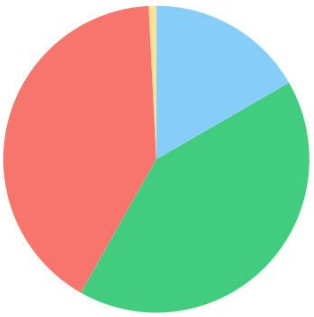
2024/26 Use Attainment Summary
No bacteria or other indicator data for Pinewood Pond (MA73039) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. The prior Aquatic Plants (Macrophytes) impairment (from the Aesthetics Use) is being carried forward. Since the Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Secondary Contact Recreation Use.

Plantingfield Brook (MA73-23)

Location:	Headwaters east of Thatcher Street, Westwood, to mouth at confluence with Purgatory Brook, Norwood (portion culverted).
AU Type:	RIVER
AU Size:	1.9 MILES
Classification/Qualifier:	B

Plantingfield Brook (MA73-23)

Watershed Area: 1.50 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.50	1.50	0.45	0.45
Agriculture	0.8%	0.8%	0.9%	0.9%
Developed	41%	41%	18.6%	18.6%
Natural	41.5%	41.5%	40.1%	40.1%
Wetland	16.7%	16.7%	40.5%	40.5%
Impervious	23.3%	23.3%	10.2%	10.2%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	(Dewatering*)	--	Unchanged
5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Dewatering*)	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Escherichia Coli (E. Coli)	TMDL approved or established by EPA (4a)	Impairment covered under TMDL: Massachusetts Statewide TMDL for Pathogen-Impaired Waterbodies (Report CN 515.1, approved 2/13/2024, ATTAINS Action ID: R1_MA_2024_04)

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Plantingfield Brook (MA73-23) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Plantingfield Brook (MA73-23) 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 Plantingfield Brook (MA73-23) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2019-2020. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples a third of the way down Plantingfield Brook at NepRWA_PFB023 [Tech Drive, Norwood] from 2019-2020 (n=4-8/yr). Analysis of the multi-year moderate frequency dataset from this station indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2019 and 2020, 60 & 100%), and while 0 yrs had ≥2 samples exceed the 410 CFU/100ml STV, cumulatively across years 63% of intervals had GMs >126 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment. MassDEP staff conducted Bacteria Source Tracking (BST) work in 2013 & 2015-2018 on the Plantingfield Brook. Initially BST work focused on a stormdrain outfall pipe draining the Alpine/Ash St area, due to a history of concern over the water quality there; the Town of Norwood assisted with up-pipe investigations. In 2016 sewer lines on Springvale and Alpine road were CIPP lined, however follow up sampling at the pipe in 2017 indicated elevated *E. coli* concentrations with a max of 1,733 MPN/100ml (though this was vastly improved compared to 2015, when a max of 19,863 MPN was observed). It was concluded that a minor intermittent source of bacteria still exists in the Alpine/Ash drainage area. A baseline sample was collected close to the downstream end of the AU (at Rt.1) in 2018, with a dry weather *E. coli* concentration of 770 MPN documented.

Monitoring Stations

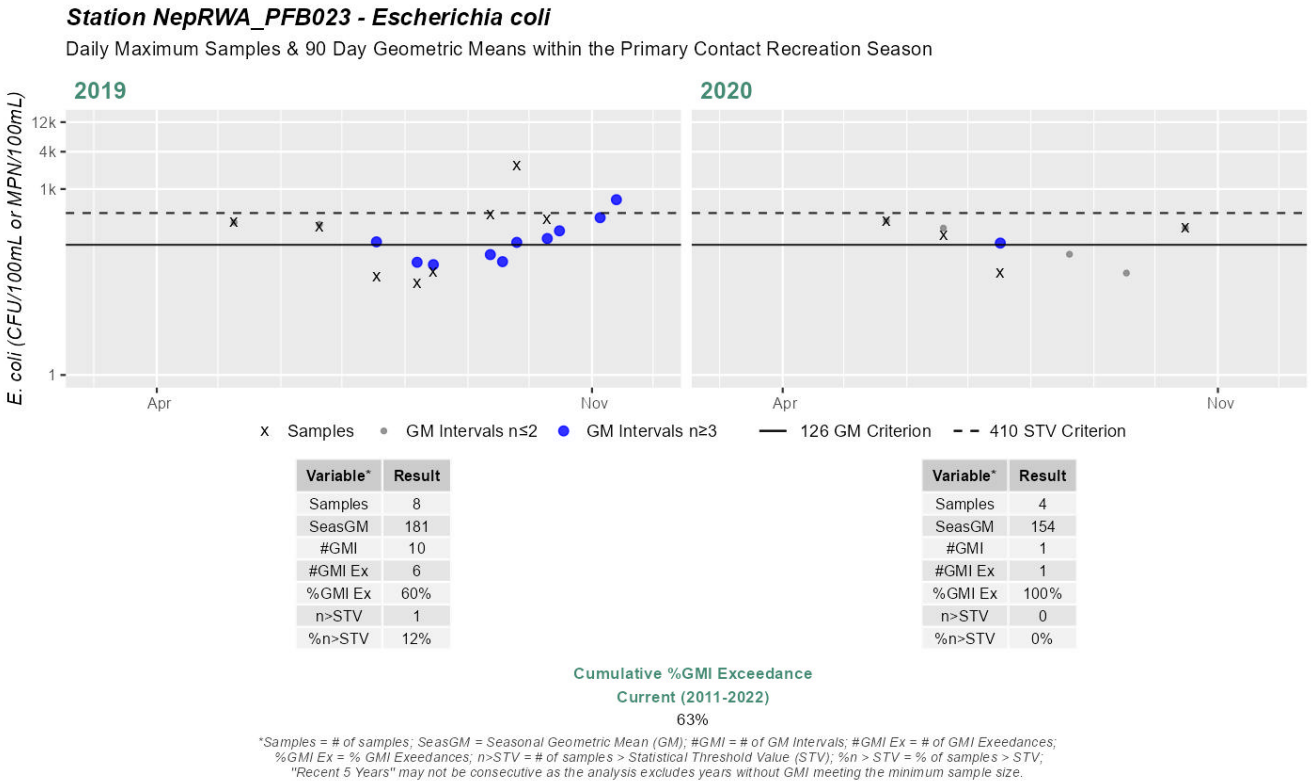
Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_PFB023	Neponset River Watershed Association	Water Quality	Plantingfield Brook	Tech Drive, Norwood	42.211213	-71.201945

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (NepRWA 2023) (MassDEP Undated 4)

[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
NepRWA_PFB023	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	8	29	2419	181
NepRWA_PFB023	Neponset River Watershed Association	E. coli	05/21/20	10/15/20	4	44	307	154



Summary Statement for 2011-2019 MassDEP Bacteria Source Tracking (BST) Data (MassDEP Undated 1)

Summary
BST work was conducted in 2013, 2015-2018 on the Plantingfield Brook AU (MA73-23). Initially BST work focused on a stormdrain outfall pipe draining the Alpine/Ash St area, due to a history of concern over the water quality there; the Town of Norwood assisted with up-pipe investigations. In 2016 sewer lines on Springvale and Alpine road were CIPP lined, however follow up sampling at the pipe in 2017 indicated elevated concentrations with a max of 1,733MPN (though this was vastly improved compared to 2015, when a max of 19,863MPN was observed). It was concluded that a minor intermittent source of bacteria still exists in the Alpine/Ash drainage area. A baseline sample was collected close to the bottom of the AU at Rt.1 in 2018 with a dry weather E.coli concentration of 770MPN.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Plantingfield Brook (MA73-23) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2009. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Plantingfield Brook from 2009-2020 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: a third of the way down the brook at NepRWA_PFB023 [Tech Drive, Norwood] from 2019-2020 (n=4-8/yr) and close to the downstream end at W1947 [Rt. 1, Norwood] from Apr-Sep 2009 (historic n=5). Analysis of the multi-year moderate frequency *E. coli* dataset from NepRWA_PFB023 indicated 1 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2019, 20%), 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV and cumulatively across years 18% of intervals had GMs >244 CFU/100ml, which meets 2024 CALM guidance. However, analysis of the historic single year limited frequency *E. coli* dataset from W1947 indicated 100% of intervals had GMs >244 CFU/100ml, 3 samples exceeded the 794 CFU/100ml STV, and the overall GM was 793 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment. While recent data at station NepRWA_PFB023 indicated generally good conditions, data in the historic window (1997-2010) from station W1947 are indicative of poor water quality conditions with an Escherichia Coli (E. Coli) impairment and there are no recent data (i.e. from the current window (2011-2022)) available to assess this location. MassDEP staff conducted Bacteria Source Tracking (BST) work in 2013 & 2015-2018 on the Plantingfield Brook. Initially BST work focused on a stormdrain outfall pipe draining the Alpine/Ash St area, due to a history of concern over the water quality there; the Town of Norwood assisted with up-pipe investigations. In 2016 sewer lines on Springvale and Alpine road were CIPP lined, however follow up sampling at the pipe in 2017 indicated elevated *E. coli* concentrations with a max of 1,733 MPN/100ml (though this was vastly improved compared to 2015, when a max of 19,863 MPN was observed). It was concluded that a minor intermittent source of bacteria still exists in the Alpine/Ash drainage area. A baseline sample was collected close to the downstream end of the AU (at Rt.1) in 2018, with a dry weather *E. coli* concentration of 770 MPN documented.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1947	MassDEP	Water Quality	Plantingfield Brook	[Route 1, Norwood]	42.204562	-71.186467
NepRWA_PFB023	Neponset River Watershed Association	Water Quality	Plantingfield Brook	Tech Drive, Norwood	42.211213	-71.201945

Bacteria Data

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

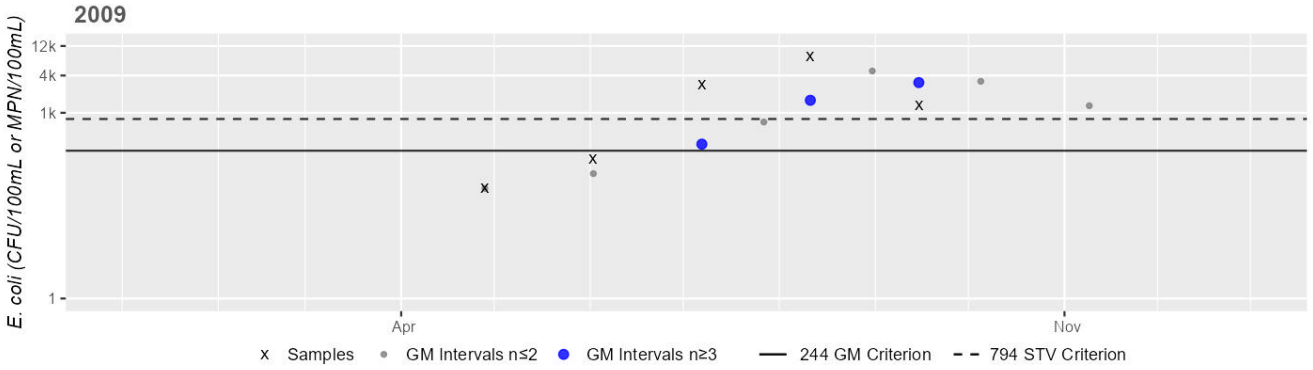
(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

[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
W1947	MassDEP	E. coli	04/28/09	09/15/09	5	60	8000	793
NepRWA_PFB023	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	8	29	2419	181
NepRWA_PFB023	Neponset River Watershed Association	E. coli	05/21/20	10/15/20	4	44	307	154

Station MASSDEP_W1947 - Escherichia coli

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



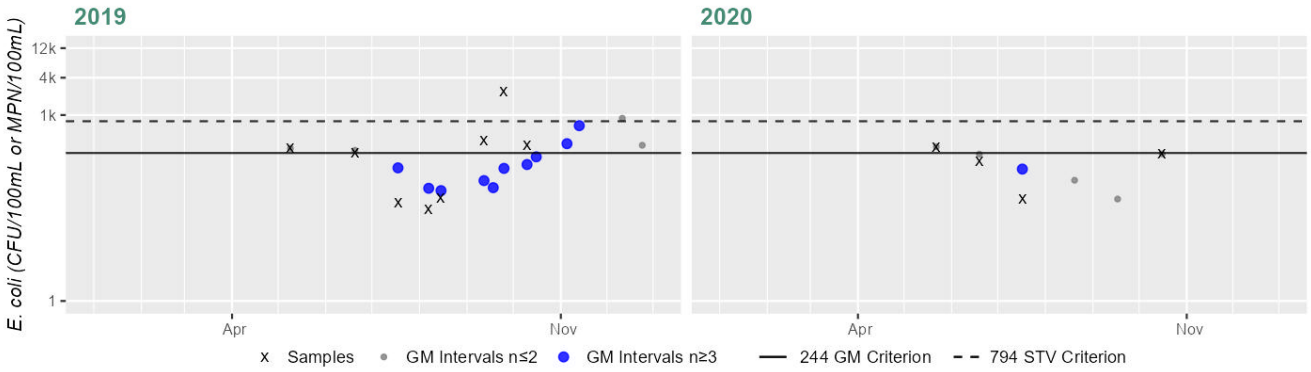
Variable*	Result
Samples	5
SeasGM	793
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	3
%n>STV	60%

Cumulative %GMI Exceedance
Historic (1997-2010)
100%

**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 NepRWA_PFB023 - Escherichia coli

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



Variable*	Result
Samples	8
SeasGM	181
#GMI	10
#GMI Ex	2
%GMI Ex	20%
n>STV	1
%n>STV	12%

Variable*	Result
Samples	4
SeasGM	154
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

18%

**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.*

Ponkapoag Pond (MA73043)

Location:	Canton/Randolph.
AU Type:	FRESHWATER LAKE
AU Size:	214 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	(Aquatic Plants (Macrophytes)*)	--	Added
4a	4a	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
4a	4a	(Fanwort*)	--	Unchanged
4a	4a	(Non-Native Aquatic Plants*)	--	Unchanged
4a	4a	Mercury in Fish Tissue	42409	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Aquatic Plants (Macrophytes)*)	Source Unknown (N)	--	--	X	X	X
(Eurasian Water Milfoil, Myriophyllum Spicatum*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Mercury in Fish Tissue	Atmospheric Deposition (Y)	--	X	--	--	--
Mercury in Fish Tissue	Source Unknown (N)	--	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 Ponkapoag Pond (MA73043) continues to be assessed as Not Supporting and the prior Mercury in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Ponkapoag Pond in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent MDPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Ponkapoag Pond (MA73043) is assessed as Not Supporting based on observations made by MassDEP staff in 2017. An Aquatic Plants (Macrophytes) impairment is being added. MassDEP staff recorded aesthetics observations as part of the MAP2 wadeable streams monitoring project in summer 2017 at two stations in Canton/Randolph for Ponkapoag Pond, at the southern end of pond near the boat ramp north of Randolph Street (W2703/MAP2L-159S, n=5), and at the deep hole index station (W2097/MAP2L-159, n=3). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, or littoral zone duckweed recorded in the ten shoreline plots observed for the MAP2 littoral survey (n=1). However, during the MAP2 macrophyte mapping survey in August 2017 (n=1), greater than 25% (53.7%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%, which is indicative of an impairment and this survey also noted an aesthetics impairment flag due to aquatic plants (macrophytes).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2097	MassDEP	Water Quality	Ponkapoag Pond	[deep hole, Randolph]	42.192183	-71.092968
W2703	MassDEP	Water Quality	Ponkapoag Pond	[southern end of pond, at boat ramp north of Randolph Street, Canton]	42.188380	-71.093558

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2097	2017	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2097 (MAP2L-159) on Ponkapoag Pond (MA73043) during 3 site visits between Jun 2017 and Aug 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. During the MAP2 macrophyte mapping survey (n=1) in Aug 2017, greater than 25% (53.7%) of the waterbody was determined to have an aquatic macrophyte biovolume >50% and the survey also noted an aesthetics impairment flag due to aquatic plants (macrophytes). The observations from the MAP2 survey are indicative of an Aesthetics Use impairment.
W2703	2017	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2703 (MAP2L-159S) on Ponkapoag Pond (MA73043) during 5 site visits between May 2017 and Sep 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. During the MAP2 littoral survey (n=1), duckweed was not noted in any of the 10 shoreline plots.

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2097	Ponkapoag Pond	2017	Aesthetics Impaired?	No	3	3
W2097	Ponkapoag Pond	2017	Aquatic Plant Density, Overall	Moderate	2	3
W2097	Ponkapoag Pond	2017	Aquatic Plant Density, Overall	Unobservable	1	3
W2097	Ponkapoag Pond	2017	Aquatic Plant Density, Whole Lake	Unobservable	3	3
W2097	Ponkapoag Pond	2017	Color	Dark Tan	1	3
W2097	Ponkapoag Pond	2017	Color	Light Yellow/Tan	1	3
W2097	Ponkapoag Pond	2017	Color	None	1	3
W2097	Ponkapoag Pond	2017	Duckweed Density, Whole Lake	None	1	3
W2097	Ponkapoag Pond	2017	Duckweed Density, Whole Lake	Unobservable	2	3
W2097	Ponkapoag Pond	2017	Objectionable Deposits	No	3	3
W2097	Ponkapoag Pond	2017	Odor	None	3	3
W2097	Ponkapoag Pond	2017	Scum	No	3	3
W2097	Ponkapoag Pond	2017	Turbidity	None	2	3
W2097	Ponkapoag Pond	2017	Turbidity	Slightly Turbid	1	3
W2703	Ponkapoag Pond	2017	Aesthetics Impaired?	No	5	5
W2703	Ponkapoag Pond	2017	Color	Brownish	1	5
W2703	Ponkapoag Pond	2017	Color	Light Yellow/Tan	2	5
W2703	Ponkapoag Pond	2017	Color	None	2	5
W2703	Ponkapoag Pond	2017	Objectionable Deposits	No	4	5
W2703	Ponkapoag Pond	2017	Objectionable Deposits	Yes	1	5
W2703	Ponkapoag Pond	2017	Odor	None	5	5
W2703	Ponkapoag Pond	2017	Scum	No	3	5
W2703	Ponkapoag Pond	2017	Scum	Yes	2	5
W2703	Ponkapoag Pond	2017	Turbidity	None	4	5
W2703	Ponkapoag Pond	2017	Turbidity	Slightly Turbid	1	5

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Ponkapoag Pond (MA73043) is assessed as Not Supporting. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). In 2017 MassDEP staff collected Secchi depth and cyanobacteria cell count data at W2097 [MAP2L-159, Index-deep hole] and cyanobacteria cell count and cyanotoxin data at W2703 [MAP2L-159S, Shoreline at southern end of pond, at boat ramp N of Randolph St, Canton]. At station W2097 (station depth=2.27 m) the Secchi depth measurements ranged from 2-2.27 m (n=3) indicating water clarity meeting the 1.2 m (4 ft) threshold. The cyanobacteria cell count did not exceed 70,000 cells/ml in any of the water samples in 2017 (n=6). Analysis of microcystins and cylindrospermopsin samples from W2703 in 2017 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L. In addition, MassDEP staff collected *E. coli* bacteria samples in Ponkapoag Pond at W2703 from May-Sep 2017 (n=5). Analysis of the single year limited frequency dataset from this station indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV and the seasonal GM was 33 CFU/100ml, which meets 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2097	MassDEP	Water Quality	Ponkapoag Pond	[deep hole, Randolph]	42.192183	-71.092968
W2703	MassDEP	Water Quality	Ponkapoag Pond	[southern end of pond, at boat ramp north of Randolph Street, Canton]	42.188380	-71.093558

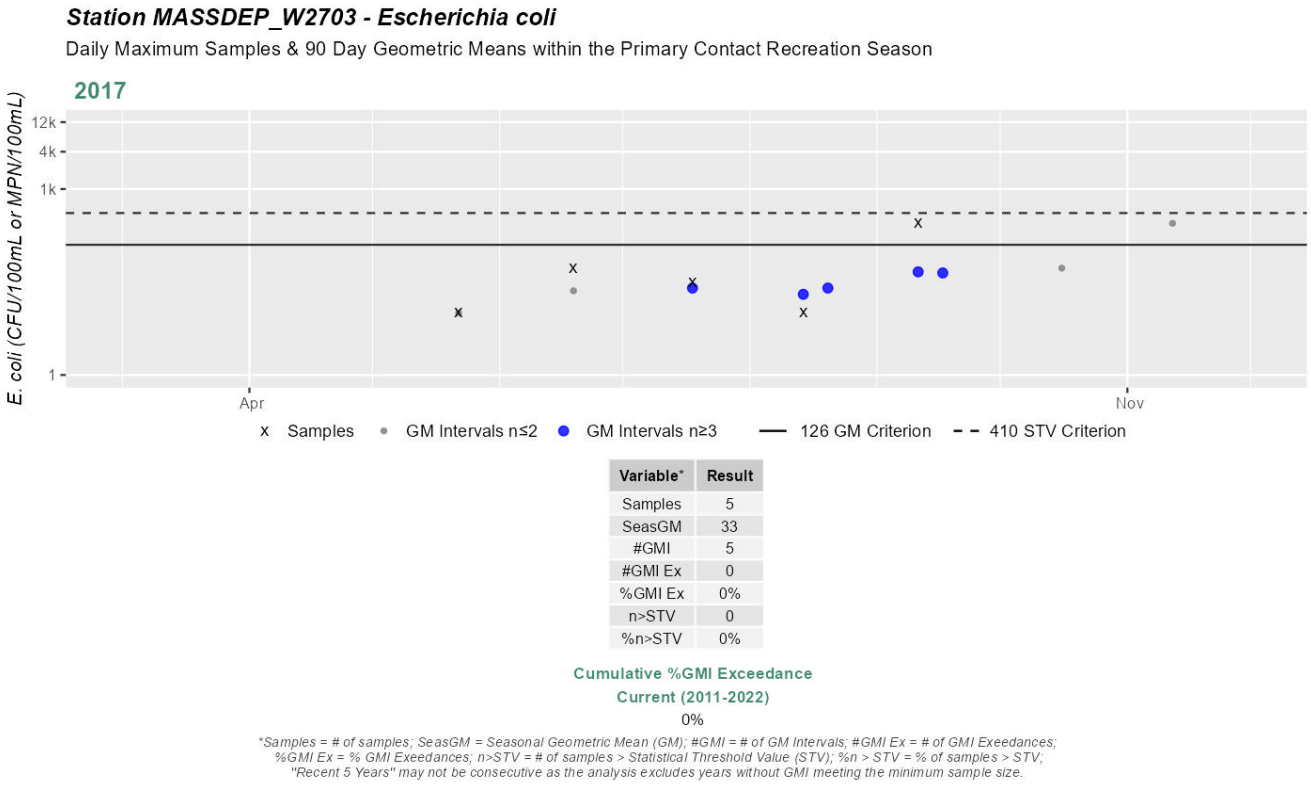
Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(MassDEP Undated 10) (MassDEP Undated 6)

[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
W2703	MassDEP	E. coli	05/22/17	09/11/17	5	10	280	33



Other Indicators

Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data (MassDEP Undated 10) (MassDEP Undated 6)

Data Year(s)	Summary
2017	In Ponkapoag Pond (MA73043) in 2017, MassDEP collected Secchi and cyanobacteria cell count data at W2097 [MAP2L-159, Index-deep hole], and cyanobacteria cell count and cyanotoxin data at W2703 [MAP2L-159S, Shoreline]. At station W2097 (station depth=2.27 m) the Secchi depth measurements ranged from 2-2.27 m (n=3) indicating water clarity meeting the 1.2 m (4 ft) threshold. The cyanobacteria cell count did not exceed 70,000 cells/mL in any of the water samples (n=6). Analysis of microcystins and cylindrospermopsin samples from the shoreline station W2703 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L.

MassDEP Cyanobacteria Cell Count Data Collected at Lakes and Impoundments (2016-2018) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Waterbody	Station Type	Data Year	Sample Count	Count >70,000 cells/mL	Exceedance Date(s)
W2097	Ponkapoag Pond	Index	2017	3	0	NA
W2703	Ponkapoag Pond	Shoreline	2017	3	0	NA

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Ponkapoag Pond (MA73043) is assessed as Not Supporting. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). In 2017 MassDEP staff collected cyanobacteria cell count data at W2097 [MAP2L-159, Index-deep hole] and cyanobacteria cell count and cyanotoxin data at W2703 [MAP2L-159S, Shoreline at southern end of pond, at boat ramp N of Randolph St, Canton]. The cyanobacteria cell count did not exceed 70,000 cells/ml in any of the water samples (n=6). Analysis of microcystins and cylindrospermopsin samples from W2703 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L. In addition, MassDEP staff collected *E. coli* bacteria samples in Ponkapoag Pond at W2703 from May-Sep 2017 (n=5). Analysis of the single year limited frequency dataset from this station indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV and the overall GM was 33 CFU/100ml, which meets 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2703	MassDEP	Water Quality	Ponkapoag Pond	[southern end of pond, at boat ramp north of Randolph Street, Canton]	42.188380	-71.093558

Bacteria Data

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

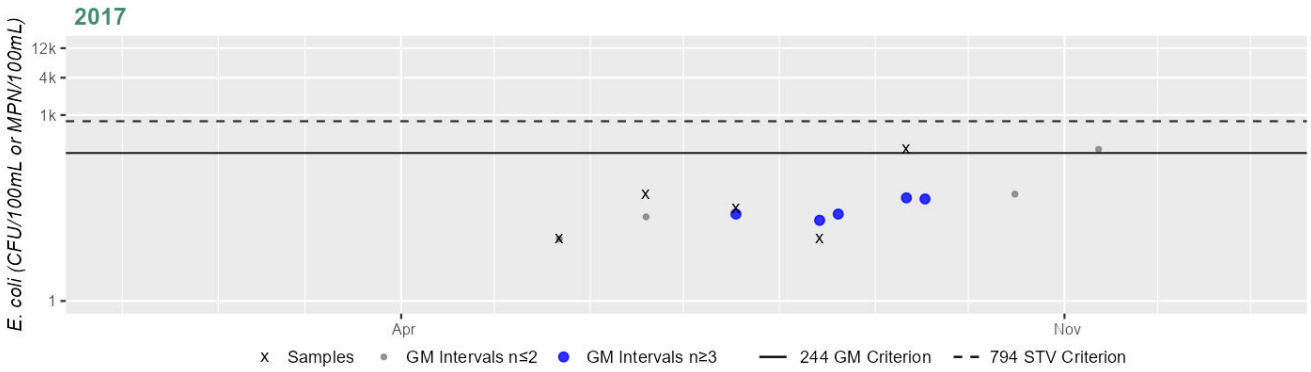
(MassDEP Undated 10) (MassDEP Undated 5)

[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
W2703	MassDEP	E. coli	05/22/17	09/11/17	5	10	280	33

Station MASSDEP_W2703 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	33
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

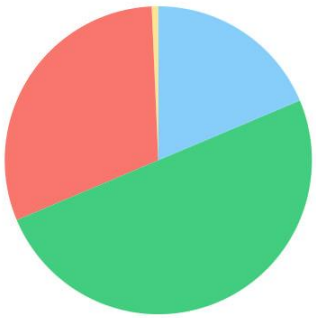
**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Ponkapog Brook (MA73-27)

Location:	Headwaters, outlet of Ponkapoag Pond, Canton to confluence with Neponset River, Canton.
AU Type:	RIVER
AU Size:	3.1 MILES
Classification/Qualifier:	B

Ponkapog Brook (MA73-27)

Watershed Area: 4.20 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	4.20	3.62	1.28	1.14
Agriculture	0.7%	0.8%	0.3%	0.4%
Developed	30.7%	32.7%	16.4%	18%
Natural	50%	48.1%	50.6%	52.2%
Wetland	18.7%	18.4%	32.6%	29.5%
Impervious	13.5%	14%	6.8%	7.4%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Escherichia Coli (E. Coli)	2592	Unchanged
4a	4a	Fecal Coliform	2592	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--

Recommendations

2024/26 Recommendations
2024IR [Aquatic Plants (Macrophytes), Low] Conduct follow-up site visits in this Ponkapoag Brook AU (MA73-27) in particular at Elm Street, Canton {W0566} to evaluate the status of the dense and very dense aquatic plant growth identified during summer 2016 and 2017 surveys.

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Ponkapog Brook (MA73-27) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary

The Aesthetics Use for Ponkapog Brook (MA73-27) continues to be assessed as Fully Supporting based on the general lack of objectionable conditions observed by MassDEP staff during the summers of 2016-2018. An Alert is being identified for Aquatic Plants (Macrophytes) due the observations of dense and very dense plant growth at one station in 2016 and 2017. MassDEP staff recorded aesthetics observations at one station three-quarters of the way down Ponkapog Brook, during the summers of 2016-2018 as part of the Bacteria Source Tracking (BST) project and other special projects, at Elm Street, Canton (W0566, n=2, 5 & 1 respectively). There were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by field sampling crews, although staff noted dense and very dense aquatic plants at this station in 2016 (n=2) and 2017 (n=3). Additional monitoring will be recommended to determine if these dense plants impair the Use of Ponkapog Brook.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0566	MassDEP	Water Quality	Ponkapog Brook	[Elm Street, Canton]	42.203234	-71.135018

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W0566	2016	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0566 on Ponkapog Brook (MA73-27) during 2 site visits between Jul 2016 and Aug 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted dense/very dense aquatic plants (n=2). However, aesthetic observations are limited (n<3).
W0566	2017	5	Aesthetic observations were made by MassDEP field sampling crews at Station W0566 on Ponkapog Brook (MA73-27) during 5 site visits between Jul 2017 and Dec 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted dense/very dense aquatic plants (n=3).
W0566	2018	1	Aesthetic observations were made by MassDEP field sampling crews at Station W0566 on Ponkapog Brook (MA73-27) during 1 site visit on May 22, 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W0566	2016	2	2	0
W0566	2017	5	3	0
W0566	2018	1	1	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0566	Ponkapog Brook	2016	Aquatic Plant Density, Overall	Dense	1	2
W0566	Ponkapog Brook	2016	Aquatic Plant Density, Overall	Very Dense	1	2
W0566	Ponkapog Brook	2016	Color	Light Yellow/Tan	1	2
W0566	Ponkapog Brook	2016	Color	None	1	2
W0566	Ponkapog Brook	2016	Odor	None	2	2
W0566	Ponkapog Brook	2016	Periphyton Density, Filamentous	None	2	2
W0566	Ponkapog Brook	2016	Periphyton Density, Film	Sparse	2	2
W0566	Ponkapog Brook	2016	Turbidity	Slightly Turbid	2	2
W0566	Ponkapog Brook	2017	Aesthetics Impaired?	No	2	2
W0566	Ponkapog Brook	2017	Aquatic Plant Density, Overall	Dense	2	5
W0566	Ponkapog Brook	2017	Aquatic Plant Density, Overall	None	2	5
W0566	Ponkapog Brook	2017	Aquatic Plant Density, Overall	Very Dense	1	5
W0566	Ponkapog Brook	2017	Color	None	5	5
W0566	Ponkapog Brook	2017	Objectionable Deposits	No	2	2
W0566	Ponkapog Brook	2017	Odor	None	5	5
W0566	Ponkapog Brook	2017	Periphyton Density, Filamentous	None	3	5
W0566	Ponkapog Brook	2017	Periphyton Density, Filamentous	Unobservable	2	5
W0566	Ponkapog Brook	2017	Periphyton Density, Film	None	2	5
W0566	Ponkapog Brook	2017	Periphyton Density, Film	Sparse	1	5
W0566	Ponkapog Brook	2017	Periphyton Density, Film	Unobservable	2	5
W0566	Ponkapog Brook	2017	Scum	No	2	2
W0566	Ponkapog Brook	2017	Turbidity	Moderately Turbid	1	5
W0566	Ponkapog Brook	2017	Turbidity	None	2	5
W0566	Ponkapog Brook	2017	Turbidity	Slightly Turbid	2	5
W0566	Ponkapog Brook	2018	Aesthetics Impaired?	No	1	1

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0566	Ponkapog Brook	2018	Aquatic Plant Density, Overall	Moderate	1	1
W0566	Ponkapog Brook	2018	Color	Light Yellow/Tan	1	1
W0566	Ponkapog Brook	2018	Objectionable Deposits	No	1	1
W0566	Ponkapog Brook	2018	Odor	None	1	1
W0566	Ponkapog Brook	2018	Periphyton Density, Filamentous	None	1	1
W0566	Ponkapog Brook	2018	Periphyton Density, Film	None	1	1
W0566	Ponkapog Brook	2018	Scum	No	1	1
W0566	Ponkapog Brook	2018	Turbidity	None	1	1

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Ponkapog Brook (MA73-27) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 combined station in 2018-2022. The prior Fecal Coliform impairment is also being carried forward. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples three-quarters of the way down Ponkapog Brook at W0566 & NepRWA_POB040 [Elm St, Canton & Elm St, Canton] from 2011-2014 and 2016-2022 (n=2-9/yr). Analysis of the recent five years of the multi-year limited frequency dataset from this station indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 75-100%), 3 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018-2019 and 2022, n=2-3), and cumulatively across years 90% of intervals had GMs >126 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0566	MassDEP	Water Quality	Ponkapog Brook	[Elm Street, Canton]	42.203234	-71.135018
NepRWA_POB040	Neponset River Watershed Association	Water Quality	Ponkapoag Brook	Elm St, Canton	42.203167	-71.134770

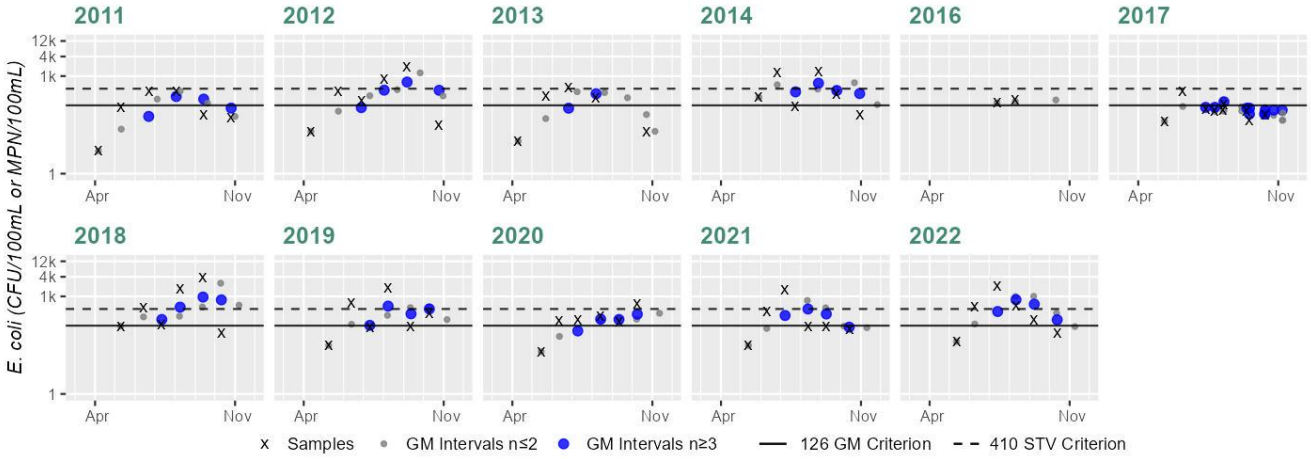
Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)
(MassDEP Undated 10) (MassDEP Undated 6) (NepRWA 2023) (MassDEP Undated 4)
[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
W0566	MassDEP	E. coli	07/12/16	08/09/16	2	152	184	167
W0566	MassDEP	E. coli	07/27/17	09/18/17	3	44	88	68
NepRWA_POB040	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	350	77
NepRWA_POB040	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	20	1940	198
NepRWA_POB040	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	10	448	85
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	63	1400	308
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	41	332	99
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	74	3870	389
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	31	1850	229
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	573	156
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	31	1620	171
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	41	2010	255

Station MASSDEP_W0566 & NepRWA_POB040 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	77
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	198
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	85
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	308
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	2
SeasGM	167
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	9
SeasGM	87
#GMI	11
#GMI Ex	1
%GMI Ex	9%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	389
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	229
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	156
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	171
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	255
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Cumulative %GMI Exceedance Current (2011-2022)
64%

Cumulative %GMI Exceedance Current (Recent 5 Years)
90%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Ponkapog Brook (MA73-27) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 combined station in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) three-quarters of the way down Ponkapog Brook at combined station W0566 & NepRWA_POB040 [Elm St, Canton & Elm St, Canton] from 2008-2010 (historic n=5-12/yr) and 2011-2014 and 2016-2022 (current n=2-9/yr). Analysis of the recent five years of the multi-year limited frequency dataset from this station indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 25-75%) and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2), cumulatively across years 65% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0566	MassDEP	Water Quality	Ponkapog Brook	[Elm Street, Canton]	42.203234	-71.135018
NepRWA_POB040	Neponset River Watershed Association	Water Quality	Ponkapoag Brook	Elm St, Canton	42.203167	-71.134770

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

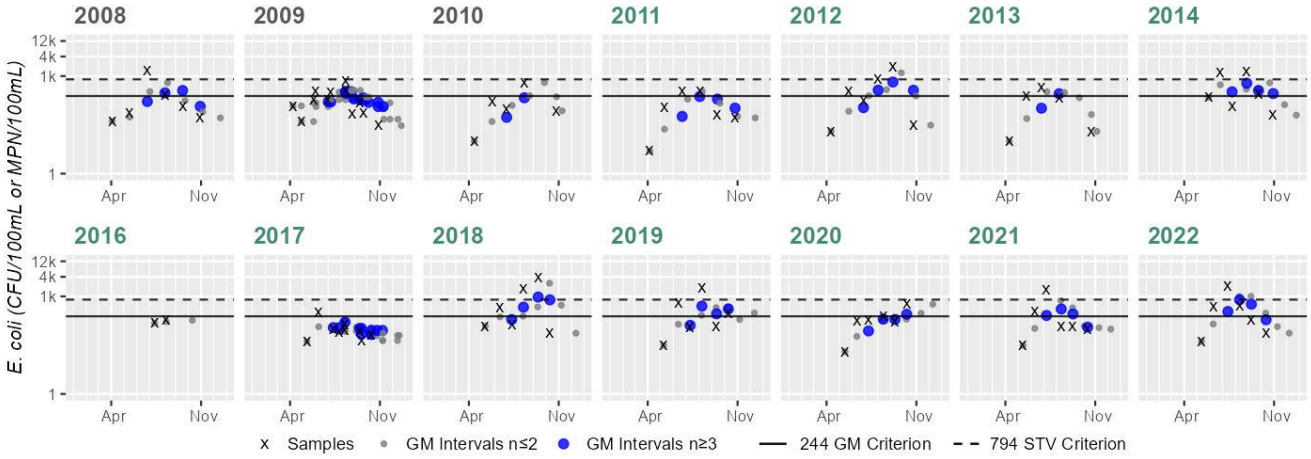
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0566	MassDEP	E. coli	04/28/09	09/15/09	6	40	360	157
W0566	MassDEP	E. coli	07/12/16	08/09/16	2	152	184	167
W0566	MassDEP	E. coli	07/27/17	09/18/17	3	44	88	68
NepRWA_POB040	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	41	1500	139
NepRWA_POB040	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	30	697	137
NepRWA_POB040	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	5	10	631	96
NepRWA_POB040	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	350	77

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_POB040	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	20	1940	198
NepRWA_POB040	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	10	448	85
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	63	1400	308
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	41	332	99
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	74	3870	389
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	31	1850	229
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	573	156
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	31	1620	171
NepRWA_POB040	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	41	2010	255

Station MASSDEP_W0566 & NepRWA_POB040 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	139
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	12
SeasGM	147
#GMI	16
#GMI Ex	4
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	96
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	77
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	198
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	85
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	308
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	2
SeasGM	167
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	9
SeasGM	87
#GMI	11
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	389
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	229
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	156
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	171
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	255
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
27%	46%	65%

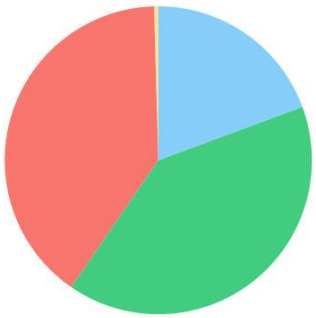
**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Purgatory Brook (MA73-24)

Location:	Headwaters east of Farm Lane, Westwood to confluence with Neponset River, Norwood.
AU Type:	RIVER
AU Size:	5.1 MILES
Classification/Qualifier:	B

Purgatory Brook (MA73-24)

Watershed Area: 5.99 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	5.99	4.99	1.79	1.48
Agriculture	0.4%	0.5%	0.5%	0.5%
Developed	40%	44.8%	26.9%	31.3%
Natural	40.2%	36.2%	31%	26.6%
Wetland	19.4%	18.5%	41.6%	41.6%
Impervious	23.5%	26.8%	12.5%	14.6%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Debris*)	--	Unchanged
5	5	Escherichia Coli (E. Coli)	2592	Unchanged
5	5	Fecal Coliform	2592	Unchanged
5	5	Trash	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Debris*)	Illegal Dumps or Other Inappropriate Waste Disposal (N)	--	--	X	X	X

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Trash	Illegal Dumps or Other Inappropriate Waste Disposal (N)	--	--	X	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Purgatory Brook (MA73-24) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Purgatory Brook (MA73-24) continues to be assessed as Not Supporting with the prior Debris and Trash impairments being carried forward. No new data are available to evaluate the Aesthetics Use for Purgatory Brook.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Purgatory Brook (MA73-24) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2018-2022. The prior Fecal Coliform impairment is being carried forward and the prior Debris and Trash impairments (from the Aesthetics Use) are also being carried forward. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples a third of the way down Purgatory Brook at NepRWA_PUB022 [Rt 1A, near Everett St, Westwood] from 2011-2014 and 2017-2022 (n=4-6/yr). Analysis of the recent five years of the multi-year limited frequency dataset from this station indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 75-100%), 5 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018-2022, n=2-5) and cumulatively across years 89% of intervals had GMs >126 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

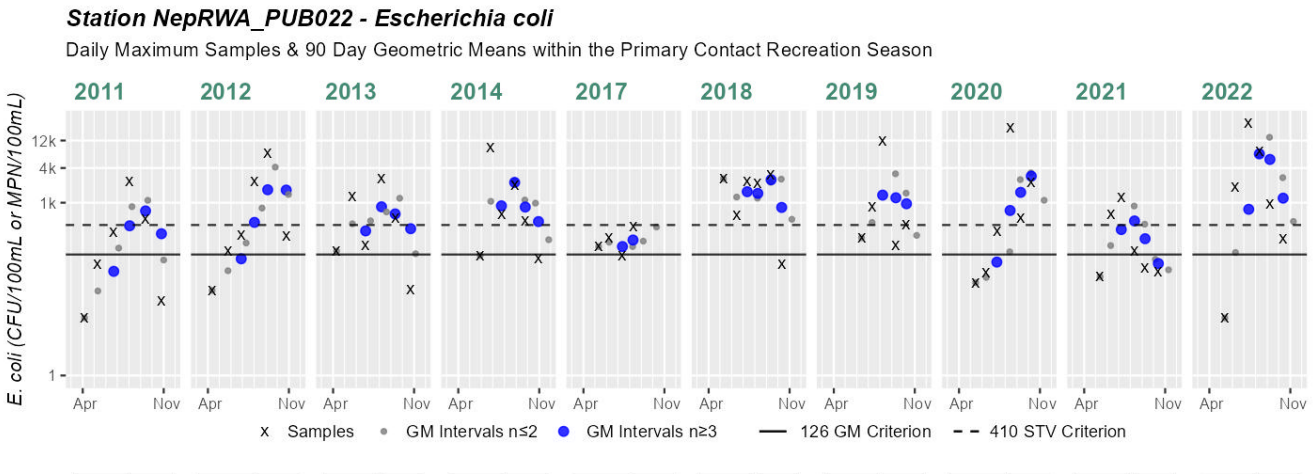
Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_PUB022	Neponset River Watershed Association	Water Quality	Purgatory Brook	Rt 1A, near Everett St, Westwood	42.214833	-71.189770

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)
(NepRWA 2023) (MassDEP Undated 4)
[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
NepRWA_PUB022	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	2360	136
NepRWA_PUB022	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	30	7270	419
NepRWA_PUB022	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	31	2610	338
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	108	9210	644

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/11/17	08/10/17	4	122	379	210
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	86	3080	1133
NepRWA_PUB022	Neponset River Watershed Association	E. coli	06/13/19	10/10/19	5	179	12000	711
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	19900	518
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	52	1230	173
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	24200	959



Variable*	Result
Samples	6
SeasGM	136
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	419
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	338
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	644
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	4
SeasGM	210
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	1133
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	5
SeasGM	711
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	518
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	173
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	959
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Cumulative %GMI Exceedance Current (2011-2022)
89%

Cumulative %GMI Exceedance Current (Recent 5 Years)
89%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Purgatory Brook (MA73-24) continues to be assessed as Not Supporting. The prior Debris and Trash impairments (from the Aesthetics Use) are being carried forward. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. MassDEP and NepRWA staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Purgatory Brook from 2008-2022 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: a third of the way down the brook at NepRWA_PUB022 [Rt 1A, near Everett St, Westwood] from 2008-2010 (historic n=6/yr) and 2011-2014 and 2017-2022 (current n=4-6/yr), and just a little further downstream at W1953 [Everett St, Norwood] from Apr-Sep 2009 (historic n=5). Analysis of the recent five years of the multi-year limited frequency dataset from NepRWA_PUB022 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 50-100%), 4 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2018-2020 and 2022, n=2-4), and cumulatively across years 84% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment. It should be noted that data in the historic IR window at both stations NepRWA_PUB022 and W1953 were also indicative of an Escherichia Coli (E. Coli) impairment; with 50% cumulatively of the GM intervals >244 CFU/100ml for the multi year low frequency dataset at NepRWA_PUB022 and 100% of all the GM intervals >244 CFU/100ml for the single year low frequency dataset at W1953.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1953	MassDEP	Water Quality	Purgatory Brook	[Everett Street, Norwood]	42.213230	-71.188256
NepRWA_PUB022	Neponset River Watershed Association	Water Quality	Purgatory Brook	Rt 1A, near Everett St, Westwood	42.214833	-71.189770

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

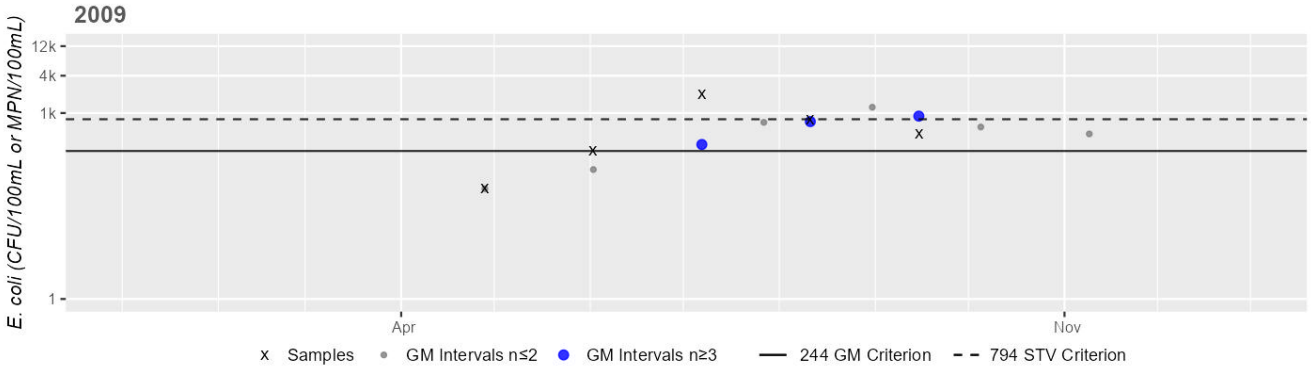
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1953	MassDEP	E. coli	04/28/09	09/15/09	5	60	2000	402
NepRWA_PUB022	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	10	13000	231

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_PUB022	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	41	265	105
NepRWA_PUB022	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	52	3650	342
NepRWA_PUB022	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	10	2360	136
NepRWA_PUB022	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	30	7270	419
NepRWA_PUB022	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	31	2610	338
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	108	9210	644
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/11/17	08/10/17	4	122	379	210
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	86	3080	1133
NepRWA_PUB022	Neponset River Watershed Association	E. coli	06/13/19	10/10/19	5	179	12000	711
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	19900	518
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	52	1230	173
NepRWA_PUB022	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	24200	959

Station MASSDEP_W1953 - Escherichia coli

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



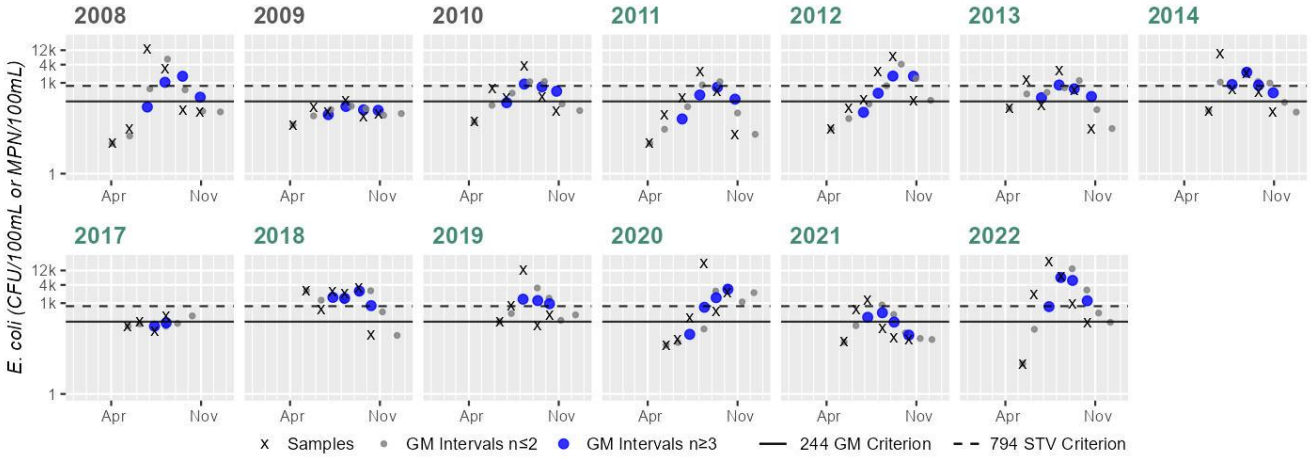
Variable*	Result
Samples	5
SeasGM	402
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	1
%n>STV	20%

Cumulative %GMI Exceedance
Historic (1997-2010)
100%

**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 NepRWA_PUB022 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	231
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	105
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	342
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	136
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	419
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	338
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	644
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	4
SeasGM	210
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	1133
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	5
SeasGM	711
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	518
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	173
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	959
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Cumulative %GMI Exceedance Historic (1997-2010)
50%

Cumulative %GMI Exceedance Current (2011-2022)
81%

Cumulative %GMI Exceedance Current (Recent 5 Years)
84%

**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.*

Reservoir Pond (MA73048)

Location:	Canton.
AU Type:	FRESHWATER LAKE
AU Size:	251 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
4a	4a	(Fanwort*)	--	Unchanged
4a	4a	(Non-Native Aquatic Plants*)	--	Unchanged
4a	4a	Mercury in Fish Tissue	42400	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Eurasian Water Milfoil, Myriophyllum Spicatum*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Mercury in Fish Tissue	Atmospheric Deposition (Y)	--	X	--	--	--
Mercury in Fish Tissue	Source Unknown (N)	--	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 Reservoir Pond (MA73048) continues to be assessed as Not Supporting and the prior Mercury in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Reservoir Pond in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent MDPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Reservoir Pond (MA73048) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Reservoir Pond (MA73048) are available, so the Primary Contact Recreation Use is Not Assessed.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Reservoir Pond (MA73048) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.

Russell Pond (MA73003)

Location:	Milton.
AU Type:	FRESHWATER LAKE
AU Size:	9 ACRES
Classification/Qualifier:	B

No usable data were available for Russell Pond (MA73003) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Curly-leaf Pondweed*)	--	Unchanged
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Curly-leaf Pondweed*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Turbidity	Source Unknown (N)	--	--	X	X	X

School Meadow Brook (MA73-06)

Location:	Headwaters, outlet of Ganawatte Farm Pond, Walpole to confluence with Neponset River, Walpole.
AU Type:	RIVER
AU Size:	1.9 MILES
Classification/Qualifier:	B

School Meadow Brook (MA73-06)

Watershed Area: 3.17 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.17	3.17	1.14	1.14
Agriculture	0.9%	0.9%	1.1%	1.1%
Developed	20.8%	20.8%	14.9%	14.9%
Natural	63.4%	63.4%	54.4%	54.4%
Wetland	14.9%	14.9%	29.6%	29.6%
Impervious	12%	12%	9.1%	9.1%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	5	Escherichia Coli (E. Coli)	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for School Meadow Brook (MA73-06) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for School Meadow Brook (MA73-06) continues to be assessed as Fully Supporting based on the general lack of objectionable conditions observed by MassDEP staff during summer 2015. The prior Alert identified for Aquatic Plants (Macrophytes) based on observations of dense plants at Washington Street in 2009, is being removed since no concern over Aquatic Plant density was raised by MassDEP staff during site visits to the same station in 2015. Aesthetic observations were made by MassDEP field sampling crews at two stations in the downstream half of School Meadow Brook in Walpole, during the summer of 2015 as part of the MassDEP Bacteria Source Tracking (BST) project; Washington Street (W1936, n=3) and ~500 feet downstream of Washington Street (W2550, n=3). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded at either station.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1936	MassDEP	Water Quality	School Meadow Brook	[Washington Street, Walpole]	42.125402	-71.245996
W2550	MassDEP	Water Quality	School Meadow Brook	[approximately 500 feet downstream of Washington Street, Walpole]	42.126577	-71.247286

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W1936	2015	3	Aesthetic observations were made by MassDEP field sampling crews at Station W1936 on School Meadow Brook (MA73-06) during 3 site visits between Jun 2015 and Aug 2015. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W2550	2015	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2550 on School Meadow Brook (MA73-06) during 3 site visits between Jun 2015 and Aug 2015. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W1936	2015	3	2	0
W2550	2015	3	3	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1936	School Meadow Brook	2015	Aquatic Plant Density, Overall	Dense	1	3
W1936	School Meadow Brook	2015	Aquatic Plant Density, Overall	None	1	3
W1936	School Meadow Brook	2015	Aquatic Plant Density, Overall	Sparse	1	3
W1936	School Meadow Brook	2015	Color	None	3	3
W1936	School Meadow Brook	2015	Odor	None	3	3
W1936	School Meadow Brook	2015	Periphyton Density, Filamentous	None	2	3
W1936	School Meadow Brook	2015	Periphyton Density, Filamentous	Unobservable	1	3
W1936	School Meadow Brook	2015	Periphyton Density, Film	Sparse	2	3
W1936	School Meadow Brook	2015	Periphyton Density, Film	Unobservable	1	3
W1936	School Meadow Brook	2015	Turbidity	Slightly Turbid	3	3

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2550	School Meadow Brook	2015	Aquatic Plant Density, Overall	None	3	3
W2550	School Meadow Brook	2015	Color	None	3	3
W2550	School Meadow Brook	2015	Odor	None	3	3
W2550	School Meadow Brook	2015	Periphyton Density, Filamentous	None	3	3
W2550	School Meadow Brook	2015	Periphyton Density, Film	Sparse	3	3
W2550	School Meadow Brook	2015	Turbidity	Slightly Turbid	3	3

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for School Meadow Brook (MA73-06) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 2 stations in 2015 & 2018-2022. The prior Alert identified for Aquatic Plants (Macrophytes) based on observations of dense plants at Washington Street in 2009, is being removed since no concern over Aquatic Plant density was raised by MassDEP staff during site visits to the same station in 2015. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in School Meadow Brook from 2011-2022 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end at NepRWA_SMB001 [Pine St, Walpole] from 2011-2014 and 2017-2022 (n=5-6/yr), then roughly three-quarters of the way down the brook at W1936 [Washington St, Walpole] from Jun-Aug 2015 (n=3) and W2550 [~500 ft downstream of Washington St, Walpole] from Jun-Aug 2015 (n=3). Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_SMB001 indicated 3 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2019 and 2022, 25-75%), 1 yr had ≥2 samples exceed the 410 CFU/100ml STV (2022, n=2), and cumulatively across years 25% of intervals had GMs >126 CFU/100ml. Analysis of the single year limited frequency *E. coli* dataset from W1936 indicated 100% of intervals had GMs >126 CFU/100ml, 1 sample exceeded the 410 CFU/100ml STV, and the seasonal GM was 198 CFU/100ml. Analysis of the single year limited frequency *E. coli* dataset from W2550 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 125 CFU/100ml. While *E. coli* data from W2550 meets 2024 CALM guidance, *E. coli* data from NepRWA_SMB001 and W1936 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1936	MassDEP	Water Quality	School Meadow Brook	[Washington Street, Walpole]	42.125402	-71.245996
W2550	MassDEP	Water Quality	School Meadow Brook	[approximately 500 feet downstream of Washington Street, Walpole]	42.126577	-71.247286
NepRWA_SMB001	Neponset River Watershed Association	Water Quality	School Meadow Brook	Pine Street, Walpole	42.109783	-71.242450

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(MassDEP Undated 10) (MassDEP Undated 6) (NepRWA 2023) (MassDEP Undated 4)

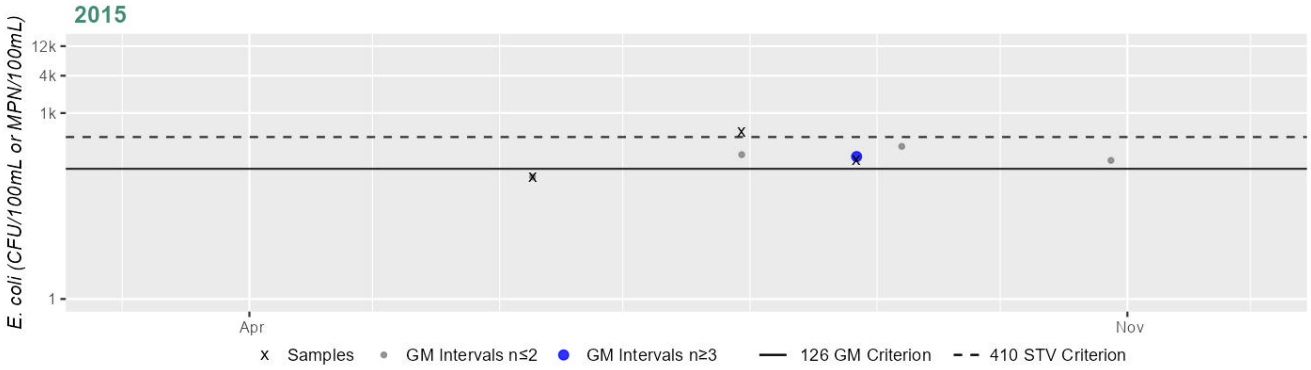
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1936	MassDEP	E. coli	06/09/15	08/27/15	3	93	488	198

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W2550	MassDEP	E. coli	06/09/15	08/27/15	3	96	172	125
NepRWA_SMB001	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	134	15
NepRWA_SMB001	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	743	16
NepRWA_SMB001	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	41	10
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	1990	28
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	10	145	37
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	754	43
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	272	60
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	197	43
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	134	46
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	30	1850	151

Station MASSDEP_W1936 - Escherichia coli

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



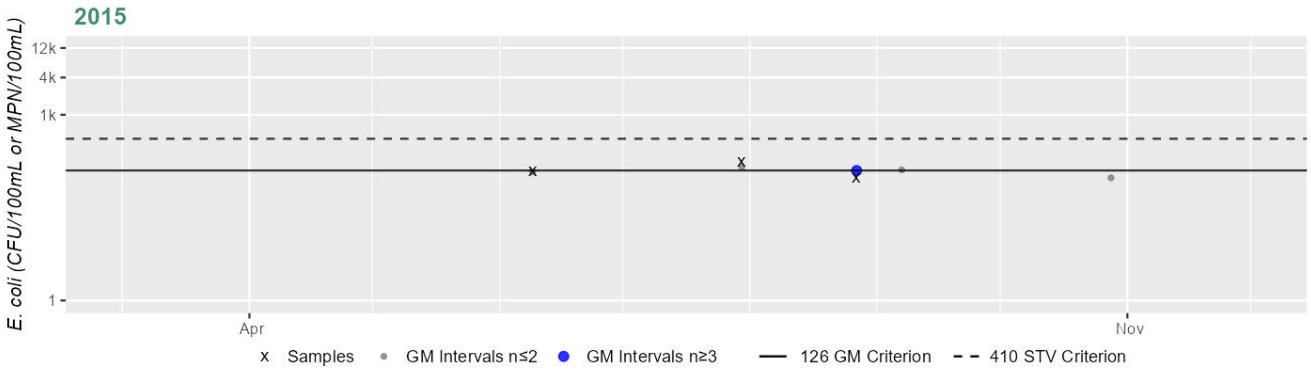
Variable*	Result
Samples	3
SeasGM	198
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	33%

Cumulative %GMI Exceedance
Current (2011-2022)
100%

**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 MASSDEP_W2550 - Escherichia coli

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



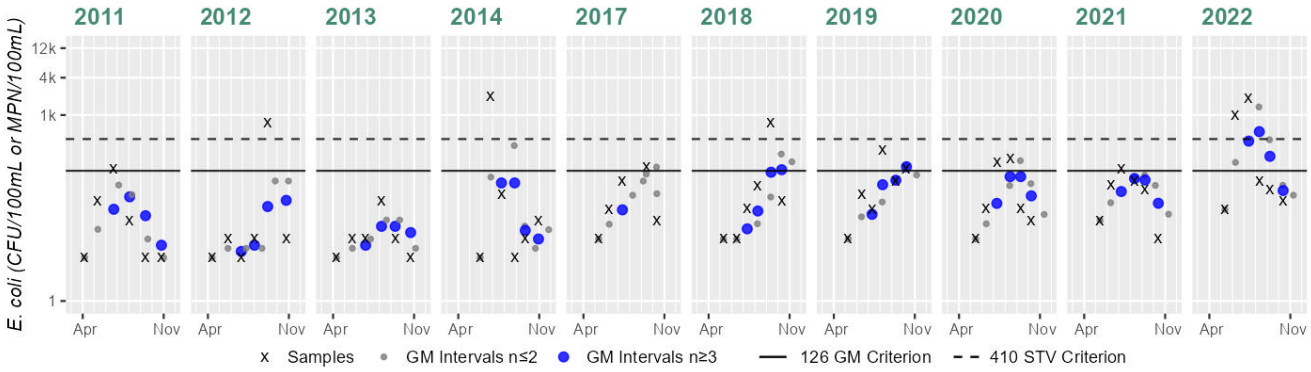
Variable*	Result
Samples	3
SeasGM	125
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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 NepRWA_SMB001 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	15
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	16
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	10
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	28
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	37
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	43
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	60
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	43
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	46
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	151
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance Current (2011-2022)
13%

Cumulative %GMI Exceedance Current (Recent 5 Years)
25%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for School Meadow Brook (MA73-06) continues to be assessed as Fully Supporting based on bacteria data collected at 3 stations in 2015 & 2018-2022. The prior Alert identified for Aquatic Plants (Macrophytes) based on observations of dense plants at Washington Street in 2009, is being removed since no concern over Aquatic Plant density was raised by MassDEP staff during site visits to the same station in 2015. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in School Meadow Brook from 2008-2022 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end at NepRWA_SMB001 [Pine St, Walpole] from 2008-2010 (historic n=5-6/yr) and 2011-2014 and 2017-2022 (current n=5-6/yr), then roughly three-quarters of the way down the brook at W1936 [Washington St, Walpole] from Apr-Sep 2009 (historic n=5) and Jun-Aug 2015 (current n=3) and also W2550 [~500 ft downstream of Washington St, Walpole] from Jun-Aug 2015 (current n=3). Since bacteria data from the historic IR window are all indicative of good water quality conditions, only the analysis from the current IR window will be summarized here. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_SMB001 indicated 1 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2022, 50%), 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2022, n=2), and cumulatively across years 10% of intervals had GMs >244 CFU/100ml. Analysis of the single year limited frequency *E. coli* datasets from both stations W1936 & W2550 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM's were 198 & 125 CFU/100ml respectively. The data from stations NepRWA_SMB001, W1936, and W2550 all meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1936	MassDEP	Water Quality	School Meadow Brook	[Washington Street, Walpole]	42.125402	-71.245996
W2550	MassDEP	Water Quality	School Meadow Brook	[approximately 500 feet downstream of Washington Street, Walpole]	42.126577	-71.247286
NepRWA_SMB001	Neponset River Watershed Association	Water Quality	School Meadow Brook	Pine Street, Walpole	42.109783	-71.242450

Bacteria Data

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

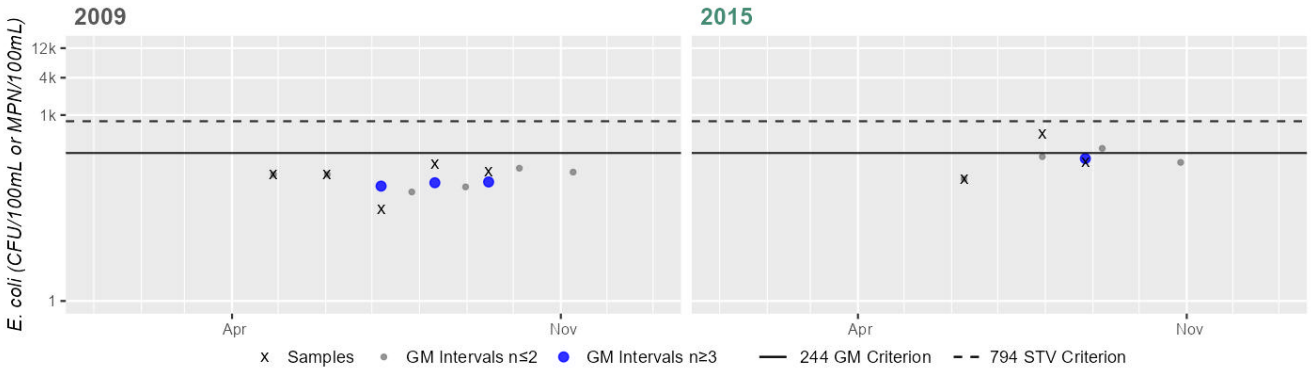
(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

[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
W1936	MassDEP	E. coli	04/28/09	09/15/09	5	30	160	93
W1936	MassDEP	E. coli	06/09/15	08/27/15	3	93	488	198
W2550	MassDEP	E. coli	06/09/15	08/27/15	3	96	172	125
NepRWA_SMB001	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	5	52	13
NepRWA_SMB001	Neponset River Watershed Association	E. coli	04/08/09	09/23/09	5	5	98	15
NepRWA_SMB001	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	5	10	84	26
NepRWA_SMB001	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	134	15
NepRWA_SMB001	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	743	16
NepRWA_SMB001	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	41	10
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	1990	28
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	10	145	37
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	754	43
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	272	60
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	197	43
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	134	46
NepRWA_SMB001	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	30	1850	151

Station MASSDEP_W1936 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	93
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	3
SeasGM	198
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

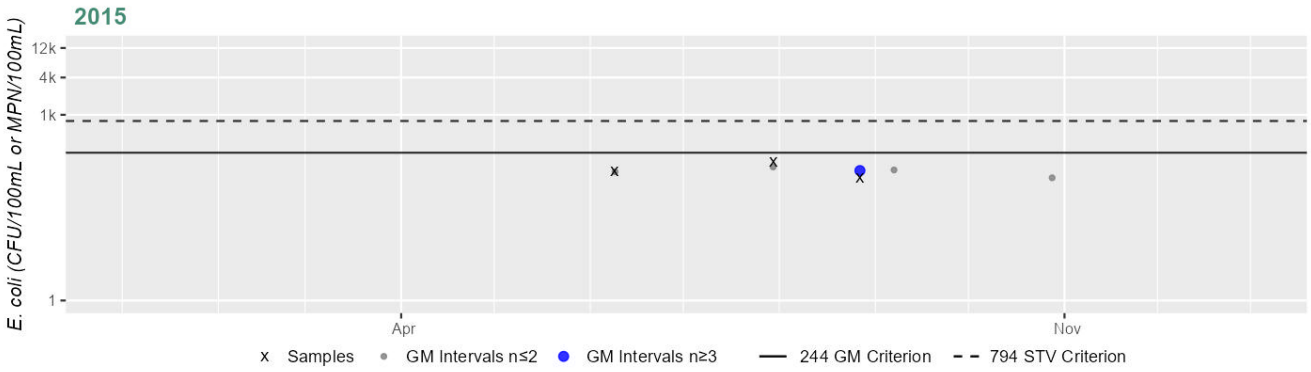
Cumulative %GMI Exceedance Historic (1997-2010)
0%

Cumulative %GMI Exceedance Current (2011-2022)
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 MASSDEP_W2550 - Escherichia coli

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



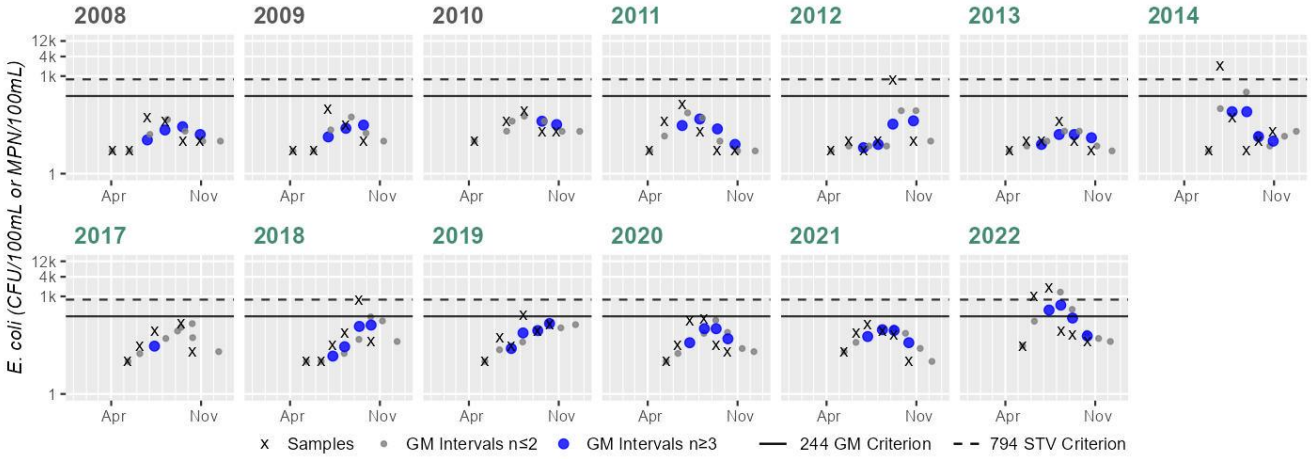
Variable*	Result
Samples	3
SeasGM	125
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)
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 NepRWA_SMB001 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	13
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	15
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	26
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	15
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	16
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	10
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	28
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	37
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	43
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	60
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	43
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	46
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	151
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance
Historic (1997-2010)
0%

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

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.*

Sprague Pond (MA73053)

Location:	Boston/Dedham.
AU Type:	FRESHWATER LAKE
AU Size:	7 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	2	None	--	Unchanged

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Sprague Pond (MA73053) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Sprague Pond (MA73053) 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 Sprague Pond (MA73053) is assessed as Fully Supporting based on bacteria data collected at 1 station in 2019-2020. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in Sprague Pond at NepRWA_SGP053 [Sprague Pond at Horne St, Dedham] from 2019-2020 (n=6-8/yr). Analysis of the multi-year moderate frequency dataset from this station indicated 1 out of 2 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2020, 25%), 0 yrs had ≥2 samples exceed the 410 CFU/100ml STV, and cumulatively across years 14% of intervals had GMs >126 CFU/100ml. *E. coli* data from NepRWA_SGP053 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_SGP053	Neponset River Watershed Association	Water Quality	Sprague Pond	Sprague Pond at Horne Street, Dedham	42.233674	-71.137758

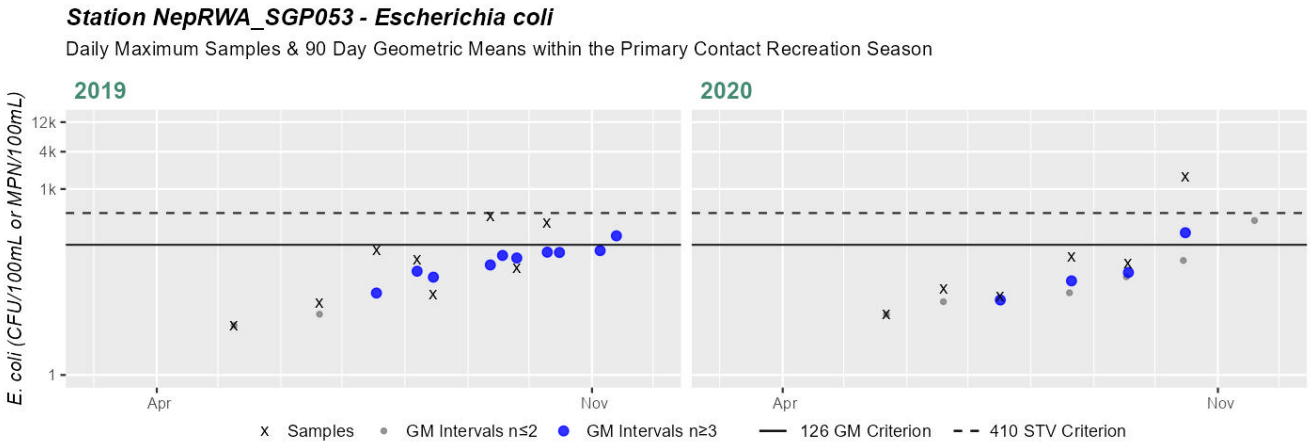
Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(NepRWA 2023) (MassDEP Undated 4)

[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
NepRWA_SGP053	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	8	6	365	53
NepRWA_SGP053	Neponset River Watershed Association	E. coli	05/21/20	10/15/20	6	9	1553	56



Variable*	Result
Samples	8
SeasGM	53
#GMI	10
#GMI Ex	1
%GMI Ex	10%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	56
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance
Current (2011-2022)
14%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Sprague Pond (MA73053) is assessed as Fully Supporting based on bacteria data collected at 1 station in 2019-2020. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in Sprague Pond at NepRWA_SGP053 [Sprague Pond at Horne St, Dedham] from 2019-2020 (n=6-8/yr). Analysis of the multi-year moderate frequency dataset from this station indicated 0 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml, 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, and cumulatively across years 0% of intervals had GMs >244 CFU/100ml. *E. coli* data from NepRWA_SGP053 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_SGP053	Neponset River Watershed Association	Water Quality	Sprague Pond	Sprague Pond at Horne Street, Dedham	42.233674	-71.137758

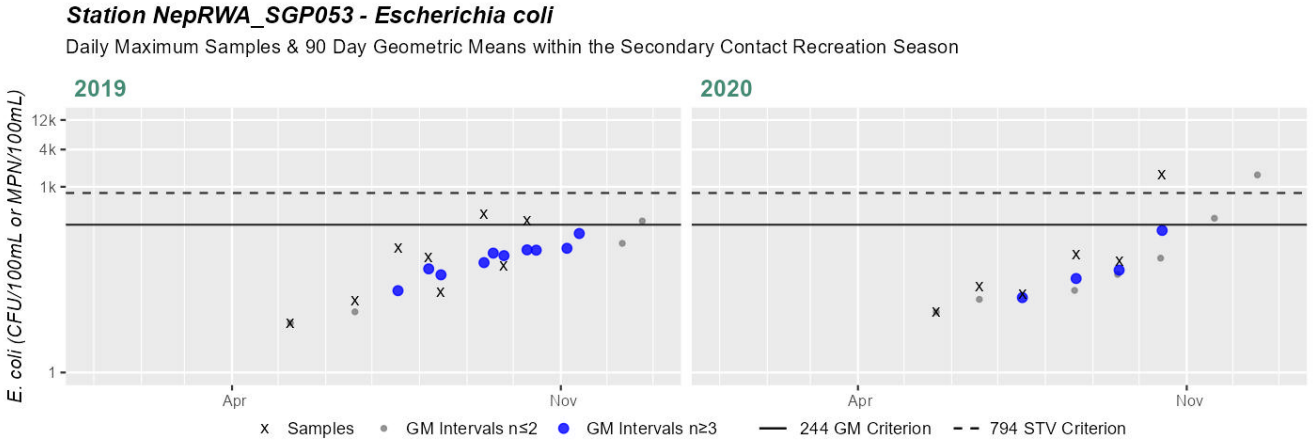
Bacteria Data

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

(NepRWA 2023) (MassDEP Undated 3)

[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
NepRWA_SGP053	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	8	6	365	53
NepRWA_SGP053	Neponset River Watershed Association	E. coli	05/21/20	10/15/20	6	9	1553	56



Variable*	Result
Samples	8
SeasGM	53
#GMI	10
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	56
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance
Current (2011-2022)
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.*

Steep Hill Brook (MA73-18)

Location:	Headwaters, outlet of Pinewood Pond, Stoughton, to mouth at inlet of Bolivar Pond, Canton.
AU Type:	RIVER
AU Size:	0.9 MILES
Classification/Qualifier:	B

Steep Hill Brook (MA73-18)

Watershed Area: 5.96 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	5.96	5.95	1.63	1.63
Agriculture	0.7%	0.7%	0.9%	0.9%
Developed	45%	45.1%	24.3%	24.3%
Natural	41.3%	41.2%	44.1%	44.1%
Wetland	13%	13%	30.7%	30.7%
Impervious	24.2%	24.2%	11.6%	11.6%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Escherichia Coli (E. Coli)	TMDL approved or established by EPA (4a)	Impairment covered under TMDL: Massachusetts Statewide TMDL for Pathogen-Impaired Waterbodies (Report CN 515.1, approved 2/13/2024, ATTAINS Action ID: R1_MA_2024_04)

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Steep Hill Brook (MA73-18) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Steep Hill Brook (MA73-18) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Steep Hill Brook (MA73-18) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Steep Hill Brook (MA73-18) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 1 station in 2009. MassDEP staff collected *E. coli* bacteria samples three-quarters of the way down Steep Hill Brook at W1944 [W of the northern end of Erin Rd, ~2400 ft downstream of Rt. 27, Stoughton] from Apr-Sep 2009 (n=6). Analysis of the historic single year limited frequency dataset from this station indicated 100% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV and the overall GM was 352 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1944	MassDEP	Water Quality	Steep Hill Brook	[west of the northern end of Erin Road, approximately 2400 feet downstream of Route 27, Stoughton]	42.139700	-71.138738

Bacteria Data

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

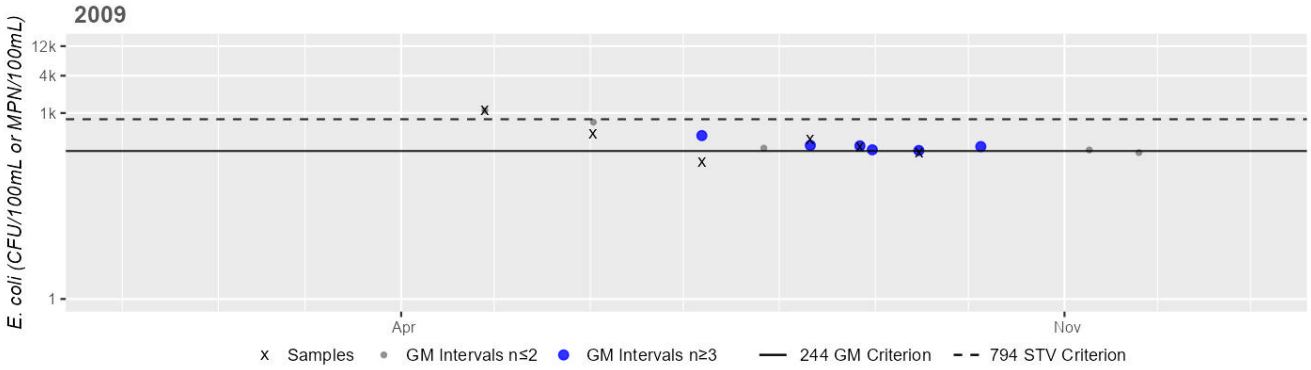
(MassDEP Undated 10) (MassDEP Undated 5)

[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
W1944	MassDEP	E. coli	04/28/09	09/15/09	6	160	1100	352

Station MASSDEP_W1944 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	352
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance
Historic (1997-2010)
100%

**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.*

Town Pond (MA73056)

Location:	Stoughton.
AU Type:	FRESHWATER LAKE
AU Size:	8 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Fanwort*)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Recommendations

2024/26 Recommendations
2024IR [Bacteria, Medium] Additional monitoring for *E.coli* should be conducted in Town Pond (MA73056) in the area of Neponset River Watershed Association (NepRWA) sample station {NepRWA_UTS032} to evaluate the elevated concentrations of Escherichia coli (E. Coli) at NepRWA_UTS032 measured in 2019.

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert

Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Town Pond (MA73056) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Town Pond (MA73056) 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 Town Pond (MA73056) is assessed as Fully Supporting based on bacteria data collected at 1 station in 2019-2020, although an Alert is being identified for Escherichia coli (E. Coli). Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in Town Pond at NepRWA_UTS032 [Unnamed Tributary of Steep Hill Brook at W St, Stoughton] from 2019-2020 (n=6-8/yr). Analysis of the multi-year moderate frequency dataset from this station indicated 1 out of 2 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2019, 30%), 1 yr had ≥2 samples exceed the 410 CFU/100ml STV (2019, n=3), and cumulatively across years 21% of intervals had GMs >126 CFU/100ml (which exceeds the 2024 CALM threshold of 10%). While *E. coli* data from NepRWA_UTS032 meet 2024 CALM guidance, an Alert is being identified for Escherichia coli (E. Coli) at NepRWA_UTS032 due to the elevated concentrations in 2019, which resulted in the cumulative percentage of intervals >126 CFU/100ml being >10%.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_UTS032	Neponset River Watershed Association	Water Quality	Unnamed Tributary of Steep Hill Brook	Unnamed Tributary of Steep Hill Brook @ West Street, Stoughton	42.125104	-71.130372

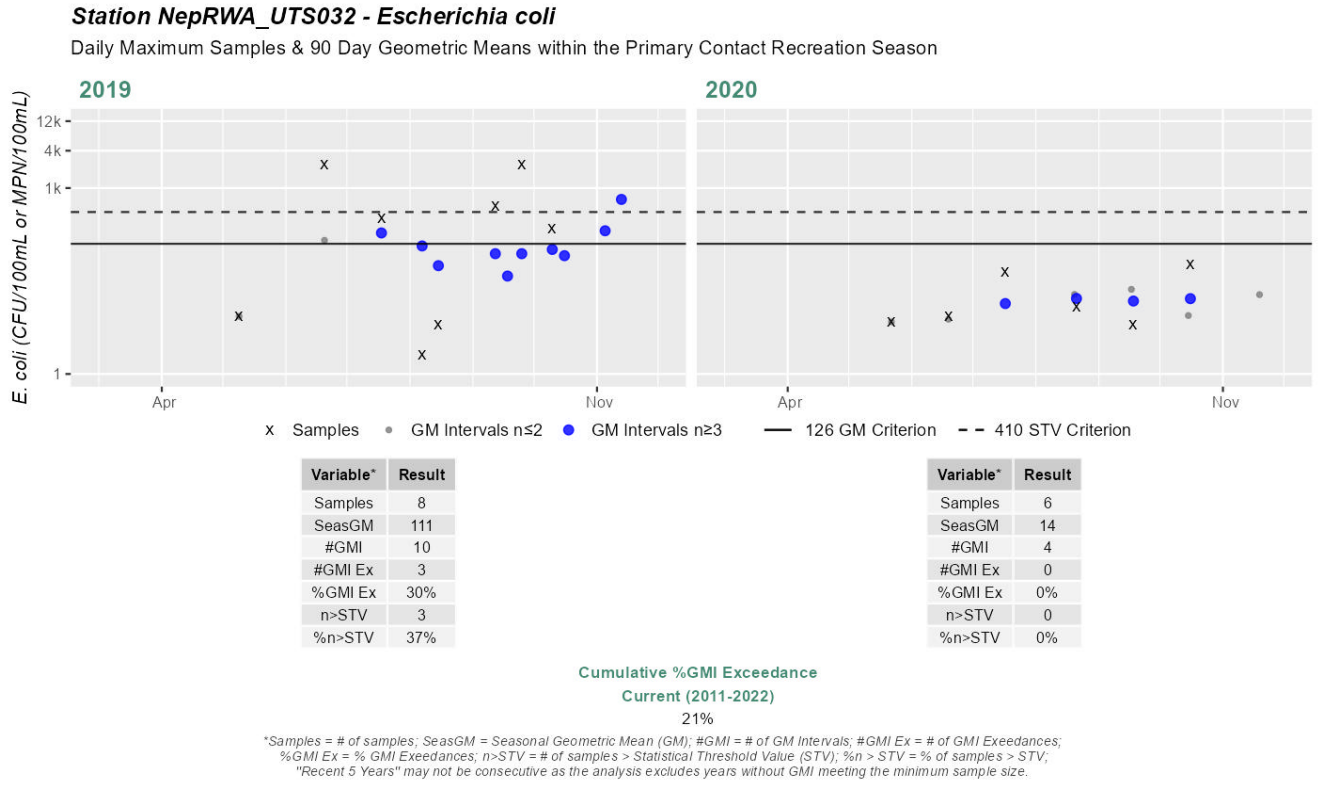
Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(NepRWA 2023) (MassDEP Undated 4)

[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
NepRWA_UTS032	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	8	2	2419	111
NepRWA_UTS032	Neponset River Watershed Association	E. coli	05/21/20	10/15/20	6	6	57	14



Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Town Pond (MA73056) is assessed as Fully Supporting based on bacteria data collected at 1 station in 2019-2020. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in Town Pond at NepRWA_UTS032 [Unnamed Tributary of Steep Hill Brook at W St, Stoughton] from 2019-2020 (n=6-8/yr). Analysis of the multi-year moderate frequency dataset from this station indicated 0 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml, 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2019, n=2) and cumulatively across years 7% of intervals had GMs >244 CFU/100ml, which meets 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_UTS032	Neponset River Watershed Association	Water Quality	Unnamed Tributary of Steep Hill Brook	Unnamed Tributary of Steep Hill Brook @ West Street, Stoughton	42.125104	-71.130372

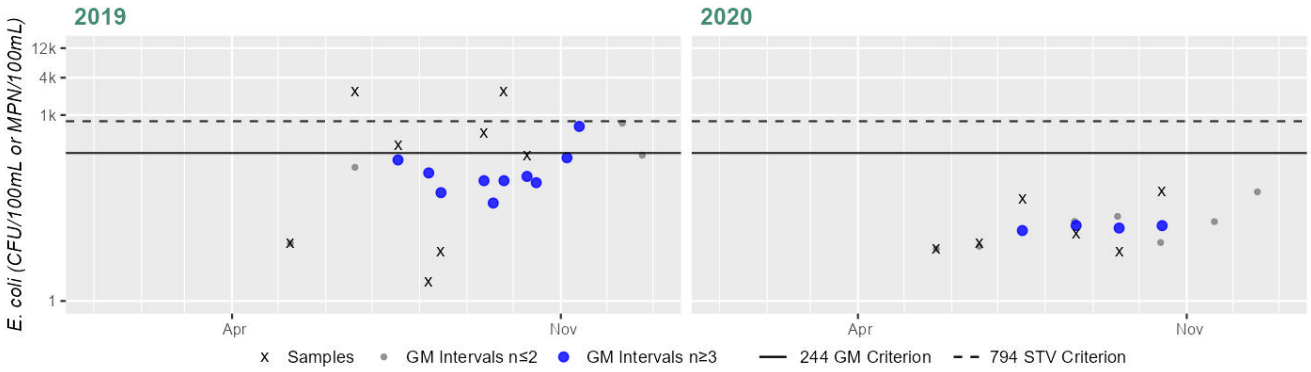
Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)
(NepRWA 2023) (MassDEP Undated 3)
[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
NepRWA_UTS032	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	8	2	2419	111
NepRWA_UTS032	Neponset River Watershed Association	E. coli	05/21/20	10/15/20	6	6	57	14

Station NepRWA_UTS032 - Escherichia coli

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



Variable*	Result
Samples	8
SeasGM	111
#GMI	10
#GMI Ex	1
%GMI Ex	10%
n>STV	2
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	14
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

7%

**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.*

Traphole Brook (MA73-17)

Location:	Headwaters west of Everett Street, Sharon, to confluence with Neponset River, Sharon.
AU Type:	RIVER
AU Size:	3.9 MILES
Classification/Qualifier:	B

Traphole Brook (MA73-17)

Watershed Area: 4.65 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	4.65	4.60	1.14	1.14
Agriculture	1.2%	0.7%	0%	0%
Developed	33.2%	33.5%	24.7%	24.7%
Natural	51.9%	51.9%	44.1%	44.1%
Wetland	13.8%	14%	31.1%	31.1%
Impervious	18.7%	18.9%	13.1%	13.1%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	5	Escherichia Coli (E. Coli)	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Recommendations

2024/26 Recommendations
2016IR [Algae, Low] Follow-up monitoring should be conducted in Traphole Brook (MA73-17) in particular at Cooney Street, Walpole to evaluate dense filamentous observed at this location in 2009. {W0551}

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Traphole Brook (MA73-17) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	YES

2024/26 Use Attainment Summary
There are no data available to assess the status of the Aesthetics Use for this Traphole Brook AU (MA73-17), so it is Not Assessed. The prior Alert identified for dense Filamentous Algae at Cooney Street, Walpole (W0551) in 2009 is being carried forward (MassDEP Undated 9).

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Traphole Brook (MA73-17) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. The prior Alert for dense Filamentous Algae is being removed from the Recreational Uses but continues to be maintained under the Aesthetics Use. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples three-quarters of the way down Traphole Brook at NepRWA_THB033 [Sumner St, Norwood] from 2011-2014 and 2017-2022 (n=5-6/yr). Analysis of the recent five years of the multi-year limited frequency dataset from this station indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 75-100%), 4 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018 and 2020-2022, n=2-4) and cumulatively across years 90% of intervals had GMs >126 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_THB033	Neponset River Watershed Association	Water Quality	Traphole Brook	Sumner Street, Norwood	42.159967	-71.195430

Bacteria Data

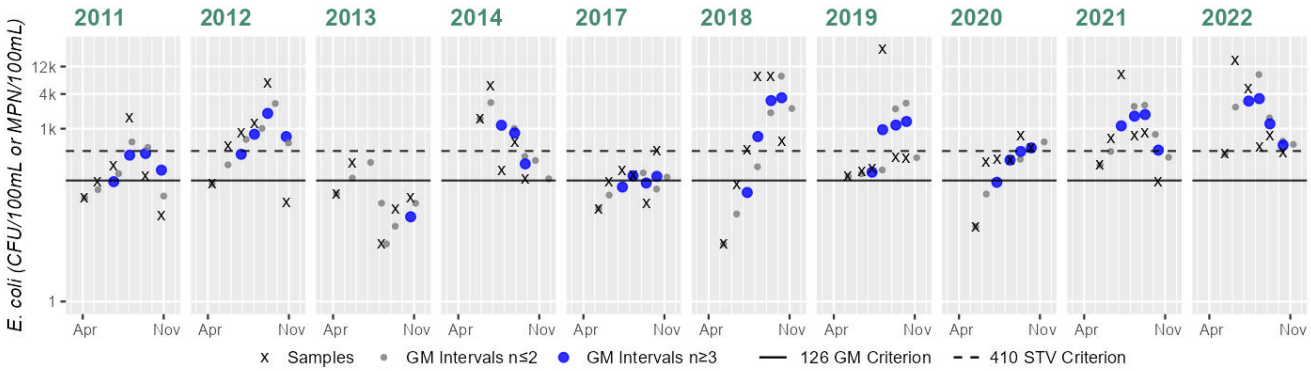
Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)
(NepRWA 2023) (MassDEP Undated 4)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_THB033	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	31	1520	151
NepRWA_THB033	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	52	6130	512
NepRWA_THB033	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	10	259	54
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/29/14	09/25/14	5	135	5480	652
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	41	408	120
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	8160	518

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	148	24200	484
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	749	233
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	121	8660	689
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	364	15500	1251

Station NepRWA_THB033 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	151
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	512
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	5
SeasGM	54
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	652
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	3
%n>STV	60%

Variable*	Result
Samples	6
SeasGM	120
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	518
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	484
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	233
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	689
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	1251
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Cumulative %GMI Exceedance Current (2011-2022)
83%

Cumulative %GMI Exceedance Current (Recent 5 Years)
90%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Traphole Brook (MA73-17) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. The prior Alert for dense Filamentous Algae is being removed from the Recreational Uses but continues to be maintained under the Aesthetics Use. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Traphole Brook from 2008-2022 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: halfway down the AU at W0551 [Cooney St, Walpole] from Apr-Sep 2009 (n=6) and three-quarters of the way down at NepRWA_THB033 [Sumner St, Norwood] from 2008-2010 (historic n=6/yr) as well as in 2011-2014 and 2017-2022 (current n=5-6/yr). Since bacteria data from the historic IR window (at W0551) was indicative of good water quality conditions, only the analysis from the current IR window (at NepRWA_THB033) will be summarized here. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_THB033 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 75-100%), 3 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2018 and 2021-2022, n=2) and cumulatively across years 85% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment. It should be noted that data in the historic IR window at NepRWA_THB033 was also indicative of an Escherichia Coli (E. Coli) impairment, with 50% cumulatively of the GM intervals >244 CFU/100ml for the multi year low frequency dataset.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0551	MassDEP	Water Quality	Traphole Brook	[Cooney Street, Walpole]	42.157528	-71.208948
NepRWA_THB033	Neponset River Watershed Association	Water Quality	Traphole Brook	Sumner Street, Norwood	42.159967	-71.195430

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

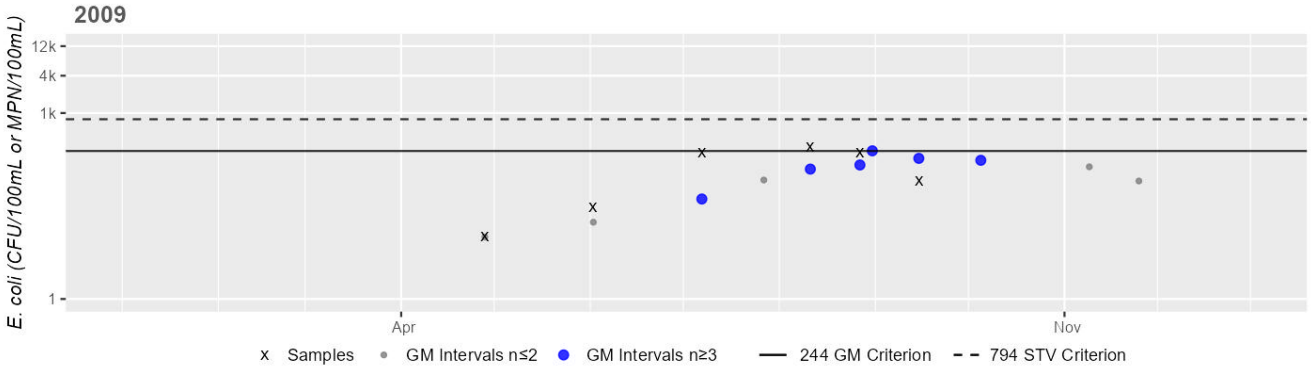
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0551	MassDEP	E. coli	04/28/09	09/15/09	6	10	280	84
NepRWA_THB033	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	10	1110	183

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_THB033	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	5	496	83
NepRWA_THB033	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	52	703	220
NepRWA_THB033	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	31	1520	151
NepRWA_THB033	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	52	6130	512
NepRWA_THB033	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	10	259	54
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/29/14	09/25/14	5	135	5480	652
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	41	408	120
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	8160	518
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	148	24200	484
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	749	233
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	121	8660	689
NepRWA_THB033	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	364	15500	1251

Station MASSDEP_W0551 - Escherichia coli

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



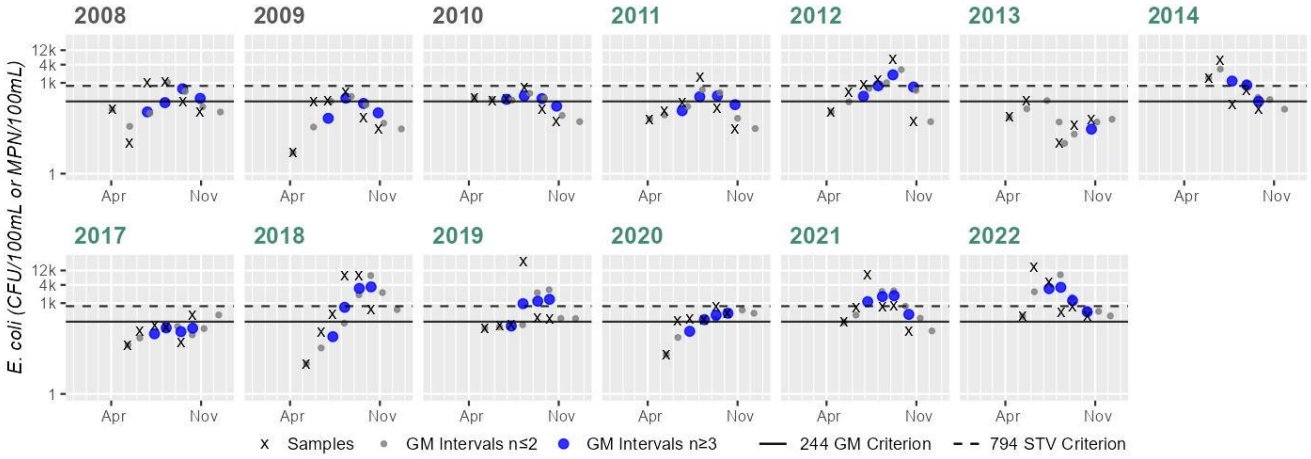
Variable*	Result
Samples	6
SeasGM	84
#GMI	6
#GMI Ex	1
%GMI Ex	16%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
16%

**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 NepRWA_THB033 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	183
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	83
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	220
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	151
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	512
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	5
SeasGM	54
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	652
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	120
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	518
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	484
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	233
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	689
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	1251
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance Historic (1997-2010)
50%

Cumulative %GMI Exceedance Current (2011-2022)
72%

Cumulative %GMI Exceedance Current (Recent 5 Years)
85%

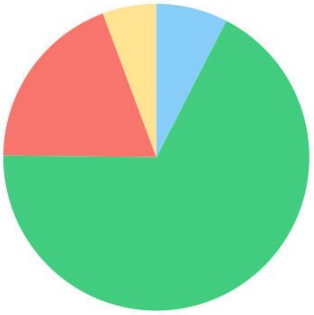
**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Tubwreck Brook (MA73-07)

Location:	Headwaters - small unnamed pond southeast of Powissett Street, Dover to confluence with Mill Brook just southwest of Dover/Medfield border.
AU Type:	RIVER
AU Size:	1.6 MILES
Classification/Qualifier:	B

Tubwreck Brook (MA73-07)

Watershed Area: 0.71 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	0.71	0.71	0.23	0.23
Agriculture	5.7%	5.7%	0.7%	0.7%
Developed	19.1%	19.1%	17.1%	17.1%
Natural	67.6%	67.6%	61.6%	61.6%
Wetland	7.6%	7.6%	20.6%	20.6%
Impervious	9.7%	9.7%	7.5%	7.5%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Tubwreck Brook (MA73-07) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Tubwreck Brook (MA73-07) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Tubwreck Brook (MA73-07) are available, so the Primary Contact Recreation Use is Not Assessed.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Tubwreck Brook (MA73-07) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected *E. coli* bacteria samples at the downstream end of Tubwreck Brook at W1937 [Draper Rd, Dover] from Apr-Sep 2009 (n=5). Analysis of the historic single year limited frequency dataset from this station indicated 33% of intervals had GMs >244 CFU/100ml, 2 samples exceeded the 794 CFU/100ml STV and the overall GM was 105 CFU/100ml. Historic *E. coli* data from W1937 are inconclusive according to the 2024 CALM to assess the Secondary Contact Recreation Use because this single year, limited frequency dataset included both GMs below the threshold and STV exceedance of the threshold. Since these data were collected prior to the current IR window (2011-2022) the Secondary Contact Recreation Use cannot be positively assessed using bacteria data.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1937	MassDEP	Water Quality	Tubwreck Brook	[Draper Road, Dover]	42.208946	-71.266949

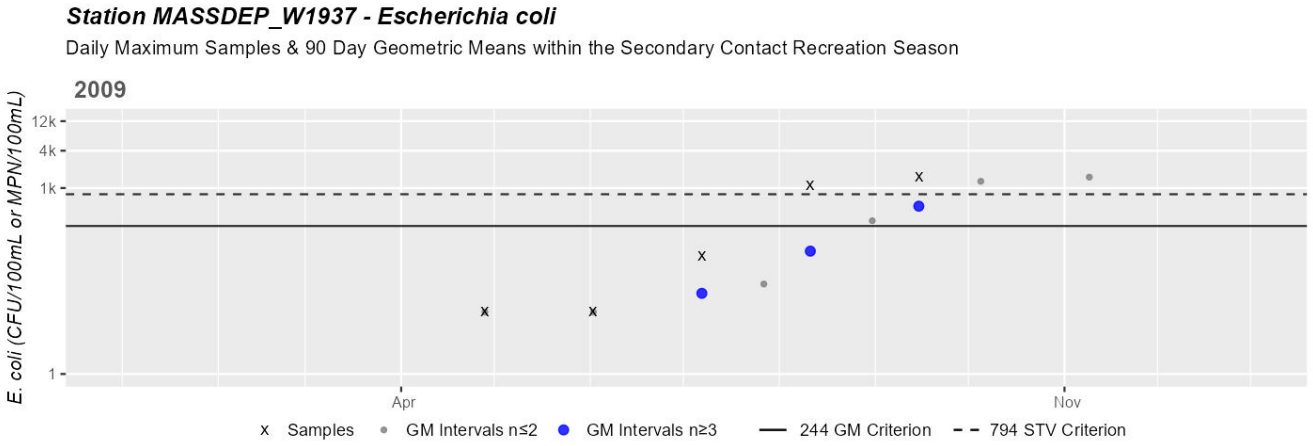
Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5)

[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
W1937	MassDEP	E. coli	04/28/09	09/15/09	5	10	1500	105



Variable*	Result
Samples	5
SeasGM	105
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	2
%n>STV	40%

Cumulative %GMI Exceedance
Historic (1997-2010)
33%

**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.*

Turner Pond (MA73058)

Location:	Walpole.
AU Type:	FRESHWATER LAKE
AU Size:	18 ACRES
Classification/Qualifier:	B

No usable data were available for Turner Pond (MA73058) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Fanwort*)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Turners Pond (MA73059)

Location:	Milton.
AU Type:	FRESHWATER LAKE
AU Size:	11 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Dissolved Oxygen	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X	--	--	--	--
Turbidity	Source Unknown (N)	--	--	X	X	X

Recommendations

2024/26 Recommendations
2024IR [Harmful Algal Blooms, Low] Follow-up monitoring should be conducted in Turners Pond (MA73059) to determine if Harmful Algal Blooms may be impairing the Recreational and Aesthetic uses. Monitoring should include observational data and collection of cyanobacteria cell count data, as well as continued reporting of algal blooms to MDPH. This is of low priority;

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Turners Pond (MA73059) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Turners Pond (MA73059) continues to be assessed as as Not Supporting with the prior Turbidity impairment being carried forward. During the period 2015 through 2022, C-HAB postings for Turners Pond were reported to MDPH based on visual observations of an unknown duration in 2022 and no blooms were reported in other years. A recommendation for follow-up monitoring will be made. No new data are available to evaluate the Aesthetics Use for Turners Pond.

Algal Bloom Information

Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data (Bailey, Logan April 26, 2023) (MassDEP Undated 3)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Turners Pond (MA73059) were reported to MDPH based on visual observations of an unknown duration in 2022. No blooms were reported in other years. A recommendation for follow-up monitoring will be made.

Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH (Bailey, Logan April 26, 2023) (MassDEP Undated 3)

[* indicates a C-HAB posting of unknown duration]

DEP Waterbody (DPH Waterbody)	DPH Town	Posting Days 2015	Posting Days 2016	Posting Days 2017	Posting Days 2018	Posting Days 2019	Posting Days 2020	Posting Days 2021	Posting Days 2022
Turners Pond	Milton								*

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Turners Pond (MA73059) continues to be assessed as Not Supporting. The prior Turbidity impairment (from the Aesthetics Use) is being carried forward. During the period 2015 through 2022, C-HAB postings for Turners Pond were reported to MDPH based on visual observations of an unknown duration in 2022. No blooms were reported in other years. A recommendation for follow-up monitoring will be made.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Turners Pond (MA73059) continues to be assessed as Not Supporting. The prior Turbidity impairment (from the Aesthetics Use) is being carried forward. During the period 2015 through 2022, C-HAB postings for Turners Pond were reported to MDPH based on visual observations of an unknown duration in 2022. No blooms were reported in other years. A recommendation for follow-up monitoring will be made.

Unnamed Tributary (MA73-10)

Location:	Headwaters, outlet Turner Pond, Walpole to confluence with Neponset River, Walpole.
AU Type:	RIVER
AU Size:	0.4 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA73-10)

Watershed Area: 8.23 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	8.23	5.43	2.65	1.75
Agriculture	2.6%	2.3%	0.9%	1.2%
Developed	19.1%	19.7%	14.9%	16.1%
Natural	63.4%	61.1%	55.5%	52.6%
Wetland	14.9%	16.9%	28.8%	30.1%
Impervious	9.1%	9.2%	6.9%	7.5%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	2	None	--	Unchanged

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unnamed Tributary (MA73-10) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Unnamed Tributary (MA73-10) 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 Unnamed Tributary (MA73-10) is assessed as Fully Supporting based on bacteria data collected at 1 station in 2018-2022. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples at the upstream end of this Unnamed Tributary (to the Neponset River) at NepRWA_MMB106 [Turner's Pond upstream at Mill Pond Rd] from 2011-2014 and 2017-2022 (n=4-6/yr). Analysis of the recent five years of the multi-year limited frequency dataset from this station indicated 0 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml, 0 yrs had ≥2 samples exceed the 410 CFU/100ml STV and cumulatively across years 0% of intervals had GMs >126 CFU/100m, which meets 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_MMB106	Neponset River Watershed Association	Water Quality	Turner's Pond	Turner's Pond upstream at Mill Pond Rd	42.151333	-71.261150

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(NepRWA 2023) (MassDEP Undated 4)

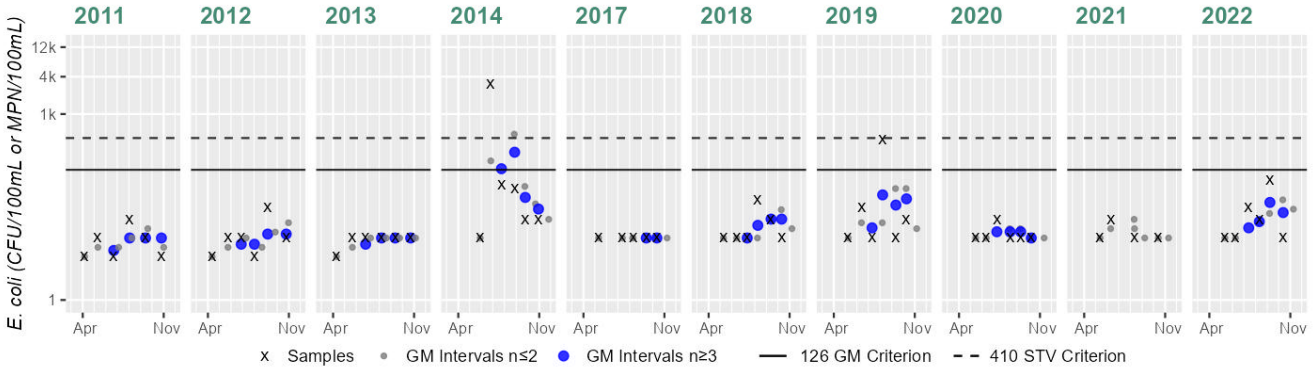
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MMB106	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	20	7
NepRWA_MMB106	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	31	9

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MMB106	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	10	8
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	10	3080	61
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	10	10	10
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	41	14
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	393	24
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	20	11
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	4	10	20	11
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	85	19

Station NepRWA_MMB106 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	7
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	9
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	8
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	61
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	10
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	14
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	24
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	11
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	11
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	19
#GMI	4
#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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Unnamed Tributary (MA73-10) is assessed as Fully Supporting based on bacteria data collected at 1 station in 2018-2022. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) at the upstream end of this Unnamed Tributary (to the Neponset River) at NepRWA_MMB106 [Turner's Pond upstream at Mill Pond Rd] from 2008-2010 (historic n=6/yr) and 2011-2014 and 2017-2022 (current n=4-6/yr). Since bacteria data from the historic IR window at this station are indicative of good water quality conditions, only the analysis from the current IR window will be summarized here. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_MMB106 indicated 0 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml, 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV and cumulatively across years 0% of intervals had GMs >244 CFU/100ml, which meets 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_MMB106	Neponset River Watershed Association	Water Quality	Turner's Pond	Turner's Pond upstream at Mill Pond Rd	42.151333	-71.261150

Bacteria Data

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

(NepRWA 2023) (MassDEP Undated 3)

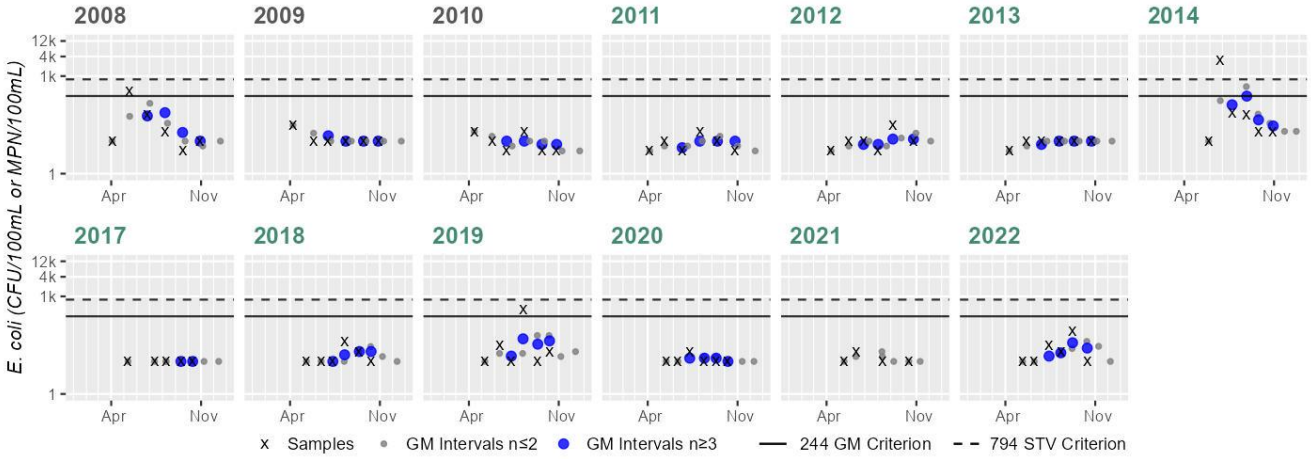
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MMB106	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	5	336	24
NepRWA_MMB106	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	10	31	12
NepRWA_MMB106	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	5	20	8

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MMB106	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	20	7
NepRWA_MMB106	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	5	31	9
NepRWA_MMB106	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	10	8
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	10	3080	61
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	5	10	10	10
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	41	14
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	393	24
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	20	11
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	4	10	20	11
NepRWA_MMB106	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	85	19

Station NepRWA_MMB106 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	24
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	12
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	8
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	7
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	9
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	8
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	61
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	10
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	14
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	24
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	11
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	11
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	19
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)
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.*

Unnamed Tributary (MA73-14)

Location:	Headwaters, outlet Willet Pond, Walpole/Norwood, to inlet Ellis Pond, Norwood.
AU Type:	RIVER
AU Size:	0.4 MILES
Classification/Qualifier:	B

No usable data were available for Unnamed Tributary (MA73-14) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Unnamed Tributary (MA73-31)

Location:	Headwaters, outlet of Massapoag Lake, Sharon to mouth at inlet of Hammer Shop Pond, Sharon (not depicted on 1987 Mansfield USGS quad).
AU Type:	RIVER
AU Size:	0.3 MILES
Classification/Qualifier:	B

No usable data were available for Unnamed Tributary (MA73-31) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	2592	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Fecal Coliform	Source Unknown (N)	--	--	--	X	--

Unnamed Tributary (MA73-32)

Location:	From the outlet of Town Pond, Stoughton to mouth at confluence with Steep Hill Brook, Stoughton.
AU Type:	RIVER
AU Size:	1 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA73-32)

Watershed Area: 4.96 square miles

Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	4.96	4.96	1.36	1.36
Agriculture	0.4%	0.4%	0.7%	0.7%
Developed	46.6%	46.6%	24.5%	24.5%
Natural	40.7%	40.7%	45.2%	45.2%
Wetland	12.3%	12.3%	29.6%	29.6%
Impervious	24.8%	24.8%	11.2%	11.2%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Escherichia Coli (E. Coli)	54860	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unnamed Tributary (MA73-32) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for this Unnamed Tributary to Steep Hill Brook (MA73-32) continues to be assessed as Fully Supporting based on the general lack of objectionable conditions observed by MassDEP staff throughout the AU during the summer of 2015. MassDEP staff recorded aesthetics observations at 4 stations in Stoughton on this Unnamed Tributary AU, during the summer of 2015 as part of the MassDEP Bacteria Source Tracking (BST) project. These stations are described from upstream to downstream as follows: close to the upstream end of the AU at the outlet of Town Pond, Pratts Court (W2556, n=2), a third of the way down the AU at Central Street (W2554, n=3), two-thirds of the way down at Mill Street (W2553, n=3) and the downstream end of the AU at Erin Road (W2552, n=3). There were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by field sampling crews at any of the stations, though field staff noted very dense Aquatic Plants on two occasions at W2552.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2552	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, Erin Road, Stoughton]	42.137177	-71.138331
W2553	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, Mill Street, Stoughton]	42.134163	-71.132868
W2554	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, Central Street, Stoughton]	42.130660	-71.129284
W2556	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, outlet Town Pond, Pratts Court, Stoughton]	42.126836	-71.129686

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2552	2015	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2552 on Unnamed Tributary (MA73-32) during 3 site visits between May 2015 and Aug 2015. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted dense/very dense aquatic plants (n=2).
W2553	2015	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2553 on Unnamed Tributary (MA73-32) during 3 site visits between May 2015 and Aug 2015. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W2554	2015	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2554 on Unnamed Tributary (MA73-32) during 3 site visits between May 2015 and Aug 2015. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W2556	2015	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2556 on Unnamed Tributary (MA73-32) during 2 site visits between Jul 2015 and Aug 2015. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2552	2015	3	3	0
W2553	2015	3	3	0
W2554	2015	3	3	0
W2556	2015	2	2	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2552	Unnamed Tributary	2015	Aquatic Plant Density, Overall	Sparse	1	3
W2552	Unnamed Tributary	2015	Aquatic Plant Density, Overall	Very Dense	2	3

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2552	Unnamed Tributary	2015	Color	None	3	3
W2552	Unnamed Tributary	2015	Odor	None	3	3
W2552	Unnamed Tributary	2015	Periphyton Density, Filamentous	None	3	3
W2552	Unnamed Tributary	2015	Periphyton Density, Film	Moderate	1	3
W2552	Unnamed Tributary	2015	Periphyton Density, Film	None	1	3
W2552	Unnamed Tributary	2015	Periphyton Density, Film	Sparse	1	3
W2552	Unnamed Tributary	2015	Turbidity	Moderately Turbid	1	3
W2552	Unnamed Tributary	2015	Turbidity	Slightly Turbid	2	3
W2553	Unnamed Tributary	2015	Aquatic Plant Density, Overall	None	3	3
W2553	Unnamed Tributary	2015	Color	None	3	3
W2553	Unnamed Tributary	2015	Odor	None	2	3
W2553	Unnamed Tributary	2015	Odor	Other (Metallic)	1	3
W2553	Unnamed Tributary	2015	Periphyton Density, Filamentous	None	3	3
W2553	Unnamed Tributary	2015	Periphyton Density, Film	Moderate	1	3
W2553	Unnamed Tributary	2015	Periphyton Density, Film	Sparse	2	3
W2553	Unnamed Tributary	2015	Turbidity	Slightly Turbid	3	3
W2554	Unnamed Tributary	2015	Aquatic Plant Density, Overall	None	3	3
W2554	Unnamed Tributary	2015	Color	None	3	3
W2554	Unnamed Tributary	2015	Odor	None	3	3
W2554	Unnamed Tributary	2015	Periphyton Density, Filamentous	None	3	3

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2554	Unnamed Tributary	2015	Periphyton Density, Film	Sparse	3	3
W2554	Unnamed Tributary	2015	Turbidity	Slightly Turbid	3	3
W2556	Unnamed Tributary	2015	Aquatic Plant Density, Overall	None	1	2
W2556	Unnamed Tributary	2015	Aquatic Plant Density, Overall	Sparse	1	2
W2556	Unnamed Tributary	2015	Color	None	2	2
W2556	Unnamed Tributary	2015	Odor	Musty (Basement)	1	2
W2556	Unnamed Tributary	2015	Odor	None	1	2
W2556	Unnamed Tributary	2015	Periphyton Density, Filamentous	None	2	2
W2556	Unnamed Tributary	2015	Periphyton Density, Film	Moderate	1	2
W2556	Unnamed Tributary	2015	Periphyton Density, Film	Sparse	1	2
W2556	Unnamed Tributary	2015	Turbidity	None	1	2
W2556	Unnamed Tributary	2015	Turbidity	Slightly Turbid	1	2

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Unnamed Tributary (MA73-32) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 combined station in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in this Unnamed Tributary to Steep Hill Brook from 2011-2022 at 4 stations/combined stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at W2556 [outlet Town Pond, Pratts Court, Stoughton] from Jul-Aug 2015 (n=2), a third of the way down the AU at combined station W2554 & NepRWA_SHB021 [Central St, Stoughton] from 2011-2015 and 2017-2022 (n=3-6/yr), two-thirds of the way down at W2553 [Mill St, Stoughton] from May-Aug 2015 (n=3) and the downstream end of the AU at W2552 [Erin Rd, Stoughton] from May-Aug 2015 (n=3). The available *E. coli* data at stations W2556, W2553 & W2552 are all too limited to assess the Primary Contact Recreation Use according to the 2024 CALM, though it should be noted that 1 sample exceeded the 410 CFU/100ml STV at W2552 in 2015 (921 CFU). However, analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from W2554 & NepRWA_SHB021 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 25-100%), 3 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018-2019 and 2022, n=2-4), and cumulatively across years 70% of intervals had GMs >126 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2552	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, Erin Road, Stoughton]	42.137177	-71.138331
W2553	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, Mill Street, Stoughton]	42.134163	-71.132868
W2554	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, Central Street, Stoughton]	42.130660	-71.129284
W2556	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, outlet Town Pond, Pratts Court, Stoughton]	42.126836	-71.129686
NepRWA_SHB021	Neponset River Watershed Association	Water Quality	Steep Hill Brook	Central St & West St, Stoughton	42.130583	-71.129300

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(MassDEP Undated 10) (MassDEP Undated 6) (NepRWA 2023) (MassDEP Undated 4)

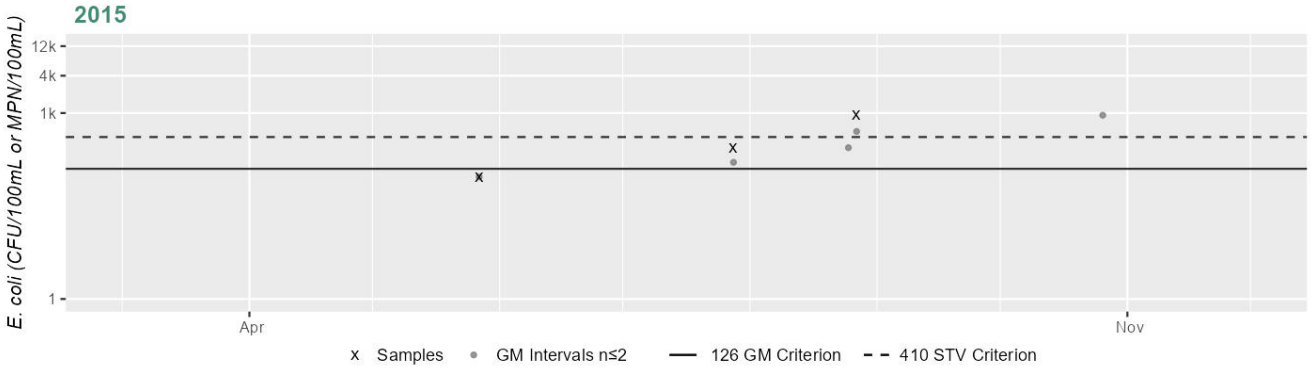
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W2552	MassDEP	E. coli	05/27/15	08/27/15	3	93	921	287

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W2553	MassDEP	E. coli	05/27/15	08/27/15	3	17	276	73
W2554	MassDEP	E. coli	05/27/15	08/27/15	3	32	119	75
W2556	MassDEP	E. coli	07/28/15	08/27/15	2	1	1	1
NepRWA_SHB021	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	169	26
NepRWA_SHB021	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	20	1180	257
NepRWA_SHB021	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	31	97	53
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	20	1670	234
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	20	480	153
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	7270	194
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	6490	230
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	185	75
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	30	2190	129
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	63	644	246

Station MASSDEP_W2552 - Escherichia coli

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



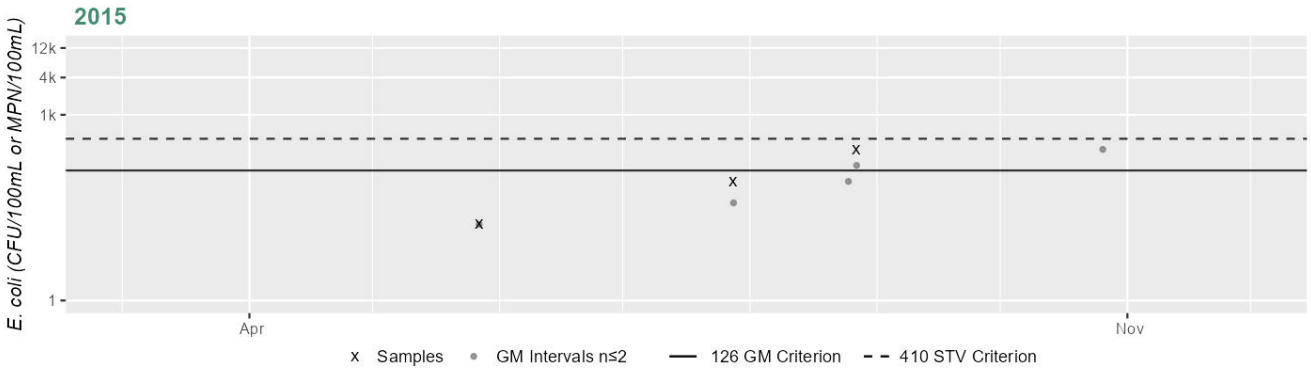
Variable*	Result
Samples	3
SeasGM	287
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	33%

Cumulative %GMI Exceedance
Current (2011-2022)
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 MASSDEP_W2553 - Escherichia coli

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



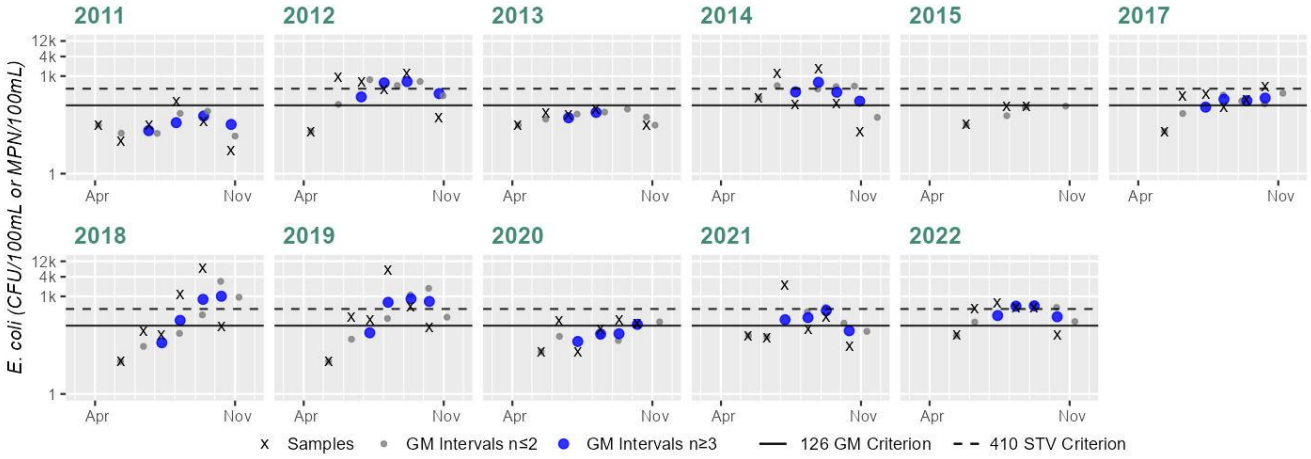
Variable*	Result
Samples	3
SeasGM	73
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
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 MASSDEP_W2554 & NepRWA_SHB021 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	26
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	257
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	5
SeasGM	53
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	234
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

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

Variable*	Result
Samples	6
SeasGM	153
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	194
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	230
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	75
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	129
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	246
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Cumulative %GMI Exceedance Current (2011-2022)

65%

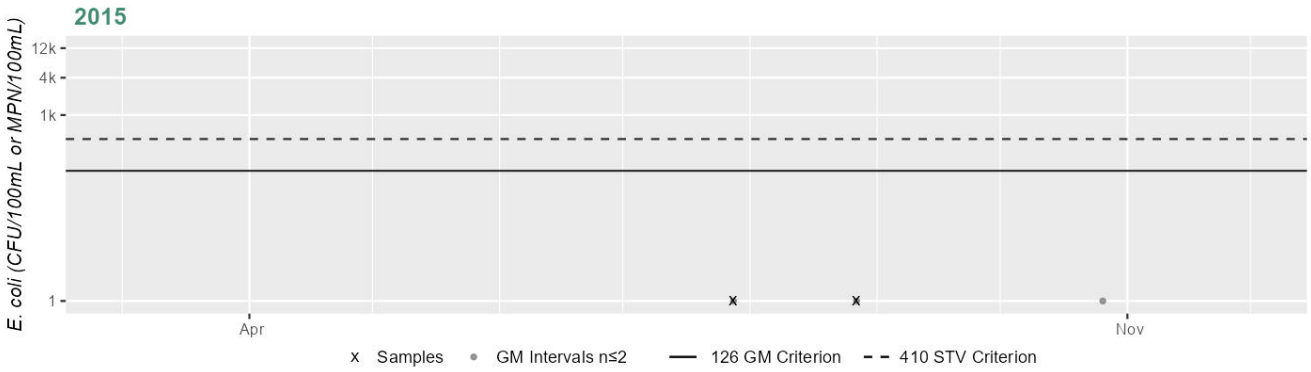
Cumulative %GMI Exceedance Current (Recent 5 Years)

70%

**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 MASSDEP_W2556 - Escherichia coli

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



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

Cumulative %GMI Exceedance

Current (2011-2022)

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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Unnamed Tributary (MA73-32) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 combined station in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in this Unnamed Tributary to Steep Hill Brook, from 2008-2022 at 5 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at W2556 [outlet Town Pond, Pratts Court, Stoughton] from Jul-Aug 2015 (n=2), a third of the way down the AU at combined station W2554 & NepRWA_SHB021 [Central St, Stoughton] from 2008-2010 (historic n=4-6/yr) also in 2011-2015 and 2017-2022 (current n=3-6/yr), two-thirds of the way down at W2553 [Mill St, Stoughton] from May-Aug 2015 (n=3), three-quarters of the way down at W1951 [~950 ft upstream of Erin Rd, Stoughton] from Apr-Sep 2009 (n=6), and the downstream end of the AU at W2552 [Erin Rd, Stoughton] from May-Aug 2015 (n=3). The available *E. coli* data at stations W2556, W2553 & W2552 are all too limited to assess the Secondary Contact Recreation Use according to the 2024 CALM, though it should be noted that 1 sample exceeded the 794 CFU/100ml STV at W2552 in 2015 (921 CFU). However, analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from combined station W2554 & NepRWA_SHB021 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2019 and 2021-2022, 25-75%) and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2), cumulatively across years 45% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment. It should be noted that data in the historic IR window at station W1951 was also indicative of an Escherichia Coli (E. Coli) impairment, with 66% of the GM intervals >244 CFU/100ml for this single year low frequency dataset.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1951	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, approximately 950 feet upstream of Erin Road, Stoughton]	42.135719	-71.135626
W2552	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, Erin Road, Stoughton]	42.137177	-71.138331
W2553	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, Mill Street, Stoughton]	42.134163	-71.132868
W2554	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, Central Street, Stoughton]	42.130660	-71.129284
W2556	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Steep Hill Brook, outlet Town Pond, Pratts Court, Stoughton]	42.126836	-71.129686
NepRWA_SHB021	Neponset River Watershed Association	Water Quality	Steep Hill Brook	Central St & West St, Stoughton	42.130583	-71.129300

Bacteria Data

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

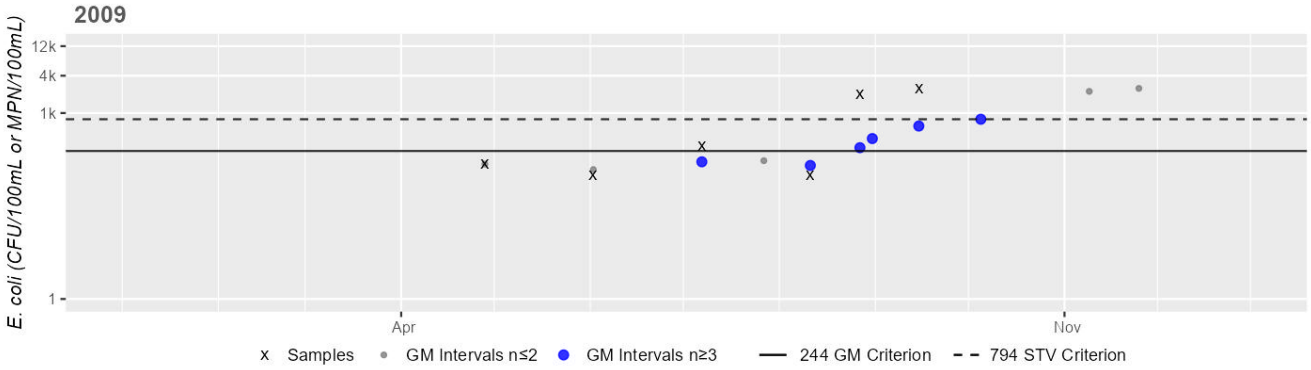
(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

[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
W1951	MassDEP	E. coli	04/28/09	09/15/09	6	100	2500	359
W2552	MassDEP	E. coli	05/27/15	08/27/15	3	93	921	287
W2553	MassDEP	E. coli	05/27/15	08/27/15	3	17	276	73
W2554	MassDEP	E. coli	05/27/15	08/27/15	3	32	119	75
W2556	MassDEP	E. coli	07/28/15	08/27/15	2	1	1	1
NepRWA_SHB021	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	10	2100	154
NepRWA_SHB021	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	31	160	88
NepRWA_SHB021	Neponset River Watershed Association	E. coli	04/14/10	09/22/10	4	10	218	93
NepRWA_SHB021	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	169	26
NepRWA_SHB021	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	20	1180	257
NepRWA_SHB021	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	31	97	53
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	20	1670	234
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	20	480	153
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	7270	194
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	6490	230
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	185	75
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	30	2190	129
NepRWA_SHB021	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	63	644	246

Station MASSDEP_W1951 - Escherichia coli

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



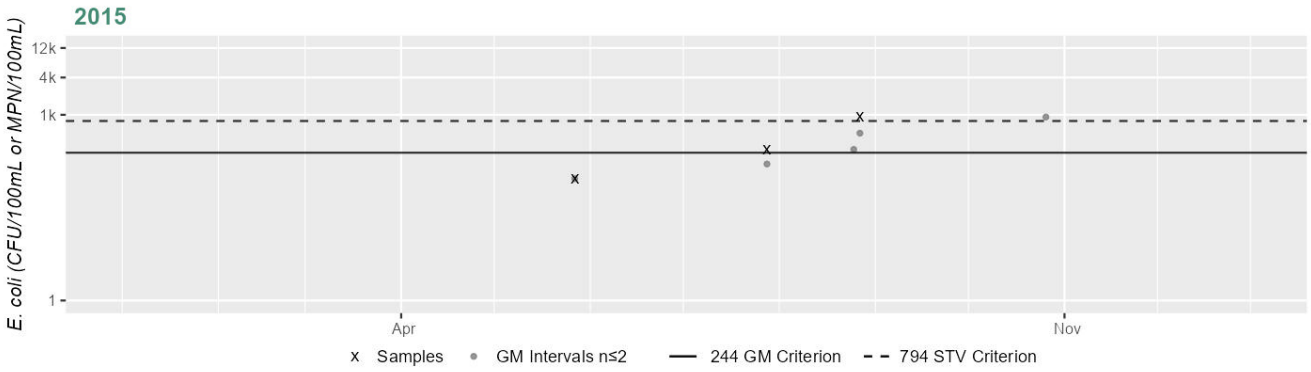
Variable*	Result
Samples	6
SeasGM	359
#GMI	6
#GMI Ex	4
%GMI Ex	66%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance
Historic (1997-2010)
66%

**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 MASSDEP_W2552 - Escherichia coli

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



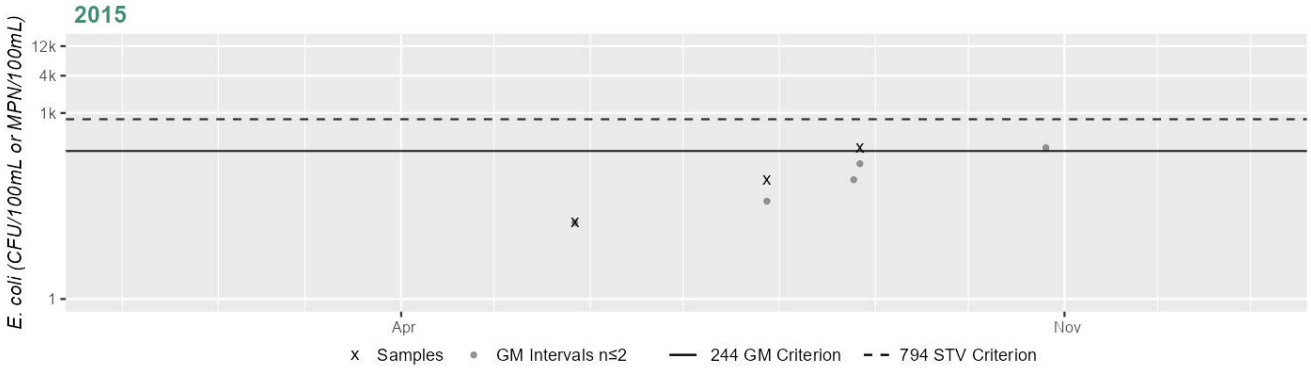
Variable*	Result
Samples	3
SeasGM	287
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	33%

Cumulative %GMI Exceedance
Current (2011-2022)
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 MASSDEP_W2553 - Escherichia coli

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



Variable*	Result
Samples	3
SeasGM	73
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

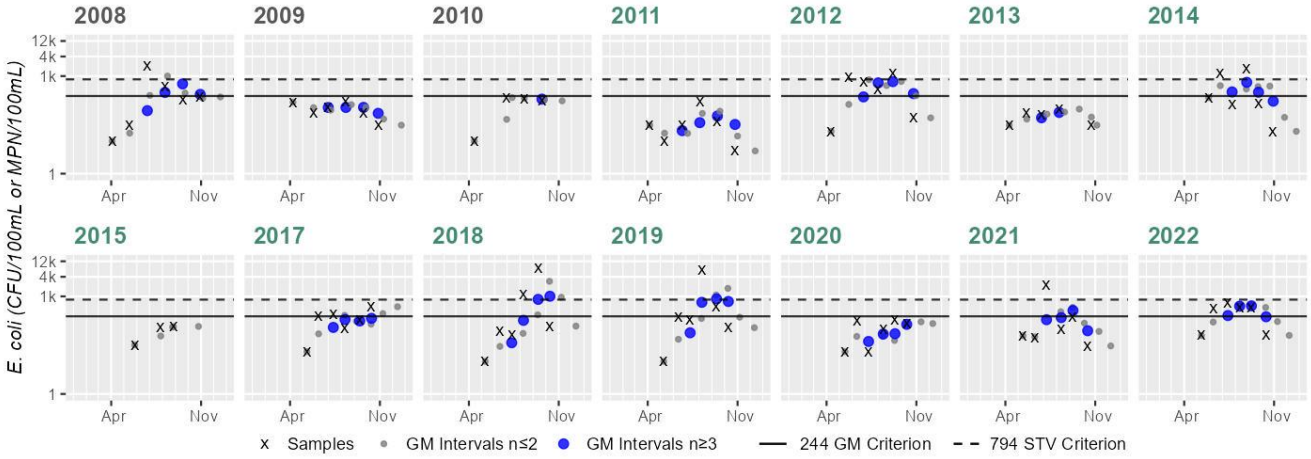
Current (2011-2022)

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 MASSDEP_W2554 & NepRWA_SHB021 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	154
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	88
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	93
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	26
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	257
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	5
SeasGM	53
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	234
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

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

Variable*	Result
Samples	6
SeasGM	153
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	194
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	230
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	75
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	129
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	246
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)
33%

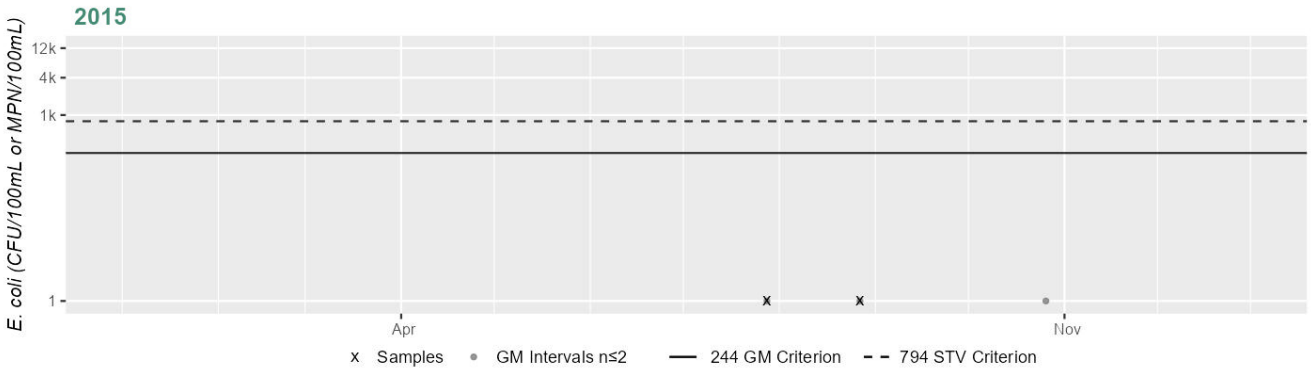
Cumulative %GMI Exceedance Current (2011-2022)
39%

Cumulative %GMI Exceedance Current (Recent 5 Years)
45%

**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 MASSDEP_W2556 - Escherichia coli

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



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

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

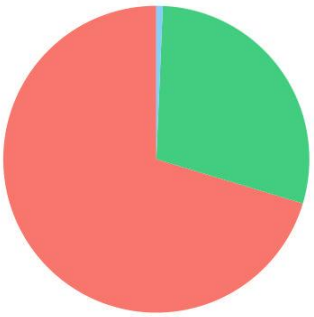
**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Unnamed Tributary (MA73-33)

Location:	Locally known as "Meadow Brook" - From where the underground/culverted stream emerges east of Pleasant Street, Norwood to confluence with Neponset River, Norwood.
AU Type:	RIVER
AU Size:	0.7 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA73-33)

Watershed Area: 1.16 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.16	1.16	0.07	0.07
Agriculture	0%	0%	0%	0%
Developed	70.3%	70.3%	56.9%	56.9%
Natural	29%	29%	34.4%	34.4%
Wetland	0.7%	0.7%	8.7%	8.7%
Impervious	49%	49%	38.4%	38.4%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Escherichia Coli (E. Coli)	54861	Unchanged
5	5	Phosphorus, Total	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Phosphorus, Total	Illicit Connections/Hook-ups to Storm Sewers (Y)	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unnamed Tributary (MA73-33) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
There is insufficient information to assess the Aesthetics Use for this Unnamed Tributary to Neponset River, locally known as Meadow Brook (MA73-33). MassDEP staff recorded a limited number of aesthetics observations at one station at the upstream end of this Unnamed Tributary, during the summer of 2017 as part of the MassDEP Bacteria Source Tracking (BST) project; where the underground culvert daylights near Meadow Brook Road (east of Pleasant Street), Norwood (W0548, n=1). There were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by field sampling crews at this station, though observations are limited.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0548	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Neponset River, locally known as Meadow Brook. Sampled where it comes out of underground culvert near Meadow Brook Road (east of Pleasant Street), Norwood]	42.184422	-71.193827

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 6)

[Note: scums of natural origins (e.g. pollen blankets or natural foams) are excluded.]

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W0548	2017	1	Aesthetic observations were made by MassDEP field sampling crews at Station W0548 on Unnamed Tributary (MA73-33) during 1 site visit on Aug 29, 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 10) (MassDEP Undated 6)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W0548	2017	1	0	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 10)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0548	Unnamed Tributary	2017	Aquatic Plant Density, Overall	NA	1	1
W0548	Unnamed Tributary	2017	Color	None	1	1
W0548	Unnamed Tributary	2017	Odor	None	1	1
W0548	Unnamed Tributary	2017	Periphyton Density, Filamentous	NR	1	1
W0548	Unnamed Tributary	2017	Periphyton Density, Film	NR	1	1
W0548	Unnamed Tributary	2017	Turbidity	None	1	1

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Unnamed Tributary (MA73-33) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 combined station in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples at the upstream end of this Unnamed Tributary to Neponset River, (locally known as Meadow Brook) at W0548 & NepRWA_MEB001 [where underground culvert daylights near Meadow Brook Rd (E of Pleasant St), Norwood & Meadow Brook at Sunnyside Rd] from 2011-2014 and 2017-2022 (n=5-8/yr). Analysis of the recent five years of the multi-year limited frequency dataset from this station indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 100%), 5 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018-2022, n=3-6) and cumulatively across years 100% of intervals had GMs >126 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0548	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Neponset River, locally known as Meadow Brook. Sampled where it comes out of underground culvert near Meadow Brook Road (east of Pleasant Street), Norwood]	42.184422	-71.193827
NepRWA_MEB001	Neponset River Watershed Association	Water Quality	Meadow Brook Road	Meadow Brook @ Sunnyside Road	42.184667	-71.193980

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(MassDEP Undated 10) (MassDEP Undated 6) (NepRWA 2023) (MassDEP Undated 4)

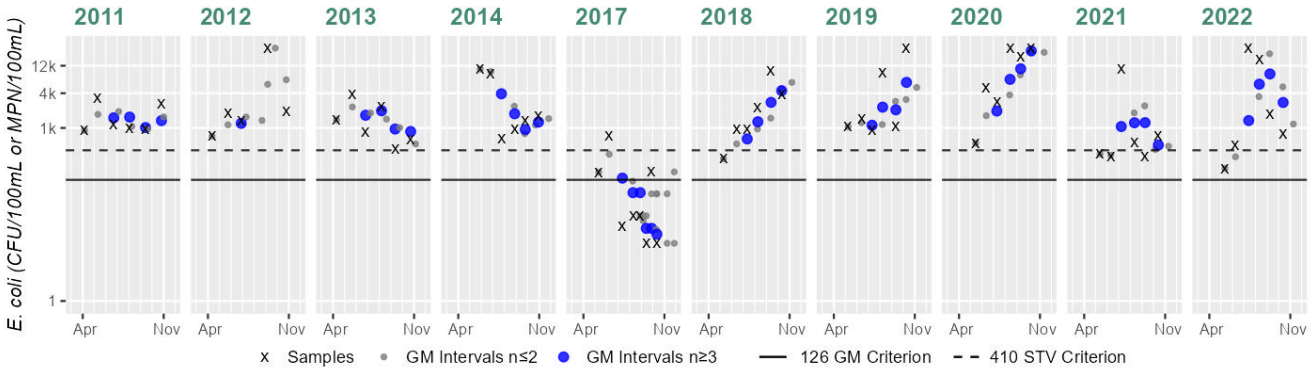
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0548	MassDEP	E. coli	08/29/17	09/28/17	2	30	173	72
NepRWA_MEB001	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	907	3260	1416

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_MEB001	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	723	24200	2411
NepRWA_MEB001	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	435	3870	1200
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	657	10500	2223
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	717	44
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	292	9800	1689
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	906	24200	2619
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	546	24200	6521
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	318	10500	731
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	199	24200	1928

Station MASSDEP_W0548 & NepRWA_MEB001 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	1416
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	5
SeasGM	2411
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	5
%n>STV	100%

Variable*	Result
Samples	6
SeasGM	1200
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	6
SeasGM	2223
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	8
SeasGM	49
#GMI	6
#GMI Ex	1
%GMI Ex	16%
n>STV	1
%n>STV	12%

Variable*	Result
Samples	6
SeasGM	1689
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	2619
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	6
SeasGM	6521
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	6
SeasGM	731
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	1928
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Cumulative %GMI Exceedance Current (2011-2022)
87%

Cumulative %GMI Exceedance Current (Recent 5 Years)
100%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Unnamed Tributary (MA73-33) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 combined station in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in this Unnamed Tributary to Neponset River (locally known as Meadow Brook) from 2008-2022 at 2 stations/combined stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at combined station W0548 & NepRWA_MEB001 [where underground culvert daylights near Meadow Brook Rd (E of Pleasant St), Norwood & Meadow Brook at Sunnyside Rd] from 2008-2010 (historic n=5-6/yr) as well as 2011-2014 and 2017-2022 (current n=5-8/yr), and three-quarters of the way down at W1950 [~400 ft upstream of Dean St, Norwood] from Apr-Sep 2009 (n=5). Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from W0548 & NepRWA_MEB001 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 100%), 4 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2018-2020 and 2022, n=3-6) and cumulatively across years 100% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment. It should be noted that data in the historic IR window for this AU were also indicative of an Escherichia Coli (E. Coli) impairment; i.e. at W0548 & NepRWA_MEB001 100% cumulatively of the GM intervals >244 CFU/100ml for the multi year low frequency dataset and at W1950 100% of the GM intervals >244 CFU/100ml for the single year low frequency dataset.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0548	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Neponset River, locally known as Meadow Brook. Sampled where it comes out of underground culvert near Meadow Brook Road (east of Pleasant Street), Norwood]	42.184422	-71.193827
W1950	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Neponset River locally known as 'Meadow Brook', approximately 400 feet upstream of Dean Street, Norwood]	42.179495	-71.188203
NepRWA_MEB001	Neponset River Watershed Association	Water Quality	Meadow Brook Road	Meadow Brook @ Sunnyside Road	42.184667	-71.193980

Bacteria Data

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

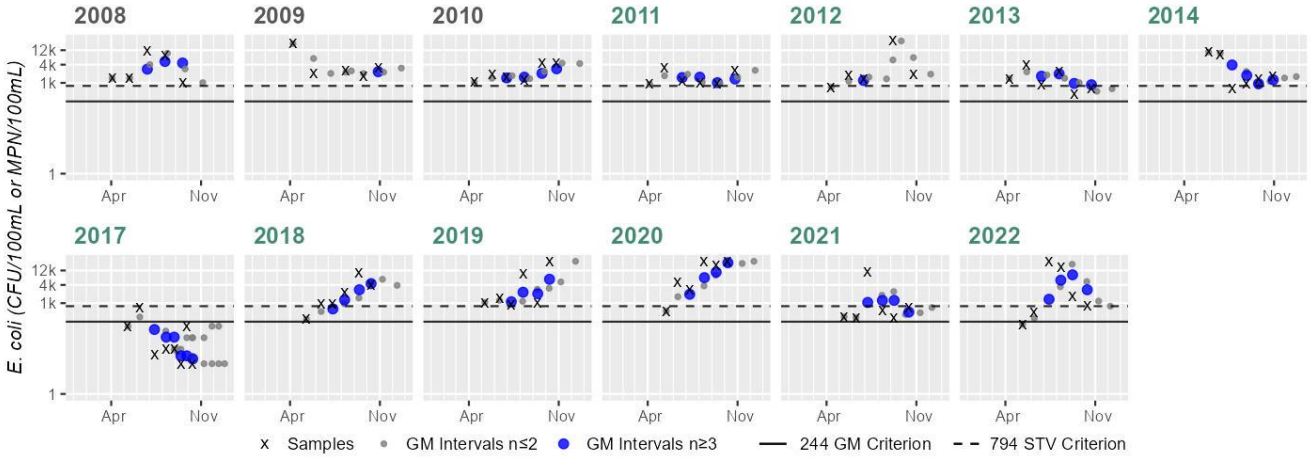
(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

[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
W0548	MassDEP	E. coli	08/29/17	09/28/17	2	30	173	72
W1950	MassDEP	E. coli	04/28/09	09/15/09	5	80	5600	704
NepRWA_MEB001	Neponset River Watershed Association	E. coli	04/02/08	09/17/08	5	1020	11200	2861
NepRWA_MEB001	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	5	1650	19900	3487
NepRWA_MEB001	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	1040	4610	2061
NepRWA_MEB001	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	907	3260	1416
NepRWA_MEB001	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	723	24200	2411
NepRWA_MEB001	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	435	3870	1200
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	657	10500	2223
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	717	44
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	292	9800	1689
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	906	24200	2619
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	546	24200	6521
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	318	10500	731
NepRWA_MEB001	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	199	24200	1928

Station MASSDEP_W0548 & NepRWA_MEB001 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	2861
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	5
%n>STV	100%

Variable*	Result
Samples	5
SeasGM	3487
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	5
%n>STV	100%

Variable*	Result
Samples	6
SeasGM	2061
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	6
SeasGM	1416
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	5
SeasGM	2411
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	4
%n>STV	80%

Variable*	Result
Samples	6
SeasGM	1200
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	2223
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	8
SeasGM	49
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	1689
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	2619
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	6
SeasGM	6521
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	731
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

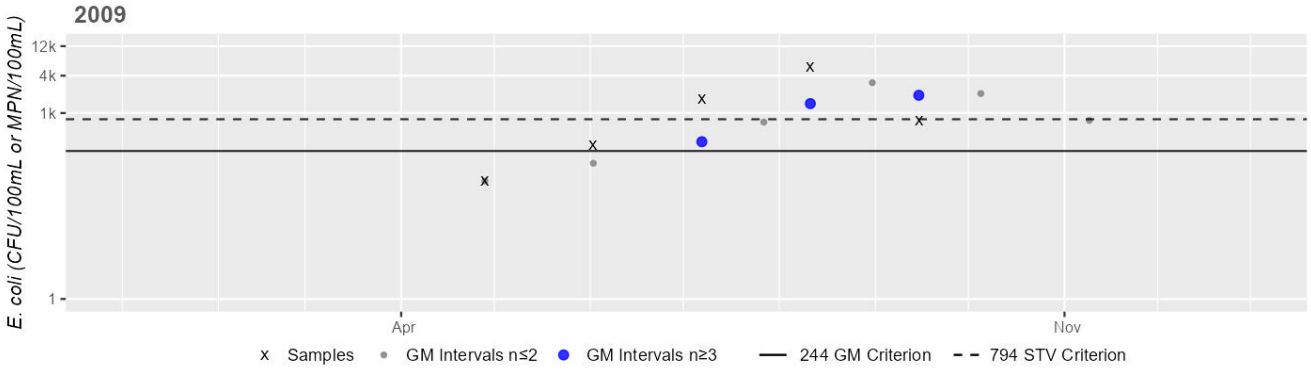
Variable*	Result
Samples	6
SeasGM	1928
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
100%	84%	100%

**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 MASSDEP_W1950 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	704
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	2
%n>STV	40%

Cumulative %GMI Exceedance
Historic (1997-2010)
100%

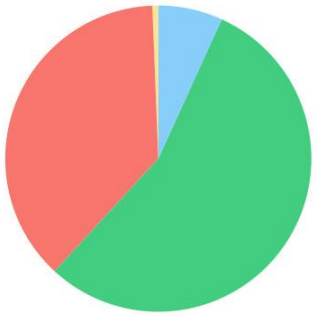
**Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exeedances; %GMI Ex = % GMI Exeedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Unnamed Tributary (MA73-34)

Location:	Headwaters, outlet Clark Pond, Walpole to confluence with Neponset River, Walpole (locally considered part of Spring Brook) (excluding the approximately 0.2 miles through Diamond Pond and the approximately 0.2 miles through Memorial Pond segment MA73012).
AU Type:	RIVER
AU Size:	0.8 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA73-34)

Watershed Area: 2.13 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.13	2.13	0.70	0.70
Agriculture	0.6%	0.6%	0.2%	0.2%
Developed	37.5%	37.5%	31.3%	31.3%
Natural	55%	55%	53.1%	53.1%
Wetland	6.8%	6.8%	15.4%	15.4%
Impervious	18%	18%	15.5%	15.5%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Debris*)	--	Unchanged
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Escherichia Coli (E. Coli)	--	Added
5	5	Trash	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Debris*)	Illegal Dumps or Other Inappropriate Waste Disposal (N)	--	--	X	X	X
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Trash	Illegal Dumps or Other Inappropriate Waste Disposal (N)	--	--	X	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unnamed Tributary (MA73-34) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for this Unnamed Tributary (MA73-34) locally considered part of Spring Brook, continues to be assessed as as Not Supporting with the prior Trash and Debris impairments being carried forward. No new data are available to evaluate the Aesthetics Use for this Unnamed Tributary AU.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Unnamed Tributary (MA73-34) continues to be assessed as Not Supporting. The prior Debris and Trash impairments (from the Aesthetics Use) are being carried forward. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples three-quarters of the way down this Unnamed Tributary (locally considered part of Spring Brook) at NepRWA_SPB016 [Rt. 27, Walpole] from 2011-2014 and 2017-2022 (n=5-6/yr). Analysis of the recent five years of the multi-year limited frequency dataset from this station indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 50-100%), and while only 1 yr had ≥2 samples exceed the 410 CFU/100ml STV (2018, n=2), cumulatively across years 73% of intervals had GMs >126 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

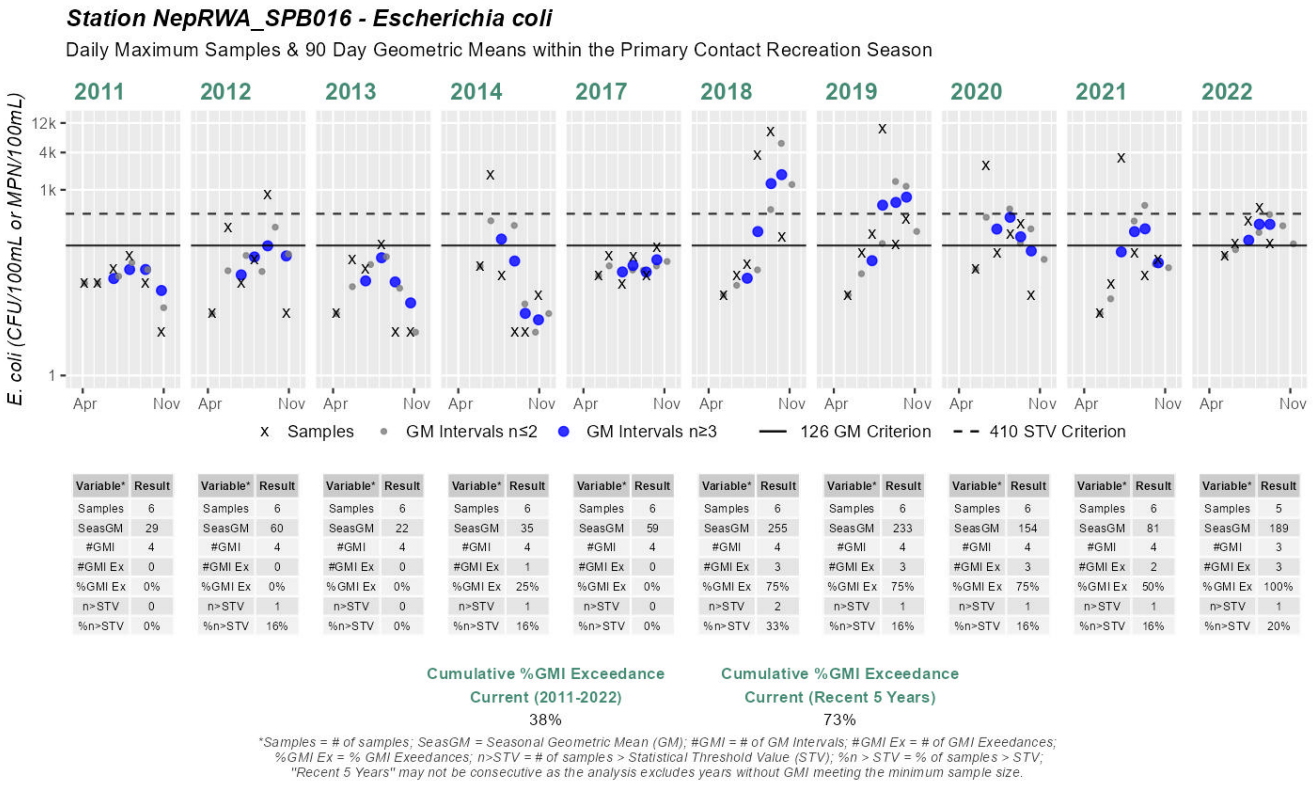
Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_SPB016	Neponset River Watershed Association	Water Quality	Spring Brook	Route 27, Walpole	42.146483	-71.250650

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)
(NepRWA 2023) (MassDEP Undated 4)
[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
NepRWA_SPB016	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	85	29
NepRWA_SPB016	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	839	60
NepRWA_SPB016	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	132	22
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	1720	35

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	30	118	59
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	20	8660	255
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	9800	233
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	2480	154
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	3260	81
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/12/22	09/08/22	5	86	512	189



Variable*	2011	2012	2013	2014	2017	2018	2019	2020	2021	2022
Samples	6	6	6	6	6	6	6	6	6	5
SeasGM	29	60	22	35	59	255	233	154	81	189
#GMI	4	4	4	4	4	4	4	4	4	3
#GMI Ex	0	0	0	1	0	3	3	3	2	3
%GMI Ex	0%	0%	0%	25%	0%	75%	75%	75%	50%	100%
n>STV	0	1	0	1	0	2	1	1	1	1
%n>STV	0%	16%	0%	16%	0%	33%	16%	16%	16%	20%

*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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Unnamed Tributary (MA73-34) continues to be assessed as Not Supporting. The prior Debris and Trash impairments (from the Aesthetics Use) are being carried forward. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2018-2022. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in this Unnamed Tributary (locally considered part of Spring Brook) from 2008-2022 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: three-quarters of the way down the AU at NepRWA_SPB016 [Rt. 27, Walpole] from 2008-2010 (historic n=6/yr) as well as 2011-2014 & 2017-2022 (current n=5-6/yr), and close to the downstream end at W1952 [W of Neponset View Terrace, locally considered part of Spring Brook, ~420 ft upstream from confluence with the Neponset River, Walpole] from Apr-Sep 2009 (n=5). Since bacteria data from the historic IR window are all indicative of good water quality conditions, only the analysis from the current IR window (1 station) will be summarized here. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_SPB016 indicated 4 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2020 and 2022, 25-75%) and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2018, n=2), cumulatively across years 42% of intervals had GMs >244 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1952	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Neponset River west of Neponset View Terrace, locally considered part of Spring Brook, approximately 420 feet upstream from confluence with the Neponset River, Walpole]	42.148245	-71.253302
NepRWA_SPB016	Neponset River Watershed Association	Water Quality	Spring Brook	Route 27, Walpole	42.146483	-71.250650

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

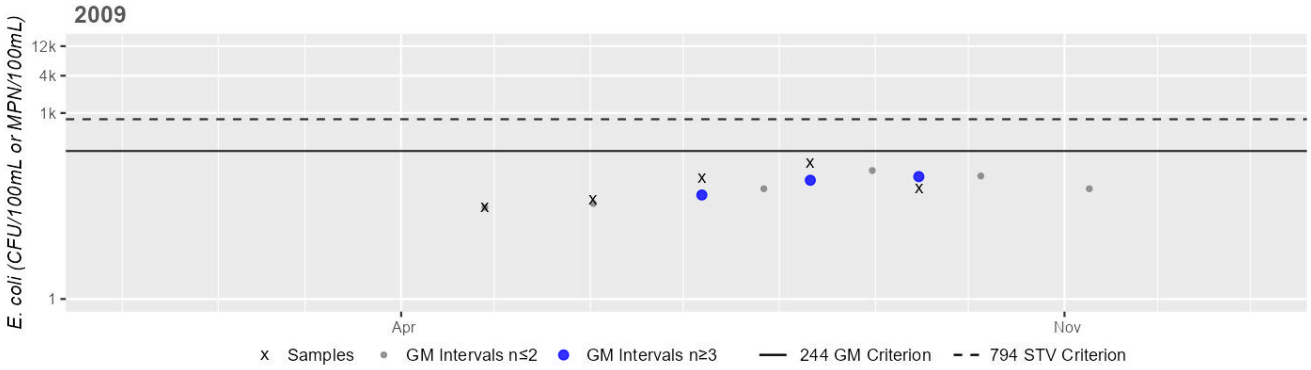
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1952	MassDEP	E. coli	04/28/09	09/15/09	5	30	155	63

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_SPB016	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	10	171	60
NepRWA_SPB016	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	41	350	151
NepRWA_SPB016	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	5	86	29
NepRWA_SPB016	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	85	29
NepRWA_SPB016	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	10	839	60
NepRWA_SPB016	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	5	132	22
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	1720	35
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	30	118	59
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	20	8660	255
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	20	9800	233
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	20	2480	154
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	3260	81
NepRWA_SPB016	Neponset River Watershed Association	E. coli	05/12/22	09/08/22	5	86	512	189

Station MASSDEP_W1952 - Escherichia coli

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



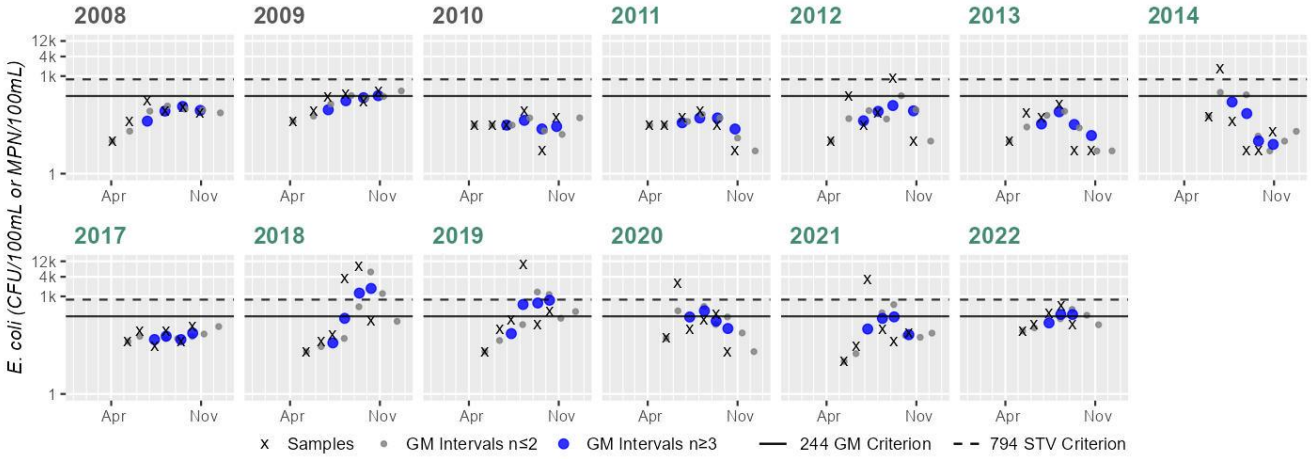
Variable*	Result
Samples	5
SeasGM	63
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
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 NepRWA_SPB016 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	60
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	151
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	29
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	29
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	60
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	22
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	35
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	59
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	255
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	233
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	154
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	81
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	189
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)
8%

Cumulative %GMI Exceedance Current (2011-2022)
20%

Cumulative %GMI Exceedance Current (Recent 5 Years)
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.*

Unnamed Tributary (MA73-35)

Location:	Unnamed tributary to Beaver Brook, headwaters outlet small unnamed pond east of Moose Hill Street, Sharon to mouth at confluence with Beaver Brook, Sharon.
AU Type:	RIVER
AU Size:	0.5 MILES
Classification/Qualifier:	B

No usable data were available for Unnamed Tributary (MA73-35) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

Unnamed Tributary (MA73-36)

Location:	Unnamed tributary locally known as "Davenport Creek" from Hallet Street, Boston to mouth at confluence with the Neponset River, Boston.
AU Type:	ESTUARY
AU Size:	0.01 SQUARE MILES
Classification/Qualifier:	SB: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None	--	Unchanged

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unnamed Tributary (MA73-36) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Unnamed Tributary (MA73-36): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0033 sq mi (53%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0033 sq mi (53%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as entirely prohibited.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 7)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
GBH3.0	Dorchester Bay And Neponset River	Prohibited	0.00327	52.6%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Unnamed Tributary (MA73-36) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
No bacteria data are available to assess the Primary Contact Recreation Use for Unnamed Tributary (MA73-36) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0033 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 this Unnamed Tributary to Neponset River.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 7)

Summary
Unnamed Tributary (MA73-36): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0033 sq mi (53%). 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
Insufficient Information	NO

2024/26 Use Attainment Summary

No bacteria data are available to assess the Secondary Contact Recreation Use for Unnamed Tributary (MA73-36) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0033 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 this Unnamed Tributary to Neponset River.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 7)

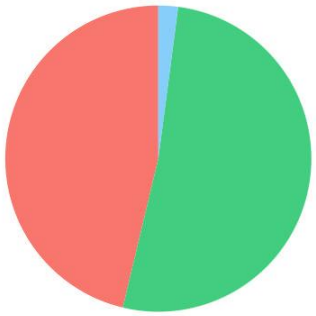
Summary
Unnamed Tributary (MA73-36): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0033 sq mi (53%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Unquity Brook (MA73-26)

Location:	Isolated (urban): Headwaters (perennial portion) near Randolph Avenue, Milton to mouth at confluence with Gulliver Creek, Milton (Note: culverted portions of segment total approximately 1/3 of segment length, or 0.5 miles).
AU Type:	RIVER
AU Size:	1.6 MILES
Classification/Qualifier:	B

Unquity Brook (MA73-26)

Watershed Area: 1.38 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.38	1.38	0.22	0.22
Agriculture	0%	0%	0%	0%
Developed	46.3%	46.3%	37.3%	37.3%
Natural	51.7%	51.7%	58.5%	58.5%
Wetland	2.1%	2.1%	4.1%	4.1%
Impervious	29.7%	29.7%	23.2%	23.2%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Dewatering*)	--	Unchanged
5	5	(Physical Substrate Habitat Alterations*)	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Escherichia Coli (E. Coli)	2592	Unchanged
5	5	Fecal Coliform	2592	Unchanged
5	5	Fish Bioassessments	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged
5	5	Sedimentation/Siltation	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Dewatering*)	Channelization (Y)	X	--	--	--	--
(Dewatering*)	Source Unknown (N)	X	--	--	--	--
(Physical Substrate Habitat Alterations*)	Channelization (Y)	X	--	--	--	--
(Physical Substrate Habitat Alterations*)	Source Unknown (N)	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Fecal Coliform	Source Unknown (N)	--	--	--	X	X
Fish Bioassessments	Source Unknown (N)	X	--	--	--	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--
Sedimentation/Siltation	Source Unknown (N)	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unquity Brook (MA73-26) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Unquity Brook (MA73-26) 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 Unquity Brook (MA73-26) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 2 stations in 2018-2022. The prior Fecal Coliform impairment is also being carried forward. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in Unquity Brook from 2011-2022 at 2 stations. Samples were collected from the following stations/sample years, both close to the downstream end of the AU, from upstream to downstream as follows: NepRWA_UNB014 [Adams St, Milton] from 2011-2014 and 2017-2022 (n=6/yr) and NepRWA_UNB016 [Squantum St/Christopher Rd, Milton] from 2011-2014 and 2017-2022 (n=6/yr). Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_UNB014 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 100%), 5 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018-2022, n=3-6) and cumulatively across years 100% of intervals had GMs >126 CFU/100ml. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_UNB016 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018-2022, 75-100%), 5 yrs had ≥2 samples exceed the 410 CFU/100ml STV (2018-2022, n=3-5) and cumulatively across years 95% of intervals had GMs >126 CFU/100ml. The data from both NepRWA_UNB014 and NepRWA_UNB016 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_UNB014	Neponset River Watershed Association	Water Quality	Unquity Brook	Adams Street, Milton	42.260200	-71.046850
NepRWA_UNB016	Neponset River Watershed Association	Water Quality	Unquity Brook	Squantum St/Christopher Rd, Milton	42.261750	-71.046867

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(NepRWA 2023) (MassDEP Undated 4)

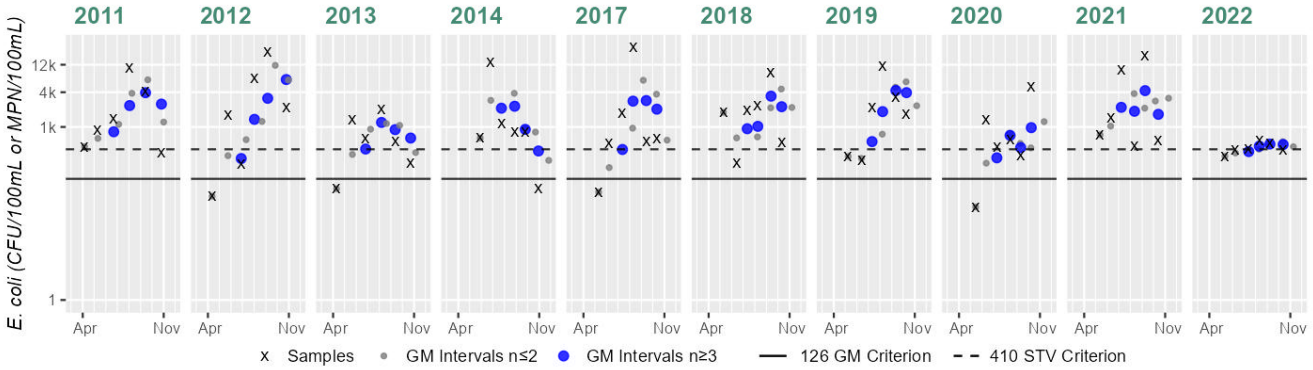
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_UNB014	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	359	10500	1434
NepRWA_UNB014	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	63	19900	1371
NepRWA_UNB014	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	85	2050	515
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	85	13000	900
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	74	24200	909
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	233	8660	1445
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	262	11200	1481
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	4880	532
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	457	17300	1903
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	309	591	430
NepRWA_UNB016	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	199	4350	649
NepRWA_UNB016	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	218	19900	1354
NepRWA_UNB016	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	63	1660	372
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	350	10500	1415
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	52	3450	458
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	10500	463
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	246	7700	1438

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	30	1270	362
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	85	24200	1085
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	691	229

Station NepRWA_UNB014 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	1434
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	1371
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	515
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	900
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	909
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	1445
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	1481
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	532
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	1903
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	6
SeasGM	430
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

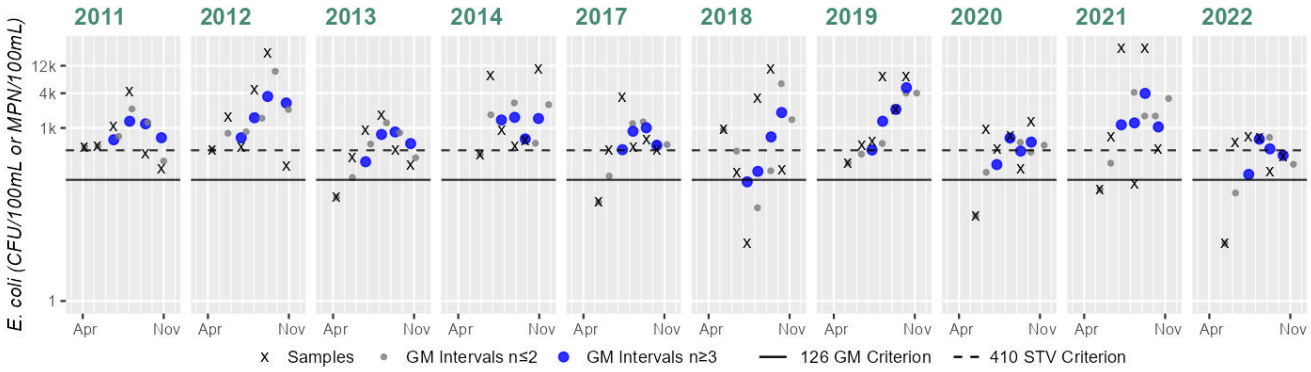
Cumulative %GMI Exceedance Current (2011-2022)
100%

Cumulative %GMI Exceedance Current (Recent 5 Years)
100%

**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 NepRWA_UNB016 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	649
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	1354
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	372
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	1415
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	458
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	463
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	1438
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	6
SeasGM	362
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	1085
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	229
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Cumulative %GMI Exceedance Current (2011-2022)
97%

Cumulative %GMI Exceedance Current (Recent 5 Years)
95%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Unquity Brook (MA73-26) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 2 stations in 2018-2022. The prior Fecal Coliform impairment is also being carried forward. MassDEP and Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Unquity Brook from 2008-2022 at 3 stations. Samples were collected from the following stations/sample years, all very close to the downstream end of the AU, from upstream to downstream as follows: W0579 [Rowe St (just S of Adams St), Milton] from Apr-Sep 2009 (n=6), NepRWA_UNB014 [Adams St, Milton] from 2008-2010 (historic n=6/yr) as well as 2011-2014 and 2017-2022 (current n=6/yr), NepRWA_UNB016 [Squantum St/Christopher Rd, Milton] from 2008-2010 (historic n=6/yr) as well as 2011-2014 and 2017-2022 (current n=6/yr). Since bacteria data from the historic IR window are also indicative of poor water quality conditions, only the analysis from the current IR window (2 stations) will be summarized here. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_UNB014 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 100%), 4 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2018-2021, n=2-4) and cumulatively across years 100% of intervals had GMs >244 CFU/100ml. Analysis of the recent five years of this multi-year limited frequency *E. coli* dataset from NepRWA_UNB016 indicated 5 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2018-2022, 50-100%), 4 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2018-2021, n=2-3) and cumulatively across years 80% of intervals had GMs >244 CFU/100ml. The data from both NepRWA_UNB014 and NepRWA_UNB016 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0579	MassDEP	Water Quality	Unquity Brook	[Rowe Street (just south of Adams Street), Milton]	42.259904	-71.047540
NepRWA_UNB014	Neponset River Watershed Association	Water Quality	Unquity Brook	Adams Street, Milton	42.260200	-71.046850
NepRWA_UNB016	Neponset River Watershed Association	Water Quality	Unquity Brook	Squantum St/Christopher Rd, Milton	42.261750	-71.046867

Bacteria Data

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

(MassDEP Undated 10) (MassDEP Undated 5) (NepRWA 2023) (MassDEP Undated 3)

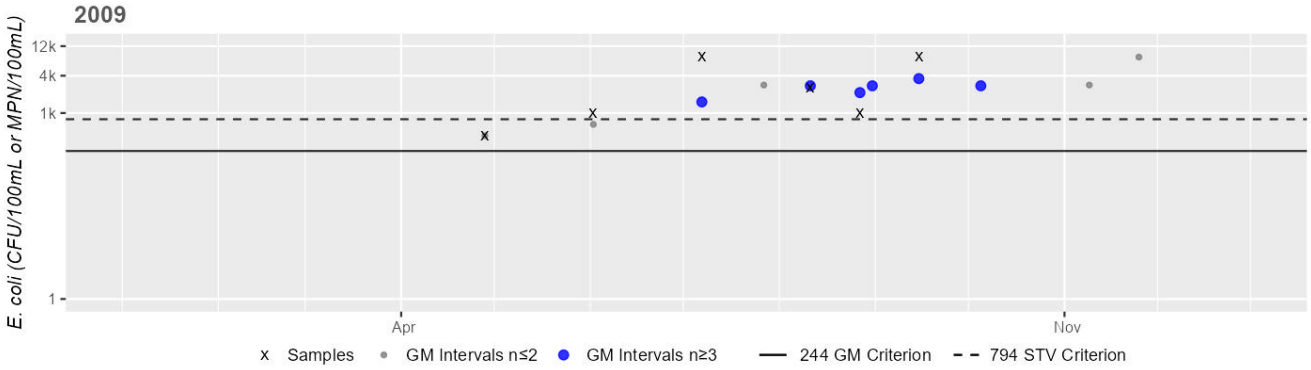
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0579	MassDEP	E. coli	04/28/09	09/15/09	6	430	8000	2037
NepRWA_UNB014	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	97	4880	854
NepRWA_UNB014	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	158	1410	661
NepRWA_UNB014	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	62	1610	419
NepRWA_UNB014	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	359	10500	1434
NepRWA_UNB014	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	63	19900	1371
NepRWA_UNB014	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	85	2050	515
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	85	13000	900
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	74	24200	909
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	233	8660	1445
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	262	11200	1481
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	41	4880	532
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	457	17300	1903
NepRWA_UNB014	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	309	591	430
NepRWA_UNB016	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	187	4880	936
NepRWA_UNB016	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	199	1520	688
NepRWA_UNB016	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	110	1010	356
NepRWA_UNB016	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	199	4350	649

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_UNB016	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	6	218	19900	1354
NepRWA_UNB016	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	6	63	1660	372
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	350	10500	1415
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	52	3450	458
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	10500	463
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	246	7700	1438
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	30	1270	362
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	85	24200	1085
NepRWA_UNB016	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	691	229

Station MASSDEP_W0579 - Escherichia coli

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



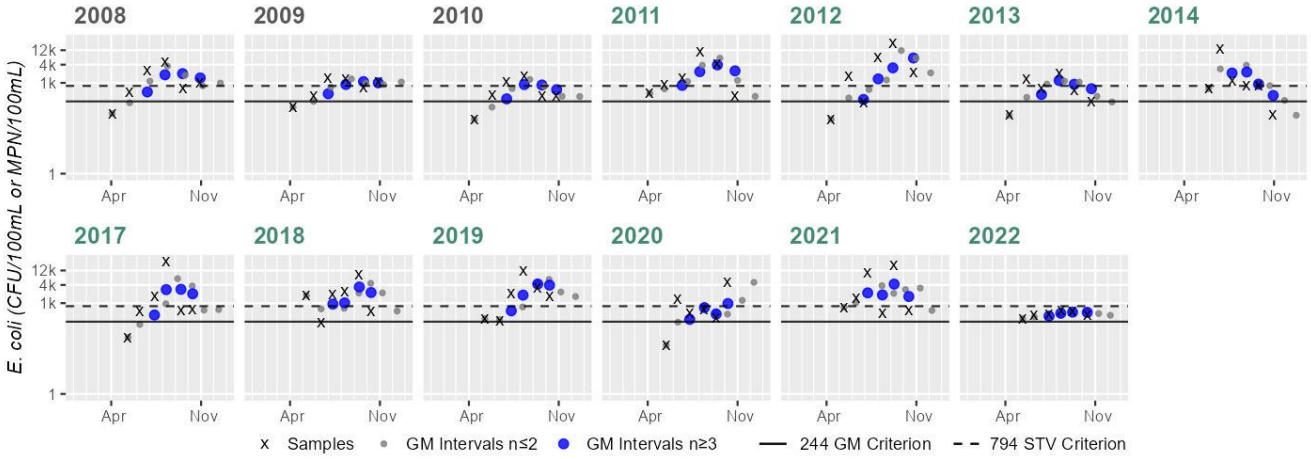
Variable*	Result
Samples	6
SeasGM	2037
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	5
%n>STV	83%

Cumulative %GMI Exceedance
Historic (1997-2010)
100%

**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 NepRWA_UNB014 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	854
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	661
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	419
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	1434
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	1371
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	515
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	900
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	909
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	1445
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	1481
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	532
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	1903
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

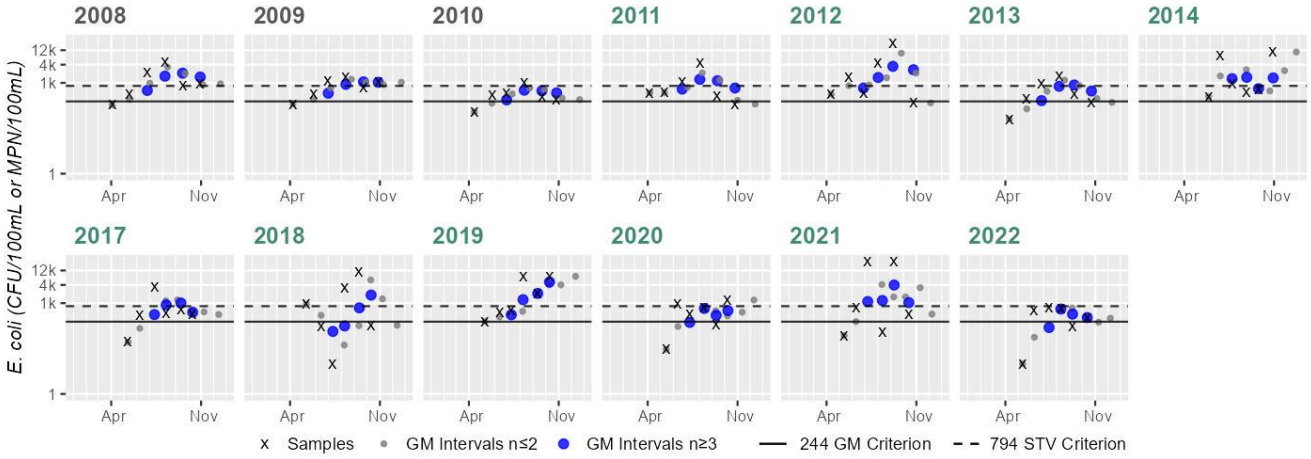
Variable*	Result
Samples	6
SeasGM	430
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	0
%n>STV	0%

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

**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 NepRWA_UNB016 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	936
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	688
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	356
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	649
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	1354
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	372
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	1415
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	458
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	463
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	1438
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	3
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	362
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	1085
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	229
#GMI	4
#GMI Ex	3
%GMI Ex	75%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
100%	90%	80%

**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.*

Willet Pond (MA73062)

Location:	Walpole/Westwood/Norwood (at northern end, includes former 2008 segment: Unnamed Tributary MA73-13).
AU Type:	FRESHWATER LAKE
AU Size:	205 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Mercury in Fish Tissue	33880	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Mercury in Fish Tissue	Atmospheric Deposition (Y)	--	X	--	--	--
Mercury in Fish Tissue	Source Unknown (N)	--	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 Willet Pond (MA73062) continues to be assessed as Not Supporting and the prior Mercury in Fish Tissue impairment is being carried forward. MDPH included a site-specific advisory for Willet Pond in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent MDPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Willet Pond (MA73062) 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 Willet Pond (MA73062) is assessed as Fully Supporting based on bacteria data collected at 2 stations in 2018-2022. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in Willet Pond from 2018-2022 at 2 stations. Samples were collected from the following stations/sample years: NepRWA_WIP002 [Willett Pond, E end, Walpole] from 2011-2014 and 2017-2022 (n=3-6/yr) and also at NepRWA_WIP003 [Willett Pond, southern site, Walpole] from 2011-2014 and 2017-2021 (n=5-6/yr). Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_WIP002 indicated 1 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2018, 50%), 0 yrs had ≥2 samples exceed the 410 CFU/100ml STV, and cumulatively across years 11% of intervals had GMs >126 CFU/100ml. Analysis of the recent five years of the multi-year limited frequency *E. coli* dataset from NepRWA_WIP003 indicated 1 out of 5 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2019, 25%), 0 yrs had ≥2 samples exceed the 410 CFU/100ml STV, and cumulatively across years 5% of intervals had GMs >126 CFU/100ml. *E. coli* data from both NepRWA_WIP002 and NepRWA_WIP003 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_WIP002	Neponset River Watershed Association	Water Quality	Willett Pond, east end	Willett Pond, east end, Walpole	42.181207	-71.234776
NepRWA_WIP003	Neponset River Watershed Association	Water Quality	Willett Pond, southern site	Willett Pond, southern site, Walpole	42.171260	-71.234251

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)

(NepRWA 2023) (MassDEP Undated 4)

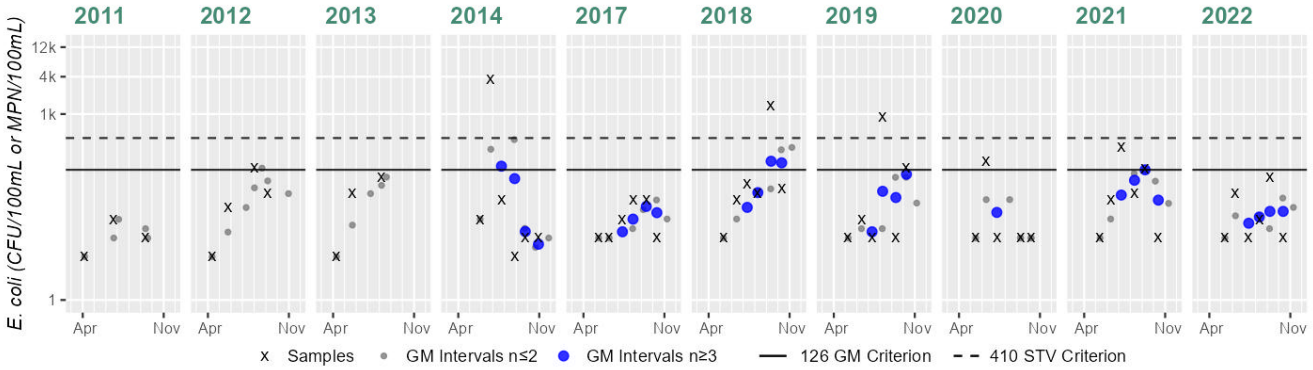
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_WIP002	Neponset River Watershed Association	E. coli	04/06/11	09/14/11	3	5	20	10
NepRWA_WIP002	Neponset River Watershed Association	E. coli	04/11/12	09/05/12	4	5	134	32
NepRWA_WIP002	Neponset River Watershed Association	E. coli	04/10/13	08/07/13	3	5	96	29
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	3650	33
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	41	17
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	1350	71
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	909	36
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	5	10	173	17
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	292	44
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	97	21
NepRWA_WIP003	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	20	11
NepRWA_WIP003	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	5	1110	41
NepRWA_WIP003	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	5	2500	45
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	10	4110	38
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/11/17	09/14/17	5	10	41	16
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	86	21

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	857	47
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	52	16
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	292	26

Station NepRWA_WIP002 - Escherichia coli

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



Variable*	Result
Samples	3
SeasGM	10
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	32
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

Variable*	Result
Samples	6
SeasGM	33
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	17
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	71
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	36
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

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

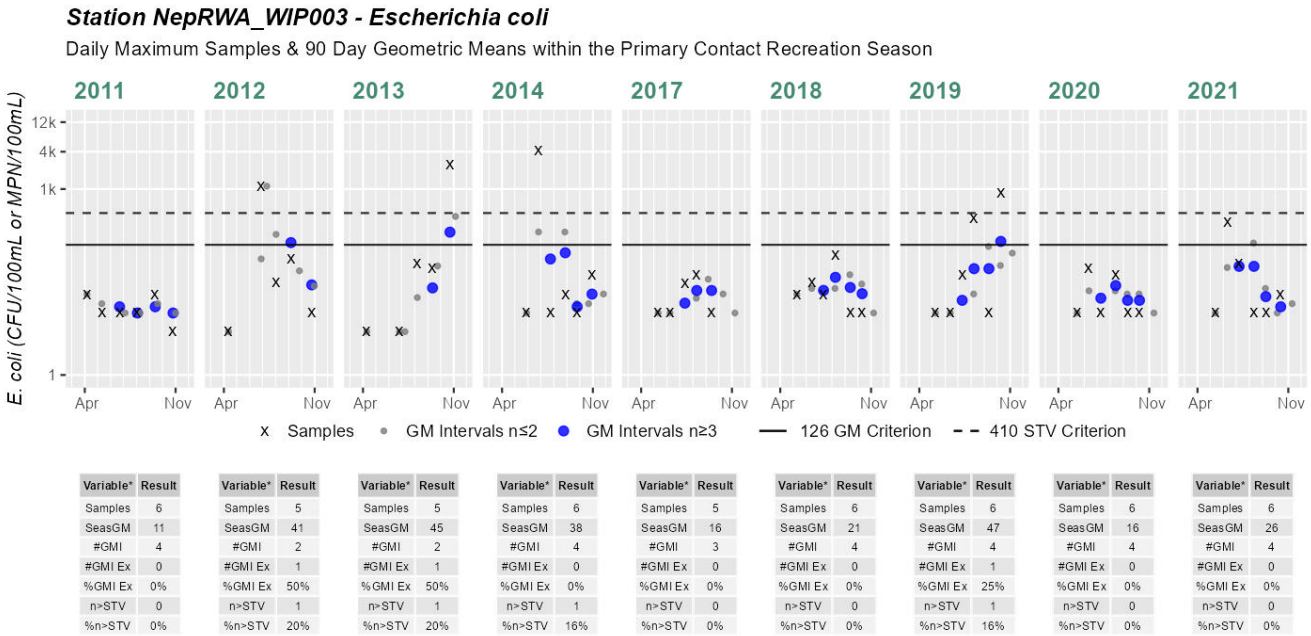
Variable*	Result
Samples	6
SeasGM	44
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	21
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Current (2011-2022)
12%

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.*



Variable*	Result
Samples	6
SeasGM	11
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	41
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	5
SeasGM	45
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	38
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	16
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	21
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	47
#GMI	4
#GMI Ex	1
%GMI Ex	25%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	16
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	26
#GMI	4
#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)
5%

**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.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Willet Pond (MA73062) is assessed as Fully Supporting based on bacteria data collected at 2 stations in 2018-2022. Neponset River Watershed Association (NepRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Willet Pond from 2008-2022 at 2 stations. Samples were collected from the following stations/sample years: NepRWA_WIP002 [Willett Pond, E end, Walpole] from 2008-2010 (historic n=4-6/yr) as well as 2011-2014 and 2017-2022 (current n=3-6/yr) and NepRWA_WIP003 [Willett Pond, southern site, Walpole] from 2008-2010 (historic n=4-6/yr) as well as 2011-2014 and 2017-2021 (current n=5-6/yr). Since bacteria data from the historic IR window are all indicative of good water quality conditions, only the analysis from the current IR window will be summarized here. Analysis of the recent five years of the multi-year limited frequency *E. coli* datasets from both NepRWA_WIP002 & NepRWA_WIP003 indicated 0 out of 5 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml, 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, and cumulatively across years 0% of intervals had GMs >244 CFU/100ml. *E. coli* data from both stations NepRWA_WIP002 and NepRWA_WIP003 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NepRWA_WIP002	Neponset River Watershed Association	Water Quality	Willett Pond, east end	Willett Pond, east end, Walpole	42.181207	-71.234776
NepRWA_WIP003	Neponset River Watershed Association	Water Quality	Willett Pond, southern site	Willett Pond, southern site, Walpole	42.171260	-71.234251

Bacteria Data

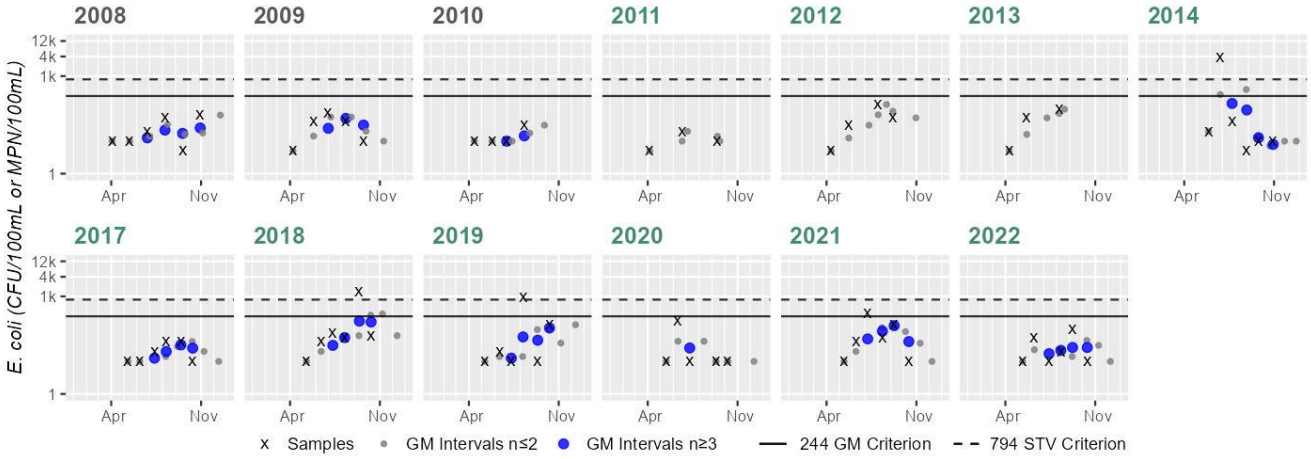
Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)
(NepRWA 2023) (MassDEP Undated 3)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_WIP002	Neponset River Watershed Association	E. coli	04/02/08	10/29/08	6	5	63	17
NepRWA_WIP002	Neponset River Watershed Association	E. coli	04/08/09	09/23/09	5	5	74	22
NepRWA_WIP002	Neponset River Watershed Association	E. coli	04/14/10	08/11/10	4	10	31	13
NepRWA_WIP002	Neponset River Watershed Association	E. coli	04/06/11	09/14/11	3	5	20	10
NepRWA_WIP002	Neponset River Watershed Association	E. coli	04/11/12	09/05/12	4	5	134	32
NepRWA_WIP002	Neponset River Watershed Association	E. coli	04/10/13	08/07/13	3	5	96	29
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	5	3650	33
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/11/17	10/12/17	6	10	41	17
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	1350	71
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	909	36

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	5	10	173	17
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	292	44
NepRWA_WIP002	Neponset River Watershed Association	E. coli	05/12/22	10/13/22	6	10	97	21
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/14/08	09/17/08	4	5	41	20
NepRWA_WIP003	Neponset River Watershed Association	E. coli	04/08/09	10/28/09	6	5	52	13
NepRWA_WIP003	Neponset River Watershed Association	E. coli	04/14/10	10/27/10	6	10	161	44
NepRWA_WIP003	Neponset River Watershed Association	E. coli	04/06/11	10/26/11	6	5	20	11
NepRWA_WIP003	Neponset River Watershed Association	E. coli	04/11/12	10/24/12	5	5	1110	41
NepRWA_WIP003	Neponset River Watershed Association	E. coli	04/10/13	10/23/13	5	5	2500	45
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/29/14	10/30/14	6	10	4110	38
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/11/17	09/14/17	5	10	41	16
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/10/18	10/11/18	6	10	86	21
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/09/19	10/10/19	6	10	857	47
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/14/20	10/08/20	6	10	52	16
NepRWA_WIP003	Neponset River Watershed Association	E. coli	05/13/21	10/14/21	6	10	292	26

Station NepRWA_WIP002 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	17
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	22
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	13
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	3
SeasGM	10
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	32
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

Variable*	Result
Samples	6
SeasGM	33
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	17
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	71
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	36
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

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

Variable*	Result
Samples	6
SeasGM	44
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

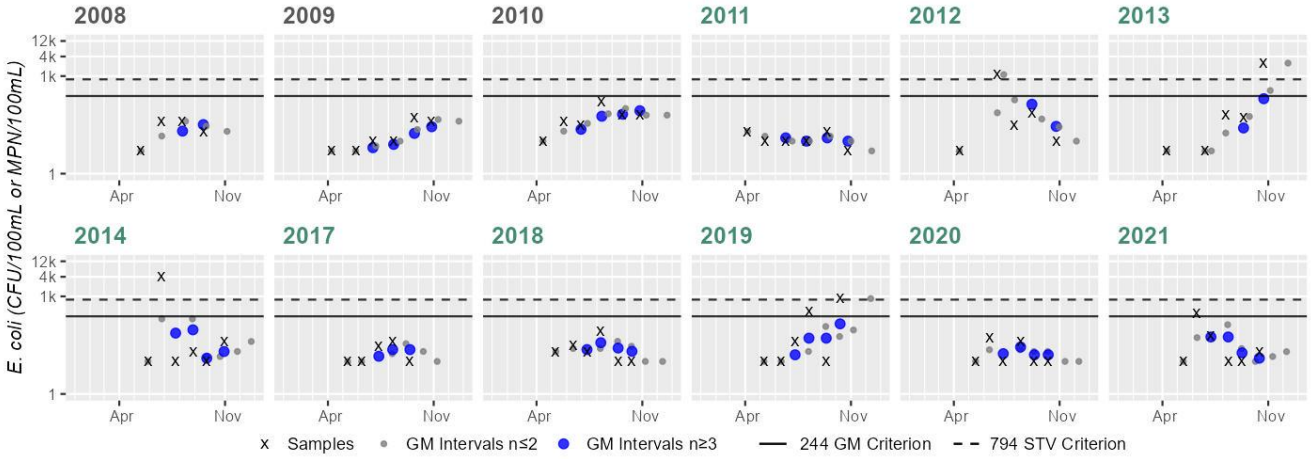
Variable*	Result
Samples	6
SeasGM	21
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)	Cumulative %GMI Exceedance Current (2011-2022)	Cumulative %GMI Exceedance Current (Recent 5 Years)
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 NepRWA_WIP003 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	20
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	13
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	44
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	11
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	41
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	5
SeasGM	45
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

Variable*	Result
Samples	6
SeasGM	38
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	5
SeasGM	16
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	21
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	47
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	16
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	26
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance Historic (1997-2010)
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.*

Woods Pond (MA73055)

Location:	Stoughton.
AU Type:	FRESHWATER LAKE
AU Size:	14 ACRES
Classification/Qualifier:	B

No usable data were available for Woods Pond (MA73055) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

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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 3.

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 4.

MassDEP. "Open file analysis of MassDEP WPP water quality data collected between 1997 and 2020 using 2024 CALM guidance." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 5.

MassDEP. "Open file analysis of MassDEP WPP water quality data collected between 2011 and 2020 using 2024 CALM guidance." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 6.

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