

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

**Appendix 35  
South 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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[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
Aaron River	MA94-28	5	5	(Fanwort*)	--	Unchanged
Aaron River	MA94-28	5	5	(Non-Native Aquatic Plants*)	--	Removed
Aaron River	MA94-28	5	5	Algae	--	Unchanged
Aaron River Reservoir	MA94178	4a	4a	Mercury in Fish Tissue	33880	Unchanged
Arnold School Pond	MA94004	3	3	None	--	Unchanged
Back River	MA94-66	2	2	None	--	Unchanged
Bartlett Pond	MA94005	3	3	None	--	Unchanged
Beaver Dam Brook	MA94-65	3	3	None	--	Unchanged
Ben Mann Brook	MA94-41	2	3	None	--	Unchanged
Billington Sea	MA94007	5	5	(Fanwort*)	--	Unchanged
Billington Sea	MA94007	5	5	Algae	--	Unchanged
Billington Sea	MA94007	5	5	Chlorophyll-a	--	Unchanged
Billington Sea	MA94007	5	5	Dissolved Oxygen Supersaturation	--	Unchanged
Billington Sea	MA94007	5	5	Harmful Algal Blooms	--	Unchanged
Billington Sea	MA94007	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Billington Sea	MA94007	5	5	Phosphorus, Total	--	Unchanged
Billington Sea	MA94007	5	5	Turbidity	--	Unchanged

<b>Waterbody</b>	<b>AU_ID</b>	<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
Black Jimmy Pond	MA94008	3	3	None	--	Unchanged
Black Mountain Pond	MA94009	4c	4c	(Aquatic Plants (Macrophytes)*)	--	Added
Black Mountain Pond	MA94009	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Bloody Pond	MA94015	2	2	None	--	Unchanged
Bluefish River	MA94-30	4a	4a	Fecal Coliform	61738	Unchanged
Boot Pond	MA94016	5	5	Dissolved Oxygen	--	Unchanged
Boot Pond	MA94016	5	5	Harmful Algal Blooms	--	Unchanged
Bound Brook	MA94-18	5	5	Turbidity	--	Unchanged
Bound Brook Pond	MA94017	3	3	None	--	Unchanged
Briggs Reservoir	MA94019	4c	4c	(Fanwort*)	--	Unchanged
Briggs Reservoir	MA94020	4c	4c	(Fanwort*)	--	Unchanged
Cohasset Cove	MA94-32	4a	4a	Fecal Coliform	61706, 61739	Unchanged
Cohasset Harbor	MA94-01	4a	4a	Fecal Coliform	61708	Unchanged
Cooks Pond	MA94027	5	5	(Aquatic Plants (Macrophytes)*)	--	Added
Cooks Pond	MA94027	5	5	(Fanwort*)	--	Unchanged
Cooks Pond	MA94027	5	5	(Non-Native Aquatic Plants*)	--	Unchanged
Cooks Pond	MA94027	5	5	Harmful Algal Blooms	--	Unchanged
Crossman Pond	MA94032	5	5	(Aquatic Plants (Macrophytes)*)	--	Unchanged
Crossman Pond	MA94032	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged

<b>Waterbody</b>	<b>AU_ID</b>	<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
Cushing Brook	MA94-40	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Drinkwater River	MA94-21	5	5	(Curly-leaf Pondweed*)	--	Unchanged
Drinkwater River	MA94-21	5	5	(Debris*)	--	Unchanged
Drinkwater River	MA94-21	5	5	(Fanwort*)	--	Unchanged
Drinkwater River	MA94-21	5	5	Algae	--	Unchanged
Drinkwater River	MA94-21	5	5	Chlorophyll-a	--	Unchanged
Drinkwater River	MA94-21	5	5	Dissolved Oxygen Supersaturation	--	Unchanged
Drinkwater River	MA94-21	5	5	Escherichia Coli (E. Coli)	61724	Unchanged
Drinkwater River	MA94-21	5	5	Fecal Coliform	61724	Unchanged
Drinkwater River	MA94-21	5	5	Mercury in Fish Tissue	--	Unchanged
Drinkwater River	MA94-21	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Drinkwater River	MA94-21	5	5	Phosphorus, Total	--	Unchanged
Drinkwater River	MA94-21	5	5	Transparency / Clarity	--	Unchanged
Drinkwater River	MA94-21	5	5	Trash	--	Unchanged
Duxbury Bay	MA94-15	5	5	Estuarine Bioassessments	--	Unchanged
Duxbury Bay	MA94-15	5	5	Fecal Coliform	61735	Unchanged
Eel River	MA94-37	2	2	None	--	Unchanged
Eel River	MA94-38	5	5	(Fanwort*)	--	Unchanged
Eel River	MA94-38	5	5	Benthic Macroinvertebrates	--	Unchanged
Elbow Pond	MA94035	3	3	None	--	Unchanged

<b>Waterbody</b>	<b>AU_ID</b>	<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
Ellisville Harbor	MA94-34	4a	4a	Fecal Coliform	61716	Unchanged
Factory Pond	MA94175	5	5	(Fish Passage Barrier*)	--	Unchanged
Factory Pond	MA94175	5	5	Mercury in Fish Tissue	--	Unchanged
First Herring Brook	MA94-36	4c	4c	(Fish Passage Barrier*)	--	Unchanged
First Herring Brook	MA94-63	4c	4c	(Fish Passage Barrier*)	--	Unchanged
French Stream	MA94-03	5	5	Dissolved Oxygen	--	Unchanged
French Stream	MA94-03	5	5	Escherichia Coli (E. Coli)	61718	Unchanged
French Stream	MA94-03	5	5	Fecal Coliform	61718	Unchanged
French Stream	MA94-03	5	5	Fish Bioassessments	--	Unchanged
French Stream	MA94-03	5	5	Phosphorus, Total	--	Unchanged
Fresh Pond	MA94040	5	5	(Fish Passage Barrier*)	--	Unchanged
Fresh Pond	MA94040	5	5	Mercury in Fish Tissue	--	Unchanged
Furnace Brook	MA94-52	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Furnace Pond	MA94043	5	5	(Fanwort*)	--	Unchanged
Furnace Pond	MA94043	5	5	Dissolved Oxygen	--	Unchanged
Furnace Pond	MA94043	5	5	Harmful Algal Blooms	--	Added
Furnace Pond	MA94043	5	5	Transparency / Clarity	--	Added
Governor Winslow House Pond	MA94047	3	3	None	--	Unchanged
Great Herring Pond	MA94050	5	5	Dissolved Oxygen	--	Unchanged
Great Herring Pond	MA94050	5	5	Mercury in Fish Tissue	33880	Unchanged

<b>Waterbody</b>	<b>AU_ID</b>	<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
Great Sandy Bottom Pond	MA94053	3	3	None	--	Unchanged
Great South Pond	MA94054	5	5	Dissolved Oxygen	--	Unchanged
Great South Pond	MA94054	5	5	Mercury in Fish Tissue	33880	Unchanged
Green Harbor	MA94-11	4a	4a	Fecal Coliform	61731	Unchanged
Green Harbor River	MA94-10	5	5	(Fish Passage Barrier*)	--	Unchanged
Green Harbor River	MA94-10	5	5	(Flow Regime Modification*)	--	Unchanged
Green Harbor River	MA94-10	5	5	Algae	--	Unchanged
Green Harbor River	MA94-10	5	5	Turbidity	--	Unchanged
Gunners Exchange Pond	MA94055	2	2	None	--	Unchanged
Halls Brook	MA94-57	3	3	None	--	Unchanged
Halls Brook	MA94-58	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Harrobs Corner Bog Pond	MA94061	3	3	None	--	Unchanged
Hedges Pond	MA94065	2	2	None	--	Unchanged
Herring Brook	MA94-29	4c	4c	(Fanwort*)	--	Unchanged
Herring Brook	MA94-29	4c	4c	(Non-Native Aquatic Plants*)	--	Removed
Herring River	MA94-07	4a	4a	Enterococcus	61727	Unchanged
Herring River	MA94-07	4a	4a	Fecal Coliform	61727	Unchanged
Herring River	MA94-44	2	2	None	--	Unchanged



Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Hobomock Pond	MA94177	3	3	None	--	Unchanged
Hoyts Pond	MA94070	2	2	None	--	Unchanged
Indian Brook	MA94-51	5	5	(Fanwort*)	--	Unchanged
Indian Brook	MA94-51	5	5	(Non-Native Aquatic Plants*)	--	Unchanged
Indian Brook	MA94-51	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Indian Brook	MA94-51	5	5	Phosphorus, Total	--	Unchanged
Indian Head Brook	MA94-49	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Indian Head Brook	MA94-50	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Indian Head Pond	MA94071	5	5	(Fish Passage Barrier*)	--	Unchanged
Indian Head Pond	MA94071	5	5	Harmful Algal Blooms	--	Unchanged
Indian Head River	MA94-04	5	5	(Fish Passage Barrier*)	--	Unchanged
Indian Head River	MA94-04	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Indian Head River	MA94-04	5	5	Mercury in Fish Tissue	--	Unchanged
Indian Head River	MA94-22	5	5	(Fish Passage Barrier*)	--	Unchanged
Indian Head River	MA94-22	5	5	Mercury in Fish Tissue	--	Unchanged
Indian Pond	MA94072	3	3	None	--	Unchanged
Iron Mine Brook	MA94-24	2	5	Escherichia Coli (E. Coli)	--	Added
Island Creek	MA94-46	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Island Creek	MA94-47	3	3	None	--	Unchanged
Island Creek Pond	MA94073	4c	4c	(Fanwort*)	--	Unchanged
Island Creek Pond	MA94073	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Island Pond	MA94074	5	5	Mercury in Fish Tissue	--	Unchanged

<b>Waterbody</b>	<b>AU_ID</b>	<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
Island Pond	MA94075	4c	4c	(Fanwort*)	--	Unchanged
Island Pond	MA94076	3	3	None	--	Unchanged
Jacobs Pond	MA94077	4c	4c	(Fanwort*)	--	Unchanged
Jacobs Pond	MA94077	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Jacobs Pond	MA94077	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Jones River	MA94-12	5	5	(Aquatic Plants (Macrophytes)*)	--	Unchanged
Jones River	MA94-12	5	5	(Dewatering*)	--	Unchanged
Jones River	MA94-12	5	5	(Fish Passage Barrier*)	--	Unchanged
Jones River	MA94-12	5	5	Algae	--	Unchanged
Jones River	MA94-12	5	5	Dissolved Oxygen	--	Unchanged
Jones River	MA94-12	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Jones River	MA94-12	5	5	Turbidity	--	Unchanged
Jones River	MA94-13	5	5	(Aquatic Plants (Macrophytes)*)	--	Unchanged
Jones River	MA94-13	5	5	(Dewatering*)	--	Unchanged
Jones River	MA94-13	5	5	Algae	--	Unchanged
Jones River	MA94-13	5	5	Dissolved Oxygen	--	Unchanged
Jones River	MA94-13	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Jones River	MA94-13	5	5	Turbidity	--	Unchanged
Jones River	MA94-14	5	5	Enterococcus	--	Added
Jones River	MA94-14	5	5	Fecal Coliform	61734	Unchanged
Jones River	MA94-14	5	5	Fish Bioassessments	--	Unchanged

<b>Waterbody</b>	<b>AU_ID</b>	<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
Jones River	MA94-14	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Keene Pond	MA94079	3	3	None	--	Unchanged
Lily Pond	MA94179	5	5	(Curly-leaf Pondweed*)	--	Unchanged
Lily Pond	MA94179	5	5	(Fanwort*)	--	Unchanged
Lily Pond	MA94179	5	5	(Non-Native Aquatic Plants*)	--	Unchanged
Lily Pond	MA94179	5	5	Transparency / Clarity	--	Unchanged
Little Harbor	MA94-20	4a	4a	Fecal Coliform	2586	Unchanged
Little Herring Pond	MA94082	2	2	None	--	Unchanged
Little Pond	MA94182	2	2	None	--	Unchanged
Little Sandy Bottom Pond	MA94085	3	3	None	--	Unchanged
Little South Pond	MA94087	2	2	None	--	Unchanged
Long Island Pond	MA94088	4c	4c	(Fanwort*)	--	Unchanged
Long Island Pond	MA94088	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Longwater Brook	MA94-39	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Lorings Bogs Pond	MA94089	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Lout Pond	MA94090	2	2	None	--	Unchanged
Lower Chandler Pond	MA94091	4c	4c	(Fanwort*)	--	Unchanged
Maquan Pond	MA94096	3	3	None	--	Unchanged
Morey Hole	MA94102	2	2	None	--	Unchanged

<b>Waterbody</b>	<b>AU_ID</b>	<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
Musquashcut Brook	MA94-64	5	5	Enterococcus	--	Unchanged
Musquashcut Pond	MA94-33	5	5	(Flow Regime Modification*)	--	Unchanged
Musquashcut Pond	MA94-33	5	5	Algae	--	Unchanged
Musquashcut Pond	MA94-33	5	5	Chlorophyll-a	--	Unchanged
Musquashcut Pond	MA94-33	5	5	Dissolved Oxygen Supersaturation	--	Unchanged
Musquashcut Pond	MA94-33	5	5	Enterococcus	61713	Changed
Musquashcut Pond	MA94-33	5	5	Fecal Coliform	61713	Unchanged
Musquashcut Pond	MA94-33	5	5	Phosphorus, Total	--	Unchanged
North Hill Marsh Pond	MA94109	3	3	None	--	Unchanged
North River	MA94-05	5	5	Enterococcus	61725	Changed
North River	MA94-05	5	5	Fecal Coliform	61725	Unchanged
North River	MA94-05	5	5	Mercury in Fish Tissue	--	Unchanged
North River	MA94-06	4a	4a	Fecal Coliform	61730	Unchanged
North Triangle Pond	MA94110	2	2	None	--	Unchanged
Old Oaken Bucket Pond	MA94113	5	5	(Fanwort*)	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Old Oaken Bucket Pond	MA94113	5	5	(Non-Native Aquatic Plants*)	--	Unchanged
Old Oaken Bucket Pond	MA94113	5	5	Phosphorus, Total	--	Unchanged
Oldham Pond	MA94114	5	5	(Asian Clam*)	--	Unchanged
Oldham Pond	MA94114	5	5	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
Oldham Pond	MA94114	5	5	Harmful Algal Blooms	--	Unchanged
Pembroke Street South Pond	MA94117	4c	4c	(Fanwort*)	--	Unchanged
Philips Brook	MA94-48	2	2	None	--	Unchanged
Pine Lake	MA94120	3	3	None	--	Unchanged
Pine Street Pond	MA94121	3	3	None	--	Unchanged
Plymouth Bay	MA94-17	5	5	Fecal Coliform	--	Unchanged
Plymouth Harbor	MA94-16	5	5	Estuarine Bioassessments	--	Unchanged
Plymouth Harbor	MA94-16	5	5	Fecal Coliform	61737	Unchanged
Pudding Brook	MA94-60	2	2	None	--	Unchanged
Reeds Millpond	MA94126	4c	4c	(Fanwort*)	--	Unchanged
Reservoir	MA94127	4c	4c	(Flow Regime Modification*)	--	Unchanged
Reservoir	MA94186	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Round Pond	MA94131	3	3	None	--	Unchanged
Russell Millpond	MA94132	5	5	Algae	--	Unchanged
Russell Millpond	MA94132	5	5	Dissolved Oxygen	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Russell Pond	MA94133	4c	4c	(Fanwort*)	--	Unchanged
Russell Pond	MA94133	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Savery Pond	MA94136	5	5	Harmful Algal Blooms	--	Unchanged
Savery Pond	MA94136	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Savery Pond	MA94136	5	5	Phosphorus, Total	--	Unchanged
Scituate Harbor	MA94-02	5	5	Estuarine Bioassessments	--	Unchanged
Scituate Harbor	MA94-02	5	5	Fecal Coliform	61715	Unchanged
Second Herring Brook	MA94-26	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Second Herring Brook	MA94-31	4a	4a	Fecal Coliform	61721	Unchanged
Shallow Pond	MA94140	3	3	None	--	Unchanged
Ship Pond	MA94142	3	3	None	--	Unchanged
Silver Lake	MA94143	5	5	(Fish Passage Barrier*)	--	Unchanged
Silver Lake	MA94143	5	5	(Flow Regime Modification*)	--	Unchanged
Silver Lake	MA94143	5	5	Dissolved Oxygen	--	Unchanged
Smelt Brook	MA94-54	5	5	(Fish Passage Barrier*)	--	Unchanged
Smelt Brook	MA94-54	5	5	Turbidity	--	Unchanged
Smelt Brook	MA94-56	3	3	None	--	Unchanged
Smelt Pond	MA94184	4c	4c	(Fanwort*)	--	Unchanged
Smelt Pond	MA94184	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Smelt Pond	MA94184	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

<b>Waterbody</b>	<b>AU_ID</b>	<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
South River	MA94-08	5	5	(Fish Passage Barrier*)	--	Unchanged
South River	MA94-08	5	5	Dissolved Oxygen	--	Unchanged
South River	MA94-09	4a	4a	Enterococcus	61728	Unchanged
South River	MA94-09	4a	4a	Fecal Coliform	61728	Unchanged
South Triangle Pond	MA94149	3	3	None	--	Unchanged
Studleys Pond	MA94151	5	5	Fecal Coliform	--	Unchanged
Studleys Pond	MA94151	5	5	PFAS in Fish Tissue	--	Added
Tack Factory Pond	MA94152	4c	4c	(Fish Passage Barrier*)	--	Unchanged
The Gulf	MA94-19	4a	4a	Fecal Coliform	61710	Unchanged
Third Herring Brook	MA94-27	5	5	(Fish Passage Barrier*)	--	Unchanged
Third Herring Brook	MA94-27	5	5	Escherichia Coli (E. Coli)	--	Unchanged
Torrey Pond	MA94157	4c	4c	(Fanwort*)	--	Unchanged
Torrey Pond	MA94157	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Town Brook	MA94-42	4c	4c	(Curly-leaf Pondweed*)	--	Unchanged
Town Brook	MA94-42	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Triangle Pond	MA94160	5	2	Harmful Algal Blooms	--	Removed
Tussock Brook	MA94-67	3	3	None	--	Unchanged
Tussock Brook	MA94-68	2	2	None	--	Unchanged
Unnamed Tributary	MA94-35	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Unnamed Tributary	MA94-43	3	3	None	--	Unchanged

<b>Waterbody</b>	<b>AU_ID</b>	<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
Unnamed Tributary	MA94-45	3	3	None	--	Unchanged
Unnamed Tributary	MA94-53	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Unnamed Tributary	MA94-55	2	2	None	--	Unchanged
Unnamed Tributary	MA94-59	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Unnamed Tributary	MA94-61	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Unnamed Tributary	MA94-62	3	3	None	--	Unchanged
Upper Chandler Pond	MA94165	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Wampatuck Pond	MA94168	5	5	(Fanwort*)	--	Unchanged
Wampatuck Pond	MA94168	5	5	(Fish Passage Barrier*)	--	Unchanged
Wampatuck Pond	MA94168	5	5	Chlorophyll-a	--	Unchanged
Wampatuck Pond	MA94168	5	5	Dissolved Oxygen Supersaturation	--	Unchanged
Wampatuck Pond	MA94168	5	5	Harmful Algal Blooms	--	Unchanged
Wampatuck Pond	MA94168	5	5	Phosphorus, Total	--	Unchanged
Wampatuck Pond	MA94168	5	5	Transparency / Clarity	--	Unchanged
West Chandler Pond	MA94170	3	3	None	--	Unchanged
Winslow Cemetary Pond	MA94172	3	3	None	--	Unchanged



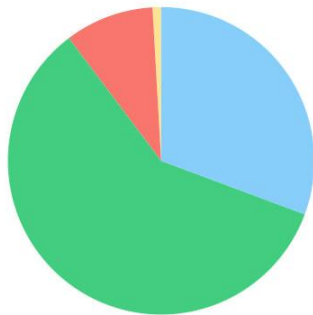
<b>Waterbody</b>	<b>AU_ID</b>	<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
Wright Pond	MA94174	3	3	None	--	Unchanged

## Aaron River (MA94-28)

<b>Location:</b>	Outlet Aaron River Reservoir, Cohasset to flow control structure near Beechwood Street (confluence with Bound Brook), Cohasset.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1 MILES
<b>Classification/Qualifier:</b>	A: PWS, ORW (Tributary)

### Aaron River (MA94-28)

Watershed Area: 9.17 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	9.17	8.05	2.10	1.94
Agriculture	0.9%	0.3%	0.2%	0.2%
Developed	9.4%	8.8%	7.1%	6.7%
Natural	59.1%	61.1%	55.9%	57.4%
Wetland	30.7%	29.8%	36.8%	35.8%
Impervious	4.5%	4.3%	3.5%	3.4%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fanwort*)	--	Unchanged
5	5	(Non-Native Aquatic Plants*)	--	Removed
5	5	Algae	--	Unchanged

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

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

## Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Non-Native Aquatic Plants	Clarification of listing cause	The Non-Native Aquatic Plants impairment for this Aaron River AU (MA94-28) will be removed to be consistent with a "Clarification of Listing Cause" under the Aquatic Life Use submitted for the 2018/20 IR, where it was identified that the generic "Non-Native Aquatic Plants" cause was not needed because a specific non-native plant species cause was already being utilized. The specific macrophyte cause code "Fanwort" will continue to be maintained under the Aquatic Life Use.

### Non-Native Aquatic Plants

Please see removal reason above.

## 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 Aaron River (MA94-28) is Not Assessed.

### Aesthetic

2024/26 Use Attainment	Alert
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Not Supporting	NO
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#### 2024/26 Use Attainment Summary

The Aesthetics Use for Aaron River (MA94-28) continues to be assessed as Not Supporting with the Algae impairment being carried forward. The Non-Native Aquatic Plants impairment will be removed from the Aesthetics Use to be consistent with a “Clarification of Listing Cause” under the Aquatic Life Use submitted for the 2018/2019, where the Impairment was changed from the generic “Non-Native Aquatic Plants” to the specific macrophyte Fanwort (*Cabomba caroliniana*). A Fanwort (*Cabomba caroliniana*) impairment will not be added to the Aesthetics Use at this time, since that would be a redundant duplication of the Fanwort (*Cabomba caroliniana*) impairment across multiple uses for this waterbody and this impairment will continue to be maintained under the Aquatic Life Use. No new data are available to evaluate the Aesthetics Use for this Aaron River AU.

### Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

#### 2024/26 Use Attainment Summary

No bacteria or other indicator data for the Aaron River (MA94-28) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting, with the prior Algae impairment (from the Aesthetics Use) being carried forward. The Non-Native Aquatic Plants impairment is being removed (this impairment will continue to be maintained under the Aquatic Life Use).

### Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

#### 2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for the Aaron River (MA94-28) continues to be assessed as Not Supporting, with the prior Algae impairment (from the Aesthetics Use) being carried forward. The Non-Native Aquatic Plants impairment is being removed (this impairment will continue to be maintained under the Aquatic Life Use). MassDEP staff collected *E. coli* bacteria samples in the Aaron River at the downstream end of the AU at station W0876 [upstream of flow control structure at Beechwood St, Cohasset] from Jul-Oct 2001 (n=4). 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 23 CFU/100ml, which meets 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
W0876	MassDEP	Water Quality	Aaron River	[upstream of flow control structure at Beechwood Street, Cohasset]	42.217175	-70.811159

## Bacteria Data

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

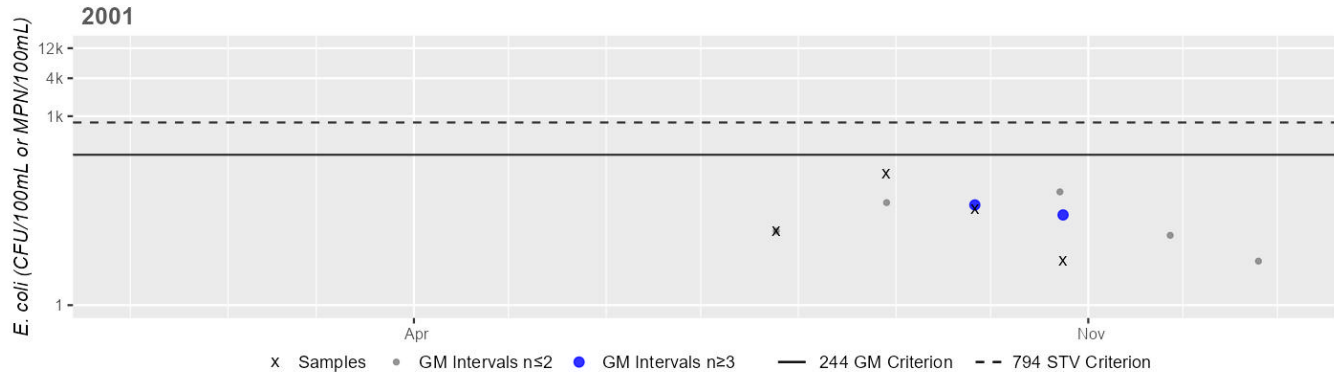
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0876	MassDEP	E. coli	07/25/01	10/24/01	4	5	120	23

#### Station MASSDEP\_W0876 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	23
#GMI	2
#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 Exceedances; %GMI Ex = % GMI Exceedances; 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.

## Aaron River Reservoir (MA94178)

<b>Location:</b>	Cohasset/Hingham/Scituate.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	136 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4a	4a	Mercury in Fish Tissue	33880	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Mercury in Fish Tissue	Atmospheric Deposition (Y)	--	X	--	--	--
Mercury in Fish Tissue	Source Unknown (N)	--	X	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO

<b>2024/26 Use Attainment Summary</b>
The Fish Consumption Use for Aaron River Reservoir (MA94178) 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 Aaron River Reservoir 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 Aaron River Reservoir (MA94178) 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 the Aaron River Reservoir (MA94178) 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 the Aaron River Reservoir (MA94178) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.	

## Arnold School Pond (MA94004)

<b>Location:</b>	Pembroke.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	12 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Arnold School Pond (MA94004) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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



## Back River (MA94-66)

<b>Location:</b>	Estuarine waters of Duxbury Marsh landward from the Powder Point Bridge, Duxbury including the following named (SARIS) waters: Great Wood Island (9457400), Pine Point (9457425), Little Wood Island (9457475), Duck Hill (9457500), Cut (9457450, portion south of Canal Street, Marshfield) and Bourne Wharf (9457525) rivers, and Dug Way (9457550), Marshfield/Duxbury.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.65 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

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 Back River (MA94-66) is Not Assessed.

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
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Back River (MA94-66): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5843 sq mi (91%). The approved shellfish growing area represents 0.5843 sq mi (91%). The Shellfish Harvesting Use is assessed as Fully Supporting because the growing area (normalized to the AU area) is classified as 100% approved.

### Shellfish Growing Area Classifications

**MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB45.0	Duxbury Bay	Approved	0.00010	0.0%
CCB47.0	Back River	Approved	0.58418	90.5%

### Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Back River (MA94-66) 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 the Back River (MA94-66) continues to be assessed as Fully Supporting. The shellfish growing areas (0.5843 sq mi) in this AU are 100% approved and are indicative of Fully Supporting conditions for the Primary Contact Recreation Use of Back River.

### Shellfish Growing Area Classifications

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Back River (MA94-66): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5843 sq mi (91%). The approved shellfish growing area represents 0.5843 sq mi (91%). The Primary Contact Recreational Use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

**Secondary Contact Recreation**

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for the Back River (MA94-66) continues to be assessed as Fully Supporting. The shellfish growing areas (0.5843 sq mi) in this AU are 100% approved and are indicative of Fully Supporting conditions for the Secondary Contact Recreation Use of Back River.

**Shellfish Growing Area Classifications**

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Back River (MA94-66): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5843 sq mi (91%). The approved shellfish growing area represents 0.5843 sq mi (91%). The Secondary Contact Recreational use is assessed as fully supporting because the growing area (normalized to the AU area) is classified as 100% approved, unless other data are available that contradict this use attainment decision.

## Bartlett Pond (MA94005)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	33 ACRES
<b>Classification/Qualifier:</b>	B

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

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Bartlett Pond (MA94005) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

<b>2024/26 Use Attainment Summary</b>
---------------------------------------

Too limited data are available to assess the Aesthetics Use for Bartlett Pond (MA94005), so it is assessed as having Insufficient Information. Since the prior Chlorophyll-a Alert was redundantly duplicated across multiple uses for this waterbody, the Chlorophyll-a Alert is being removed from the Aesthetics Use but is currently maintained as an impairment under the Aquatic Life Use. During the period 2015 through 2022, C-HAB postings for Bartlett Pond were reported to MDPH based on cell count data for 14 days in 2018 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. The prior Alert for C-HABs is also being removed since the incidence of blooms has been so limited in recent years.

### **Algal Bloom Information**

**Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

<b>C-HAB Summary Statement</b>
During the period 2015 through 2022, C-HAB postings for Bartlett Pond (MA94005) were reported to MDPH based on cell count data for 14 days in 2018. 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.

**Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

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

<b>DEP Waterbody (DPH Waterbody)</b>	<b>DPH Town</b>	<b>Posting Days 2015</b>	<b>Posting Days 2016</b>	<b>Posting Days 2017</b>	<b>Posting Days 2018</b>	<b>Posting Days 2019</b>	<b>Posting Days 2020</b>	<b>Posting Days 2021</b>	<b>Posting Days 2022</b>
Bartlett Pond	Plymouth				14				

### **Primary Contact Recreation**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

<b>2024/26 Use Attainment Summary</b>
---------------------------------------

No bacteria data are available to assess the Primary Contact Recreation Use for Bartlett Pond (MA94005) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. Since the prior Chlorophyll-a Alert was redundantly duplicated across multiple uses for this waterbody, the Chlorophyll-a Alert is being removed from the Primary Contact Recreation Use but is currently maintained as an impairment under the Aquatic Life Use. During the period 2015 through 2022, C-HAB postings for Bartlett Pond were reported to MDPH based on cell count data for 14 days in 2018 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. The prior Alert for C-HABs is also being removed since the incidence of blooms has been so limited in recent years. The Town of Plymouth (PLY) collected Secchi depth data at the deep hole of the pond at station PLY\_Bartlett\_DeepHole, in 2014. At station PLY\_Bartlett\_DeepHole (station depth=1.1 m) the Secchi depth (n=1) was measured to be 1.1 m on Sep 04, 2014, however the data were too limited (n <3) to evaluate water clarity.

### Other Indicators

#### Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data

(MassDEP Undated 3)

Data Year(s)	Summary
2014	In Bartlett Pond (MA94005), the Town of Plymouth (PLY) collected Secchi data at PLY_Bartlett_DeepHole [41.9283, -70.557483, Deep spot] in 2014. At station PLY_Bartlett_DeepHole (station depth=1.1 m) the Secchi depth (n=1) was measured to be 1.1 m on Sep 04, 2014. There was insufficient information to assess water clarity because the station depth is less than 1.2 m and the Secchi depth was the same as the station depth.

### 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 Bartlett Pond (MA94005) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. Since the prior Chlorophyll-a Alert was redundantly duplicated across multiple uses for this waterbody, the Chlorophyll-a Alert is being removed from the Secondary Contact Recreation Use but is currently maintained as an impairment under the Aquatic Life Use. During the period 2015 through 2022, C-HAB postings for Bartlett Pond were reported to MDPH based on cell count data for 14 days in 2018 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. The prior Alert for C-HABs is also being removed since the incidence of blooms has been so limited in recent years.

## Beaver Dam Brook (MA94-65)

<b>Location:</b>	Headwaters east of Long Island Pond, Plymouth to mouth at inlet Bartlett Pond, Plymouth (through former 2016 segment: Beaver Dam Pond MA94006).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	2.6 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Beaver Dam Brook (MA94-65) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

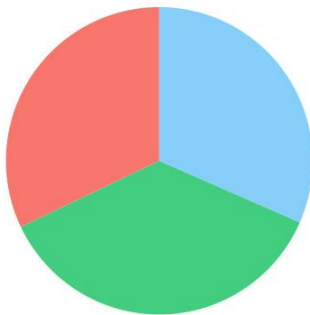
<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
3	3	None	--	Unchanged

## Ben Mann Brook (MA94-41)

<b>Location:</b>	Headwaters, south of Abington Rockland Reservoir, Rockland to mouth at confluence with Cushing Brook, Hanover.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	2 MILES
<b>Classification/Qualifier:</b>	B

### Ben Mann Brook (MA94-41)

Watershed Area: 1.79 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.79	1.79	0.95	0.95
Agriculture	0%	0%	0%	0%
Developed	32.1%	32.1%	21.4%	21.4%
Natural	36.4%	36.4%	37.1%	37.1%
Wetland	31.6%	31.6%	41.5%	41.5%
Impervious	19.3%	19.3%	12.1%	12.1%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	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 Ben Mann Brook (MA94-41) 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 Ben Mann Brook (MA94-41) 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 Ben Mann Brook (MA94-41) 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 Ben Mann Brook (MA94-41) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected <i>E. coli</i> bacteria samples just over halfway down Ben Mann Brook at W1526 [Webster St (Rt. 123) crossing, Hanover] from May-Aug 2006 (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 49 CFU/100ml, which meets 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
W1526	MassDEP	Water Quality	Ben Mann Brook	[Webster Street (Route 123) crossing, Hanover]	42.139484	-70.890695

## Bacteria Data

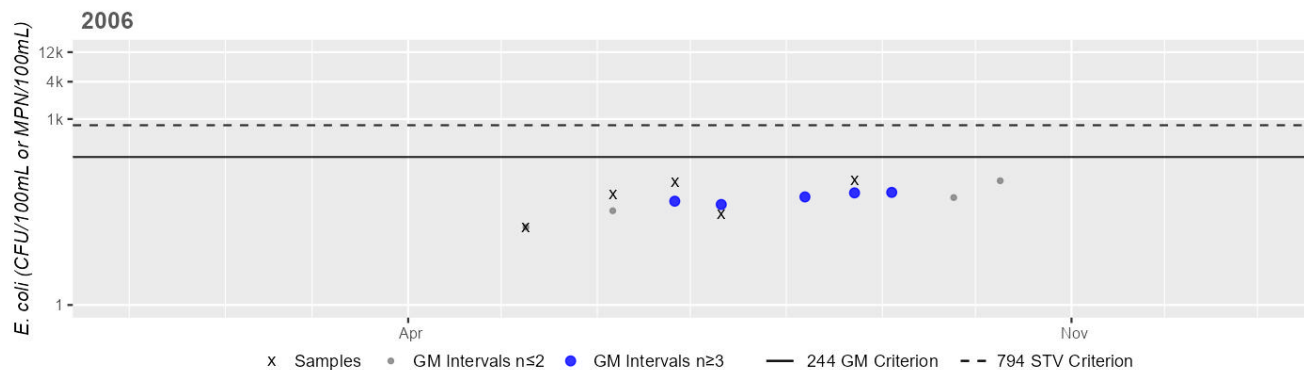
**Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)**  
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W1526	MassDEP	E. coli	05/09/06	08/23/06	5	18	101	49

### Station MASSDEP\_W1526 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	49
#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 Exceedances;  
%GMI Ex = % GMI Exceedances; 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.

## Billington Sea (MA94007)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	263 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Fanwort*)	--	Unchanged
5	5	Algae	--	Unchanged
5	5	Chlorophyll-a	--	Unchanged
5	5	Dissolved Oxygen Supersaturation	--	Unchanged
5	5	Harmful Algal Blooms	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged
5	5	Turbidity	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Algae	Source Unknown (N)	--	--	X	X	X
Chlorophyll-a	Agriculture (N)	X	--	--	--	--
Chlorophyll-a	Source Unknown (N)	X	--	--	--	--
Dissolved Oxygen Supersaturation	Agriculture (N)	X	--	--	--	--

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Dissolved Oxygen Supersaturation	Source Unknown (N)	X	--	--	--	--
Harmful Algal Blooms	Source Unknown (N)	--	--	X	X	X
Nutrient/Eutrophication Biological Indicators	Agriculture (N)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X	--	--	--	--
Phosphorus, Total	Agriculture (N)	X	--	--	--	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--
Turbidity	Source Unknown (N)	--	--	X	X	X

## Recommendations

<b>2024/26 Recommendations</b>
2024/26IR [Harmful Algal Blooms, High] Follow-up monitoring should be conducted in Billington Sea (MA94007) to confirm the existing Harmful Algal Blooms impairment to the Recreational and Aesthetic uses. Monitoring should focus on the collection of cyanobacteria cell count data. C-HAB postings for Billington Sea were reported to MDPH based on visual observations for 21 days in 2018, 125 days in 2019, and 30 days in 2020. This is of high priority;

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Billington Sea (MA94007) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO

### 2024/26 Use Attainment Summary

The Aesthetics Use for Billington Sea (MA94007) continues to be assessed as Not Supporting, with the prior impairments for Turbidity and Algae being carried forward. The prior Harmful Algal Blooms impairment is also being carried forward since extended blooms were reported in 2018, 2019 & 2020. During the period 2015 through 2022, C-HAB postings for Billington Sea were reported to MDPH based on visual observations for 21 days in 2018, 125 days in 2019, and 30 days in 2020 and no blooms were reported in other years. Since extended blooms (>20 days) were reported in recent years this is reflective of the existing Harmful Algal Blooms impairment for Billington Sea. Considering the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data.

### Algal Bloom Information

**Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

#### C-HAB Summary Statement

During the period 2015 through 2022, C-HAB postings for Billington Sea (MA94007) were reported to MDPH based on visual observations for 21 days in 2018, 125 days in 2019, and 30 days in 2020. No blooms were reported in other years. Since blooms were reported in recent years, a prior Harmful Algal Bloom impairment is being carried forward and the Aesthetics Use and Primary/Secondary Contact Recreational Uses continue to be assessed as Not Supporting. Since the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data.

**Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

[\* 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
Billington Sea	Plymouth				21	125	30		

### Primary Contact Recreation

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

The Primary Contact Recreation Use for Billington Sea (MA94007) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward, since extended blooms were reported in 2018, 2019 & 2020. The prior Algae and Turbidity impairments (from the Aesthetics Use) are also being carried forward. During the period 2015 through 2022, C-HAB postings for Billington Sea were reported to MDPH based on visual observations for 21 days in 2018, 125 days in 2019, and 30 days in 2020 and no blooms were reported in other years. Since extended blooms (>20 days) were reported in recent years this C-HAB data is reflective of the existing Harmful Algal Blooms impairment for Billington Sea. Considering the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data. The Town of Plymouth (PLY) collected Secchi depth data at the deep hole of the waterbody at station PLY\_B.SeaWest\_DeepHole, in 2014. At station PLY\_B.SeaWest\_DeepHole (station depth=2.5 m) the Secchi depth (n=1) was measured to be 1.75 m on Aug 25, 2014 which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity.

### Other Indicators

#### Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data

(MassDEP Undated 3)

Data Year(s)	Summary
2014	In Billington Sea (MA94007), the Town of Plymouth (PLY) collected Secchi data at PLY_B.SeaWest_DeepHole [41.935583, -70.694944, Deep spot] in 2014. At station PLY_B.SeaWest_DeepHole (station depth=2.5 m) the Secchi depth (n=1) was measured to be 1.75 m on Aug 25, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold.

### Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Billington Sea (MA94007) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward, since extended blooms were reported in 2018, 2019 & 2020. The prior Algae and Turbidity impairments (from the Aesthetics Use) are also being carried forward. During the period 2015 through 2022, C-HAB postings for Billington Sea were reported to MDPH based on visual observations for 21 days in 2018, 125 days in 2019, and 30 days in 2020 and no blooms were reported in other years. Since extended blooms (>20 days) were reported in recent years this C-HAB data is reflective of the existing Harmful Algal Blooms impairment for Billington Sea. Considering the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data.

## Black Jimmy Pond (MA94008)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	9 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Black Jimmy Pond (MA94008) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Black Mountain Pond (MA94009)

<b>Location:</b>	Marshfield.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	17 ACRES
<b>Classification/Qualifier:</b>	B

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

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(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

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
---------------------------------------



Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Black Mountain Pond (MA94009) is Not Assessed.

## Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

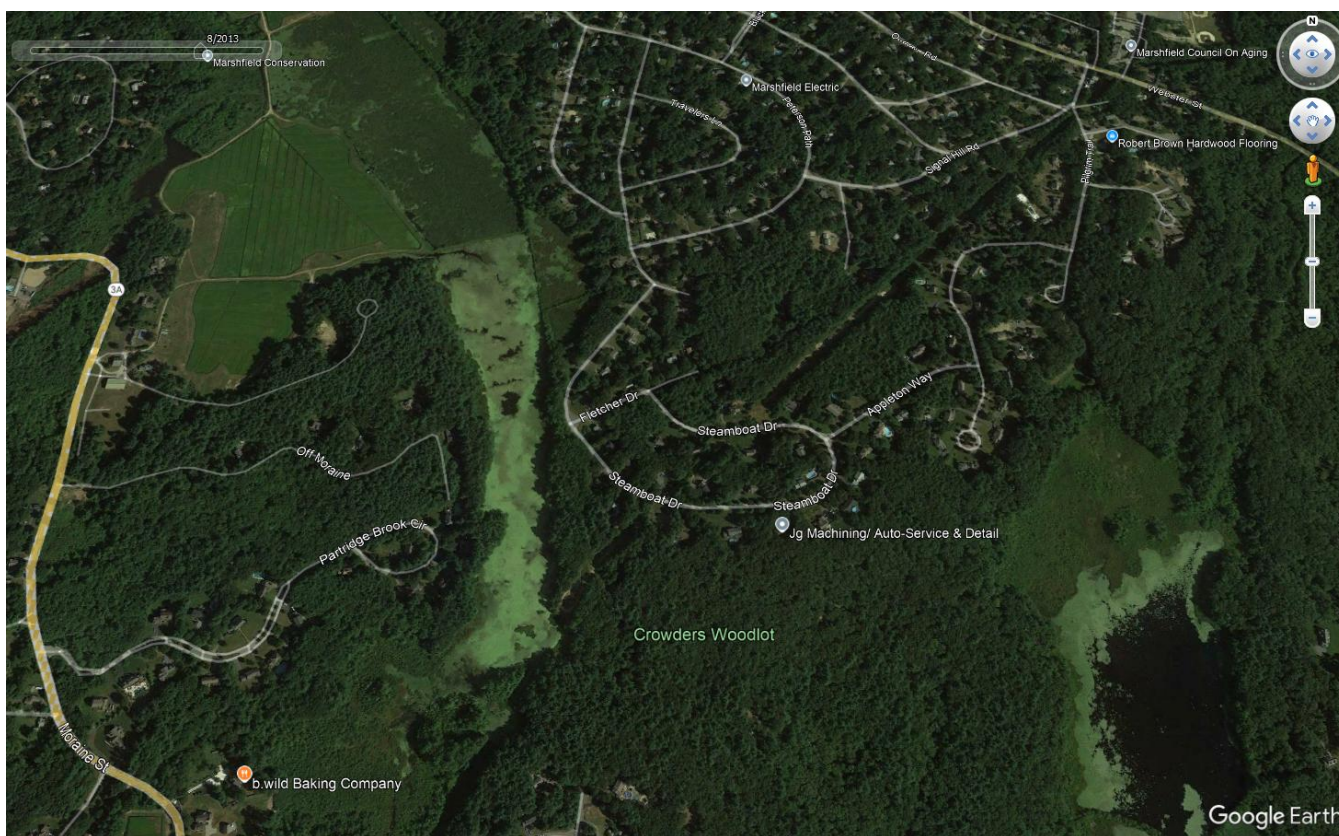
### 2024/26 Use Attainment Summary

The Aesthetics Use for Black Mountain Pond (MA94009) continues to be assessed as Not Supporting, with an Aquatic Plants (Macrophytes) non-pollutant impairment being added. 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. Since MassDEP staff noted that the entire pond was covered with very dense floating leaf and submerged vegetation (including non-native species) during a September 1996 synoptic survey (MassDEP 1996) and Google Earth images August 2013 and October 2021 (Google Earth Pro Undated) show this pond is almost completely filled in with submergent and emergent vegetation (>25% coverage), 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 Black Mountain Pond.

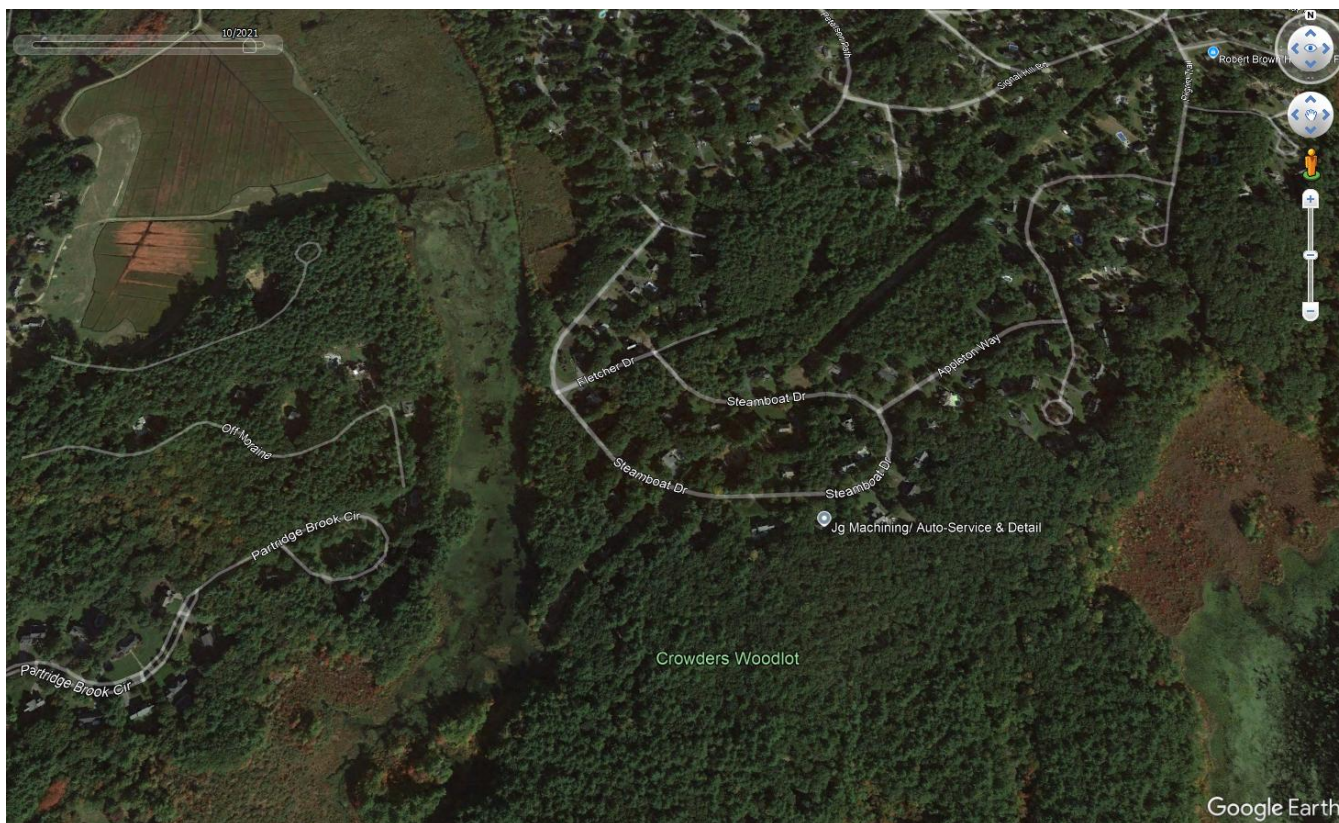
## Aesthetic Observations

**Black Mountain Pond (MA94009) 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)









## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

No bacteria or other indicator data for Black Mountain Pond (MA94009) 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 Black Mountain Pond (MA94009) 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

## Bloody Pond (MA94015)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	101 ACRES
<b>Classification/Qualifier:</b>	B

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 Bloody Pond (MA94015) 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 Bloody Pond (MA94015) 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 Bloody Pond (MA94015) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Town of Plymouth (PLY) collected Secchi depth data at the deep hole of the pond, at station PLY\_Bloody\_DeepHole in 2014-2015 and 2017. While the data were too limited ( $n < 3$ ) at this station in 2014 to evaluate water clarity ( $n=1$ , 8.85m), in 2015 at station PLY\_Bloody\_DeepHole (station depth=11.3 m) the Secchi depth measurements ranged from 5.07-6.78 m ( $n=3$ ) and in 2017 at station PLY\_Bloody\_DeepHole (station depth=11.58 m) the measurements ranged from 3.4-4.95 m ( $n=3$ ), indicating water clarity meeting the 1.2 m (4 ft) threshold in those two years.

### Other Indicators

#### Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data (MassDEP Undated 3)

Data Year(s)	Summary
2014-2015, 2017	In Bloody Pond (MA94015), the Town of Plymouth (PLY) collected Secchi data at PLY_Bloody_DeepHole [41.845833, -70.581833, Deep spot] from 2014-2015 and in 2017. In 2014 at station PLY_Bloody_DeepHole (station depth=11 m) the Secchi depth ( $n=1$ ) was measured to be 8.85 m on Sep 10, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold. In 2015 at station PLY_Bloody_DeepHole (station depth=11.3 m) the Secchi depth measurements ranged from 5.07-6.78 m ( $n=3$ ) indicating water clarity meeting the 1.2 m (4 ft) threshold. In 2017 at station PLY_Bloody_DeepHole (station depth=11.58 m) the Secchi depth measurements ranged from 3.4-4.95 m ( $n=3$ ) indicating water clarity meeting the 1.2 m (4 ft) threshold.

### Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for Bloody Pond (MA94015) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.	

## Bluefish River (MA94-30)

<b>Location:</b>	Saltmarsh north of Harrison Street, Duxbury to mouth at Duxbury Bay, Duxbury.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.07 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	61738	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	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 Bluefish River (MA94-30) is Not Assessed.

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

Bluefish River (MA94-30): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.061 sq mi (94%). The approved shellfish growing area represents 0 sq mi (0%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

### Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB46.1	Bluefish River	Conditionally Approved	0.02575	39.5%
CCB46.5	Bluefish River	Prohibited	0.03523	54.1%

### Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

### 2024/26 Use Attainment Summary

No data are available, so the Aesthetics Use for Bluefish River (MA94-30) 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 the Bluefish River (MA94-30) so it is assessed as having Insufficient Information. The shellfish growing areas (0.061 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that the shellfish classification data were too limited to assess the Primary Contact Recreation Use of Bluefish River.

### Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

#### Summary

Bluefish River (MA94-30): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.061 sq mi (94%). 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
<p>No bacteria data are available to assess the Secondary Contact Recreation Use for the Bluefish River (MA94-30) so it is assessed as having Insufficient Information. The shellfish growing areas (0.061 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that the shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Bluefish River. MassDEP staff collected Enterococcus bacteria samples in the Bluefish River halfway down the AU at station W0893 [Washington St bridge, Duxbury] from Jul-Sep 2001 (n=3). Analysis of the historic single year limited frequency dataset from this station indicated 0% of intervals had GMs &gt;68 CFU/100ml, no samples exceeded the 252 CFU/100ml STV and the overall GM was 29 CFU/100ml. Historic Enterococcus data from station W0893 meet 2024 CALM guidance, but 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.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0893	MassDEP	Water Quality	Bluefish River	[Washington Street bridge, Duxbury]	42.046411	-70.672096

## Bacteria Data

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

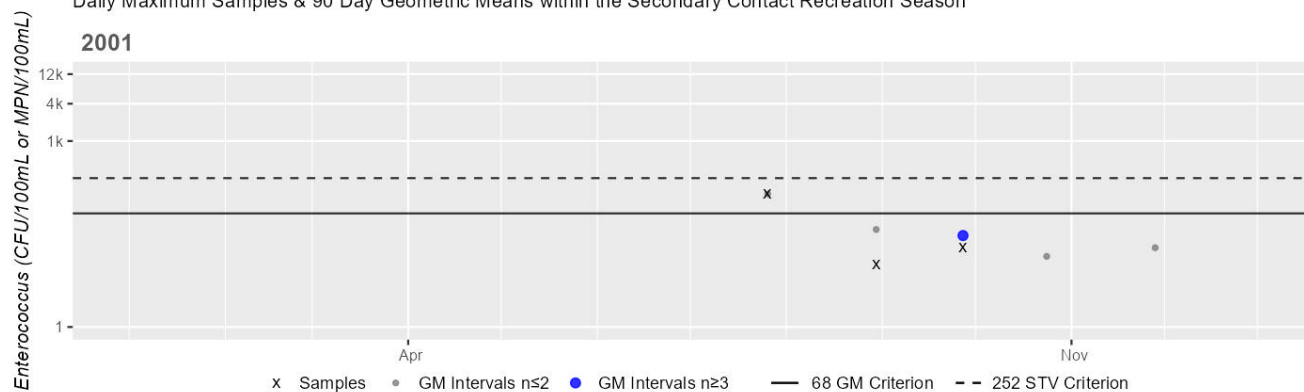
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0893	MassDEP	Enterococci	07/26/01	09/27/01	3	10	140	29

### Station MASSDEP\_W0893 - Enterococcus

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



Variable*	Result
Samples	3
SeasGM	29
#GMI	1
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)**

### Summary

Bluefish River (MA94-30): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.061 sq mi (94%). 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.

## Boot Pond (MA94016)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	69 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW (Tributary)

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Dissolved Oxygen	--	Unchanged
5	5	Harmful Algal Blooms	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Harmful Algal Blooms	Source Unknown (N)	--	--	X	X	X

## Recommendations

<b>2024/26 Recommendations</b>
2024/26IR [Harmful Algal Blooms, Medium] Follow-up monitoring should be conducted in Boot Pond (MA94016) to confirm the existing Harmful Algal Blooms impairment to the Recreational and Aesthetic uses. Monitoring should focus on the collection of cyanobacteria cell count data. C-HAB postings for Boot Pond were reported to MDPH based on visual observations for 48 days in 2018 and no blooms were reported in other years. This is of medium 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 Boot Pond (MA94016) is Not Assessed.

## Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Boot Pond (MA94016) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward, based on the occurrence of an extended C-HAB posting in 2018. During the period 2015 through 2022, C-HAB postings for Boot Pond were reported to MDPH based on visual observations for 48 days in 2018 and no blooms were reported in other years. Since blooms were reported in a recent year this is reflective of the existing Harmful Algal Blooms impairment for Boot Pond. Considering the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data.

## Algal Bloom Information

**Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Boot Pond (MA94016) were reported to MDPH based on visual observations for 48 days in 2018. No blooms were reported in other years. Since blooms were reported in a recent year, a prior Harmful Algal Bloom impairment is being carried forward and the Aesthetics Use and Primary/Secondary Contact Recreational Uses continue to be assessed as Not Supporting. Since the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data.

**Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

[\* 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
Boot Pond	Plymouth				48				

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Boot Pond (MA94016) continues to be assessed as Not Supporting. The prior Harmful Algal Blooms impairment is being carried forward since extended blooms were reported in 2018. During the period 2015 through 2022, C-HAB postings for Boot Pond were reported to MDPH based on visual observations for 48 days in 2018 and no blooms were reported in other years. Since extended blooms (&gt;20 days) were reported in recent years this C-HAB data is reflective of the existing Harmful Algal Blooms impairment for Boot Pond. As the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data. The Town of Plymouth (PLY) collected Secchi depth data at the deep hole station PLY_Boot_DeepHole in 2014-2015 and 2017. In 2017 at station PLY_Boot_DeepHole (station depth=10 m) the Secchi depth measurements ranged from 3-9.5 m (n=3), indicating water clarity meeting the 1.2 m (4 ft) threshold. However data were too limited (n &lt;3) to evaluate water clarity using data collected in 2015 (n=1, 1.8m) and 2014 (n=1, 7m).</p>

## Other Indicators

### Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data (MassDEP Undated 3)

Data Year(s)	Summary
2014-2015, 2017	<p>In Boot Pond (MA94016), the Town of Plymouth (PLY) collected Secchi data at PLY_Boot_DeepHole [41.896267, -70.661083, Deep spot] from 2014-2015 and in 2017. In 2014 at station PLY_Boot_DeepHole (station depth=10.3 m) the Secchi depth (n=1) was measured to be 7 m on Aug 20, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold. In 2015 at station PLY_Boot_DeepHole (station depth=1.8 m) the Secchi depth (n=1) was measured to be 1.8 m on Sep 14, 2015 indicating water clarity meeting the 1.2 m (4 ft) threshold. In 2017 at station PLY_Boot_DeepHole (station depth=10 m) the Secchi depth measurements ranged from 3-9.5 m (n=3) indicating water clarity meeting the 1.2 m (4 ft) threshold.</p>

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
--------------------------------

The Secondary Contact Recreation Use for Boot Pond (MA94016) continues to be assessed as Not Supporting. The prior Harmful Algal Blooms impairment is being carried forward since extended blooms were reported in 2018. During the period 2015 through 2022, C-HAB postings for Boot Pond were reported to MDPH based on visual observations for 48 days in 2018 and no blooms were reported in other years. Since extended blooms (>20 days) were reported in recent years this C-HAB data is reflective of the existing Harmful Algal Blooms impairment for Boot Pond. As the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data.

## Bound Brook (MA94-18)

<b>Location:</b>	Headwaters, flow control structure near Beechwood Street, Cohasset to mouth at outlet Hunters Pond (confluence with The Gulf), Scituate.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	2.1 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Bound Brook (MA94-18) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

## Bound Brook Pond (MA94017)

<b>Location:</b>	Norwell.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	21 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW (Tributary)

No usable data were available for Bound Brook Pond (MA94017) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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



## Briggs Reservoir (MA94019)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	24 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Briggs Reservoir (MA94019) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

## Briggs Reservoir (MA94020)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	17 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Briggs Reservoir (MA94020) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

## Cohasset Cove (MA94-32)

<b>Location:</b>	The waters south of a line drawn from the Bassing Beach jetty, Scituate westerly to the opposite shore, Cohasset excluding Baileys Creek and The Gulf.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.09 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	61706, 61739	Unchanged

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

## Recommendations

2024/26 Recommendations
2024/26IR [Bacteria, Low] High frequency follow-up monitoring should be conducted in Cohasset Cove (MA94-32), to confirm if Enterococcus bacteria are impairing the Recreational uses. MDPH indicated that Bassings Beach in Scituate [Beach ID: 5654] was posted for >10% of the swimming season in 2021 (56%). 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 Cohasset Cove (MA94-32) is Not Assessed.

## Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Cohasset Cove (MA94-32): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0843 sq mi (97%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.0843 sq mi (97%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB10.1	West Cohasset Harbor	Prohibited	0.08428	97.1%

## Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Cohasset Cove (MA94-32) 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 Cohasset Cove (MA94-32) continues to be assessed as Fully Supporting based on bacteria data from 3 stations in 2020 and minimal beach closures for 1 beach on the AU, though an Alert is being identified for Enterococcus. MDPH Beach Closure data indicated that Bassings Beach in Scituate [Beach ID: 5654] was only rarely posted for swimming for most of the years of 2018-2022. However, since this beach was posted for >10% of the swimming season in 2021 (56%), an Alert is being identified for Enterococcus. The shellfish growing areas (0.0843 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 Cohasset Cove.

Cohasset Center for Student Coastal Research (CCSCR) staff/volunteers collected Enterococcus bacteria samples in 2020 at 3 stations along the eastern shore of Cohasset Cove: CCSCR\_Bassings North [beach] from Jun-Aug 2020 (n=11), CCSCR\_Bassings South [beach] from Jun-Sep 2020 (n=12) and CCSCR\_Cohasset Sailing Club [dock] from Jun-Aug 2020 (n=11). Analysis of the single year moderate frequency Enterococcus datasets indicated that 47%, 42% and 47% of intervals had GMs >35 CFU/100ml for CCSCR\_Bassings North, South and Cohasset Sailing Club respectively though in each case only 1 sample exceeded the 130 CFU/100ml STV. Enterococcus data from CCSCR\_Bassings North, CCSCR\_Bassings South, and CCSCR\_Cohasset Sailing Club meet 2024 CALM guidance.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CCSCR_Bassings North	Cohasset Center for Student Coastal Research	Water Quality	Cohasset Harbor	beach	42.241504	-70.786998
CCSCR_Bassings South	Cohasset Center for Student Coastal Research	Water Quality	Cohasset Harbor	beach	42.239849	-70.786714
CCSCR_Cohasset Sailing Club	Cohasset Center for Student Coastal Research	Water Quality	Cohasset Harbor	dock	42.239456	-70.788461

## Bacteria Data

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

(CCSCR 2020) (MassDEP Undated 3)

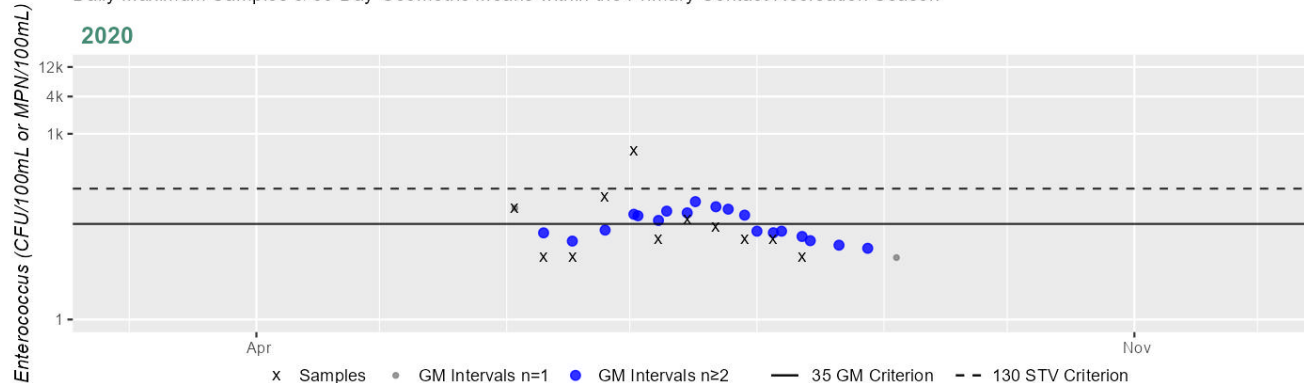
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CCSCR_Bassings North	Cohasset Center for Student Coastal Research	Enterococcus	06/02/20	08/11/20	11	10	529	31
CCSCR_Bassings South	Cohasset Center for Student Coastal Research	Enterococcus	06/02/20	09/02/20	12	10	670	33

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CCSCR_Cohasset Sailing Club	Cohasset Center for Student Coastal Research	Enterococcus	06/02/20	08/11/20	11	10	441	30

### Station CCSCR\_Bassings North - Enterococcus

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



Variable*	Result
Samples	11
SeasGM	31
#GMI	19
#GMI Ex	9
%GMI Ex	47%
n>STV	1
%n>STV	9%

#### Cumulative %GMI Exceedance

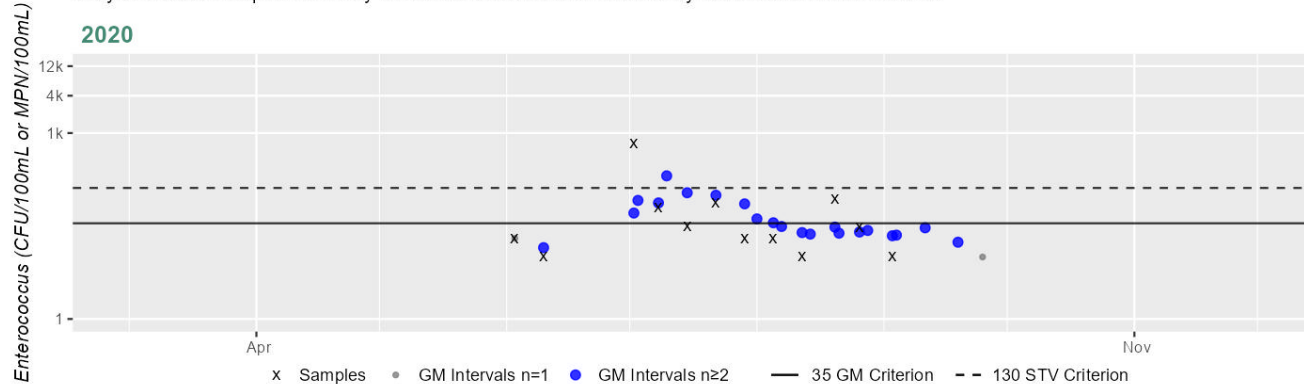
Current (2011-2022)

47%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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 CCSCR\_Bassings South - Enterococcus

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



Variable*	Result
Samples	12
SeasGM	33
#GMI	21
#GMI Ex	9
%GMI Ex	42%
n>STV	1
%n>STV	8%

Cumulative %GMI Exceedance

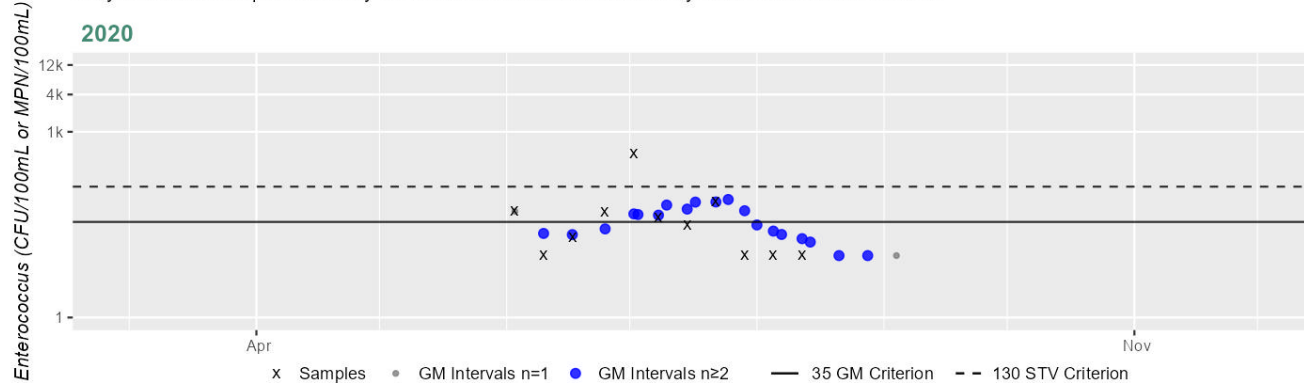
Current (2011-2022)

42%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 CCSCR\_Cohasset Sailing Club - Enterococcus

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



Variable*	Result
Samples	11
SeasGM	30
#GMI	19
#GMI Ex	9
%GMI Ex	47%
n>STV	1
%n>STV	9%

Cumulative %GMI Exceedance

Current (2011-2022)

47%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 3)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
5654	Bassings Beach/ Scituate	42.23999, -70.78840	42.24166, -70.78560	7%	0%	0%	7%	7%	2%	3%	56%	0%	1

## Shellfish Growing Area Classifications

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Cohasset Cove (MA94-32): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0843 sq mi (97%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Cohasset Cove (MA94-32) continues to be assessed as Fully Supporting based on a re-evaluation of bacteria data from 3 stations in 2020. MDPH Beach Closure data indicated that Bassings Beach in Scituate [Beach ID: 5654] was rarely, if at all, posted for swimming from 2018-2022. In addition, shellfish classification data were too limited to assess the Secondary Contact Recreation Use.</p> <p>Cohasset Center for Student Coastal Research (CCSCR) staff/volunteers collected Enterococcus bacteria samples in 2020 at 3 stations along the eastern shore of Cohasset Cove: CCSCR_Bassings North [beach] from Jun-Aug 2020 (n=11), CCSCR_Bassings South [beach] from Jun-Sep 2020 (n=12), CCSCR_Cohasset Sailing Club [dock] from Jun-Aug 2020 (n=11). Analysis of the single year moderate frequency Enterococcus datasets indicated that 0% of intervals had GMs &gt;68 CFU/100ml for all three sample stations and in each case only 1 sample exceeded the 252 CFU/100ml STV. Enterococcus data from CCSCR_Bassings North, CCSCR_Bassings South, and CCSCR_Cohasset Sailing Club meet 2024 CALM guidance.</p>

## Monitoring Stations



Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CCSCR_Bassings North	Cohasset Center for Student Coastal Research	Water Quality	Cohasset Harbor	beach	42.241504	-70.786998
CCSCR_Bassings South	Cohasset Center for Student Coastal Research	Water Quality	Cohasset Harbor	beach	42.239849	-70.786714
CCSCR_Cohasset Sailing Club	Cohasset Center for Student Coastal Research	Water Quality	Cohasset Harbor	dock	42.239456	-70.788461

### ***Bacteria Data***

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

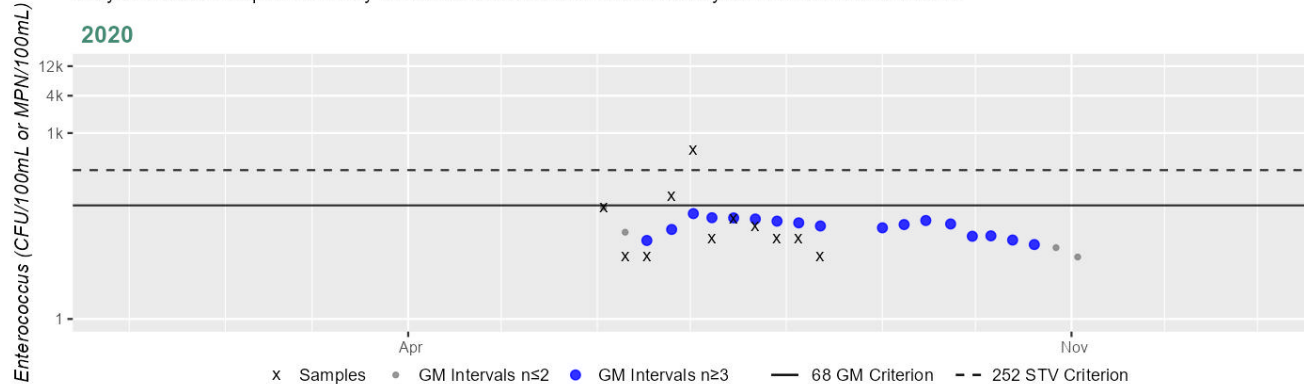
(CCSCR 2020) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CCSCR_Bassings North	Cohasset Center for Student Coastal Research	Enterococci	06/02/20	08/11/20	11	10	529	31
CCSCR_Bassings South	Cohasset Center for Student Coastal Research	Enterococci	06/02/20	09/02/20	12	10	670	33
CCSCR_Cohasset Sailing Club	Cohasset Center for Student Coastal Research	Enterococci	06/02/20	08/11/20	11	10	441	30

### Station CCSCR\_Bassings North - Enterococcus

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



Variable*	Result
Samples	11
SeasGM	31
#GMI	17
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	9%

Cumulative %GMI Exceedance

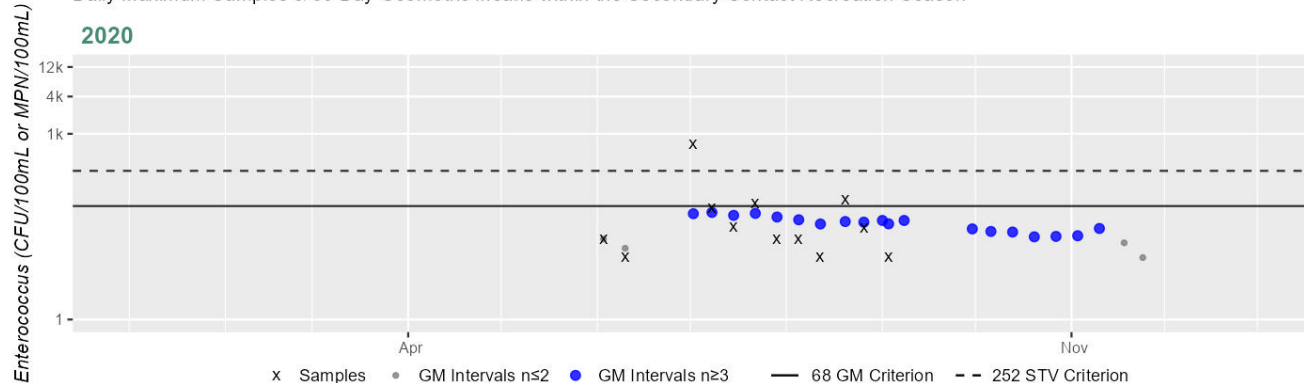
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 CCSCR\_Bassings South - Enterococcus

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



Variable*	Result
Samples	12
SeasGM	33
#GMI	19
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	8%

Cumulative %GMI Exceedance

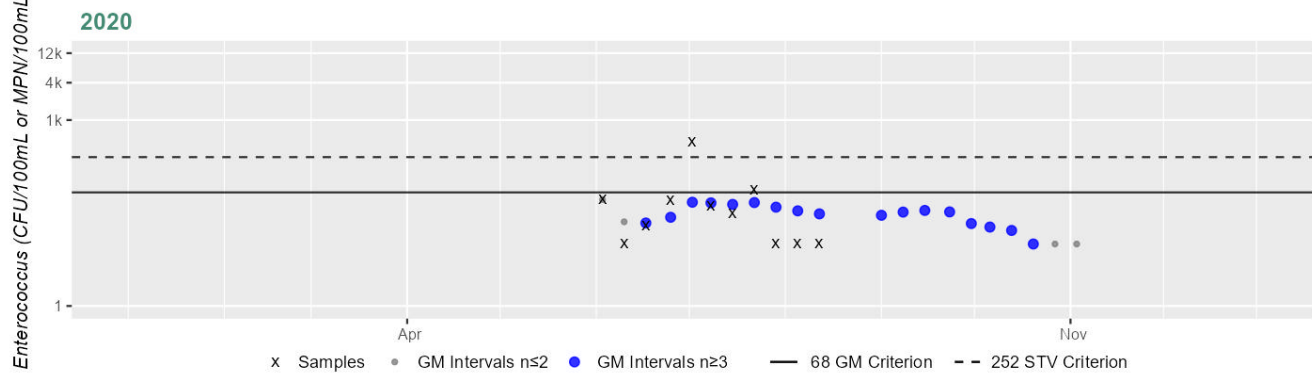
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 CCSCR\_Cohasset Sailing Club - Enterococcus

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



Variable*	Result
Samples	11
SeasGM	30
#GMI	17
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	9%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)**

### Summary

Cohasset Cove (MA94-32): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0843 sq mi (97%). 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.

## Cohasset Harbor (MA94-01)

<b>Location:</b>	The waters south of a line drawn from the northwestern point of Scituate Neck, Scituate to just north of Quarry Point, Cohasset not including Cohasset Cove, Cohasset/Scituate.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.7 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4a	4a	Fecal Coliform	61708	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO
<b>2024/26 Use Attainment Summary</b>	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Cohasset Harbor (MA94-01) is Not Assessed.	

### Shellfish Harvesting

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO

### 2024/26 Use Attainment Summary

Cohasset Harbor (MA94-01): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.6631 sq mi (95%). The approved shellfish growing area represents 0 sq mi (0%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

### Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB10.0	East Cohasset Harbor	Conditionally Approved	0.32078	46.1%
MB10.1	West Cohasset Harbor	Prohibited	0.28309	40.7%
MB10.3	Briggs Harbor, Cohasset Harbor	Prohibited	0.01693	2.4%
MB10.4	Creek on Eastern Shore	Conditionally Approved	0.00720	1.0%
MB9.0	Cohasset North Coastal	Prohibited	0.03507	5.0%

### Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

### 2024/26 Use Attainment Summary

No data are available, so the Aesthetics Use for Cohasset Harbor (MA94-01) 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 Cohasset Harbor (MA94-01) so it is assessed as having Insufficient Information. The shellfish growing areas (0.6631 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that the shellfish classification data were too limited to assess the Primary Contact Recreation Use of Cohasset Harbor.

### Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Summary
Cohasset Harbor (MA94-01): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.6631 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.

## 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 Cohasset Harbor (MA94-01) so it is assessed as having Insufficient Information. The shellfish growing areas (0.6631 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that the shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Cohasset Harbor.

## Shellfish Growing Area Classifications

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Cohasset Harbor (MA94-01): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.6631 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.

## Cooks Pond (MA94027)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	21 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Aquatic Plants (Macrophytes)*)	--	Added
5	5	(Fanwort*)	--	Unchanged
5	5	(Non-Native Aquatic Plants*)	--	Unchanged
5	5	Harmful Algal Blooms	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Aquatic Plants (Macrophytes)*)	Source Unknown (N)	--	--	X	X	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	--	--	--	--
Harmful Algal Blooms	Source Unknown (N)	--	--	X	X	X

## Designated Use Attainment Decisions

### Fish Consumption

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
There is Insufficient Information to assess the Fish Consumption Use for Cooks Pond (MA94027). Fish toxics sampling for mercury, organochlorine pesticides, and metals was performed by MassDEP WPP biologists in Cooks Pond at station F0465 in 2018 as part of the probabilistic lake surveys (MAP2). However, no site-specific fish consumption advisory was issued by MDPH.

### Fish Consumption Advisories

#### Summary of Fish Toxics Sampling and Resulting Fish Consumption Advisories (MassDEP Undated 7)

Summary Statement
Fish toxics sampling for mercury, organochlorine pesticides, and metals was performed by MassDEP WPP biologists in Cooks Pond (MA94027) at station F0465 in 2018 as part of the probabilistic lake surveys (MAP2). No site-specific fish consumption advisory was issued by MA DPH.

### Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
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The Aesthetics Use for Cooks Pond (MA94027) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward, since extended blooms were reported in 2018. An Aquatic Plants (Macrophytes) non-pollutant impairment is being added, based on observations collected during a 2018 macrophyte mapping survey. MassDEP staff recorded aesthetics observations as part of the MAP2 lake monitoring project in summer 2018 at two stations in Plymouth, for Cooks Pond; at the northern edge of pond, ~200 feet east of Cooks Pond Dam (NAT ID: MA01027), south off Cooks Pond Road (W2784/MAP2L-306S, n=5) and at the deep hole index site, southern lobe (W2783/MAP2L-306, n=3). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, or littoral zone duckweed recorded in ten shoreline plots (n=1), though field staff noted green water color and high turbidity associated with a shoreline algal bloom in May. However, during the MAP2 macrophyte mapping survey in Sep 2018 (n=1), greater than 25% (64%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%. During the period 2015 through 2022, C-HAB postings for Cooks Pond were reported to MDPH for 28 days in 2018 (cell count) and 36 days in 2022 (visual observations), though no blooms were reported in other years. Since extended blooms (>20 days in duration) based on cell count data were reported in recent years, this is reflective of the existing Harmful Algal Blooms impairment for Cooks Pond.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2783	MassDEP	Water Quality	Cooks Pond	[index site, southern lobe, Plymouth]	41.920719	-70.665406
W2784	MassDEP	Water Quality	Cooks Pond	[northern edge of pond, approximately 200 feet east of Cooks Pond Dam (NAT ID: MA01027), south off Cooks Pond Road, Plymouth]	41.924301	-70.665875

### Aesthetic Observations

#### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2783	2018	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2783 (MAP2L-306) on Cooks Pond (MA94027) during 3 site visits between Jul 2018 and Sep 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. During the MAP2 macrophyte mapping survey (n=1) in Sep 2018, greater than 25% (64%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%. The observations from the MAP2 survey are indicative of an Aesthetics Use impairment.

W2784	2018	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2784 (MAP2L-306S) on Cooks Pond (MA94027) during 5 site visits between May 2018 and Sep 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted green water color (n=1) and high turbidity (n=1). During the MAP2 littoral survey (n=1), duckweed was not noted in any of the 10 shoreline plots. Shoreline algal blooms were noted by DEP field crews on May 09, 2018.
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#### MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2783	Cooks Pond	2018	Aesthetics Impaired?	No	3	3
W2783	Cooks Pond	2018	Aquatic Plant Density, Overall	None	3	3
W2783	Cooks Pond	2018	Color	Brownish	1	3
W2783	Cooks Pond	2018	Color	Light Yellow/Tan	2	3
W2783	Cooks Pond	2018	Objectionable Deposits	No	3	3
W2783	Cooks Pond	2018	Odor	None	3	3
W2783	Cooks Pond	2018	Scum	No	2	3
W2783	Cooks Pond	2018	Scum	Yes	1	3
W2783	Cooks Pond	2018	Turbidity	None	2	3
W2783	Cooks Pond	2018	Turbidity	Slightly Turbid	1	3
W2784	Cooks Pond	2018	Aesthetics Impaired?	No	5	5
W2784	Cooks Pond	2018	Color	Greenish	1	5
W2784	Cooks Pond	2018	Color	Light Yellow/Tan	1	5
W2784	Cooks Pond	2018	Color	None	2	5
W2784	Cooks Pond	2018	Color	NR	1	5
W2784	Cooks Pond	2018	Objectionable Deposits	No	4	5
W2784	Cooks Pond	2018	Objectionable Deposits	Yes	1	5
W2784	Cooks Pond	2018	Odor	None	4	5
W2784	Cooks Pond	2018	Odor	Sulfide (rotten egg)	1	5
W2784	Cooks Pond	2018	Scum	No	5	5
W2784	Cooks Pond	2018	Turbidity	Highly Turbid	1	5
W2784	Cooks Pond	2018	Turbidity	None	2	5
W2784	Cooks Pond	2018	Turbidity	Slightly Turbid	2	5

### Algal Bloom Information

**Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

**C-HAB Summary Statement**

During the period 2015 through 2022, C-HAB postings for Cooks Pond (MA94027) were reported to MDPH for 28 days in 2018 (cell count) and 36 days in 2022 (visual observations). No blooms were reported in other years. Since extended blooms (>20 days in duration) based on cell count data were reported in recent years, the Aesthetics Use and Primary/Secondary Contact Recreational Uses continue to be assessed as Not Supporting.

**Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH** (Bailey, Logan April 26, 2023)  
(MassDEP Undated 2)

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

		Posting Days 2015	Posting Days 2016	Posting Days 2017	Posting Days 2018	Posting Days 2019	Posting Days 2020	Posting Days 2021	Posting Days 2022
DEP Waterbody (DPH Waterbody)	DPH Town								
Cooks Pond	Plymouth				28				36

**Primary Contact Recreation**

2024/26 Use Attainment	Alert
Not Supporting	NO

**2024/26 Use Attainment Summary**

The Primary Contact Recreation Use for Cooks Pond (MA94027) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward, since extended blooms were reported in 2018. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use).

During the period 2015 through 2022, C-HAB postings for Cooks Pond were reported to MDPH for 28 days in 2018 (cell count) and 36 days in 2022 (visual observations) and no blooms were reported in other years. Since extended blooms (>20 days in duration) based on cell count data were reported in recent years, this is reflective of the existing Harmful Algal Blooms impairment for Cooks Pond. In 2018 MassDEP staff collected Secchi depth and cyanobacteria cell count data at station W2783 [MAP2L-306, Index-deep hole] and cyanobacteria cell count and cyanotoxins data at shoreline station W2784 [MAP2L-306S, northern edge of pond, ~200 ft E of Cooks Pond Dam (T ID: MA01027), S off Cooks Pond Rd, Plymouth] and in 2015 the Town of Plymouth (PLY) collected Secchi depth data at a station closer to the northern end of the pond, PLY\_Cooks\_DeepHole. In 2015 at station PLY\_Cooks\_DeepHole (station depth=3.7 m) the Secchi depth (n=1) was measured to be 1.5 m on Sep 17, 2015 which meets the 1.2 m (4 ft) threshold, however this data were too limited (n <3) to evaluate water clarity. In 2018 at MassDEP's index-deep hole station W2783 (station depth=3.2 m) the Secchi depth measurements ranged from 2-2.3 m (n=2), 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 2018 (n=6). Analysis of microcystins and cylindrospermopsin samples from shoreline station W2784 in 2018 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L. MassDEP staff also collected *E. coli* bacteria samples in Cooks Pond at the shoreline station from May-Sep 2018 (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 2 CFU/100ml, which meets 2024 CALM guidance.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2783	MassDEP	Water Quality	Cooks Pond	[index site, southern lobe, Plymouth]	41.920719	-70.665406
W2784	MassDEP	Water Quality	Cooks Pond	[northern edge of pond, approximately 200 feet east of Cooks Pond Dam (NAT ID: MA01027), south off Cooks Pond Road, Plymouth]	41.924301	-70.665875

### Bacteria Data

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

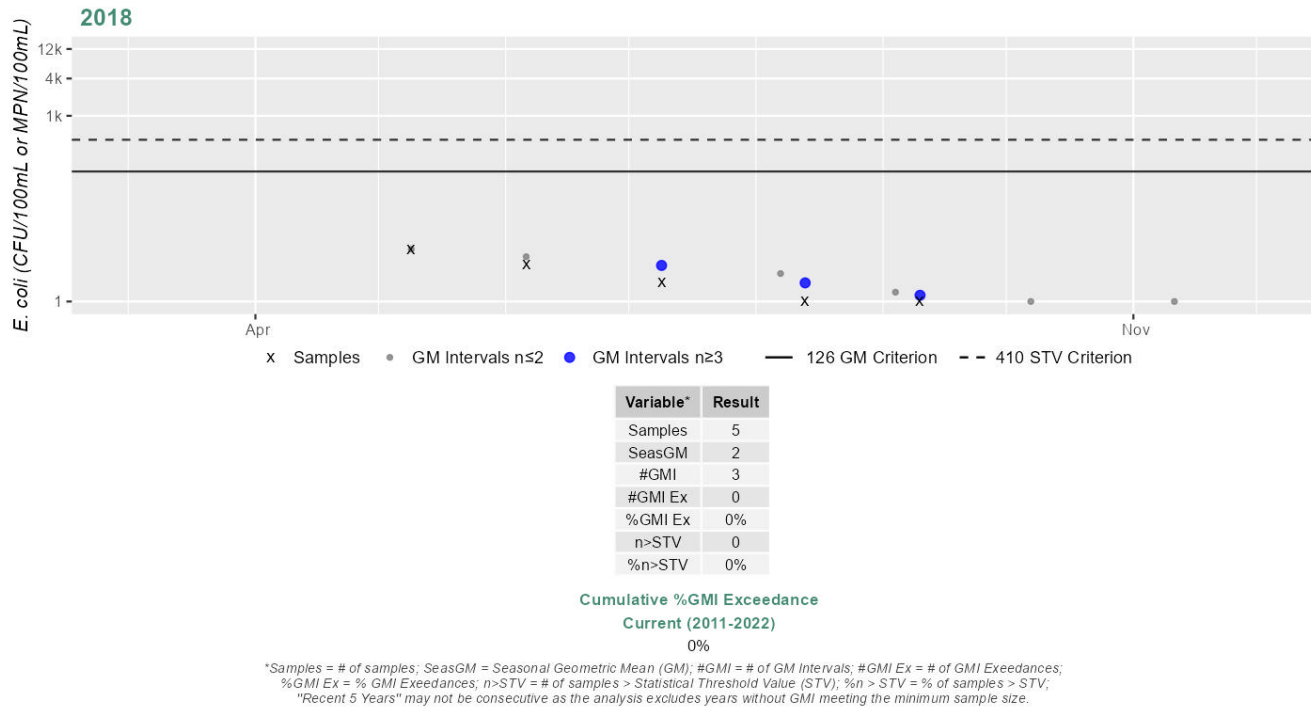
(MassDEP Undated 9) (MassDEP Undated 5)

[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
W2784	MassDEP	E. coli	05/09/18	09/10/18	5	1	7	2

### Station MASSDEP\_W2784 - Escherichia coli

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



## Other Indicators

### Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data (MassDEP Undated 9) (MassDEP Undated 5) (MassDEP Undated 3)

Data Year(s)	Summary
2015, 2018	<p>In Cooks Pond (MA94027) in 2018, MassDEP collected Secchi depth and cyanobacteria cell count data at W2783 [MAP2L-306, Index-deep hole] and cyanobacteria cell count and cyanotoxin data at W2784 [MAP2L-306S, Shoreline]. In 2015, the Town of Plymouth (PLY) collected Secchi data at PLY_Cooks_DeepHole [41.923017, -70.665405, Deep spot]. In 2015 at station PLY_Cooks_DeepHole (station depth=3.7 m) the Secchi depth (n=1) was measured to be 1.5 m on Sep 17, 2015 indicating water clarity meeting the 1.2 m (4 ft) threshold. In 2018 at DEP's index-deep hole station W2783 (station depth=3.2 m) the Secchi depth measurements ranged from 2-2.3 m (n=2) 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 collected at the two DEP stations in 2018 (n=6). Analysis of microcystins and cylindrospermopsin samples from DEP's shoreline station W2784 in 2018 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L.</p>

**MassDEP Cyanobacteria Cell Count Data Collected at Lakes and Impoundments (2016-2018)** (MassDEP Undated 9) (MassDEP Undated 5)

Station Code	Waterbody	Station Type	Data Year	Sample Count	Count >70,000 cells/mL	Exceedance Date(s)
W2783	Cooks Pond	Index	2018	3	0	NA
W2784	Cooks Pond	Shoreline	2018	3	0	NA

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Cooks Pond (MA94027) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward, since extended blooms were reported in 2018. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use).</p> <p>During the period 2015 through 2022, C-HAB postings for Cooks Pond were reported to MDPH for 28 days in 2018 (cell count) and 36 days in 2022 (visual observations) and no blooms were reported in other years. Since extended blooms (&gt;20 days in duration) based on cell count data were reported in recent years, this is reflective of the existing Harmful Algal Blooms impairment for Cooks Pond.</p> <p>In 2018 MassDEP collected cyanobacteria cell count data at W2783 [MAP2L-306, Index-deep hole] and cyanobacteria cell count and cyanotoxins data at shoreline station W2784 [MAP2L-306S, northern edge of pond, ~200 ft E of Cooks Pond Dam (T ID: MA01027), S off Cooks Pond Rd, Plymouth]. 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 station W2784 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L.</p> <p>MassDEP staff also collected <i>E. coli</i> bacteria samples in Cooks Pond at shoreline station W2784 from May-Sep 2018 (n=5). Analysis of the single year limited frequency dataset from this station indicated 0% of intervals had GMs &gt;244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV and the overall GM was 2 CFU/100ml, which meets 2024 CALM guidance.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2784	MassDEP	Water Quality	Cooks Pond	[northern edge of pond, approximately 200 feet east of Cooks Pond Dam (NAT ID: MA01027), south off Cooks Pond Road, Plymouth]	41.924301	-70.665875

## Bacteria Data

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

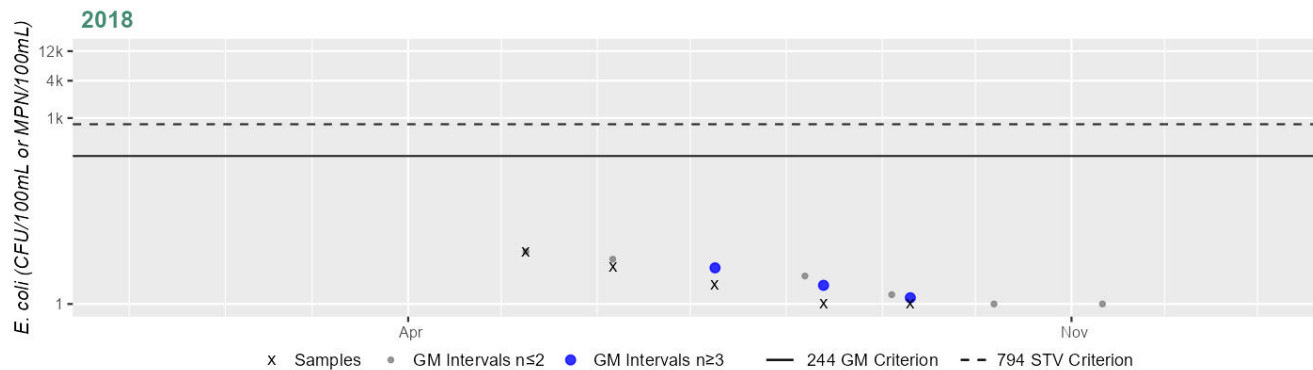
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W2784	MassDEP	E. coli	05/09/18	09/10/18	5	1	7	2

#### Station MASSDEP\_W2784 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	2
#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 Exceedances; %GMI Ex = % GMI Exceedances; 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.

## Crossman Pond (MA94032)

<b>Location:</b>	Kingston.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	13 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Crossman Pond (MA94032) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

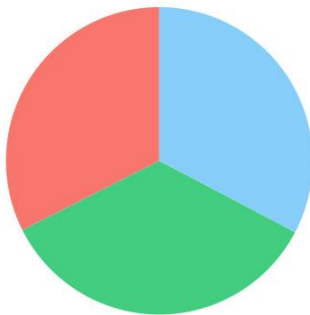


## Cushing Brook (MA94-40)

<b>Location:</b>	Headwaters (perennial portion), east of Pleasant Street, Rockland to mouth at confluence with Drinkwater River, Hanover.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	3.1 MILES
<b>Classification/Qualifier:</b>	B

### Cushing Brook (MA94-40)

Watershed Area: 4.03 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	4.03	3.29	1.65	1.36
Agriculture	0%	0%	0%	0%
Developed	32.4%	29.7%	19.1%	16%
Natural	34.9%	34.5%	34.3%	35.3%
Wetland	32.7%	35.8%	46.6%	48.7%
Impervious	19.1%	15.8%	10.6%	7.5%

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)

## Recommendations

2024/26 Recommendations
2016IR [Aquatic Plants, Low] It is recommended that additional aesthetics observations be collected for Cushing Brook (MA94-40). Additional information regarding the dense macrophyte cover a quarter of the way down the AU at East Water Street (Rt. 123) crossing, Rockland {W1525} is recommended, to investigate whether the macrophyte coverages are natural or symptomatic of nutrient enrichment. This issue was first observed in 2006 and no additional aesthetics observations have been recorded in this area since that time. 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 Cushing Brook (MA94-40) 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 Cushing Brook (MA94-40), so it is Not Assessed. The prior Alert identified for very dense Aquatic Plants (Macrophytes) observed by MassDEP staff in 2006, a quarter of the way down the AU at East Water Street (Rt. 123) crossing, Rockland (W1525), is being carried forward. Recommendations for additional monitoring will be made.	

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Cushing Brook (MA94-40) 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 one station in 2019. The prior Alert for very dense Aquatic Plants (Macrophytes) is being removed from the Recreational Uses but continues to be maintained under the Aesthetics Use.</p> <p>North South River Watershed Association (NSRWA) staff/volunteers collected <i>E. coli</i> bacteria samples in Cushing Brook at NSRWA_Cushing Brook [Across the street from Christopher Drive, Rockland] from Jul-Aug 2019 (n=4). Analysis of the single year limited frequency dataset from this station indicated 100% of intervals had GMs &gt;126 CFU/100ml, 2 samples exceeded the 410 CFU/100ml STV and the seasonal GM was 763 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NSRWA_Cushing Brook	North South River Watershed Association	Water Quality	Cushing Brook	Across the street from Christopher Drive, Rockland	42.131700	-70.905190

## Bacteria Data

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

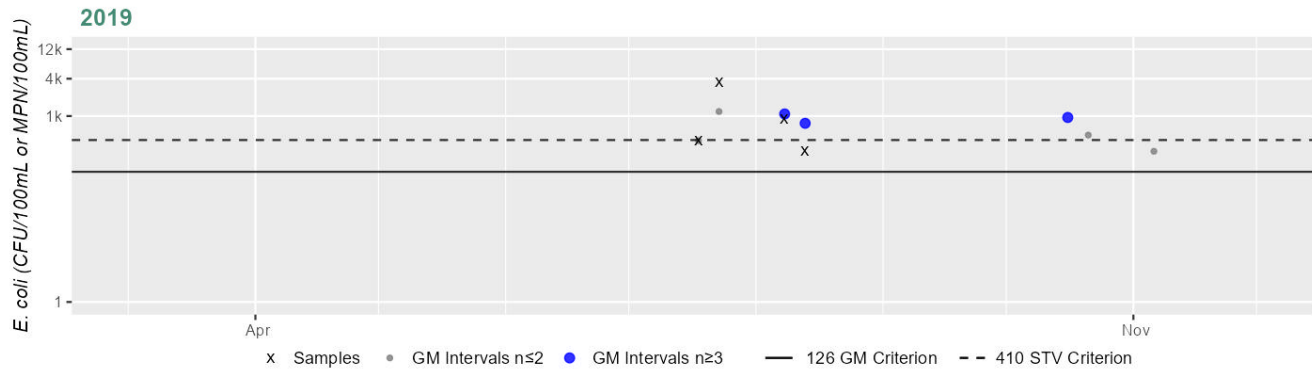
(NSRWA 2019) (MassDEP Undated 3)

[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
NSRWA_Cushing Brook	North South River Watershed Association	E. coli	07/18/19	08/13/19	4	270	3500	763

### Station MASSDEP\_W1525 & NSRWA\_Cushing Brook - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	763
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	2
%n>STV	50%

#### Cumulative %GMI Exceedance

Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 Cushing Brook (MA94-40) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on a re-evaluation of bacteria data not meeting the threshold at 2 stations/combined stations (1 in 2006 and 1 in 2019).

MassDEP and North South River Watershed Association (NSRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Cushing Brook from 2006-2019 at 2 stations/combined stations. Samples were collected from the following stations/sample years from upstream to downstream: a quarter of the way down the AU at combined station W1525 & NSRWA\_Cushing Brook [E Water St (Rt. 123) crossing, upstream of "trash rack", Rockland & Across the St from Christopher Drive, Rockland] from May-Aug 2006 (historic n=5) and Jul-Aug 2019 (current n=4), and at the downstream end of the AU at W1523 [Hanover St (Rt. 139) crossing, Hanover] from May-Aug 2006 (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 will be summarized here. Analysis of the current window (2019) single year limited frequency *E. coli* dataset from combined station W1525 & NSRWA\_Cushing Brook indicated 100% of intervals had GMs >244 CFU/100ml, 2 samples exceeded the 794 CFU/100ml STV and the overall GM was 763 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1523	MassDEP	Water Quality	Cushing Brook	[Hanover Street (Route 139) crossing, Hanover]	42.118221	-70.879738
W1525	MassDEP	Water Quality	Cushing Brook	[East Water Street (Route 123) crossing, upstream of "trash rack", Rockland]	42.131690	-70.905219
NSRWA_Cushing Brook	North South River Watershed Association	Water Quality	Cushing Brook	Across the street from Christopher Drive, Rockland	42.131700	-70.905190

### Bacteria Data

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

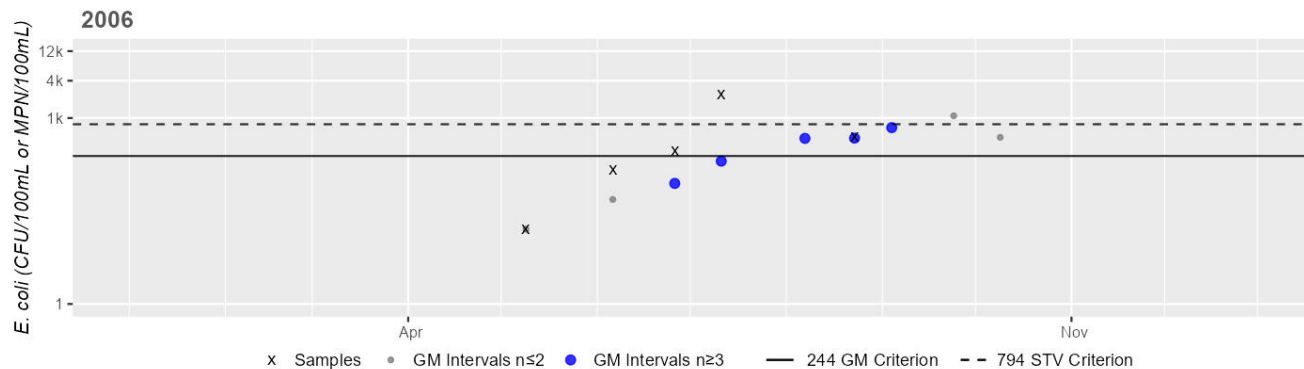
(MassDEP Undated 9) (MassDEP Undated 4) (NSRWA 2019) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1523	MassDEP	E. coli	05/09/06	08/23/06	5	16	2419	240
W1525	MassDEP	E. coli	05/09/06	08/23/06	5	72	613	279
NSRWA_Cushing Brook	North South River Watershed Association	E. coli	07/18/19	08/13/19	4	270	3500	763

### Station MASSDEP\_W1523 - *Escherichia coli*

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



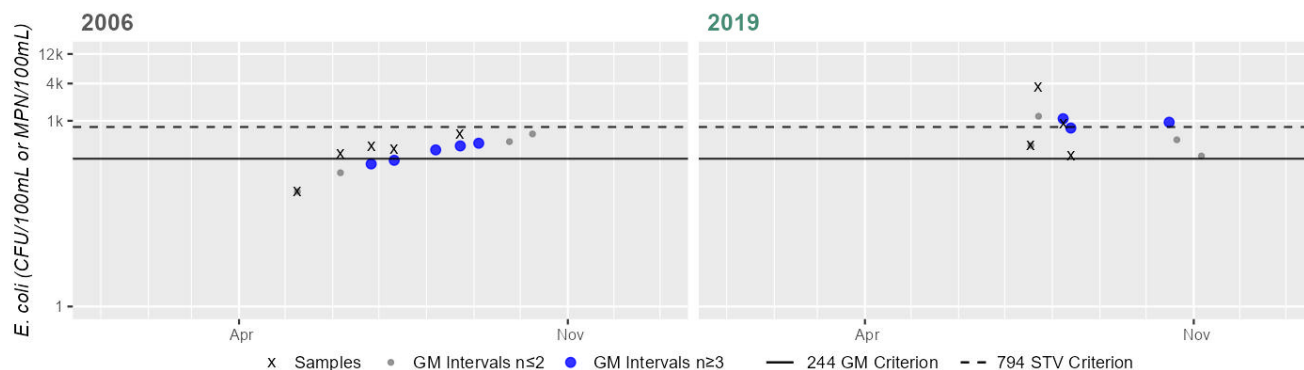
Variable*	Result
Samples	5
SeasGM	240
#GMI	5
#GMI Ex	3
%GMI Ex	60%
n>STV	1
%n>STV	20%

Cumulative %GMI Exceedance  
Historic (1997-2010)  
60%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W1525 & NSRWA\_Cushing Brook - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	279
#GMI	5
#GMI Ex	3
%GMI Ex	60%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance  
Historic (1997-2010)  
60%

Variable*	Result
Samples	4
SeasGM	763
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	2
%n>STV	50%

Cumulative %GMI Exceedance  
Current (2011-2022)  
100%

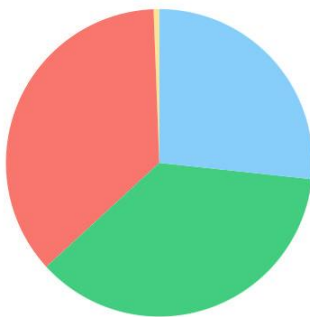
\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;  
"Recent 5 Years" may not be consecutive as the analysis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

## Drinkwater River (MA94-21)

<b>Location:</b>	Headwaters west of Whiting Street, Hanover to mouth at inlet Factory Pond, Hanover (through former 2014 segment: Forge Pond MA94037).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	3.7 MILES
<b>Classification/Qualifier:</b>	B: WWF

### Drinkwater River (MA94-21)

Watershed Area: 20.49 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	20.49	10.75	6.51	3.49
Agriculture	0.6%	0.6%	0.2%	0.3%
Developed	36.2%	31.6%	23.7%	19.6%
Natural	36.5%	37.5%	34.1%	32%
Wetland	26.7%	30.3%	41.9%	48.2%
Impervious	18.1%	15.4%	10.9%	9.4%

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	(Fanwort*)	--	Unchanged
5	5	Algae	--	Unchanged
5	5	Chlorophyll-a	--	Unchanged
5	5	Dissolved Oxygen Supersaturation	--	Unchanged
5	5	Escherichia Coli (E. Coli)	61724	Unchanged
5	5	Fecal Coliform	61724	Unchanged
5	5	Mercury in Fish Tissue	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged
5	5	Transparency / Clarity	--	Unchanged

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Trash	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Curly-leaf Pondweed*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Debris*)	Source Unknown (N)	--	--	X	X	X
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Algae	Municipal Point Source Discharges (Y)	--	--	X	X	X
Chlorophyll-a	Municipal Point Source Discharges (Y)	X	--	--	--	--
Chlorophyll-a	Source Unknown (N)	X	--	--	--	--
Dissolved Oxygen Supersaturation	Municipal Point Source Discharges (Y)	X	--	--	--	--
Dissolved Oxygen Supersaturation	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Mercury in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--
Mercury in Fish Tissue	Illegal Dumps or Other Inappropriate Waste Disposal (Y)	--	X	--	--	--
Nutrient/Eutrophication Biological Indicators	Municipal Point Source Discharges (Y)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X	--	--	--	--



<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Phosphorus, Total	Municipal Point Source Discharges (Y)	X	--	--	--	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--
Transparency / Clarity	Municipal Point Source Discharges (Y)	--	--	--	X	--
Transparency / Clarity	Source Unknown (N)	--	--	--	X	--
Trash	Source Unknown (N)	--	--	X	X	X

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO

<b>2024/26 Use Attainment Summary</b>
The Fish Consumption Use for Drinkwater River (MA94-21) 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 Drinkwater River (referred to by MDPH as "Drinkwater River/Indian Head River/North River (Between the Forge Pond Dam in Hanover and Route 3 in Norwell/Pembroke) and Factory 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

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO

<b>2024/26 Use Attainment Summary</b>
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The Aesthetics Use for Drinkwater River (MA94-21) continues to be assessed as Not Supporting with the Trash, Debris and Algae impairments 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 Total Phosphorus impairment was redundantly duplicated across multiple uses for this waterbody, the Total Phosphorus 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 the Drinkwater River.

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

The Primary Contact Recreation Use for the Drinkwater River (MA94-21) 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 one station in 2019. The prior Fecal Coliform and Transparency / Clarity impairments are being carried forward and the prior Algae, Debris, and Trash impairments (from the Aesthetics Use) are being carried forward. Since the Total Phosphorus impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Primary Contact Recreation Use.

North South River Watershed Association (NSRWA) staff/volunteers collected *E. coli* bacteria samples close to the downstream end of the Drinkwater River at NSRWA\_Drinkwater River [Opposite side of Rd as Forge Pond, Hanover] from Jul-Aug 2019 (n=4). Analysis of the single year limited frequency dataset from this station indicated 100% of intervals had GMs >126 CFU/100ml, 2 samples exceeded the 410 CFU/100ml STV and the seasonal GM was 330 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NSRWA_Drinkwater River	North South River Watershed Association	Water Quality	Drinkwater River	Opposite side of road as Forge Pond, Hanover	42.103500	-70.877600

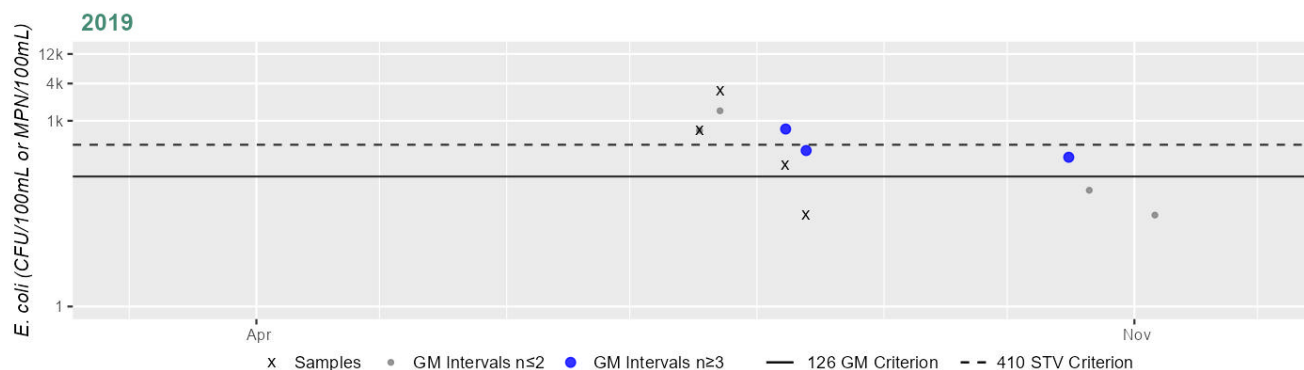
## Bacteria Data

**Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)**  
 (NSRWA 2019) (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
NSRWA_Drinkwater River	North South River Watershed Association	E. coli	07/18/19	08/13/19	4	30	3000	330

### Station NSRWA\_Drinkwater River - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	330
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	2
%n>STV	50%

Cumulative %GMI Exceedance

Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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 Drinkwater River (MA94-21) continues to be assessed as Not Supporting. The prior Algae, Debris, and Trash impairments (from the Aesthetics Use) are being carried forward. An Escherichia Coli (E. Coli) impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at one station in 2019. Since the Total Phosphorus 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.

MassDEP and North South River Watershed Association (NSRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Drinkwater River from 2001-2019 at 4 stations. Samples were collected from the following stations/sample years from upstream to downstream: A quarter of the way down the AU at W1527 [Cedar St crossing, Hanover] from May-Aug 2006 (n=5), about halfway down at W1530 [Hanover St (Rt. 139) crossing, Hanover] from May-Aug 2006 (n=5), about three-quarters of the way down at W0895 [Circuit St bridge, Hanover] from 2001 and 2006 (n=4-10/yr), then close to the downstream end of the AU at NSRWA\_Drinkwater River [Opposite side of Rd as Forge Pond, Hanover] from Jul-Aug 2019 (n=4). Since most of the bacteria data from the historic IR window are indicative of poor water quality conditions (as is the data from the current IR window), only the analysis from the current IR window will be summarized here: Analysis of the single year limited frequency *E. coli* dataset from NSRWA\_Drinkwater River indicated 100% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV (3,000 CFU/100ml), and the overall GM was 330 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0895	MassDEP	Water Quality	Drinkwater River	[Circuit Street bridge, Hanover]	42.112327	-70.879251
W1527	MassDEP	Water Quality	Drinkwater River	[Cedar Street crossing, Hanover]	42.128435	-70.873907
W1530	MassDEP	Water Quality	Drinkwater River	[Hanover Street (Route 139) crossing, Hanover]	42.117472	-70.876943
NSRWA_Drinkwater River	North South River Watershed Association	Water Quality	Drinkwater River	Opposite side of road as Forge Pond, Hanover	42.103500	-70.877600

### Bacteria Data

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

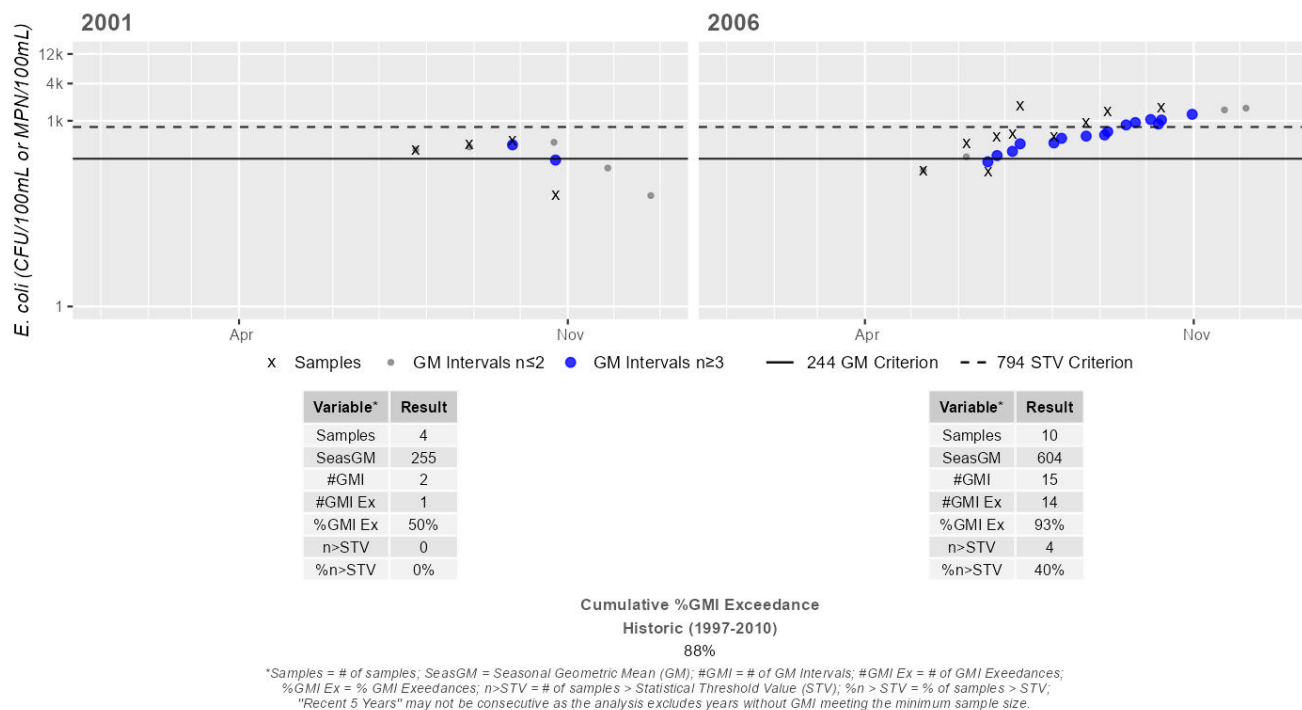
(MassDEP Undated 9) (MassDEP Undated 4) (NSRWA 2019) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0895	MassDEP	E. coli	07/25/01	10/24/01	4	62	480	255
W0895	MassDEP	E. coli	05/09/06	10/11/06	10	150	1730	604
W1527	MassDEP	E. coli	05/09/06	08/23/06	5	44	816	238
W1530	MassDEP	E. coli	05/09/06	08/23/06	5	166	2419	546
NSRWA_Drinkwater River	North South River Watershed Association	E. coli	07/18/19	08/13/19	4	30	3000	330

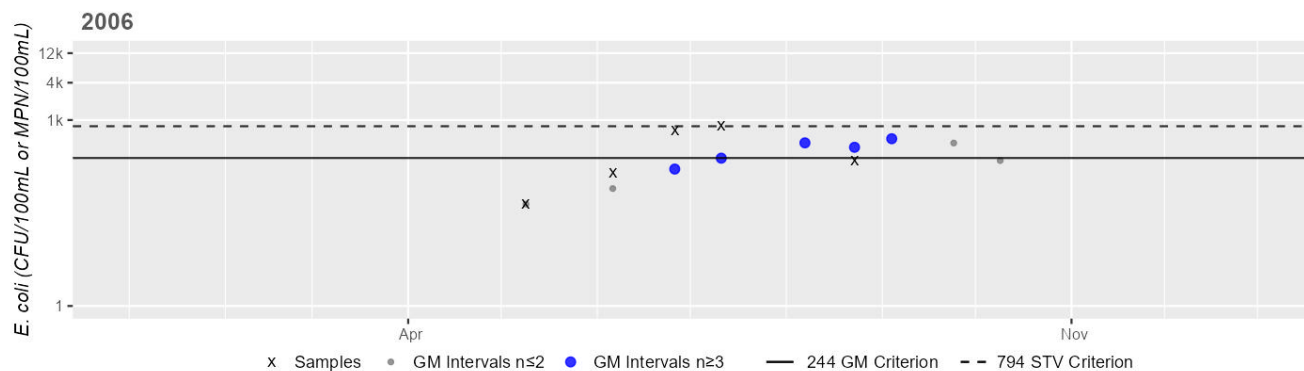
### Station MASSDEP\_W0895 - Escherichia coli

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



### Station MASSDEP\_W1527 - *Escherichia coli*

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



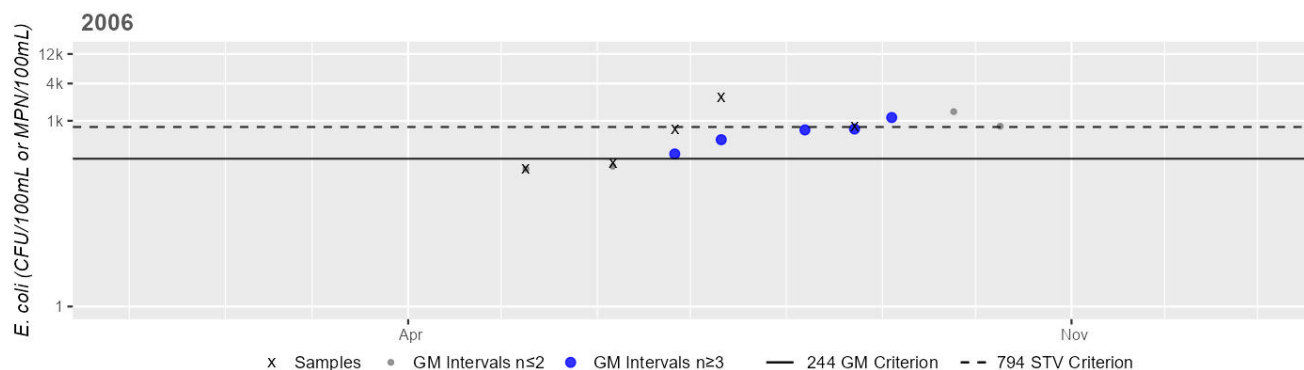
Variable*	Result
Samples	5
SeasGM	238
#GMI	5
#GMI Ex	3
%GMI Ex	60%
n>STV	1
%n>STV	20%

Cumulative %GMI Exceedance  
Historic (1997-2010)  
60%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W1530 - *Escherichia coli*

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



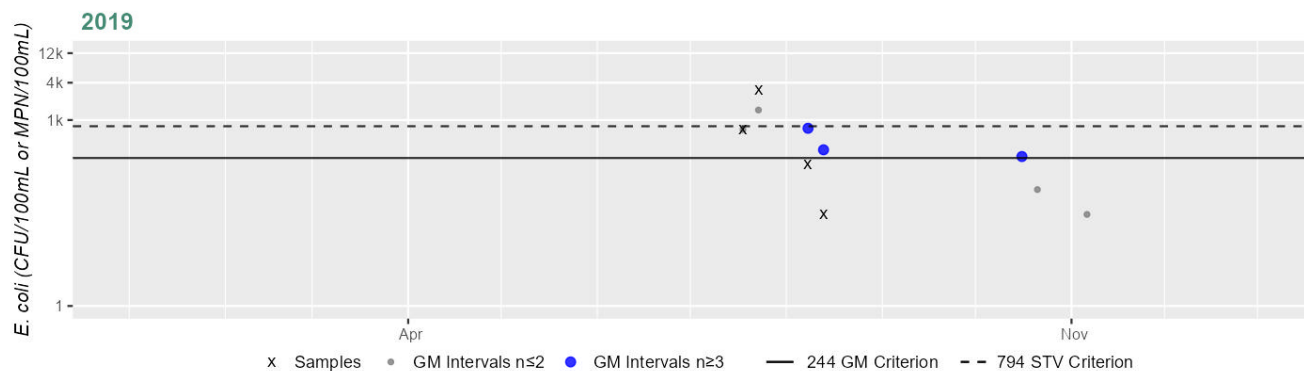
Variable*	Result
Samples	5
SeasGM	546
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	2
%n>STV	40%

Cumulative %GMI Exceedance  
Historic (1997-2010)  
100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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 NSRWA\_Drinkwater River - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	330
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	1
%n>STV	25%

## Cumulative %GMI Exceedance

Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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.

## Duxbury Bay (MA94-15)

<b>Location:</b>	The waters north and west of a line from Saquish Head to the tip of Plymouth Beach and from there to High Cliff (includes Kingston Bay), Plymouth excluding Back River and Bluefish River, Duxbury and Jones River, Kingston.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	12.7 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Estuarine Bioassessments	--	Unchanged
5	5	Fecal Coliform	61735	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Estuarine Bioassessments	Source Unknown (N)	X	--	--	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--



## Recommendations

2024/26 Recommendations
2024/26IR [Bacteria, Low] High frequency follow-up monitoring should be conducted in Duxbury Bay (MA94-15), to confirm if Enterococcus bacteria are impairing the Recreational uses. MDPH indicated that Landing Road and Rocky Nook (in the western/Kingston Bay section of the AU) were posted for >10% of the swimming season in 2019 (37%) and 2021 (12%), respectively. Note that 3 other beaches on the AU were never posted for >10% of the swimming season. 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 Duxbury Bay (MA94-15) is Not Assessed.	

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
Duxbury Bay (MA94-15): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 12.6377 sq mi (100%). The approved shellfish growing area represents 4.8737 sq mi (38%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.	

### Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB41.2	Browns Bank	Conditionally Approved	0.02906	0.2%
CCB42.0	Ichabod Flats	Conditionally Approved	2.69301	21.2%
CCB42.1	Inner Plymouth Harbor	Prohibited	0.67865	5.3%
CCB43.1	Kingston Bay East	Conditionally Approved	0.49840	3.9%
CCB43.2	Kingston Bay, North	Prohibited	0.34280	2.7%

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB43.3	Kingston Bay Center	Conditionally Approved	1.11594	8.8%
CCB43.5	Boundary Lane	Prohibited	0.00510	0.0%
CCB44.0	Jones River	Prohibited	0.00012	0.0%
CCB45.0	Duxbury Bay	Approved	4.87372	38.4%
CCB45.1	Eagle Nest Creek	Prohibited	0.00287	0.0%
CCB45.3	Duxbury Bay	Prohibited	0.00056	0.0%
CCB45.4	Standish Shores Mooring Area	Conditionally Approved	0.01786	0.1%
CCB45.5	Town Pier Inshore Mooring Area	Conditionally Approved	0.03903	0.3%
CCB45.6	Town Pier Offshore Mooring Area	Conditionally Approved	0.10191	0.8%
CCB45.7	Duxbury Bay South	Conditionally Approved	2.16398	17.0%
CCB46.1	Bluefish River	Conditionally Approved	0.07193	0.6%
CCB46.3	Long Point Marine	Prohibited	0.00278	0.0%

## Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Duxbury Bay (MA94-15) is Not Assessed.

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Duxbury Bay (MA94-15) continues to be assessed as Fully Supporting based on minimal beach closures for 5 beach's on the AU, although an Alert is being identified for Enterococcus. Duxbury Bay has 5 beaches with MDPH Beach Closure data: Landing Road [Beach ID: 2770], Shipyard Lane [Beach ID: 2772] and West End [Beach ID: 2773] beaches in Duxbury and Rocky Nook [Beach ID: 2927] and Gray's [Beach ID: 2926] beaches in Kingston. All these beaches were rarely, if at all, posted for swimming from 2018-2022. However, an Alert for Enterococcus is being identified since Landing Road and Rocky Nook (in the western/Kingston Bay section of the AU) were posted for &gt;10% of the swimming season in 2019 (37%) and 2021 (12%), respectively. The shellfish growing areas (12.6376 sq mi) in this AU are less than 100% approved (4.8737 sq mi, 38%), which means that the shellfish classification data were too limited to assess the Primary Contact Recreation Use of Duxbury Bay.</p>

## Beach Postings

**MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022)** (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 3)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2770	Landing Road/ Duxbury	42.01254, - 70.70000	42.01276, -70.69960	5%	11%	2%	0%	0%	37%	0%	0%	2%	2
2772	Shipyards Lane/ Duxbury	42.02767, - 70.67100	42.02689, -70.67090	1%	0%	0%	0%	0%	7%	0%	0%	0%	0
2773	West End/ Duxbury	42.04695, - 70.65100	42.04589, -70.65120	2%	0%	0%	0%	0%	0%	0%	0%	0%	0
2926	Gray's/ Kingston	41.98747, - 70.69940	41.98664, -70.69880	0%	1%	0%	0%	0%	0%	0%	3%	0%	0
2927	Rocky Nook/ Kingston	41.99633, - 70.70010	41.99566, -70.69980	0%	1%	0%	0%	0%	0%	6%	12%	0%	1

## Shellfish Growing Area Classifications

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Duxbury Bay (MA94-15): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 12.6377 sq mi (100%). The approved shellfish growing area represents 4.8737 sq mi (38%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO
2024/26 Use Attainment Summary	

The Secondary Contact Recreation Use for Duxbury Bay (MA94-15) continues to be assessed as Fully Supporting based on minimal beach closures for 5 beaches on the AU. Duxbury Bay has 5 beaches with DPH Beach Closure data: Landing Road [Beach ID: 2770], Shipyard Lane [Beach ID: 2772] and West End [Beach ID: 2773] beaches in Duxbury and Rocky Nook [Beach ID: 2927] and Gray's [Beach ID: 2926] beaches in Kingston. All beaches were rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (12.6376 sq mi) in this AU are less than 100% approved (4.8737 sq mi, 38%), which means that the shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Duxbury Bay.

### ***Shellfish Growing Area Classifications***

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

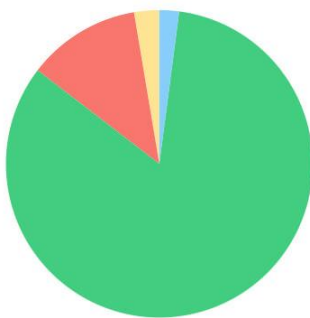
<b>Summary</b>
Duxbury Bay (MA94-15): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 12.6377 sq mi (100%). The approved shellfish growing area represents 4.8737 sq mi (38%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

## Eel River (MA94-37)

<b>Location:</b>	Headwaters (restored), southeast of College Pond Road, Plymouth to inlet Russell Millpond, Plymouth (formerly part of 2014 segment: Eel River MA94-23).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1.4 MILES
<b>Classification/Qualifier:</b>	B

### Eel River (MA94-37)

Watershed Area: 3.84 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.84	3.84	0.88	0.88
Agriculture	2.7%	2.7%	10.2%	10.2%
Developed	11.9%	11.9%	7.4%	7.4%
Natural	83.3%	83.3%	78%	78%
Wetland	2.1%	2.1%	4.4%	4.4%
Impervious	5.2%	5.2%	3.7%	3.7%

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 Eel River (MA94-37) 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 Eel River (MA94-37) 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 the Eel River (MA94-37) 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 the Eel River (MA94-37) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected <i>E. coli</i> bacteria samples about three quarters of the way down the Eel River at W0338 [upstream of Russell Millpond at outlet of cranberry bog E of Long Pond Rd, Plymouth] from Jun-Oct 2006 (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 37 CFU/100ml, which meets 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
W0338	MassDEP	Water Quality	Eel River	[upstream of Russell Millpond at outlet of cranberry bog east of Long Pond Road, Plymouth]	41.911043	-70.643850

## Bacteria Data

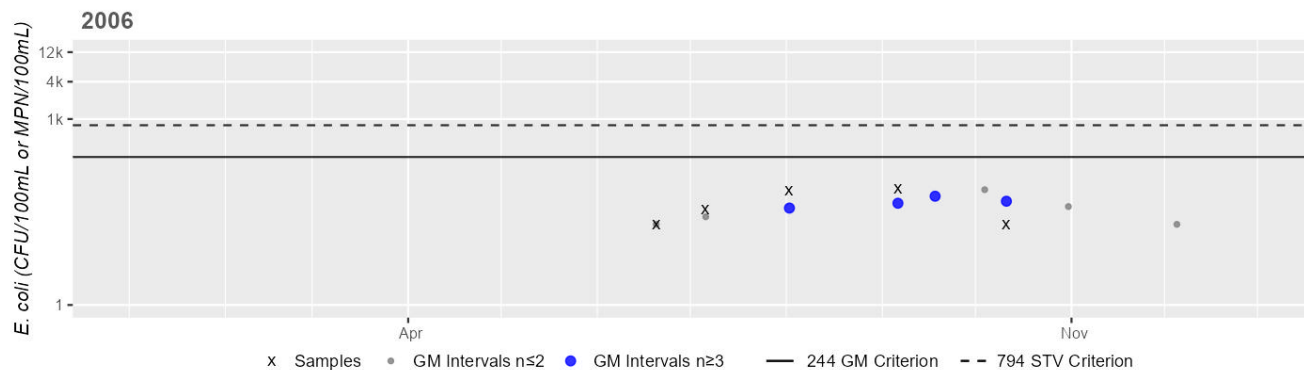
**Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)**  
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0338	MassDEP	E. coli	06/20/06	10/11/06	5	20	75	37

### Station MASSDEP\_W0338 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	37
#GMI	4
#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 Exceedances;  
%GMI Ex = % GMI Exceedances; 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.

## Eel River (MA94-38)

<b>Location:</b>	From outlet Russell Millpond, Plymouth to mouth at Plymouth Harbor, Plymouth (formerly part of 2014 segment: Eel River MA94-23).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	2.7 MILES
<b>Classification/Qualifier:</b>	B

### Eel River (MA94-38)

Watershed Area: 15.18 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	15.18	8.62	2.30	1.48
Agriculture	3.1%	4.7%	7.3%	7.3%
Developed	24.5%	21.1%	12.6%	14.5%
Natural	64%	60.5%	61.2%	53.1%
Wetland	8.5%	13.7%	18.9%	25.1%
Impervious	9.8%	9.8%	6.2%	7.9%

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Benthic Macroinvertebrates	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 Eel River (MA94-38) 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 Eel River (MA94-38) 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 the Eel River (MA94-38) 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 the Eel River (MA94-38) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected <i>E. coli</i> bacteria samples at the upstream end of the Eel River at W0339 [Russell Mills Rd, Plymouth] from Jun-Oct 2006 (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 5 CFU/100ml, which meets 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
W0339	MassDEP	Water Quality	Eel River	[Russell Mills Road, Plymouth]	41.917745	-70.626462

## Bacteria Data

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

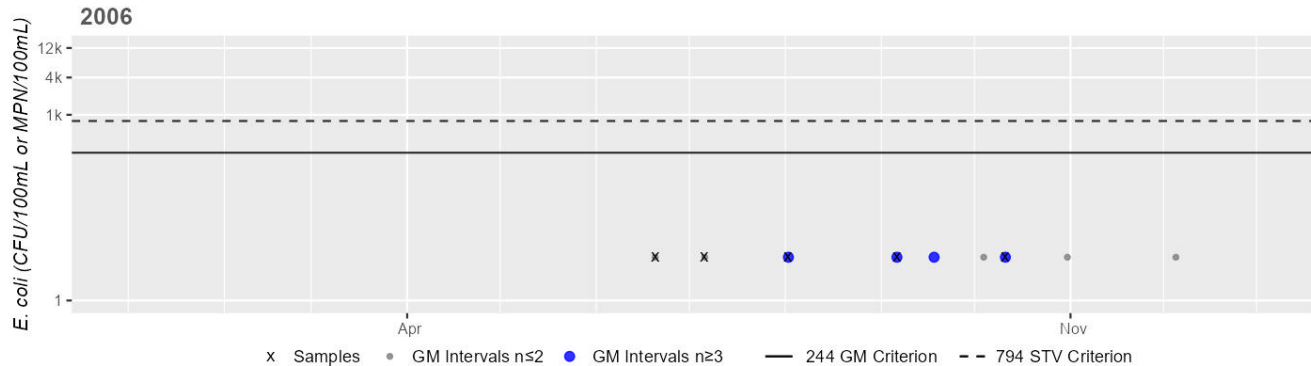
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0339	MassDEP	E. coli	06/20/06	10/11/06	5	5	5	4

#### Station MASSDEP\_W0339 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	5
#GMI	4
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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.

## Elbow Pond (MA94035)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	21 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Elbow Pond (MA94035) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Ellisville Harbor (MA94-34)

<b>Location:</b>	east of Ellisville Road, Plymouth.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.01 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4a	4a	Fecal Coliform	61716	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Ellisville Harbor (MA94-34) is Not Assessed.

### Shellfish Harvesting

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO

<b>2024/26 Use Attainment Summary</b>
---------------------------------------

Ellisville Harbor (MA94-34): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0085 sq mi (71%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.0085 sq mi (71%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB40.0	Ellisville Harbor	Prohibited	0.00847	70.6%

### Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Ellisville Harbor (MA94-34) 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 Ellisville Harbor (MA94-34) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0085 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 for Ellisville Harbor.

### Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Summary
Ellisville Harbor (MA94-34): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0085 sq mi (71%). 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 Ellisville Harbor (MA94-34) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0085 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 for Ellisville Harbor.	

## Shellfish Growing Area Classifications

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Ellisville Harbor (MA94-34): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0085 sq mi (71%). 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.

## Factory Pond (MA94175)

<b>Location:</b>	Hanson/Hanover.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	51 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	Mercury in Fish Tissue	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
Mercury in Fish Tissue	Illegal Dumps or Other Inappropriate Waste Disposal (Y)	--	X	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO
<b>2024/26 Use Attainment Summary</b>	

The Fish Consumption Use for Factory Pond (MA94175) 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 Factory Pond (referred to by MA DPH as "Drinkwater River/Indian Head River/North River (Between the Forge Pond Dam in Hanover and Route 3 in Norwell/Pembroke) and Factory Pond" or "Factory 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 Factory Pond (MA94175) 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 Factory Pond (MA94175) 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 Factory Pond (MA94175) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.

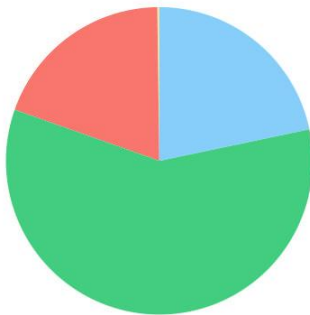


## First Herring Brook (MA94-36)

<b>Location:</b>	Headwaters, in South Swamp, Norwell to inlet Tack Factory Pond, Scituate (formerly part of 2014 segment: First Herring Brook MA94-25).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	2.6 MILES
<b>Classification/Qualifier:</b>	A: PWS, ORW (Tributary)

### First Herring Brook (MA94-36)

Watershed Area: 2.55 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.55	2.55	0.89	0.89
Agriculture	0.2%	0.2%	0.1%	0.1%
Developed	19.4%	19.4%	12.2%	12.2%
Natural	58.7%	58.7%	48.4%	48.4%
Wetland	21.7%	21.7%	39.3%	39.3%
Impervious	8.4%	8.4%	5.7%	5.7%

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (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 First Herring Brook (MA94-36) is Not Assessed.

## Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for First Herring Brook (MA94-36) is assessed as Fully Supporting based on MassDEP staff observations of the brook in the summer of 2019. MassDEP staff recorded aesthetics observations as part of the Reference Site Network monitoring project during the summer of 2019, at one station close to the downstream end of this First Herring Brook AU; west of Route 3A, ~825 feet upstream from mouth at inlet of Tack Factory Pond, Scituate (W2912, n=4). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2912	MassDEP	Water Quality	First Herring Brook	[west of Route 3A, approximately 825 feet upstream from mouth at inlet of Tack Factory Pond, Scituate]	42.187649	-70.768508

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2912	2019	4	Aesthetic observations were made by MassDEP field sampling crews at Station W2912 on First Herring Brook (MA94-36) during 4 site visits between Jun 2019 and Sep 2019. 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 9) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2912	2019	4	4	0

**MassDEP Aesthetics Observations (2011-2020)** (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2912	First Herring Brook	2019	Aesthetics Impaired?	No	4	4
W2912	First Herring Brook	2019	Aquatic Plant Density, Overall	None	2	4
W2912	First Herring Brook	2019	Aquatic Plant Density, Overall	Sparse	2	4
W2912	First Herring Brook	2019	Color	Brownish	1	4
W2912	First Herring Brook	2019	Color	Light Yellow/Tan	2	4
W2912	First Herring Brook	2019	Color	Reddish	1	4
W2912	First Herring Brook	2019	Objectionable Deposits	No	4	4
W2912	First Herring Brook	2019	Odor	None	4	4
W2912	First Herring Brook	2019	Periphyton Density, Filamentous	None	2	4
W2912	First Herring Brook	2019	Periphyton Density, Filamentous	Sparse	2	4
W2912	First Herring Brook	2019	Periphyton Density, Film	None	4	4
W2912	First Herring Brook	2019	Scum	No	4	4
W2912	First Herring Brook	2019	Turbidity	None	4	4

## 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 First Herring Brook (MA94-36) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information.

## 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 First Herring Brook (MA94-36) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. MassDEP staff collected *E. coli* bacteria samples halfway down First Herring Brook at W1510 [Grove St bridge, Scituate] from Jun-Oct 2006 (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 75 CFU/100ml, which meets 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
W1510	MassDEP	Water Quality	First Herring Brook	[Grove Street bridge, Scituate]	42.191838	-70.779686

## Bacteria Data

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

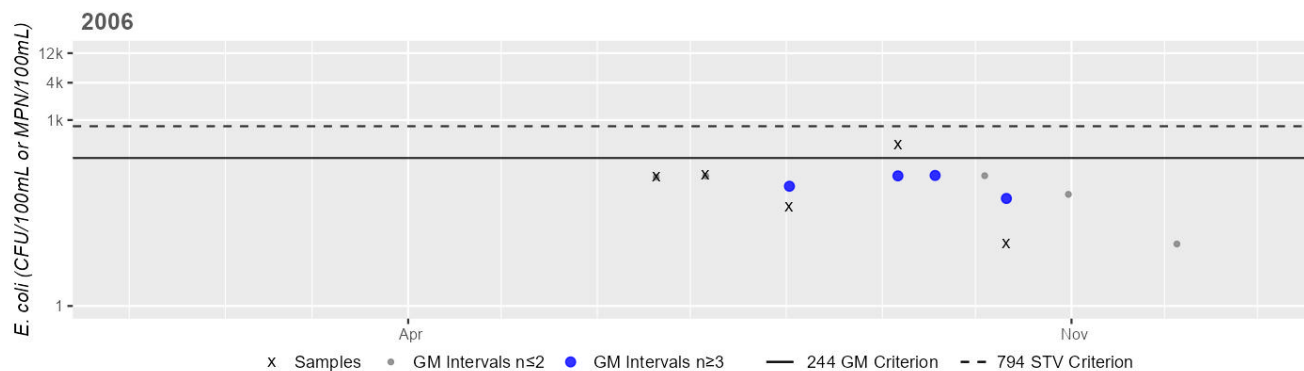
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W1510	MassDEP	E. coli	06/20/06	10/11/06	5	10	400	75

# Station MASSDEP\_W1510 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	75
#GMI	4
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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.

## First Herring Brook (MA94-63)

<b>Location:</b>	Outlet of unnamed pond (locally called 'Reservoir') to mouth at inlet of Old Oaken Bucket Pond, Scituate (formerly part of 2014 segment: First Herring Brook MA94-25).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	0.5 MILES
<b>Classification/Qualifier:</b>	A: PWS, ORW (Tributary)

No usable data were available for First Herring Brook (MA94-63) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fish Passage Barrier*)	--	Unchanged

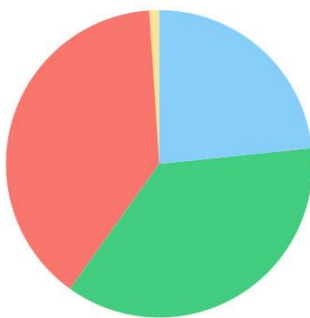
<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--

## French Stream (MA94-03)

<b>Location:</b>	Headwaters on the southeast side of the South Weymouth Naval Air Station, Rockland to mouth at confluence with Drinkwater River, Hanover (excluding the approximately 0.3 mile through Studleys Pond).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	5.8 MILES
<b>Classification/Qualifier:</b>	B: WWF

### French Stream (MA94-03)

Watershed Area: 8.78 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	8.78	6.22	2.66	1.90
Agriculture	1%	1.3%	0.4%	0.5%
Developed	39.1%	34.2%	26.2%	25.4%
Natural	36.5%	38.8%	35.3%	32.2%
Wetland	23.4%	25.7%	38.1%	41.9%
Impervious	18.4%	17.2%	10.8%	12.5%

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)	61718	Unchanged
5	5	Fecal Coliform	61718	Unchanged
5	5	Fish Bioassessments	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Dissolved Oxygen	Municipal (Urbanized High Density Area) (Y)	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Dissolved Oxygen	Unspecified Urban Stormwater (Y)	X	--	--	--	--
Escherichia Coli (E. Coli)	Municipal Point Source Discharges (Y)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Unspecified Urban Stormwater (Y)	--	--	--	X	X
Fecal Coliform	Municipal Point Source Discharges (Y)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Fecal Coliform	Unspecified Urban Stormwater (Y)	--	--	--	X	--
Fish Bioassessments	Source Unknown (N)	X	--	--	--	--
Phosphorus, Total	Municipal Point Source Discharges (Y)	X	--	--	--	--

## Recommendations

2024/26 Recommendations
<p>2024/26IR [Turbidity, Low] Follow-up monitoring should be conducted in French Stream (MA94-03), to confirm if High Turbidity is impairing the Aesthetics Use. About halfway down the AU (just upstream of Studley Pond) at West Water Street in Rockland {W2360} highly turbid water was noted during both site visits during the summer of 2012. This is of low priority;</p> <p>2010IR [Odor, Low] Follow-up monitoring should be conducted in the lower section of French Stream (MA94-03), to confirm if Odor is impairing the Aesthetics Use. Originally an Alert for Odor was identified due to the observation in 2001 of occasional chlorine/septic odors in the river downstream from the Rockland WWTP discharge at Summer Street {W0897}. Then in September 2013 at station {W0906}, downstream of the Rockland WWTP close to the downstream end of the AU, odor again was noted on one occasion although this time was described as “effluent”. This is of low priority;</p>

## 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 French Stream (MA94-03) is Not Assessed.	

## Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	YES
2024/26 Use Attainment Summary	
<p>The Aesthetics Use for French Stream (MA94-03) is assessed as Fully Supporting based on observations made by MassDEP staff in 2012 and 2013. The prior Alert for Odor (due to the occasional chlorine/septic odors in the river downstream from the Rockland WWTP discharge (MassDEP 2006)) is being carried forward since odor was still detected in this area in 2013 and the prior Alert for Turbidity is also being carried forward based on 2012 data. Since the prior Alert for elevated Total Phosphorus was redundantly duplicated across multiple uses for this waterbody, the Total Phosphorus Alert is being removed from the Aesthetics Use but will continue to be maintained as an impairment under the Aquatic Life Use.</p> <p>MassDEP staff conducted limited water quality sampling (n=2/site) at six sites throughout French Stream as part of the Bacteria Source Tracking (BST) project, described from upstream to downstream as follows: an eighth of the way down the AU at Spruce Street in Rockland (W2358) during the summer of 2012; a quarter of the way down the AU at the North Avenue/Rt. 139 crossing in Rockland (W0899) during the summer of 2012; about halfway down the AU, just upstream of Studley Pond, at West Water Street in Rockland (W2360) during the summer of 2012; just over halfway down the AU and immediately downstream of Studley Pond at Market Street in Rockland (W2357) during the summer of 2012; two-thirds of the way down the AU at the Summer Street crossing in Rockland (W0898) during the summer of 2013; and right at the downstream end approximately 30ft upstream of the confluence with the Drinkwater River in Hanover (W0906) during the summer of 2013. There were generally no objectionable conditions (odors, deposits, growths, or turbidity) recorded by MassDEP staff at any site, except for at station W2360 (West Water Street) where highly turbid water was noted during both site visits in 2012, which is indicative of an Alert status. In addition, effluent odor was noted on one occasion in September 2013 at station W0906; this station is downstream of the Rockland WWTP so the effluent odor is reflective of the existing Odor Alert for French Stream. While the frequency of visits at the six sites along French Stream in summers 2012 and 2013 was low, the Aesthetics Use continues to be assessed as Fully Supporting since there were generally no persistent objectionable conditions except for turbidity at one site.</p>	

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0898	MassDEP	Water Quality	French Stream	[Summer Street crossing, Rockland]	42.109127	-70.909274
W0899	MassDEP	Water Quality	French Stream	[North Avenue/Route 139 crossing, Rockland]	42.128484	-70.934067
W0906	MassDEP	Water Quality	French Stream	[approximately 30 feet upstream of confluence with Drinkwater River, Hanover]	42.109805	-70.881606
W2357	MassDEP	Water Quality	French Stream	[Market Street, Rockland]	42.119342	-70.916586
W2358	MassDEP	Water Quality	French Stream	[Spruce Street, Rockland]	42.136583	-70.934541
W2360	MassDEP	Water Quality	French Stream	[West Water Street, Rockland]	42.121371	-70.923761

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W0898	2013	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0898 on French Stream (MA94-03) during 2 site visits between Jun 2013 and Sep 2013. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W0899	2012	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0899 on French Stream (MA94-03) during 2 site visits between Jun 2012 and Jul 2012. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W0906	2013	2	Aesthetic observations were made by MassDEP field sampling crews at Station W0906 on French Stream (MA94-03) during 2 site visits between Jun 2013 and Sep 2013. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2357	2012	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2357 on French Stream (MA94-03) during 2 site visits between Jun 2012 and Jul 2012. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2358	2012	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2358 on French Stream (MA94-03) during 2 site visits between Jun 2012 and Jul 2012. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2360	2012	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2360 on French Stream (MA94-03) during 2 site visits between Jun 2012 and Jul 2012. There were some objectionable conditions recorded, including high turbidity (n=2). These conditions are indicative of an Alert status. However, aesthetic observations are limited (n<3).

**Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020)** (MassDEP Undated 9) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W0898	2013	2	1	0
W0899	2012	2	2	0
W0906	2013	2	2	0
W2357	2012	2	2	0
W2358	2012	2	2	0
W2360	2012	2	1	0

**MassDEP Aesthetics Observations (2011-2020)** (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0898	French Stream	2013	Aquatic Plant Density, Overall	None	1	2
W0898	French Stream	2013	Aquatic Plant Density, Overall	Unobservable	1	2
W0898	French Stream	2013	Color	Light Yellow/Tan	1	2
W0898	French Stream	2013	Color	None	1	2
W0898	French Stream	2013	Odor	None	2	2
W0898	French Stream	2013	Periphyton Density, Filamentous	None	1	2
W0898	French Stream	2013	Periphyton Density, Filamentous	Unobservable	1	2
W0898	French Stream	2013	Periphyton Density, Film	None	1	2
W0898	French Stream	2013	Periphyton Density, Film	Unobservable	1	2
W0898	French Stream	2013	Turbidity	Slightly Turbid	2	2
W0899	French Stream	2012	Aquatic Plant Density, Overall	None	2	2
W0899	French Stream	2012	Color	Light Yellow/Tan	2	2
W0899	French Stream	2012	Odor	None	2	2

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0899	French Stream	2012	Periphyton Density, Filamentous	None	2	2
W0899	French Stream	2012	Periphyton Density, Film	None	2	2
W0899	French Stream	2012	Turbidity	Moderately Turbid	2	2
W0906	French Stream	2013	Aquatic Plant Density, Overall	Sparse	2	2
W0906	French Stream	2013	Color	Light Yellow/Tan	1	2
W0906	French Stream	2013	Color	None	1	2
W0906	French Stream	2013	Odor	Effluent (Treated)	1	2
W0906	French Stream	2013	Odor	None	1	2
W0906	French Stream	2013	Periphyton Density, Filamentous	None	2	2
W0906	French Stream	2013	Periphyton Density, Film	Moderate	1	2
W0906	French Stream	2013	Periphyton Density, Film	None	1	2
W0906	French Stream	2013	Turbidity	Slightly Turbid	2	2
W2357	French Stream	2012	Aquatic Plant Density, Overall	None	2	2
W2357	French Stream	2012	Color	Light Yellow/Tan	2	2
W2357	French Stream	2012	Odor	None	2	2
W2357	French Stream	2012	Periphyton Density, Filamentous	None	1	2
W2357	French Stream	2012	Periphyton Density, Filamentous	Sparse	1	2
W2357	French Stream	2012	Periphyton Density, Film	Moderate	2	2
W2357	French Stream	2012	Turbidity	Slightly Turbid	2	2
W2358	French Stream	2012	Aquatic Plant Density, Overall	Sparse	2	2
W2358	French Stream	2012	Color	None	2	2
W2358	French Stream	2012	Odor	None	2	2
W2358	French Stream	2012	Periphyton Density, Filamentous	None	2	2
W2358	French Stream	2012	Periphyton Density, Film	Sparse	2	2
W2358	French Stream	2012	Turbidity	Moderately Turbid	2	2
W2360	French Stream	2012	Aquatic Plant Density, Overall	None	2	2
W2360	French Stream	2012	Color	Light Yellow/Tan	1	2
W2360	French Stream	2012	Color	None	1	2
W2360	French Stream	2012	Odor	None	2	2
W2360	French Stream	2012	Periphyton Density, Filamentous	None	1	2

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2360	French Stream	2012	Periphyton Density, Filamentous	Unobservable	1	2
W2360	French Stream	2012	Periphyton Density, Film	Unobservable	2	2
W2360	French Stream	2012	Turbidity	Highly 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 French Stream (MA94-03) 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 one combined station in 2019 and the prior Fecal Coliform impairment is also being carried forward. The prior Alerts for Odor and Turbidity are being removed from the Recreational Uses but will continue to be maintained under the Aesthetics Use. Since the Total Phosphorus Alert was removed from the Aesthetics Use, it is also being removed from the Primary Contact Recreation Use.

MassDEP and North South River Watershed Association (NSRWA) staff/volunteers collected *E. coli* bacteria samples in French Stream from 2012-2019 at 6 stations/combined stations, with the MassDEP staff efforts coming under the Bacteria Source Tracking Project (BST). Samples were collected from the following stations/sample years from upstream to downstream: an eighth of the way down the AU at W2358 [Spruce St, Rockland] from Jun-Jul 2012 (n=2), a quarter of the way down the AU at W0899 [N Avenue/Rt. 139 crossing, Rockland] from Jun-Jul 2012 (n=2), about halfway down the AU, just upstream of Studley Pond at W2360 [W Water St, Rockland] from Jun-Jul 2012 (n=2), just over halfway down the AU and immediately downstream of Studley Pond at W2357 [Market St, Rockland] from Jun-Jul 2012 (n=2), two-thirds of the way down the AU at combined station “W0898 & NSRWA\_French Stream” [Summer St crossing, Rockland & across the St from Eleanor Lane, Rockland] from 2013 and 2019 (n=2-4/yr), and right at the downstream end of the AU at W0906 [~30 ft upstream of confluence with Drinkwater River, Hanover] from Jun-Sep 2013 (n=2). The available *E. coli* data at station W2358, W0899, W2360, W2357 and W0906 are all too limited to assess the Primary Contact Recreation Use according to the 2024 CALM. However, it should be noted that at some of these stations one sample exceeded the 410 CFU/100ml STV in 2012 i.e. 712 CFU (W2358); 461CFU (W2360) and 488CFU (W2357). Also, analysis of the single year (2019) limited frequency *E. coli* dataset from combined station W0898 & NSRWA\_French Stream indicated 100% of intervals had GMs >126 CFU/100ml, 2 samples exceeded the 410 CFU/100ml STV (maximum 2,200 CFU) and the seasonal GM was 575 CFU/100ml, which is indicative of an *Escherichia Coli* (E. Coli) impairment. MassDEP BST human marker analysis was run at numerous locations on this French Stream AU over the years and results were always “inconclusive,” i.e., no evidence of a human source and despite the elevated bacteria concentrations no correctable sources were ever found.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0898	MassDEP	Water Quality	French Stream	[Summer Street crossing, Rockland]	42.109127	-70.909274
W0899	MassDEP	Water Quality	French Stream	[North Avenue/Route 139 crossing, Rockland]	42.128484	-70.934067
W0906	MassDEP	Water Quality	French Stream	[approximately 30 feet upstream of confluence with Drinkwater River, Hanover]	42.109805	-70.881606
W2357	MassDEP	Water Quality	French Stream	[Market Street, Rockland]	42.119342	-70.916586

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2358	MassDEP	Water Quality	French Stream	[Spruce Street, Rockland]	42.136583	-70.934541
W2360	MassDEP	Water Quality	French Stream	[West Water Street, Rockland]	42.121371	-70.923761
NSRWA_French Stream	North South River Watershed Association	Water Quality	French Stream	Across the street from Eleanor Lane, Rockland	42.108930	-70.909310

## ***Bacteria Data***

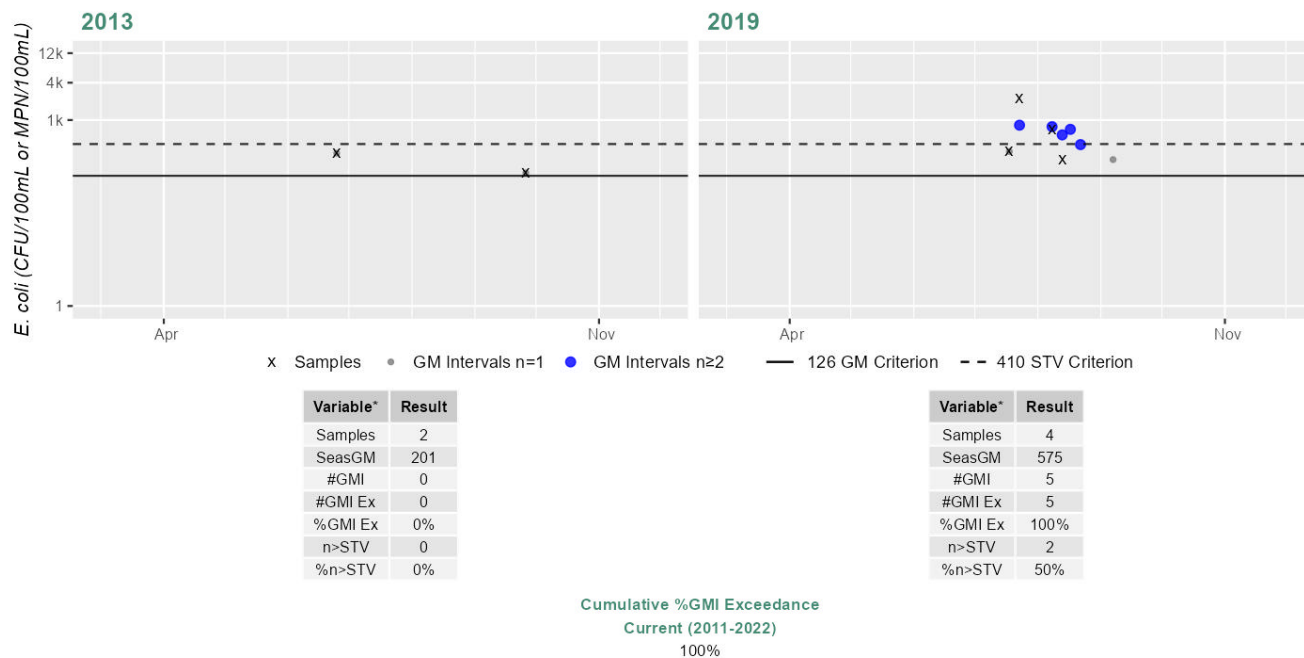
**Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis)** (MassDEP Undated 9) (MassDEP Undated 5) (NSRWA 2019) (MassDEP Undated 3)

[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
W0898	MassDEP	E. coli	06/25/13	09/26/13	2	140	291	201
W0899	MassDEP	E. coli	06/19/12	07/25/12	2	228	248	237
W0906	MassDEP	E. coli	06/25/13	09/26/13	2	231	291	259
W2357	MassDEP	E. coli	06/19/12	07/25/12	2	285	488	372
W2358	MassDEP	E. coli	06/19/12	07/25/12	2	46	712	180
W2360	MassDEP	E. coli	06/19/12	07/25/12	2	80	461	192
NSRWA_French Stream	North South River Watershed Association	E. coli	07/18/19	08/13/19	4	230	2200	575

### Station MASSDEP\_W0898 & NSRWA\_French Stream - *Escherichia coli*

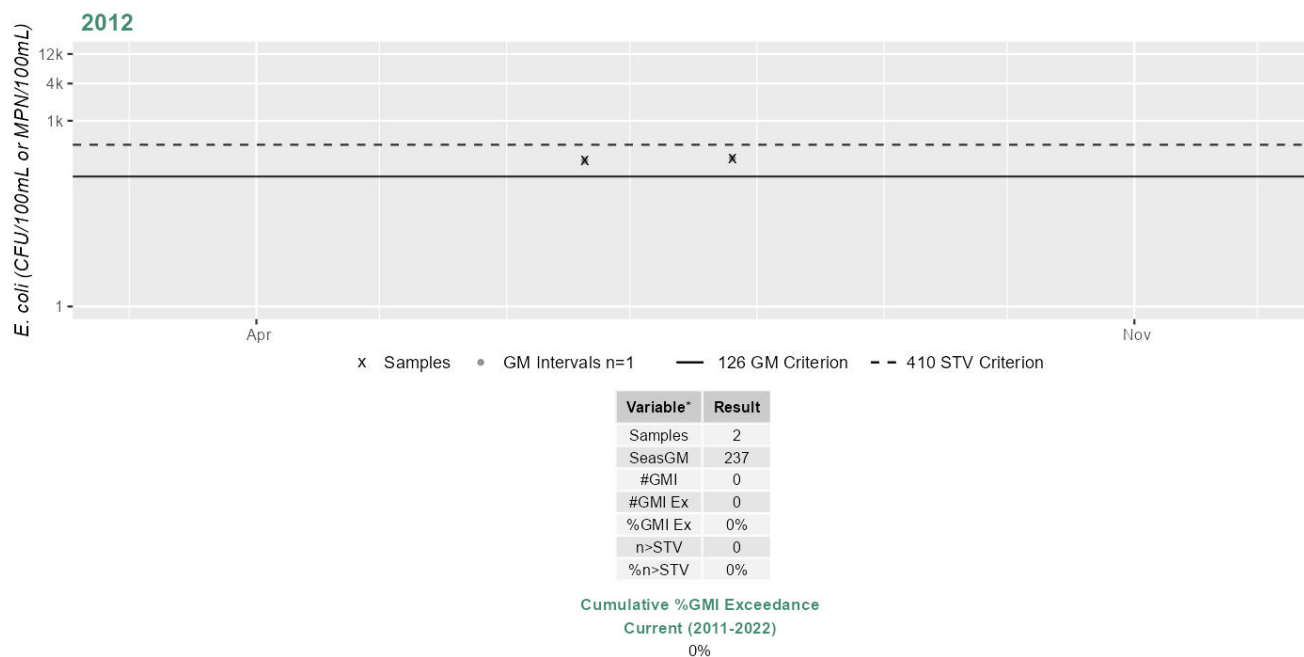
Daily Maximum Samples & 30 Day Geometric Means within the Primary Contact Recreation Season



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W0899 - *Escherichia coli*

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

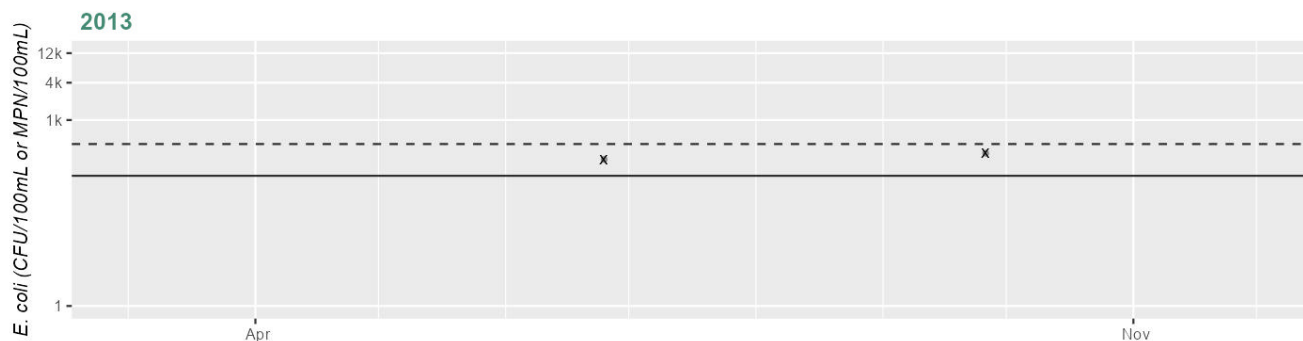


\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;  
"Recent 5 Years" may not be consecutive as the analysis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



### Station MASSDEP\_W0906 - *Escherichia coli*

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



x Samples • GM Intervals n=1 — 126 GM Criterion - - 410 STV Criterion

Variable*	Result
Samples	2
SeasGM	259
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

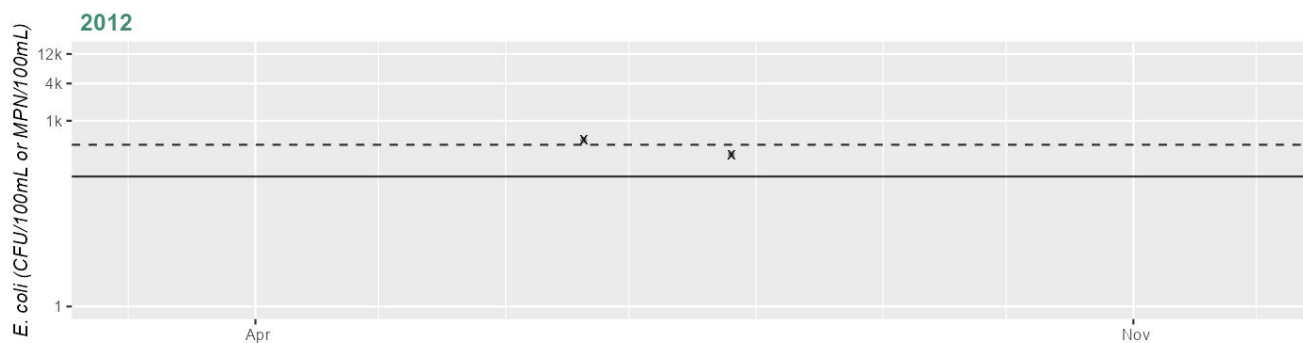
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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\_W2357 - *Escherichia coli*

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



x Samples • GM Intervals n=1 — 126 GM Criterion - - 410 STV Criterion

Variable*	Result
Samples	2
SeasGM	372
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	50%

Cumulative %GMI Exceedance

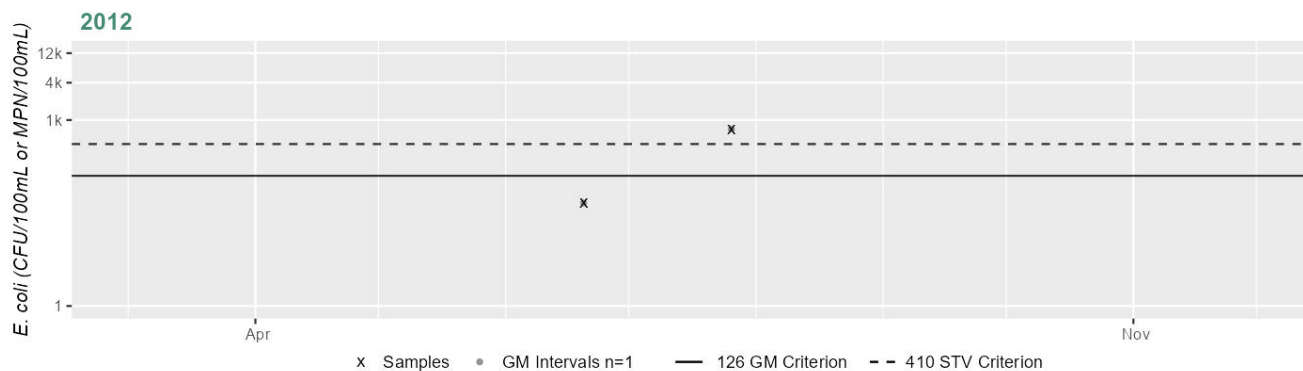
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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\_W2358 - *Escherichia coli*

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



Variable*	Result
Samples	2
SeasGM	180
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	50%

#### Cumulative %GMI Exceedance

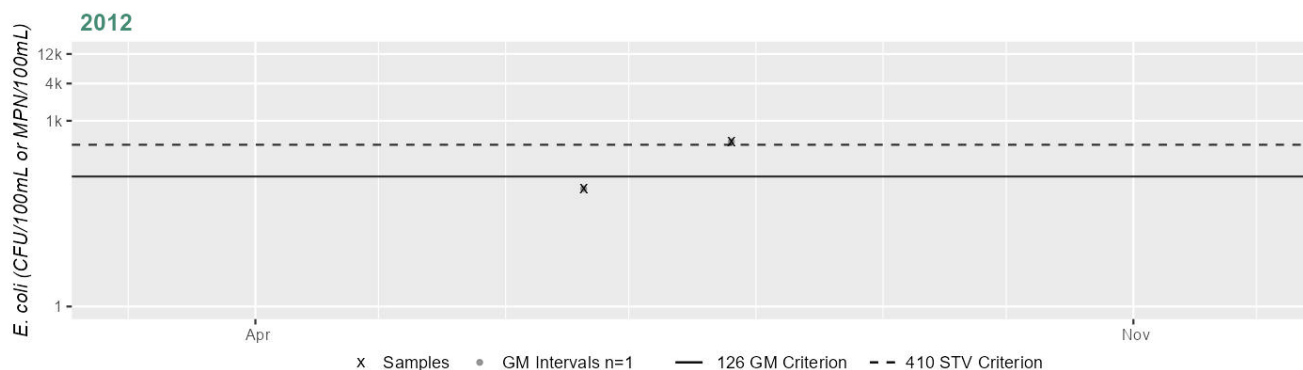
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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\_W2360 - *Escherichia coli*

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



Variable*	Result
Samples	2
SeasGM	192
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 2012-2014 at 6 sites on the French Stream AU (MA94-03), with E.coli concentrations ranging 46 to 776MPN. Additionally samples were collected at a number of unnamed tributaries over the same time range, with a max E.coli concentration of 2,489MPN. Human marker analysis was run at numerous locations over the years and results were always "inconclusive" evidence of a human source. Despite the elevated bacteria concentrations 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 French Stream (MA94-03) 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 one combined station in 2019. The prior Alerts for Odor and Turbidity are being removed from the Recreational Uses but will continue to be maintained under the Aesthetics Use. Since the Total Phosphorus Alert was removed from the Aesthetics Use, it is also being removed from the Secondary Contact Recreation Use. MassDEP and North South River Watershed Association (NSRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in French Stream from 2001-2019 at 7 stations/combined stations, with the MassDEP staff efforts coming under the Bacteria Source Tracking Project (BST). Samples were collected from the following stations/sample years from upstream to downstream: An eighth of the way down the AU at W2358 [Spruce St, Rockland] from Jun-Jul 2012 (n=2), a quarter of the way down the AU at W0899 [N Avenue/Rt. 139 crossing, Rockland] from Jul-Oct 2001 (historic n=4) and Jun-Jul 2012 (current n=2), about halfway down the AU just upstream of Studley Pond at W2360 [W Water St, Rockland] from Jun-Jul 2012 (n=2), just over halfway down the AU and immediately downstream of Studley Pond at W2357 [Market St, Rockland] from Jun-Jul 2012 (n=2), two-thirds of the way down the AU at combined station “W0898 & NSRWA\_French Stream” [Summer St crossing, Rockland & Across the St from Eleanor Lane, Rockland] from 2001 and 2006 (historic n=4-5/yr) and 2013 and 2019 (current n=2-4/yr), just over three-quarters of the way down at W0897 [~300 ft downstream from confluence with unnamed tributary (Rockland WWTP discharge canal, MA0101923), Rockland] from 2001 and 2006 (n=4-5/yr) and right at the downstream end of the AU at W0906 [~30 ft upstream of confluence with Drinkwater River, Hanover] from Jun-Sep 2013 (n=2). Since some bacteria data from the current IR window are indicative of poor water quality conditions, only the analysis from the current IR window (6 stations) will be summarized here: The available *E. coli* data at station W2358, W0899, W2360, W2357 and W0906 are all too limited to assess the Secondary Contact Recreation Use according to the 2024 CALM. Analysis of the single year limited frequency *E. coli* dataset from combined station “W0898 & NSRWA\_French Stream” indicated 100% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV (maximum 2,200 CFU) and the overall GM was 575 CFU/100ml, which is indicative of an *Escherichia Coli* (*E. Coli*) impairment. MassDEP BST human marker analysis was run at numerous locations on this French Stream AU over the years and results were always “inconclusive,” i.e., no evidence of a human source and despite the elevated bacteria concentrations no correctable sources were ever found.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0897	MassDEP	Water Quality	French Stream	[approximately 300 feet downstream from confluence with unnamed tributary (Rockland WWTP discharge canal, MA0101923), Rockland]	42.105552	-70.895367
W0898	MassDEP	Water Quality	French Stream	[Summer Street crossing, Rockland]	42.109127	-70.909274

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0899	MassDEP	Water Quality	French Stream	[North Avenue/Route 139 crossing, Rockland]	42.128484	-70.934067
W0906	MassDEP	Water Quality	French Stream	[approximately 30 feet upstream of confluence with Drinkwater River, Hanover]	42.109805	-70.881606
W2357	MassDEP	Water Quality	French Stream	[Market Street, Rockland]	42.119342	-70.916586
W2358	MassDEP	Water Quality	French Stream	[Spruce Street, Rockland]	42.136583	-70.934541
W2360	MassDEP	Water Quality	French Stream	[West Water Street, Rockland]	42.121371	-70.923761
NSRWA_French Stream	North South River Watershed Association	Water Quality	French Stream	Across the street from Eleanor Lane, Rockland	42.108930	-70.909310

## Bacteria Data

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

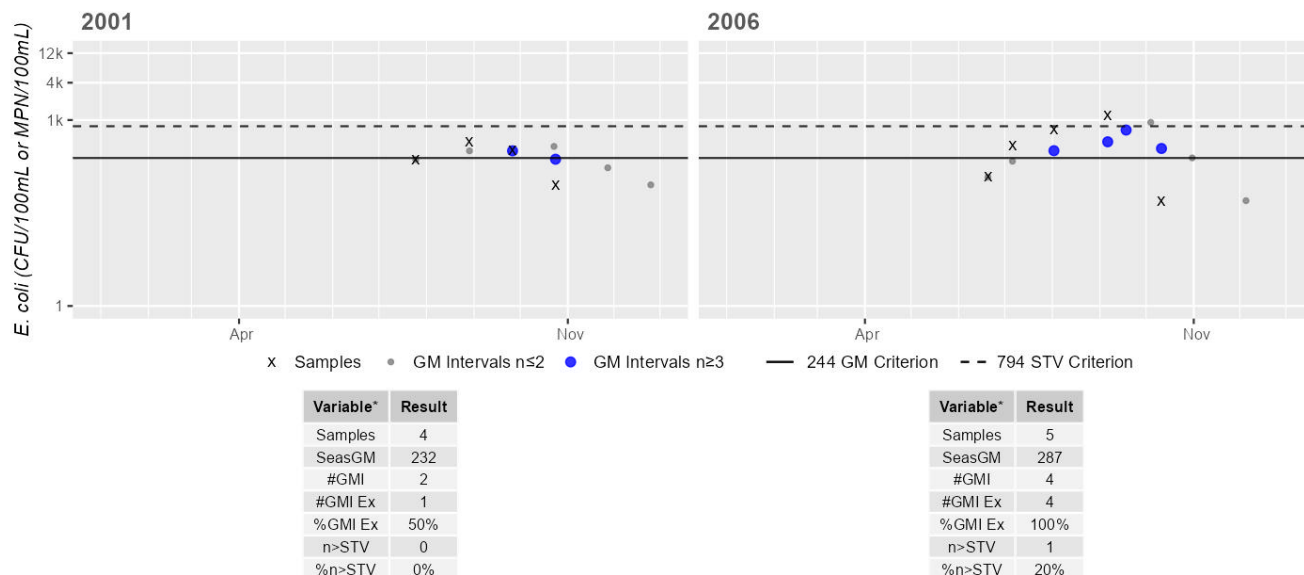
(MassDEP Undated 9) (MassDEP Undated 4) (NSRWA 2019) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0897	MassDEP	E. coli	07/25/01	10/24/01	4	90	440	232
W0897	MassDEP	E. coli	06/20/06	10/11/06	5	50	1200	287
W0898	MassDEP	E. coli	07/25/01	10/24/01	4	160	560	241
W0898	MassDEP	E. coli	06/20/06	10/11/06	5	45	860	288
W0898	MassDEP	E. coli	06/25/13	09/26/13	2	140	291	201
W0899	MassDEP	E. coli	07/25/01	10/24/01	4	81	350	163
W0899	MassDEP	E. coli	06/19/12	07/25/12	2	228	248	237
W0906	MassDEP	E. coli	06/25/13	09/26/13	2	231	291	259
W2357	MassDEP	E. coli	06/19/12	07/25/12	2	285	488	372
W2358	MassDEP	E. coli	06/19/12	07/25/12	2	46	712	180
W2360	MassDEP	E. coli	06/19/12	07/25/12	2	80	461	192
NSRWA_French Stream	North South River Watershed Association	E. coli	07/18/19	08/13/19	4	230	2200	575

### Station MASSDEP\_W0897 - *Escherichia coli*

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

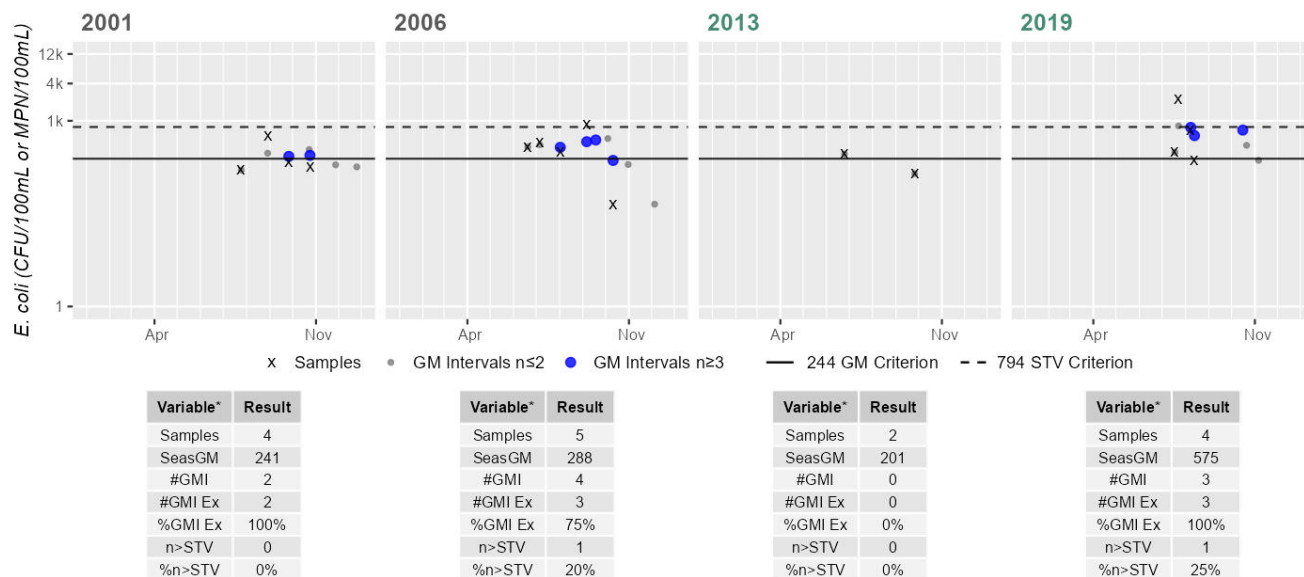


Cumulative %GMI Exceedance  
Historic (1997-2010)  
83%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W0898 & NSRWA\_French Stream - *Escherichia coli*

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



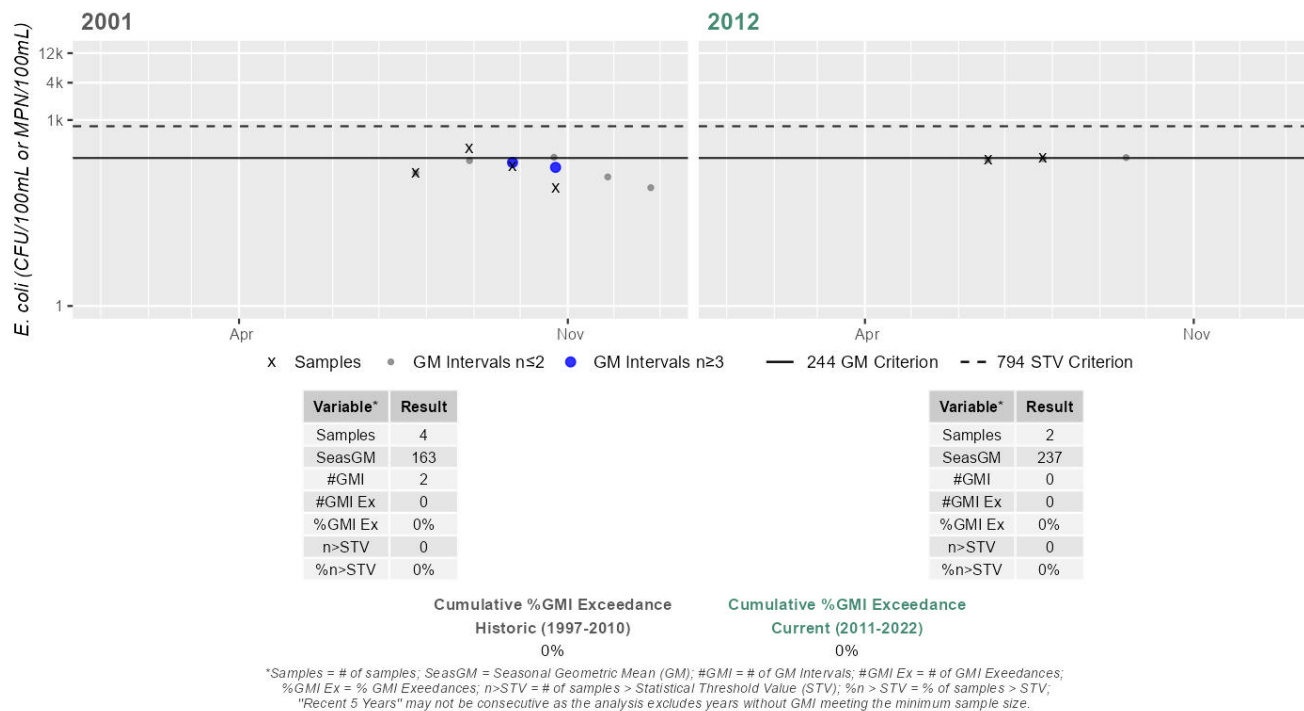
Cumulative %GMI Exceedance  
Historic (1997-2010)  
83%

Cumulative %GMI Exceedance  
Current (2011-2022)  
100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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.

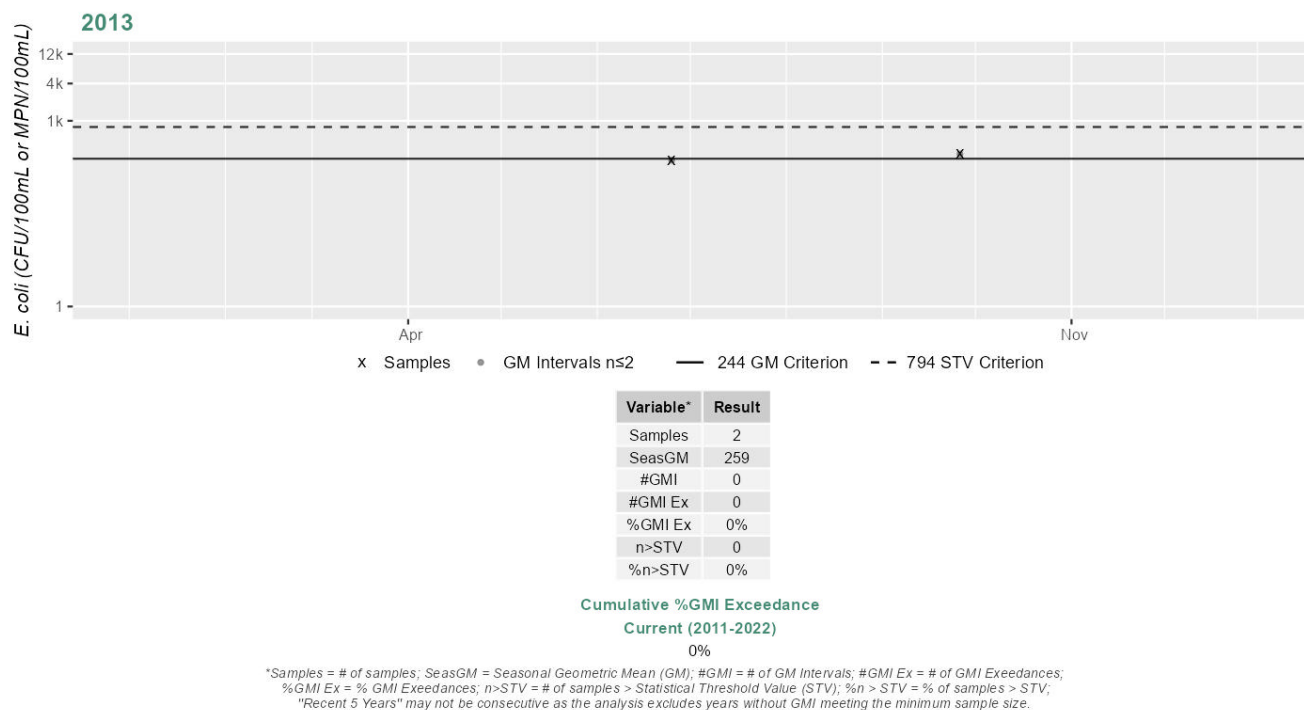
### Station MASSDEP\_W0899 - *Escherichia coli*

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



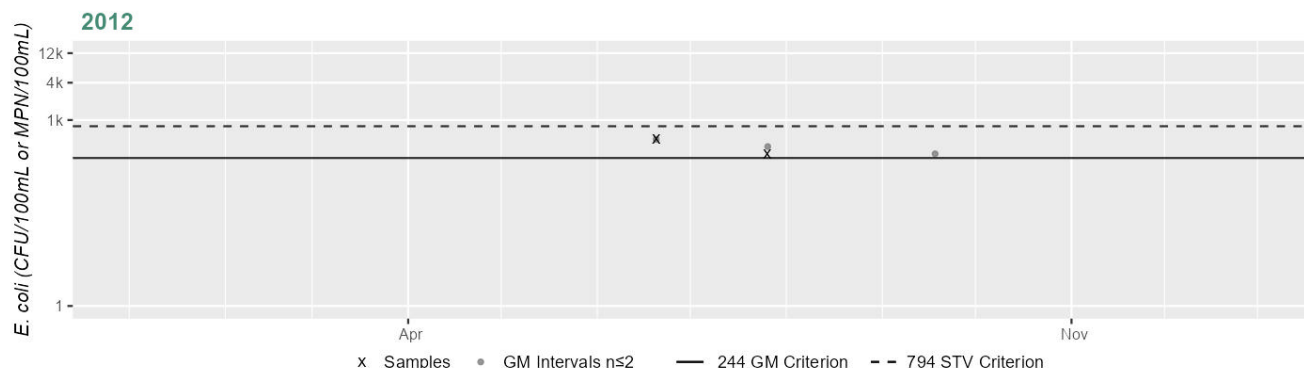
### Station MASSDEP\_W0906 - *Escherichia coli*

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



### Station MASSDEP\_W2357 - *Escherichia coli*

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



Variable*	Result
Samples	2
SeasGM	372
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

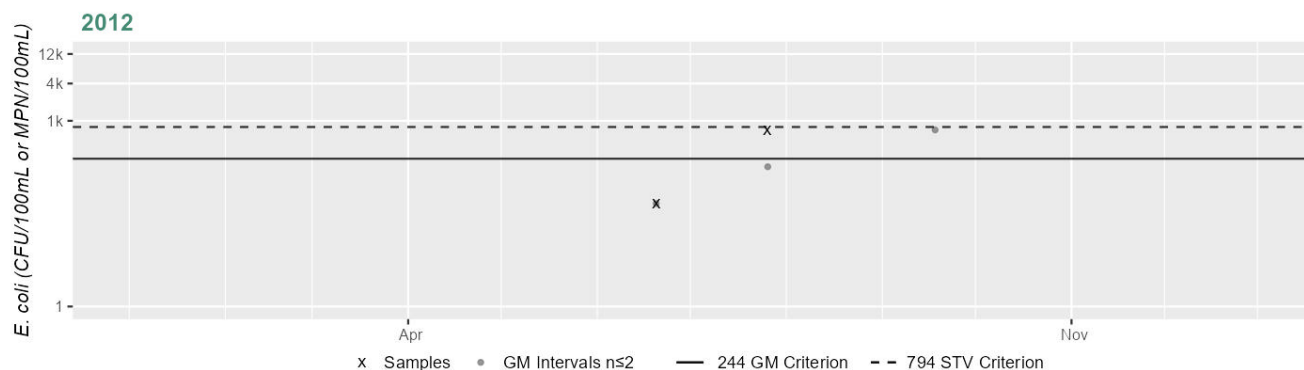
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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\_W2358 - *Escherichia coli*

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



Variable*	Result
Samples	2
SeasGM	180
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

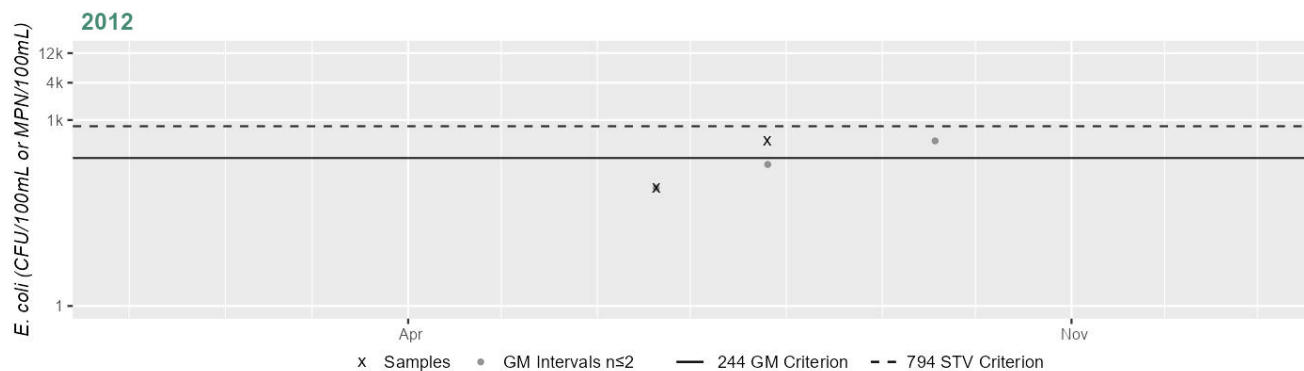
0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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\_W2360 - *Escherichia coli*

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



Variable*	Result
Samples	2
SeasGM	192
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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.

## Fresh Pond (MA94040)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	60 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	Mercury in Fish Tissue	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
Mercury in Fish Tissue	Atmospheric Deposition (N)	--	X	--	--	--
Mercury in Fish Tissue	Source Unknown (N)	--	X	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO
<b>2024/26 Use Attainment Summary</b>	

The Fish Consumption Use for Fresh Pond (MA94040) continues to be assessed as Not Supporting and the prior Mercury in Fish Tissue impairment is being carried forward. Fish toxics sampling for mercury, organochlorine pesticides, and metals was performed by MassDEP WPP biologists in Fresh Pond at station F0457 in 2018 as part of the probabilistic lake surveys (MAP2). MDPH included a site-specific advisory for Fresh 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.

### ***Fish Consumption Advisories***

#### **Summary of Fish Toxics Sampling and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP Undated 7)**

<b>Summary Statement</b>
Fish toxics sampling for mercury, organochlorine pesticides, and metals was performed by MassDEP WPP biologists in Fresh Pond (MA94040) at station F0457 in 2018 as part of the probabilistic lake surveys (MAP2). MA DPH retained the existing site-specific fish consumption advisories for Mercury associated with Fresh Pond 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 Fresh Pond (MA94040).

### **Aesthetic**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Fully Supporting	NO

<b>2024/26 Use Attainment Summary</b>
The Aesthetics Use for Fresh Pond (MA94040) is assessed as Fully Supporting based on MassDEP staff observations of the pond in the summer of 2018. MassDEP staff recorded aesthetics observations as part of the MAP2 monitoring project in summer 2018 at two stations in Plymouth, for Fresh Pond; at the beach at southern edge of pond, north off Bartlett Road (W2785/MAP2L-285S, n=5) and at the deep hole index station (W1092/MAP2L-285, n=3). During the MAP2 lake macrophyte mapping survey in Sep 2018 (n=1), less than 25% (0.6%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded at the index station, though green water color was noted on one occasion in August. During the MAP2 littoral survey at W2785 (n=1), duckweed was not noted in any of the 10 shoreline plots.

### ***Monitoring Stations***

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1092	MassDEP	Water Quality	Fresh Pond	[deep hole, Plymouth]	41.905331	-70.555980
W2785	MassDEP	Water Quality	Fresh Pond	[beach at southern edge of pond, north off Bartlett Road, Plymouth]	41.900921	-70.555368

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W1092	2018	3	Aesthetic observations were made by MassDEP field sampling crews at Station W1092 (MAP2L-285) on Fresh Pond (MA94040) during 3 site visits between Jul 2018 and Sep 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted green water color (n=1). During the MAP2 macrophyte mapping survey (n=1) in Sep 2018, less than 25% (0.6%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%.
W2785	2018	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2785 (MAP2L-285S) on Fresh Pond (MA94040) during 5 site visits between May 2018 and Sep 2018. 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 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1092	Fresh Pond	2018	Aesthetics Impaired?	No	3	3
W1092	Fresh Pond	2018	Aquatic Plant Density, Overall	None	3	3
W1092	Fresh Pond	2018	Color	Greenish	1	3
W1092	Fresh Pond	2018	Color	None	2	3
W1092	Fresh Pond	2018	Objectionable Deposits	No	3	3
W1092	Fresh Pond	2018	Odor	None	3	3
W1092	Fresh Pond	2018	Scum	No	3	3
W1092	Fresh Pond	2018	Turbidity	None	3	3
W2785	Fresh Pond	2018	Aesthetics Impaired?	No	5	5
W2785	Fresh Pond	2018	Color	None	5	5
W2785	Fresh Pond	2018	Objectionable Deposits	No	5	5
W2785	Fresh Pond	2018	Odor	None	5	5
W2785	Fresh Pond	2018	Scum	No	4	5
W2785	Fresh Pond	2018	Scum	Yes	1	5

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2785	Fresh Pond	2018	Turbidity	None	5	5

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Fresh Pond (MA94040) is assessed as Fully Supporting based on bacteria data collected at one station in 2018. In 2018 MassDEP staff collected Secchi depth and cyanobacteria cell count data at W1092 [MAP2L-285, Index-deep hole] and cyanobacteria cell count and cyanotoxins data at shoreline station W2785 [MAP2L-285S, beach at southern edge of pond, N off Bartlett Rd, Plymouth] and in 2014-2015 the Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY_Fresh_DeepHole. At DEP station W1092 (station depth=9.5 m) Secchi depth data indicated water clarity meeting the 1.2m (4ft) threshold (n=3, 4.32-7.2m) in 2018. At PLY_Fresh_DeepHole (station depth ranging 9.14-10m) in 2014 the Secchi depth was measured to be 3.6 m (n=1) and in 2015 was measured to be 5.63 m (n=1). Both these measurements meet the 1.2 m (4 ft) threshold, however the Town of Plymouth data were too limited (n &lt;3) to evaluate water clarity. The cyanobacteria cell count did not exceed 70,000 cells/ml in any of the water samples in 2018 (n=6). Analysis of microcystins and cylindrospermopsin samples from MassDEP's shoreline station W2785 in 2018 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L. MassDEP staff also collected <i>E. coli</i> bacteria samples in Fresh Pond at shoreline station W2785 from May-Sep 2018 (n=5). Analysis of the single year limited frequency dataset from this station indicated 0% of intervals had GMs &gt;126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV and the seasonal GM was 5 CFU/100ml, which meets 2024 CALM guidance.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1092	MassDEP	Water Quality	Fresh Pond	[deep hole, Plymouth]	41.905331	-70.555980
W2785	MassDEP	Water Quality	Fresh Pond	[beach at southern edge of pond, north off Bartlett Road, Plymouth]	41.900921	-70.555368

## Bacteria Data

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

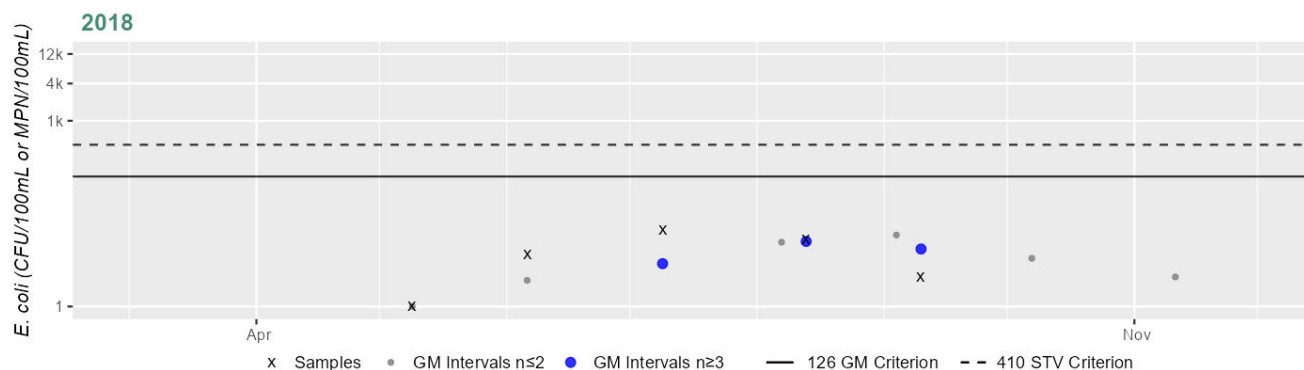
(MassDEP Undated 9) (MassDEP Undated 5)

[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
W2785	MassDEP	E. coli	05/09/18	09/10/18	5	1	17	5

#### Station MASSDEP\_W2785 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	5
#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 Exceedances; %GMI Ex = % GMI Exceedances; 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.

## Other Indicators

### Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data

(MassDEP Undated 9) (MassDEP Undated 5) (MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2014-2015, 2018	In Fresh Pond (MA94040) in 2018, MassDEP collected Secchi depth and cyanobacteria cell count data at W1092 [MAP2L-285, Index-deep hole] and cyanobacteria cell count and cyanotoxin data at W2785 [MAP2L-285S, Shoreline]. In 2015, the Town of Plymouth (PLY) collected Secchi depth data at PLY_Fresh_DeepHole [41.906056, -70.555861, Deep spot]. In 2014 at station PLY_Fresh_DeepHole (station depth=10 m) the Secchi depth (n=1) was measured to be 3.6 m on Aug 26, 2014 and in 2015 at station PLY_Fresh_DeepHole (station depth=9.14 m) the Secchi depth (n=1) was measured to be 5.63 m on Aug 20, 2015 indicating water clarity meeting the 1.2 m (4 ft) threshold in both years. In 2018 at DEP's Index-deep hole station W1092 (station depth=9.5 m) the Secchi depth measurements ranged from 4.32-7.2 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 2018 (n=6). Analysis of microcystins and cylindrospermopsin samples from W2785 in 2018 (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 9) (MassDEP Undated 5)

<b>Station Code</b>	<b>Waterbody</b>	<b>Station Type</b>	<b>Data Year</b>	<b>Sample Count</b>	<b>Count &gt;70,000 cells/mL</b>	<b>Exceedance Date(s)</b>
W1092	Fresh Pond	Index	2018	3	0	NA
W2785	Fresh Pond	Shoreline	2018	3	0	NA

## Secondary Contact Recreation

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Fully Supporting	NO

<b>2024/26 Use Attainment Summary</b>
The Secondary Contact Recreation Use for Fresh Pond (MA94040) is assessed as Fully Supporting based on a re-evaluation of bacteria data collected at one station in 2018. In 2018 MassDEP staff collected cyanobacteria cell count data at W1092 [MAP2L-285, Index-deep hole] and cyanobacteria cell count and cyanotoxins data at shoreline station W2785 [MAP2L-285S, beach at southern edge of pond, N off Bartlett Rd, Plymouth]. The cyanobacteria cell count did not exceed 70,000 cells/ml in any of the water samples (n=6) and analysis of microcystins and cylindrospermopsin samples from W2785 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L. MassDEP staff collected <i>E. coli</i> bacteria samples in Fresh Pond at shoreline station W2785 from May-Sep 2018 (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 5 CFU/100ml, which meets 2024 CALM guidance.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2785	MassDEP	Water Quality	Fresh Pond	[beach at southern edge of pond, north off Bartlett Road, Plymouth]	41.900921	-70.555368

## Bacteria Data

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

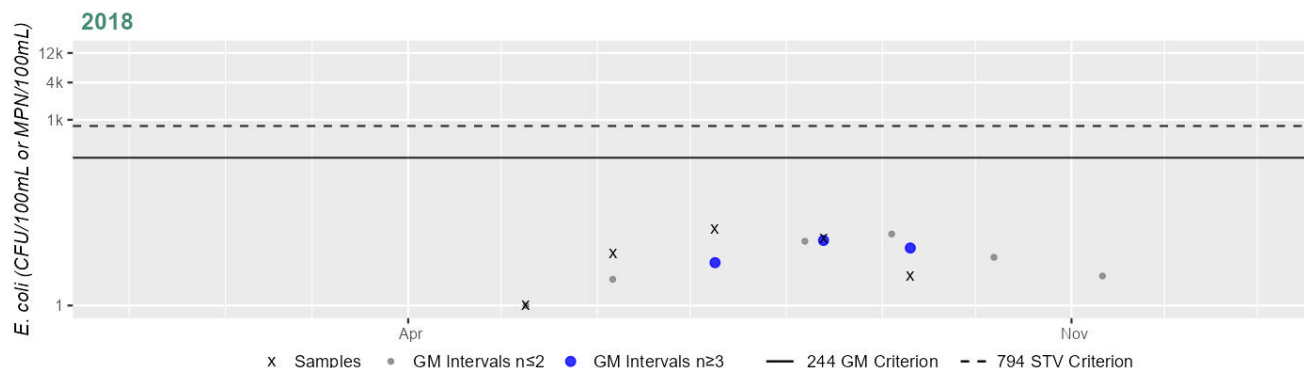
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W2785	MassDEP	E. coli	05/09/18	09/10/18	5	1	17	5

#### Station MASSDEP\_W2785 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	5
#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 Exceedances; %GMI Ex = % GMI Exceedances; 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.



## Furnace Brook (MA94-52)

<b>Location:</b>	Locally known as 'Trout Brook', headwaters outlet Soules Pond, Kingston to mouth at confluence with Jones River, Kingston.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	0.9 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Furnace Brook (MA94-52) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fish Passage Barrier*)	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--

## Furnace Pond (MA94043)

<b>Location:</b>	Pembroke.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	103 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Fanwort*)	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Harmful Algal Blooms	--	Added
5	5	Transparency / Clarity	--	Added

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Harmful Algal Blooms	Source Unknown (N)	--	--	--	X	X
Transparency / Clarity	Source Unknown (N)	--	--	--	X	--

## Recommendations

2024/26 Recommendations
2016IR [Algae, Low] Follow-up monitoring should be conducted in Furnace Pond (MA94043), to confirm if Algae is impairing the Aesthetics use. An Alert for Algae was issued in the 2016 assessment report based on observations of a blue-green bloom during a MassDEP survey in September 2003, plus MDPH cyanobacteria bloom postings for 14 days in 2011. In 2018 at shoreline station {W2786} some sporadic objectionable conditions were recorded by MassDEP staff, i.e. shoreline algal blooms with associated “algal scums” on Jul 02, Aug 06 and Sep 05, although no C-HABs were reported to MDPH during recent years (none since 2011). This is of low priority;
2016IR [Turbidity, Low] Follow-up monitoring should be conducted in Furnace Pond (MA94043), to confirm if High Turbidity is impairing the Aesthetics Use. An Alert for Turbidity was issued in the 2016 assessment report based on observations of High Turbidity during a MassDEP survey in September 2003. High turbidity was observed at shoreline station {W2786} on one occasion in 2018. This is of low priority;
2024/26IR [Color, Low] Follow-up monitoring should be conducted in Furnace Pond (MA94043), to confirm if Color is impairing the Aesthetics Use. In 2018 at shoreline station {W2786} green water color was observed on three occasions. This is of low priority;

## Designated Use Attainment Decisions

### Fish Consumption

2024/26 Use Attainment	Alert
Insufficient Information	NO
2024/26 Use Attainment Summary	
There is Insufficient Information to assess the Fish Consumption Use for Furnace Pond (MA94043). Fish toxics sampling for mercury, organochlorine pesticides, and metals was performed by MassDEP WPP biologists in Furnace Pond at station F0459 in 2018 as part of the probabilistic lake surveys (MAP2). However, no site-specific fish consumption advisory was issued by MDPH.	

### Fish Consumption Advisories

#### Summary of Fish Toxics Sampling and Resulting Fish Consumption Advisories (MassDEP Undated 7)

Summary Statement
Fish toxics sampling for mercury, organochlorine pesticides, and metals was performed by MassDEP WPP biologists in Furnace Pond (MA94043) at station F0459 in 2018 as part of the probabilistic lake surveys (MAP2). No site-specific fish consumption advisory was issued by MA DPH.

## Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	YES

### 2024/26 Use Attainment Summary

The Aesthetics Use for Furnace Pond (MA94043) is assessed as Fully Supporting based on MassDEP staff observations of the pond in the summer of 2018. The prior Alerts identified for Algae and Turbidity are being carried forward. Since the prior Alert identified for low Secchi depth transparency was redundantly duplicated across multiple uses for this waterbody, this Alert is being removed from the Aesthetics Use but will continue to be maintained (as a new impairment) under the Primary Contact Recreation Use. A new Alert is being identified for Color based on observations of green water color on three occasions in 2018.

MassDEP staff recorded aesthetics observations as part of the MAP2 lake monitoring project in summer 2018 at two stations in Pembroke, for Furnace Pond; at the southern edge of pond, north off Furnace Colony Drive (W2786/MAP2L-294S, n=5) and at the deep hole index station, southeastern lobe (W1093/MAP2L-294, n=3). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded at the index station, though green water color (n=1) and dense algae (50-75% coverage) were observed in August (which are reflective of the current Alerts). During the MAP2 macrophyte mapping survey in Jul 2018 (n=1), less than 25% (4.8%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%. During the MAP2 littoral survey at shoreline station W2786 (n=1), duckweed was not noted in any of the 10 shoreline plots. However, at this shoreline station some sporadic objectionable conditions were recorded by MassDEP staff, i.e. shoreline algal blooms with associated “algal scums” on Jul 02, Aug 06 and Sep 05 (which is reflective of the current Algae Alert for Furnace Pond), green water color on three occasions, trash on one occasion and high turbidity on one occasion (which is reflective of the current Turbidity Alert for Furnace Pond).

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1093	MassDEP	Water Quality	Furnace Pond	[deep hole, southeastern lobe, Pembroke]	42.053763	-70.822557
W2786	MassDEP	Water Quality	Furnace Pond	[southern edge of pond, north off Furnace Colony Drive, Pembroke]	42.050624	-70.822310

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W1093	2018	3	Aesthetic observations were made by MassDEP field sampling crews at Station W1093 (MAP2L-294) on Furnace Pond (MA94043) during 3 site visits between Jun 2018 and Aug 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted green water color (n=1). During the MAP2 macrophyte mapping survey (n=1) in Jul 2018, less than 25% (4.8%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%.
W2786	2018	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2786 (MAP2L-294S) on Furnace Pond (MA94043) during 5 site visits between May 2018 and Sep 2018. There were some objectionable conditions recorded, including green water color (n=3) and algal scum (n=3). Field staff also noted high turbidity (n=1) and objectionable deposits (n=2). These conditions are indicative of an Alert status. During the MAP2 littoral survey (n=1), duckweed was not noted in any of the 10 shoreline plots. Shoreline algal blooms were noted by DEP field crews on Jul 02, 2018, Aug 06, 2018, and Sep 05, 2018.

**MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 9)**

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1093	Furnace Pond	2018	Aesthetics Impaired?	No	3	3
W1093	Furnace Pond	2018	Aquatic Plant Density, Overall	None	3	3
W1093	Furnace Pond	2018	Color	Brownish	1	3
W1093	Furnace Pond	2018	Color	Greenish	1	3
W1093	Furnace Pond	2018	Color	Light Yellow/Tan	1	3
W1093	Furnace Pond	2018	Objectionable Deposits	No	3	3
W1093	Furnace Pond	2018	Odor	None	3	3
W1093	Furnace Pond	2018	Scum	No	3	3
W1093	Furnace Pond	2018	Turbidity	Moderately Turbid	2	3
W1093	Furnace Pond	2018	Turbidity	NR	1	3
W2786	Furnace Pond	2018	Aesthetics Impaired?	No	5	5
W2786	Furnace Pond	2018	Color	Dark Tan	1	5
W2786	Furnace Pond	2018	Color	Greenish	3	5
W2786	Furnace Pond	2018	Color	None	1	5
W2786	Furnace Pond	2018	Objectionable Deposits	No	3	5
W2786	Furnace Pond	2018	Objectionable Deposits	Yes	2	5
W2786	Furnace Pond	2018	Odor	None	4	5
W2786	Furnace Pond	2018	Odor	Rotting Vegetables	1	5
W2786	Furnace Pond	2018	Scum	No	1	5
W2786	Furnace Pond	2018	Scum	Yes	4	5
W2786	Furnace Pond	2018	Turbidity	Highly Turbid	1	5

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2786	Furnace Pond	2018	Turbidity	Moderately Turbid	2	5
W2786	Furnace Pond	2018	Turbidity	None	2	5

## Primary Contact Recreation

2024/26 Use Attainment					Alert
Not Supporting					YES
2024/26 Use Attainment Summary					

The Primary Contact Recreation Use for Furnace Pond (MA94043) is assessed as Not Supporting. A Harmful Algal Blooms impairment is being added due to cyanobacteria cell count data not meeting the threshold at one station in 2018, and a Transparency / Clarity impairment is being added due to Secchi depth data not meeting the threshold on three occasions in 2018. The prior Transparency / Clarity Alert and Harmful Algal Bloom Alert are being removed in light of the new impairments for the same issues. Since the prior Alert identified for Turbidity was redundantly duplicated across multiple uses for this waterbody, this Alert is being removed from the Primary Contact Recreation Use but will continue to be maintained under the Aesthetics Use.

In 2022 Central Plymouth County Water District Commission (CPCWDC) collected Secchi depth data and cyanotoxins data at station CPCWDC\_FPD [Furnace Pond Near Dam - Pembroke] and in 2018 MassDEP staff collected Secchi depth and cyanobacteria cell count data at station W1093 [MAP2L-294, Index-deep hole] as well as cyanobacteria cell count and cyanotoxins data at shoreline station W2786 [MAP2L-294S, southern edge of pond, North off Furnace Colony Drive, Pembroke]. While Secchi depth data indicated water clarity meeting the 1.2m (4ft) threshold at station CPCWDC\_FPD (station depth= 2 m) in 2022 (n=2, 1.25-2m); in 2018 at MassDEP's index-deep hole station W1093 (station depth= 2.5 m) the Secchi depth measurements ranged from 0.65-1.1 m (n=3) with 3 measurements in Jun, Jul, and Aug that were less than the 1.2 m (4 ft) threshold, which is indicative of a Transparency / Clarity impairment. Among both MassDEP stations, the cyanobacteria cell count exceeded 70,000 cells/mL on Aug 06, 2018, Aug 28, 2018, and Sep 05, 2018 indicating a cyanobacteria bloom estimated to have extended at least 30 days (n=6). Although analysis of microcystins and cylindrospermopsin samples from CPCWDC\_FPD in 2022 (n=3) and MassDEP's shoreline station W2786 in 2018 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L. CPCWDC and MassDEP staff/volunteers also collected *E. coli* bacteria samples in Furnace Pond from 2018-2022 at 2 stations. Samples were collected from the following stations/sample years: CPCWDC\_FPD from May-Oct 2022 (n=2) and MassDEP's shoreline station W2786 from May-Sep 2018 (n=5). While the available *E. coli* data at CPCWDC\_FPD are too limited to assess according to the 2024 CALM, analysis of the single year limited frequency *E. coli* dataset from W2786 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV and the seasonal GM was 9 CFU/100ml, which meets 2024 CALM guidance.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CPCWDC_FPD	Central Plymouth County Water District Commission	Water Quality	Furnace Pond	Furnace Pond Near Dam - Pembroke	42.053700	-70.820600
W1093	MassDEP	Water Quality	Furnace Pond	[deep hole, southeastern lobe, Pembroke]	42.053763	-70.822557
W2786	MassDEP	Water Quality	Furnace Pond	[southern edge of pond, north off Furnace Colony Drive, Pembroke]	42.050624	-70.822310

## Bacteria Data

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

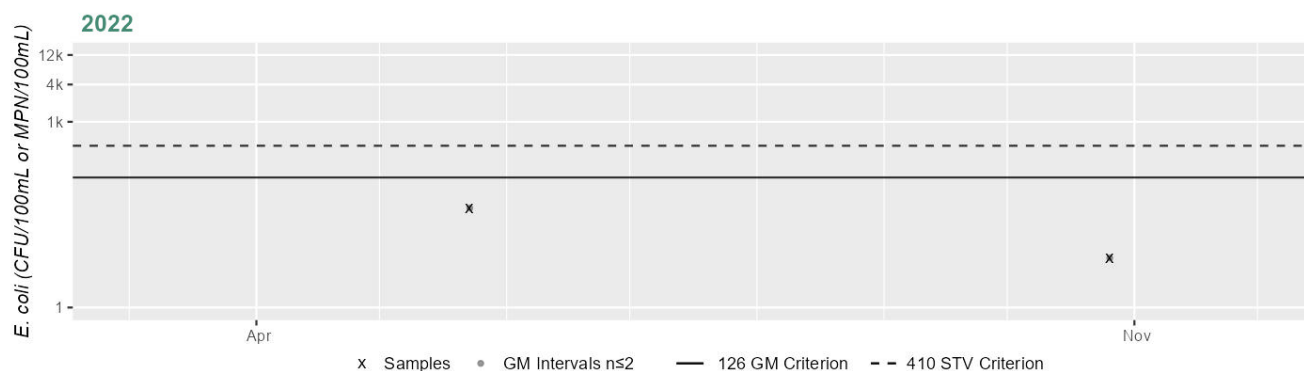
(CPCWDC 2023) (MassDEP Undated 3) (MassDEP Undated 9) (MassDEP Undated 5)

[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
CPCWDC_FPD	Central Plymouth County Water District Commission	E. coli	05/23/22	10/26/22	2	6	40	15
W2786	MassDEP	E. coli	05/07/18	09/05/18	5	2	24	9

### Station CPCWDC\_FPD - Escherichia coli

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



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

#### Cumulative %GMI Exceedance

Current (2011-2022)

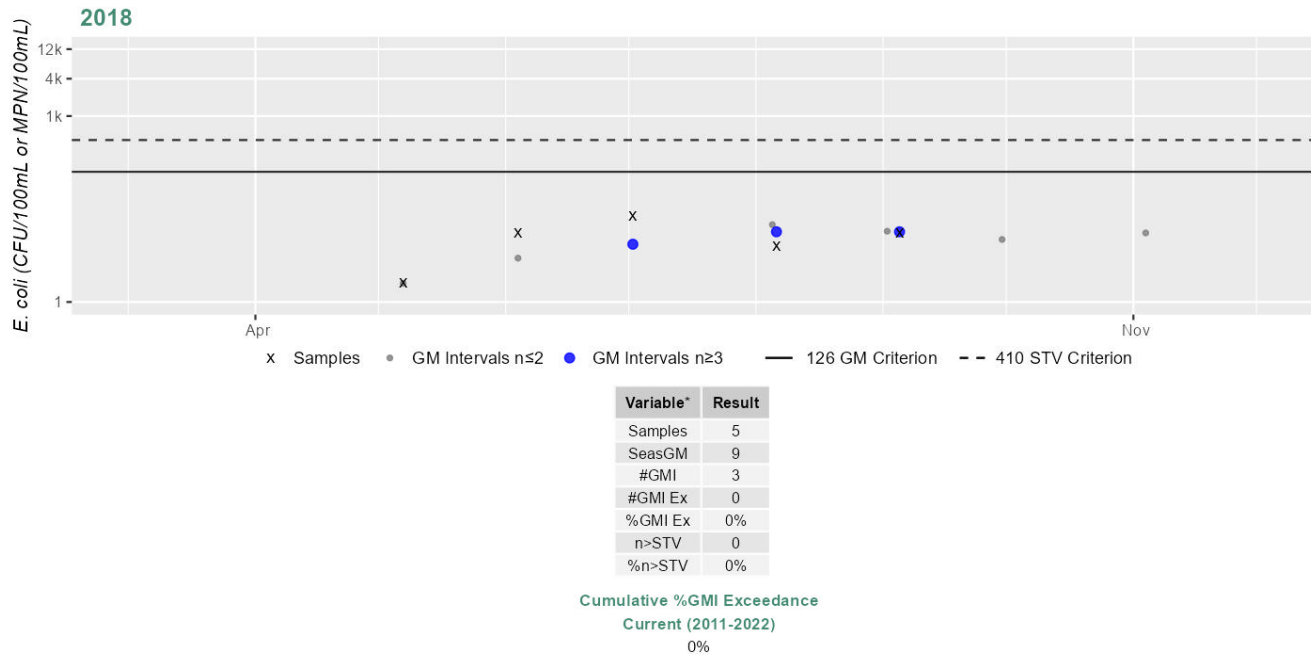
0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W2786 - *Escherichia coli*

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



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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.

### Other Indicators

#### Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data

(MassDEP Undated 9) (MassDEP Undated 5) (MassDEP Undated 3)

Data Year(s)	Summary
2018, 2022	In Furnace Pond (MA94043) in 2022, the Central Plymouth County Water District Commission (CPCWDC) collected Secchi data and cyanotoxin data at CPCWDC_FPD [42.0537, -70.8206, Furnace Pond Near Dam - Pembroke]. In 2018, MassDEP collected Secchi and cyanobacteria cell count data at W1093 [MAP2L-294, Index-deep hole], and cyanobacteria cell count and cyanotoxin data at W2786 [MAP2L-294S, Shoreline]. In 2022 at station CPCWDC_FPD (station depth=2 m) the Secchi depth measurements ranged from 1.25-2 m (n=2) indicating water clarity meeting the 1.2 m (4 ft) threshold. In 2018 at DEP's index-deep hole station W1093 (station depth=2.5 m) the Secchi depth measurements ranged from 0.65-1.1 m (n=3) with 3 measurements in Jun, Jul, and Aug that were less than the 1.2 m (4 ft) threshold. The Secchi depth measurements are indicative of a Transparency / Clarity impairment due to conditions at W1093. Among both DEP stations, the cyanobacteria cell count exceeded 70,000 cells/mL on Aug 06, 2018, Aug 28, 2018, and Sep 05, 2018 indicating a cyanobacteria bloom estimated to have extended at least 30 days (n=6). Analysis of microcystins and cylindrospermopsin samples from CPCWDC_FPD in 2022 (n=3) and DEP's shoreline station W2786 in 2018 (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 9) (MassDEP Undated 5)

Station Code	Waterbody	Station Type	Data Year	Sample Count	Count >70,000 cells/mL	Exceedance Date(s)
W1093	Furnace Pond	Index	2018	3	1	8/28/2018
W2786	Furnace Pond	Shoreline	2018	3	2	8/6/2018; 9/5/2018

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Furnace Pond (MA94043) is assessed as Not Supporting. A Harmful Algal Blooms impairment is being added due to cyanobacteria cell count data not meeting the threshold at one station in 2018. Since the prior Alert identified for Turbidity was redundantly duplicated across multiple uses for this waterbody, this Alert is being removed from the Secondary Contact Recreation Use but will continue to be maintained under the Aesthetics Use.</p> <p>In 2022 Central Plymouth County Water District Commission (CPCWDC) collected cyanotoxins data at station CPCWDC_FPD [Furnace Pond Near Dam - Pembroke] and in 2018 MassDEP staff collected cyanobacteria cell count data at station W1093 [MAP2L-294, Index-deep hole] and cyanobacteria cell count and cyanotoxins data at shoreline station W2786 [MAP2L-294S, southern edge of pond, N off Furnace Colony Drive, Pembroke]. The cyanobacteria cell count exceeded 70,000 cells/ml on Aug 06, 2018, Aug 28, 2018, and Sep 05, 2018 indicating a cyanobacteria bloom estimated to have extended at least 30 days in 2018 (n=6). Although analysis of microcystins and cylindrospermopsin samples from CPCWDC_FPD in 2022 (n=3) and MassDEP's shoreline station W2786 in 2018 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L. CPCWDC and MassDEP staff/volunteers also collected <i>E. coli</i> bacteria samples in Furnace Pond from 2018-2022 at 2 stations. Samples were collected from the following stations/sample years: CPCWDC_FPD from Mar-Oct 2022 (n=3) and MassDEP's shoreline station W2786 from May-Sep 2018 (n=5). While the available <i>E. coli</i> data at CPCWDC_FPD are too limited to assess according to the 2024 CALM, analysis of the single year limited frequency <i>E. coli</i> dataset from W2786 indicated 0% of intervals had GMs &gt;244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV and the overall GM was 9 CFU/100ml, which meets 2024 CALM guidance.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CPCWDC_FPD	Central Plymouth County Water District Commission	Water Quality	Furnace Pond	Furnace Pond Near Dam - Pembroke	42.053700	-70.820600
W2786	MassDEP	Water Quality	Furnace Pond	[southern edge of pond, north off Furnace Colony Drive, Pembroke]	42.050624	-70.822310

## Bacteria Data

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

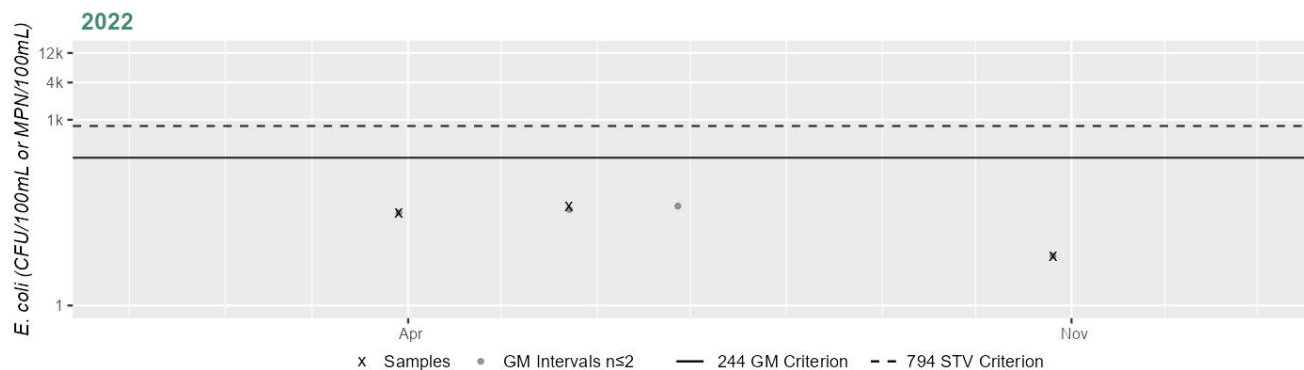
(CPCWDC 2023) (MassDEP Undated 2) (MassDEP Undated 9) (MassDEP Undated 4)

[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
CPCWDC_FPD	Central Plymouth County Water District Commission	E. coli	03/29/22	10/26/22	3	6	40	20
W2786	MassDEP	E. coli	05/07/18	09/05/18	5	2	24	9

### Station CPCWDC\_FPD - Escherichia coli

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



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

#### Cumulative %GMI Exceedance

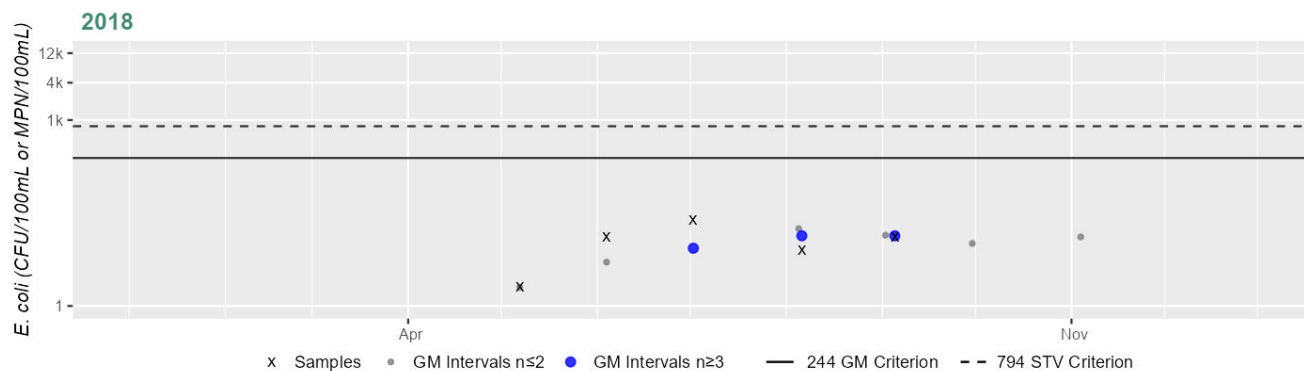
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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\_W2786 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	9
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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.

## Governor Winslow House Pond (MA94047)

<b>Location:</b>	Marshfield.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	23 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Governor Winslow House Pond (MA94047) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Great Herring Pond (MA94050)

<b>Location:</b>	Bourne/Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	415 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Dissolved Oxygen	--	Unchanged
5	5	Mercury in Fish Tissue	33880	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Mercury in Fish Tissue	Atmospheric Deposition (Y)	--	X	--	--	--
Mercury in Fish Tissue	Source Unknown (N)	--	X	--	--	--

## Recommendations

<b>2024/26 Recommendations</b>
2024/26IR [Harmful Algal Blooms, Medium] Follow-up monitoring should be conducted in Great Herring Pond (MA94050) 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. C-HAB postings for Great Herring Pond were reported to MDPH based on visual observations for 63 days in 2020 and 22 days in 2021. This of medium priority;

## Designated Use Attainment Decisions

## Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Great Herring Pond (MA94050) 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 Great Herring 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
Insufficient Information	YES

2024/26 Use Attainment Summary
Too limited data are available to assess the Aesthetics Use for Great Herring Pond (MA94050) so it is assessed as having Insufficient Information. An Alert is being identified for Harmful Algal Blooms in this waterbody since C-HAB postings (blooms of >15 days in duration) were reported to MDPH for 2020 and 2021. During the period 2015 through 2022, C-HAB postings for Great Herring Pond were reported to MDPH based on visual observations for 63 days in 2020 and 22 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 in this waterbody 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 2)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Great Herring Pond (MA94050) were reported to MDPH based on visual observations for 63 days in 2020 and 22 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 2)

[\* 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
Great Herring Pond	Plymouth						63	22	

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary
<p>No bacteria data are available to assess the Primary Contact Recreation Use for Great Herring Pond (MA94050) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. An Alert is being identified for Harmful Algal Blooms. During the period 2015 through 2022, C-HAB postings for Great Herring Pond were reported to MDPH based on visual observations for 63 days in 2020 and 22 days in 2021 and no blooms were reported in other years. Since no extended blooms (&gt;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, a Harmful Algal Bloom Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made. In 2014-2017 the Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY_GreatHerring_DeepHole. While Secchi depth data were too limited (<math>n &lt; 3</math>) to evaluate water clarity using data from this station in 2014 (<math>n=1</math>, 2m) and 2015 (<math>n=1</math>, 2.2m); in 2016 at PLY_GreatHerring_DeepHole (station depth=12 m) the Secchi depth measurements ranged from 2.3-4 m (<math>n=4</math>) and in 2017 at PLY_GreatHerring_DeepHole (station depth=12 m) the Secchi depth measurements ranged from 2.6-4 m (<math>n=7</math>), which indicated water clarity meeting the 1.2m (4ft) threshold in 2016 and 2017.</p>

### Other Indicators

**Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data**  
(MassDEP Undated 3)



<b>Data Year(s)</b>	<b>Summary</b>
2014-2017	In Great Herring Pond (MA94050), the Town of Plymouth (PLY) collected Secchi data at PLY_GreatHerring_DeepHole [41.797383, -70.563883, Deep spot] from 2014-2017. In 2014 at station PLY_GreatHerring_DeepHole (station depth=12.6 m) the Secchi depth (n=1) was measured to be 2 m on Aug 19, 2014, in 2015 at station PLY_GreatHerring_DeepHole (station depth=13 m) the Secchi depth (n=1) was measured to be 2.2 m on Aug 19, 2015, in 2016 at station PLY_GreatHerring_DeepHole (station depth=12 m) the Secchi depth measurements ranged from 2.3-4 m (n=4) and in 2017 at station PLY_GreatHerring_DeepHole (station depth=12 m) the Secchi depth measurements ranged from 2.6-4 m (n=7) indicating water clarity meeting the 1.2 m (4 ft) threshold in all four years.

## Secondary Contact Recreation

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	YES

<b>2024/26 Use Attainment Summary</b>
No bacteria data are available to assess the Secondary Contact Recreation Use for Great Herring Pond (MA94050) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. An Alert is being identified for Harmful Algal Blooms. During the period 2015 through 2022, C-HAB postings for Great Herring Pond were reported to MDPH based on visual observations for 63 days in 2020 and 22 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, a Harmful Algal Bloom Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made.

## Great Sandy Bottom Pond (MA94053)

<b>Location:</b>	Pembroke.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	103 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW

No usable data were available for Great Sandy Bottom Pond (MA94053) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Great South Pond (MA94054)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	285 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Dissolved Oxygen	--	Unchanged
5	5	Mercury in Fish Tissue	33880	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Mercury in Fish Tissue	Atmospheric Deposition (Y)	--	X	--	--	--
Mercury in Fish Tissue	Source Unknown (N)	--	X	--	--	--

## Recommendations

<b>2024/26 Recommendations</b>
2024/26IR [Harmful Algal Blooms, Low] Follow-up monitoring should be conducted in Great South Pond (MA94054) 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. C-HAB postings for Great South Pond were reported to MDPH based on visual observations for 33 days in 2021. This is of low priority.

## Designated Use Attainment Decisions

## Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Great South Pond (MA94054) 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 Great South 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
Insufficient Information	YES

2024/26 Use Attainment Summary
Too limited data are available to assess the Aesthetics Use for Great South Pond (MA94054) 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 (blooms of >15 days in duration) were reported to MDPH for 2021. During the period 2015 through 2022, C-HAB postings for Great South Pond were reported to MDPH based on visual observations for 33 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 in this waterbody 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 2)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Great South Pond (MA94054) were reported to MDPH based on visual observations for 33 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 2)

[\* 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
Great South Pond	Plymouth							33	

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary
<p>No bacteria data are available to assess the Primary Contact Recreation Use for Great South Pond (MA94054) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. An Alert is being identified for Harmful Algal Blooms. During the period 2015 through 2022, C-HAB postings for Great South Pond were reported to MDPH based on visual observations for 33 days in 2021 and no blooms were reported in other years. Since no extended blooms (&gt;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, a Harmful Algal Bloom Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made. In 2014 the Town of Plymouth (PLY) collected Secchi depth data at the deep hole station PLY_GreatSouth_DeepHole. At station PLY_GreatSouth_DeepHole (station depth=14.93 m) the Secchi depth (n=1) was measured to be 5.1 m on Aug 27, 2014 which meets the 1.2 m (4 ft) threshold, however the data were too limited (n &lt; 3) to evaluate water clarity.</p>

## Other Indicators

**Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data**  
(MassDEP Undated 3)

Data Year(s)	Summary
2014	In Great South Pond (MA94054), the Town of Plymouth (PLY) collected Secchi data at PLY_GreatSouth_DeepHole [41.904383, -70.667717, Deep spot]. In 2014 at station PLY_GreatSouth_DeepHole (station depth=14.93 m) the Secchi depth (n=1) was measured to be 5.1 m on Aug 27, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold.

## 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 Great South Pond (MA94054) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. An Alert is being identified for Harmful Algal Blooms. During the period 2015 through 2022, C-HAB postings for Great South Pond were reported to MDPH based on visual observations for 33 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, a Harmful Algal Bloom Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made.

## Green Harbor (MA94-11)

<b>Location:</b>	From the tidegates at Route 139, Marshfield to the mouth of the harbor at Massachusetts Bay/Cape Cod Bay, Marshfield.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.08 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	61731	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	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 Green Harbor (MA94-11) is Not Assessed.

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

**2024/26 Use Attainment Summary**

Green Harbor (MA94-11): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0681 sq mi (90%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.0681 sq mi (90%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB3.0	Green Harbor	Prohibited	0.06810	89.8%

**Aesthetic**

2024/26 Use Attainment	Alert
Not Assessed	NO

**2024/26 Use Attainment Summary**

No data are available, so the Aesthetics Use for Green Harbor (MA94-11) 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 Green Harbor (MA94-11) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0681 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 for Green Harbor.

**Shellfish Growing Area Classifications**

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)



Summary
Green Harbor (MA94-11): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0681 sq mi (90%). 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 Green Harbor (MA94-11) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0681 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 for Green Harbor.

## Shellfish Growing Area Classifications

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

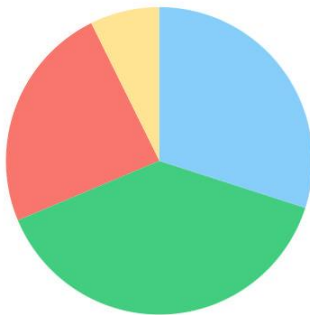
Summary
Green Harbor (MA94-11): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0681 sq mi (90%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

## Green Harbor River (MA94-10)

<b>Location:</b>	Headwaters, outlet Black Mountain Pond, Marshfield to the tidegate at Route 139, Marshfield.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	5.7 MILES
<b>Classification/Qualifier:</b>	B

### Green Harbor River (MA94-10)

Watershed Area: 7.30 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	7.30	5.57	2.97	2.39
Agriculture	7.3%	7.9%	13.3%	13.6%
Developed	24%	25.7%	9.6%	8.8%
Natural	38.7%	34.8%	35.2%	31.5%
Wetland	29.9%	31.7%	41.9%	46.1%
Impervious	11.7%	12.7%	4.2%	3.7%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	(Flow Regime Modification*)	--	Unchanged
5	5	Algae	--	Unchanged
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Hydrostructure Impacts on Fish Passage (Y)	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Impacts from Hydrostructure Flow Regulation/Modification (Y)	X	--	--	--	--
(Flow Regime Modification*)	Changes in Tidal Circulation/Flushing (Y)	X	--	--	--	--
(Flow Regime Modification*)	Hydrostructure Impacts on Fish Passage (Y)	X	--	--	--	--
(Flow Regime Modification*)	Impacts from Hydrostructure Flow Regulation/Modification (Y)	X	--	--	--	--
Algae	Source Unknown (N)	--	--	X	X	X
Turbidity	Source Unknown (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 Green Harbor River (MA94-10) is Not Assessed.	

### Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
The Aesthetics Use for Green Harbor River (MA94-10) continues to be assessed as Not Supporting, with the Algae and Turbidity impairments being carried forward. No new data are available to evaluate the Aesthetics Use for Green Harbor River.	

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for the Green Harbor River (MA94-10) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Algae and Turbidity impairments (from the Aesthetics Use) are 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 the Green Harbor River (MA94-10) continues to be assessed as Not Supporting. The prior Algae and Turbidity impairments (from the Aesthetics Use) are being carried forward. MassDEP staff collected <i>E. coli</i> bacteria samples in the Green Harbor River at the downstream end of the AU at station W0337 [upstream side of Rt. 139 bridge, Marshfield] from 2001 and 2006 (n=4/yr). Analysis of the historic multi-year limited 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, which meets 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
W0337	MassDEP	Water Quality	Green Harbor River	[upstream side of Route 139 bridge, Marshfield]	42.086478	-70.651285

## Bacteria Data

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

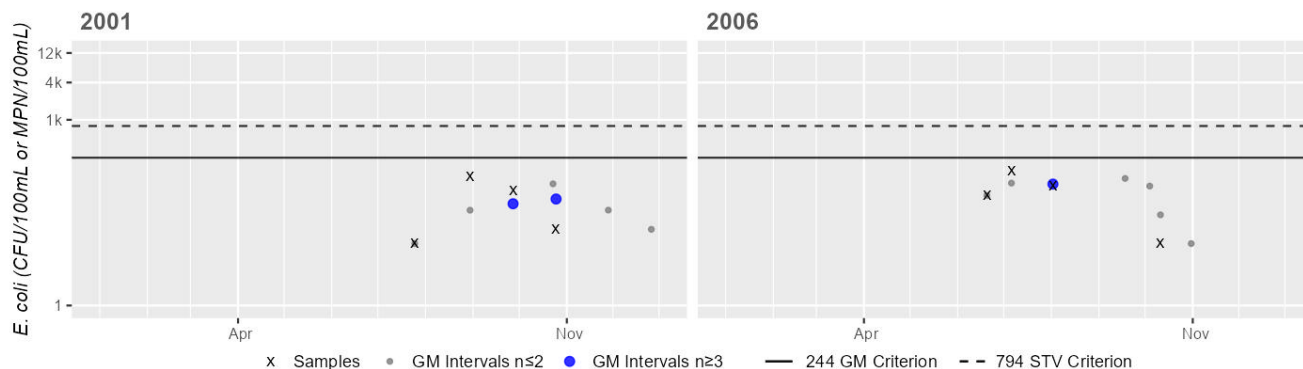
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0337	MassDEP	E. coli	07/25/01	10/25/01	4	10	120	34
W0337	MassDEP	E. coli	06/20/06	10/11/06	4	10	150	52

# Station MASSDEP\_W0337 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	34
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	52
#GMI	1
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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.

## Gunners Exchange Pond (MA94055)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	26 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
2	2	None	--	Unchanged

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Gunners Exchange Pond (MA94055) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
No data are available, so the Aesthetics Use for Gunners Exchange Pond (MA94055) is Not Assessed.

### Primary Contact Recreation

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

**2024/26 Use Attainment Summary**

No bacteria data are available to assess the Primary Contact Recreation Use for Gunners Exchange Pond (MA94055) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_GunnersEx\_DeepHole in 2014-2015. Secchi depth data were too limited ( $n < 3$ ) to evaluate water clarity using data from PLY\_GunnersEx\_DeepHole in 2014 ( $n=1$ , 6.4m) and 2015 ( $n=1$ , 5.5m), though the measurements did meet the 1.2 m (4 ft) threshold in both years.

**Other Indicators****Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data**  
(MassDEP Undated 3)

Data Year(s)	Summary
2014-2015	In Gunners Exchange Pond (MA94055), the Town of Plymouth (PLY) collected Secchi data at PLY_GunnersEx_DeepHole [41.890533, -70.650267, Deep spot] from 2014-2015. In 2014 at station PLY_GunnersEx_DeepHole (station depth=8.85 m) the Secchi depth ( $n=1$ ) was measured to be 6.4 m on Aug 20, 2014 and in 2015 at station PLY_GunnersEx_DeepHole (station depth=7.9 m) the Secchi depth ( $n=1$ ) was measured to be 5.5 m on Sep 14, 2015 indicating water clarity meeting the 1.2 m (4 ft) threshold in both years.

**Secondary Contact Recreation**

2024/26 Use Attainment	Alert
Not Assessed	NO

**2024/26 Use Attainment Summary**

No bacteria or other indicator data for Gunners Exchange Pond (MA94055) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.

## Halls Brook (MA94-57)

<b>Location:</b>	Locally known as 'Stony Brook', tidal portion east of Maple Street, Kingston to mouth at confluence with Jones River, Kingston.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.003 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	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 Halls Brook (MA94-57) is Not Assessed.

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Halls Brook (MA94-57): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0021 sq mi (73%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.0021 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB44.0	Jones River	Prohibited	0.00211	73.1%

## Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Too limited data are available to assess the Aesthetics Use for Halls Brook (MA94-57), so it is assessed as having Insufficient Information. MassDEP staff recorded limited aesthetics observations at two stations for Halls Brook, Kingston during the summer of 2011 for the Bacteria Source Tracking (BST) project; at the upstream end of the AU ~130 feet downstream/east of Maple Street (downstream of Maple Street Dam, National ID MA02132) (W2316, n=2) and at the downstream end of the AU ~60 feet upstream of confluence with Jones River, just downstream at Landing Road (W2320, n=1). There were generally no noted persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2316	MassDEP	Water Quality	Halls Brook	[approximately 130 feet downstream/east of Maple Street, Kingston (downstream of Maple Street Dam, National Id MA02132)]	41.999773	-70.725798
W2320	MassDEP	Water Quality	Halls Brook	[approximately 60 feet upstream of confluence with Jones River, just downstream at Landing Road, Kingston]	41.997918	-70.722181

## Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2316	2011	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2316 on Halls Brook (MA94-57) during 2 site visits between Jun 2011 and Aug 2011. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2320	2011	1	Aesthetic observations were made by MassDEP field sampling crews at Station W2320 on Halls Brook (MA94-57) during 1 site visit on Jun 28, 2011. 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 9) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2316	2011	2	2	0
W2320	2011	1	1	0

**MassDEP Aesthetics Observations (2011-2020)** (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2316	Halls Brook	2011	Aquatic Plant Density, Overall	None	1	2
W2316	Halls Brook	2011	Aquatic Plant Density, Overall	Sparse	1	2
W2316	Halls Brook	2011	Color	Brownish	1	2
W2316	Halls Brook	2011	Color	None	1	2
W2316	Halls Brook	2011	Odor	None	2	2
W2316	Halls Brook	2011	Periphyton Density, Filamentous	None	2	2
W2316	Halls Brook	2011	Periphyton Density, Film	Sparse	2	2
W2316	Halls Brook	2011	Turbidity	None	1	2
W2316	Halls Brook	2011	Turbidity	Slightly Turbid	1	2
W2320	Halls Brook	2011	Aquatic Plant Density, Overall	Sparse	1	1
W2320	Halls Brook	2011	Color	None	1	1
W2320	Halls Brook	2011	Odor	Other (Saltwater)	1	1
W2320	Halls Brook	2011	Periphyton Density, Filamentous	None	1	1
W2320	Halls Brook	2011	Periphyton Density, Film	None	1	1
W2320	Halls Brook	2011	Turbidity	Moderately Turbid	1	1

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
<p>Too limited bacteria data are available to assess the Primary Contact Recreation Use for Halls Brook (MA94-57) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The shellfish growing areas (0.0021 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 for Halls Brook. MassDEP staff collected Enterococcus bacteria samples in at the upstream end of Halls Brook at station W2316 [~130 ft downstream/E of Maple St, Kingston (downstream of Maple St Dam, National ID MA02132)] in Aug 2011 (n=1). The available Enterococcus data at W2316 are too limited to assess the Primary Contact Recreation Use according to the 2024 CALM, though it should be noted that the sample exceeded the 130 CFU/100ml STV (216 CFU). MassDEP staff also conducted additional intermittent sampling in Halls Brook as part of the Bacteria Source Tracking (BST) project in 2011-2013 &amp; 2016. These BST efforts found the “Tussock Brook” tributary (MA94-67 &amp; MA94-68) to be the most significant contributor of bacteria to this Halls Brook AU (though Human Marker analysis in 2011 determined this to not be a human sewage source) and the upstream Halls Brook AU (MA94-58) was also ruled out as a significant contributor of bacteria to this downstream Halls Brook AU.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2316	MassDEP	Water Quality	Halls Brook	[approximately 130 feet downstream/east of Maple Street, Kingston (downstream of Maple Street Dam, National Id MA02132)]	41.999773	-70.725798

## Bacteria Data

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

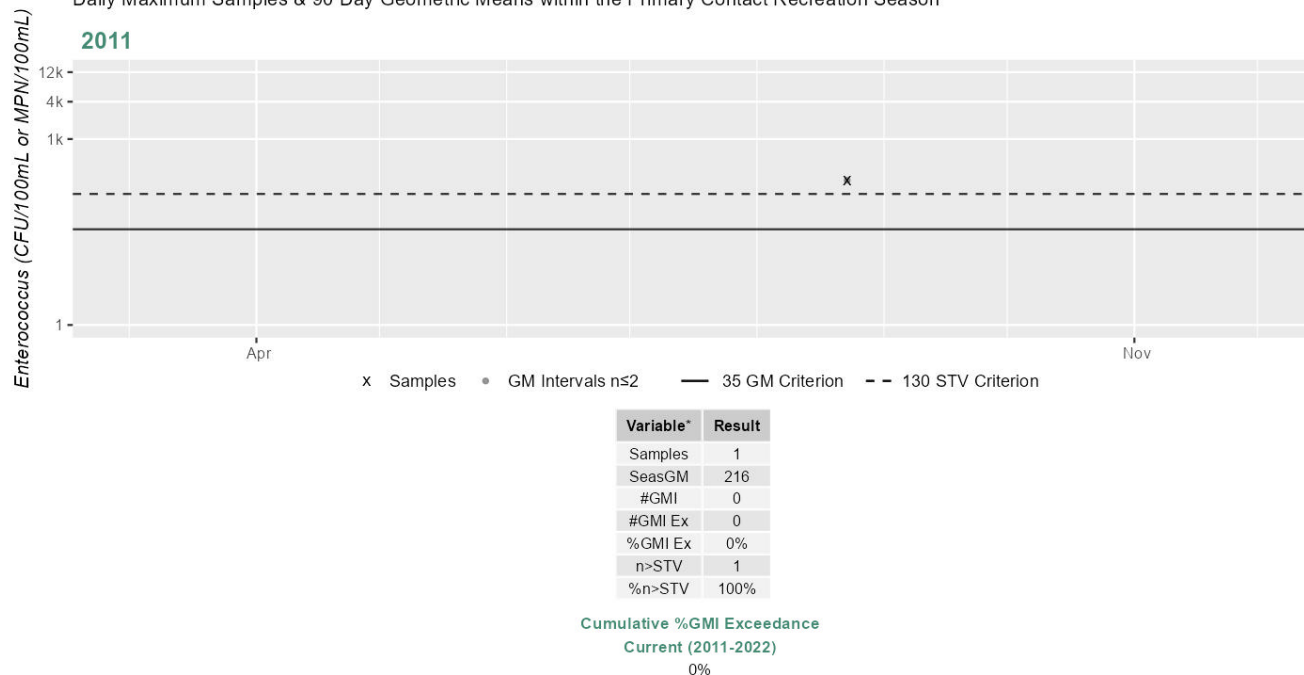
**Analysis)** (MassDEP Undated 9) (MassDEP Undated 5)

[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
W2316	MassDEP	Enterococci	08/23/11	08/23/11	1	216	216	216

### Station MASSDEP\_W2316 - Enterococcus

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



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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 2011 at 2 sites on the Halls Brook AU (MA94-57), with E.coli concentrations ranging 187 to 2,481MPN and a max Enterococcus concentration of 529MPN. Additional source tracking in 2011-2013 & 2016 found the "Tussock Brook" tributary (MA94-67 & MA94-68) to be the most significant contributor of bacteria to Halls Brook, with a max E.coli concentration of >24,196MPN close to the confluence. Human Marker analysis run on samples taken at the downstream end of Tussock Brook in 2011 indicated "no evidence" of a human source. The Halls Brook AU upstream (MA94-58) was ruled out as a significant contributor of bacteria to this AU.

### Shellfish Growing Area Classifications

#### Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Summary
Halls Brook (MA94-57): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0021 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
<p>Too limited bacteria data are available to assess the Secondary Contact Recreation Use for Halls Brook (MA94-57) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The shellfish growing areas (0.0021 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 for Halls Brook. MassDEP staff collected Enterococcus bacteria samples at the upstream end of Halls Brook at station W2316 [~130 ft downstream/E of Maple St, Kingston (downstream of Maple St Dam, National Id MA02132)] from Aug 2011 (n=1). The available Enterococcus data at W2316 are too limited to assess the Secondary Contact Recreation Use according to the 2024 CALM. MassDEP staff also conducted additional intermittent sampling in Halls Brook as part of the Bacteria Source Tracking (BST) project in 2011-2013 &amp; 2016. These BST efforts found the “Tussock Brook” tributary (MA94-67 &amp; MA94-68) to be the most significant contributor of bacteria to this Halls Brook AU (though Human Marker analysis in 2011 determined this to not be a human sewage source) and the upstream Halls Brook AU (MA94-58) was also ruled out as a significant contributor of bacteria to this downstream Halls Brook AU.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2316	MassDEP	Water Quality	Halls Brook	[approximately 130 feet downstream/east of Maple Street, Kingston (downstream of Maple Street Dam, National Id MA02132)]	41.999773	-70.725798

## Bacteria Data

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

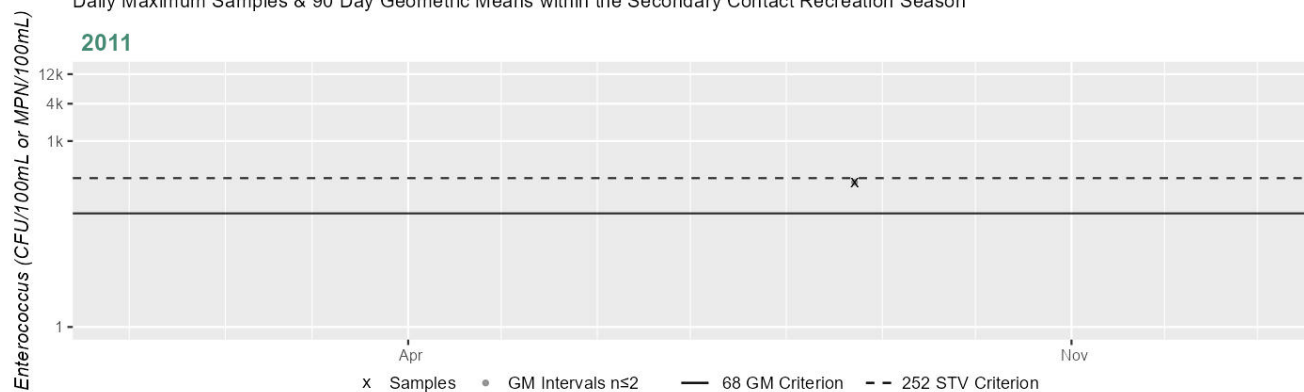
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W2316	MassDEP	Enterococci	08/23/11	08/23/11	1	216	216	216

### Station MASSDEP\_W2316 - Enterococcus

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



Variable*	Result
Samples	1
SeasGM	216
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)**

### Summary

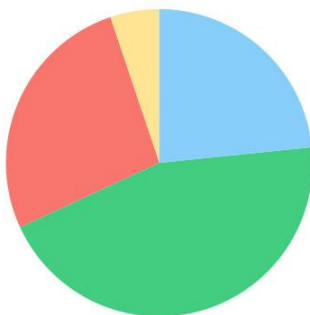
Halls Brook (MA94-57): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0021 sq mi (73%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

# Halls Brook (MA94-58)

<b>Location:</b>	Locally known as 'Stony Brook', from the inlet of Blackwater Pond, Kingston to tidal portion east of Maple Street, Kingston.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1.1 MILES
<b>Classification/Qualifier:</b>	B

## Halls Brook (MA94-58)

Watershed Area: 4.18 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	4.18	4.17	1.68	1.68
Agriculture	5.2%	5.2%	8%	8%
Developed	26.7%	26.7%	18.7%	18.7%
Natural	44.7%	44.7%	38.4%	38.4%
Wetland	23.4%	23.4%	35%	35%
Impervious	14.1%	14.1%	10.4%	10.4%

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (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 Halls Brook (MA94-58) is Not Assessed.

## Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Too limited data are available to assess the Aesthetics Use for Halls Brook (MA94-58), so it is assessed as having Insufficient Information. MassDEP staff recorded limited aesthetics observations three quarters of the way down this Halls Brook AU, during the summer of 2011 for the Bacteria Source Tracking (BST) project; ~90ft downstream/east of Summer Street (Rt. 3A) in Kingston (W2315, n=2). There were generally no noted persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2315	MassDEP	Water Quality	Halls Brook	[approximately 90 feet downstream/east of Summer Street (3A), Kingston]	41.998604	-70.730070

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2315	2011	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2315 on Halls Brook (MA94-58) during 2 site visits between Jun 2011 and Aug 2011. 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 9) (MassDEP Undated 5)



Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2315	2011	2	2	1

#### MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2315	Halls Brook	2011	Aquatic Plant Density, Overall	Moderate	1	2
W2315	Halls Brook	2011	Aquatic Plant Density, Overall	Sparse	1	2
W2315	Halls Brook	2011	Color	Brownish	1	2
W2315	Halls Brook	2011	Color	None	1	2
W2315	Halls Brook	2011	Odor	None	2	2
W2315	Halls Brook	2011	Periphyton Density, Filamentous	None	1	2
W2315	Halls Brook	2011	Periphyton Density, Filamentous	Sparse	1	2
W2315	Halls Brook	2011	Periphyton Density, Film	Dense	1	2
W2315	Halls Brook	2011	Periphyton Density, Film	Sparse	1	2
W2315	Halls Brook	2011	Turbidity	Moderately Turbid	1	2
W2315	Halls Brook	2011	Turbidity	Slightly Turbid	1	2

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
<p>Too limited bacteria data are available to assess the Primary Contact Recreation Use for Halls Brook (MA94-58) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The prior Alert for bacteria is being removed since only one <i>Enterococcus</i> sample in 2011 was moderately elevated. MassDEP staff collected <i>E. coli</i> (EC) and <i>Enterococcus</i> (Ent) bacteria samples three-quarters of the way down this Halls Brook AU at station W2315 [~90 ft downstream/E of Summer St (3A), Kingston] from 2011 (EC n=2 &amp; Ent n=1) for the purposes of the Bacteria Source Tracking (BST) project. The available <i>E. coli</i> and <i>Enterococcus</i> data at this station are both too limited to assess the Primary Contact Recreation Use according to the 2024 CALM and no correctable sources were ever found using source tracking techniques. Although it should be noted that one <i>Enterococcus</i> sample exceeded the 130 CFU/100ml STV in 2011 (350 CFU).</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2315	MassDEP	Water Quality	Halls Brook	[approximately 90 feet downstream/east of Summer Street (3A), Kingston]	41.998604	-70.730070

## Bacteria Data

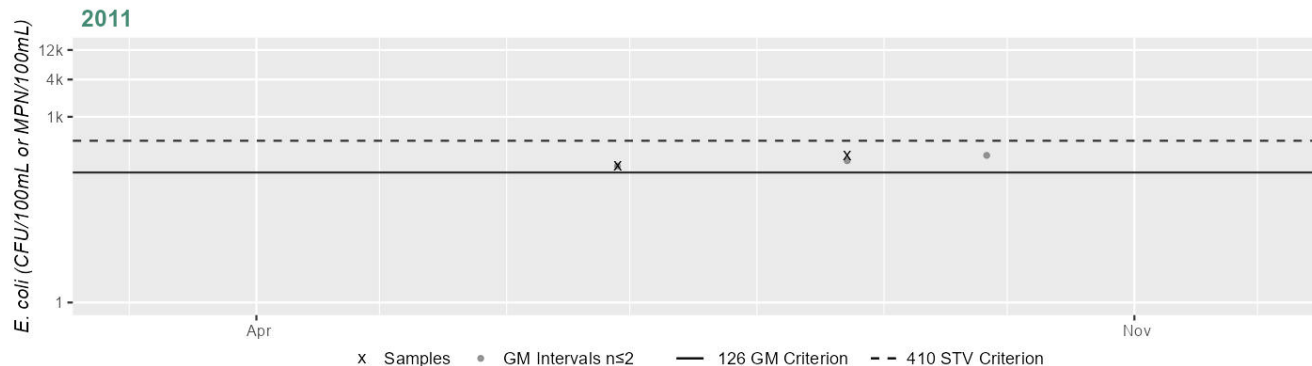
**Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)** (MassDEP Undated 9) (MassDEP Undated 5)

[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
W2315	MassDEP	E. coli	06/28/11	08/23/11	2	160	238	195
W2315	MassDEP	Enterococci	08/23/11	08/23/11	1	350	350	349

### Station MASSDEP\_W2315 - *Escherichia coli*

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



Variable*	Result
Samples	2
SeasGM	195
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

#### Cumulative %GMI Exceedance

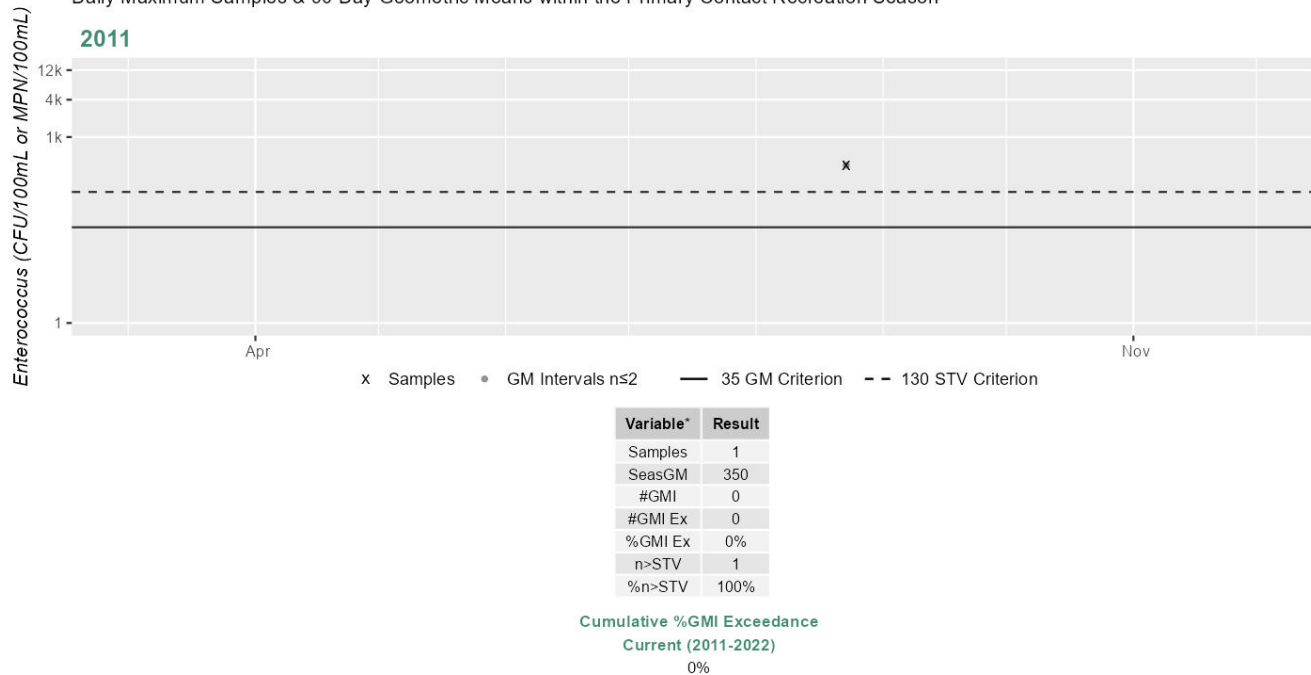
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W2315 - Enterococcus

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



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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 2011 at 2 sites on the Halls Brook AU (MA94-58), with E.coli concentrations ranging 160 to 411MPN and a max Enterococcus concentration of 350MPN. No correctable sources were ever found.

### Secondary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Too limited bacteria data are available to assess the Secondary Contact Recreation Use for Halls Brook (MA94-58) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. MassDEP staff collected <i>E. coli</i> bacteria samples three-quarters of the way down this Halls Brook AU at station W2315 [~90 ft downstream/E of Summer St (3A), Kingston] from Jun-Aug 2011 (n=2) for the purposes of the Bacteria Source Tracking (BST) project. <i>E. coli</i> data from this station are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use and no correctable sources were ever found using source tracking techniques.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2315	MassDEP	Water Quality	Halls Brook	[approximately 90 feet downstream/east of Summer Street (3A), Kingston]	41.998604	-70.730070

## Bacteria Data

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

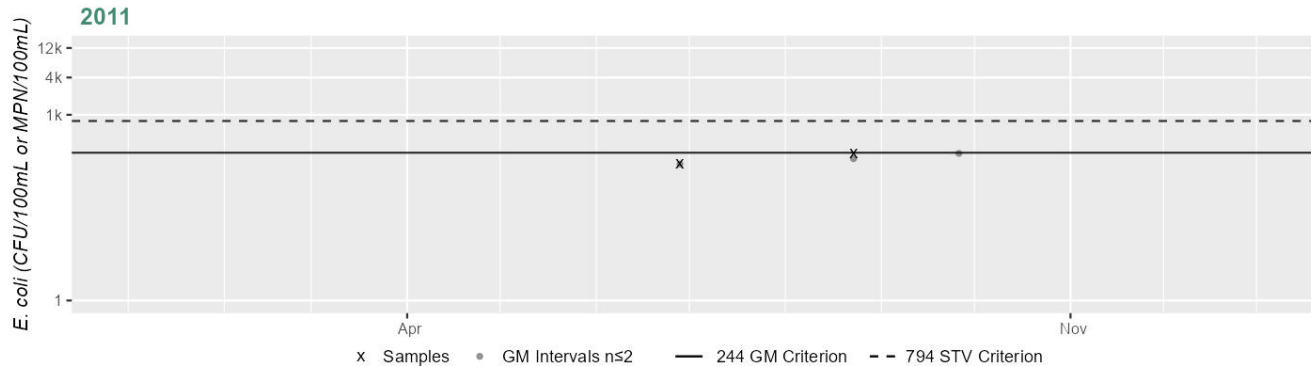
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W2315	MassDEP	E. coli	06/28/11	08/23/11	2	160	238	195

### Station MASSDEP\_W2315 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	195
#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 Exceedances; %GMI Ex = % GMI Exceedances; 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.

## Harrobs Corner Bog Pond (MA94061)

<b>Location:</b>	Plympton.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	20 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Harrobs Corner Bog Pond (MA94061) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Hedges Pond (MA94065)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	27 ACRES
<b>Classification/Qualifier:</b>	B

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 Hedges Pond (MA94065) 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 Hedges Pond (MA94065) 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 Hedges Pond (MA94065) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. In 2014 the Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_Hedges\_DeepHole. Secchi depth data were too limited (n <3) to evaluate water clarity using data from PLY\_Hedges\_DeepHole in 2014 (n=1, 3.1m), though the measurement did meet the 1.2 m (4 ft) threshold.

### ***Other Indicators***

#### **Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data** (MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2014	In Hedges Pond (MA94065), the Town of Plymouth (PLY) collected Secchi data at PLY_Hedges_DeepHole [41.827333, -70.564028, Deep spot] in 2014. At station PLY_Hedges_DeepHole (station depth=4.25 m) the Secchi depth (n=1) was measured to be 3.1 m on Sep 11, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold.

### **Secondary Contact Recreation**

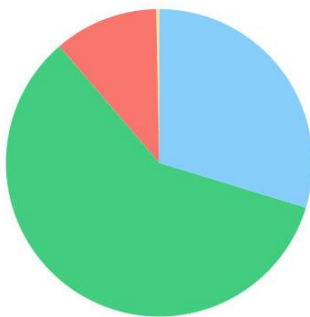
<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO
<b>2024/26 Use Attainment Summary</b>	
No bacteria or other indicator data for Hedges Pond (MA94065) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.	

## Herring Brook (MA94-29)

<b>Location:</b>	Headwaters, outlet Lily Pond, Cohasset to mouth at confluence with Aaron River, Cohasset.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	0.3 MILES
<b>Classification/Qualifier:</b>	A: PWS, ORW (Tributary)

### Herring Brook (MA94-29)

Watershed Area: 2.41 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.41	2.41	0.56	0.56
Agriculture	0.3%	0.3%	0.7%	0.7%
Developed	11%	11%	6.6%	6.6%
Natural	59%	59%	44.1%	44.1%
Wetland	29.7%	29.7%	48.6%	48.6%
Impervious	5.2%	5.2%	4.1%	4.1%

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

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



## Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Non-Native Aquatic Plants	Clarification of listing cause	The Non-Native Aquatic Plants impairment for this Herring River AU (MA94-29) will be removed to be consistent with a "Clarification of Listing Cause" under the Aquatic Life Use submitted for the 2018/20 IR, where it was identified that the generic "Non-Native Aquatic Plants" cause was not needed because a specific non-native plant species cause was already being utilized. The specific macrophyte cause code "Fanwort" will continue to be maintained under the Aquatic Life Use.

### Non-Native Aquatic Plants

Please see removal reason above.

## Designated Use Attainment Decisions

### Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	NO
<b>2024/26 Use Attainment Summary</b>	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Herring Brook (MA94-29) is Not Assessed.	

### Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	NO
<b>2024/26 Use Attainment Summary</b>	

Too limited data are available to evaluate the Aesthetics Use of Herring Brook (MA94-29), so it is assessed as having Insufficient Information. The Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use to be consistent with a “Clarification of Listing Cause” under the Aquatic Life Use submitted for the 2018/201R, where the impairment was changed from the generic “Non-Native Aquatic Plants” to the specific macrophyte Fanwort (*Cabomba caroliniana*). A Fanwort (*Cabomba caroliniana*) impairment will not be added to the Aesthetics Use at this time, since that would be a redundant duplication of the Fanwort (*Cabomba caroliniana*) impairment across multiple uses for this waterbody and this impairment will continue to be maintained under the Aquatic Life Use.

## 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 Herring Brook (MA94-29) so it is assessed as having Insufficient Information. The Non-Native Aquatic Plants impairment is being removed from the Primary Contact Recreation Use to be consistent with a “Clarification of Listing Cause” under the Aquatic Life Use submitted for the 2018/201R, where the impairment was changed from the generic “Non-Native Aquatic Plants” to the specific macrophyte Fanwort (*Cabomba caroliniana*). A Fanwort (*Cabomba caroliniana*) impairment will not be added to the Primary Contact Recreation Use at this time, since that would be a redundant duplication of the Fanwort (*Cabomba caroliniana*) impairment across multiple uses for this waterbody and this impairment will continue to be maintained under the Aquatic Life Use.

## 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 Herring Brook (MA94-29) so it is assessed as having Insufficient Information. The Non-Native Aquatic Plants impairment is being removed from the Secondary Contact Recreation Use to be consistent with a “Clarification of Listing Cause” under the Aquatic Life Use submitted for the 2018/201R, where the impairment was changed from the generic “Non-Native Aquatic Plants” to the specific macrophyte Fanwort (*Cabomba caroliniana*). A Fanwort (*Cabomba caroliniana*) impairment will not be added to the Secondary Contact Recreation Use at this time, since that would be a redundant duplication of the Fanwort (*Cabomba caroliniana*) impairment across multiple uses for this waterbody and this impairment will continue to be maintained under the Aquatic Life Use.

## Herring River (MA94-07)

<b>Location:</b>	Headwaters, outlet Old Oaken Bucket Pond, Scituate to mouth at confluence with North River, Scituate.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.08 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4a	4a	Enterococcus	61727	Unchanged
4a	4a	Fecal Coliform	61727	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Enterococcus	Municipal Point Source Discharges (Y)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Fecal Coliform	Municipal Point Source Discharges (Y)	--	--	X	--	--	--

## Recommendations

<b>2024/26 Recommendations</b>
2024/26IR [Bacteria, Low] Conduct follow-up Enterococci bacteria sampling for Herring River (MA94-07) in the vicinity of MassDEP Station {W1511} in order to evaluate whether a delisting may be appropriate. 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 Herring River (MA94-07) is Not Assessed.

## Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Herring River (MA94-07): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0756 sq mi (97%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.0756 sq mi (97%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB5.3	Herring River	Prohibited	0.07561	97.2%
MB5.6	Entrance to North River	Prohibited	0.00003	0.0%

## Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Herring River (MA94-07) 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 the Herring River (MA94-07) continues to be assessed as Not Supporting, with the prior Enterococcus impairment being carried forward. The shellfish growing areas (0.0756 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 for Herring River. North South River Watershed Association (NSRWA) staff/volunteers collected Enterococcus bacteria samples halfway down the Herring River AU at NSRWA\_Driftway Park [At base of boat ramp, Scituate] from Jun-Sep 2019 (n=16). Analysis of the single year high frequency dataset from this station indicated 0% of intervals had GMs >35 CFU/100ml and 6% of samples exceeded the 130 CFU/100ml STV (1 sample at 500 CFU), which meets 2024 CALM guidance. Although the Enterococci concentrations from the NSRWA station did not exceed the use attainment impairment threshold for a single year high frequency dataset, the Primary Contact Recreation Use for this Herring River AU (MA94-07) will continue to be assessed as Not Supporting with the prior Enterococcus impairment being carried forward, since that impairment was based on data collected in 2006 by MassDEP staff at the upstream end of the AU (Station W1511 New Driftway bridge, Scituate) (MassDEP Undated 8). Recommendations for additional monitoring at the upstream end of Herring River will be made.

### **Monitoring Stations**

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NSRWA_Driftway Park	North South River Watershed Association	Water Quality	Herring River	At base of boat ramp, Scituate	42.175440	-70.735790

### **Bacteria Data**

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

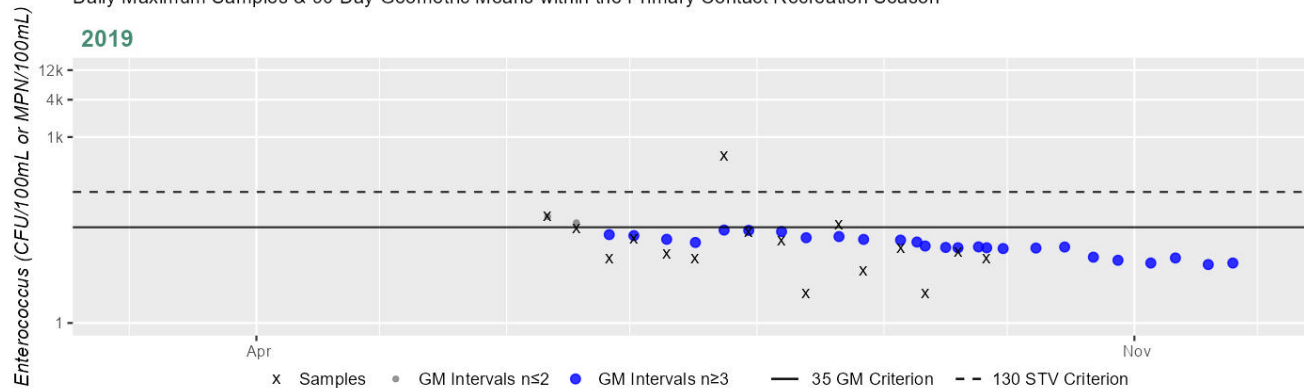
(NSRWA 2019) (MassDEP Undated 3)

[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
NSRWA_Driftway Park	North South River Watershed Association	Enterococci	06/11/19	09/26/19	16	3	500	17

### Station NSRWA\_Driftway Park - Enterococcus

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



Variable*	Result
Samples	16
SeasGM	17
#GMI	27
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	6%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)**

### Summary

Herring River (MA94-07): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0756 sq mi (97%). 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

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO
<b>2024/26 Use Attainment Summary</b>	

The Secondary Contact Recreation Use for the Herring River (MA94-07) continues to be assessed as Not Supporting. The prior Enterococcus impairment is being carried forward based on a re-evaluation of bacteria data not meeting the threshold at one station in 2006. The shellfish growing areas (0.0756 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 Herring River. MassDEP and North South River Watershed Association (NSRWA) staff/volunteers collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Herring River from 2006-2019 at 2 stations. Samples were collected from the following stations/sample years: close to the upstream end of the AU at station W1511 [New Driftway bridge, Scituate] from Jun-Oct 2006 (n=5) and halfway down the AU at station NSRWA\_Driftway Park [At base of boat ramp, Scituate] from Jun-Sep 2019 (n=16). Analysis of the historic single year limited frequency Enterococcus dataset from W1511 (in 2006) indicated 100% of intervals had GMs >68 CFU/100ml, 2 samples exceeded the 252 CFU/100ml STV, and the overall GM was 180 CFU/100ml. Analysis of the single year high frequency Enterococcus dataset from NSRWA\_Driftway Park indicated 0% of intervals had GMs >68 CFU/100ml and 6% of samples exceeded the 252 CFU/100ml STV, which meets 2024 CALM guidance. While recent data indicated generally good conditions, data from W1511 are indicative of an Enterococcus impairment/poor water quality conditions within the historic window (1997-2010) and no recent data are available to assess this upper location in the current window (2011-2022).

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1511	MassDEP	Water Quality	Herring River	[New Driftway bridge, Scituate]	42.176670	-70.748031
NSRWA_Driftway Park	North South River Watershed Association	Water Quality	Herring River	At base of boat ramp, Scituate	42.175440	-70.735790

### Bacteria Data

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

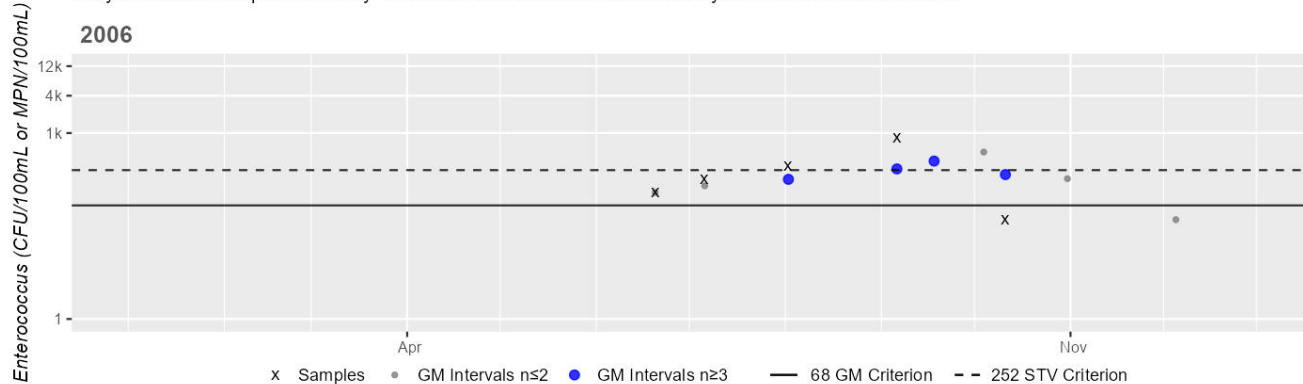
(MassDEP Undated 9) (MassDEP Undated 4) (NSRWA 2019) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1511	MassDEP	Enterococci	06/20/06	10/11/06	5	40	840	180
NSRWA_Driftway Park	North South River Watershed Association	Enterococci	06/11/19	09/26/19	16	3	500	17

### Station MASSDEP\_W1511 - Enterococcus

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



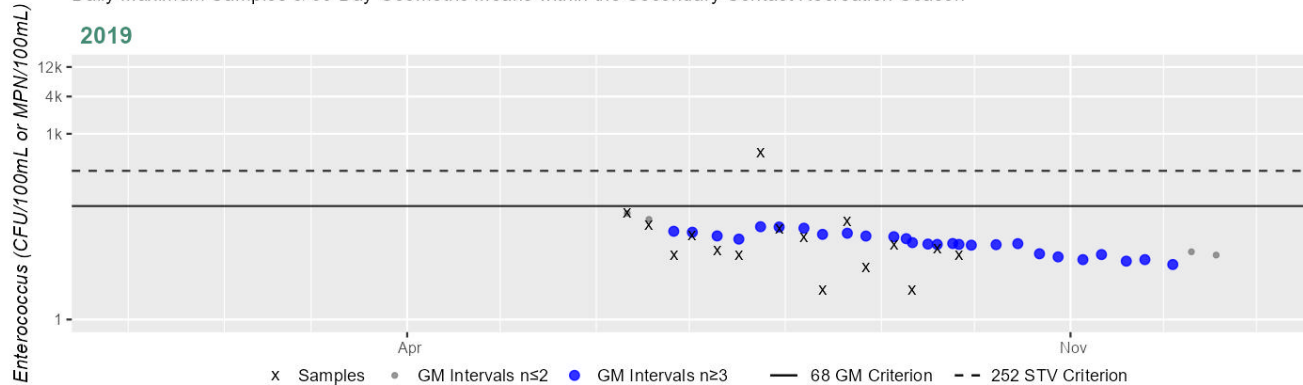
Variable*	Result
Samples	5
SeasGM	180
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	2
%n>STV	40%

Cumulative %GMI Exceedance  
Historic (1997-2010)  
100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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 NSRWA\_Driftway Park - Enterococcus

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



Variable*	Result
Samples	16
SeasGM	17
#GMI	27
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	6%

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

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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 6)

Summary
Herring River (MA94-07): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0756 sq mi (97%). 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.

## Herring River (MA94-44)

<b>Location:</b>	Headwaters outlet Great Herring Pond, Bourne to confluence with Cape Cod Canal, Bourne (includes the approximately 0.3 miles through Foundry Pond and the unnamed tributary locally known as 'The Herring Run').
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1.3 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Herring River (MA94-44) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
2	2	None	--	Unchanged

## Hobomock Pond (MA94177)

<b>Location:</b>	Pembroke.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	13 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Hobomock Pond (MA94177) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Hoyts Pond (MA94070)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	20 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
2	2	None	--	Unchanged

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Hoyts Pond (MA94070) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

<b>2024/26 Use Attainment Summary</b>
Too limited data are available to assess the Aesthetics Use for Hoyts Pond (MA94070), so it is assessed as having Insufficient Information. During the period 2015 through 2022, C-HAB postings for Hoyts Pond (MDPH name Hoyt Pond (aka Orchard Pond)) were reported to MDPH based on visual observations for 14 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.

## Algal Bloom Information

**Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Hoyts Pond (MDPH name Hoyt Pond (aka Orchard Pond)) (MA94070) were reported to MDPH based on visual observations for 14 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.

**Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

[\* 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
Hoyts Pond (MDPH name Hoyt Pond (aka Orchard Pond))	Plymouth							14	

## 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 Hoyts Pond (MA94070) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. During the period 2015 through 2022, C-HAB postings for Hoyts Pond (MDPH name Hoyt Pond (aka Orchard Pond)) were reported to MDPH based on visual observations for 14 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. In 2014-2015 the Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY_Hoyts_DeepHole. The data were too limited (n < 3) to evaluate water clarity using data from PLY_Hoyts_DeepHole in 2014 (n=1, 4.7m) and 2015 (n=1, 3.5m), although the measurements did meet the 1.2 m (4 ft) threshold in both years.

## Other Indicators

**Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data** (MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2014-2015	In Hoyts Pond (MA94070), the Town of Plymouth (PLY) collected Secchi data at PLY_Hoyts_DeepHole [41.897667, -70.6522, Deep spot] from 2014-2015. In 2014 at station PLY_Hoyts_DeepHole (station depth=5.25 m) the Secchi depth (n=1) was measured to be 4.7 m on Aug 20, 2014 and in 2015 at station PLY_Hoyts_DeepHole (station depth=4.2 m) the Secchi depth (n=1) was measured to be 3.5 m on Sep 14, 2015 indicating water clarity meeting the 1.2 m (4 ft) threshold in both years.

## Secondary Contact Recreation

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

<b>2024/26 Use Attainment Summary</b>
No bacteria data are available to assess the Secondary Contact Recreation Use for Hoyts Pond (MA94070) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. During the period 2015 through 2022, C-HAB postings for Hoyts Pond (MDPH name Hoyt Pond (aka Orchard Pond)) were reported to MDPH based on visual observations for 14 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.

## Indian Brook (MA94-51)

<b>Location:</b>	outlet of cranberry bogs west of Indian Brook Road, Plymouth to mouth at inlet Cape Cod Bay, Plymouth.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1.4 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Indian Brook (MA94-51) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Fanwort*)	--	Unchanged
5	5	(Non-Native Aquatic Plants*)	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(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	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Agriculture (N)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X	--	--	--	--

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Phosphorus, Total	Agriculture (N)	X	--	--	--	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--



## Indian Head Brook (MA94-49)

<b>Location:</b>	Headwaters outlet Indian Head Pond, Hanson to inlet Wampatuck Pond, Hanson.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Indian Head Brook (MA94-49) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fish Passage Barrier*)	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--

## Indian Head Brook (MA94-50)

<b>Location:</b>	Outlet Wampatuck Pond, Hanson to mouth at confluence with Indian Head River, Hanson.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	2.1 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Indian Head Brook (MA94-50) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fish Passage Barrier*)	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--

## Indian Head Pond (MA94071)

<b>Location:</b>	Hanson.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	120 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	Harmful Algal Blooms	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
Harmful Algal Blooms	Agriculture (N)	--	--	X	X	X
Harmful Algal Blooms	Source Unknown (N)	--	--	X	X	X

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Indian Head Pond (MA94071) is Not Assessed.

## Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Indian Head Pond (MA94071) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward, based on the occurrence of C-HAB postings extending >20 days in 2021. During the period 2015 through 2022, C-HAB postings for Indian Head Pond were reported to MDPH based on visual observations for 100 days in 2021 and no blooms were reported in other years. Since blooms were reported in a recent year this is reflective of the existing Harmful Algal Blooms impairment for Indian Head Pond.

## Algal Bloom Information

**Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Indian Head Pond (MA94071) were reported to MDPH based on visual observations for 100 days in 2021. No blooms were reported in other years. Since blooms were reported in a recent year, a prior Harmful Algal Bloom impairment is being carried forward and the Aesthetics Use and Primary/Secondary Contact Recreational Uses continue to be assessed as Not Supporting.

**Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

[\* 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
Indian Head Pond	Hanson							100	

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
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The Primary Contact Recreation Use for Indian Head Pond (MA94071) continues to be assessed as Not Supporting. The prior Harmful Algal Blooms impairment is being carried forward based on the occurrence of C-HAB postings extending >20 days in 2021. During the period 2015 through 2022, C-HAB postings for Indian Head Pond were reported to MDPH based on visual observations for 100 days in 2021 and no blooms were reported in other years. Since blooms were reported in a recent year this is reflective of the existing Harmful Algal Blooms impairment for Indian Head Pond and the C-HAB data continues to be indicative of a Harmful Algal Blooms impairment.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Indian Head Pond (MA94071) continues to be assessed as Not Supporting. The prior Harmful Algal Blooms impairment is being carried forward based on the occurrence of C-HAB postings extending >20 days in 2021. During the period 2015 through 2022, C-HAB postings for Indian Head Pond were reported to MDPH based on visual observations for 100 days in 2021 and no blooms were reported in other years. Since blooms were reported in a recent year this is reflective of the existing Harmful Algal Blooms impairment for Indian Head Pond and the C-HAB data continues to be indicative of a Harmful Algal Blooms impairment.

## Indian Head River (MA94-04)

<b>Location:</b>	Headwaters, outlet Factory Pond, Hanover/Hanson to Curtis Crossing Dam (also called Ludhams Ford Dam (NATID: MA00428)) west of Elm Street, Hanover/Pembroke.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	2.8 MILES
<b>Classification/Qualifier:</b>	B: WWF

### Indian Head River (MA94-04)

Watershed Area: 30.24 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	30.24	9.54	10.25	3.24
Agriculture	1.1%	0.4%	1.9%	0.8%
Developed	32.7%	28.2%	20.2%	17.5%
Natural	40.2%	42.9%	38.6%	40%
Wetland	26%	28.5%	39.3%	41.8%
Impervious	15.9%	12.9%	9.1%	8%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
5	5	Mercury in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	--
Mercury in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Mercury in Fish Tissue	Illegal Dumps or Other Inappropriate Waste Disposal (Y)	--	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)

## Recommendations

2024/26 Recommendations
2024/26IR [Bacteria, low] It is recommended that additional high frequency monitoring be conducted in this Indian Head River AU (MA94-04), close to the upstream end (where Winter St becomes Broadway, Hanover) {NSRWA_Indian Head River}, to determine if bacteria is impairing the Recreational Uses. NSRWA staff/volunteers collected <i>E. coli</i> bacteria samples at this location in 2019 (n=4) but the analysis was inconclusive because the single year, limited frequency dataset included both GMs below the threshold and an exceedance of the STV threshold. Since the NSRWA data are inconclusive, they cannot be used to remove the historical Escherichia Coli (E. Coli) impairment so additional monitoring is being recommended. This is of low priority;

## Designated Use Attainment Decisions

### Fish Consumption

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

The Fish Consumption Use for Indian Head River (MA94-04) 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 Indian Head River (referred to by MDPH as "Drinking Water River/Indian Head River/North River (Between the Forge Pond Dam in Hanover and Route 3 in Norwell/Pembroke) and Factory Pond" or "Indian Head 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 Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Indian Head River (MA94-04) is Not Assessed.

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for the Indian Head River (MA94-04) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward. North South River Watershed Association (NSRWA) staff/volunteers collected <i>E. coli</i> bacteria samples close to the upstream end of this Indian Head River AU at NSRWA_Indian Head River [Where Winter St becomes BRdway, Hanover] from Jul-Aug 2019 (n=4). Analysis of the single year limited frequency dataset from this station indicated 33% of intervals had GMs >126 CFU/100ml, 1 sample exceeded the 410 CFU/100ml STV and the seasonal GM was 89 CFU/100ml. <i>E. coli</i> data from NSRWA_Indian Head River are inconclusive according to the 2024 CALM to assess the Primary Contact Recreation Use because this single year, limited frequency dataset included both GMs below the threshold and an exceedance of the STV threshold. Since the NSRWA data are inconclusive, they cannot be used to remove the historical Escherichia Coli (E. Coli) impairment (so this impairment is being carried forward). Additional monitoring is being recommended to allow for re-evaluation of this impairment in a future cycle.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NSRWA_Indian Head River	North South River Watershed Association	Water Quality	Indian Head River	Where Winter St becomes Broadway, Hanover	42.090600	-70.865340



## Bacteria Data

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

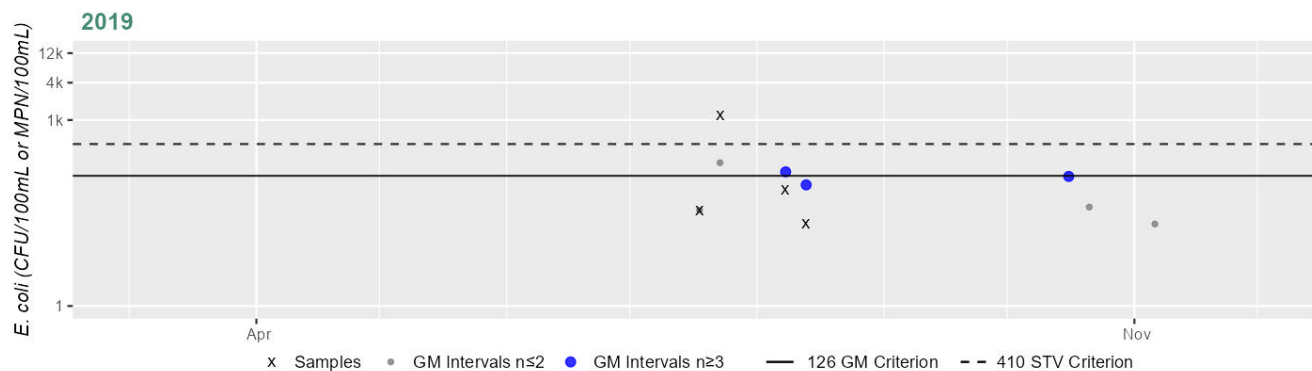
(NSRWA 2019) (MassDEP Undated 3)

[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
NSRWA_Indian Head River	North South River Watershed Association	E. coli	07/18/19	08/13/19	4	21	1200	89

#### Station NSRWA\_Indian Head River - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	89
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	1
%n>STV	25%

#### Cumulative %GMI Exceedance

Current (2011-2022)

33%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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
Insufficient Information	NO
2024/26 Use Attainment Summary	

Too limited bacteria data are available to assess the Secondary Contact Recreation Use for the Indian Head River (MA94-04) so it is assessed as having Insufficient Information. MassDEP and North South River Watershed Association (NSRWA) staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Indian Head River from 2001-2019 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the upstream end of the AU at NSRWA\_Indian Head River [Where Winter St becomes BRdway, Hanover] from Jul-Aug 2019 (n=4), and roughly halfway down the AU at W0909 [upstream/W in impoundment at Cross St/State St bridge, Hanover/Hanson] from Jul-Oct 2001 (n=4) and W1528 [~170 ft downstream from Cross St/State St, Hanover/ Hanson] from Jun-Oct 2006 (n=5). Analysis of the single year limited frequency *E. coli* dataset from NSRWA\_Indian Head River indicated 0% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV, and the overall GM was 89 CFU/100ml. Analysis of the historic single year limited frequency *E. coli* datasets from W0909 and W1528 indicated that in both cases 0% of intervals had GMs >244 CFU/100ml and no samples exceeded the 794 CFU/100ml STV, while the overall GM's were only 135 and 145 CFU/100ml respectively, which meets 2024 CALM guidance. *E. coli* data from NSRWA\_Indian Head River 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 an exceedance of the STV threshold. While the historic bacteria concentrations meet 2024 CALM guidance, too limited bacteria data from the current IR window (2011-2022) are available to assess the Secondary Contact Recreation Use.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0909	MassDEP	Water Quality	Indian Head River	[upstream/west in impoundment at Cross Street/State Street bridge, Hanover/Hanson]	42.095928	-70.849374
W1528	MassDEP	Water Quality	Indian Head River	[approximately 170 feet downstream from Cross Street/State Street, Hanover/ Hanson]	42.096111	-70.848605
NSRWA_Indian Head River	North South River Watershed Association	Water Quality	Indian Head River	Where Winter St becomes Broadway, Hanover	42.090600	-70.865340

## Bacteria Data

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

(MassDEP Undated 9) (MassDEP Undated 4) (NSRWA 2019) (MassDEP Undated 2)

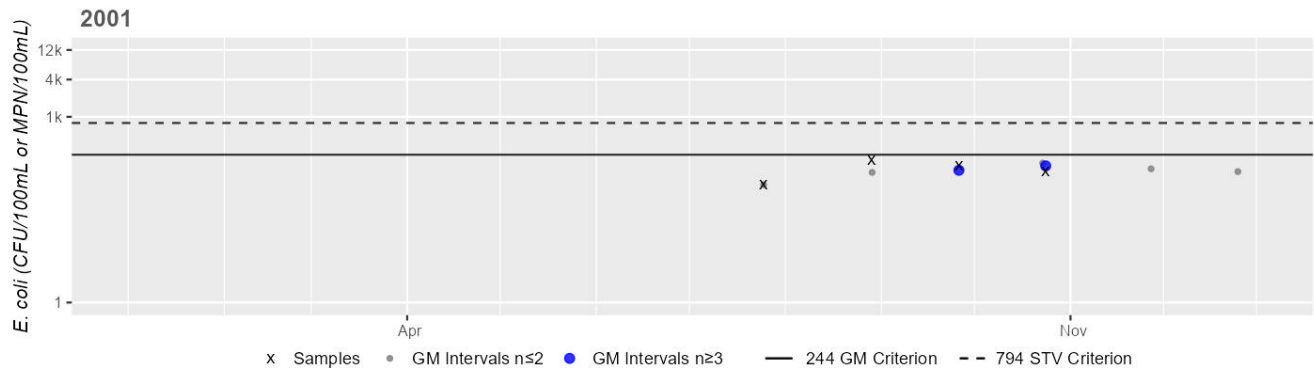
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0909	MassDEP	E. coli	07/25/01	10/24/01	4	80	200	135
W1528	MassDEP	E. coli	06/20/06	10/11/06	5	75	250	145

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NSRWA_Indian Head River	North South River Watershed Association	E. coli	07/18/19	08/13/19	4	21	1200	89

### Station MASSDEP\_W0909 - *Escherichia coli*

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



Variable*	Result
Samples	4
SeasGM	135
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

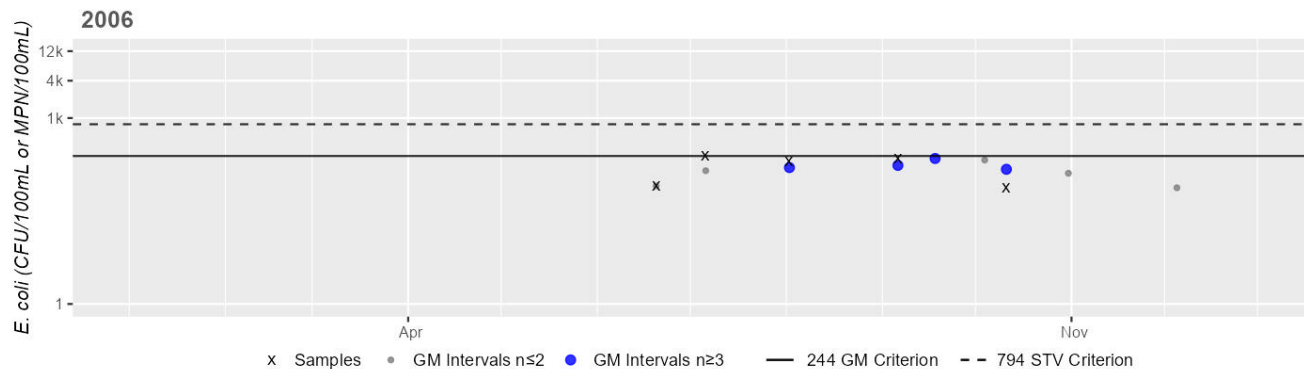
Historic (1997-2010)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W1528 - *Escherichia coli*

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



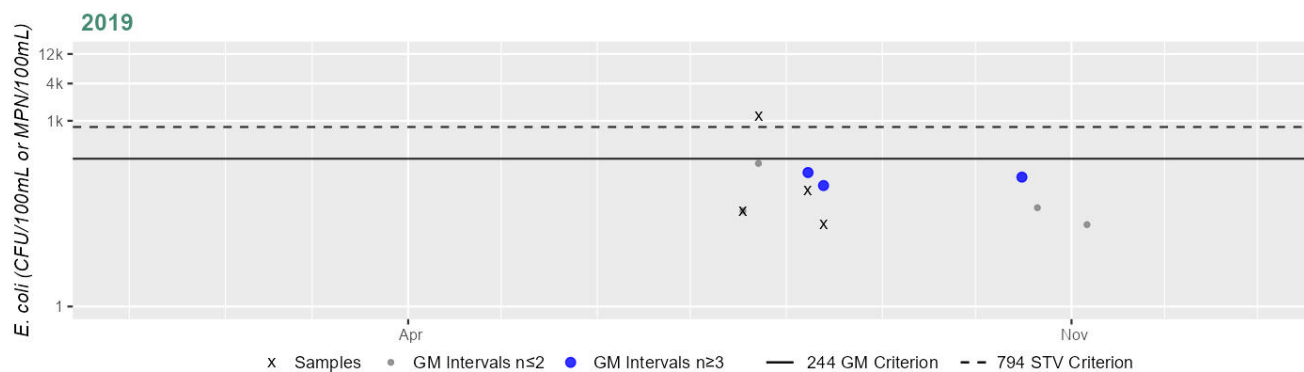
Variable*	Result
Samples	5
SeasGM	145
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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 NSRWA\_Indian Head River - *Escherichia coli*

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



Variable*	Result
Samples	4
SeasGM	89
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

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

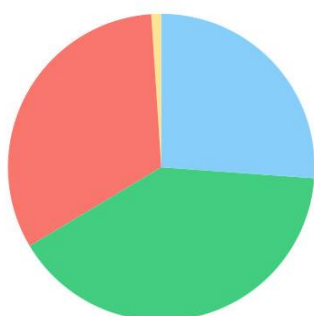
\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;  
"Recent 5 Years" may not be consecutive as the analysis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

# Indian Head River (MA94-22)

<b>Location:</b>	From Curtis Crossing Dam (also called Ludhams Ford Dam (NATID: MA00428)) west of Elm Street, Hanover/Pembroke to mouth at confluence with Herring Brook, (forming headwaters of North River) Hanover/Pembroke.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	0.9 MILES
<b>Classification/Qualifier:</b>	B: ORW, WWF

## Indian Head River (MA94-22)

Watershed Area: 31.74 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	31.74	7.07	10.80	2.28
Agriculture	1.1%	0.2%	1.8%	0.4%
Developed	32.5%	28.5%	20.3%	18.5%
Natural	40.3%	45.1%	38.6%	40.5%
Wetland	26.1%	26.2%	39.3%	40.6%
Impervious	15.8%	13.4%	9.1%	8.4%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	Mercury in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
Mercury in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Mercury in Fish Tissue	Illegal Dumps or Other Inappropriate Waste Disposal (Y)	--	X	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Fish Consumption Use for Indian Head River (MA94-22) 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 Indian Head River (referred to by MDPH as "Drinkwater River/Indian Head River/North River (Between the Forge Pond Dam in Hanover and Route 3 in Norwell/Pembroke) and Factory Pond" or "Indian Head 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 Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Indian Head River (MA94-22) 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 the Indian Head River (MA94-22) 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
<p>No bacteria or other indicator data for the Indian Head River (MA94-22) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected <i>E. coli</i> bacteria samples almost halfway down this Indian Head River AU at station W0908 [canoe ramp S off eastern end of Riverside Drive (Indian Head Drive), Hanover] from Jul-Oct 2001 (n=4). Analysis of the historic single year limited frequency dataset from this station indicated 0% of intervals had GMs &gt;244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV and the overall GM was 9 CFU/100ml, which meets 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.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0908	MassDEP	Water Quality	Indian Head River	[canoe ramp south off eastern end of Riverside Drive (Indian Head Drive), Hanover]	42.099739	-70.818843

## Bacteria Data

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

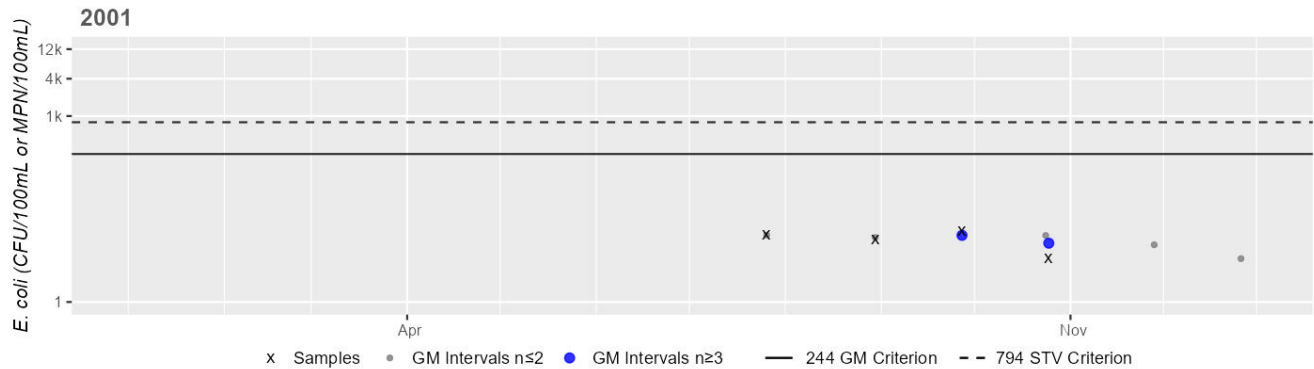
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0908	MassDEP	E. coli	07/26/01	10/25/01	4	5	14	9

Station MASSDEP\_W0908 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	9
#GMI	2
#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 Exceedances;  
%GMI Ex = % GMI Exceedances; 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.



## Indian Pond (MA94072)

<b>Location:</b>	Kingston/Plympton.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	64 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Indian Pond (MA94072) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

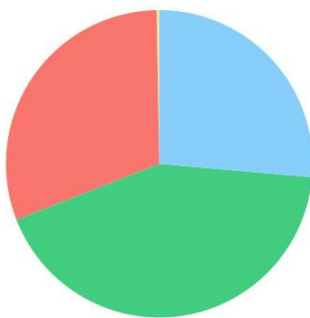
<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
3	3	None	--	Unchanged

# Iron Mine Brook (MA94-24)

<b>Location:</b>	Headwaters north of Route 139, Hanover to mouth at confluence with Indian Head River, Hanover (area associated with North River Corridor designated as ORW).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1.4 MILES
<b>Classification/Qualifier:</b>	B: ORW ('ORW' applies only to portion in North River Corridor)

## Iron Mine Brook (MA94-24)

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	0.46	0.46
Agriculture	0.3%	0.3%	0%	0%
Developed	30.6%	30.6%	24.1%	24.1%
Natural	42.7%	42.7%	40.4%	40.4%
Wetland	26.4%	26.4%	35.4%	35.4%
Impervious	15.9%	15.9%	11.2%	11.2%

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

## 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 Iron Mine Brook (MA94-24) 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 Iron Mine Brook (MA94-24) 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 Iron Mine Brook (MA94-24) are available, so the Primary Contact Recreation Use is Not Assessed.	

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
The Secondary Contact Recreation Use for Iron Mine Brook (MA94-24) 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 one station in 2001 and 2006. MassDEP staff collected <i>E. coli</i> bacteria samples two thirds of the way down Iron Mine Brook at station W0910 [Elm St crossing, Hanover] from 2001 and 2006 (n=4-5/yr). Analysis of the historic multi-year limited frequency dataset from this station indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2001 and 2006, 50 & 50%) and though 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, cumulatively across years 50% 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
W0910	MassDEP	Water Quality	Iron Mine Brook	[Elm Street crossing, Hanover]	42.105406	-70.820061

## Bacteria Data

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

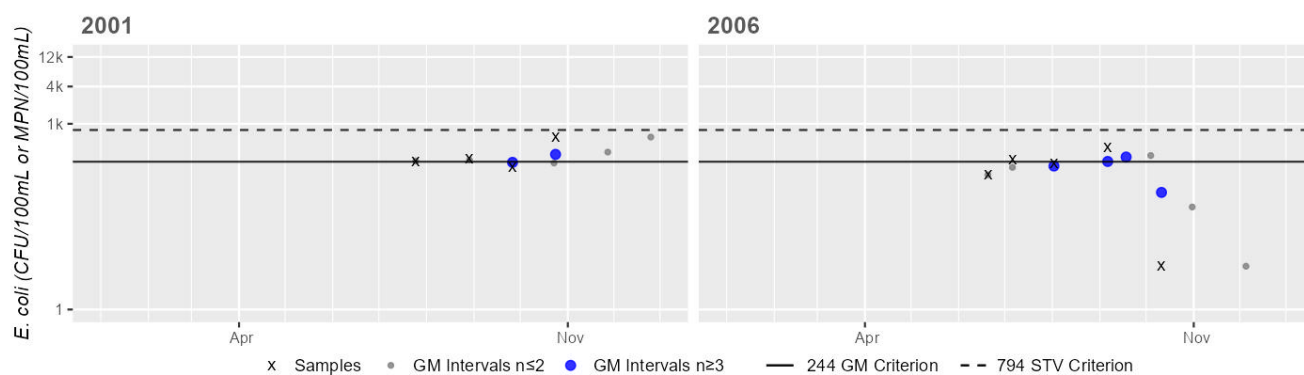
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0910	MassDEP	E. coli	07/25/01	10/24/01	4	200	610	301
W0910	MassDEP	E. coli	06/20/06	10/11/06	5	5	410	112

#### Station MASSDEP\_W0910 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	301
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	5
SeasGM	112
#GMI	4
#GMI Ex	2
%GMI Ex	50%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance  
Historic (1997-2010)  
50%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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.

## Island Creek (MA94-46)

<b>Location:</b>	Headwaters outlet Island Creek Pond , Duxbury to tidal portion south of Route 3A and west of Bryant Avenue, Duxbury (through former 2016 segment; Mill Pond MA94101).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Island Creek (MA94-46) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fish Passage Barrier*)	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--

## Island Creek (MA94-47)

<b>Location:</b>	Tidal portion, Duxbury to mouth at Kingston Bay, Duxbury.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.01 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	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 Island Creek (MA94-47) is Not Assessed.

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Island Creek (MA94-47): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0031 sq mi (48%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.0031 sq mi (48%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB43.2	Kingston Bay, North	Prohibited	0.00305	47.6%

### Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No data are available, so the Aesthetics Use for Island Creek (MA94-47) 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 Island Creek (MA94-47) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0031 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 for Island Creek.	

### Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Summary
Island Creek (MA94-47): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0031 sq mi (48%). 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 Island Creek (MA94-47) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0031 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 for Island Creek.

### ***Shellfish Growing Area Classifications***

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

<b>Summary</b>
----------------

Island Creek (MA94-47): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0031 sq mi (48%). 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.
--



## Island Creek Pond (MA94073)

<b>Location:</b>	Duxbury.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	40 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fanwort*)	--	Unchanged
4c	4c	(Fish Passage Barrier*)	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Island Creek Pond (MA94073) is Not Assessed.

## Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
There are no data available to assess the status of the Aesthetics Use for Island Creek Pond (MA94073), so it is Not Assessed. The prior Alert identified for dense growth of the non-native aquatic macrophyte, Fanwort ( <i>Cabomba caroliniana</i> ) (observed by MassDEP field staff at Heard Drive, Ipswich (W0120) in 2005) is being removed since it was redundantly duplicated across multiple uses. A Fanwort impairment will continue to be maintained under the Aquatic Life Use.

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Island Creek Pond (MA94073) 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 Island Creek Pond (MA94073) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.

## Island Pond (MA94074)

<b>Location:</b>	[west of the locality of Cedarville] Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	52 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Mercury in Fish Tissue	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Mercury in Fish Tissue	Atmospheric Deposition (N)	--	X	--	--	--
Mercury in Fish Tissue	Source Unknown (N)	--	X	--	--	--

## Recommendations

<b>2024/26 Recommendations</b>
2024/26IR [Harmful Algal Blooms, Low] Follow-up monitoring should be conducted in Island Pond (MA94074), to confirm if Harmful Algal Blooms are impairing the Recreational and Aesthetics uses. Monitoring should include observational data and collection of cyanobacteria cell count data, as well as continued reporting of blooms to MDPH. At shoreline station {W2788} the cyanobacteria cell count exceeded 70,000 cells/mL for a single sample (106,708 cells) on Aug 13, 2018. This is of low priority.

## Designated Use Attainment Decisions

## Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Fish Consumption Use for Island Pond (MA94074) continues to be assessed as Not Supporting and the prior Mercury in Fish Tissue impairment is being carried forward. Fish toxics sampling for mercury, organochlorine pesticides, and metals was performed by MassDEP WPP biologists in Island Pond at station F0462 in 2018 as part of the probabilistic lake surveys (MAP2). MDPH included a site-specific advisory for Island 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.</p>

## Fish Consumption Advisories

**Summary of Fish Toxics Sampling and Resulting Fish Consumption Advisories** (MA DPH 2025) (MassDEP Undated 7)

Summary Statement
<p>Fish toxics sampling for mercury, organochlorine pesticides, and metals was performed by MassDEP WPP biologists in Island Pond (MA94074) at station F0462 in 2018 as part of the probabilistic lake surveys (MAP2). MA DPH retained the existing site-specific fish consumption advisories for Mercury associated with Island Pond 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 Island Pond (MA94074).</p>

## Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Aesthetics Use for Island Pond (MA94074) is assessed as Fully Supporting based on MassDEP staff observations of the pond in the summer of 2018. MassDEP staff recorded aesthetics observations as part of the MAP2 lake monitoring project in summer 2018 at two stations in Plymouth, for Island Pond; at the southeastern lobe, edge of lobe north of Muddy Pond, east of Gardner Drive (W2788/MAP2L-301S, n=5) and at the deep hole index station (W2787/MAP2L-301, n=3). During the MAP2 macrophyte mapping survey in Aug 2018 (n=1), less than 25% (0.6%) of the waterbody was determined to have an aquatic macrophyte biovolume &gt;50%. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded at the index station, though green water color was noted on one occasion in July. During the MAP2 littoral survey at W2788 (n=1), duckweed was not noted in any of the 10 shoreline plots.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2787	MassDEP	Water Quality	Island Pond	[index site, Plymouth]	41.811935	-70.576695
W2788	MassDEP	Water Quality	Island Pond	[southeastern lobe, edge of lobe north of Muddy Pond, east of Gardner Drive, Plymouth]	41.809566	-70.575052

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2787	2018	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2787 (MAP2L-301) on Island Pond (MA94074) during 3 site visits between Jul 2018 and Sep 2018. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted green water color (n=1). During the MAP2 macrophyte mapping survey (n=1) in Aug 2018, less than 25% (0.6%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%.
W2788	2018	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2788 (MAP2L-301S) on Island Pond (MA94074) during 5 site visits between May 2018 and Sep 2018. 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 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2787	Island Pond	2018	Aesthetics Impaired?	No	3	3
W2787	Island Pond	2018	Aquatic Plant Density, Overall	None	3	3
W2787	Island Pond	2018	Color	Greenish	1	3
W2787	Island Pond	2018	Color	None	2	3
W2787	Island Pond	2018	Objectionable Deposits	No	3	3
W2787	Island Pond	2018	Odor	None	3	3
W2787	Island Pond	2018	Scum	No	3	3
W2787	Island Pond	2018	Turbidity	None	3	3
W2788	Island Pond	2018	Aesthetics Impaired?	No	5	5
W2788	Island Pond	2018	Color	None	5	5

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2788	Island Pond	2018	Objectionable Deposits	No	5	5
W2788	Island Pond	2018	Odor	None	5	5
W2788	Island Pond	2018	Scum	No	4	5
W2788	Island Pond	2018	Scum	Yes	1	5
W2788	Island Pond	2018	Turbidity	None	5	5

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Island Pond (MA94074) is assessed as Fully Supporting based on bacteria data collected at one station in 2018, with an Alert being identified for Harmful Algal Blooms. In 2018 MassDEP staff collected Secchi depth and cyanobacteria cell count data at station W2787 [MAP2L-301, Index-deep hole] and cyanobacteria cell count and cyanotoxins data at shoreline station W2788 [MAP2L-301S, southeastern lobe, edge of lobe N of Muddy Pond, E of Gardner Drive, Plymouth] and in 2015 the Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY_Island_DeepHole. At station W2787 in 2018 (station depth=8.1 m) Secchi depth data indicated water clarity meeting the 1.2m (4ft) threshold (n=3, 3.26-4.73m). At station PLY_Island_DeepHole in 2015 (station depth=7 m) the Secchi depth was measured to be 3.2 m (n=1) which meets the 1.2 m (4 ft) threshold, however the data were too limited (n &lt;3) to evaluate water clarity. Among samples from both MassDEP stations, the cyanobacteria cell count exceeded 70,000 cells/mL for a single sample (106,708 cells) on Aug 13, 2018 (n=6), which is indicative of a Harmful Algal Bloom Alert, consequently additional sampling is recommended for this AU. Although analysis of microcystins and cylindrospermopsin samples from MassDEP's shoreline station W2788 in 2018 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L. MassDEP staff also collected <i>E. coli</i> bacteria samples in Island Pond at shoreline station W2788 from May-Sep 2018 (n=5). Analysis of the single year limited frequency dataset from this station indicated 0% of intervals had GMs &gt;126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV and the seasonal GM was 3 CFU/100ml, which meets 2024 CALM guidance.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2787	MassDEP	Water Quality	Island Pond	[index site, Plymouth]	41.811935	-70.576695

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2788	MassDEP	Water Quality	Island Pond	[southeastern lobe, edge of lobe north of Muddy Pond, east of Gardner Drive, Plymouth]	41.809566	-70.575052

## Bacteria Data

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

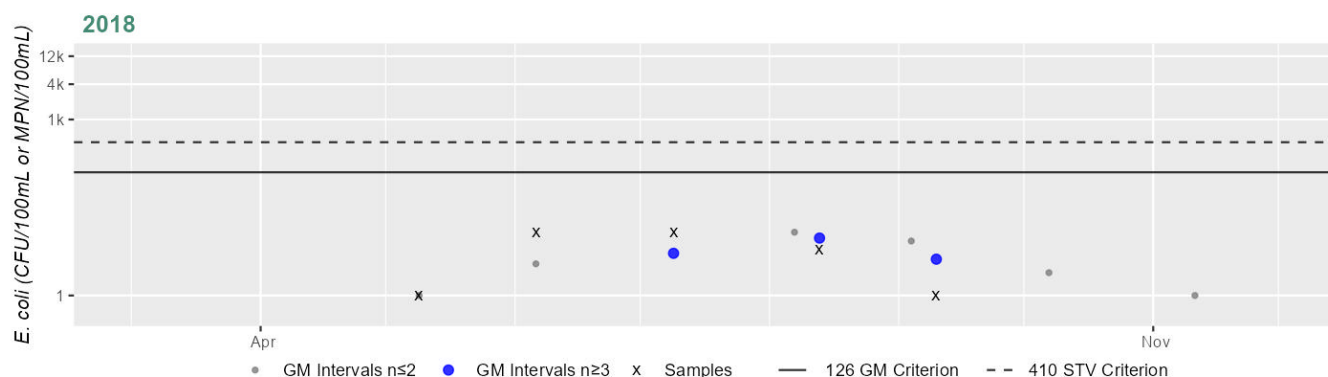
(MassDEP Undated 9) (MassDEP Undated 5)

[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
W2788	MassDEP	E. coli	05/09/18	09/10/18	5	1	12	3

#### Station MASSDEP\_W2788 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	3
#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 Exceedances; %GMI Ex = % GMI Exceedances; 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.

## Other Indicators

### Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data

(MassDEP Undated 9) (MassDEP Undated 5) (MassDEP Undated 3)

Data Year(s)	Summary
2015, 2018	In Island Pond (MA94074) in 2018, MassDEP collected Secchi and cyanobacteria cell count data at W2787 [MAP2L-301, Index-deep hole] and cyanobacteria cell count and cyanotoxin data at W2788 [MAP2L-3015, Shoreline]. In 2015, the Town of Plymouth (PLY) collected Secchi data at PLY_Island_DeepHole [41.811528, -70.576263, Deep spot]. In 2015 at station PLY_Island_DeepHole (station depth=7 m) the Secchi depth (n=1) was measured to be 3.2 m on Sep 16, 2015 indicating water clarity meeting the 1.2 m (4 ft) threshold. In 2018 at DEP's index-deep hole station W2787 (station depth=8.1 m) the Secchi depth measurements ranged from 3.26-4.73 m (n=3) indicating water clarity meeting the 1.2 m (4 ft) threshold. Among samples from both DEP stations, the cyanobacteria cell count exceeded 70,000 cells/ml for a single sample on Aug 13, 2018 in 2018 (n=6). The elevated cyanobacteria cell count measurement is indicative of a Harmful Algal Blooms Alert. Analysis of microcystins and cylindrospermopsin samples from DEP's shoreline station W2788 in 2018 (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 9) (MassDEP Undated 5)

Station Code	Waterbody	Station Type	Data Year	Sample Count	Count >70,000 cells/mL	Exceedance Date(s)
W2787	Island Pond	Index	2018	3	0	NA
W2788	Island Pond	Shoreline	2018	3	1	8/13/2018

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Island Pond (MA94074) is assessed as Fully Supporting based on a re-evaluation of bacteria data collected at one station in 2018, with an Alert being identified for Harmful Algal Blooms. In 2018 MassDEP collected cyanobacteria cell count data at station W2787 [MAP2L-301, Index-deep hole] and cyanobacteria cell count and cyanotoxins data at shoreline station W2788 [southeastern lobe, edge of lobe N of Muddy Pond, E of Gardner Drive, Plymouth]. Among samples from both MassDEP stations, the cyanobacteria cell count exceeded 70,000 cells/ml for a single sample (106,708 cells) on Aug 13, 2018 in 2018 (n=6), which is indicative of a Harmful Algal Blooms Alert. Consequently additional sampling is recommended for this AU. Analysis of microcystins and cylindrospermopsin samples from station W2788 in 2018 (n=6) indicated that the cyanotoxin concentrations did not exceed their respective thresholds of 8 µg/L and 15 µg/L. MassDEP staff collected <i>E. coli</i> bacteria samples in Island Pond at shoreline station W2788 from May-Sep 2018 (n=5). Analysis of the single year limited frequency dataset from this station indicated 0% of intervals had GMs &gt;244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV and the overall GM was 3 CFU/100ml, which meets 2024 CALM guidance.</p>



## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2788	MassDEP	Water Quality	Island Pond	[southeastern lobe, edge of lobe north of Muddy Pond, east of Gardner Drive, Plymouth]	41.809566	-70.575052

## Bacteria Data

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

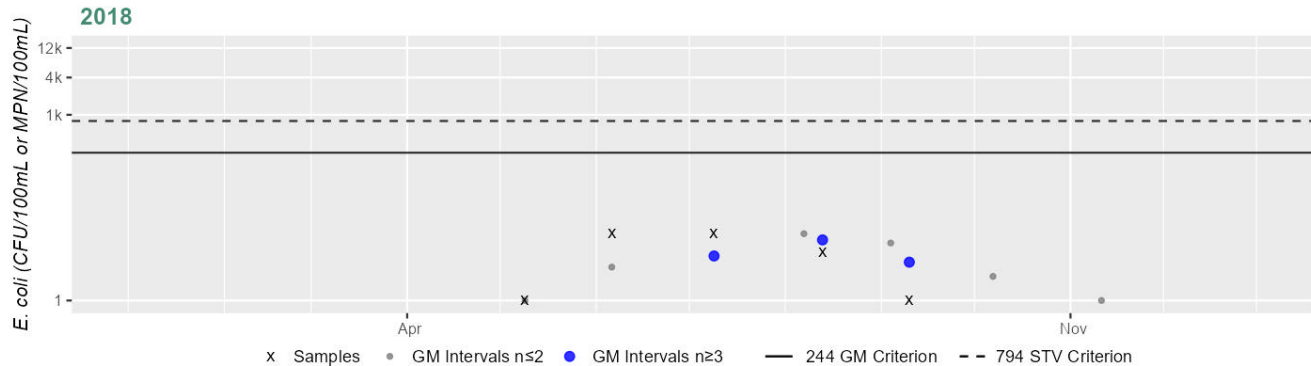
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W2788	MassDEP	E. coli	05/09/18	09/10/18	5	1	12	3

#### Station MASSDEP\_W2788 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	3
#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 Exceedances; %GMI Ex = % GMI Exceedances; 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.

## Island Pond (MA94075)

<b>Location:</b>	[locally known as Great Island Pond] Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	80 ACRES
<b>Classification/Qualifier:</b>	B

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

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

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Island Pond (MA94075) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
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Not Assessed	NO
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#### 2024/26 Use Attainment Summary

No data are available, so the Aesthetics Use for Island Pond (MA94075) 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 Island Pond (MA94075) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. In 2015 the Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_GreatIsland\_DeepHole. At station PLY\_GreatIsland\_DeepHole (station depth=4.7 m) the Secchi depth (n=1) was measured to be 4.2 m on Sep 17, 2015 which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity.

### Other Indicators

**Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data**  
(MassDEP Undated 3)

Data Year(s)	Summary
2015	In Island Pond (MA94075), the Town of Plymouth (PLY) collected Secchi data at PLY_GreatIsland_DeepHole [41.884141, -70.57334, Deep spot] in 2015. At station PLY_GreatIsland_DeepHole (station depth=4.7 m) the Secchi depth (n=1) was measured to be 4.2 m on Sep 17, 2015 indicating water clarity meeting the 1.2 m (4 ft) threshold.

### Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

#### 2024/26 Use Attainment Summary

No bacteria or other indicator data for Island Pond (MA94075) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.

## Island Pond (MA94076)

<b>Location:</b>	[south of locality of South Pond] Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	12 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Island Pond (MA94076) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Jacobs Pond (MA94077)

<b>Location:</b>	Norwell.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	61 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fanwort*)	--	Unchanged
4c	4c	(Fish Passage Barrier*)	--	Unchanged
4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fanwort*)	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	--	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

**2024/26 Use Attainment Summary**

Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Jacobs Pond (MA94077) 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 Jacobs Pond (MA94077). 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 Jacobs Pond.

**Primary Contact Recreation**

2024/26 Use Attainment	Alert
Insufficient Information	NO

**2024/26 Use Attainment Summary**

There is Insufficient Information to assess the Primary Contact Recreation Use for Jacobs Pond (MA94077) as no bacteria or other indicator data are available in the current IR window (2011-2022). 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, but will continue to be maintained under the Aquatic Life Use.

**Secondary Contact Recreation**

2024/26 Use Attainment	Alert
Insufficient Information	NO

**2024/26 Use Attainment Summary**

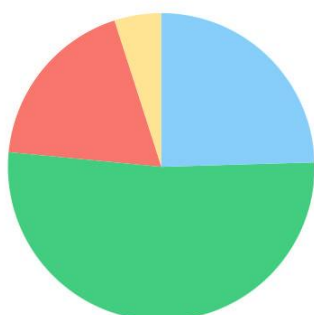
There is Insufficient Information to assess the Secondary Contact Recreation Use for Jacobs Pond (MA94077) as no bacteria or other indicator data are available in the current IR window (2011-2022). Since the Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Secondary Contact Recreation Use, but will continue to be maintained under the Aquatic Life Use.

## Jones River (MA94-12)

<b>Location:</b>	Headwaters, outlet Silver Lake, Kingston to former dam (NATID: MA00396) near Wapping Road, Kingston.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	4.1 MILES
<b>Classification/Qualifier:</b>	B: WWF, HQW

### Jones River (MA94-12)

Watershed Area: 17.52 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	17.52	11.56	8.19	5.01
Agriculture	5%	5.6%	7.6%	8.5%
Developed	18.5%	19.3%	10.4%	10.8%
Natural	52%	49.6%	50.7%	45.4%
Wetland	24.5%	25.5%	31.3%	35.3%
Impervious	7.6%	7.9%	4%	4.3%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Aquatic Plants (Macrophytes)*)	--	Unchanged
5	5	(Dewatering*)	--	Unchanged
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	Algae	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Turbidity	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Aquatic Plants (Macrophytes)*)	Water Diversions (Y)	--	--	X	X	X
(Dewatering*)	Impacts from Hydrostructure Flow Regulation/Modification (Y)	X	--	--	--	--
(Dewatering*)	Water Diversions (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Impacts from Hydrostructure Flow Regulation/Modification (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Water Diversions (Y)	X	--	--	--	--
Algae	Water Diversions (Y)	--	--	X	X	X
Dissolved Oxygen	Impacts from Hydrostructure Flow Regulation/Modification (Y)	X	--	--	--	--
Dissolved Oxygen	Water Diversions (Y)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Water Diversions (Y)	--	--	X	X	X
Turbidity	Water Diversions (Y)	--	--	X	X	X

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO
<b>2024/26 Use Attainment Summary</b>	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Jones River (MA94-12) is Not Assessed.	

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
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Not Supporting	NO
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#### 2024/26 Use Attainment Summary

The Aesthetics Use for Jones River (MA94-12) continues to be assessed as Not Supporting, with the prior Nutrient/Eutrophication Biological Indicators, Aquatic Plants (Macrophytes), Algae and Turbidity impairments being carried forward. No new data are available to evaluate the Aesthetics Use for this Jones River AU.

### Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

#### 2024/26 Use Attainment Summary

No bacteria or other indicator data for the Jones River (MA94-12) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Algae, Aquatic Plants (Macrophytes), Nutrient/Eutrophication Biological Indicators, and Turbidity impairments (from the Aesthetics Use) are 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 the Jones River (MA94-12) continues to be assessed as Not Supporting. The prior Algae, Aquatic Plants (Macrophytes), Nutrient/Eutrophication Biological Indicators, and Turbidity impairments (from the Aesthetics Use) are being carried forward. MassDEP staff collected *E. coli* bacteria samples in the Jones River in 2001 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the upstream end of the AU at station W0914 [in impoundment (locally known as Forge Pond), just upstream of Lake St, Kingston] from Jul-Oct 2001 (n=4), and the downstream end of the AU at station W0913 [Rt. 106 (Wapping Rd) crossing, Kingston] from Jul-Oct 2001 (n=4). Analysis of the historic single year limited frequency datasets from both these stations indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV and the overall GM's were 5 and 144 CFU/100ml respectively. Historic *E. coli* data from both stations W0914 and W0913 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
W0913	MassDEP	Water Quality	Jones River	[Route 106 (Wapping Road) crossing, Kingston]	41.993605	-70.748162
W0914	MassDEP	Water Quality	Jones River/Jones River Pond	[in impoundment (locally known as Forge Pond), just upstream of Lake Street, Kingston]	42.013041	-70.788342

## Bacteria Data

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

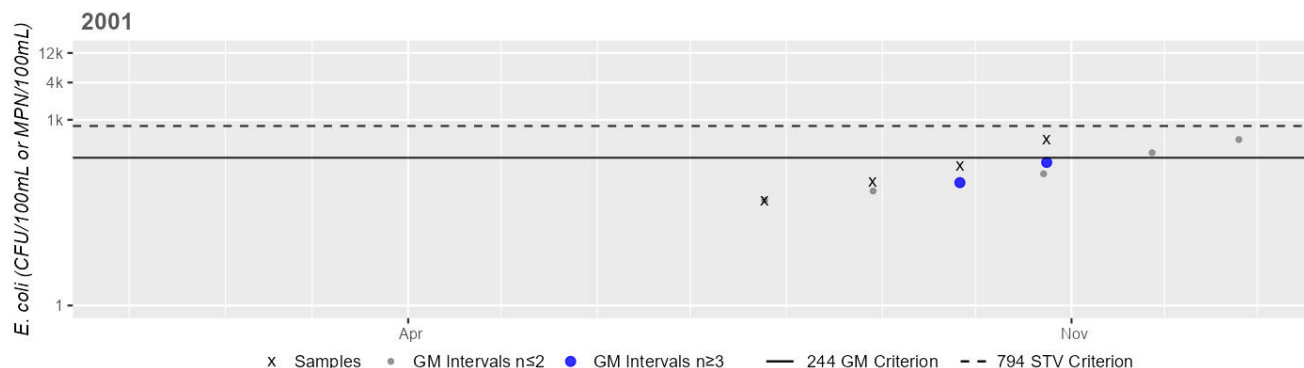
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0913	MassDEP	E. coli	07/25/01	10/24/01	4	50	480	144
W0914	MassDEP	E. coli	07/25/01	10/24/01	4	5	10	5

#### Station MASSDEP\_W0913 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	144
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

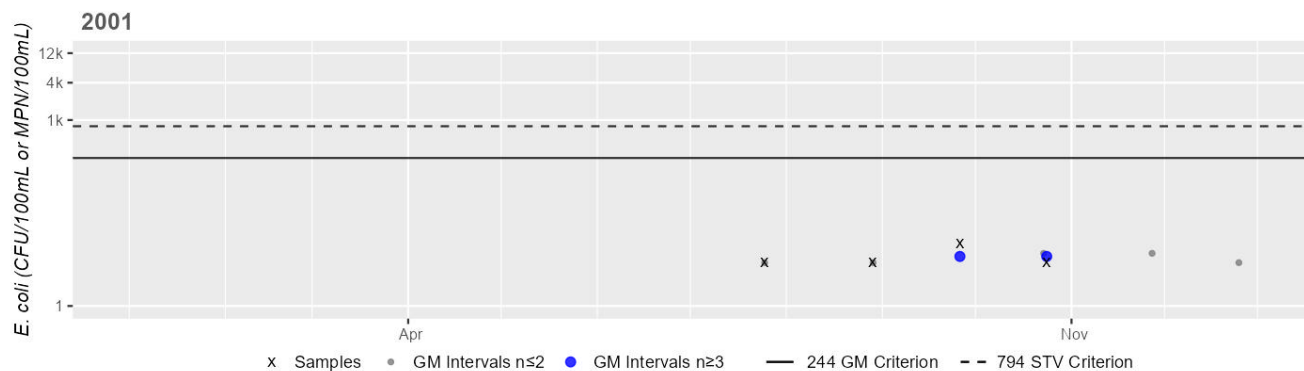
Historic (1997-2010)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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\_W0914 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	5
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

## Cumulative %GMI Exceedance

Historic (1997-2010)

0%

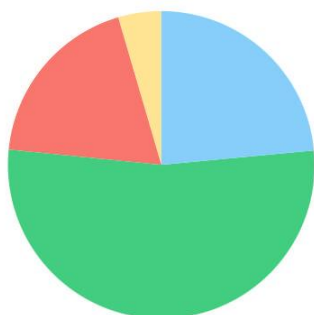
\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;  
 "Recent 5 Years" may not be consecutive as the analysis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

## Jones River (MA94-13)

<b>Location:</b>	From former dam (NATID: MA00396) near Wapping Road, Kingston to former dam (NATID: MA00395) at Elm Street, Kingston.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	0.9 MILES
<b>Classification/Qualifier:</b>	B: WWF

### Jones River (MA94-13)

Watershed Area: 20.03 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	20.03	10.25	9.27	4.31
Agriculture	4.5%	5.3%	7.2%	8.4%
Developed	18.9%	21.1%	10.4%	12.1%
Natural	53.1%	50.9%	51.7%	45.7%
Wetland	23.5%	22.7%	30.7%	33.9%
Impervious	7.8%	8.7%	4.1%	4.8%

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

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Aquatic Plants (Macrophytes)*)	Water Diversions (Y)	--	--	X	X	X
(Dewatering*)	Impacts from Hydrostructure Flow Regulation/Modification (Y)	X	--	--	--	--
(Dewatering*)	Water Diversions (Y)	X	--	--	--	--
Algae	Water Diversions (Y)	--	--	X	X	X
Dissolved Oxygen	Impacts from Hydrostructure Flow Regulation/Modification (Y)	X	--	--	--	--
Dissolved Oxygen	Water Diversions (Y)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Water Diversions (Y)	--	--	X	X	X
Turbidity	Water Diversions (Y)	--	--	X	X	X

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Jones River (MA94-13) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO

<b>2024/26 Use Attainment Summary</b>
---------------------------------------

The Aesthetics Use for Jones River (MA94-13) continues to be assessed as Not Supporting, with the prior Nutrient/Eutrophication Biological Indicators, Aquatic Plants (Macrophytes), Algae and Turbidity impairments being carried forward. No new data are available to evaluate the Aesthetics Use for this Jones River AU.

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

No bacteria or other indicator data for the Jones River (MA94-13) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Algae, Aquatic Plants (Macrophytes), Nutrient/Eutrophication Biological Indicators, and Turbidity impairments (from the Aesthetics Use) are 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 the Jones River (MA94-13) continues to be assessed as Not Supporting. The prior Algae, Aquatic Plants (Macrophytes), Nutrient/Eutrophication Biological Indicators, and Turbidity impairments (from the Aesthetics Use) are being carried forward. MassDEP staff collected *E. coli* bacteria samples at the downstream end of this Jones River AU at station W0912 [impoundment upstream of Elm St bridge, Kingston] from Jul-Oct 2001 (n=4). 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 39 CFU/100ml, which meets 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
W0912	MassDEP	Water Quality	Jones River	[impoundment upstream of Elm Street bridge, Kingston]	41.990650	-70.734893

## Bacteria Data

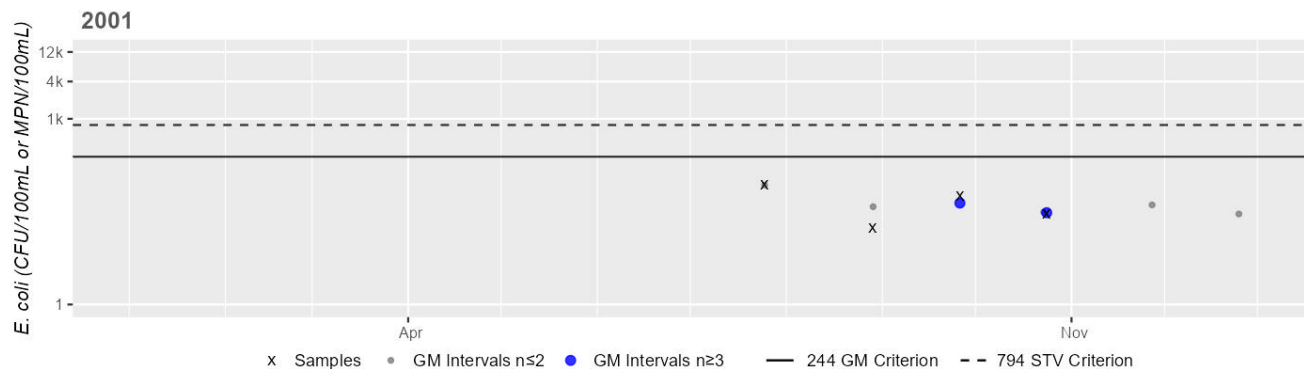
**Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)**  
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0912	MassDEP	E. coli	07/25/01	10/24/01	4	17	85	39

### Station MASSDEP\_W0912 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	39
#GMI	2
#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 Exceedances;  
%GMI Ex = % GMI Exceedances; 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.

## Jones River (MA94-14)

<b>Location:</b>	From former dam (NATID: MA00395) at Elm Street, Kingston to mouth at Kingston Bay, Kingston.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.09 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Enterococcus	--	Added
5	5	Fecal Coliform	61734	Unchanged
5	5	Fish Bioassessments	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Enterococcus	Source Unknown (N)	--	--	--	--	--	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	X	--	--	--
Fish Bioassessments	Source Unknown (N)	X	--	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X	--	--	--	--	--



## Recommendations

2024/26 Recommendations
<p>2024/26IR [Aesthetics, Low] It is recommended that additional monitoring be conducted in this Jones River AU (MA94-14) just downstream of the former Elm Street dam at stations {W0912} and {W1524} to reevaluate concerns over Aquatic Plants (Macrophytes) and Algae. These concerns were originally based on observations of macrophyte coverage and dense algae documented in 2006 just downstream of the former Elm Street dam and the presence of filamentous green algae within the smelt spawning area (i.e., the reach below the location of the former Elm Street Dam to slightly downstream from Rt. 3A). It is hoped that these conditions have changed with the removal of Elm Street dam in late summer/fall of 2019 (DER 2019). This is of low priority;</p> <p>2024/26IR [Bacteria, Medium] It is recommended that additional high frequency monitoring be conducted in this Jones River AU (MA94-14), just downstream of the Halls Brook tributary at Rt.3 {W2321} and close to the downstream end of the AU at station {W2322}, to determine if bacteria is impairing the Recreational Uses. Intermittent sampling conducted as part of the Bacteria Source Tracking (BST) project in 2011-2013 &amp; 2016 documented Enterococcus concentrations ranging from 10 to 703 MPN/100ml and identified a hotspot downstream of the Halls Brook tributary. This is of medium priority;</p>

## 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 Jones River (MA94-14) is Not Assessed.	

### Shellfish Harvesting

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

Jones River (MA94-14): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0702 sq mi (80%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.0702 sq mi (80%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB43.2	Kingston Bay, North	Prohibited	0.00253	2.9%
CCB44.0	Jones River	Prohibited	0.06769	77.3%

### **Aesthetic**

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary
<p>Too limited data are available to assess the Aesthetics Use for Jones River (MA94-14), so it is assessed as having Insufficient Information. The prior Alerts for Aquatic Plants (Macrophytes) and Algae (based on observations of macrophyte coverage and dense algae documented in 2006 just downstream of the former Elm Street dam and the presence of filamentous green algae within the smelt spawning area (i.e., the reach below the location of the former Elm Street Dam to slightly downstream from Rt. 3A)) are being carried forward. It is recommended that additional monitoring be conducted to reevaluate these concerns, since hopefully these conditions have changed with the removal of Elm Street dam in late summer/fall of 2019 (DER 2019). MassDEP staff conducted very limited water quality sampling at three stations in the downstream half of this Jones River AU as part of the Bacteria Source Tracking Project (BST) during the summer of 2011. The sites are described from upstream to downstream as follows: in Kingston at the railroad bridge approximately 1000 ft upstream of Rt. 3 (W2318, n=1), at Rt. 3 (W2321, n=1), and at the harbor master dock off the eastern end of River Street (W2322, n=2). There were generally no noted persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded at these three stations.</p>

### **Monitoring Stations**

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2318	MassDEP	Water Quality	Jones River	[at railroad bridge approximately 1000 feet upstream of Route 3, east of Landing Road, Kingston]	41.996096	-70.723112
W2321	MassDEP	Water Quality	Jones River	[Route 3, Kingston]	41.997178	-70.721207
W2322	MassDEP	Water Quality	Jones River	[harbor master dock off eastern end of River Street, Kingston]	41.998025	-70.709983

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2318	2011	1	Aesthetic observations were made by MassDEP field sampling crews at Station W2318 on Jones River (MA94-14) during 1 site visit on Jun 28, 2011. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2321	2011	1	Aesthetic observations were made by MassDEP field sampling crews at Station W2321 on Jones River (MA94-14) during 1 site visit on Jun 28, 2011. 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).
W2322	2011	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2322 on Jones River (MA94-14) during 2 site visits between Jun 2011 and Aug 2011. 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).

### Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 9) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2318	2011	1	1	0
W2321	2011	1	0	0
W2322	2011	2	2	0

### MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
--------------	-----------	-----------	-----------	--------	--------------	-------------------------

W2318	Jones River	2011	Aquatic Plant Density, Overall	Sparse	1	1
W2318	Jones River	2011	Color	None	1	1
W2318	Jones River	2011	Odor	None	1	1
W2318	Jones River	2011	Periphyton Density, Filamentous	None	1	1
W2318	Jones River	2011	Periphyton Density, Film	Sparse	1	1
W2318	Jones River	2011	Turbidity	Moderately Turbid	1	1
W2321	Jones River	2011	Aquatic Plant Density, Overall	Unobservable	1	1
W2321	Jones River	2011	Color	None	1	1
W2321	Jones River	2011	Odor	Other (Saltwater)	1	1
W2321	Jones River	2011	Periphyton Density, Filamentous	Unobservable	1	1
W2321	Jones River	2011	Periphyton Density, Film	Unobservable	1	1
W2321	Jones River	2011	Turbidity	Highly Turbid	1	1
W2322	Jones River	2011	Aquatic Plant Density, Overall	None	2	2
W2322	Jones River	2011	Color	None	2	2
W2322	Jones River	2011	Odor	None	2	2
W2322	Jones River	2011	Periphyton Density, Filamentous	None	2	2
W2322	Jones River	2011	Periphyton Density, Film	None	2	2
W2322	Jones River	2011	Turbidity	Highly Turbid	1	2
W2322	Jones River	2011	Turbidity	Moderately Turbid	1	2

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES
2024/26 Use Attainment Summary	

Too limited bacteria data are available to assess the Primary Contact Recreation Use for the Jones River (MA94-14) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Alert previously identified for Enterococcus, based on intermittently elevated concentrations documented between 2011 and 2016, is being carried forward. The prior Alerts for Aquatic Plants (Macrophytes) and Algae are being removed from the Recreational Uses but continue to be maintained under the Aesthetics Use.

The shellfish growing areas (0.0702 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 for Jones River. MassDEP staff collected Enterococcus bacteria samples close to the downstream end of this Jones River AU at station W2322 [harbor master dock off eastern end of River St, Kingston] in Aug 2011 (n=1). The available Enterococcus data at this station are too limited to assess the Primary Contact Recreation Use according to the 2024 CALM.

MassDEP staff also conducted additional intermittent sampling in the Jones River as part of the Bacteria Source Tracking (BST) project in 2011-2013 & 2016. This project documented Enterococcus concentrations ranging from 10 to 703 MPN/100ml (it should be noted that not all BST data are in the MassDEP WPP Monitoring database, so are not all presented in bacteria tables below). As a result of the source tracking efforts a hotspot was identified in the Jones River just downstream of the Halls Brook tributary (MA94-57), consequently source tracking efforts focused on Halls Brook and its drainage area. Source tracking samples were also collected from a number of unnamed tributaries and drain outfall pipes discharging (in wet weather conditions) directly to the Jones, but no correctable sources of bacteria were ever found.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2322	MassDEP	Water Quality	Jones River	[harbor master dock off eastern end of River Street, Kingston]	41.998025	-70.709983

## Bacteria Data

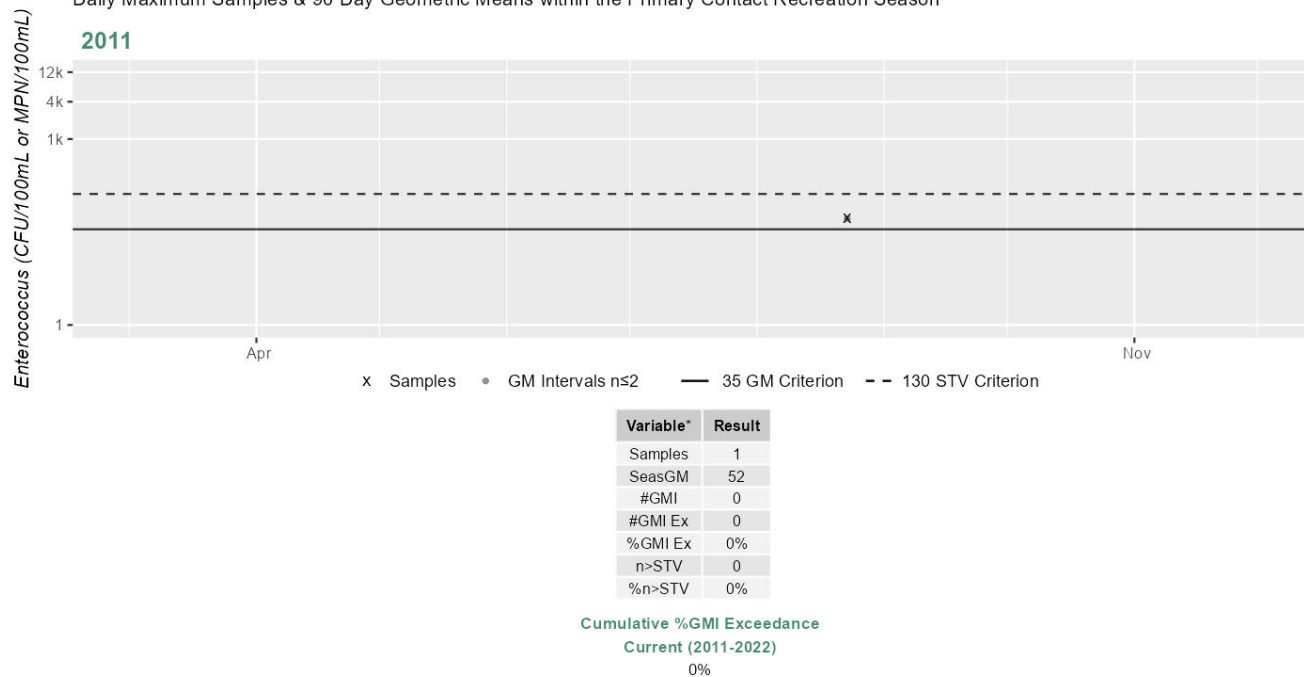
**Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)** (MassDEP Undated 9) (MassDEP Undated 5)

[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
W2322	MassDEP	Enterococci	08/23/11	08/23/11	1	52	52	52

### Station MASSDEP\_W2322 - Enterococcus

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



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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 2011-2013 & 2016 at 5 sites on the Jones River AU (MA94-14), with E.coli concentrations ranging 145 to 2,014MPN and Enterococcus concentrations ranging 10 to 703MPN. A hotspot was identified just downstream of the Halls Brook tributary (MA94-57); consequently source tracking efforts focused on Halls Brook and its drainage area. Additional source tracking over the same time-span, found the Tussock Brook tributary (MA94-67 & MA94-68) to Halls Brook to be the most significant contributor of bacteria to Halls Brook and thus the Jones River, however human marker analysis at the downstream end of Tussock Brook in 2011 indicated "no evidence" of a human source. E.coli concentrations at the downstream end of Halls Brook, close to the confluence with the Jones River, ranged 213 to 2,481MPN with a max enterococcus concentration of 529MPN. Samples were also collected from a number of unnamed tributaries and also drain outfall pipes discharging (in wet weather conditions) directly to the Jones, but no correctable sources were ever found.

### Shellfish Growing Area Classifications

#### Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Summary
Jones River (MA94-14): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0702 sq mi (80%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for the Jones River (MA94-14) is assessed as Not Supporting. An Enterococcus impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at one station in 2001. The prior Alert for elevated bacteria is being removed in light of the new impairment for the same concern. The shellfish growing areas (0.0702 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 Jones River. MassDEP staff collected Enterococcus bacteria samples in both the historic (1997-2010) &amp; the current IR window (2011-2022) in the Jones River from 2001-2011 at 2 stations. Samples were collected from the following stations/sample years: a third of the way down the AU at station W0911 [Rt. 3A (Main St) crossing, Kingston] from Jul-Sep 2001 (n=3) and close to the downstream end of the AU at station W2322 [harbor master dock off eastern end of River St, Kingston] from Aug 2011 (n=1). Analysis of this historic single year limited frequency Enterococcus dataset from W0911 indicated 100% of intervals had GMs &gt;68 CFU/100ml, 3 samples exceeded the 252 CFU/100ml STV, and the overall GM was 686 CFU/100ml. Enterococcus data from W2322 are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use, but the historic Enterococcus data from W0911 are indicative of an Enterococcus impairment. MassDEP staff also conducted additional intermittent sampling in the Jones River as part of the Bacteria Source Tracking (BST) project in 2011-2013 &amp; 2016. This project documented Enterococcus concentrations ranging from 10 to 703 MPN/100ml (it should be noted that not all BST data are in the MassDEP WPP Monitoring database, so are not all presented in bacteria tables below). As a result of the source tracking efforts a hotspot was identified in the Jones River just downstream of the Halls Brook tributary (MA94-57), consequently source tracking efforts focused on Halls Brook and its drainage area. Source tracking samples were also collected from a number of unnamed tributaries and drain outfall pipes discharging (in wet weather conditions) directly to the Jones, but no correctable sources of bacteria were ever found.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0911	MassDEP	Water Quality	Jones River	[Route 3A (Main Street) crossing, Kingston]	41.990251	-70.724061
W2322	MassDEP	Water Quality	Jones River	[harbor master dock off eastern end of River Street, Kingston]	41.998025	-70.709983

## Bacteria Data

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

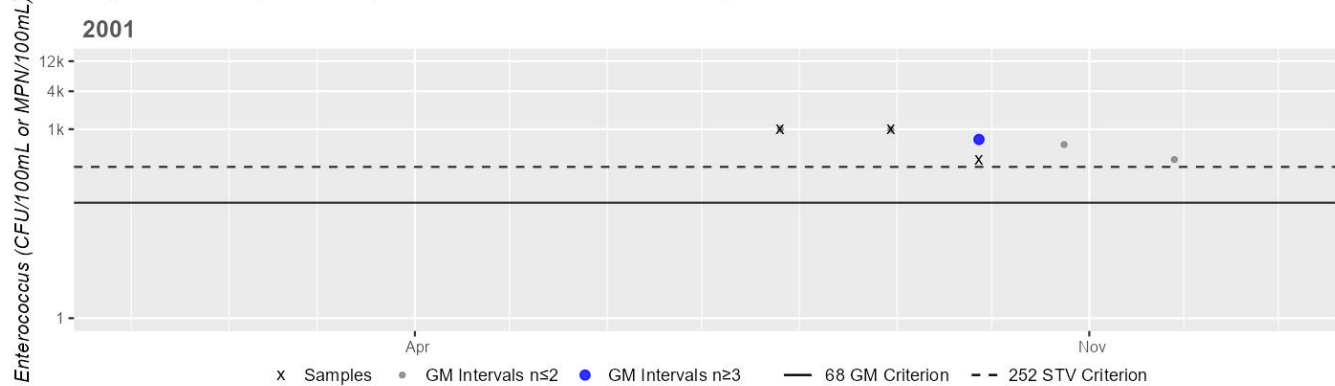
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0911	MassDEP	Enterococci	07/26/01	09/27/01	3	330	1000	686
W2322	MassDEP	Enterococci	08/23/11	08/23/11	1	52	52	52

#### Station MASSDEP\_W0911 - Enterococcus

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



Variable*	Result
Samples	3
SeasGM	686
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	3
%n>STV	100%

Cumulative %GMI Exceedance

Historic (1997-2010)

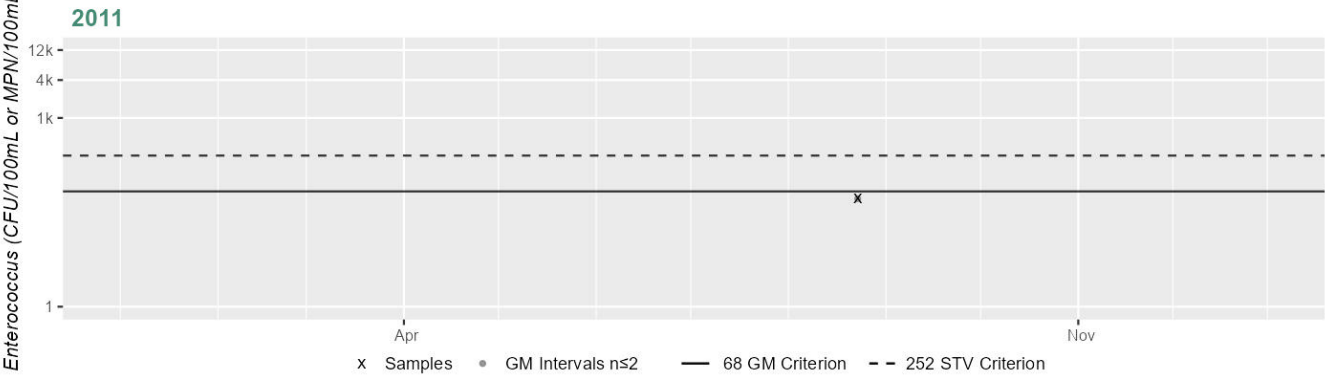
100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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\_W2322 - Enterococcus

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



Variable*	Result
Samples	1
SeasGM	52
#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 Exceedances;  
%GMI Ex = % GMI Exceedances; 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 6)

Summary
Jones River (MA94-14): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0702 sq mi (80%). 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.

## Keene Pond (MA94079)

<b>Location:</b>	Duxbury.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	11 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Keene Pond (MA94079) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Lily Pond (MA94179)

<b>Location:</b>	Cohasset.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	50 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Curly-leaf Pondweed*)	--	Unchanged
5	5	(Fanwort*)	--	Unchanged
5	5	(Non-Native Aquatic Plants*)	--	Unchanged
5	5	Transparency / Clarity	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(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	--	--	--	--
Transparency / Clarity	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 Lily Pond (MA94179) 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 Lily Pond (MA94179). 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. Additionally, since the prior 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 Lily Pond.	

### Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for Lily Pond (MA94179) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Transparency / Clarity impairment is being carried. 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, but will continue to be maintained under the Aquatic Life Use.	

### Secondary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	NO
2024/26 Use Attainment Summary	

There is Insufficient Information to assess the Secondary Contact Recreation Use for Lily Pond (MA94179) as no bacteria or other indicator data are available in the current IR window (2011-2022). 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. The Non-Native Aquatic Plants impairment will continue to be maintained under the Aquatic Life Use.

## Little Harbor (MA94-20)

<b>Location:</b>	Cohasset.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.27 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4a	4a	Fecal Coliform	2586	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	X	--	--	--
Fecal Coliform	Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO) (Y)	--	--	X	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
---------------------------------------

Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Little Harbor (MA94-20) is Not Assessed.

## Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

Little Harbor (MA94-20): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.2596 sq mi (95%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.2596 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB11.0	Little Harbor	Prohibited	0.25962	95.5%

## Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

### 2024/26 Use Attainment Summary

No data are available, so the Aesthetics Use for Little Harbor (MA94-20) 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 Little Harbor (MA94-20) so it is assessed as having Insufficient Information. The shellfish growing areas (0.2596 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 Little Harbor.

**Shellfish Growing Area Classifications**

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Little Harbor (MA94-20): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.2596 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.

**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 Little Harbor (MA94-20) so it is assessed as having Insufficient Information. The shellfish growing areas (0.2596 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 Little Harbor.	

**Shellfish Growing Area Classifications**

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Little Harbor (MA94-20): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.2596 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.



## Little Herring Pond (MA94082)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	81 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
2	2	None	--	Unchanged

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Little Herring Pond (MA94082) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
No data are available, so the Aesthetics Use for Little Herring Pond (MA94082) is Not Assessed.

### Primary Contact Recreation

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

<b>2024/26 Use Attainment Summary</b>
---------------------------------------

No bacteria data are available to assess the Primary Contact Recreation Use for Little Herring Pond (MA94082) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_LittleHerring\_DeepHole in 2015 and 2017. Secchi depth data were too limited (n <3) to evaluate water clarity using data from PLY\_LittleHerring\_DeepHole in 2015 (n=1, 1.1m) and 2017 (n=1, 1.5m).

### **Other Indicators**

#### **Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data** (MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2015, 2017	In Little Herring Pond (MA94082), the Town of Plymouth (PLY) collected Secchi data at PLY_LittleHerring_DeepHole [41.826583, -70.575667, Deep spot] in 2015 and 2017. In 2015 at station PLY_LittleHerring_DeepHole (station depth=1.1 m) the Secchi depth (n=1) was measured to be 1.1 m on Aug 19, 2015. There was insufficient information to assess water clarity because the station depth is less than 1.2 m and the Secchi depth was the same as the station depth. In 2017 at station PLY_LittleHerring_DeepHole (station depth=1.5 m) the Secchi depth (n=1) was measured to be 1.5 m on Sep 13, 2017 indicating water clarity meeting the 1.2 m (4 ft) threshold.

### **Secondary Contact Recreation**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO
<b>2024/26 Use Attainment Summary</b>	
No bacteria or other indicator data for Little Herring Pond (MA94082) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.	

## Little Pond (MA94182)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	40 ACRES
<b>Classification/Qualifier:</b>	B

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 Little Pond (MA94182) 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 Little Pond (MA94182) 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 Little Pond (MA94182) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_Little\_DeepHole in 2014. The Secchi depth at station PLY\_Little\_DeepHole (station depth=12.5 m) was measured to be 6.4 m (n=1) which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity.

### ***Other Indicators***

#### **Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data** (MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2014	In Little Pond (MA94182), the Town of Plymouth (PLY) collected Secchi data at PLY_Little_DeepHole [41.942417, -70.684028, Deep spot] in 2014. At station PLY_Little_DeepHole (station depth=12.5 m) the Secchi depth (n=1) was measured to be 6.4 m on Sep 09, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold.

### **Secondary Contact Recreation**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO
<b>2024/26 Use Attainment Summary</b>	
No bacteria or other indicator data for Little Pond (MA94182) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.	

## Little Sandy Bottom Pond (MA94085)

<b>Location:</b>	Pembroke.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	56 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW (Tributary)

No usable data were available for Little Sandy Bottom Pond (MA94085) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Little South Pond (MA94087)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	63 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW

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 Little South Pond (MA94087) 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 Little South Pond (MA94087) 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 Little South Pond (MA94087) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_LittleSouth\_DeepHole in 2014. At station PLY\_LittleSouth\_DeepHole (station depth=5.5 m) the Secchi depth (n=1) was measured to be 4.9 m on Sep 09, 2014 which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity.

### ***Other Indicators***

#### **Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data** (MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2014	In Little South Pond (MA94087), the Town of Plymouth (PLY) collected Secchi data at PLY_LittleSouth_DeepHole [41.916028, -70.675472, Deep spot] in 2014. At station PLY_LittleSouth_DeepHole (station depth=5.5 m) the Secchi depth (n=1) was measured to be 4.9 m on Sep 09, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold.

### **Secondary Contact Recreation**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO
<b>2024/26 Use Attainment Summary</b>	
No bacteria or other indicator data for Little South Pond (MA94087) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.	

## Long Island Pond (MA94088)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	33 ACRES
<b>Classification/Qualifier:</b>	B

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

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(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	--	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
---------------------------------------



Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Long Island Pond (MA94088) 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 Long Island Pond (MA94088) 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 Long Island Pond (MA94088) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY_LongIsland_DeepHole in 2014. The Secchi depth at station PLY_LongIsland_DeepHole (station depth=5m) was measured to be 2.75 m (n=1) which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity.

## Other Indicators

**Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data**  
(MassDEP Undated 3)

Data Year(s)	Summary
2014	In Long Island Pond (MA94088), the Town of Plymouth (PLY) collected Secchi data at PLY_LongIsland_DeepHole [41.8945, -70.576278, Deep spot] in 2014. At station PLY_LongIsland_DeepHole (station depth=5 m) the Secchi depth (n=1) was measured to be 2.75 m on Aug 28, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

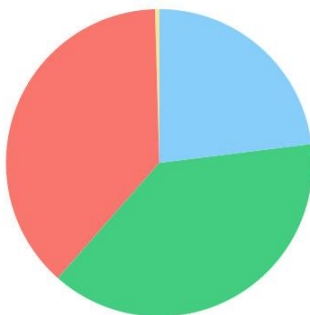
2024/26 Use Attainment Summary
No bacteria or other indicator data for Long Island Pond (MA94088) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.

# Longwater Brook (MA94-39)

<b>Location:</b>	Headwaters, south of Route 3, Norwell to mouth at confluence with Drinkwater River, Hanover.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	2.8 MILES
<b>Classification/Qualifier:</b>	B

## Longwater Brook (MA94-39)

Watershed Area: 2.98 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.98	2.98	0.86	0.86
Agriculture	0.5%	0.5%	0.5%	0.5%
Developed	38%	38%	27.4%	27.4%
Natural	38.5%	38.5%	36.4%	36.4%
Wetland	23%	23%	35.7%	35.7%
Impervious	20.2%	20.2%	13.8%	13.8%

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 Longwater Brook (MA94-39) 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 Longwater Brook (MA94-39) is Not Assessed.	

### Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
<p>The Primary Contact Recreation Use for Longwater Brook (MA94-39) 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 one station in 2019. North South River Watershed Association (NSRWA) staff/volunteers collected <i>E. coli</i> bacteria samples halfway down Longwater Brook at station NSRWA_Longwater Brook [Across the street from Hacketts Pond Drive, Hanover] from Jul-Aug 2019 (n=4). Analysis of the single year limited frequency dataset from this station indicated 100% of intervals had GMs &gt;126 CFU/100ml, 4 samples exceeded the 410 CFU/100ml STV and the seasonal GM was 3,427 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.</p>	

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NSRWA_Longwater Brook	North South River Watershed Association	Water Quality	Longwater Brook	Across the street from Hacketts Pond Drive, Hanover	42.146000	-70.871190

## Bacteria Data

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

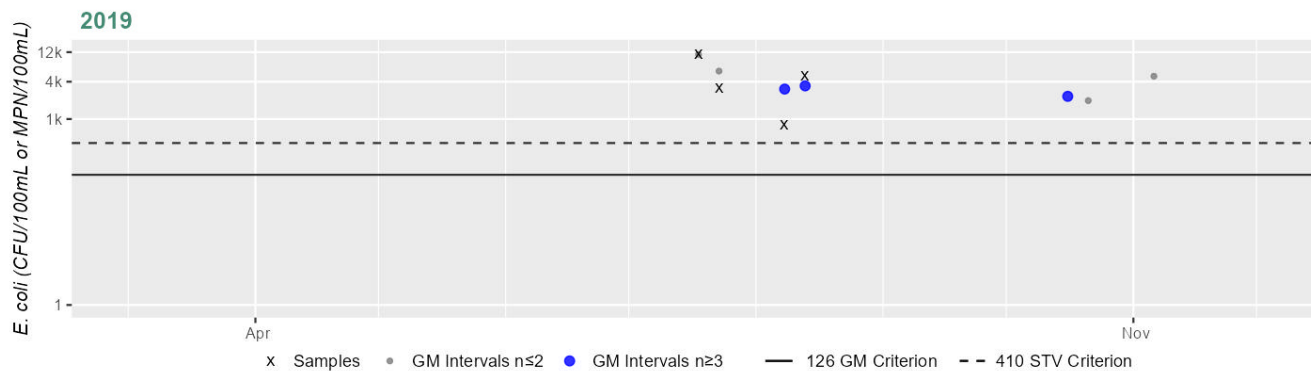
(NSRWA 2019) (MassDEP Undated 3)

[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
NSRWA_Longwater Brook	North South River Watershed Association	E. coli	07/18/19	08/13/19	4	800	11000	3427

### Station NSRWA\_Longwater Brook - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	3427
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	4
%n>STV	100%

#### Cumulative %GMI Exceedance

Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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
<p>The Secondary Contact Recreation Use for Longwater Brook (MA94-39) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on a re-evaluation of bacteria data not meeting the threshold at one station in 2019. MassDEP and North South River Watershed Association (NSRWA) staff/volunteers collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) &amp; the current IR window (2011-2022) in Longwater Brook from 2006-2019 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: halfway down the AU at NSRWA_Longwater Brook [Across the street from Hacketts Pond Drive, Hanover] from Jul-Aug 2019 (n=4) and three-quarters of the way down at W1529 [Baits Way crossing, Hanover] from May-Aug 2006 (n=5). Since bacteria data from the historic IR window are indicative of good water quality conditions, only the analysis from the current IR window will be summarized here. Analysis of the single year limited frequency <i>E. coli</i> dataset from NSRWA_Longwater Brook indicated 100% of intervals had GMs &gt;244 CFU/100ml, 4 samples exceeded the 794 CFU/100ml STV and the overall GM was 3,427 CFU/100ml, which is indicative of an Escherichia Coli (E. Coli) impairment.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1529	MassDEP	Water Quality	Longwater Brook	[Baits Way crossing, Hanover]	42.138158	-70.872797
NSRWA_Longwater Brook	North South River Watershed Association	Water Quality	Longwater Brook	Across the street from Hacketts Pond Drive, Hanover	42.146000	-70.871190

## Bacteria Data

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

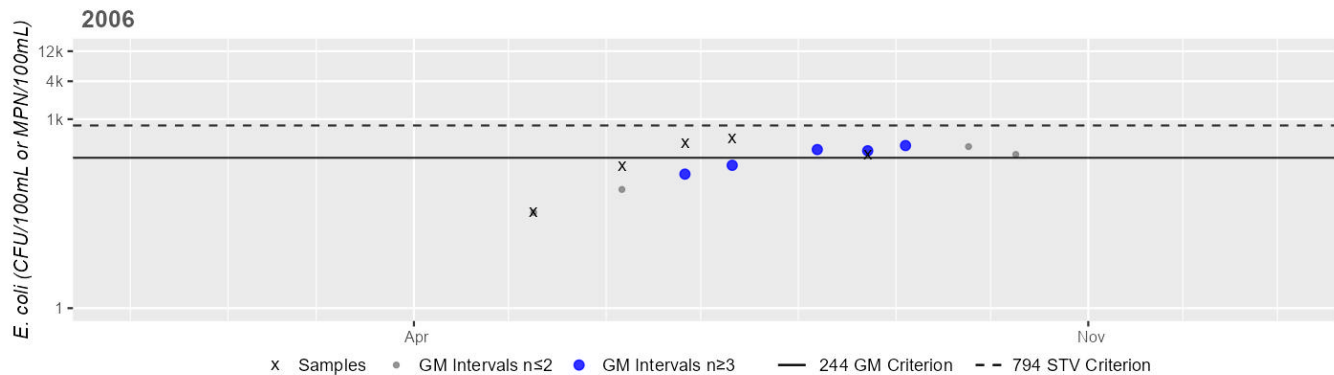
(MassDEP Undated 9) (MassDEP Undated 4) (NSRWA 2019) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1529	MassDEP	E. coli	05/09/06	08/23/06	5	33	488	200
NSRWA_Longwater Brook	North South River Watershed Association	E. coli	07/18/19	08/13/19	4	800	11000	3427

### Station MASSDEP\_W1529 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	200
#GMI	5
#GMI Ex	3
%GMI Ex	60%
n>STV	0
%n>STV	0%

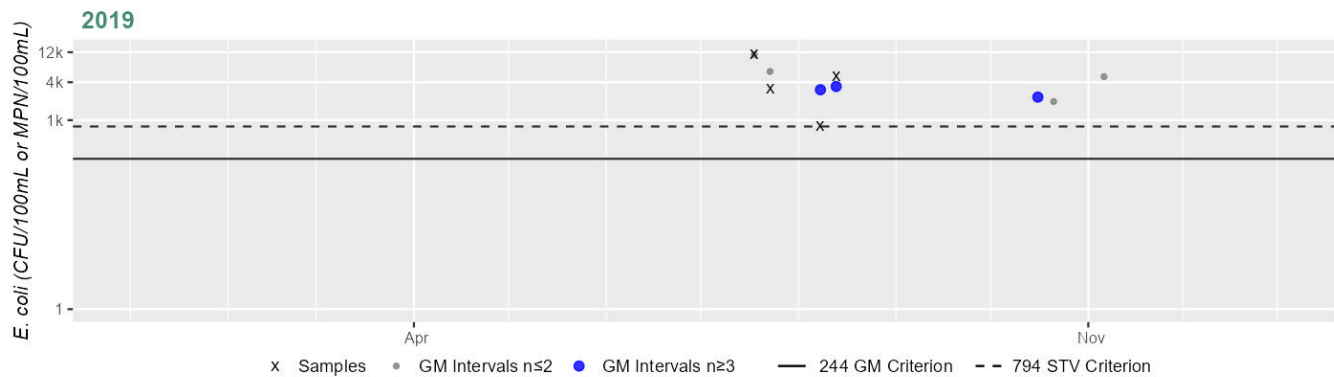
Cumulative %GMI Exceedance  
Historic (1997-2010)

60%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances, 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 NSRWA\_Longwater Brook - *Escherichia coli*

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



Variable*	Result
Samples	4
SeasGM	3427
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	4
%n>STV	100%

Cumulative %GMI Exceedance  
Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances, 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.

## Lorings Bogs Pond (MA94089)

<b>Location:</b>	Duxbury.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	33 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Lorings Bogs Pond (MA94089) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

## Lout Pond (MA94090)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	18 ACRES
<b>Classification/Qualifier:</b>	B

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 Lout Pond (MA94090) 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 Lout Pond (MA94090) 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 Lout Pond (MA94090) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_Lout\_DeepHole in 2015. The Secchi depth at station PLY\_Lout\_DeepHole (station depth=10.5 m) was measured to be 5 m (n=1) which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity.

**Other Indicators****Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data**

(MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2015	In Lout Pond (MA94090), the Town of Plymouth (PLY) collected Secchi data at PLY_Lout_DeepHole [41.935562, -70.671353, Deep spot] in 2015. At station PLY_Lout_DeepHole (station depth=10.5 m) the Secchi depth (n=1) was measured to be 5 m on Sep 24, 2015 indicating water clarity meeting the 1.2 m (4 ft) threshold.

**Secondary Contact Recreation**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
No bacteria or other indicator data for Lout Pond (MA94090) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.

# Lower Chandler Pond (MA94091)

<b>Location:</b>	Duxbury/Pembroke.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	37 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Lower Chandler Pond (MA94091) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

## Maquan Pond (MA94096)

<b>Location:</b>	Hanson.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	45 ACRES
<b>Classification/Qualifier:</b>	B

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

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Maquan Pond (MA94096) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

<b>2024/26 Use Attainment Summary</b>
Too limited data are available to assess the Aesthetics Use for Maquan Pond (MA94096), so it is assessed as having Insufficient Information. During the period 2015 through 2022, C-HAB postings for Maquan Pond were reported to MDPH based on visual observations for 9 days in 2017 and 14 days in 2022 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.

## Algal Bloom Information

**Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Maquan Pond (MA94096) were reported to MDPH based on visual observations for 9 days in 2017 and 14 days in 2022. 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.

**Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

[\* 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
Maquan Pond	Hanson			9					14

## 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 Maquan Pond (MA94096) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. During the period 2015 through 2022, C-HAB postings for Maquan Pond were reported to MDPH based on visual observations for 9 days in 2017 and 14 days in 2022 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.

## 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 Maquan Pond (MA94096) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. During the period 2015 through 2022, C-HAB postings for Maquan Pond were reported to MDPH based on visual observations for 9 days in 2017 and 14 days in 2022 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.

## Morey Hole (MA94102)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	22 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
2	2	None	--	Unchanged

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Morey Hole (MA94102) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
No data are available, so the Aesthetics Use for Morey Hole (MA94102) is Not Assessed.

### Primary Contact Recreation

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

<b>2024/26 Use Attainment Summary</b>
---------------------------------------

No bacteria data are available to assess the Primary Contact Recreation Use for Morey Hole (MA94102) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_Moreys\_DeepHole in 2014. The Secchi depth at PLY\_Moreys\_DeepHole (station depth=3.9 m) was measured to be 3.85 m (n=1) which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity.

### ***Other Indicators***

#### **Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data** (MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2014	In Morey Hole (MA94102), the Town of Plymouth (PLY) collected Secchi data at PLY_Moreys_DeepHole [41.869583, -70.555667, Deep spot] in 2014. At station PLY_Moreys_DeepHole (station depth=3.9 m) the Secchi depth (n=1) was measured to be 3.85 m on Aug 21, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold.

### **Secondary Contact Recreation**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO
<b>2024/26 Use Attainment Summary</b>	
No bacteria or other indicator data for Morey Hole (MA94102) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.	

## Musquashcut Brook (MA94-64)

<b>Location:</b>	Headwaters outlet Musquashcut Pond, Scituate to mouth at confluence with The Gulf, Scituate.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.02 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Enterococcus	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Enterococcus	Source Unknown (N)	--	--	--	--	X	X

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Musquashcut Brook (MA94-64) is Not Assessed.

### Shellfish Harvesting

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO



2024/26 Use Attainment Summary
Musquashcut Brook (MA94-64): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0136 sq mi (63%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.0136 sq mi (63%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB10.1	West Cohasset Harbor	Prohibited	0.01358	63.4%

### Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Musquashcut Brook (MA94-64) 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 Musquashcut Brook (MA94-64) continues to be assessed as Not Supporting. The prior Enterococcus impairment is being carried forward based on bacteria data not meeting the threshold at 2 combined stations in 2019 & 2020. The shellfish growing areas (0.0136 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 Musquashcut Brook. Cohasset Center for Student Coastal Research (CCSCR) staff/volunteers collected Enterococcus bacteria samples in Musquashcut Brook from 2019-2020 at 2 combined stations. Samples were collected from the following stations/sample years: about a quarter of the way down the AU at combined station CCSCR\_Gannet Road & CCSCR\_Gannett Tide Gate [Tide Gate & river tributary] from 2019-2020 (n=7-13/yr) and at the downstream end of the AU at combined station CCSCR\_Hatherly & CCSCR\_Hatherly Tide Gate [Tide Gate & river tributary] from 2019-2020 (n=8-14/yr). Analysis of the multi-year moderate frequency Enterococcus datasets from both these stations indicated that while only 1 yr (2020) at each station had  $\geq 2$  samples exceeding the 130 CFU/100ml STV (n=4 and n=2 respectively), both 2019 and 2020 had intervals where >20% of the GMs were >35 CFU/100ml (100 & 95% at Gannet Road/Tide Gate and 72 & 73% at Hatherly Tide Gate) and cumulatively across years 96% and 73% respectively of intervals had GMs >35 CFU/100ml. Enterococcus data from CCSCR\_Gannet Road & CCSCR\_Gannett Tide Gate and CCSCR\_Hatherly & CCSCR\_Hatherly Tide Gate are both indicative of an Enterococcus impairment.

### **Monitoring Stations**

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CCSCR_Gannet Road	Cohasset Center for Student Coastal Research	Water Quality	Musquashcut Pond	Tide Gate	42.225481	-70.773960
CCSCR_Gannett Tide Gate	Cohasset Center for Student Coastal Research	Water Quality	Scituate Mushquashcut	river tributary	42.225465	-70.774225
CCSCR_Hatherly	Cohasset Center for Student Coastal Research	Water Quality	Musquashcut Pond	Tide Gate	42.225402	-70.759390
CCSCR_Hatherly Tide Gate	Cohasset Center for Student Coastal Research	Water Quality	Scituate Mushquashcut	river tributary	42.225402	-70.759385

### **Bacteria Data**

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

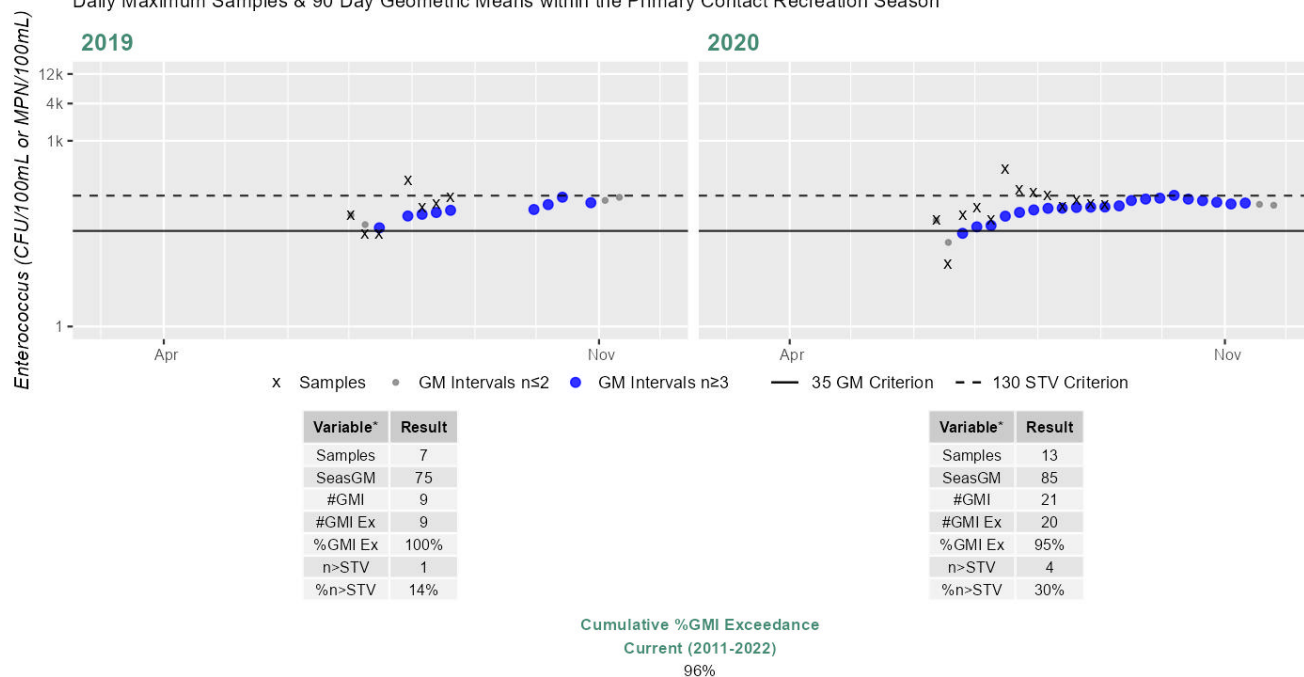
(CCSCR 2020) (MassDEP Undated 3)

[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
CCSCR_Gannet Road	Cohasset Center for Student Coastal Research	Enterococci	07/02/19	08/20/19	7	31	228	75
CCSCR_Gannett Tide Gate	Cohasset Center for Student Coastal Research	Enterococci	06/11/20	09/02/20	13	10	345	85
CCSCR_Hatherly	Cohasset Center for Student Coastal Research	Enterococci	07/02/19	08/20/19	8	10	884	41
CCSCR_Hatherly Tide Gate	Cohasset Center for Student Coastal Research	Enterococci	06/03/20	09/02/20	14	10	487	53

### Station CCSCR\_Gannet Road & CCSCR\_Gannett Tide Gate - Enterococcus

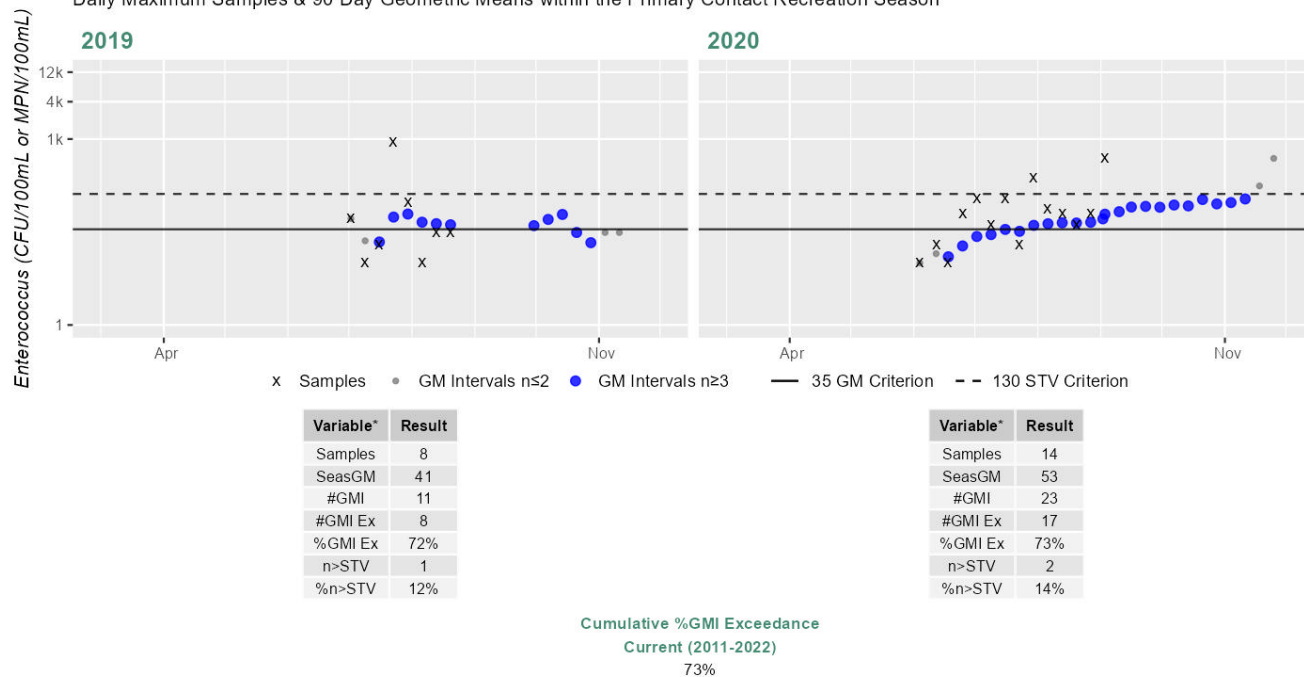
Daily Maximum Samples & 90 Day Geometric Means within the Primary Contact Recreation Season



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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 CCSCR\_Hatherly & CCSCR\_Hatherly Tide Gate - Enterococcus

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



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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 6)**

### Summary

Musquashcut Brook (MA94-64): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0136 sq mi (63%). 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

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO
<b>2024/26 Use Attainment Summary</b>	

The Secondary Contact Recreation Use for Musquashcut Brook (MA94-64) is assessed as Not Supporting. An Enterococcus impairment is being added based on a re-evaluation of bacteria data not meeting the threshold for 1 combined station at the upstream end of the AU in 2019 & 2020. The shellfish growing areas (0.0136 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 Musquashcut Brook. Cohasset Center for Student Coastal Research (CCSCR) staff/volunteers collected Enterococcus bacteria samples in Musquashcut Brook from 2019-2020 at 2 combined stations. Samples were collected from the following stations/sample years: about a quarter of the way down the AU at combined station CCSCR\_Gannet Road & CCSCR\_Gannett Tide Gate [Tide Gate & river tributary] from 2019-2020 (n=7-13/yr) and at the downstream end of the AU at combined station CCSCR\_Hatherly & CCSCR\_Hatherly Tide Gate [Tide Gate & river tributary] from 2019-2020 (n=8-14/yr). Analysis of the multi-year moderate frequency Enterococcus dataset from CCSCR\_Gannet Road & CCSCR\_Gannett Tide Gate indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >68 CFU/100ml (2019 and 2020, 66 & 80%) and while 0 yrs had ≥2 samples exceed the 252 CFU/100ml STV, cumulatively across years 76% of intervals had GMs >68 CFU/100ml. However, analysis of the multi-year moderate frequency Enterococcus dataset from CCSCR\_Hatherly & CCSCR\_Hatherly Tide Gate indicated that while cumulatively across years 26% of intervals had GMs >68 CFU/100ml, only 1 out of 2 sufficient data yrs had intervals where >20% of the GMs were >68 CFU/100ml (2020, 39%) and 0 yrs had ≥2 samples exceed the 252 CFU/100ml STV. While Enterococcus data from CCSCR\_Hatherly & CCSCR\_Hatherly Tide Gate meet 2024 CALM guidance, Enterococcus data from CCSCR\_Gannet Road & CCSCR\_Gannett Tide Gate are indicative of an Enterococcus impairment.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CCSCR_Gannet Road	Cohasset Center for Student Coastal Research	Water Quality	Musquashcut Pond	Tide Gate	42.225481	-70.773960
CCSCR_Gannett Tide Gate	Cohasset Center for Student Coastal Research	Water Quality	Scituate Mushquashcut	river tributary	42.225465	-70.774225
CCSCR_Hatherly	Cohasset Center for Student Coastal Research	Water Quality	Musquashcut Pond	Tide Gate	42.225402	-70.759390

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CCSCR_Hatherly Tide Gate	Cohasset Center for Student Coastal Research	Water Quality	Scituate Mushquashicut	river tributary	42.225402	-70.759385

### ***Bacteria Data***

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

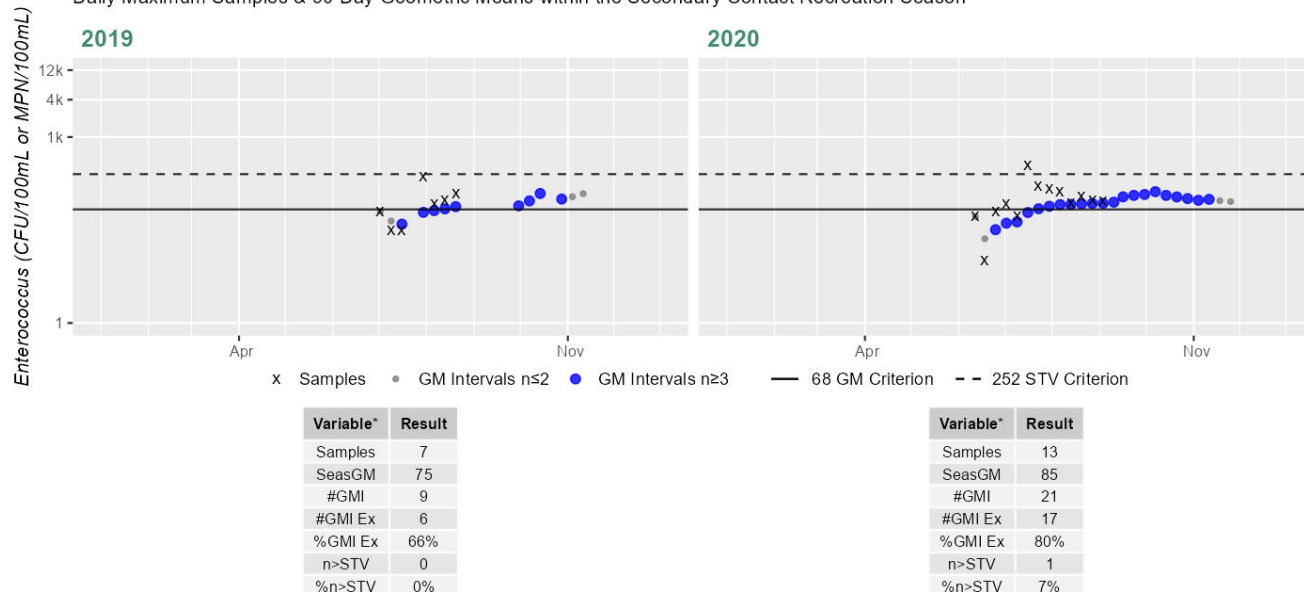
(CCSCR 2020) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CCSCR_Gannett Road	Cohasset Center for Student Coastal Research	Enterococci	07/02/19	08/20/19	7	31	228	75
CCSCR_Gannett Tide Gate	Cohasset Center for Student Coastal Research	Enterococci	06/11/20	09/02/20	13	10	345	85
CCSCR_Hatherly	Cohasset Center for Student Coastal Research	Enterococci	07/02/19	08/20/19	8	10	884	41
CCSCR_Hatherly Tide Gate	Cohasset Center for Student Coastal Research	Enterococci	06/03/20	09/02/20	14	10	487	53

### Station CCSCR\_Gannet Road & CCSCR\_Gannett Tide Gate - Enterococcus

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



Cumulative %GMI Exceedance

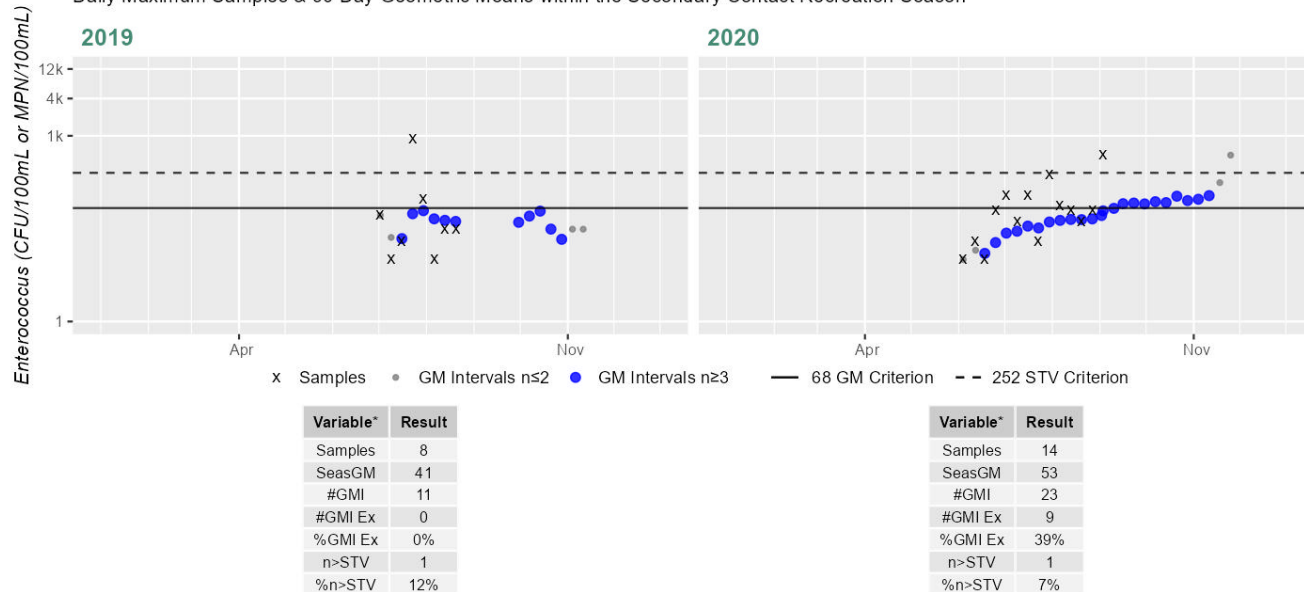
Current (2011-2022)

76%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 CCSCR\_Hatherly & CCSCR\_Hatherly Tide Gate - Enterococcus

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



Cumulative %GMI Exceedance

Current (2011-2022)

26%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)

Summary
Musquashcut Brook (MA94-64): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0136 sq mi (63%). 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.



## Musquashcut Pond (MA94-33)

<b>Location:</b>	Scituate (formerly reported as 2004 segment: Musquashcut Pond MA94105).
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.11 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Flow Regime Modification*)	--	Unchanged
5	5	Algae	--	Unchanged
5	5	Chlorophyll-a	--	Unchanged
5	5	Dissolved Oxygen Supersaturation	--	Unchanged
5	5	Enterococcus	61713	Changed
5	5	Fecal Coliform	61713	Unchanged
5	5	Phosphorus, Total	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Flow Regime Modification*)	Changes in Tidal Circulation/Flushing (Y)	X	--	--	--	--	--
Algae	Changes in Tidal Circulation/Flushing (Y)	X	--	--	X	X	X
Chlorophyll-a	Changes in Tidal Circulation/Flushing (Y)	X	--	--	--	--	--
Dissolved Oxygen Supersaturation	Changes in Tidal Circulation/Flushing (Y)	X	--	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
Phosphorus, Total	Changes in Tidal Circulation/Flushing (Y)	X	--	--	--	--	--

## Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Enterococcus	TMDL approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the South Coastal Watershed (Report CN 255.0, approved 9/25/2014, ATTAINS Action ID: 61713)

## 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 Musquashcut Pond (MA94-33) is Not Assessed.	

### Shellfish Harvesting

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

Musquashcut Pond (MA94-33): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1002 sq mi (92%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.1002 sq mi (92%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB10.1	West Cohasset Harbor	Prohibited	0.10020	91.9%

### Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

#### 2024/26 Use Attainment Summary

The Aesthetics Use for Musquashcut Pond (MA94-33) continues to be assessed as Not Supporting with the Algae impairment being carried forward. Since the prior Flow Regime Modification impairment was redundantly duplicated across multiple uses for this waterbody, the Flow Regime Modification impairment is being removed from the Aesthetics Use but will continue to be maintained under the Aquatic Life Use.

### Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

#### 2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Musquashcut Pond (MA94-33) 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 2019-2020. The prior Algae impairment (from the Aesthetics Use) is being carried forward. Since the Flow Regime Modification impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Primary Contact Recreation Use. The shellfish growing areas (0.1002 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 Musquashcut Pond. Cohasset Center for Student Coastal Research (CCSCR) staff/volunteers collected Enterococcus bacteria samples in Musquashcut Pond from 2019-2020 at 4 stations. Samples were collected from the following stations/sample years: CCSCR\_Old Farm Road [Western shoreline] in Jul 2019 (n=3), CCSCR\_Seaside Close [Eastern shoreline] from 2019-2020 (n=7-8/yr), CCSCR\_Seaside Bridge [Eastern shoreline] from Jul-Aug 2019 (n=7) and the downstream end of the AU at station CCSCR\_Hatherly Path [river tributary] from Aug-Sep 2020 (n=4). Analysis of the single year limited frequency Enterococcus datasets from CCSCR\_Hatherly Path, CCSCR\_Old Farm Road and CCSCR\_Seaside Bridge indicated 100% of intervals had GMs >35 CFU/100ml in all cases; 1, 3 and 5 samples respectively exceeded the 130 CFU/100ml STV and the seasonal GM's were 113, 1,082 and 330 CFU/100ml, which are all indicative of an Enterococcus impairment. Also analysis of the multi-year moderate frequency Enterococcus dataset from CCSCR\_Seaside Close indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml (2019 and 2020, 45 & 100%) and while only 1 yr had ≥2 samples exceeding the 130 CFU/100ml STV (2020, n=4), cumulatively across years 70% of intervals had GMs >35 CFU/100ml, which is also indicative of an Enterococcus impairment.

### **Monitoring Stations**

<b>Station Code</b>	<b>Organization</b>	<b>Type</b>	<b>Water Body</b>	<b>Station Description</b>	<b>Latitude</b>	<b>Longitude</b>
CCSCR_Hatherly Path	Cohasset Center for Student Coastal Research	Water Quality	Scituate Mushquashicut	river tributary	42.225815	-70.759052
CCSCR_Old Farm Road	Cohasset Center for Student Coastal Research	Water Quality	Musquashicut Pond	Shoreline	42.227873	-70.759401
CCSCR_Seaside Bridge	Cohasset Center for Student Coastal Research	Water Quality	Musquashicut Pond	Shoreline	42.224496	-70.752395
CCSCR_Seaside Close	Cohasset Center for Student Coastal Research	Water Quality	Musquashicut Pond; Scituate Mushquashicut	Shoreline	42.227086	-70.755302

## Bacteria Data

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

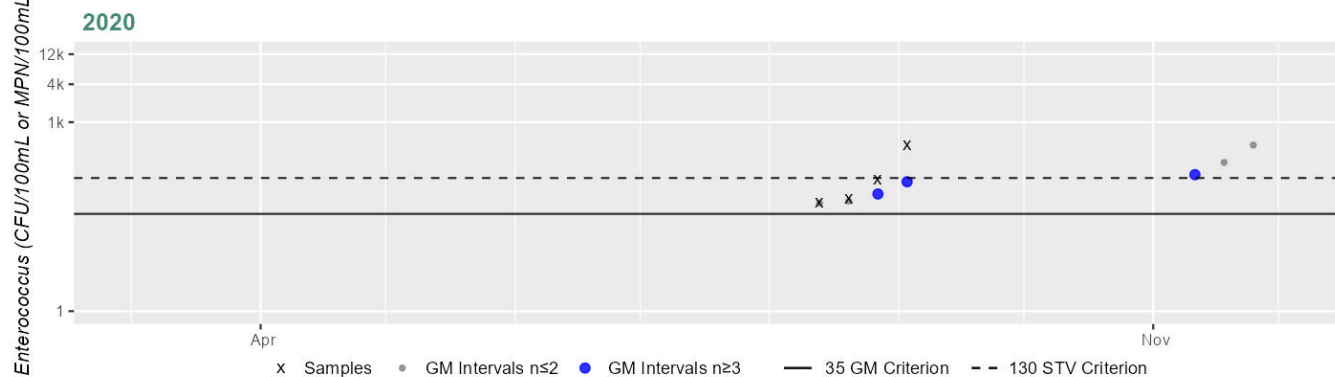
(CCSCR 2020) (MassDEP Undated 3)

[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
CCSCR_Hatherly Path	Cohasset Center for Student Coastal Research	Enterococci	08/12/20	09/02/20	4	52	432	113
CCSCR_Old Farm Road	Cohasset Center for Student Coastal Research	Enterococci	07/02/19	07/16/19	3	213	3448	1082
CCSCR_Seaside Bridge	Cohasset Center for Student Coastal Research	Enterococci	07/02/19	08/20/19	7	10	6488	330
CCSCR_Seaside Close	Cohasset Center for Student Coastal Research	Enterococci	07/02/19	08/20/19	8	10	1112	32
CCSCR_Seaside Close	Cohasset Center for Student Coastal Research	Enterococci	06/03/20	07/22/20	7	10	2419	134

#### Station CCSCR\_Hatherly Path - Enterococcus

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



Variable*	Result
Samples	4
SeasGM	113
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	1
%n>STV	25%

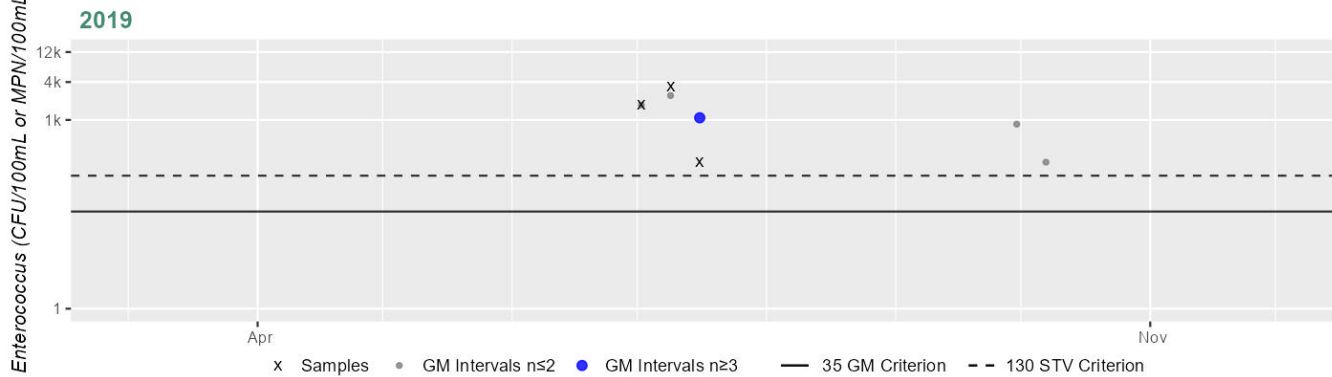
#### Cumulative %GMI Exceedance

Current (2011-2022)  
100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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 CCSCR\_Old Farm Road - Enterococcus

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



Variable*	Result
Samples	3
SeasGM	1082
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	3
%n>STV	100%

Cumulative %GMI Exceedance

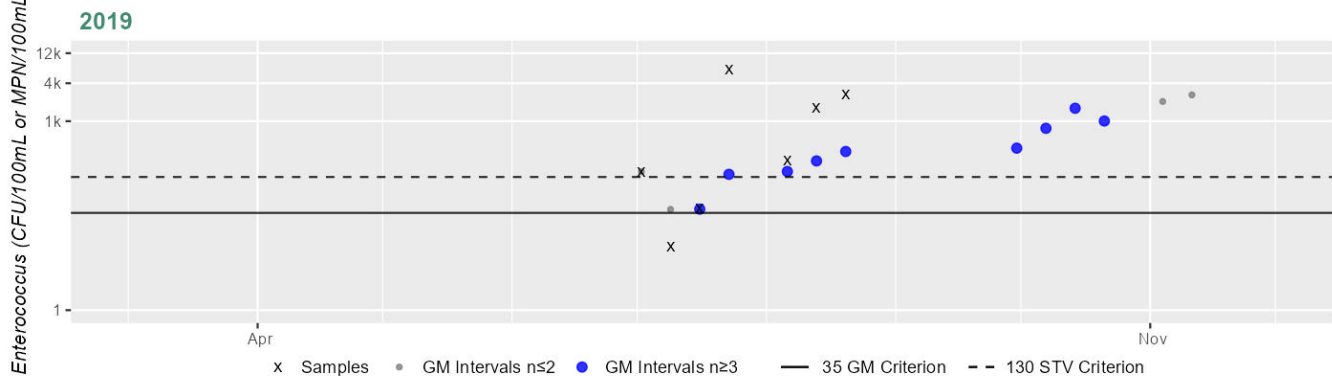
Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 CCSCR\_Seaside Bridge - Enterococcus

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



Variable*	Result
Samples	7
SeasGM	330
#GMI	9
#GMI Ex	9
%GMI Ex	100%
n>STV	5
%n>STV	71%

Cumulative %GMI Exceedance

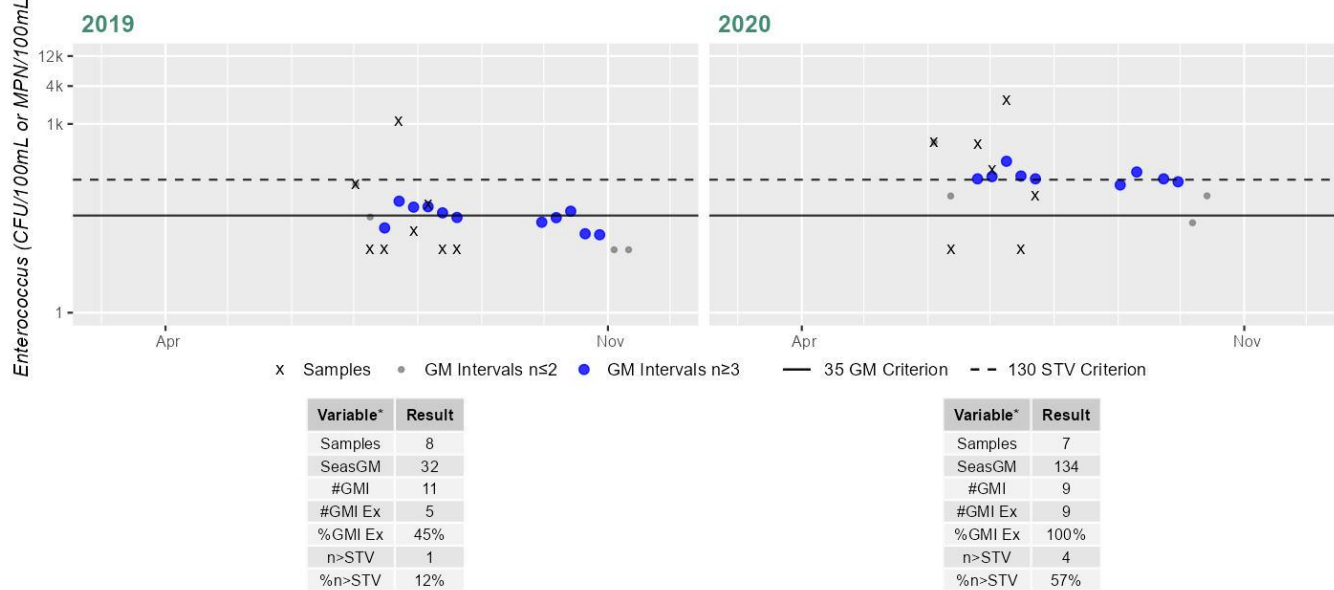
Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 CCSCR\_Seaside Close - Enterococcus

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



Cumulative %GMI Exceedance

Current (2011-2022)

70%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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 6)**

### Summary

Musquashcut Pond (MA94-33): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1002 sq mi (92%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

## Secondary Contact Recreation

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

The Secondary Contact Recreation Use for Musquashcut Pond (MA94-33) continues to be assessed as Not Supporting. The prior Enterococcus impairment is being carried forward based on a re-evaluation of bacteria data not meeting the threshold at 3 stations in 2019-2020. The prior Algae impairment (from the Aesthetics Use) is being carried forward. Since the Flow Regime Modification impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Secondary Contact Recreation Use. The shellfish growing areas (0.1002 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 Secondary Contact Recreation Use of Musquashcut Pond. Cohasset Center for Student Coastal Research (CCSCR) staff/volunteers collected Enterococcus bacteria samples in Musquashcut Pond from 2019-2020 at 4 stations. Samples were collected from the following stations/sample years: CCSCR\_Old Farm Road [Western shoreline] in Jul 2019 (n=3), CCSCR\_Seaside Close [Eastern shoreline] from 2019-2020 (n=7-8/yr), CCSCR\_Seaside Bridge [Eastern shoreline] from Jul-Aug 2019 (n=7) and the downstream end of the AU at station CCSCR\_Hatherly Path [river tributary] from Aug-Sep 2020 (n=4). Analysis of the single year limited frequency Enterococcus datasets from CCSCR\_Hatherly Path and CCSCR\_Old Farm Road indicated 100% of intervals had GMs >68 CFU/100ml, 1 and 2 samples respectively exceeded the 252 CFU/100ml STV, with overall GM's of 113 and 1082 CFU/100ml respectively, which are both indicative of an Enterococcus impairment. In addition, analysis of the single year moderate frequency Enterococcus dataset from CCSCR\_Seaside Bridge indicated 88% of intervals had GMs >68 CFU/100ml and 3 samples exceeded the 252 CFU/100ml STV, which is also indicative of an Enterococcus impairment. However, analysis of the multi-year moderate frequency Enterococcus dataset from CCSCR\_Seaside Close indicated that while cumulatively across years 45% of intervals had GMs >68 CFU/100ml, only 1 out of 2 sufficient data yrs had intervals where >20% of the GMs were >68 CFU/100ml (2020, 100%) and only 1 yr had ≥2 samples exceed the 252 CFU/100ml STV (2020, n=3), which meets 2024 CALM guidance. While Enterococcus data from CCSCR\_Seaside Close meet 2024 CALM guidance, Enterococcus data from CCSCR\_Hatherly Path, CCSCR\_Old Farm Road, and CCSCR\_Seaside Bridge are indicative of an Enterococcus impairment.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CCSCR_Hatherly Path	Cohasset Center for Student Coastal Research	Water Quality	Scituate Mushquashicut	river tributary	42.225815	-70.759052
CCSCR_Old Farm Road	Cohasset Center for Student Coastal Research	Water Quality	Musquashicut Pond	Shoreline	42.227873	-70.759401



Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CCSCR_Seaside Bridge	Cohasset Center for Student Coastal Research	Water Quality	Musquashicut Pond	Shoreline	42.224496	-70.752395
CCSCR_Seaside Close	Cohasset Center for Student Coastal Research	Water Quality	Musquashicut Pond; Scituate Mushquashicut	Shoreline	42.227086	-70.755302

### ***Bacteria Data***

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

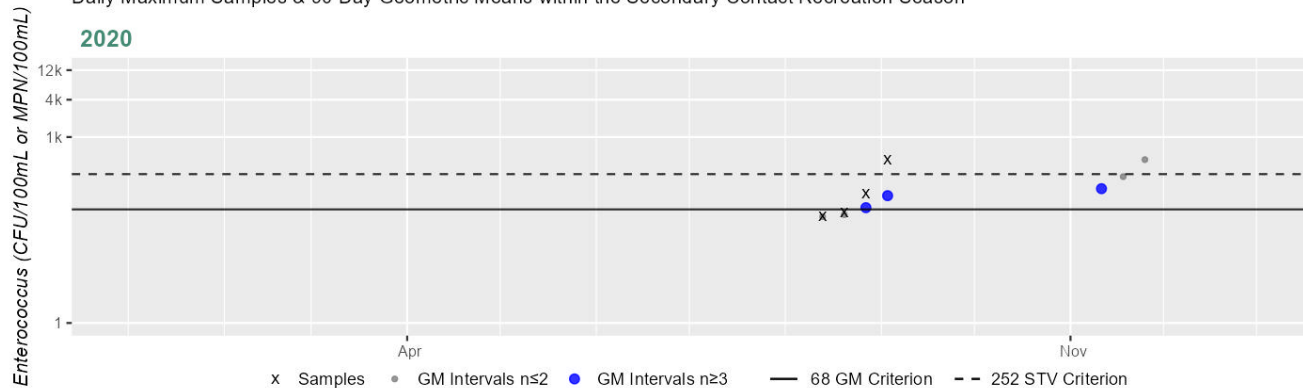
(CCSCR 2020) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CCSCR_Hatherly Path	Cohasset Center for Student Coastal Research	Enterococci	08/12/20	09/02/20	4	52	432	113
CCSCR_Old Farm Road	Cohasset Center for Student Coastal Research	Enterococci	07/02/19	07/16/19	3	213	3448	1082
CCSCR_Seaside Bridge	Cohasset Center for Student Coastal Research	Enterococci	07/02/19	08/20/19	7	10	6488	330
CCSCR_Seaside Close	Cohasset Center for Student Coastal Research	Enterococci	07/02/19	08/20/19	8	10	1112	32
CCSCR_Seaside Close	Cohasset Center for Student Coastal Research	Enterococci	06/03/20	07/22/20	7	10	2419	134

### Station CCSCR\_Hatherly Path - Enterococcus

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



Variable*	Result
Samples	4
SeasGM	113
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	1
%n>STV	25%

#### Cumulative %GMI Exceedance

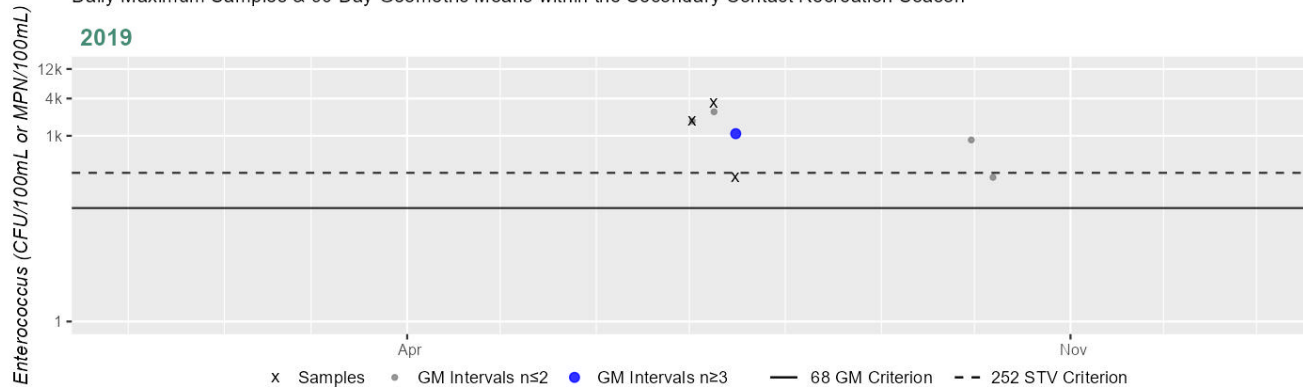
Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 CCSCR\_Old Farm Road - Enterococcus

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



Variable*	Result
Samples	3
SeasGM	1082
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	66%

#### Cumulative %GMI Exceedance

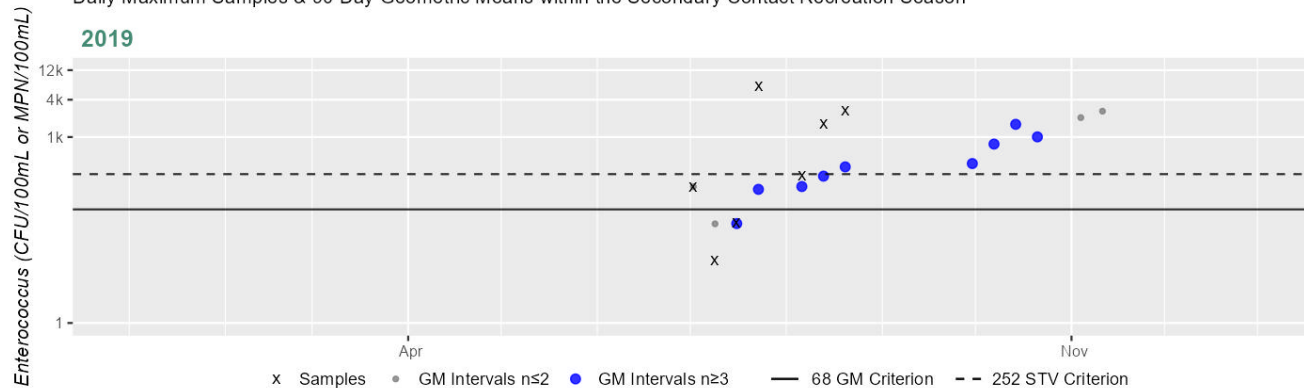
Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 CCSCR\_Seaside Bridge - Enterococcus

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



Variable*	Result
Samples	7
SeasGM	330
#GMI	9
#GMI Ex	8
%GMI Ex	88%
n>STV	3
%n>STV	42%

#### Cumulative %GMI Exceedance

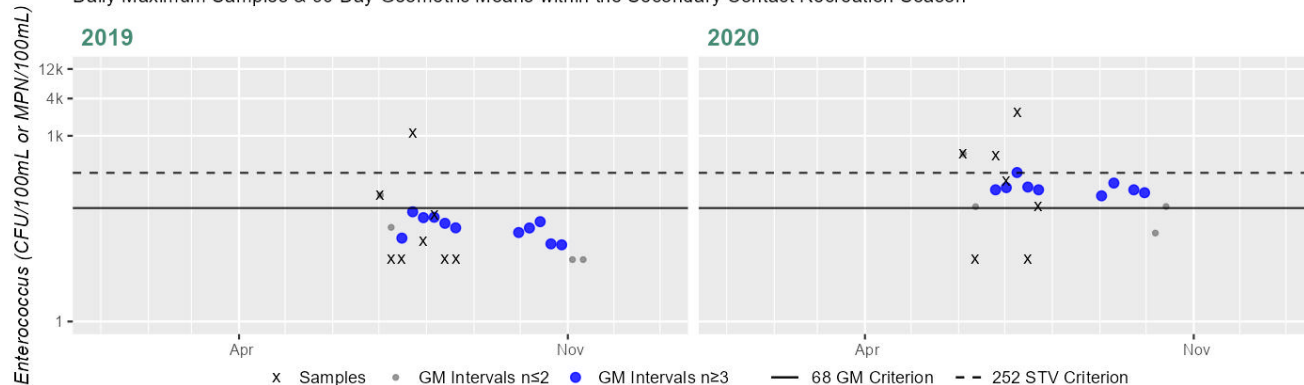
Current (2011-2022)

88%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 CCSCR\_Seaside Close - Enterococcus

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



Variable*	Result
Samples	8
SeasGM	32
#GMI	11
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	12%

Variable*	Result
Samples	7
SeasGM	134
#GMI	9
#GMI Ex	9
%GMI Ex	100%
n>STV	3
%n>STV	42%

#### Cumulative %GMI Exceedance

Current (2011-2022)

45%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)

Summary
Musquashcut Pond (MA94-33): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1002 sq mi (92%). 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.

## North Hill Marsh Pond (MA94109)

<b>Location:</b>	Duxbury.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	43 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for North Hill Marsh Pond (MA94109) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## North River (MA94-05)

<b>Location:</b>	Headwaters, confluence of Indian Head River and Herring Brook, Hanover/Pembroke to Route 3A, Marshfield/Scituate.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.3 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: ORW, SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Enterococcus	61725	Changed
5	5	Fecal Coliform	61725	Unchanged
5	5	Mercury in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
Mercury in Fish Tissue	Contaminated Sediments (Y)	--	X	--	--	--	--
Mercury in Fish Tissue	Illegal Dumps or Other Inappropriate Waste Disposal (Y)	--	X	--	--	--	--

## Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Enterococcus	TMDL approved or established by EPA (4a)	Impairment covered under TMDL: Final Pathogen TMDL for the South Coastal Watershed (Report CN 255.0, approved 9/25/2014, ATTAINS Action ID: 61725)

## Designated Use Attainment Decisions

### Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	No

2024/26 Use Attainment Summary
The Fish Consumption Use for North River (MA94-05) continues to be assessed as Not Supporting with the prior Mercury in Fish Tissue impairment being carried forward. MDPH included a site-specific advisory for North River (referred to by MDPH as "Drinkwater River/Indian Head River/North River (Between the Forge Pond Dam in Hanover and Rt. 3 in Norwell/Pembroke) and Factory Pond" or "North 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.

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
North River (MA94-05): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.2444 sq mi (80%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.2444 sq mi (80%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB5.2	North River West	Prohibited	0.24445	80.4%

## Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Too limited data/information are available to evaluate the Aesthetics Use for North River (MA94-05), so it is assessed as having Insufficient Information. MassDEP staff recorded aesthetics observations during the summer of 2016 as part of the Bacteria Source Tracking Project (BST), at two stations for this North River AU; close to the upstream end of the AU on Washington Street in Hanover/Pembroke (W2651) and close to the downstream end west of the dead-end of Corn Hill Lane in Marshfield (W2652). There were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by MassDEP field sampling crews at either site. However, there is insufficient information to assess the Aesthetics Use since data were limited (n=2/station).

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2651	MassDEP	Water Quality	North River	[Washington Street, Hanover/Pembroke]	42.108562	-70.806755
W2652	MassDEP	Water Quality	North River	[west of dead-end of Corn Hill Lane, Marshfield]	42.142089	-70.783103

## Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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



Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2651	2016	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2651 on North River (MA94-05) during 2 site visits between Jun 2016 and Jul 2016. 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).
W2652	2016	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2652 on North River (MA94-05) during 2 site visits between Jun 2016 and Jul 2016. 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).

**Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020)** (MassDEP Undated 9) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2651	2016	2	0	0
W2652	2016	2	0	0

**MassDEP Aesthetics Observations (2011-2020)** (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2651	North River	2016	Aquatic Plant Density, Overall	Unobservable	2	2
W2651	North River	2016	Color	None	2	2
W2651	North River	2016	Odor	None	2	2
W2651	North River	2016	Periphyton Density, Filamentous	Unobservable	2	2
W2651	North River	2016	Periphyton Density, Film	Unobservable	2	2
W2651	North River	2016	Turbidity	Highly Turbid	1	2
W2651	North River	2016	Turbidity	Moderately Turbid	1	2
W2652	North River	2016	Aquatic Plant Density, Overall	Unobservable	2	2
W2652	North River	2016	Color	None	2	2
W2652	North River	2016	Odor	None	2	2
W2652	North River	2016	Periphyton Density, Filamentous	Unobservable	2	2
W2652	North River	2016	Periphyton Density, Film	Unobservable	2	2
W2652	North River	2016	Turbidity	Highly Turbid	1	2
W2652	North River	2016	Turbidity	Moderately Turbid	1	2

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for the North River (MA94-05) continues to be assessed as Not Supporting. The prior Enterococcus impairment is being carried forward based on bacteria data not meeting the threshold at 3 stations in 2019.</p> <p>The shellfish growing areas (0.2444 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means that the shellfish classification data were too limited to assess Primary Contact Recreation Use of North River. MassDEP and North South River Watershed Association (NSRWA) staff/volunteers collected Enterococcus bacteria samples in the North River from 2016 &amp; 2019 at 5 stations. Samples were collected from the following stations/sample years: close to the upstream end of the AU at station W2651 [Washington St, Hanover/Pembroke] from Jun-Jul 2016 (n=2) and NSRWA_Washington St. Bridge [downstream of Washington St. Bridge, right edge, Hanover] from Jun-Aug 2019 (n=6), halfway down the AU at station W2652 [W of dead-end of Corn Hill Lane, Marshfield] from Jun-Jul 2016 (n=2) and NSRWA_Cornhill Lane [End of Rd, edge of marsh, Marshfield] from Jun-Aug 2019 (n=6) and about three-quarters of the way down at NSRWA_Union St. Bridge [downstream of Union St. Bridge, left edge (marsh next to Norwell boat ramp)] from Jun-Aug 2019 (n=6). Analysis of the single year limited frequency Enterococcus datasets from NSRWA_Washington St. Bridge, NSRWA_Cornhill Lane and NSRWA_Union St. Bridge indicated 100%, 100% and 85% of intervals respectively had GMs &gt;35 CFU/100ml, with seasonal GM's of 129, 77 and 41 CFU/100ml respectively. The available Enterococcus data from stations W2651 and W2652 are too limited according to the 2024 CALM to assess the Primary Contact Recreation Use. However, the Enterococcus data from NSRWA_Union St. Bridge, NSRWA_Cornhill Lane, and NSRWA_Washington St. Bridge are indicative of an Enterococcus impairment.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2651	MassDEP	Water Quality	North River	[Washington Street, Hanover/Pembroke]	42.108562	-70.806755
W2652	MassDEP	Water Quality	North River	[west of dead-end of Corn Hill Lane, Marshfield]	42.142089	-70.783103
NSRWA_Cornhill Lane	North South River Watershed Association	Water Quality	North River	End of road, edge of marsh, Marshfield	42.141910	-70.782800
NSRWA_Union St. Bridge	North South River Watershed Association	Water Quality	North River	Downstream of Union St. Bridge, left edge (marsh next to Norwell boat ramp)	42.155400	-70.775420

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NSRWA_Washington St. Bridge	North South River Watershed Association	Water Quality	North River	Downstream of Washington St. Bridge, right edge, Hanover	42.108520	-70.807220

## Bacteria Data

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

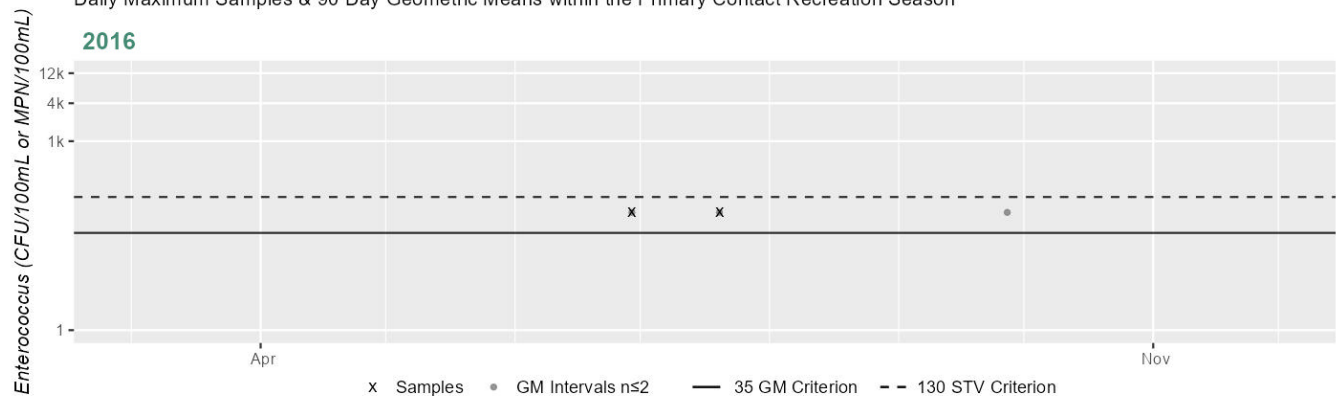
(MassDEP Undated 9) (MassDEP Undated 5) (NSRWA 2019) (MassDEP Undated 3)

[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
W2651	MassDEP	Enterococci	06/28/16	07/19/16	2	74	74	74
W2652	MassDEP	Enterococci	06/28/16	07/19/16	2	10	52	22
NSRWA_Cornhill Lane	North South River Watershed Association	Enterococci	06/11/19	08/21/19	6	17	600	77
NSRWA_Union St. Bridge	North South River Watershed Association	Enterococci	06/11/19	08/21/19	6	8	310	41
NSRWA_Washington St. Bridge	North South River Watershed Association	Enterococci	06/11/19	08/21/19	6	24	500	129

### Station MASSDEP\_W2651 - Enterococcus

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



Variable*	Result
Samples	2
SeasGM	74
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

#### Cumulative %GMI Exceedance

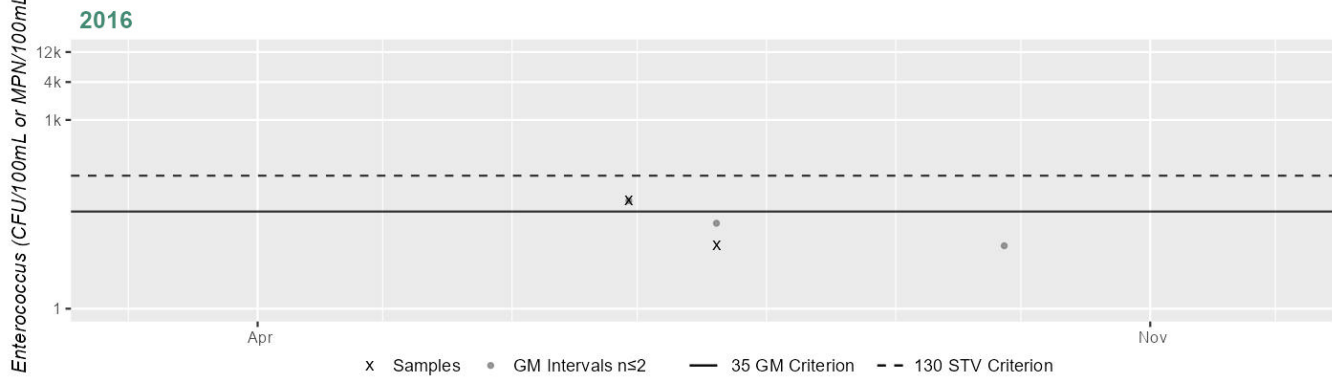
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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\_W2652 - Enterococcus

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



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

#### Cumulative %GMI Exceedance

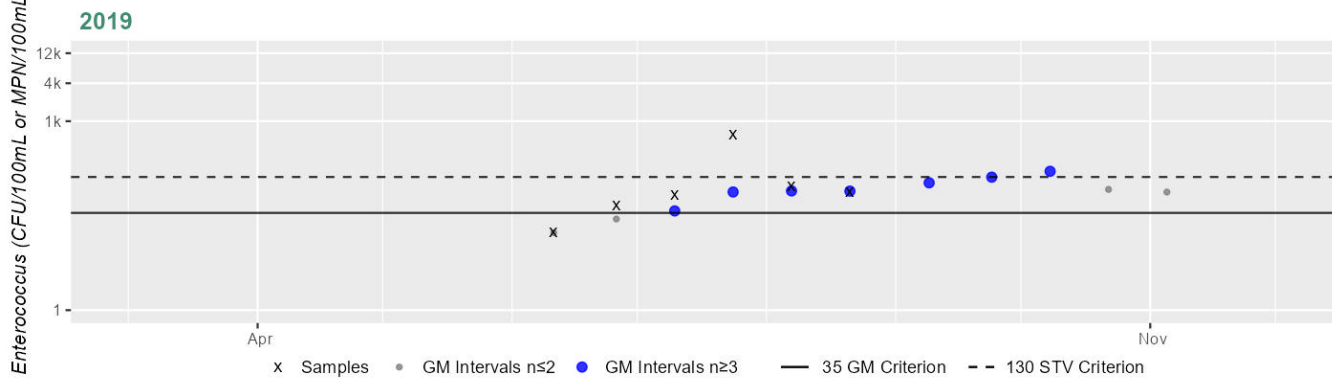
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 NSRWA\_Cornhill Lane - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	77
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	1
%n>STV	16%

#### Cumulative %GMI Exceedance

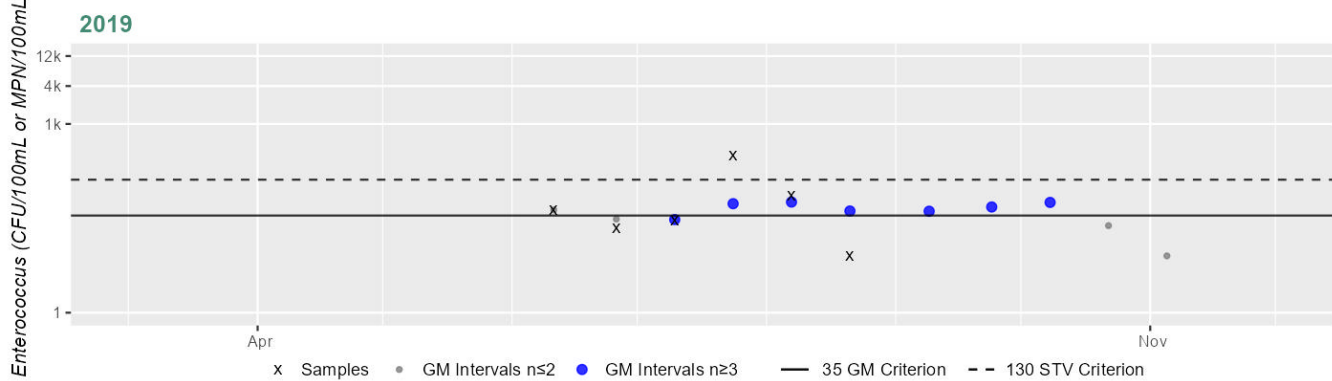
Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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\_W0916 & NSRWA\_Union St. Bridge - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	41
#GMI	7
#GMI Ex	6
%GMI Ex	85%
n>STV	1
%n>STV	16%

#### Cumulative %GMI Exceedance

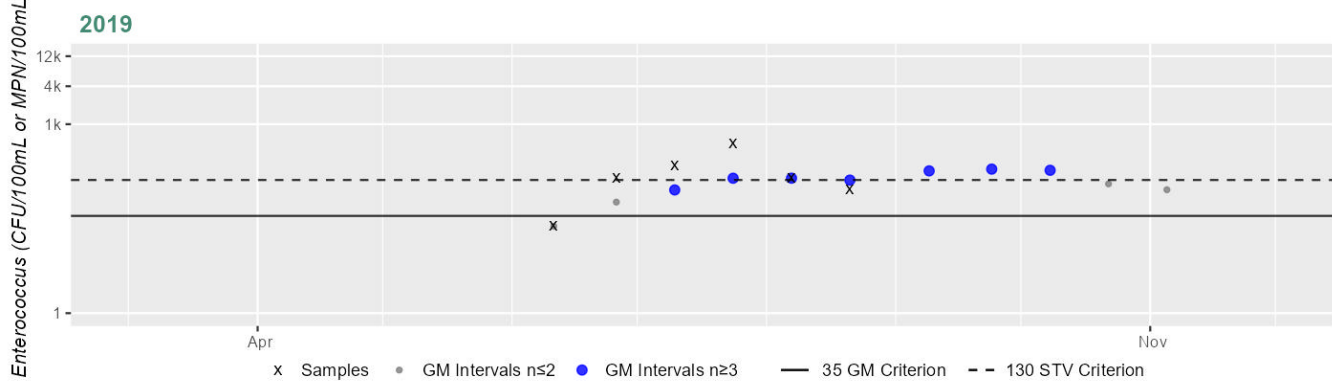
Current (2011-2022)

85%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 NSRWA\_Washington St. Bridge - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	129
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	4
%n>STV	66%

#### Cumulative %GMI Exceedance

Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)

Summary
North River (MA94-05): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.2444 sq mi (80%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

**Secondary Contact Recreation**

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

The Secondary Contact Recreation Use for the North River (MA94-05) is assessed as Not Supporting, with an Enterococcus impairment being added based on a re-evaluation of bacteria data not meeting the threshold at 2 stations in 2019. The shellfish growing areas (0.2444 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 North River.

MassDEP and North South River Watershed Association (NSRWA) staff/volunteers collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the North River from 2001-2019 at 7 stations. Samples were collected from the following stations/sample years: close to the upstream end of the AU at station W0917 [Rt. 53/139 bridge, Hanover/Pembroke] from Jul-Sep 2001 (n=3), station W2651 [Washington St, Hanover/Pembroke] from Jun-Jul 2016 (n=2), and NSRWA\_Washington St. Bridge [downstream of Washington St. Bridge, right edge, Hanover] from Jun-Aug 2019 (n=6); halfway down the AU at station W2652 [W of dead-end of Corn Hill Lane, Marshfield] from Jun-Jul 2016 (n=2) and NSRWA\_Cornhill Lane [End of Rd, edge of marsh, Marshfield] from Jun-Aug 2019 (n=6); about three-quarters of the way down at combined station W0916 & NSRWA\_Union St. Bridge [Bridge St/Union St bridge, Norwell/Marshfield & downstream of Union St. Bridge, left edge (marsh next to Norwell boat ramp)] from Jul-Sep 2001 (historic n=3) and Jun-Aug 2019 (current n=6); and the downstream end of the AU at station W0915 [from dock on southern shore upstream/W of Rt. 3A (Main St) bridge, Marshfield] from Jul-Aug 2001 (n=2). Since the current IR window data is sometimes indicative of poor quality, only the analysis for the current IR window data will be summarized below: Analysis of the single year limited frequency Enterococcus datasets from NSRWA\_Cornhill Lane and Washington St. Bridge indicated 85% and 100% respectively of intervals had GMs >68 CFU/100ml, with overall GM's of 77 and 129 CFU/100ml respectively, which is indicative of an Enterococcus impairment in both cases. Analysis of the single year limited frequency Enterococcus dataset from combined station "W0916 & NSRWA\_Union St. Bridge" indicated 0% of intervals had GMs >68 CFU/100ml, 1 sample exceeded the 252 CFU/100ml STV and the overall GM was 41 CFU/100ml. The data from this combined station is inconclusive according to the 2024 CALM to assess the Secondary Contact Recreation Use, because the single year limited frequency dataset (at NSRWA\_Union St. Bridge in the current IR data window) included both GMs below the threshold and an exceedance of the STV threshold. The available Enterococcus data at stations W2651 and W2652 are too limited to assess according to the 2024 CALM to assess the Secondary Contact Recreation Use.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0915	MassDEP	Water Quality	North River	[from dock on southern shore upstream/west of Route 3A (Main Street) bridge, Marshfield]	42.160951	-70.743105
W0916	MassDEP	Water Quality	North River	[Bridge Street/Union Street bridge, Norwell/Marshfield]	42.155293	-70.775650
W0917	MassDEP	Water Quality	North River	[Route 53/139 bridge, Hanover/Pembroke]	42.107349	-70.808417

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2651	MassDEP	Water Quality	North River	[Washington Street, Hanover/Pembroke]	42.108562	-70.806755
W2652	MassDEP	Water Quality	North River	[west of dead-end of Corn Hill Lane, Marshfield]	42.142089	-70.783103
NSRWA_Cornhill Lane	North South River Watershed Association	Water Quality	North River	End of road, edge of marsh, Marshfield	42.141910	-70.782800
NSRWA_Union St. Bridge	North South River Watershed Association	Water Quality	North River	Downstream of Union St. Bridge, left edge (marsh next to Norwell boat ramp)	42.155400	-70.775420
NSRWA_Washington St. Bridge	North South River Watershed Association	Water Quality	North River	Downstream of Washington St. Bridge, right edge, Hanover	42.108520	-70.807220

## Bacteria Data

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

(MassDEP Undated 9) (MassDEP Undated 4) (NSRWA 2019) (MassDEP Undated 2)

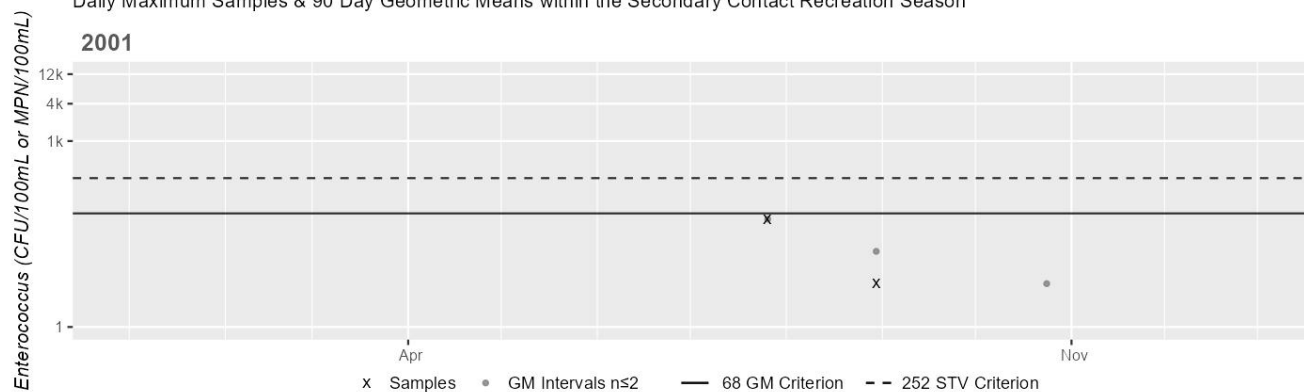
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0915	MassDEP	Enterococci	07/26/01	08/30/01	2	5	55	16
W0916	MassDEP	Enterococci	07/26/01	09/27/01	3	15	210	65
W0917	MassDEP	Enterococci	07/26/01	09/27/01	3	170	1000	453
W2651	MassDEP	Enterococci	06/28/16	07/19/16	2	74	74	74
W2652	MassDEP	Enterococci	06/28/16	07/19/16	2	10	52	22
NSRWA_Cornhill Lane	North South River Watershed Association	Enterococci	06/11/19	08/21/19	6	17	600	77
NSRWA_Union St. Bridge	North South River Watershed Association	Enterococci	06/11/19	08/21/19	6	8	310	41
NSRWA_Washington St. Bridge	North South River Watershed Association	Enterococci	06/11/19	08/21/19	6	24	500	129



### Station MASSDEP\_W0915 - Enterococcus

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



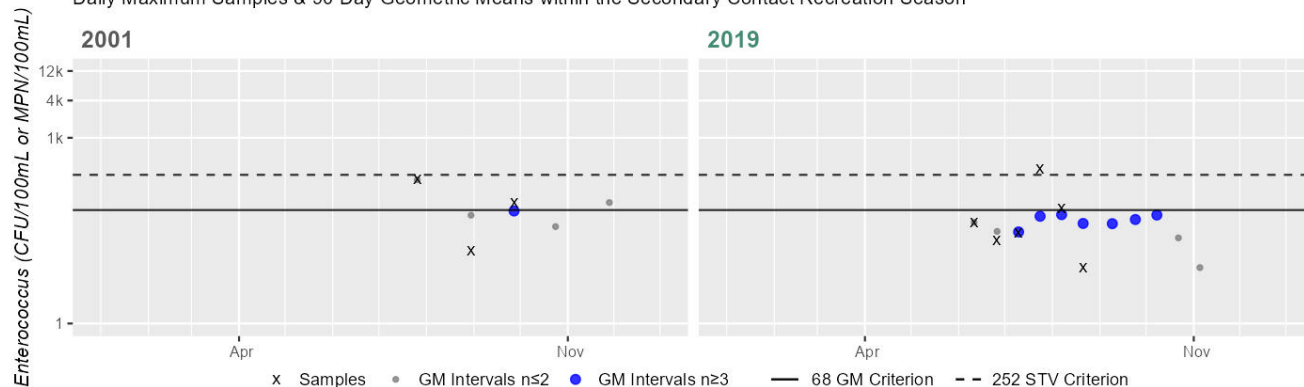
Variable*	Result
Samples	2
SeasGM	16
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W0916 & NSRWA\_Union St. Bridge - Enterococcus

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



Variable*	Result
Samples	3
SeasGM	65
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

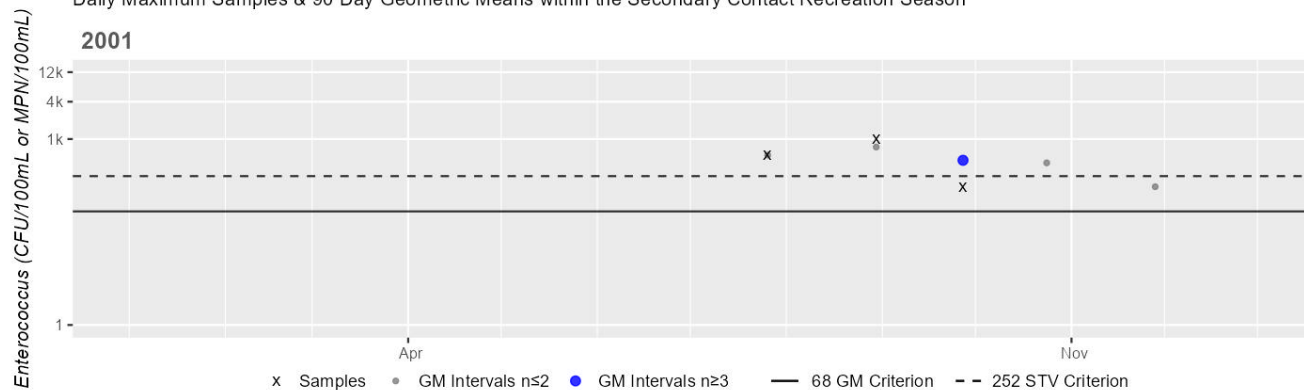
Variable*	Result
Samples	6
SeasGM	41
#GMI	7
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

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

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W0917 - Enterococcus

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



Variable*	Result
Samples	3
SeasGM	453
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	66%

Cumulative %GMI Exceedance

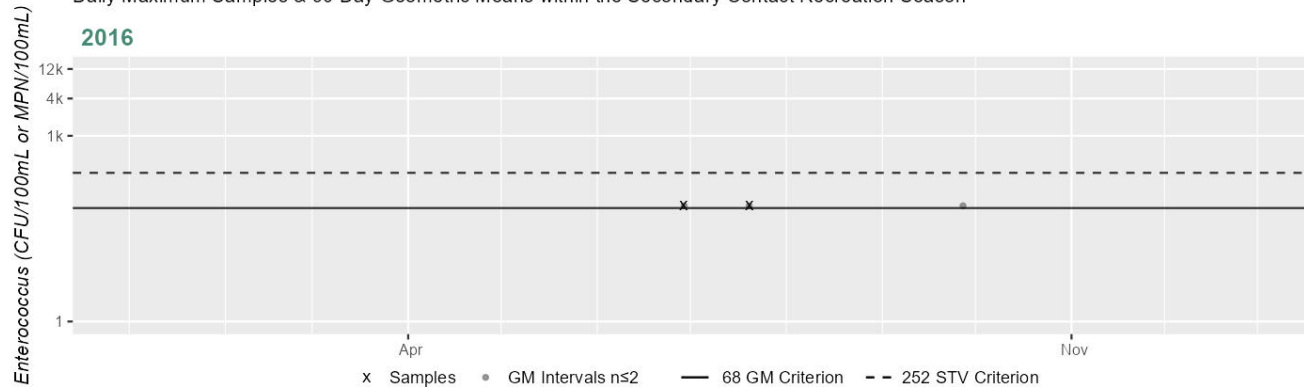
Historic (1997-2010)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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\_W2651 - Enterococcus

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



Variable*	Result
Samples	2
SeasGM	74
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

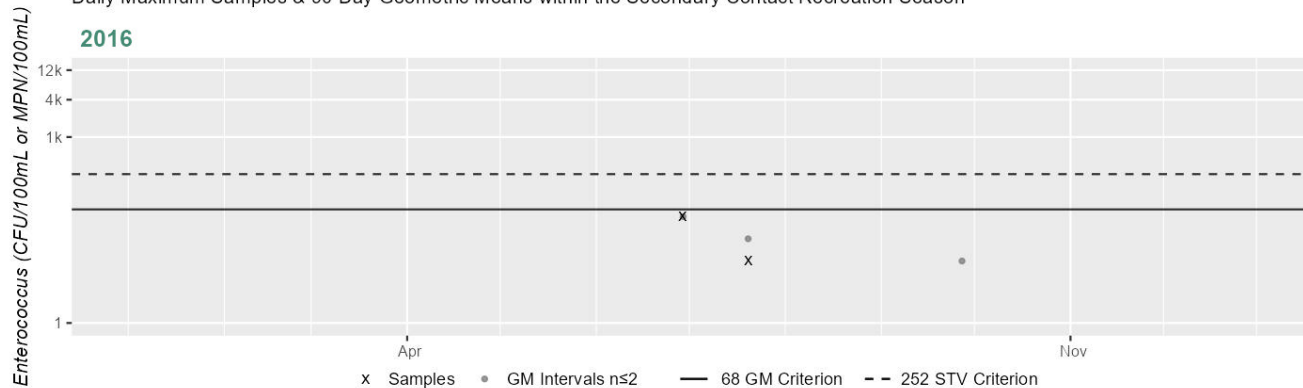
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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\_W2652 - Enterococcus

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



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

#### Cumulative %GMI Exceedance

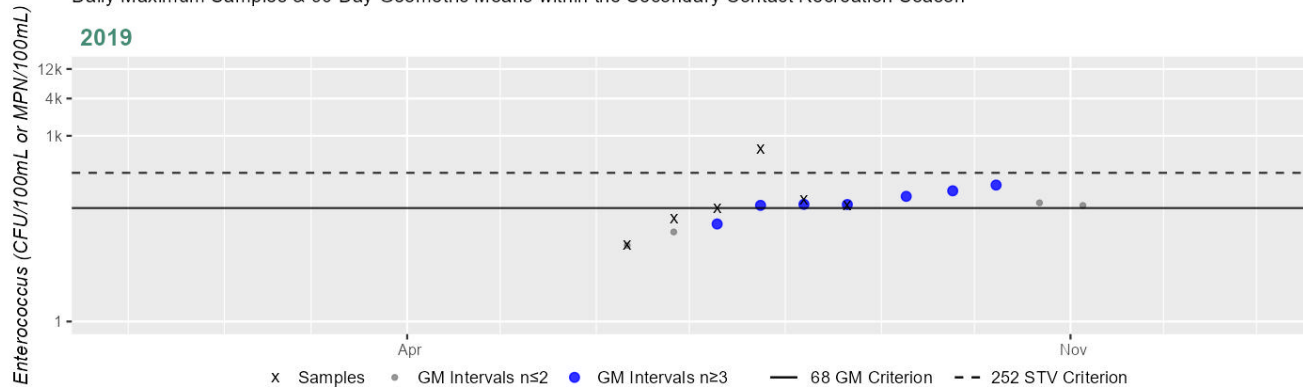
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 NSRWA\_Cornhill Lane - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	77
#GMI	7
#GMI Ex	6
%GMI Ex	85%
n>STV	1
%n>STV	16%

#### Cumulative %GMI Exceedance

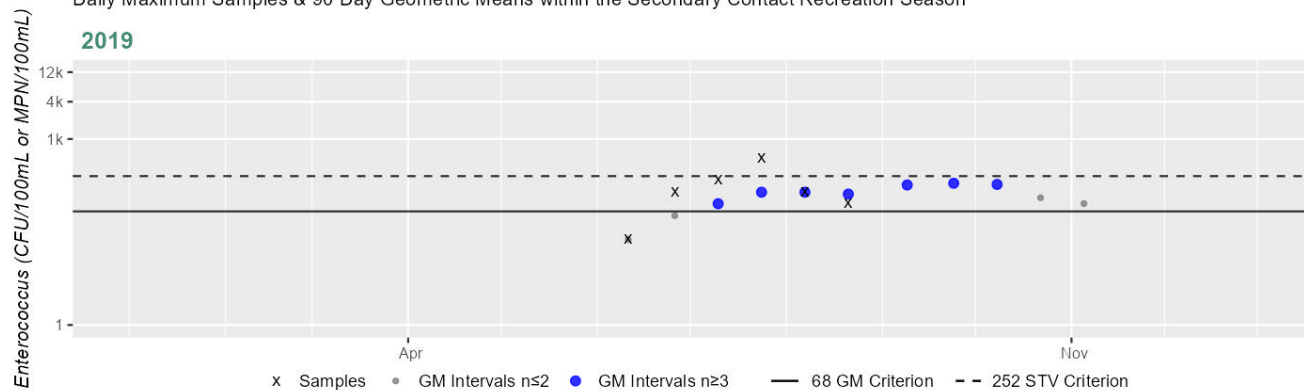
Current (2011-2022)

85%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 NSRWA\_Washington St. Bridge - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	129
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance

Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)**

### Summary

North River (MA94-05): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.2444 sq mi (80%). 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.

## North River (MA94-06)

<b>Location:</b>	Route 3A, Marshfield/Scituate to confluence with South River/Massachusetts Bay, Marshfield/Scituate.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.54 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	61730	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	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 North River (MA94-06) is Not Assessed.

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

**2024/26 Use Attainment Summary**

North River (MA94-06): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5187 sq mi (95%). The approved shellfish growing area represents 0 sq mi (0%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

**Shellfish Growing Area Classifications**

**MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB5.1	North River - East	Conditionally Approved	0.17087	31.4%
MB5.2	North River West	Prohibited	0.00028	0.1%
MB5.3	Herring River	Prohibited	0.00005	0.0%
MB5.4	Unnamed Stream	Prohibited	0.00000	0.0%
MB5.6	Entrance to North River	Prohibited	0.34753	63.9%

**Aesthetic**

2024/26 Use Attainment	Alert
Not Assessed	NO

**2024/26 Use Attainment Summary**

No data are available, so the Aesthetics Use for North River (MA94-06) is Not Assessed.

**Primary Contact Recreation**

2024/26 Use Attainment	Alert
Fully Supporting	NO

**2024/26 Use Attainment Summary**

The Primary Contact Recreation Use for the North River (MA94-06) continues to be assessed as Fully Supporting based on bacteria data collected at 2 stations in 2019. The shellfish growing areas (0.5187 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 North River. North South River Watershed Association (NSRWA) staff/volunteers collected Enterococcus bacteria samples in the North River in 2019 at 2 stations. Samples were collected from the following stations/sample years: At the upstream end of the AU at station NSRWA\_North River Marina [Off dock adjacent to end of boat ramp, Marshfield] from Jun-Sep 2019 (n=16) and about a quarter of the way down the AU at station NSRWA\_Damons Point [At end of dock, Marshfield] from Jun-Sep 2019 (n=16). Analysis of the single year high frequency Enterococcus datasets from NSRWA\_North River Marina & Damons Point indicated 0% of intervals had GMs >35 CFU/100ml in both cases with 6% & 0% of samples exceeding the 130 CFU/100ml STV respectively, which meets 2024 CALM guidance for both stations.

### **Monitoring Stations**

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NSRWA_Damons Point	North South River Watershed Association	Water Quality	North River	At end of dock, Marshfield	42.160250	-70.732660
NSRWA_North River Marina	North South River Watershed Association	Water Quality	North River	Off dock adjacent to end of boat ramp, Marshfield	42.161040	-70.742080

### **Bacteria Data**

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

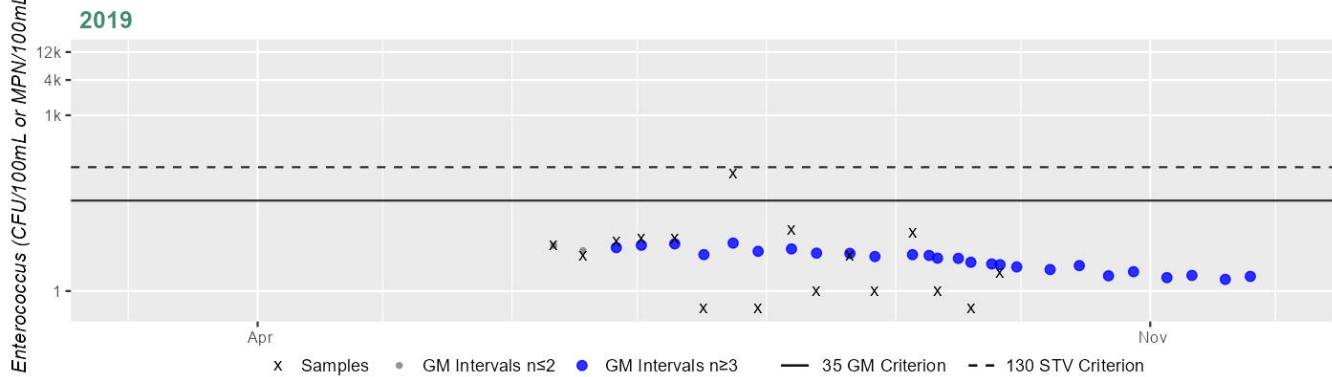
(NSRWA 2019) (MassDEP Undated 3)

[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
NSRWA_Damons Point	North South River Watershed Association	Enterococci	06/11/19	09/26/19	16	0	100	3
NSRWA_North River Marina	North South River Watershed Association	Enterococci	06/11/19	09/26/19	16	0	160	3

### Station NSRWA\_Damons Point - Enterococcus

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



Variable*	Result
Samples	16
SeasGM	3
#GMI	27
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

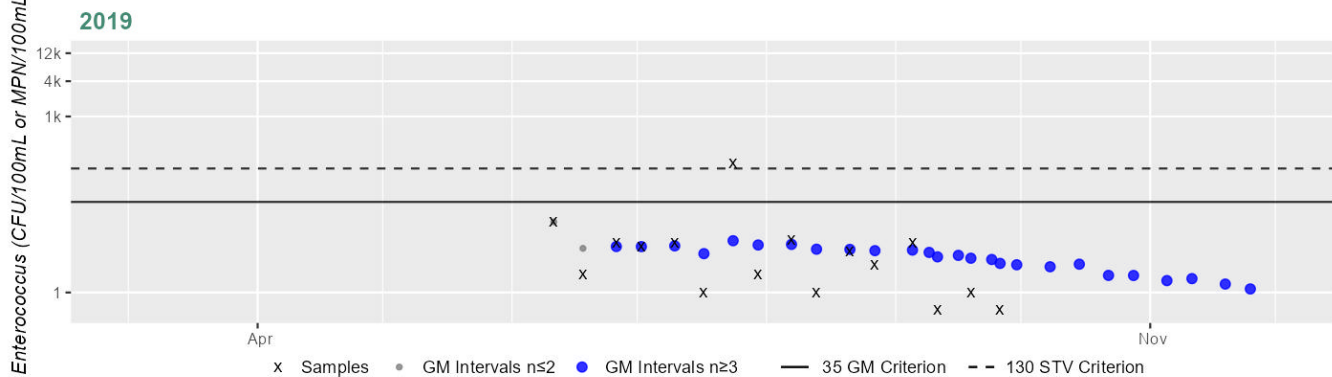
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 NSRWA\_North River Marina - Enterococcus

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



Variable*	Result
Samples	16
SeasGM	3
#GMI	27
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	6%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)

Summary
North River (MA94-06): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5187 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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for the North River (MA94-06) continues to be assessed as Fully Supporting based on a re-evaluation of bacteria data collected at 2 stations in 2019. The shellfish growing areas (0.5187 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 Secondary Contact Recreation Use of North River. North South River Watershed Association (NSRWA) staff/volunteers collected Enterococcus bacteria samples in the North River from 2019 at 2 stations. Samples were collected from the following stations/sample years: At the upstream end of the AU at station NSRWA_North River Marina [Off dock adjacent to end of boat ramp, Marshfield] from Jun-Sep 2019 (n=16) and about a quarter of the way down the AU at station NSRWA_Damons Point [At end of dock, Marshfield] from Jun-Sep 2019 (n=16). Analysis of the single year high frequency Enterococcus datasets from both stations indicated 0% of intervals had GMs >68 CFU/100ml and 0% of samples exceeded the 252 CFU/100ml STV, which meets 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NSRWA_Damons Point	North South River Watershed Association	Water Quality	North River	At end of dock, Marshfield	42.160250	-70.732660
NSRWA_North River Marina	North South River Watershed Association	Water Quality	North River	Off dock adjacent to end of boat ramp, Marshfield	42.161040	-70.742080

## Bacteria Data

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

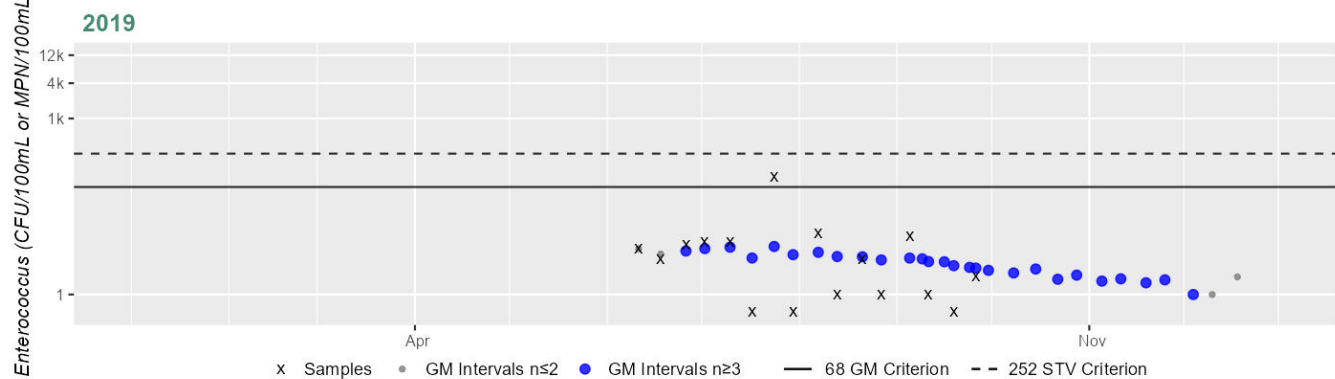
(NSRWA 2019) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
NSRWA_Damons Point	North South River Watershed Association	Enterococci	06/11/19	09/26/19	16	0	100	3
NSRWA_North River Marina	North South River Watershed Association	Enterococci	06/11/19	09/26/19	16	0	160	3

#### Station NSRWA\_Damons Point - Enterococcus

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



Variable*	Result
Samples	16
SeasGM	3
#GMI	27
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

#### Cumulative %GMI Exceedance

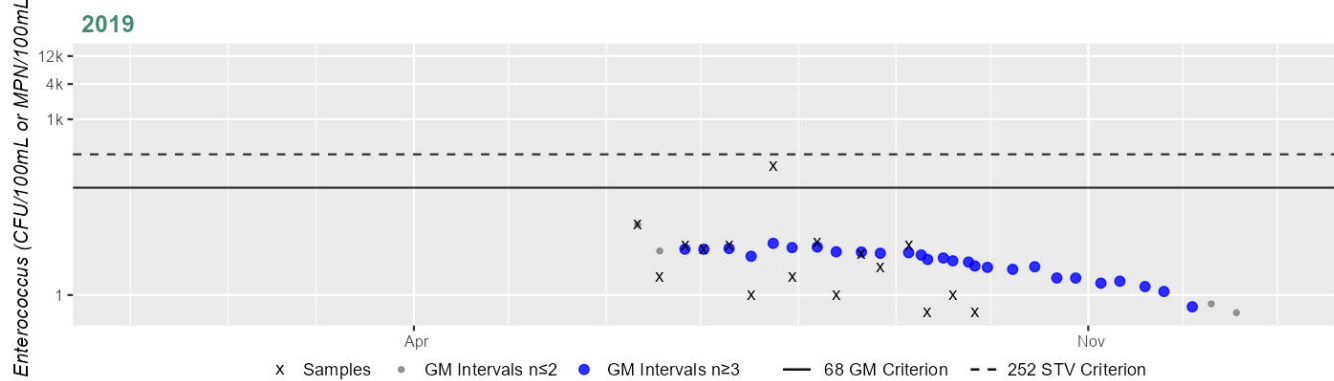
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 NSRWA\_North River Marina - Enterococcus

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



Variable*	Result
Samples	16
SeasGM	3
#GMI	27
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)**

### Summary

North River (MA94-06): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5187 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.

## North Triangle Pond (MA94110)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	22 ACRES
<b>Classification/Qualifier:</b>	B

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 North Triangle Pond (MA94110) 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 North Triangle Pond (MA94110) 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 North Triangle Pond (MA94110) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_NorthTri\_DeepHole in 2014. The Secchi depth at station PLY\_NorthTri\_DeepHole (station depth=2.5m) was measured to be 2.5 m (n=1) which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity.

### **Other Indicators**

#### **Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data** (MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2014	In North Triangle Pond (MA94110), the Town of Plymouth (PLY) collected Secchi data at PLY_NorthTri_DeepHole [41.949333, -70.701083, Deep spot] in 2014. At station PLY_NorthTri_DeepHole (station depth=2.5 m) the Secchi depth (n=1) was measured to be 2.5 m on Sep 09, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold.

### **Secondary Contact Recreation**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO
<b>2024/26 Use Attainment Summary</b>	
No bacteria or other indicator data for North Triangle Pond (MA94110) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.	

## Old Oaken Bucket Pond (MA94113)

<b>Location:</b>	Scituate.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	9 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Fanwort*)	--	Unchanged
5	5	(Non-Native Aquatic Plants*)	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(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	--	--	--	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

**2024/26 Use Attainment Summary**

Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Old Oaken Bucket Pond (MA94113) is Not Assessed.

**Aesthetic****2024/26 Use Attainment**

Insufficient Information

**Alert**

NO

**2024/26 Use Attainment Summary**

There is Insufficient Information to assess the Aesthetics Use for Old Oaken Bucket Pond (MA94113). Since the prior 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 Old Oaken Bucket Pond.

**Aesthetic Observations****Primary Contact Recreation****2024/26 Use Attainment**

Insufficient Information

**Alert**

NO

**2024/26 Use Attainment Summary**

No bacteria or other indicator data for Old Oaken Bucket Pond (MA94113) are available, so the Primary Contact Recreation Use continues to be assessed as Insufficient Information. 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 but will continue to be maintained under the Aquatic Life Use.

**Secondary Contact Recreation****2024/26 Use Attainment**

Insufficient Information

**Alert**

NO

**2024/26 Use Attainment Summary**

No bacteria or other indicator data for Old Oaken Bucket Pond (MA94113) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is assessed as Insufficient Information. 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 but will continue to be maintained under the Aquatic Life Use.

## Oldham Pond (MA94114)

<b>Location:</b>	Pembroke/Hanson.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	232 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW (Tributary)

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Asian Clam*)	--	Unchanged
5	5	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
5	5	Harmful Algal Blooms	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Asian Clam*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Eurasian Water Milfoil, Myriophyllum Spicatum*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Harmful Algal Blooms	Source Unknown (N)	--	--	X	X	X



## Recommendations

2024/26 Recommendations
2024/26IR [Harmful Algal Blooms, Low priority] Follow-up monitoring should be conducted in Oldham Pond (MA94114) to confirm the existing Harmful Algal Blooms impairment to the Recreational and Aesthetic uses. Monitoring should focus on the collection of cyanobacteria cell count data. C-HAB postings for Oldham Pond were reported to MDPH based on visual observations for 26 days in 2017. 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 Oldham Pond (MA94114) is Not Assessed.	

### Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
The Aesthetics Use for Oldham Pond (MA94114) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward. During the period 2015 through 2022, C-HAB postings for Oldham Pond were reported to MDPH based on visual observations for 26 days in 2017 and no blooms were reported in other years. Since blooms were reported in a recent year this is reflective of the existing Harmful Algal Blooms impairment for Oldham Pond. Considering the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data.	

### Algal Bloom Information

**Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

**C-HAB Summary Statement**

During the period 2015 through 2022, C-HAB postings for Oldham Pond (MA94114) were reported to MDPH based on visual observations for 26 days in 2017. No blooms were reported in other years. Since blooms were reported in a recent year, a prior Harmful Algal Bloom impairment is being carried forward and the Aesthetics Use and Primary/Secondary Contact Recreational Uses continue to be assessed as Not Supporting. Since the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data.

**Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH** (Bailey, Logan April 26, 2023)  
(MassDEP Undated 2)

[\* 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
Oldham Pond	Pembroke			26					

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Oldham Pond (MA94114) continues to be assessed as Not Supporting. The prior Harmful Algal Blooms impairment is being carried forward based on the occurrence of C-HAB postings extending >20 days in 2017. During the period 2015 through 2022, C-HAB postings for Oldham Pond were reported to MDPH based on visual observations for 26 days in 2017 and no blooms were reported in other years. Since blooms were reported in a recent year, this is reflective of the existing Harmful Algal Blooms impairment for Oldham Pond. Since the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Oldham Pond (MA94114) continues to be assessed as Not Supporting. The prior Harmful Algal Blooms impairment is being carried forward based on the occurrence of C-HAB postings extending >20 days in 2017. During the period 2015 through 2022, C-HAB postings for Oldham Pond were reported to MDPH based on visual observations for 26 days in 2017 and no blooms were reported in other years. Since blooms were reported in a recent year, this is reflective of the existing Harmful Algal Blooms impairment for Oldham Pond. Since the existing Harmful Algal Blooms impairment was based on visual observations, a recommendation is being made to confirm the impairment with cyanobacteria cell count data.

## Pembroke Street South Pond (MA94117)

<b>Location:</b>	Kingston.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	6 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Pembroke Street South Pond (MA94117) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

## Philips Brook (MA94-48)

<b>Location:</b>	Headwaters north of the Summer Street/Cross Street intersection, Duxbury to the inlet of Northwest Duxbury Pond, Duxbury.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	0.8 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Philips Brook (MA94-48) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
2	2	None	--	Unchanged

## Pine Lake (MA94120)

<b>Location:</b>	Duxbury.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	22 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Pine Lake (MA94120) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Pine Street Pond (MA94121)

<b>Location:</b>	Duxbury.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	14 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Pine Street Pond (MA94121) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Plymouth Bay (MA94-17)

<b>Location:</b>	The waters southeast of a line drawn from Saquish Head to the tip of Plymouth Beach, Plymouth and west of a line from Gurnet Point to Rocky Point, Plymouth.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	10.3 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Fecal Coliform	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO
<b>2024/26 Use Attainment Summary</b>	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Plymouth Bay (MA94-17) is Not Assessed.	

### Shellfish Harvesting

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO



### 2024/26 Use Attainment Summary

Plymouth Bay (MA94-17): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 10.1849 sq mi (99%). The approved shellfish growing area represents 6.3991 sq mi (62%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

### Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB41.0	Plymouth North Coastal	Approved	6.39913	61.9%
CCB41.1	Plymouth North Coastal	Prohibited	0.00004	0.0%
CCB41.2	Browns Bank	Conditionally Approved	3.78574	36.6%

### Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

### 2024/26 Use Attainment Summary

No data are available, so the Aesthetics Use for Plymouth Bay (MA94-17) 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 Plymouth Bay (MA94-17) continues to be assessed as Fully Supporting based on MDPH Beach Closure data. Plymouth Bay has 3 beaches (located in the south-west corner of the AU) with MDPH Beach Closure data: Plymouth - 1 [Beach ID: 5625], Plymouth - 3 [Beach ID: 3063] and Plymouth - 5 [Beach ID: 5626] beaches in Plymouth. All these beaches were rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (10.1849 sq mi) in this AU are less than 100% approved (6.3991 sq mi, 62%), which means that shellfish classification data were too limited to assess the Primary Contact Recreation Use of Plymouth Bay.

### Beach Postings

MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022) (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 3)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
3063	Plymouth Beach - 3/ Plymouth	41.94661, -70.62750	41.94569, -70.62620	0%	0%	0%	0%	0%	0%	0%	2%	0%	0
5625	Plymouth Beach - 1/ Plymouth	41.94569, -70.62620	41.94368, -70.62420	0%	0%	0%	0%	0%	0%	1%	8%	0%	0
5626	Plymouth Beach - 5/ Plymouth	41.94476, -70.62520	41.94169, -70.62070	0%	0%	0%	0%	0%	0%	0%	0%	0%	0

### Shellfish Growing Area Classifications

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Plymouth Bay (MA94-17): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 10.1849 sq mi (99%). The approved shellfish growing area represents 6.3991 sq mi (62%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

### Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Plymouth Bay (MA94-17) continues to be assessed as Fully Supporting based on MDPH Beach Closure data. Plymouth Bay has 3 beaches (located in the south-west corner of the AU) with MDPH Beach Closure data: Plymouth - 1 [Beach ID: 5625], Plymouth - 3 [Beach ID: 3063] and Plymouth - 5 [Beach ID: 5626] beaches in Plymouth. All these beaches were rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (10.1849 sq mi) in this AU are less than 100% approved (6.3991 sq mi, 62%), which means that shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Plymouth Bay.

### Shellfish Growing Area Classifications

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

<b>Summary</b>
Plymouth Bay (MA94-17): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 10.1849 sq mi (99%). The approved shellfish growing area represents 6.3991 sq mi (62%). 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.

## Plymouth Harbor (MA94-16)

<b>Location:</b>	The waters south of a line drawn from the tip of Plymouth Beach to High Cliff, Plymouth.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	2.53 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Estuarine Bioassessments	--	Unchanged
5	5	Fecal Coliform	61737	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Estuarine Bioassessments	Source Unknown (N)	X	--	--	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	X	--	--	--
Fecal Coliform	Municipal Point Source Discharges (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 Plymouth Harbor (MA94-16) is Not Assessed.

## Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

Plymouth Harbor (MA94-16): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.4896 sq mi (98%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 2.4896 sq mi (98%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB42.1	Inner Plymouth Harbor	Prohibited	2.48962	98.4%

## Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

### 2024/26 Use Attainment Summary

No data are available, so the Aesthetics Use for Plymouth Harbor (MA94-16) 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 Plymouth Harbor (MA94-16) so it is assessed as having Insufficient Information. The shellfish growing areas (2.4896 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 Plymouth Harbor.

**Shellfish Growing Area Classifications**

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Plymouth Harbor (MA94-16): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.4896 sq mi (98%). 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 Plymouth Harbor (MA94-16) so it is assessed as having Insufficient Information. The shellfish growing areas (2.4896 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 Plymouth Harbor.	

**Shellfish Growing Area Classifications**

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

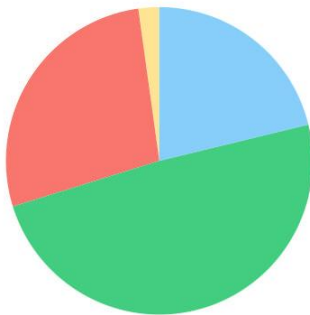
Summary
Plymouth Harbor (MA94-16): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.4896 sq mi (98%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

## Pudding Brook (MA94-60)

<b>Location:</b>	Headwaters, perennial portion, east of Hemlock Drive, Pembroke to inlet of Reservoir, southwest of Pleasant Street, Pembroke.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	2 MILES
<b>Classification/Qualifier:</b>	B

### Pudding Brook (MA94-60)

Watershed Area: 3.32 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.32	3.32	1.02	1.02
Agriculture	2.2%	2.2%	1.4%	1.4%
Developed	27.6%	27.6%	14.8%	14.8%
Natural	49%	49%	39.2%	39.2%
Wetland	21.2%	21.2%	44.6%	44.6%
Impervious	14.9%	14.9%	7%	7%

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 Pudding Brook (MA94-60) is Not Assessed.

## Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Pudding Brook (MA94-60) is assessed as is assessed as Fully Supporting based on MassDEP staff observations of the brook in the summer of 2013. MassDEP staff recorded aesthetics observations as part of the MAP2 wadeable streams monitoring project in summer 2013 at one station half way down this Pudding Brook AU; ~175 feet upstream/north of Spring Street (W2399, n=8). There were generally no noted persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2399	MassDEP	Water Quality	Pudding Brook	[approximately 175 feet upstream/north from Spring Street, Pembroke]	42.086583	-70.756947

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2399	2013	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2399 on Pudding Brook (MA94-60) during 8 site visits between May 2013 and Sep 2013. 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 9) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2399	2013	8	7	0

### MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2399	Pudding Brook	2013	Aesthetics Impaired?	No	6	8



Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2399	Pudding Brook	2013	Aesthetics Impaired?	NR	2	8
W2399	Pudding Brook	2013	Aquatic Plant Density, Overall	None	6	8
W2399	Pudding Brook	2013	Aquatic Plant Density, Overall	Sparse	1	8
W2399	Pudding Brook	2013	Aquatic Plant Density, Overall	Unobservable	1	8
W2399	Pudding Brook	2013	Color	Light Yellow/Tan	6	8
W2399	Pudding Brook	2013	Color	None	2	8
W2399	Pudding Brook	2013	Objectionable Deposits	No	8	8
W2399	Pudding Brook	2013	Odor	None	8	8
W2399	Pudding Brook	2013	Periphyton Density, Filamentous	None	6	8
W2399	Pudding Brook	2013	Periphyton Density, Filamentous	Sparse	1	8
W2399	Pudding Brook	2013	Periphyton Density, Filamentous	Unobservable	1	8
W2399	Pudding Brook	2013	Periphyton Density, Film	None	6	8
W2399	Pudding Brook	2013	Periphyton Density, Film	Sparse	1	8
W2399	Pudding Brook	2013	Periphyton Density, Film	Unobservable	1	8
W2399	Pudding Brook	2013	Scum	No	6	8
W2399	Pudding Brook	2013	Scum	Yes	2	8
W2399	Pudding Brook	2013	Turbidity	None	7	8
W2399	Pudding Brook	2013	Turbidity	NR	1	8

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	NO
2024/26 Use Attainment Summary	

Too limited bacteria data are available to assess the Primary Contact Recreation Use for Pudding Brook (MA94-60) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. MassDEP staff collected *E. coli* bacteria samples a third of the way down Pudding Brook at W2399 [~175 ft upstream/N from Spring St, Pembroke] from May-Sep 2013 (n=5). Analysis of the single year limited frequency dataset from this station indicated 0% of intervals had GMs >126 CFU/100ml, 1 sample exceeded the 410 CFU/100ml STV (605 CFU) and the seasonal GM was 56 CFU/100ml. *E. coli* data from station W2399 are inconclusive according to the 2024 CALM to assess the Primary Contact Recreation Use, because this single year, limited frequency dataset included both GMs below the threshold and an exceedance of the STV threshold.

### **Monitoring Stations**

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2399	MassDEP	Water Quality	Pudding Brook	[approximately 175 feet upstream/north from Spring Street, Pembroke]	42.086583	-70.756947

### **Bacteria Data**

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

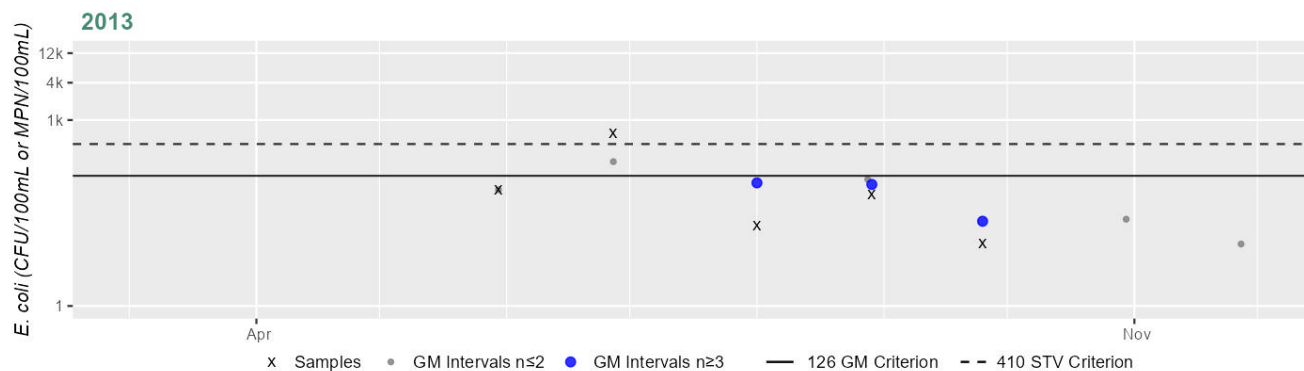
(MassDEP Undated 9) (MassDEP Undated 5)

[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
W2399	MassDEP	E. coli	05/30/13	09/25/13	5	10	605	56

### Station MASSDEP\_W2399 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	56
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	20%

#### Cumulative %GMI Exceedance

Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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
<p>The Secondary Contact Recreation Use for Pudding Brook (MA94-60) continues to be assessed as Fully Supporting based on a re-evaluation of bacteria data from one station in 2013. MassDEP staff collected <i>E. coli</i> bacteria samples a third of the way down Pudding Brook at W2399 [~175 ft upstream/N from Spring St, Pembroke] from May-Sep 2013 (n=5). Analysis of the single year limited frequency dataset from this station indicated 0% of intervals had GMs &gt;244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV and the overall GM was 56 CFU/100ml, which meets 2024 CALM guidance.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2399	MassDEP	Water Quality	Pudding Brook	[approximately 175 feet upstream/north from Spring Street, Pembroke]	42.086583	-70.756947

## Bacteria Data

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

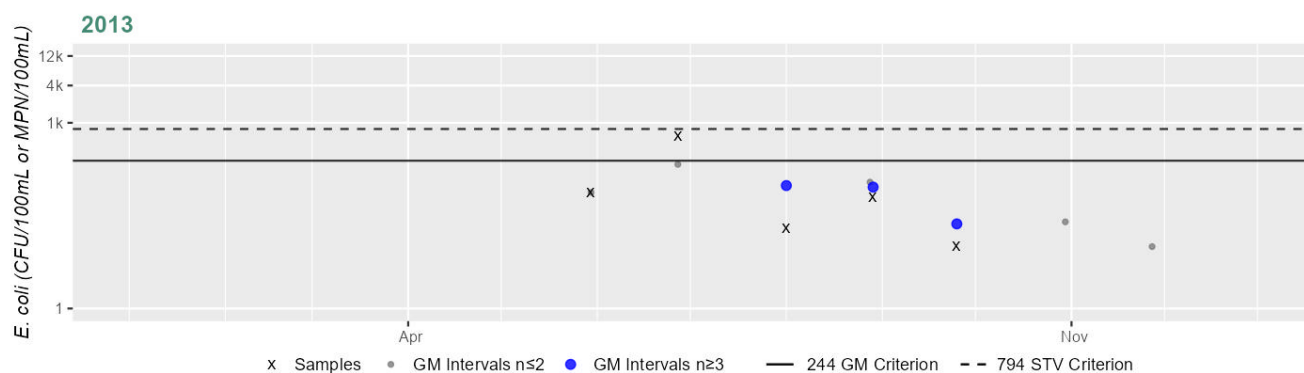
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W2399	MassDEP	E. coli	05/30/13	09/25/13	5	10	605	56

#### Station MASSDEP\_W2399 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	56
#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 Exceedances;  
%GMI Ex = % GMI Exceedances; 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.

## Reeds Millpond (MA94126)

<b>Location:</b>	Kingston.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	6 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Reeds Millpond (MA94126) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

## Reservoir (MA94127)

<b>Location:</b>	Pembroke.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	16 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Flow Regime Modification*)	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Flow Regime Modification*)	Source Unknown (N)	X	--	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Reservoir (MA94127) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

**2024/26 Use Attainment Summary**

Too limited data are available to evaluate the Aesthetics Use of Reservoir (MA94127), so it is assessed as having Insufficient Information. Since the Flow Regime Modification impairment was redundantly duplicated across multiple uses for this waterbody, the Flow Regime Modification impairment is being removed from the Aesthetics Use, but will continue to be maintained under the Aquatic Life Use.

**Primary Contact Recreation**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

**2024/26 Use Attainment Summary**

No bacteria data are available to assess the Primary Contact Recreation Use for Reservoir (MA94127) so it is assessed as having Insufficient Information. Since the Flow Regime Modification 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**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

**2024/26 Use Attainment Summary**

No bacteria data are available to assess the Secondary Contact Recreation Use for Reservoir (MA94127) so it is assessed as having Insufficient Information. Since the Flow Regime Modification impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Secondary Contact Recreation Use.

## Reservoir (MA94186)

<b>Location:</b>	Scituate (formerly part of 2014 segment: First Herring Brook MA94-25).
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	63 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW (Tributary)

No usable data were available for Reservoir (MA94186) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fish Passage Barrier*)	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--



## Round Pond (MA94131)

<b>Location:</b>	Duxbury.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	7 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Round Pond (MA94131) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Russell Millpond (MA94132)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	42 ACRES
<b>Classification/Qualifier:</b>	B

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

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

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Russell Millpond (MA94132) is Not Assessed.

## Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
The Aesthetics Use for Russell Millpond (MA94132) continues to be assessed as Not Supporting, with the prior Algae impairment being carried forward. No new data are available to evaluate the Aesthetics Use for Russell Millpond.	

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
The Primary Contact Recreation Use for Russell Millpond (MA94132) continues to be assessed as Not Supporting, with the prior Algae impairment (from the Aesthetics Use) being carried forward. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY_RussellMills_DeepHole in 2014. The Secchi depth at PLY_RussellMills_DeepHole (station depth=6.4 m) was measured to be 1.43 m (n=1) which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity.	

## Other Indicators

**Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data**  
(MassDEP Undated 3)

Data Year(s)	Summary
2014	In Russell Millpond (MA94132), the Town of Plymouth (PLY) collected Secchi data at PLY_RussellMills_DeepHole [41.917222, -70.6275, Deep spot] in 2014. At station PLY_RussellMills_DeepHole (station depth=6.4 m) the Secchi depth (n=1) was measured to be 1.43 m on Aug 19, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for Russell Millpond (MA94132) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. The prior Algae impairment (from the Aesthetics Use) is being carried forward.	

## Russell Pond (MA94133)

<b>Location:</b>	Kingston.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	11 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Russell Pond (MA94133) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fanwort*)	--	Unchanged
4c	4c	(Fish Passage Barrier*)	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--

## Savery Pond (MA94136)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	29 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Harmful Algal Blooms	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Harmful Algal Blooms	Agriculture (N)	--	--	X	X	X
Harmful Algal Blooms	Source Unknown (N)	--	--	X	X	X
Nutrient/Eutrophication Biological Indicators	Agriculture (N)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X	--	--	--	--
Phosphorus, Total	Agriculture (N)	X	--	--	--	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Savery Pond (MA94136) is Not Assessed.

## Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO

<b>2024/26 Use Attainment Summary</b>
The Aesthetics Use for Savery Pond (MA94136) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward. MassDEP staff recorded aesthetics observations at one station on Savery Pond northwest shore (from private dock at 42 Lake Road), Plymouth (W2241) during the summer of 2011, as part of the Lakes Baseline project (n=1). No persistent objectionable conditions (i.e., odors, deposits, growths, or turbidity) were observed during this survey. During the period 2015 through 2022, C-HAB postings for Savery Pond were reported to MDPH for 14 days in 2015 (cell count), 27 days in 2016 (visual observations), and 42 days in 2017 (visual observations) and no blooms were reported in other years. Since blooms were reported in recent years this is reflective of the existing Harmful Algal Blooms impairment for Savery Pond.

## Monitoring Stations

<b>Station Code</b>	<b>Organization</b>	<b>Type</b>	<b>Water Body</b>	<b>Station Description</b>	<b>Latitude</b>	<b>Longitude</b>
W2241	MassDEP	Water Quality	Savery Pond	[northwest shore (from private dock at 42 Lake Road), Plymouth]	41.848792	-70.549915

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

<b>Station Code</b>	<b>Data Year</b>	<b>Field Sheet Count</b>	<b>Aesthetics Summary Statement</b>
W2241	2011	1	Aesthetic observations were made by MassDEP field sampling crews at Station W2241 on Savery Pond (MA94136) during 1 site visit on Sep 14, 2011. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

### MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2241	Savery Pond	2011	Aquatic Plant Density, Overall	NR	1	1
W2241	Savery Pond	2011	Color	None	1	1
W2241	Savery Pond	2011	Objectionable Deposits	NR	1	1
W2241	Savery Pond	2011	Odor	None	1	1
W2241	Savery Pond	2011	Scum	NR	1	1
W2241	Savery Pond	2011	Turbidity	Slightly Turbid	1	1

### Algal Bloom Information

**Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Savery Pond (MA94136) were reported to MDPH for 14 days in 2015 (cell count), 27 days in 2016 (visual observations), and 42 days in 2017 (visual observations). No blooms were reported in other years. Since blooms were reported in recent years, a prior Harmful Algal Bloom impairment is being carried forward and the Aesthetics Use and Primary/Secondary Contact Recreational Uses continue to be assessed as Not Supporting.

**Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

[\* 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
Savery Pond	Plymouth	14	27	42					

### Primary Contact Recreation

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

The Primary Contact Recreation Use for Savery Pond (MA94136) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward. During the period 2015 through 2022, C-HAB postings for Savery Pond were reported to MDPH for 14 days in 2015 (cell count), 27 days in 2016 (visual observations), and 42 days in 2017 (visual observations). No blooms were reported in other years. Since blooms were reported in recent years this is reflective of the existing Harmful Algal Blooms impairment for Savery Pond. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_Savery\_DeepHole in 2014-2017. Secchi depth data at PLY\_Savery\_DeepHole (station depth ranging 3.5-3.9 m) were generally indicative of water clarity meeting the 1.2m (4ft) threshold in 2016 (n=8, 1.05-2.5m), 2015 (n=5, 1.07-3.4m), and 2017 (n=3, 1.4-1.7m). While the Secchi depth was measured to be 1.4 m at this station in 2014 (n=1) which meets the 1.2 m (4 ft) threshold, these data were too limited (n <3) to evaluate water clarity.

### Other Indicators

#### Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data (MassDEP Undated 3)

Data Year(s)	Summary
2014-2017	In Savery Pond (MA94136), the Town of Plymouth (PLY) collected Secchi data at PLY_Savery_DeepHole [41.84804, -70.548765, Deep spot] from 2014-2017. In 2014 at station PLY_Savery_DeepHole (station depth=3.5 m) the Secchi depth (n=1) was measured to be 1.4 m on Aug 18, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold. In 2015 at station PLY_Savery_DeepHole (station depth=3.5 m) the Secchi depth measurements ranged from 1.07-3.4 m (n=5) with 1 measurement taken on Jul 24, 2015 that was less than the 1.2 m (4 ft) threshold. In 2016 at station PLY_Savery_DeepHole (station depth=3.9 m) the Secchi depth measurements ranged from 1.05-2.5 m (n=8) with 1 measurement taken on Jul 26, 2016 that was less than the 1.2 m (4 ft) threshold. In 2017 at station PLY_Savery_DeepHole (station depth=3.5 m) the Secchi depth measurements ranged from 1.4-1.7 m (n=3) indicating water clarity meeting the 1.2 m (4 ft) threshold.

### Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Savery Pond (MA94136) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward. During the period 2015 through 2022, C-HAB postings for Savery Pond were reported to MDPH for 14 days in 2015 (cell count), 27 days in 2016 (visual observations), and 42 days in 2017 (visual observations). No blooms were reported in other years. Since blooms were reported in recent years this is reflective of the existing Harmful Algal Blooms impairment for Savery Pond.



## Scituate Harbor (MA94-02)

<b>Location:</b>	The waters west of a line across the mouth of Scituate Harbor, from the elbow of the jetty southeast off Lighthouse Point to the jetty northeast of the U.S. Coast Guard Station, Scituate.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.32 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Estuarine Bioassessments	--	Unchanged
5	5	Fecal Coliform	61715	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Estuarine Bioassessments	Source Unknown (N)	X	--	--	--	--	--
Fecal Coliform	Municipal Point Source Discharges (Y)	--	--	X	--	--	--

## Recommendations

<b>2024/26 Recommendations</b>
2024/26IR [Bacteria, Low] High frequency follow-up monitoring should be conducted in Scituate Harbor (MA94-02), to confirm if Enterococcus bacteria are impairing the Recreational uses. MDPH indicated that Scituate Lighthouse beach in Scituate [Beach ID: 3136] was posted for >10% of the swimming season in 2019 (12%). 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 Scituate Harbor (MA94-02) is Not Assessed.	

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
Scituate Harbor (MA94-02): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3157 sq mi (98%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.3157 sq mi (98%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as a combination of approved and 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB4.0	Scituate South Coastal	Approved	0.00000	0.0%
MB7.0	Scituate Harbor	Prohibited	0.31571	97.8%
MB8.0	Scituate North Coastal	Approved	0.00002	0.0%

### Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No data are available, so the Aesthetics Use for Scituate Harbor (MA94-02) 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 Scituate Harbor (MA94-02) continues to be assessed as Fully Supporting based on MDPH Beach Closure data, however an Alert for Enterococcus is being identified. MDPH Beach Closure data for Scituate Lighthouse beach [Beach ID: 3136] in Scituate, indicated that this beach was rarely, if at all, posted for swimming from 2018-2022. An Alert for Enterococcus is being identified since Scituate Lighthouse beach was posted for >10% of the swimming season in 2019 (12%). The shellfish growing areas (0.3157 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 Scituate Harbor.

## Beach Postings

**MA DPH Beach Posting Data Summary (% Bathing Season Posted 2014-2022)** (Bailey, Logan Feb. 2, 2021) (Bailey Sept. 10, 2023) (MassDEP Undated 3)

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
3136	Scituate Lighthouse/ Scituate	42.20461, -70.71640	42.20415, -70.71570	2%	6%	7%	2%	4%	12%	0%	6%	0%	1

## Shellfish Growing Area Classifications

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

### Summary

Scituate Harbor (MA94-02): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3157 sq mi (98%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

### 2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Scituate Harbor (MA94-02) continues to be assessed as Fully Supporting based on MDPH Beach Closure data. MDPH Beach Closure data for Scituate Lighthouse beach [Beach ID: 3136] in Scituate, indicated that this beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.3157 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 Scituate Harbor.

### ***Shellfish Growing Area Classifications***

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

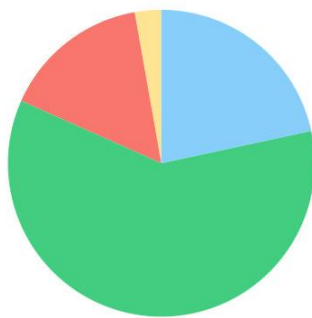
Summary
Scituate Harbor (MA94-02): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3157 sq mi (98%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

## Second Herring Brook (MA94-26)

<b>Location:</b>	Headwaters, outlet Turner Pond, Norwell (excluding the approximately 0.3 mile through Torrey Pond) to the tidal zone near a wooden walk bridge approximately 205 meters downstream from Second Herring Brook Pond Dam (NATID: MA02171), Norwell (area associated with North River Corridor designated as ORW).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1.6 MILES
<b>Classification/Qualifier:</b>	B: ORW ('ORW' applies only to portion in North River Corridor)

### Second Herring Brook (MA94-26)

Watershed Area: 3.64 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.64	3.54	0.89	0.89
Agriculture	2.8%	2.9%	6.5%	6.5%
Developed	15.5%	15%	9.6%	9.6%
Natural	60%	60%	51.3%	51.3%
Wetland	21.6%	22.2%	32.6%	32.6%
Impervious	6.7%	6.6%	4.3%	4.3%

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (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 Second Herring Brook (MA94-26) is Not Assessed.

### Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Second Herring Brook (MA94-26) is assessed as Fully Supporting based on MassDEP staff observations of the pond in the summer of 2019. MassDEP staff recorded aesthetics observations as part of the Reference Site Network monitoring project during the summer of 2019, at one station half way down this Second Herring Brook AU; Rt. 123 (Main Street) crossing, Norwell (W0918, n=4). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0918	MassDEP	Water Quality	Second Herring Brook	[Route 123 (Main Street) crossing, Norwell]	42.160283	-70.788634

### Aesthetic Observations

#### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W0918	2019	4	Aesthetic observations were made by MassDEP field sampling crews at Station W0918 on Second Herring Brook (MA94-26) during 4 site visits between Jun 2019 and Sep 2019. 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 9) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W0918	2019	4	4	0

**MassDEP Aesthetics Observations (2011-2020)** (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0918	Second Herring Brook	2019	Aesthetics Impaired?	No	4	4
W0918	Second Herring Brook	2019	Aquatic Plant Density, Overall	None	4	4
W0918	Second Herring Brook	2019	Color	Brownish	1	4
W0918	Second Herring Brook	2019	Color	Light Yellow/Tan	2	4
W0918	Second Herring Brook	2019	Color	Reddish	1	4
W0918	Second Herring Brook	2019	Objectionable Deposits	No	4	4
W0918	Second Herring Brook	2019	Odor	None	4	4
W0918	Second Herring Brook	2019	Periphyton Density, Filamentous	None	4	4
W0918	Second Herring Brook	2019	Periphyton Density, Film	None	4	4
W0918	Second Herring Brook	2019	Scum	No	4	4
W0918	Second Herring Brook	2019	Turbidity	None	3	4
W0918	Second Herring Brook	2019	Turbidity	Slightly Turbid	1	4

**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 Second Herring Brook (MA94-26) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information.

## 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 Second Herring Brook (MA94-26) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. MassDEP staff collected <i>E. coli</i> bacteria samples halfway down this Second Herring Brook AU at W0918 [Rt. 123 (Main St) crossing, Norwell] from Jul-Oct 2001 (n=4). 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 34 CFU/100ml, which meets 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
W0918	MassDEP	Water Quality	Second Herring Brook	[Route 123 (Main Street) crossing, Norwell]	42.160283	-70.788634

## Bacteria Data

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

(MassDEP Undated 9) (MassDEP Undated 4)

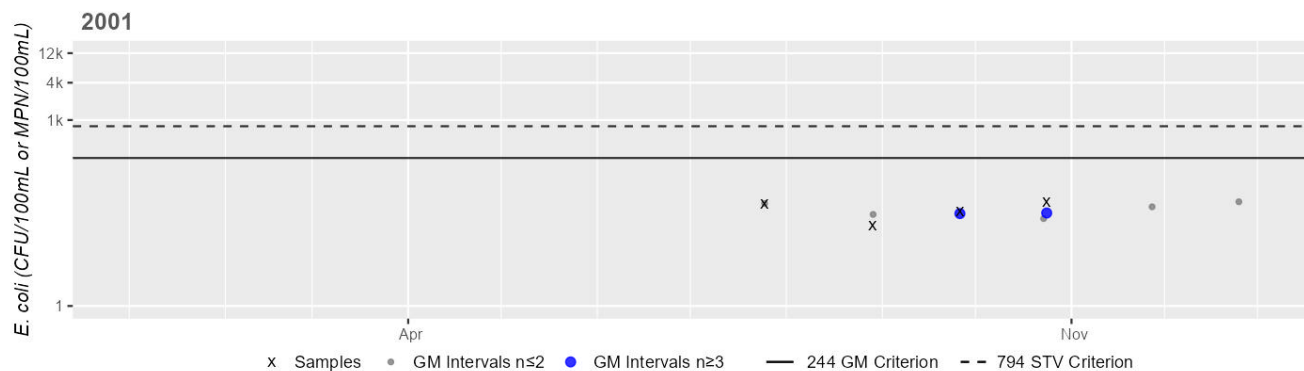
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0918	MassDEP	E. coli	07/25/01	10/24/01	4	20	48	34



# Station MASSDEP\_W0918 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	34
#GMI	2
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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.

## Second Herring Brook (MA94-31)

<b>Location:</b>	From the tidal zone near a wooden walk bridge approximately 205 meters downstream from the Second Herring Brook Pond Dam (NATID: MA02171), Norwell to mouth at confluence with the North River, Norwell.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.002 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: ORW

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4a	4a	Fecal Coliform	61721	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	No
<b>2024/26 Use Attainment Summary</b>	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Second Herring Brook (MA94-31) is Not Assessed.	

## Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Second Herring Brook (MA94-31): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0016 sq mi (67%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0016 sq mi (67%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of approved and 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB5.2	North River West	Prohibited	0.00164	67.1%

## Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Second Herring Brook (MA94-31) 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 Second Herring Brook (MA94-31) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0016 sq mi) in this AU are less than 100% approved (0 sq mi, 0%). The data were too limited to assess Primary Contact Recreation Use of Second Herring Brook (MA94-31) based on shellfish classification data.

**Shellfish Growing Area Classifications**

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Second Herring Brook (MA94-31): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0016 sq mi (67%). 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 Second Herring Brook (MA94-31) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0016 sq mi) in this AU are less than 100% approved (0 sq mi, 0%). The data were too limited to assess Secondary Contact Recreation Use of Second Herring Brook (MA94-31) based on shellfish classification data.	

**Shellfish Growing Area Classifications**

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

Summary
Second Herring Brook (MA94-31): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0016 sq mi (67%). 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.

## Shallow Pond (MA94140)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	19 ACRES
<b>Classification/Qualifier:</b>	B

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

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Shallow Pond (MA94140) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
No data are available, so the Aesthetics Use for Shallow Pond (MA94140) is Not Assessed.

### Primary Contact Recreation

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

<b>2024/26 Use Attainment Summary</b>
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No bacteria data are available to assess the Primary Contact Recreation Use for Shallow Pond (MA94140) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_Shallow\_DeepHole in 2014. The Secchi depth at PLY\_Shallow\_DeepHole (station depth=1.25 m) was measured to be 1.25 m (n=1) which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity.

### **Other Indicators**

#### **Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data** (MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2014	In Shallow Pond (MA94140), the Town of Plymouth (PLY) collected Secchi data at PLY_Shallow_DeepHole [41.889194, -70.553583, Deep spot] in 2014. At station PLY_Shallow_DeepHole (station depth=1.25 m) the Secchi depth (n=1) was measured to be 1.25 m on Sep 04, 2014 indicating water clarity meeting the 1.2 m (4 ft) threshold.

### **Secondary Contact Recreation**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO
<b>2024/26 Use Attainment Summary</b>	
No bacteria or other indicator data for Shallow Pond (MA94140) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.	

## Ship Pond (MA94142)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	11 ACRES
<b>Classification/Qualifier:</b>	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	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 Ship Pond (MA94142) is Not Assessed.

### Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
There are no data available to assess the status of the Aesthetics Use for Ship Pond (MA94142), so it is Not Assessed. During a MassDEP 1996 synoptic survey in July, field staff observed moderate turbidity, oil-like sheen and sulfur smell. The Alert status identified for these same concerns are now being removed since they were only observed on that one occasion.

### 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 Ship Pond (MA94142) and available other indicators for this AU did not result in any impairment, so it is assessed as having Insufficient Information. The Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_Ship\_DeepHole in 2014. At station PLY\_Ship\_DeepHole (station depth=1 m) the Secchi depth (n=1) was measured to be 1 m on Sep 04, 2014. These data were too limited (n <3) to evaluate the water clarity for Ship Pond.

**Other Indicators****Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data**  
(MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2014	In Ship Pond (MA94142), the Town of Plymouth (PLY) collected Secchi data at PLY_Ship_DeepHole [41.870247, -70.53378, Deep spot] in 2014. At station PLY_Ship_DeepHole (station depth=1 m) the Secchi depth (n=1) was measured to be 1 m on Sep 04, 2014. There was insufficient information to assess water clarity because the station depth is less than 1.2 m and the Secchi depth was the same as the station depth.

**Secondary Contact Recreation**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

**2024/26 Use Attainment Summary**

No bacteria or other indicator data for Ship Pond (MA94142) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.



## Silver Lake (MA94143)

<b>Location:</b>	Pembroke/Plympton/Kingston.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	616 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	(Flow Regime Modification*)	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
(Flow Regime Modification*)	Water Diversions (Y)	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--

## Recommendations

2024/26 Recommendations
2024/26IR [Harmful Algal Blooms, Low] Follow-up monitoring should be conducted in Silver Lake (MA94143), to confirm if Harmful Algal Blooms are impairing the Recreational and Aesthetics uses. Monitoring should include observational data and collection of cyanobacteria cell count data, as well as continued reporting of blooms to MDPH. Central Plymouth County Water District Commission (CPCWDC) collected cyanotoxins data at a surface water station SLIL-S, which is in close proximity to MassDEP deep hole station {W2416}. Analysis of microcystins samples at this location (n=2 in 2021 and n=7 in 2022), indicated that the concentrations exceeded the threshold of 8 µg/L on one occasion, in March 2022 (12.55 µg/L). 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 Silver Lake (MA94143) is Not Assessed.	

### Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	NO
2024/26 Use Attainment Summary	
Too limited data are available to assess the Aesthetics Use for Silver Lake (MA94143), so it is assessed as having Insufficient Information. MassDEP staff recorded aesthetics observations at the deep hole, index station, Pembroke for this Silver Lake AU as part of the Lakes Baseline Survey in 2013. There were generally no noted persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, however there is insufficient information to assess the Aesthetics Use since data were limited (n=1).	

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2416	MassDEP	Water Quality	Silver Lake	[deep hole, Pembroke]	42.019060	-70.807205

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

### MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2416	Silver Lake	2013	Aesthetics Impaired?	No	1	1
W2416	Silver Lake	2013	Aquatic Plant Density, Overall	None	1	1
W2416	Silver Lake	2013	Aquatic Plant Density, Whole Lake	NR	1	1
W2416	Silver Lake	2013	Color	None	1	1
W2416	Silver Lake	2013	Duckweed Density, Whole Lake	None	1	1
W2416	Silver Lake	2013	Objectionable Deposits	No	1	1
W2416	Silver Lake	2013	Odor	None	1	1
W2416	Silver Lake	2013	Scum	No	1	1
W2416	Silver Lake	2013	Turbidity	None	1	1

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES
2024/26 Use Attainment Summary	

The Primary Contact Recreation Use for Silver Lake (MA94143) is assessed as Fully Supporting based on bacteria data collected at one station in 2022 and good water clarity according to Secchi depth measurements taken in 2021 and 2022. However, an Alert is being identified for Harmful Algal Blooms due to an elevated concentration of cyanotoxins on one occasion in 2022. Central Plymouth County Water District Commission (CPCWDC) collected Secchi depth data at deep hole station CPCWDC\_Silver\_DeepHole and cyanotoxins data at the same location (surface water station SLIL-S) both in 2021-2022. MassDEP also collected Secchi depth data at deep hole station W2416 in 2013. At MassDEP's deep hole station W2416 (station depth=21.3 m) the Secchi depth was measured to be 5.1 m on Aug 27, 2013 (n=1) which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity. Secchi depth data were also generally indicative of water clarity meeting the 1.2m (4ft) threshold at CPCWDC\_Silver\_DeepHole (station depth=19.8 m in 2021 & 2022), i.e. in 2021 (n=2, 2-3m) and 2022 (n=7, 1-3m), with 1 measurement taken on May 22, 2022 that was less than the threshold. Analysis of microcystins samples from SLIL-S in 2021 (n=2) and SLIL-S in 2022 (n=7) indicated that the concentrations exceeded the threshold of 8 µg/L less than three 10-day assessment periods with an exceedance in March 2022 (12.55 µg/L). The elevated cyanotoxin concentration is indicative of a Harmful Algal Bloom Alert, so a recommendation will be made for additional monitoring. CPCWDC staff/volunteers also collected *E. coli* bacteria samples in Silver Lake at station CPCWDC\_Silver\_DeepHole from 2021-2022 (n=2-7/yr). Analysis of the single year moderate frequency dataset from this station indicated 0% of intervals had GMs >126 CFU/100ml and no samples exceeded the 410 CFU/100ml STV, which meets 2024 CALM guidance.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CPCWDC_Silver_DeepHole	Central Plymouth County Water District Commission	Water Quality	Silver Lake	Deep Hole Pembroke	42.019800	-70.807500

## Bacteria Data

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

(CPCWDC 2023) (MassDEP Undated 3)

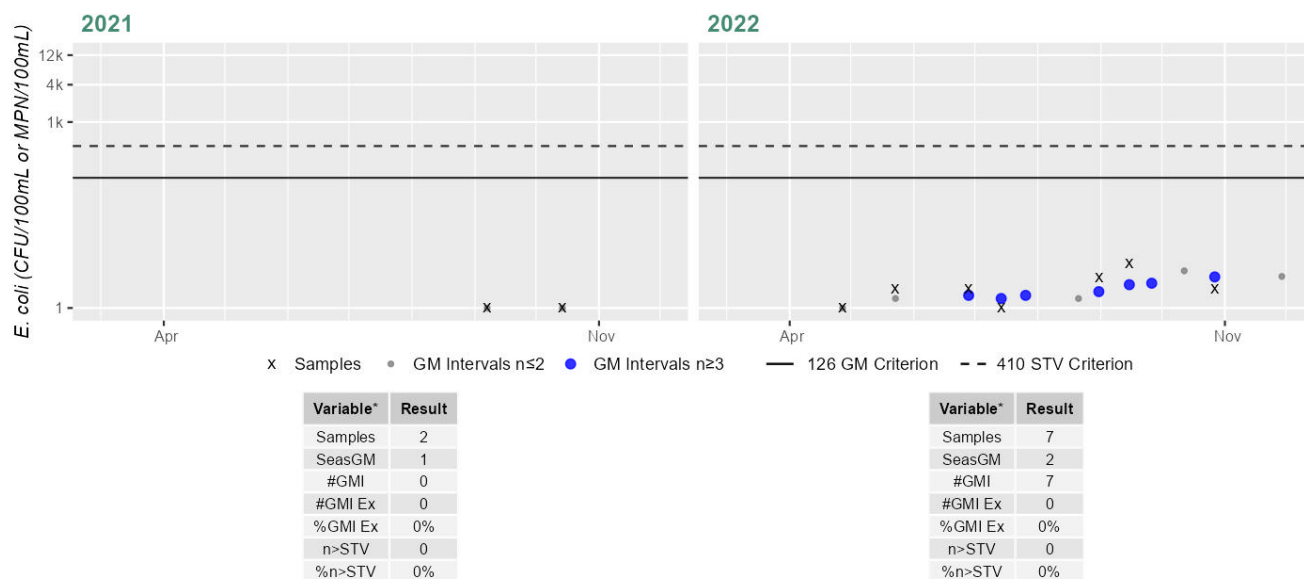
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CPCWDC_Silver_DeepHole	Central Plymouth County Water District Commission	E. coli	09/07/21	10/14/21	2	1	1	1

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CPCWDC_Silver_DeepHole	Central Plymouth County Water District Commission	E. coli	04/27/22	10/27/22	7	1	5	2

### Station CPCWDC\_Silver\_DeepHole - Escherichia coli

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



Cumulative %GMI Exceedance

Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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.

## Other Indicators

**Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data**  
(MassDEP Undated 9) (MassDEP Undated 5) (MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2013, 2021-2022	In Silver Lake (MA94143), from 2021-2022 the Central Plymouth County Water District Commission (CPCWDC) collected Secchi data at CPCWDC_Silver_DeepHole and cyanotoxin data at CPCWDC_SLIL-S [42.0198, -70.8075, Silver Lake Surface, Pembroke]. In 2013, MassDEP collected Secchi data at W2416 [42.01906, -70.807205, deep hole, Pembroke] (2013). In 2021 at station CPCWDC_Silver_DeepHole (station depth=19.8 m) the Secchi depth measurements ranged from 2-3 m (n=2) indicating water clarity meeting the 1.2 m (4 ft) threshold. In 2022 at station CPCWDC_Silver_DeepHole (station depth=19.8 m) the Secchi depth measurements ranged from 1-3 m (n=7) with 1 measurement taken on May 23, 2022 that was less than the 1.2 m (4 ft) threshold. In 2013 at station W2416 (station depth=21.3 m) the Secchi depth (n=1) was measured to be 5.1 m on Aug 27, 2013 indicating water clarity meeting the 1.2 m (4 ft) threshold. Analysis of microcystins samples from CPCWDC_SLIL-S in 2021 (n=2) and SLIL-S in 2022 (n=7) indicated that the concentrations exceeded the threshold of 8 µg/L in less than three 10-day assessment periods with an exceedance on 2022-03-29. The elevated cyanotoxin concentration is indicative of a Harmful Algal Bloom Alert.

## Secondary Contact Recreation

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Fully Supporting	YES

<b>2024/26 Use Attainment Summary</b>
<p>The Secondary Contact Recreation Use for Silver Lake (MA94143) is assessed as Fully Supporting based on a re-evaluation of bacteria data collected at one station in 2021 and 2022. However, an Alert is being identified for Harmful Algal Blooms due to an elevated concentration of cyanotoxins on one occasion in 2022.</p> <p>Central Plymouth County Water District Commission (CPCWDC) collected cyanotoxins data at surface water station SLIL-S in 2021-2022. Analysis of microcystins samples from SLIL-S in 2021 (n=2) and SLIL-S in 2022 (n=7) indicated that the concentrations exceeded the threshold of 8 µg/L less than two 10-day assessment periods with an exceedance in March 2022 (12.55 µg/L). The elevated cyanotoxin concentration is indicative of a Harmful Algal Bloom Alert, so a recommendation will be made for additional monitoring. CPCWDC staff/volunteers also collected <i>E. coli</i> bacteria samples in Silver Lake at CPCWDC_Silver_DeepHole from 2021-2022 (n=3-8/yr). Analysis of the multi-year moderate frequency dataset from this station indicated 0 out of 2 sufficient data yrs had intervals where &gt;20% of the GMs were &gt;244 CFU/100ml, 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV and cumulatively across years 0% of intervals had GMs &gt;244 CFU/100ml, which meets 2024 CALM guidance.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CPCWDC_Silver_DeepHole	Central Plymouth County Water District Commission	Water Quality	Silver Lake	Deep Hole Pembroke	42.019800	-70.807500

## Bacteria Data

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

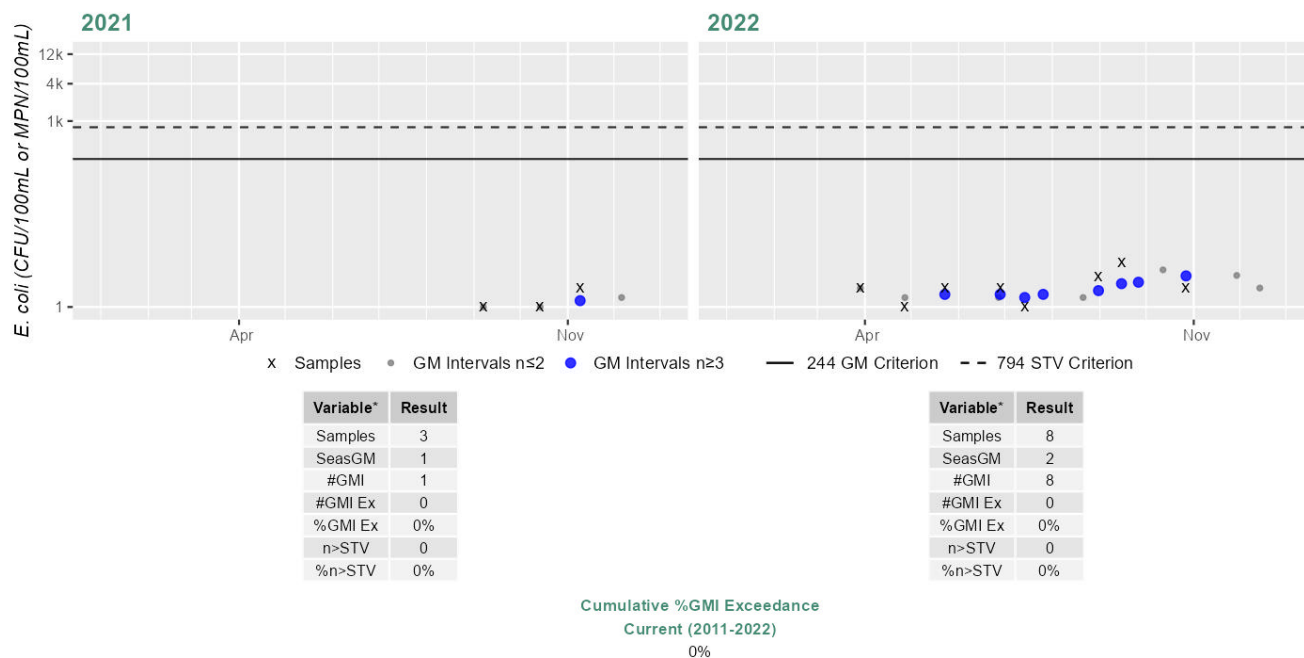
(CPCWDC 2023) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CPCWDC_Silver_DeepHole	Central Plymouth County Water District Commission	E. coli	09/07/21	11/09/21	3	1	2	1
CPCWDC_Silver_DeepHole	Central Plymouth County Water District Commission	E. coli	03/29/22	10/27/22	8	1	5	2

#### Station CPCWDC\_Silver\_DeepHole - Escherichia coli

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



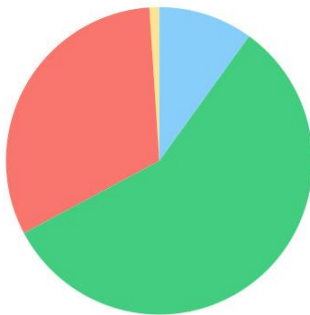
\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

## Smelt Brook (MA94-54)

<b>Location:</b>	Headwaters outlet Smelt Pond, Kingston to tidal portion north of Route 3A, Kingston (through former 2016 segment: Foundry Pond MA94038).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	2.1 MILES
<b>Classification/Qualifier:</b>	B

### Smelt Brook (MA94-54)

Watershed Area: 2.85 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.85	2.85	0.94	0.94
Agriculture	1%	1%	2.8%	2.8%
Developed	31.8%	31.7%	16.8%	16.7%
Natural	57.3%	57.3%	61.9%	61.9%
Wetland	9.9%	10%	18.5%	18.5%
Impervious	15.8%	15.8%	8.9%	8.8%

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
Turbidity	Source Unknown (N)	--	--	X	X	X



## Recommendations

2024/26 Recommendations
2024/26IR [Turbidity, Medium] Conduct follow-up sampling in Smelt Brook (MA94-54) approximately 600 ft upstream of Main Street (Route 3A), Kingston, upstream of station {W2319} as a point of reference; to evaluate whether turbidity has worsened or improved in the Foundry Pond impoundment area of this AU. Is a Turbidity impairment for the Aesthetics Use is still appropriate?. This is of medium 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 Smelt Brook (MA94-54) is Not Assessed.	

### Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
The Aesthetics Use for Smelt Brook (MA94-54) continues to be assessed as Not Supporting with the Turbidity impairment being carried forward. MassDEP staff recorded aesthetics observations at the downstream end of this Smelt Brook AU, ~200 feet downstream of Main Street (Rt. 3A) (W2319, n=2), during the summer of 2011 for the Bacteria Source Tracking (BST) project. There were generally no noted persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. Insufficient information is available to evaluate any changes so the Aesthetics Use for this Smelt Brook AU continues to be assessed as Not Supporting with the Turbidity impairment being carried forward. The original listing of Turbidity was based on estimations made during a MassDEP 1996 synoptic survey in the Foundry Pond impoundment of Smelt Brook in September 1996 (MassDEP 2002). It is recommended that additional observations be made within the Foundry Pond impoundment section of this Smelt Brook AU to determine if a Turbidity impairment for the Aesthetics Use is still appropriate.	

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2319	MassDEP	Water Quality	Smelt Brook	[approximately 200 feet downstream of Main Street (Route 3A), Kingston]	41.987834	-70.707868

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2319	2011	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2319 on Smelt Brook (MA94-54) during 2 site visits between Jun 2011 and Aug 2011. 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 9) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2319	2011	2	2	0

### MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2319	Smelt Brook	2011	Aquatic Plant Density, Overall	None	2	2
W2319	Smelt Brook	2011	Color	None	2	2
W2319	Smelt Brook	2011	Odor	None	2	2
W2319	Smelt Brook	2011	Periphyton Density, Filamentous	None	2	2
W2319	Smelt Brook	2011	Periphyton Density, Film	None	1	2
W2319	Smelt Brook	2011	Periphyton Density, Film	Sparse	1	2
W2319	Smelt Brook	2011	Turbidity	None	1	2
W2319	Smelt Brook	2011	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 Smelt Brook (MA94-54) continues to be assessed as Not Supporting, with the prior Turbidity impairment (from the Aesthetics Use) being carried forward. MassDEP staff collected *E. coli* (EC) and Enterococcus (Ent) bacteria samples at the downstream end of this Smelt Brook AU at W2319 [~200 ft downstream of Main St (Rt. 3A), Kingston] from 2011 (EC n=2 & Ent n=1). While there were no exceedances of their respective STV's, *E. coli* and Enterococcus data from W2319 are too limited according to the 2024 CALM to assess the Primary Contact Recreation Use.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2319	MassDEP	Water Quality	Smelt Brook	[approximately 200 feet downstream of Main Street (Route 3A), Kingston]	41.987834	-70.707868

### Bacteria Data

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

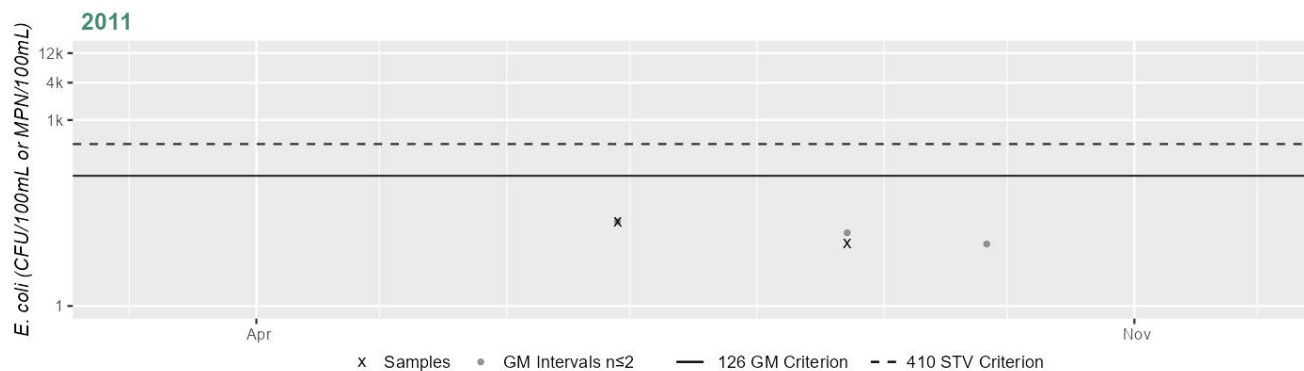
(MassDEP Undated 9) (MassDEP Undated 5)

[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
W2319	MassDEP	<i>E. coli</i>	06/28/11	08/23/11	2	10	23	15
W2319	MassDEP	Enterococci	08/23/11	08/23/11	1	109	109	108

### Station MASSDEP\_W2319 - *Escherichia coli*

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



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

#### Cumulative %GMI Exceedance

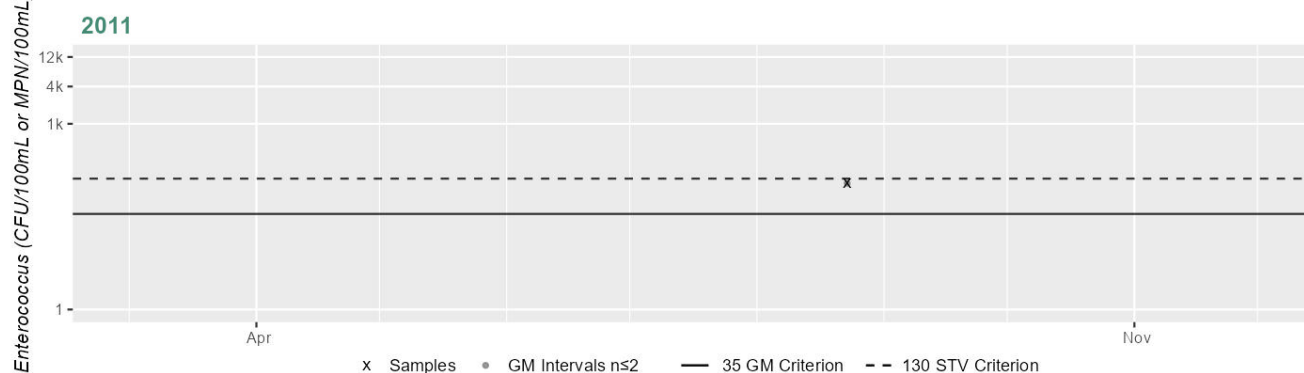
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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\_W2319 - *Enterococcus*

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



Variable*	Result
Samples	1
SeasGM	109
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 Smelt Brook (MA94-54) continues to be assessed as Not Supporting, with the prior Turbidity impairment (from the Aesthetics Use) being carried forward. MassDEP staff collected <i>E. coli</i> bacteria samples at the downstream end of this Smelt Brook AU at W2319 [~200 ft downstream of Main St (Rt. 3A), Kingston] from Jun-Aug 2011 (n=2). However, <i>E. coli</i> data from W2319 are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2319	MassDEP	Water Quality	Smelt Brook	[approximately 200 feet downstream of Main Street (Route 3A), Kingston]	41.987834	-70.707868

### Bacteria Data

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

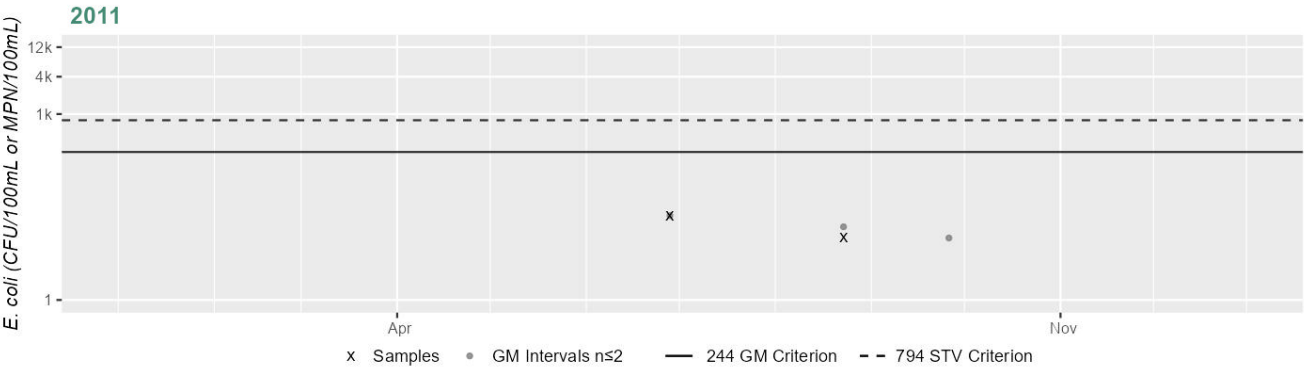
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W2319	MassDEP	E. coli	06/28/11	08/23/11	2	10	23	15

Station MASSDEP\_W2319 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	15
#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 Exceedances;  
%GMI Ex = % GMI Exceedances; 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.

## Smelt Brook (MA94-56)

<b>Location:</b>	Tidal portion north of Route 3A, Kingston to mouth at confluence with Jones River, Kingston.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.01 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	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 Smelt Brook (MA94-56) is Not Assessed.

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Smelt Brook (MA94-56): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0044 sq mi (72%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.0044 sq mi (72%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB44.0	Jones River	Prohibited	0.00439	71.8%

**Aesthetic**

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No data are available, so the Aesthetics Use for Smelt Brook (MA94-56) 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 Smelt Brook (MA94-56) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0044 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 Smelt Brook.	

**Shellfish Growing Area Classifications**

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Summary
Smelt Brook (MA94-56): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0044 sq mi (72%). 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 Smelt Brook (MA94-56) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0044 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 Smelt Brook.

### ***Shellfish Growing Area Classifications***

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

<b>Summary</b>
Smelt Brook (MA94-56): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0044 sq mi (72%). 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.

## Smelt Pond (MA94184)

<b>Location:</b>	Kingston.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	45 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Smelt Pond (MA94184) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fanwort*)	--	Unchanged
4c	4c	(Fish Passage Barrier*)	--	Unchanged
4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged

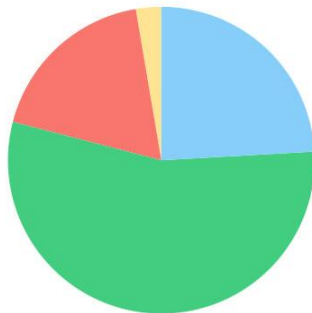
<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

## South River (MA94-08)

<b>Location:</b>	Headwaters, outlet unnamed pond north of Congress Street, Duxbury to downstream of fish ladder at Veterans Memorial Park, near Main Street (Route 3A), Marshfield (through former 2014 segment: South River Pond MA94148).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	4.9 MILES
<b>Classification/Qualifier:</b>	B: ORW

### South River (MA94-08)

Watershed Area: 11.45 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	11.45	8.25	3.67	2.63
Agriculture	2.7%	2%	7.1%	4.8%
Developed	18.3%	18%	10.9%	11.3%
Natural	54.9%	53.1%	42.2%	38.5%
Wetland	24.1%	26.9%	39.7%	45.4%
Impervious	8.7%	8.5%	5.2%	5.3%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
Dissolved Oxygen	Agriculture (N)	X	--	--	--	--
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 South River (MA94-08) 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 South River (MA94-08) 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 the South River (MA94-08) 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 the South River (MA94-08) 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 in the South River from 2001-2006 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: halfway down the AU at W0921 [Temple St (Myrtle St) crossing, Duxbury] in 2001 and 2006 (n=4-5/yr), and the downstream end at W0920 [upstream of Rt. 3A (Main St) bridge, in impoundment, Marshfield] from Jul-Oct 2001 (n=4). Analysis of the historic multi-year limited frequency *E. coli* dataset from W0921 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, which meets 2024 CALM guidance. Analysis of this historic single year limited frequency *E. coli* dataset from W0920 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV and the overall GM was 50 CFU/100ml, which also meets 2024 CALM guidance. However, since the data for these two stations 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
W0920	MassDEP	Water Quality	South River	[upstream of Route 3A (Main Street) bridge, in impoundment, Marshfield]	42.094630	-70.718259
W0921	MassDEP	Water Quality	South River	[Temple Street (Myrtle Street) crossing, Duxbury]	42.079989	-70.745665

### Bacteria Data

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

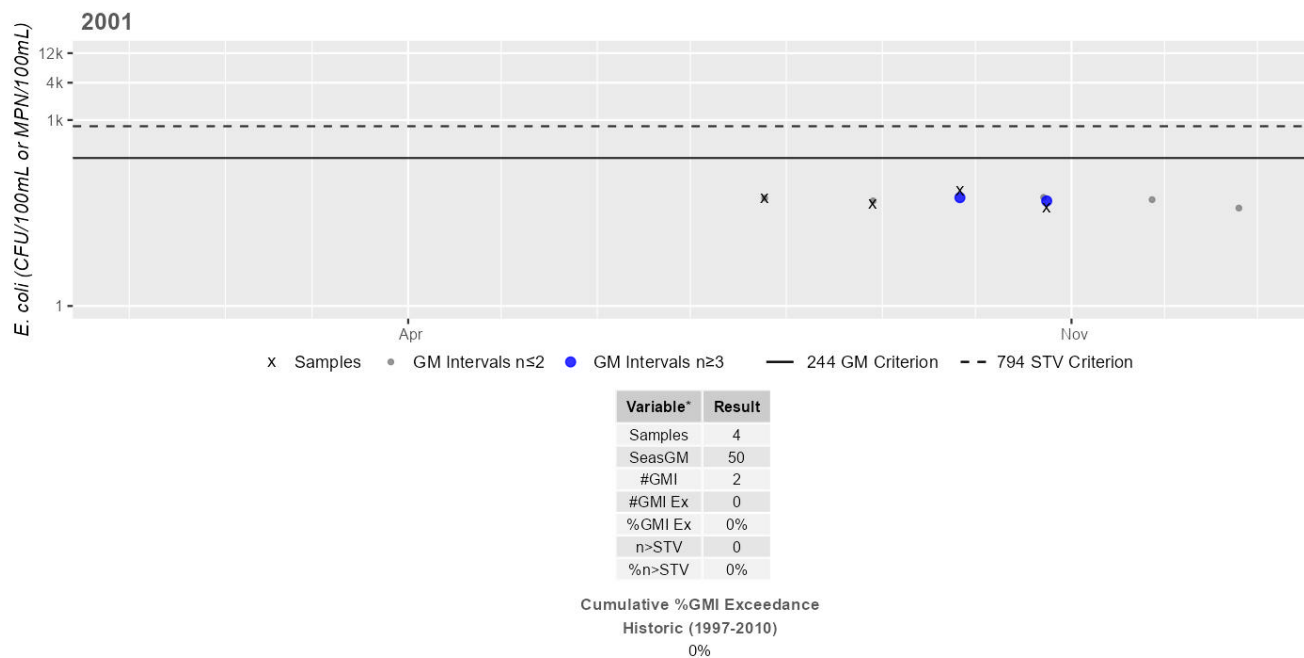
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0920	MassDEP	E. coli	07/25/01	10/24/01	4	38	71	50
W0921	MassDEP	E. coli	07/25/01	10/24/01	4	30	71	47
W0921	MassDEP	E. coli	06/20/06	10/11/06	5	40	130	79

### Station MASSDEP\_W0920 - *Escherichia coli*

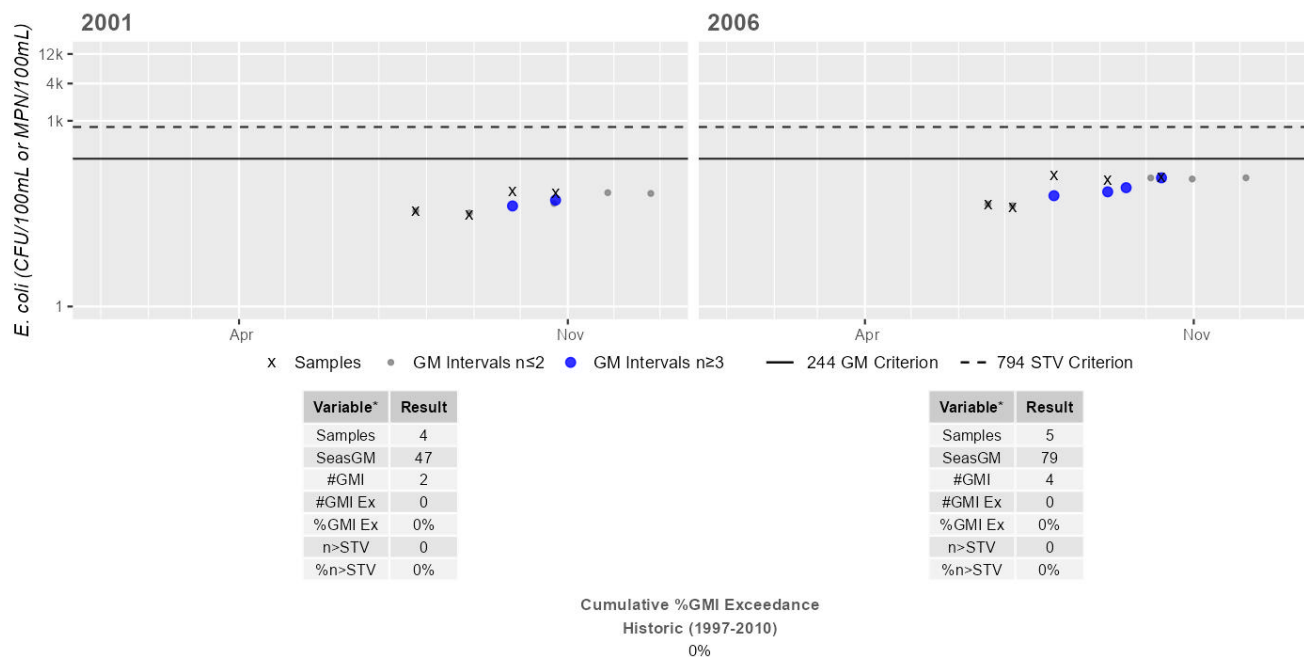
Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W0921 - *Escherichia coli*

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



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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.

## South River (MA94-09)

<b>Location:</b>	From downstream of fish ladder at Veterans Memorial Park near Main Street (Route 3A), Marshfield to mouth at confluence with North River/Massachusetts Bay, Marshfield/Scituate.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.63 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: ORW, SFO

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4a	4a	Enterococcus	61728	Unchanged
4a	4a	Fecal Coliform	61728	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>SH</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	X	--	--	--

## Recommendations

2024/26 Recommendations
2024/26 [Algae, Low] Conduct follow-up monitoring of aesthetics in South River (MA94-09) downstream of Route 3A bridge, Marshfield {W1539} and as far down as the Willow Street Bridge, to evaluate whether growths of filamentous green algae have worsened or improved and determine if the Aesthetics Use should be impaired for this reason. In 2001 a dramatic growth of filamentous green algae was observed to be occurring at the upstream end of this AU during the smelt spawning season (late April/early May), which was of concern to DMF biologists at that time. Smelt spawning habitat in the South River is located (at the upstream end of this AU) between the dam and the Willow Street Bridge (approximately 229 m), although spawning habitat was not continuous. 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 South River (MA94-09) is Not Assessed.	

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
South River (MA94-09): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5819 sq mi (93%). The approved shellfish growing area represents 0 sq mi (0%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing area (normalized to the AU area) is < 100% approved. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.	

### Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB5.6	Entrance to North River	Prohibited	0.00889	1.4%
MB6.0	South River South	Prohibited	0.18497	29.5%
MB6.1	South River East	Conditionally Approved	0.22105	35.2%



Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB6.2	Entrance to South River	Prohibited	0.08251	13.1%
MB6.3	South River West	Conditionally Approved	0.08443	13.5%

## 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 South River (MA94-09), so it is Not Assessed. The prior Alert identified for Algae (i.e. a dramatic growth of filamentous green algae occurring at the upstream end of this AU during the smelt spawning season (MassDEP 2006)) is being carried forward. Additional monitoring will be recommended, to determine if the Aesthetics Use should be impaired for Algae.

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

The Primary Contact Recreation Use for the South River (MA94-09) continues to be assessed as Not Supporting with the prior Enterococcus impairment being carried forward, based on bacteria data not meeting the threshold at one station (at the upstream end of the AU) in 2019. The prior Alert identified for Algae (i.e. a dramatic growth of filamentous green algae occurring at the upstream end of this AU during the smelt spawning season (MassDEP 2006)) is being removed from the Recreational Uses but will continue to be maintained under the Aesthetics Use. The shellfish growing areas (0.5819 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 South River.

North South River Watershed Association (NSRWA) staff/volunteers collected Enterococcus bacteria samples for this South River AU in 2019 at 3 stations. Samples were collected from the following stations/sample years: Close to the upstream end at NSRWA\_Willow St. Bridge [upstream of bridge, left edge, Marshfield] from Jun-Aug 2019 (n=6); halfway down the AU at NSRWA\_Julian St. Bridge [downstream of bridge, right edge, Marshfield] from Jun-Sep 2019 (n=16), and at the downstream end at NSRWA\_North River Mouth [Edge of intertidal, straight out from parking area, Scituate] from Jun-Aug 2019 (n=6). Analysis of the single year limited frequency Enterococcus dataset from NSRWA\_Willow St. Bridge indicated 100% of intervals had GMs >35 CFU/100ml, 3 samples exceeded the 130 CFU/100ml STV, and the seasonal GM was 190 CFU/100ml, which is indicative of an Enterococcus impairment. However further downstream, analysis of the single year high frequency/limited frequency Enterococcus datasets from NSRWA\_Julian St. Bridge and NSRWA\_North River Mouth respectively, indicated 0% of intervals had GMs >35 CFU/100ml in both cases and at Julian Street bridge only 6% of samples exceeded the 130 CFU/100ml STV (maximum 240 CFU/100ml), while at North River mouth no samples exceeded the 130 CFU/100ml STV, which means that the Enterococcus data from both these stations meet 2024 CALM guidance.

### **Monitoring Stations**

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NSRWA_Julian St. Bridge	North South River Watershed Association	Water Quality	South River	Downstream of bridge, right edge, Marshfield	42.131450	-70.687960
NSRWA_North River Mouth	North South River Watershed Association	Water Quality	North River	Edge of intertidal, straight out from parking area, Scituate	42.161890	-70.707640
NSRWA_Willow St. Bridge	North South River Watershed Association	Water Quality	South River	Upstream of bridge, left edge, Marshfield	42.093190	-70.712490

### **Bacteria Data**

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

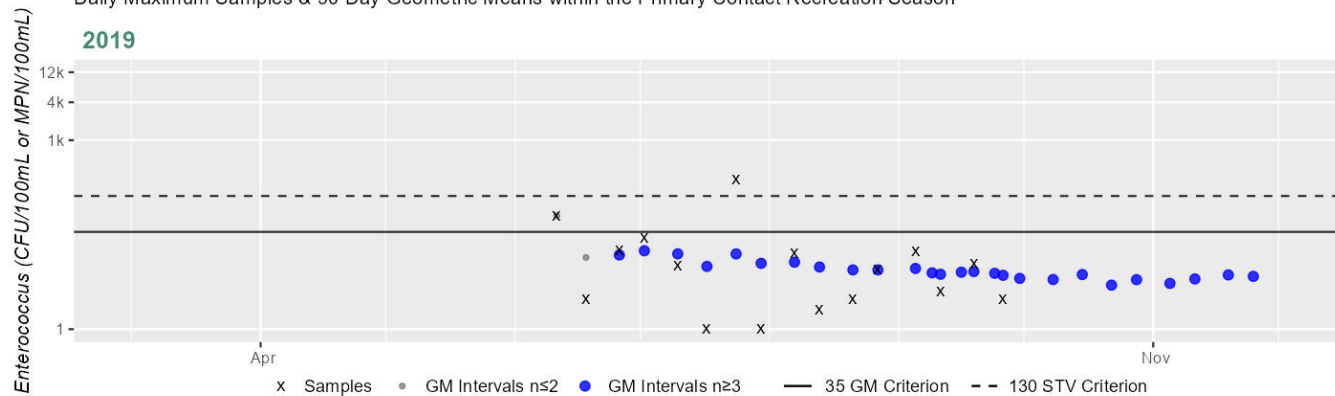
(NSRWA 2019) (MassDEP Undated 3)

[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
NSRWA_Julian St. Bridge	North South River Watershed Association	Enterococci	06/11/19	09/26/19	16	1	240	8
NSRWA_North River Mouth	North South River Watershed Association	Enterococci	06/11/19	08/21/19	6	0	11	0
NSRWA_Willow St. Bridge	North South River Watershed Association	Enterococci	06/11/19	08/21/19	6	80	600	190

### Station MASSDEP\_W0919 & NSRWA\_Julian St. Bridge - Enterococcus

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



Variable*	Result
Samples	16
SeasGM	8
#GMI	27
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	6%

#### Cumulative %GMI Exceedance

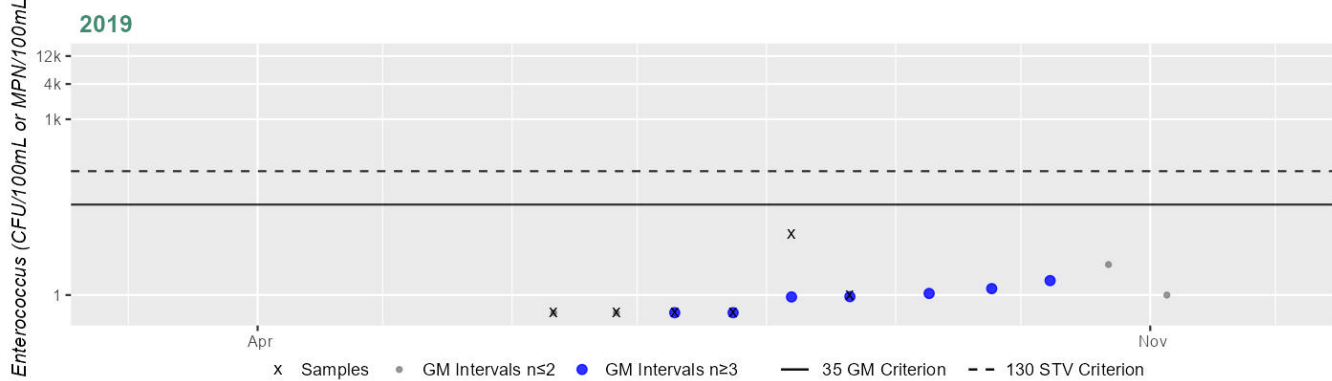
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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 NSRWA\_North River Mouth - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	0
#GMI	7
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

#### Cumulative %GMI Exceedance

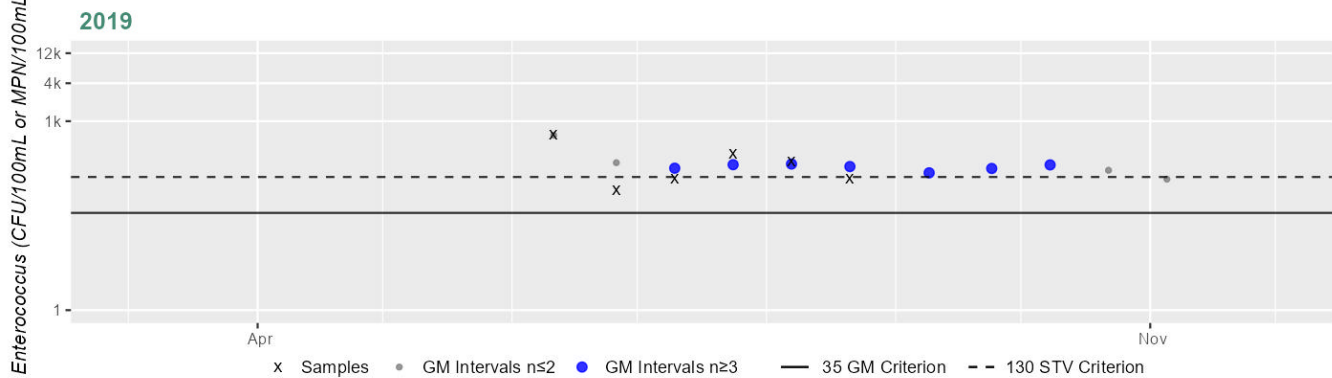
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 NSRWA\_Willow St. Bridge - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	190
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	3
%n>STV	50%

#### Cumulative %GMI Exceedance

Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)

Summary
South River (MA94-09): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5819 sq mi (93%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

**Secondary Contact Recreation**

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

The Secondary Contact Recreation Use for the South River (MA94-09) is assessed as Not Supporting with the prior Enterococcus impairment being carried forward based on a re-evaluation of bacteria data not meeting the threshold at three stations (one in 2001, one in 2006 and one in 2019). The prior Alert identified for Algae (i.e. a dramatic growth of filamentous green algae occurring at the upstream end of this AU during the smelt spawning season (MassDEP 2006)) is being removed from the Recreational Uses but will continue to be maintained under the Aesthetics Use. The shellfish growing areas (0.5819 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 Secondary Contact Recreation Use of South River. MassDEP and North South River Watershed Association (NSRWA) staff/volunteers collected Enterococcus bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the South River from 2001-2019 at 4 stations/combined stations. Samples were collected from the following stations/sample years: At the very upstream end of the AU at station W1539 [downstream Rt. 3A bridge, Marshfield] from Jun-Oct 2006 (n=5), a little further downstream at NSRWA\_Willow St. Bridge [upstream of bridge, left edge, Marshfield] from Jun-Aug 2019 (n=6), halfway down the AU at combined station “W0919 & NSRWA\_Julian St. Bridge” [Julian St/Bayberry Rd bridge, Scituate/Marshfield & downstream of bridge, right edge, Marshfield] from Jul-Sep 2001 (historic n=3) and Jun-Sep 2019 (current n=16) and at the downstream end of the AU at NSRWA\_North River Mouth [Edge of intertidal, straight out from parking area, Scituate] from Jun-Aug 2019 (n=6). Analysis of the single year limited frequency Enterococcus datasets from stations W1539 (historic) and NSRWA\_Willow St. Bridge (current) both indicated 100% of intervals had GMs >68 CFU/100ml, in addition at Willow St. Bridge 2 samples exceeded the 252 CFU/100ml STV, and the overall GM was 190 CFU/100ml (indicative of an Enterococcus impairment in both cases). Further downstream, analysis of the current single year high frequency/limited frequency Enterococcus datasets from combined station “W0919 & NSRWA\_Julian St. Bridge” and NSRWA\_North River Mouth respectively indicated 0% of intervals had GMs >68 CFU/100ml and no samples exceeded the 252 CFU/100ml STV in both cases, which meets 2024 CALM guidance. However, it must be noted that analysis of the historic single year limited frequency Enterococcus dataset at combined station “W0919 & NSRWA\_Julian St. Bridge” in 2001, indicated 100% of intervals had GMs >68 CFU/100ml (maximum 360 CFU/100ml) which is indicative of an Enterococcus impairment.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0919	MassDEP	Water Quality	South River	[Julian Street/Bayberry Road bridge, Scituate/Marshfield]	42.131403	-70.688001
W1539	MassDEP	Water Quality	South River	[downstream Route 3A bridge, Marshfield]	42.094494	-70.717896
NSRWA_Julian St. Bridge	North South River Watershed Association	Water Quality	South River	Downstream of bridge, right edge, Marshfield	42.131450	-70.687960

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
NSRWA_North River Mouth	North South River Watershed Association	Water Quality	North River	Edge of intertidal, straight out from parking area, Scituate	42.161890	-70.707640
NSRWA_Willow St. Bridge	North South River Watershed Association	Water Quality	South River	Upstream of bridge, left edge, Marshfield	42.093190	-70.712490

## ***Bacteria Data***

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

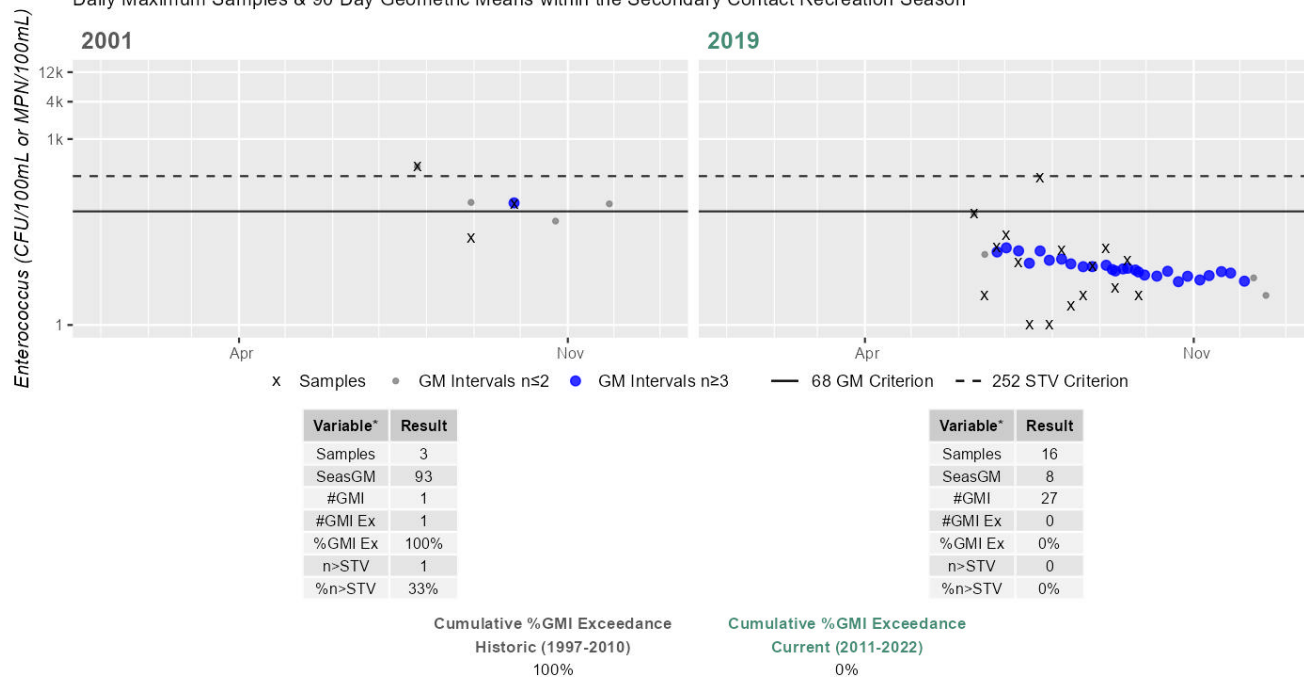
(MassDEP Undated 9) (MassDEP Undated 4) (NSRWA 2019) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W0919	MassDEP	Enterococci	07/26/01	09/27/01	3	25	360	93
W1539	MassDEP	Enterococci	06/20/06	10/11/06	5	75	180	106
NSRWA_Julian St. Bridge	North South River Watershed Association	Enterococci	06/11/19	09/26/19	16	1	240	8
NSRWA_North River Mouth	North South River Watershed Association	Enterococci	06/11/19	08/21/19	6	0	11	0
NSRWA_Willow St. Bridge	North South River Watershed Association	Enterococci	06/11/19	08/21/19	6	80	600	190

### Station MASSDEP\_W0919 & NSRWA\_Julian St. Bridge - Enterococcus

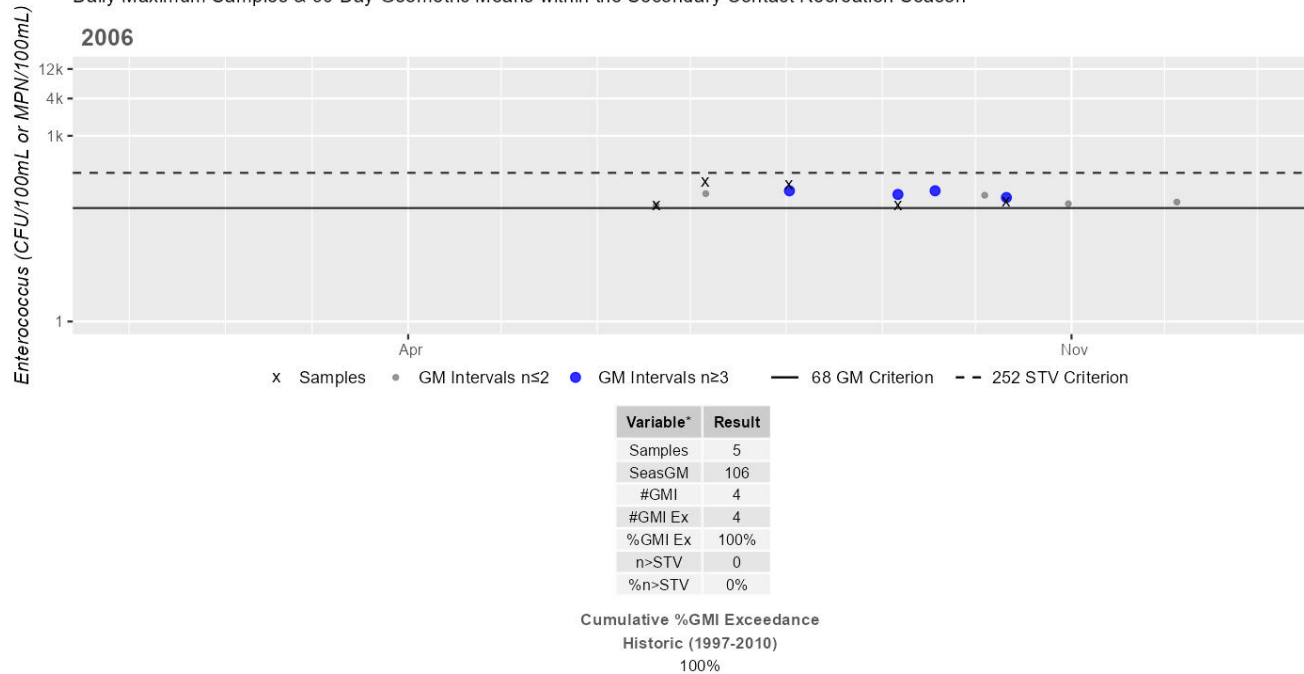
Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W1539 - Enterococcus

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

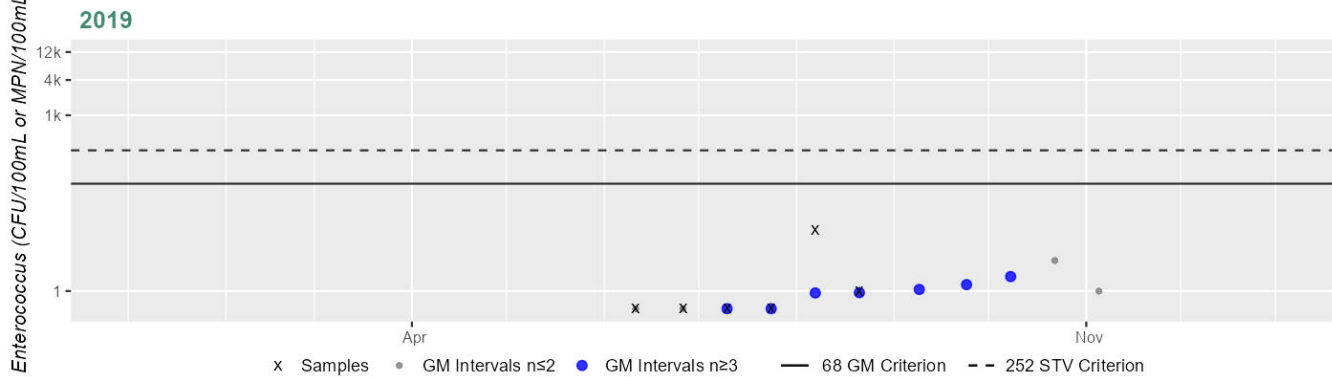


\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;  
"Recent 5 Years" may not be consecutive as the analysis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



### Station NSRWA\_North River Mouth - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	0
#GMI	7
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

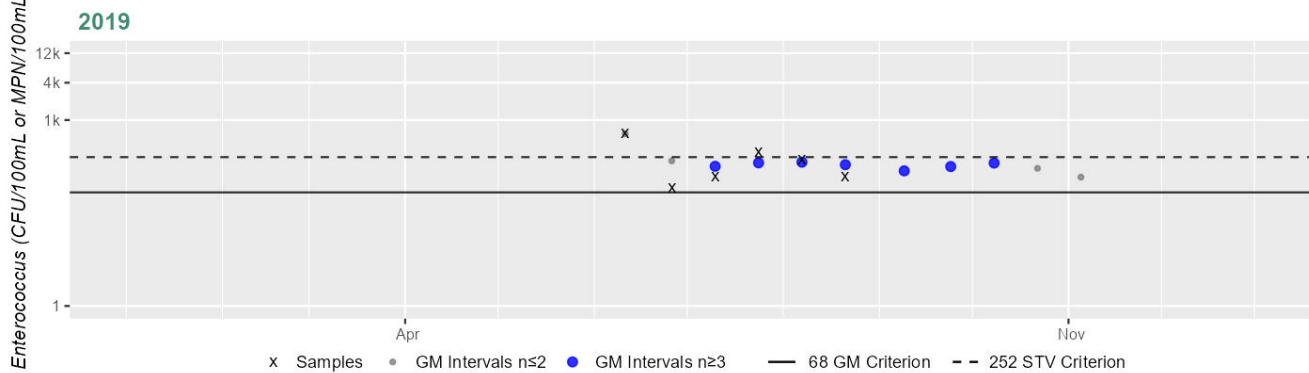
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 NSRWA\_Willow St. Bridge - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	190
#GMI	7
#GMI Ex	7
%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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 6)

Summary
South River (MA94-09): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5819 sq mi (93%). 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.

## South Triangle Pond (MA94149)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	17 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for South Triangle Pond (MA94149) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Studleys Pond (MA94151)

<b>Location:</b>	Rockland.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	25 ACRES
<b>Classification/Qualifier:</b>	B: WWF (impoundment on river designated B/WWF)

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	Fecal Coliform	--	Unchanged
5	5	PFAS in Fish Tissue	--	Added

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
PFAS in Fish Tissue	Source Unknown (N)	--	X	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO
<b>2024/26 Use Attainment Summary</b>	

The Fish Consumption Use for Studleys Pond (MA94151) is assessed as Not Supporting with a new impairment being added for PFAS in Fish Tissue. Fish toxics sampling was conducted in Studleys Pond at station F0482 (PFAS Study ID 36) [on French Stream in impoundment (Studleys Pond) of Studleys Pond Dam (NAT ID: MA00763), Rockland] on 09/07/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. MDPH issued a site-specific advisory for PFAS in Studleys Pond (referred to by MDPH as "Studley Pond") in their May 2024 Freshwater Fish Consumption Advisory List and retained it in the January 2025 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. No source of PFAS has been identified at this time.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
F0482	MassDEP	Fish Toxics	French Stream/Studleys Pond	[on French Stream in impoundment (Studleys Pond) of Studleys Pond Dam (NAT ID: MA00763), Rockland]	42.120072	-70.920122

## Fish Tissue Data

### Summary of Fish Tissue Data and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP 2023) (MassDEP Undated 7)

Summary
Fish toxics sampling was conducted in Studleys Pond (MA94151) at station F0482 (PFAS Study ID 36) [on French Stream in impoundment (Studleys Pond) of Studleys Pond Dam (NAT ID: MA00763), Rockland] on 09/07/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. Because of elevated PFAS measured in fish filets, MA DPH issued site-specific fish consumption advisories for Studleys Pond (referred to by MA DPH as Studley Pond) in their May 2024 Freshwater Fish Consumption Advisory List and retained them in the January 2025 list. The site-specific DPH advisories are indicative of a Fish Consumption Use impairment for PFAS in Fish Tissue for Studleys Pond (MA94151).

### MassDEP 2022 PFAS in Fish Tissue Data for Massachusetts Surface Waters (MassDEP 2023) (MassDEP Undated 7) (MA DPH 2023)

[ng/g = ppb. All PFBA, PFBS, and HFPO-DA (Genx) concentrations <MDL. ND indicates that the PFAS analyte was not detected in any of the composite samples (i.e., it was <MDL). Means weighted by the number of fish in the contributing composites were calculated for any PFAS analyte – waterbody – species combination where an analyte was detected in at least one sample; if a sample did not have the analyte detected, the concentration for that sample was set to ½\*MDL for the purposes of calculating a mean. Data are highlighted red per the fish consumption advisory thresholds summarized in Table 4.2 of MA DPH's 2023 Technical Support Document for the evaluation of PFAS in recreational waterbodies.]

[Species List: B = bluegill, P = pumpkinseed, YP = yellow perch]

Station Code	PFAS Study ID	Sample Date	Species	Mean PFHxS ng/g	Mean PFNA ng/g	Mean PFOA ng/g	Mean PFOS ng/g	Analytes with ≥ 1 Sample Qualified
F0482	36	09/07/2022	B	0.51	ND	ND	150.00	

Station Code	PFAS Study ID	Sample Date	Species	Mean PFHxS ng/g	Mean PFNA ng/g	Mean PFOA ng/g	Mean PFOS ng/g	Analytes with ≥ 1 Sample Qualified
F0482	36	09/07/2022	P	1.4	0.25	0.36	53.00	PFNA & PFOA
F0482	36	09/07/2022	YP	1.05	0.24	ND	66.60	PFNA

## Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Studleys Pond (MA94151) is Not Assessed.

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>No bacteria or other indicator data for Studleys Pond (MA94151) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting, with the prior Fecal Coliform impairment being carried forward.</p> <p>MassDEP staff conducted intermittent sampling for Studleys Pond as part of the Bacteria Source Tracking (BST) project in 2012. Two samples were collected from the outlet of the pond, with a maximum dry weather <i>E. coli</i> concentration of 488 MPN (it should be noted that not all BST data are in the MassDEP WPP Monitoring database, so are not all presented in bacteria tables below). Surface water sampling was conducted in Studley Pond at station W3301 (PFAS Study ID 36) on 09/07/2022 as part of a 2022 MassDEP funded project with ERG evaluating 40 PFAS analytes in selected fresh waters. The 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.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W3301	MassDEP	Water Quality	French Stream/Studleys Pond	[the default location representing co-located water/fish PFAS sampling, on French Stream in Studleys Pond impoundment, Rockland]	42.120072	-70.920122

## Bacteria Data

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

Summary
Two samples were collected from the outlet of the Studleys Pond AU (MA94151) in 2012, as part of the BST work for the AU downstream (French Stream). The max dry weather E.coli concentration at the outlet was 488MPN.

## Other Indicators

### Summary Statement(s) for MassDEP 2022 PFAS in Water Column Data (MassDEP 2023) (MassDEP Undated 5)

Summary
Surface water sampling was conducted in Studley Pond (MA94151) at station W3301 (PFAS Study ID 36) on 09/07/2022 as part of a 2022 MassDEP funded project with ERG evaluating 40 PFAS analytes in selected fresh waters. The 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.

### MassDEP 2022 PFAS in Water Column Data for Massachusetts Surface Waters (MassDEP 2023) (MassDEP Undated 5)

[HFPO-DA is also known as GenX; the  $\Sigma$ PFAS6 equals the sum of PFOA, PFOS, PFNA, PFHxS, PFDA, PFHpA (not all shown individually here); \* indicates the  $\Sigma$ PFAS6 concentration was qualified since data for one or more individual PFAS6 analytes were qualified; b = blank contamination qualifier, d = qualifier indicating precision of field duplicates did not meet project data quality objectives; j = 'estimated' value qualifier; ## = censored data.]

Station Code	PFAS Study ID	Sample Date	PFOA ng/L	PFOS ng/L	PFNA ng/L	PFHxS ng/L	PFBA ng/L	PFBS ng/L	HFPO-DA ng/L	$\Sigma$ PFAS6 ng/L
W3301	36	09/07/2022	43	80	5.9	37	16	4.7	<2.1	190.8*

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Studleys Pond (MA94151) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff conducted intermittent sampling for Studleys Pond as part of the Bacteria Source Tracking (BST) project in 2012. Two samples were collected from the outlet of the pond, with a maximum dry weather <i>E. coli</i> concentration of 488 MPN (it should be noted that not all BST data are in the MassDEP WPP Monitoring database, so are not all presented in bacteria tables below).

## Tack Factory Pond (MA94152)

<b>Location:</b>	Scituate.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	8 ACRES
<b>Classification/Qualifier:</b>	A: PWS, ORW (Tributary)

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fish Passage Barrier*)	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Tack Factory Pond (MA94152) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
No data are available, so the Aesthetics Use for Tack Factory Pond (MA94152) 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 Tack Factory Pond (MA94152) 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 Tack Factory Pond (MA94152) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected <i>E. coli</i> bacteria samples in Tack Factory Pond (an impoundment of First Herring Brook) at station W0896 [west/upstream at Cushing Highway (Rt. 3A), Scituate] from Jul-Oct 2001 (n=4). The historic data from this station 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
W0896	MassDEP	Water Quality	First Herring Brook/Tack Factory Pond	[in Tack Factory Pond (an impoundment of First Herring Brook) west/upstream at Cushing Highway (Route 3A), Scituate]	42.186586	-70.760871

## Bacteria Data

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

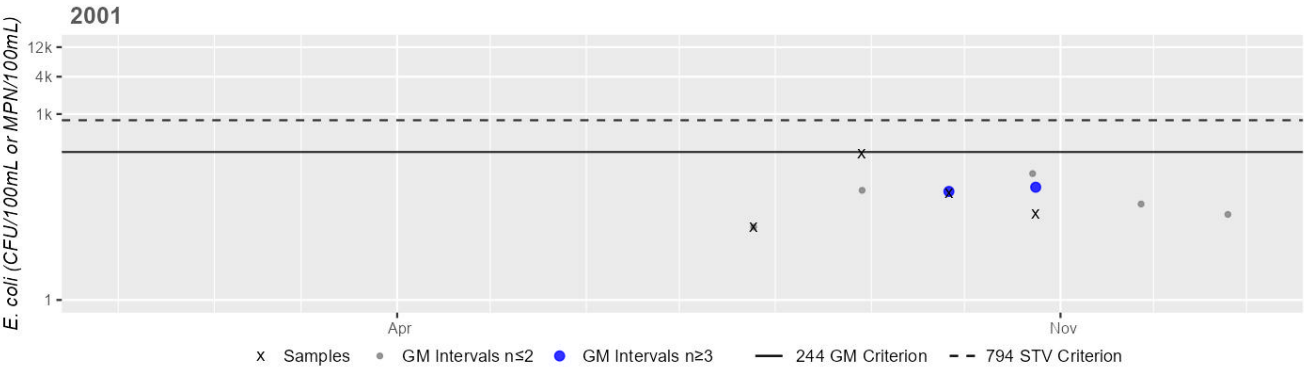
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0896	MassDEP	E. coli	07/25/01	10/24/01	4	15	230	45

Station MASSDEP\_W0896 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	45
#GMI	2
#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 Exceedances;  
%GMI Ex = % GMI Exceedances; 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.

## The Gulf (MA94-19)

<b>Location:</b>	Headwaters, outlet Hunters Pond, Scituate to confluence with Cohasset Cove just north of Border Street, Cohasset.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.13 SQUARE MILES
<b>Classification/Qualifier:</b>	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	61710	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	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 The Gulf (MA94-19) is Not Assessed.

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

The Gulf (MA94-19): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1106 sq mi (88%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.1106 sq mi (88%). There is insufficient information available to assess the Shellfish Harvesting Use because the growing areas within this AU are classified as either entirely prohibited or a combination of prohibited and approved, conditionally approved, and/or restricted. There is insufficient information available to delist the existing Fecal Coliform impairment so the Shellfish Harvesting Use is evaluated as Not Supporting.

### Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
MB10.1	West Cohasset Harbor	Prohibited	0.11059	87.9%

### Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

### 2024/26 Use Attainment Summary

No data are available, so the Aesthetics Use for The Gulf (MA94-19) 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 The Gulf (MA94-19) so it is assessed as having Insufficient Information. The shellfish growing areas (0.1106 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 The Gulf.

### Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Summary
The Gulf (MA94-19): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1106 sq mi (88%). 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 The Gulf (MA94-19) so it is assessed as having Insufficient Information. The shellfish growing areas (0.1106 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 The Gulf.

## Shellfish Growing Area Classifications

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

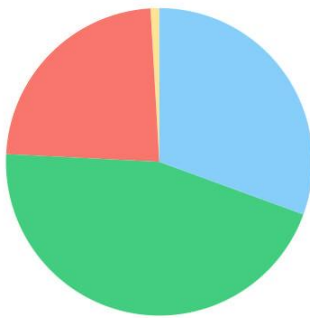
Summary
The Gulf (MA94-19): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1106 sq mi (88%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

## Third Herring Brook (MA94-27)

<b>Location:</b>	Headwaters, outlet Jacobs Pond, Norwell/Hanover to mouth at confluence with North River, Norwell/Hanover (area associated with North River Corridor designated as ORW).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	5.3 MILES
<b>Classification/Qualifier:</b>	B: ORW ('ORW' applies only to portion in North River Corridor)

### Third Herring Brook (MA94-27)

Watershed Area: 10.33 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	10.33	6.41	2.69	1.98
Agriculture	0.9%	0.9%	1.1%	0.9%
Developed	23.3%	23.9%	14%	14.4%
Natural	45.2%	45.4%	37.5%	35.6%
Wetland	30.6%	29.8%	47.4%	49.1%
Impervious	12.2%	12.2%	6.9%	6.7%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	Escherichia Coli (E. Coli)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (Y)	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 Third Herring Brook (MA94-27) is Not Assessed.

### Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Third Herring Brook (MA94-27) is assessed as Fully Supporting based on the lack of objectionable conditions observed at 3 stations during summers 2016 and/or 2017. MassDEP staff conducted water quality sampling at 3 stations throughout the downstream half of this Third Herring Brook AU during the summers of 2016 and 2017 for the Bacteria Source Tracking project (BST). The sites are described from upstream to downstream as follows: at the Tiffany Road/East Street crossing in Norwell/Hanover in 2016 (W0922, n=3), west of Tiffany Road, within the stream channel just upstream of the old dam location in Norwell in 2017 (W2741, n=2), and at the Broadway/River Street bridge in Hanover/Norwell in 2016 and 2017 (W1509 n=3 and 2, respectively). There were generally no noted persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0922	MassDEP	Water Quality	Third Herring Brook	[Tiffany Road/East Street crossing, Norwell/Hanover]	42.130444	-70.816438
W1509	MassDEP	Water Quality	Third Herring Brook	[Broadway/River Street bridge, Hanover/Norwell]	42.117216	-70.809245
W2741	MassDEP	Water Quality	Third Herring Brook	[west of Tiffany Road, within stream channel just upstream of old dam location, Norwell]	42.122784	-70.809074

### Aesthetic Observations

#### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W0922	2016	3	Aesthetic observations were made by MassDEP field sampling crews at Station W0922 on Third Herring Brook (MA94-27) during 3 site visits between Jun 2016 and Aug 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W1509	2016	3	Aesthetic observations were made by MassDEP field sampling crews at Station W1509 on Third Herring Brook (MA94-27) during 3 site visits between Jun 2016 and Aug 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W1509	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W1509 on Third Herring Brook (MA94-27) during 2 site visits between Aug 2017 and Sep 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2741	2017	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2741 on Third Herring Brook (MA94-27) during 2 site visits between Aug 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 9) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W0922	2016	3	3	0
W1509	2016	3	3	0
W1509	2017	2	2	0
W2741	2017	2	2	0

**MassDEP Aesthetics Observations (2011-2020)** (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W0922	Third Herring Brook	2016	Aquatic Plant Density, Overall	None	3	3
W0922	Third Herring Brook	2016	Color	Brownish	1	3
W0922	Third Herring Brook	2016	Color	Light Yellow/Tan	2	3
W0922	Third Herring Brook	2016	Odor	Musty (Basement)	2	3
W0922	Third Herring Brook	2016	Odor	None	1	3



<b>Station Code</b>	<b>Waterbody</b>	<b>Data Year</b>	<b>Parameter</b>	<b>Result</b>	<b>Result Count</b>	<b>Total Field Sheet Count</b>
W0922	Third Herring Brook	2016	Periphyton Density, Filamentous	None	3	3
W0922	Third Herring Brook	2016	Periphyton Density, Film	Sparse	3	3
W0922	Third Herring Brook	2016	Turbidity	Moderately Turbid	2	3
W0922	Third Herring Brook	2016	Turbidity	Slightly Turbid	1	3
W1509	Third Herring Brook	2016	Aquatic Plant Density, Overall	None	3	3
W1509	Third Herring Brook	2016	Color	Light Yellow/Tan	3	3
W1509	Third Herring Brook	2016	Odor	None	3	3
W1509	Third Herring Brook	2016	Periphyton Density, Filamentous	None	3	3
W1509	Third Herring Brook	2016	Periphyton Density, Film	Sparse	3	3
W1509	Third Herring Brook	2016	Turbidity	Moderately Turbid	1	3
W1509	Third Herring Brook	2016	Turbidity	Slightly Turbid	2	3
W1509	Third Herring Brook	2017	Aquatic Plant Density, Overall	None	2	2
W1509	Third Herring Brook	2017	Color	Light Yellow/Tan	1	2
W1509	Third Herring Brook	2017	Color	None	1	2
W1509	Third Herring Brook	2017	Odor	None	2	2
W1509	Third Herring Brook	2017	Periphyton Density, Filamentous	None	2	2
W1509	Third Herring Brook	2017	Periphyton Density, Film	Sparse	2	2
W1509	Third Herring Brook	2017	Turbidity	Moderately Turbid	1	2
W1509	Third Herring Brook	2017	Turbidity	Slightly Turbid	1	2
W2741	Third Herring Brook	2017	Aquatic Plant Density, Overall	None	2	2

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2741	Third Herring Brook	2017	Color	Light Yellow/Tan	1	2
W2741	Third Herring Brook	2017	Color	None	1	2
W2741	Third Herring Brook	2017	Odor	None	2	2
W2741	Third Herring Brook	2017	Periphyton Density, Filamentous	None	2	2
W2741	Third Herring Brook	2017	Periphyton Density, Film	None	1	2
W2741	Third Herring Brook	2017	Periphyton Density, Film	Sparse	1	2
W2741	Third Herring Brook	2017	Turbidity	Moderately Turbid	1	2
W2741	Third Herring Brook	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 Third Herring Brook (MA94-27) 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 2 stations in 2016 and 2017. MassDEP staff collected *E. coli* (EC) and Enterococcus (Ent) bacteria samples in Third Herring Brook from 2016-2017 at 3 stations for the purpose of source tracking, as part of the Bacteria Source Tracking Project (BST). Samples were collected from the following stations/sample years throughout the downstream half of this AU, from upstream to downstream as follows: W0922 [Tiffany Rd/E St crossing, Norwell/Hanover] in 2016 (EC n=3), W2741 [W of Tiffany Rd, within stream channel just upstream of old dam location, Norwell] from 2017 (EC n=2) and W1509 [BRdway/River St bridge, Hanover/Norwell] from 2016-2017 (EC n=2-3/yr & Ent n=1). Analysis of the single year limited frequency *E. coli* datasets from stations W0922 and W1509 indicated 100% of intervals had GMs >126 CFU/100ml in both cases, which is indicative of an Escherichia Coli (E. Coli) impairment. Conditions appeared to be worst at station W1509 in 2016, with 3 samples exceeding the 410 CFU/100ml STV at that location and a maximum concentration of 712 CFU/100ml. The available *E. coli* data at W2741 and Enterococcus data at W1509 are both too limited to assess the Primary Contact Recreation Use according to the 2024 CALM. It should also be noted that samples were collected for BST human marker analysis at station W1509 in 2016, but the final result indicated “no evidence” of a human sewage source.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0922	MassDEP	Water Quality	Third Herring Brook	[Tiffany Road/East Street crossing, Norwell/Hanover]	42.130444	-70.816438
W1509	MassDEP	Water Quality	Third Herring Brook	[Broadway/River Street bridge, Hanover/Norwell]	42.117216	-70.809245
W2741	MassDEP	Water Quality	Third Herring Brook	[west of Tiffany Road, within stream channel just upstream of old dam location, Norwell]	42.122784	-70.809074

### Bacteria Data

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

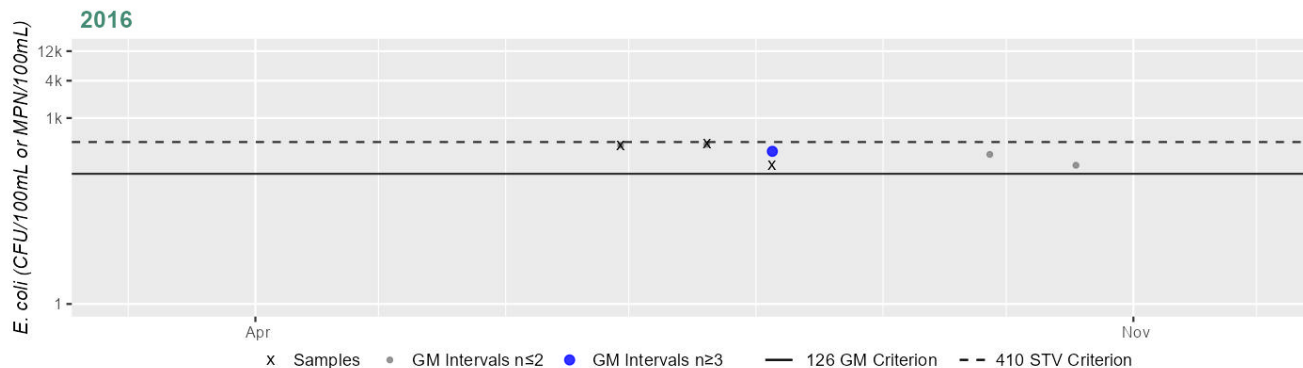
Analysis) (MassDEP Undated 9) (MassDEP Undated 5)

[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
W0922	MassDEP	E. coli	06/28/16	08/04/16	3	173	387	290
W1509	MassDEP	E. coli	06/28/16	08/04/16	3	579	712	632
W1509	MassDEP	Enterococci	10/26/16	10/26/16	1	31	31	31
W1509	MassDEP	E. coli	08/03/17	09/12/17	2	93	326	174
W2741	MassDEP	E. coli	08/03/17	09/12/17	2	110	121	115

### Station MASSDEP\_W0922 - *Escherichia coli*

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



Variable*	Result
Samples	3
SeasGM	290
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

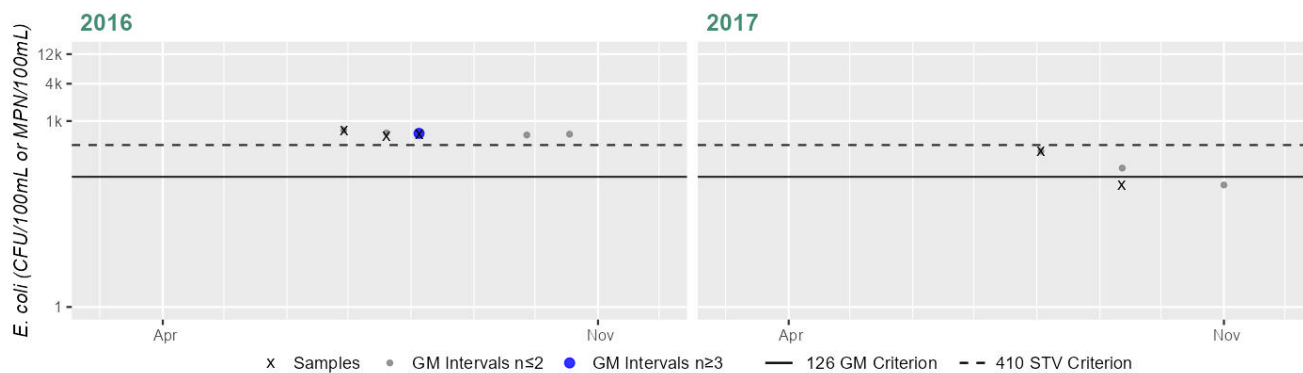
Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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\_W1509 - *Escherichia coli*

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



Variable*	Result
Samples	3
SeasGM	632
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	3
%n>STV	100%

Variable*	Result
Samples	2
SeasGM	174
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

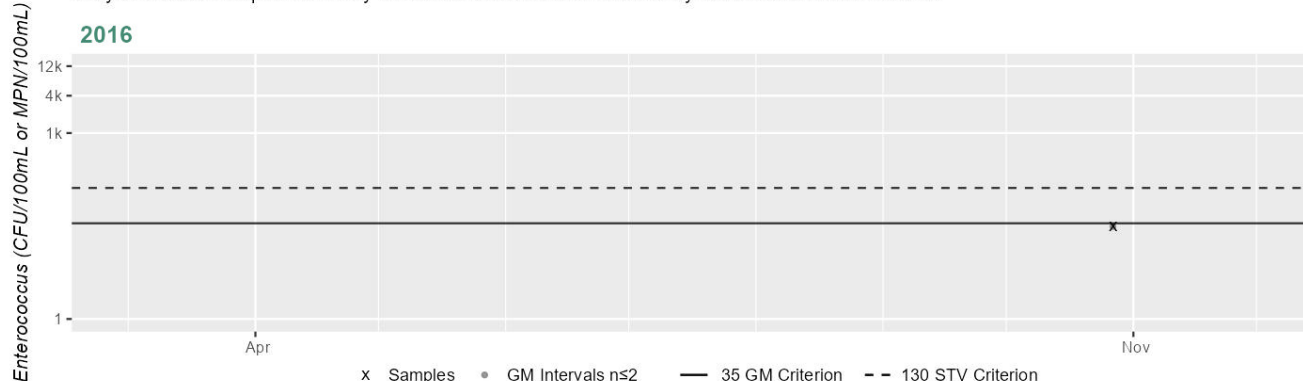
Current (2011-2022)

100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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\_W1509 - Enterococcus

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



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

Cumulative %GMI Exceedance

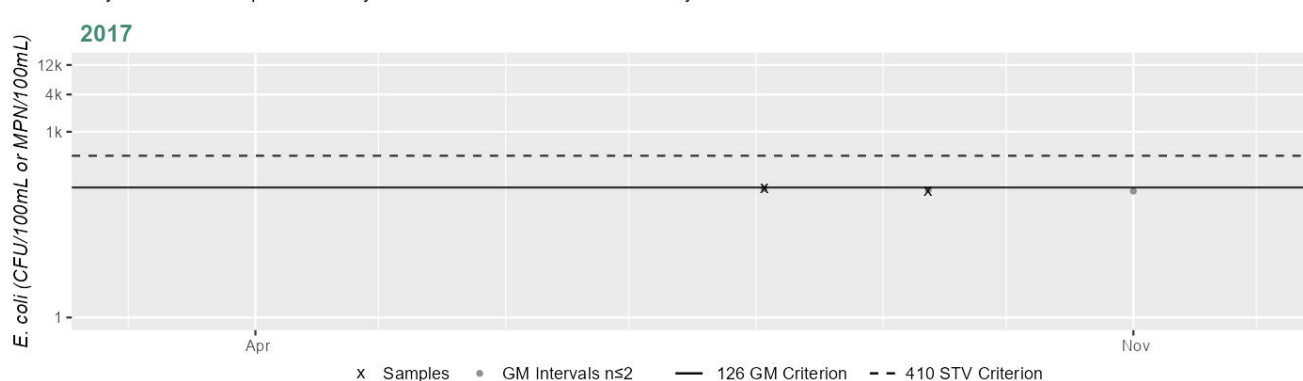
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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\_W2741 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	115
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 2016 & 2017 at 5 sites on the Third Herring Brook AU (MA94-27), with E.coli concentrations ranging 110-3,873MPN. Hotspots were situated in the areas of South St & Broadway/River St. It should also be noted that sites in the middle of the AU were selected to bracket the old "Tack Factory Dam", which was removed in December 2016. Dry weather bacteria concentrations at did not appear to be affected by the dam removal, with concentrations being <150MPN before and after the removal. Samples were collected for human marker analysis at Broadway/River St in 2016, with a result of "no evidence" of a human source. Additional work was conducted in 2016-2018 on a couple of unnamed tributaries, with a max E.coli concentration of 1,414MPN found on a tributary locally known as "Copeland Tannery Brook" (not an AU), which discharges to Third Herring Brook downstream of Meadow Brook Rd. Despite the elevated bacteria concentrations on this tributary, no correctable sources were ever found.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Third Herring Brook (MA94-27) 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 2 stations in 2001, 2006, 2016 &amp; 2017. MassDEP staff collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) &amp; the current IR window (2011-2022) in Third Herring Brook from 2001-2017 at 3 stations for the purpose of source tracking, as part of the Bacteria Source Tracking Project (BST). Samples were collected from the following stations/sample years throughout the downstream half of this AU, from upstream to downstream as follows: W0922 [Tiffany Rd/E St crossing, Norwell/Hanover] from Jul-Oct 2001 (historic n=4) and Jun-Aug 2016 (current n=3), W2741 [W of Tiffany Rd, within stream channel just upstream of old dam location, Norwell] from Aug-Sep 2017 (n=2), W1509 [BRdway/River St bridge, Hanover/Norwell] from Jun-Oct 2006 (historic n=5) and 2016-2017 (current n=2-3/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 single year limited frequency <i>E. coli</i> datasets from stations W0922 and W1509 indicated 100% of intervals had GMs &gt;244 CFU/100ml in both cases, which is indicative of an Escherichia Coli (E. Coli) impairment. The available <i>E. coli</i> data at W2741 are too limited to assess the Secondary Contact Recreation Use according to the 2024 CALM. It should also be noted that samples were collected for BST human marker analysis at station W1509 in 2016, but the final result indicated "no evidence" of a human sewage source.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0922	MassDEP	Water Quality	Third Herring Brook	[Tiffany Road/East Street crossing, Norwell/Hanover]	42.130444	-70.816438
W1509	MassDEP	Water Quality	Third Herring Brook	[Broadway/River Street bridge, Hanover/Norwell]	42.117216	-70.809245
W2741	MassDEP	Water Quality	Third Herring Brook	[west of Tiffany Road, within stream channel just upstream of old dam location, Norwell]	42.122784	-70.809074

## Bacteria Data

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

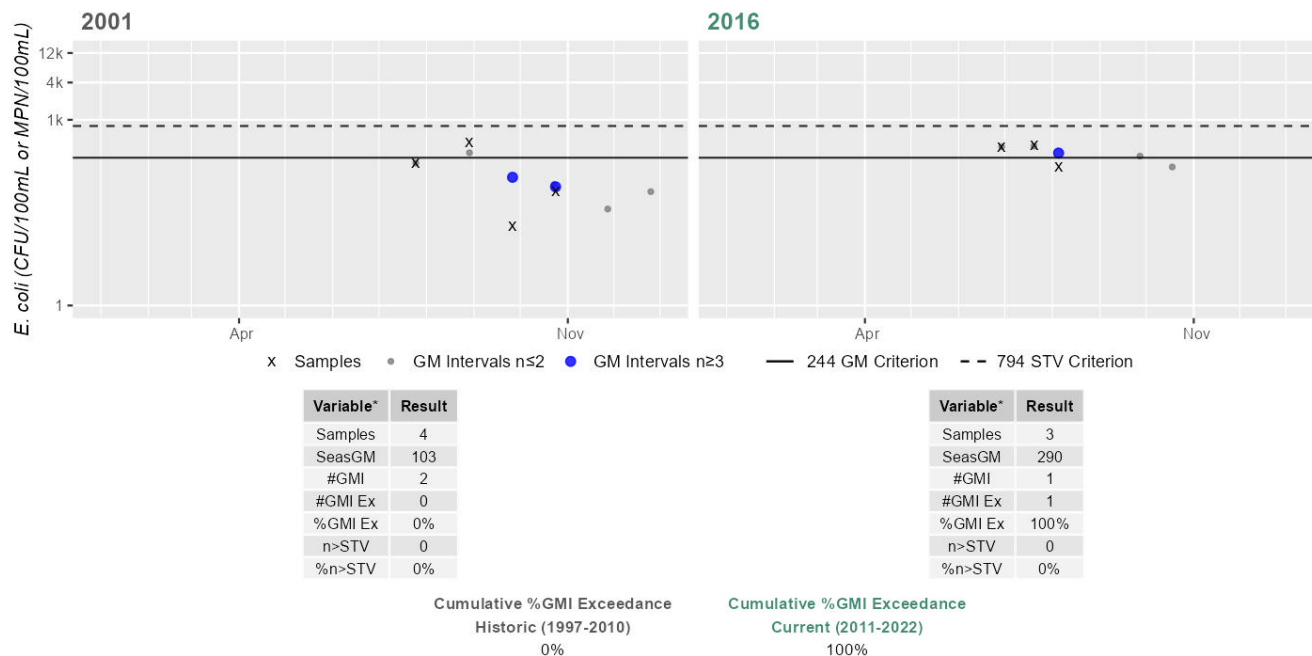
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0922	MassDEP	E. coli	07/25/01	10/24/01	4	19	430	103
W0922	MassDEP	E. coli	06/28/16	08/04/16	3	173	387	290
W1509	MassDEP	E. coli	06/20/06	10/11/06	5	20	320	125
W1509	MassDEP	E. coli	06/28/16	08/04/16	3	579	712	632
W1509	MassDEP	E. coli	08/03/17	09/12/17	2	93	326	174
W2741	MassDEP	E. coli	08/03/17	09/12/17	2	110	121	115

#### Station MASSDEP\_W0922 - Escherichia coli

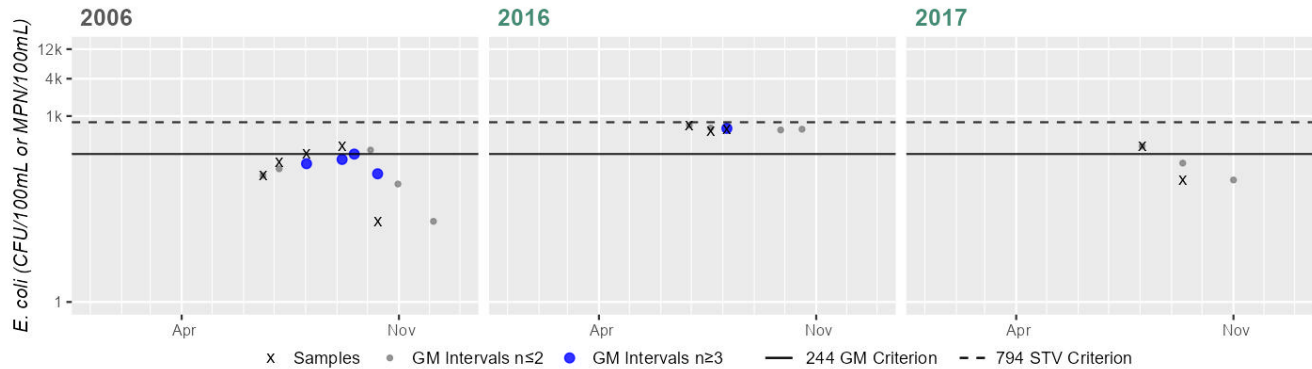
Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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\_W1509 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	125
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	3
SeasGM	632
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	2
SeasGM	174
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

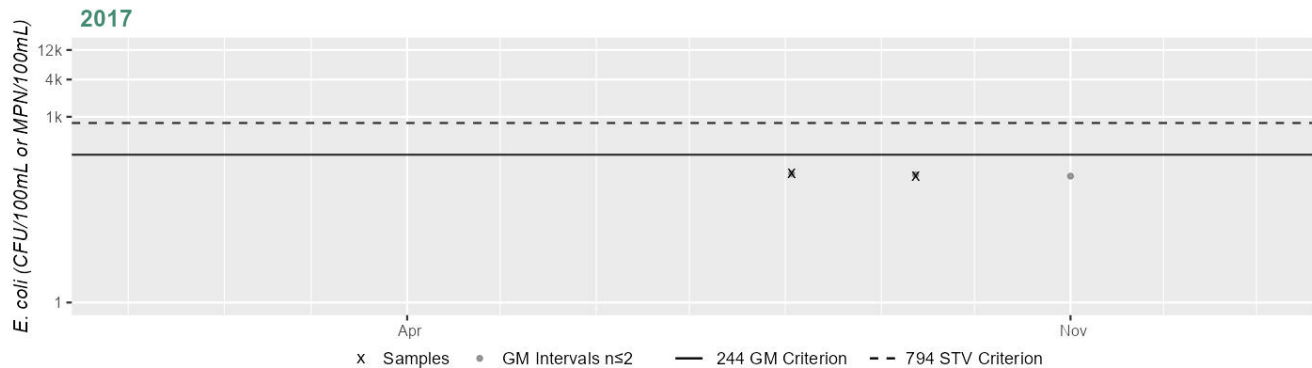
Cumulative %GMI Exceedance  
Historic (1997-2010)  
0%

Cumulative %GMI Exceedance  
Current (2011-2022)  
100%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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\_W2741 - *Escherichia coli*

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



Variable*	Result
Samples	2
SeasGM	115
#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 Exceedances;  
%GMI Ex = % GMI Exceedances; 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.



## Torrey Pond (MA94157)

<b>Location:</b>	Norwell.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	19 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Torrey Pond (MA94157) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fanwort*)	--	Unchanged
4c	4c	(Fish Passage Barrier*)	--	Unchanged

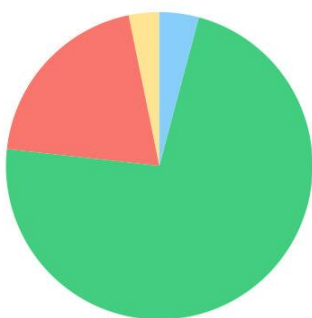
<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--

## Town Brook (MA94-42)

<b>Location:</b>	Headwaters, outlet Billington Sea, Plymouth to just upstream of the Route 3A bridge, Plymouth (excluding the approximately 0.07 mile through Arms House Pond).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1.5 MILES
<b>Classification/Qualifier:</b>	B

### Town Brook (MA94-42)

Watershed Area: 8.99 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	8.99	6.44	3.98	2.89
Agriculture	3.2%	4.2%	6.4%	8.2%
Developed	20%	26.2%	9.2%	11.8%
Natural	72.6%	64.5%	77.4%	71.7%
Wetland	4.2%	5.1%	6.9%	8.3%
Impervious	10.8%	14.3%	4.6%	5.9%

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Curly-leaf Pondweed*)	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	--	--	--	--

## 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 Brook (MA94-42) 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 Brook (MA94-42) 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 Town Brook (MA94-42) 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 Town Brook (MA94-42) 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 Town Brook at station W1512 [at footbridge ~500 ft downstream from Spring Lane, Plymouth] from Jun-Oct 2006 (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 89 CFU/100ml, which meets 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
W1512	MassDEP	Water Quality	Town Brook	[at footbridge approximately 500 feet downstream from Spring Lane, Plymouth]	41.954362	-70.663983

### Bacteria Data

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

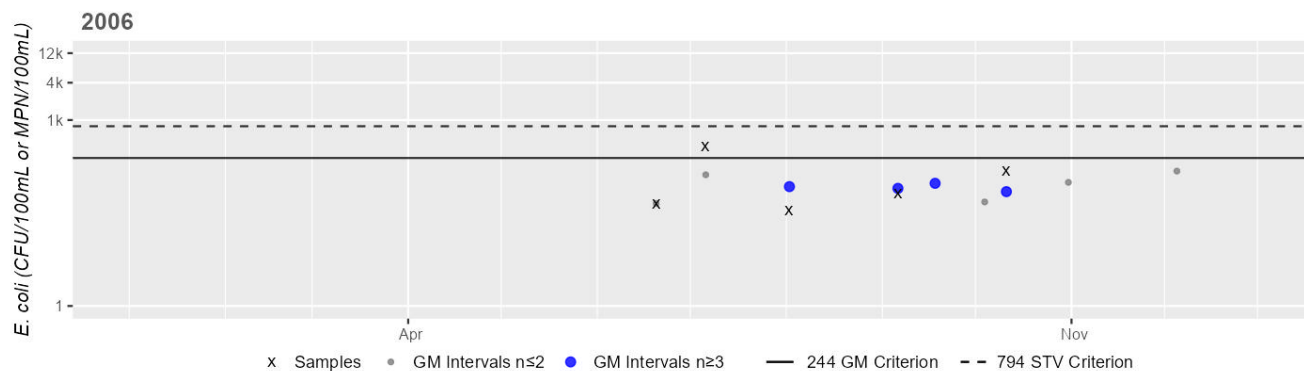
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W1512	MassDEP	E. coli	06/20/06	10/11/06	5	35	380	89

# Station MASSDEP\_W1512 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	89
#GMI	4
#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 Exceedances;  
 %GMI Ex = % GMI Exceedances; 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.

## Triangle Pond (MA94160)

<b>Location:</b>	Plymouth.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	14 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	2	Harmful Algal Blooms	--	Removed

### Supporting Information for Removed Impairments

<b>2022 Removed Impairment</b>	<b>Removal Reason</b>	<b>Removal Comment</b>
Harmful Algal Blooms	Applicable WQS attained; original basis for listing was incorrect	Triangle Pond (MA94160) was first listed as impaired for Harmful Algal Blooms in the 2022 reporting cycle. The impairment decision was based on C-HAB postings being reported to MDPH for 86 days in 2019 (Bailey, Logan April 26, 2023). However, these data were incorrectly associated with Triangle Pond (MA94160) in Plymouth as opposed to Triangle Pond in Northampton. Therefore the Harmful Algal Blooms impairment is being delisted for Triangle Pond (MA94160) in Plymouth.

### Harmful Algal Blooms

Please see removal comment above.

### 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 Triangle Pond (MA94160) is Not Assessed.

## Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Too limited data are available to evaluate the Aesthetics Use of Triangle Pond (MA94160), so it is assessed as having Insufficient Information. MDPH C-HAB bloom posting data from 2019 were previously reported in the 2022 IR for Triangle Pond, resulting in an impairment of the Aesthetics and Recreational uses. Since these data were incorrectly associated with this AU, the prior Harmful Algal Blooms impairment should be delisted from the Aesthetics Use.

## Algal Bloom Information

**Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

C-HAB Summary Statement
MDPH C-HAB bloom posting data from 2019 were previously reported in the 2022 IR for Triangle Pond (MA94160), resulting in an impairment of the Aesthetics and recreational uses. Since these data were incorrectly associated with this AU, the prior Harmful Algal Blooms impairment should be delisted from the Aesthetics and Primary/Secondary Contact Recreation Uses.

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
--------------------------------

Too limited data are available to evaluate the Primary Contact Recreation Use of Triangle Pond (MA94160), so it is assessed as having Insufficient Information. MDPH C-HAB bloom posting data from 2019 were previously reported in the 2022 IR for Triangle Pond, resulting in an impairment of the Aesthetics and Recreational uses. Since these data were incorrectly associated with this AU, the prior Harmful Algal Blooms impairment should be delisted from the Primary Contact Recreation Use. Town of Plymouth (PLY) collected Secchi depth data at deep hole station PLY\_Triangle\_DeepHole in 2015. At PLY\_Triangle\_DeepHole (station depth=5m) the Secchi depth was measured to be 4.63 m (n=1) which meets the 1.2 m (4 ft) threshold, however the data were too limited (n <3) to evaluate water clarity.

### **Other Indicators**

#### **Summary Statement for 2011-2022 Cyanobacteria Cell Count and Cyanotoxin Data, and Secchi Depth Data** (MassDEP Undated 3)

<b>Data Year(s)</b>	<b>Summary</b>
2015	In Triangle Pond (MA94160), the Town of Plymouth (PLY) collected Secchi data at PLY_Triangle_DeepHole [41.819546, -70.575848, Deep spot] in 2015. At station PLY_Triangle_DeepHole (station depth=5 m) the Secchi depth (n=1) was measured to be 4.63 m on Sep 16, 2015 indicating water clarity meeting the 1.2 m (4 ft) threshold.

### **Secondary Contact Recreation**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	NO

<b>2024/26 Use Attainment Summary</b>
Too limited data are available to evaluate the Secondary Contact Recreation Use of Triangle Pond (MA94160), so it is assessed as having Insufficient Information. MDPH C-HAB bloom posting data from 2019 were previously reported in the 2022 IR for Triangle Pond, resulting in an impairment of the Aesthetics and Recreational uses. Since these data were incorrectly associated with this AU, the prior Harmful Algal Blooms impairment should be delisted from the Secondary Contact Recreation Use.



## Tussock Brook (MA94-67)

<b>Location:</b>	Headwaters, north of Woodbridge Road, Duxbury to tidal portion west of Route 3, Kingston.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1.1 MILES
<b>Classification/Qualifier:</b>	B

### Tussock Brook (MA94-67)

Watershed Area: 0.68 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	0.68	0.68	0.20	0.20
Agriculture	7%	7%	0%	0%
Developed	28.8%	28.8%	27.8%	27.8%
Natural	45.7%	45.7%	42.2%	42.2%
Wetland	18.5%	18.5%	30%	30%
Impervious	16.5%	16.5%	16.1%	16.1%

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

## Recommendations

2024/26 Recommendations
2024/26IR [Bacteria, Medium] High frequency follow-up monitoring should be conducted in Tussock Brook (MA94-67), to confirm if <i>E. coli</i> bacteria are impairing the Recreational uses. Additional samples should be collected at {W2371} which is upstream at Rt. 3, Kingston (upstream of tide gate). A limited number of samples (2) were collected here in 2012 and both of these exceeded the primary and secondary STV threshold i.e. 1,330 & 3,080 CFU/100ml. Additional sporadic BST sampling between 2011 and 2016 documented a maximum <i>E. coli</i> concentration of 12,997 MPN/100ml upstream of the tide gate (at W2371). A 2011 restoration plan developed by the Jones River Watershed Association prioritized the removal of this tide-gate, though it currently still stands. It would be beneficial to collect additional samples at a high frequency, both before and after the removal of the tide gate. This is of medium 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 Tussock Brook (MA94-67) is Not Assessed.	

### Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	NO
2024/26 Use Attainment Summary	
Too limited data are available to assess the Aesthetics Use for Tussock Brook (MA94-67), so it is assessed as having Insufficient Information. MassDEP staff recorded limited aesthetics observations at two stations for this Tussock Brook AU, during the summers of 2011 and 2012 for the Bacteria Source Tracking project (BST); about two-thirds of the way down the AU from the outlet of the ~ 6 acre unnamed impoundment, east of Rt. 3, straddling the Kingston/Duxbury line (W2314, n=1-2/yr in 2011 & 2012) and at the downstream end of the AU upstream at Rt. 3 in Kingston (upstream of tide gate) (W2371 n=2 in 2012). There were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded.	

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2314	MassDEP	Water Quality	Tussock Brook	[from outlet of the approximately 6 acre unnamed impoundment, east of Route 3, straddling the Kingston/Duxbury border]	42.003955	-70.722156
W2371	MassDEP	Water Quality	Tussock Brook	[upstream at Route 3, Kingston (upstream of tidegate)]	41.999749	-70.722019

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2314	2011	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2314 on Tussock Brook (MA94-67) during 2 site visits between Jun 2011 and Aug 2011. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2314	2012	1	Aesthetic observations were made by MassDEP field sampling crews at Station W2314 on Tussock Brook (MA94-67) during 1 site visit on Jun 12, 2012. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).
W2371	2012	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2371 on Tussock Brook (MA94-67) during 2 site visits between Jul 2012 and Aug 2012. 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 9) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2314	2011	2	2	0
W2314	2012	1	1	0
W2371	2012	2	2	0

### MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2314	Tussock Brook	2011	Aquatic Plant Density, Overall	None	1	2

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2314	Tussock Brook	2011	Aquatic Plant Density, Overall	Very Dense	1	2
W2314	Tussock Brook	2011	Color	None	2	2
W2314	Tussock Brook	2011	Odor	Other (Saltwater)	1	2
W2314	Tussock Brook	2011	Odor	Sulfide (rotten egg)	1	2
W2314	Tussock Brook	2011	Periphyton Density, Filamentous	None	2	2
W2314	Tussock Brook	2011	Periphyton Density, Film	None	2	2
W2314	Tussock Brook	2011	Turbidity	Moderately Turbid	1	2
W2314	Tussock Brook	2011	Turbidity	Slightly Turbid	1	2
W2314	Tussock Brook	2012	Aquatic Plant Density, Overall	None	1	1
W2314	Tussock Brook	2012	Color	None	1	1
W2314	Tussock Brook	2012	Odor	Other (Wetland/Marsh)	1	1
W2314	Tussock Brook	2012	Periphyton Density, Filamentous	None	1	1
W2314	Tussock Brook	2012	Periphyton Density, Film	None	1	1
W2314	Tussock Brook	2012	Turbidity	Slightly Turbid	1	1
W2371	Tussock Brook	2012	Aquatic Plant Density, Overall	None	2	2
W2371	Tussock Brook	2012	Color	Light Yellow/Tan	2	2
W2371	Tussock Brook	2012	Odor	None	2	2
W2371	Tussock Brook	2012	Periphyton Density, Filamentous	None	2	2
W2371	Tussock Brook	2012	Periphyton Density, Film	Sparse	2	2
W2371	Tussock Brook	2012	Turbidity	Slightly Turbid	2	2

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES
2024/26 Use Attainment Summary	

Too limited bacteria data are available to assess the Primary Contact Recreation Use for Tussock Brook (MA94-67) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. An Alert is being identified for *Escherichia coli* (*E. coli*) based on bacteria data collected at the downstream end of the AU in 2012. MassDEP staff collected *E. coli* (EC) and *Enterococcus* (Ent) bacteria samples in Tussock Brook from 2011-2012 at 2 stations, for the purposes of source tracking as part of the Bacteria Source Tracking Project (BST). Samples were collected from the following stations/sample years from upstream to downstream: about two-thirds of the way down the AU at station W2314 [from outlet of the ~6 acre unnamed impoundment, E of Rt. 3, straddling the Kingston/Duxbury border] from 2011-2012 (EC n=2/yr & Ent n=1) and the downstream end of the AU at station W2371 [upstream at Rt. 3, Kingston (upstream of tide gate)] in 2012 (EC n=2). The available *E. coli* data at both stations W2314 and W2371 are too limited to assess the Primary Contact Recreation Use according to the 2024 CALM, however it must be noted that at station W2371 in 2012 both samples exceeded the 410 CFU/100ml STV, with a maximum concentration of 3,080 CFU/100ml documented. Consequently an Alert is being identified for *Escherichia coli* (*E. coli*) and recommendations will be made for additional monitoring. The available *Enterococcus* data at W2314 are also too limited to assess according to the 2024 CALM. Additional sporadic BST sampling between 2011 and 2016 documented a maximum *E. coli* concentration of 12,997 MPN/100ml upstream of the tide gate (at W2371) (it should be noted that not all BST data are in the MassDEP WPP Monitoring database, so are not all presented in bacteria tables below). BST sampling consequently focused on two main tributaries to Tussock Brook as well as some highway drainage ditches and storm drain outfall pipes. No correctable sources of bacteria were ever found, though the parcel of land between Park St and Loring St (including a tributary) was identified as the most significant contributor of bacteria to Tussock Brook during wet weather events.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2314	MassDEP	Water Quality	Tussock Brook	[from outlet of the approximately 6 acre unnamed impoundment, east of Route 3, straddling the Kingston/Duxbury border]	42.003955	-70.722156
W2371	MassDEP	Water Quality	Tussock Brook	[upstream at Route 3, Kingston (upstream of tidegate)]	41.999749	-70.722019

### Bacteria Data

**Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)** (MassDEP Undated 9) (MassDEP Undated 5)

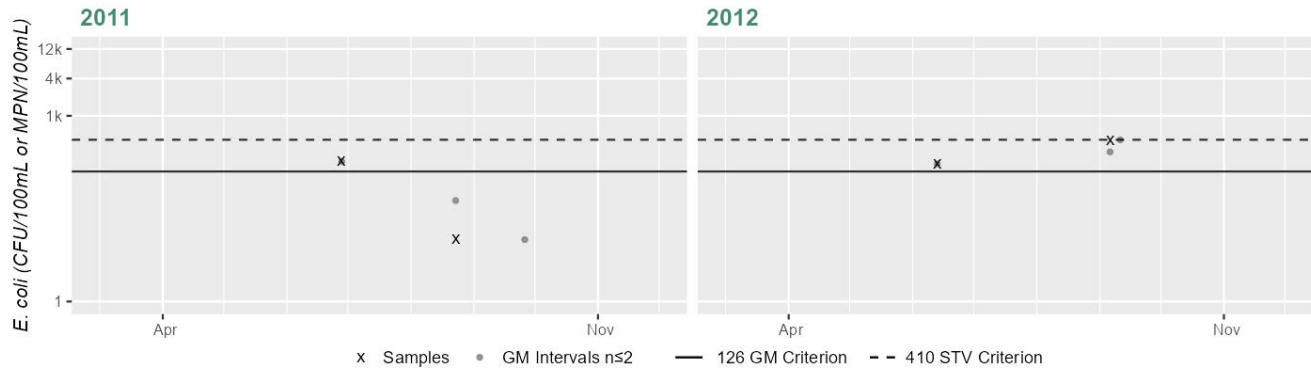
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W2314	MassDEP	<i>E. coli</i>	06/28/11	08/23/11	2	10	183	42
W2314	MassDEP	<i>Enterococci</i>	08/23/11	08/23/11	1	10	10	10
W2314	MassDEP	<i>E. coli</i>	06/12/12	09/05/12	2	167	408	261

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W2371	MassDEP	E. coli	07/17/12	08/08/12	2	1330	3080	2023

### Station MASSDEP\_W2314 - Escherichia coli

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



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

Variable*	Result
Samples	2
SeasGM	261
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

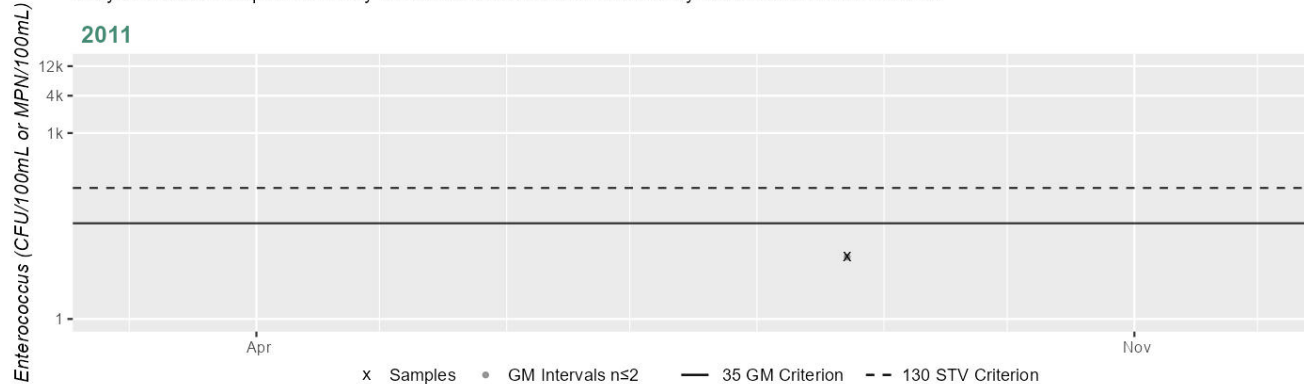
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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\_W2314 - Enterococcus

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



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

Cumulative %GMI Exceedance

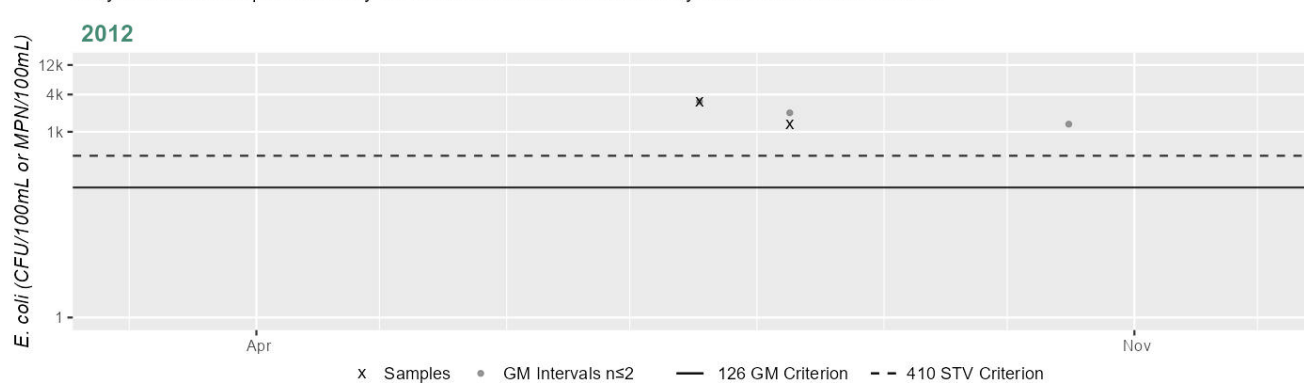
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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\_W2371 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	2023
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	100%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
 %GMI Ex = % GMI Exceedances; 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 2011-2013 & 2016 at 2 sites on the Tussock Brook AU (MA94-67), with E.coli concentrations just upstream of tide gate/Rt.3 ranging 1,333 to 12,997MPN. Additional source tracking over the same time range focused on two main tributaries as well as some highway drainage ditches and stormdrain outfall pipes, for a total of 10 additional sites. No correctable sources were ever found; though the parcel of land between Park St and Loring St (including a tributary) was identified as the most significant contributor of bacteria to Tussock Brook during wet weather events.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary
<p>Too limited bacteria data are available to assess the Secondary Contact Recreation Use for Tussock Brook (MA94-67) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. An Alert is being identified for Escherichia coli (E. coli) based on bacteria data collected at the downstream end of the AU in 2012. MassDEP staff collected <i>E. coli</i> bacteria samples in Tussock Brook from 2011-2012 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: about two-thirds of the way down the AU at station W2314 [from outlet of the ~6 acre unnamed impoundment, E of Rt. 3, straddling the Kingston/Duxbury border] from 2011-2012 (n=2/yr), and the downstream end of the AU at station W2371 [upstream at Rt. 3, Kingston (upstream of tide gate)] from Jul-Aug 2012 (n=2). The available <i>E. coli</i> data at both stations W2314 and W2371 are too limited to assess the Secondary Contact Recreation Use according to the 2024 CALM, however it must be noted that at station W2371 in 2012 both samples exceeded the 794 CFU/100ml STV, with a maximum concentration of 3,080 CFU documented. Consequently an Alert is being identified for Escherichia coli (E. coli) and recommendations will be made for additional monitoring. Additional sporadic BST sampling between 2011 and 2016 documented a maximum <i>E. coli</i> concentration of 12,997 MPN/100ml upstream of the tide gate (at W2371) (it should be noted that not all BST data are in the MassDEP WPP Monitoring database, so are not all presented in bacteria tables below); BST sampling consequently focused on two main tributaries to Tussock Brook as well as some highway drainage ditches and storm drain outfall pipes. No correctable sources of bacteria were ever found, though the parcel of land between Park St and Loring St (including a tributary) was identified as the most significant contributor of bacteria to Tussock Brook during wet weather events.</p>

## Monitoring Stations



Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2314	MassDEP	Water Quality	Tussock Brook	[from outlet of the approximately 6 acre unnamed impoundment, east of Route 3, straddling the Kingston/Duxbury border]	42.003955	-70.722156
W2371	MassDEP	Water Quality	Tussock Brook	[upstream at Route 3, Kingston (upstream of tidegate)]	41.999749	-70.722019

## Bacteria Data

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

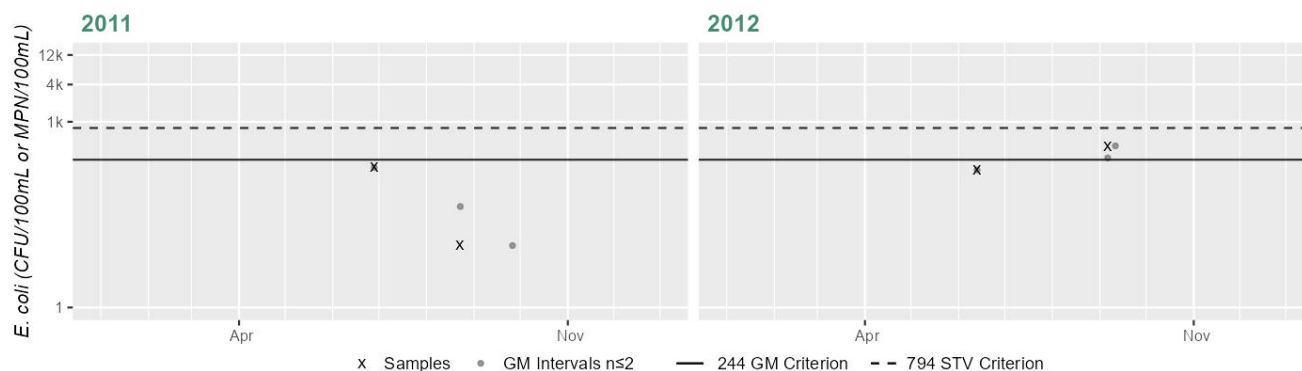
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W2314	MassDEP	E. coli	06/28/11	08/23/11	2	10	183	42
W2314	MassDEP	E. coli	06/12/12	09/05/12	2	167	408	261
W2371	MassDEP	E. coli	07/17/12	08/08/12	2	1330	3080	2023

#### Station MASSDEP\_W2314 - Escherichia coli

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



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

Variable*	Result
Samples	2
SeasGM	261
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

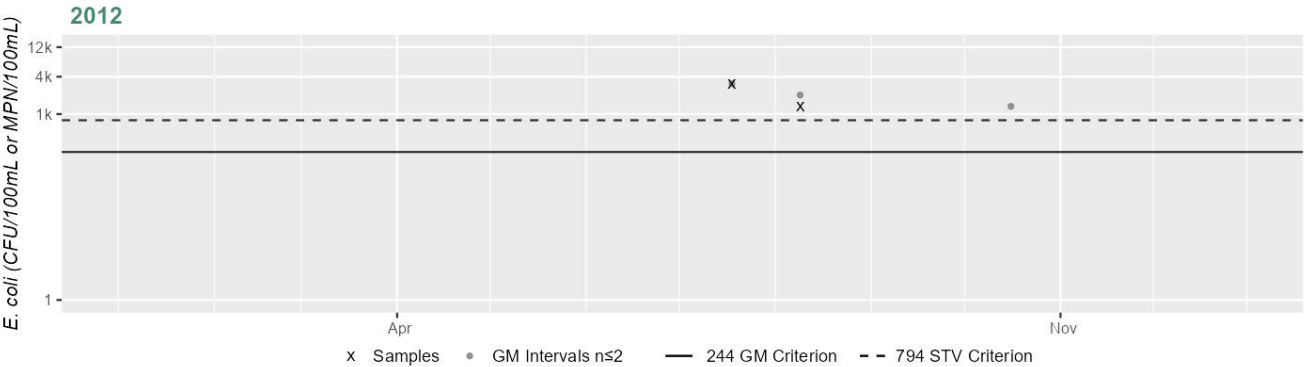
Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; 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\_W2371 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	2023
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	100%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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.

## Tussock Brook (MA94-68)

<b>Location:</b>	tidal portion west of Route 3, Kingston to mouth at confluence Halls Brook, Kingston
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.001 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

## Recommendations

2024/26 Recommendations
<p>2024/26IR [Bacteria, Medium] High frequency follow-up monitoring should be conducted in Tussock Brook (MA94-68), to confirm if Enterococcus bacteria are impairing the Recreational uses. Additional samples should be collected at {W2317} which is downstream/W of Rt. 3 and the tide gate, Kingston. A limited number of samples were collected here in 2011-2012 with the single samples exceeding the primary and secondary STV thresholds in both years i.e. 2012 (920 CFU/100ml) and 2011 (3,200 CFU/100ml). MassDEP Bacteria Source Tracking (BST) project in 2011-2013 documented that bacteria concentrations were sometimes noted to be comparatively higher downstream of the tide gate than upstream of the tide gate/Rt.3 (i.e., W2371 in the upstream AU MA94-67), which led to a theory that sediment resuspension at the tide gate could be exacerbating bacteria concentrations in the water column downstream. A 2011 restoration plan developed by the Jones River Watershed Association prioritized the removal of this tide-gate, though it currently still stands. It would be beneficial to collect additional samples at a high frequency, both before and after the removal of the tide gate. This is of medium priority;</p>

## 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 Tussock Brook (MA94-68) is Not Assessed.

## Shellfish Harvesting

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Tussock Brook (MA94-68): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0001 sq mi (11%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.0001 sq mi (11%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB44.0	Jones River	Prohibited	0.00006	11.3%

## Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Tussock Brook (MA94-68) is assessed Fully Supporting based on the general lack of objectionable conditions noted by MassDEP staff during the summers of 2011 and 2012. MassDEP staff recorded limited aesthetics observations for this Tussock Brook AU, during the summers of 2011 and 2012 for the SERO MST project; at the upstream end of the AU downstream/west of Rt. 3 and the tide gate (W2317) in 2011 (n=1) and 2012 (n=2). There were generally no noted persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff observed high turbidity on one occasion in 2011.

### Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2317	MassDEP	Water Quality	Tussock Brook	[downstream/west of Route 3 and the tidegate, Kingston]	41.999373	-70.722464

## Aesthetic Observations

### Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 5)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2317	2011	1	Aesthetic observations were made by MassDEP field sampling crews at Station W2317 on Tussock Brook (MA94-68) during 1 site visit on Jun 28, 2011. 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).
W2317	2012	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2317 on Tussock Brook (MA94-68) during 2 site visits between Jul 2012 and Aug 2012. 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 9) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2317	2011	1	0	0
W2317	2012	2	2	0

### MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 9)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2317	Tussock Brook	2011	Aquatic Plant Density, Overall	Unobservable	1	1
W2317	Tussock Brook	2011	Color	None	1	1
W2317	Tussock Brook	2011	Odor	Other (Saltwater)	1	1
W2317	Tussock Brook	2011	Periphyton Density, Filamentous	Unobservable	1	1
W2317	Tussock Brook	2011	Periphyton Density, Film	Unobservable	1	1
W2317	Tussock Brook	2011	Turbidity	Highly Turbid	1	1
W2317	Tussock Brook	2012	Aquatic Plant Density, Overall	None	2	2

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2317	Tussock Brook	2012	Color	Light Yellow/Tan	2	2
W2317	Tussock Brook	2012	Odor	None	2	2
W2317	Tussock Brook	2012	Periphyton Density, Filamentous	None	2	2
W2317	Tussock Brook	2012	Periphyton Density, Film	None	1	2
W2317	Tussock Brook	2012	Periphyton Density, Film	Sparse	1	2
W2317	Tussock Brook	2012	Turbidity	Moderately Turbid	1	2
W2317	Tussock Brook	2012	Turbidity	Slightly Turbid	1	2

## Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary
<p>Too limited bacteria data are available to assess the Primary Contact Recreation Use for Tussock Brook (MA94-68) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information, however an Alert is being identified for Enterococcus due to extremely elevated concentrations documented at the upstream end of the AU in 2011 &amp; 2012. The shellfish growing areas (0.0001 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 Primary Contact Recreation Use of Tussock Brook. MassDEP staff collected Enterococcus bacteria samples in Tussock Brook at the upstream end of the AU at station W2317 [downstream/W of Rt. 3 and the tide gate, Kingston] from 2011-2012 (n=1/yr). While the available Enterococcus data at this station are too limited to assess the Primary Contact Recreation Use according to the 2024 CALM, it must be noted that the single samples widely exceeded the 130 CFU/100ml STV in both years i.e. 2012 (920 CFU/100ml) and 2011 (3,200 CFU/100ml), which is indicative of an Alert status. MassDEP staff also conducted additional intermittent sampling in Tussock Brook as part of the Bacteria Source Tracking (BST) project in 2011-2013. Human Marker analyses run for 1 site (downstream of Rt.3 and the dam/tide gate) in 2011 and 2012 indicated “no evidence” and “inconclusive evidence” of a human sewage source, respectively, and no correctable sources were ever found. Bacteria concentrations were sometimes noted to be comparatively higher downstream of the tide gate than upstream of the tide gate/Rt.3 (i.e., W2371 in the upstream AU MA94-67), which led to a theory that sediment resuspension at the tide gate could be exacerbating bacteria concentrations in the water column downstream. A 2011 restoration plan developed by the Jones River Watershed Association prioritized the removal of this tide-gate (Jones River Watershed Association 2011), though it currently still stands.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2317	MassDEP	Water Quality	Tussock Brook	[downstream/west of Route 3 and the tidegate, Kingston]	41.999373	-70.722464

## Bacteria Data

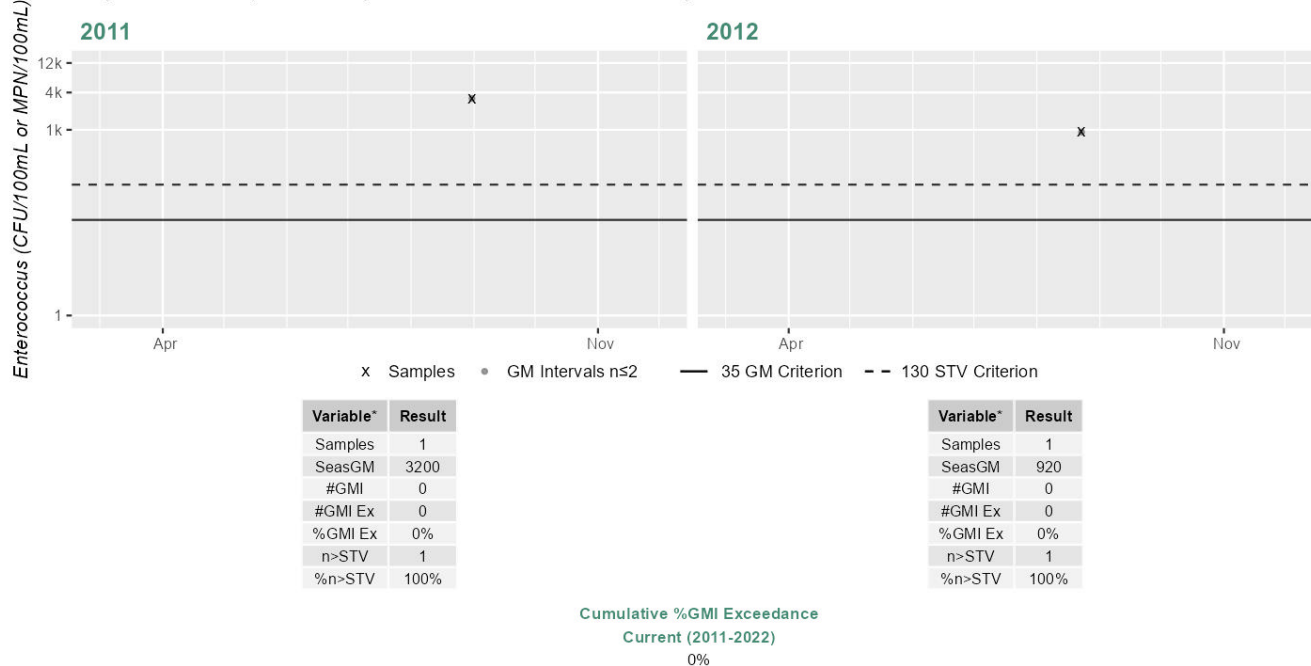
### Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (MassDEP Undated 9) (MassDEP Undated 5)

[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
W2317	MassDEP	Enterococci	08/31/11	08/31/11	1	3200	3200	3200
W2317	MassDEP	Enterococci	08/22/12	08/22/12	1	920	920	920

#### Station MASSDEP\_W2317 - Enterococcus

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



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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)

<b>Summary</b>
BST work was conducted in 2011-2013 intermittently at 1 site (downstream of Rt.3 and the dam/tide gate) on the Tussock Brook AU (MA94-68), with E.coli concentrations ranging 884 to >24,196MPN and with a max Enterococcus of 3,076MPN. Human Marker analysis was run on samples taken at the same site in both 2011 and 2012; results indicated “no evidence” and "inconclusive evidence" of a human source respectively. Additional source tracking over the same time-span focused on the upstream Tussock Brook AU (MA94-67), but no correctable sources were ever found. Bacteria concentrations were sometimes noted to be comparatively lower, directly upstream of the tide gate/Rt.3 compared to downstream, which led to a theory that sediment resuspension at the tide gate could be exacerbating bacteria concentrations in the water column downstream.

### ***Shellfish Growing Area Classifications***

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

<b>Summary</b>
Tussock Brook (MA94-68): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0001 sq mi (11%). 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**

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Insufficient Information	YES
<b>2024/26 Use Attainment Summary</b>	



Too limited bacteria data are available to assess the Secondary Contact Recreation Use for Tussock Brook (MA94-68) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information, however an Alert is being identified for Enterococcus due to extremely elevated concentrations documented at the upstream end of the AU in 2011. The shellfish growing areas (0.0001 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 Tussock Brook. MassDEP staff collected Enterococcus bacteria samples in Tussock Brook at the upstream end of the AU at station W2317 [downstream/W of Rt. 3 and the tide gate, Kingston] from 2011-2012 (n=1/yr). While the available Enterococcus data at this station are too limited to assess the Secondary Contact Recreation Use according to the 2024 CALM, it must be noted that the single samples exceeded the 252 CFU/100ml STV in both years i.e. 2012 (920 CFU/100ml) and 2011 (3,200 CFU/100ml), with the 2011 data being extreme enough to be indicative of an Alert status. MassDEP staff also conducted additional intermittent sampling in Tussock Brook as part of the Bacteria Source Tracking (BST) project in 2011-2013. Human Marker analyses run for 1 site (downstream of Rt.3 and the dam/tide gate) in 2011 and 2012 indicated “no evidence” and “inconclusive evidence” of a human sewage source, respectively, and no correctable sources were ever found. Bacteria concentrations were sometimes noted to be comparatively higher downstream of the tide gate than upstream of the tide gate/Rt.3 (i.e., W2371 in the upstream AU MA94-67), which led to a theory that sediment resuspension at the tide gate could be exacerbating bacteria concentrations in the water column downstream. A 2011 restoration plan developed by the Jones River Watershed Association prioritized the removal of this tide-gate (Jones River Watershed Association 2011), though it currently still stands.

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2317	MassDEP	Water Quality	Tussock Brook	[downstream/west of Route 3 and the tidegate, Kingston]	41.999373	-70.722464

## Bacteria Data

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

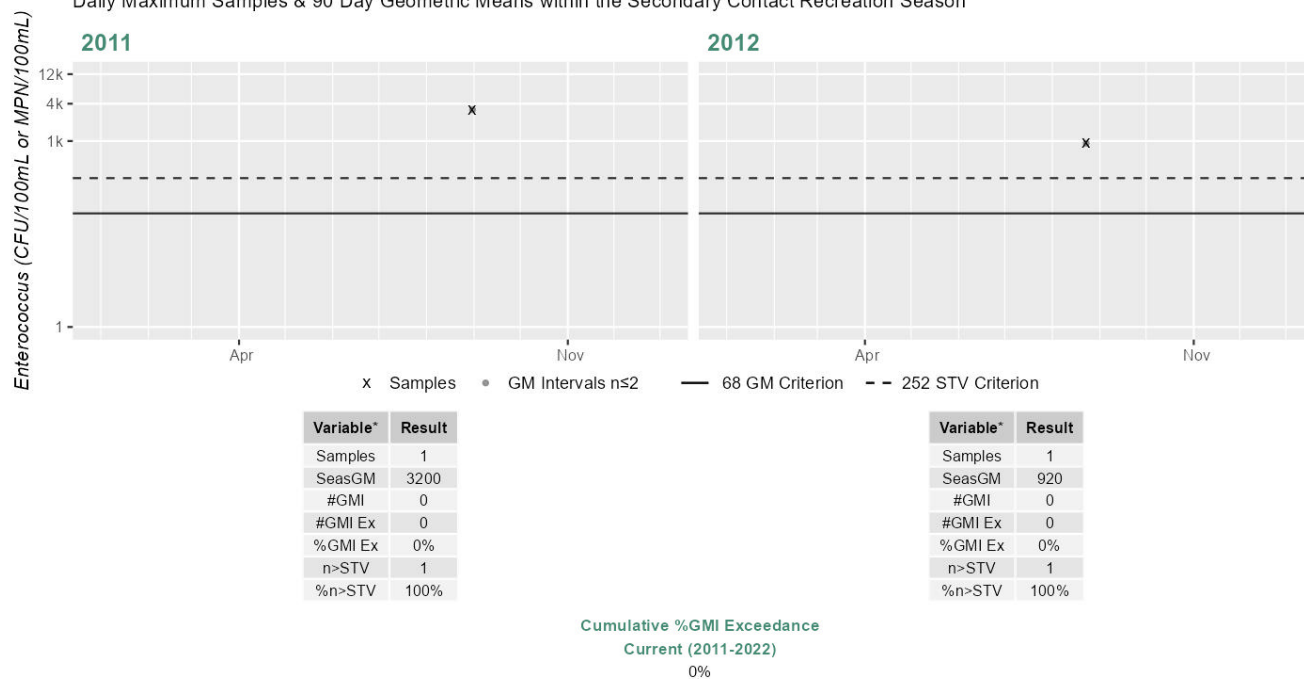
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W2317	MassDEP	Enterococci	08/31/11	08/31/11	1	3200	3200	3200
W2317	MassDEP	Enterococci	08/22/12	08/22/12	1	920	920	920

### Station MASSDEP\_W2317 - Enterococcus

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



\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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 6)**

### Summary

Tussock Brook (MA94-68): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0001 sq mi (11%). 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.

# 

<b>Location:</b>	Unnamed tributary to Eel River, from outlet cranberry bog south of Valley Road, Plymouth to mouth at confluence with Eel River, Plymouth (through former 2014 segment: Forge Pond MA94036).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	2.4 MILES
<b>Classification/Qualifier:</b>	B

## 

Watershed Area: 7.62 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	7.62	7.05	0.62	0.61
Agriculture	2.9%	3.1%	9.6%	9.8%
Developed	27.9%	27.3%	11.2%	11.4%
Natural	58.7%	58.2%	45.9%	45%
Wetland	10.6%	11.5%	33.2%	33.8%
Impervious	8.6%	7.7%	3.6%	3.7%

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--

## Recommendations

2024/26 Recommendations
2016IR [Aquatic Plants Macrophytes, Low] Follow-up monitoring should be conducted in Unnamed Tributary (MA94-35), to confirm if Dense Aquatic Plants (Macrophytes) are impairing the Aesthetics Use. The Alert was initially identified for dense Aquatic Plants (Macrophytes) observed by MassDEP staff in 2006, at the outlet from Howland Pond at Clifford Road bridge, Plymouth {W0333}. 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 Unnamed Tributary (MA94-35) 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 Unnamed Tributary AU (MA94-35), so it is Not Assessed. The prior Alert identified for dense Aquatic Plants (Macrophytes) observed by MassDEP staff in 2006, close to the downstream end of the AU at the outlet from Howland Pond at Clifford Road bridge, Plymouth (W0333), is being carried forward.	

### Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for Unnamed Tributary (MA94-35) are available, so the Primary Contact Recreation Use is Not Assessed. Since the prior Alert for Dense Aquatic Plants (Macrophytes) was redundantly duplicated across multiple uses for this waterbody, the Aquatic Plants (Macrophytes) Alert is being removed from the Primary Contact Recreation Use but is maintained under the Aesthetics Use.	

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
<p>No bacteria or other indicator data for Unnamed Tributary (MA94-35) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected <i>E. coli</i> bacteria samples close to the downstream end of this Unnamed Tributary AU at station W0333 [Eel River tributary, outlet Howland Pond, Clifford Rd bridge, Plymouth] from Jun-Oct 2006 (n=5). Analysis of the historic single year limited frequency dataset from this station indicated 0% of intervals had GMs &gt;244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV and the overall GM was 78 CFU/100ml, which meets 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. Since the prior Alert for Dense Aquatic Plants (Macrophytes) was redundantly duplicated across multiple uses for this waterbody, the Aquatic Plants (Macrophytes) Alert is being removed from the Secondary Contact Recreation Use but is maintained under the Aesthetics Use.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0333	MassDEP	Water Quality	Unnamed Tributary	[Eel River tributary, outlet Howland Pond, Clifford Road bridge, Plymouth]	41.926027	-70.613532

## Bacteria Data

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

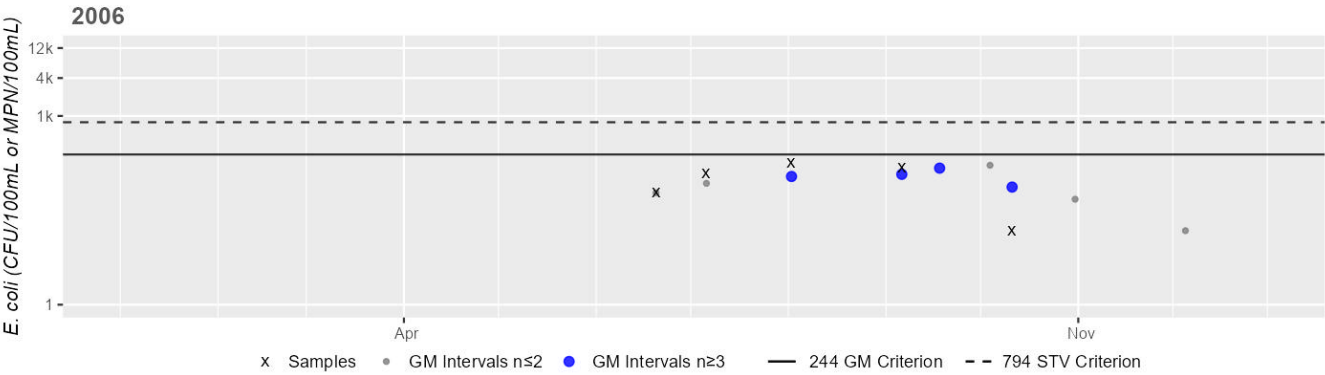
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0333	MassDEP	E. coli	06/20/06	10/11/06	5	15	180	78

**Station MASSDEP\_W0333 - Escherichia coli**

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



Variable*	Result
Samples	5
SeasGM	78
#GMI	4
#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 Exceedances;  
%GMI Ex = % GMI Exceedances; 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 (MA94-43)

<b>Location:</b>	Unnamed tributary to Great Herring Pond, headwaters outlet Little Herring Pond, Plymouth to mouth at inlet of Great Herring Pond, Plymouth.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	0.6 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Unnamed Tributary (MA94-43) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Unnamed Tributary (MA94-45)

<b>Location:</b>	Unnamed tributary to Duxbury Bay, source north of Route 3/Cherry Street intersection, Plymouth to mouth at inlet of Duxbury Bay, Plymouth.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	1.1 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Unnamed Tributary (MA94-45) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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



#

## Unnamed Tributary (MA94-55)

<b>Location:</b>	Unnamed tributary (locally known as 'Marshfield Fairgrounds Brook') to South River, from headwaters east of Proctor Street, Marshfield to tidal portion east of Willow Street, Marshfield.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	0.8 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Unnamed Tributary (MA94-55) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
2	2	None	--	Unchanged

## Unnamed Tributary (MA94-59)

<b>Location:</b>	Unnamed tributary (locally known as 'Second Brook' and 'Laundry Brook') to Jones River intersecting Brook Street, Kingston (segment includes distance through Lucas Pond).
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	0.2 MILES
<b>Classification/Qualifier:</b>	B

No usable data were available for Unnamed Tributary (MA94-59) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
4c	4c	(Fish Passage Barrier*)	--	Unchanged

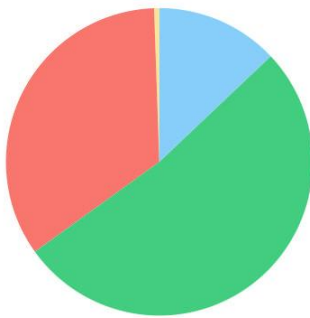
<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fish Passage Barrier*)	Habitat Modification - other than Hydromodification (Y)	X	--	--	--	--

## Unnamed Tributary (MA94-61)

<b>Location:</b>	Unnamed tributary to Bluefish River (locally considered a portion of Bluefish River), headwaters north of Surplus Street, Duxbury to tidal portion north of Harrison Street, Duxbury.
<b>AU Type:</b>	RIVER
<b>AU Size:</b>	0.5 MILES
<b>Classification/Qualifier:</b>	B

### Unnamed Tributary (MA94-61)

Watershed Area: 0.89 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	0.89	0.89	0.19	0.19
Agriculture	0.5%	0.5%	0%	0%
Developed	34.4%	34.4%	25.6%	25.6%
Natural	52.1%	52.1%	46.5%	46.5%
Wetland	13%	13%	27.9%	27.9%
Impervious	13.7%	13.7%	8.6%	8.6%

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--

## Recommendations

### 2024/26 Recommendations

2024/26IR [Bacteria, High] High frequency follow-up monitoring should be conducted in this Unnamed Tributary to the Bluefish River (MA94-61), including at station {W0894} Harrison St bridge, Duxbury (locally considered part of Bluefish River), to confirm if *E. coli* bacteria are impairing the Recreational uses. Based on a re-evaluation of historical bacteria data, there is concern over one extremely elevated bacteria concentration (5,000 CFU/100ml) documented in 2001 at the downstream end of the AU (station W0894). In consideration of the existing shellfish beds in the downstream “Bluefish River” (MA94-30), additional monitoring is recommended for this AU. If additional elevated bacteria concentrations are documented in future then a bacteria source tracking effort is also recommended. This is of High 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 Unnamed Tributary (MA94-61) 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 (MA94-61) 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 Unnamed Tributary (MA94-61) are available, so the Primary Contact Recreation Use is Not Assessed.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	YES

2024/26 Use Attainment Summary
<p>No bacteria or other indicator data for Unnamed Tributary (MA94-61) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. An Alert is being identified for Escherichia Coli (<i>E. coli</i>) based on a re-evaluation of bacteria data, indicating one extremely elevated bacteria concentration at the downstream end of the AU in 2001. MassDEP staff collected <i>E. coli</i> bacteria samples at the downstream end of this Unnamed Tributary AU at station W0894 [Harrison St bridge, Duxbury (locally considered part of Bluefish River)] from Jul-Oct 2001 (n=4). Historic data from this station are inconclusive according to the 2024 CALM to assess the Secondary Contact Recreation Use because this single year, limited frequency dataset included both a GM below the threshold (68 CFU) and an exceedance of the STV threshold (5,000 CFU/100ml). 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. However, in consideration of the existing shellfish beds in the downstream “Bluefish River” (MA94-30) and the extremely elevated <i>E. coli</i> concentration documented in 2001 at Harrison St. bridge (W0894), an Escherichia Coli (<i>E. coli</i>) Alert is being identified for this Unnamed Tributary to Bluefish River and additional monitoring/bacteria source tracking will be recommended.</p>

## Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0894	MassDEP	Water Quality	Unnamed Tributary	[Harrison Street bridge, Duxbury (locally considered part of Bluefish River)]	42.039811	-70.676075

## Bacteria Data

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

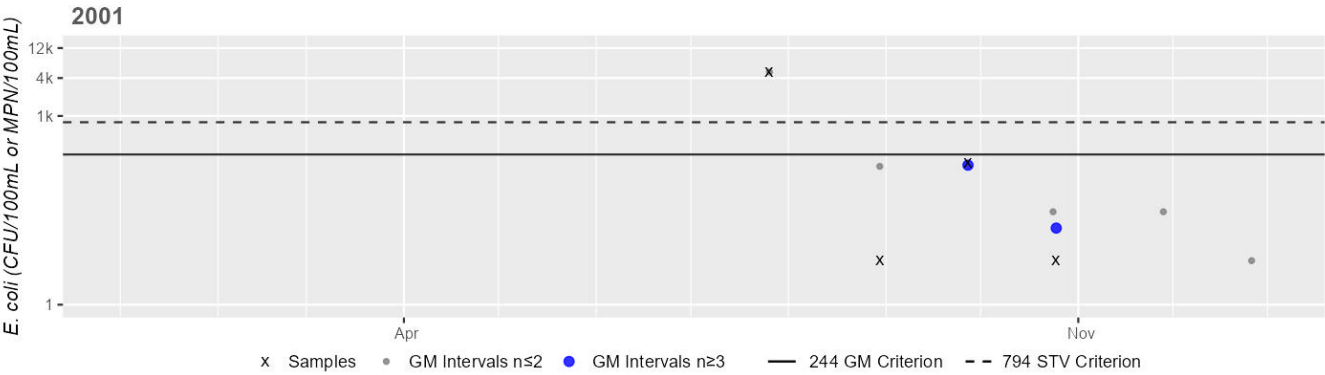
(MassDEP Undated 9) (MassDEP Undated 4)

[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
W0894	MassDEP	<i>E. coli</i>	07/26/01	10/25/01	4	5	5000	68

**Station MASSDEP\_W0894 - Escherichia coli**

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



Variable*	Result
Samples	4
SeasGM	68
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

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

\*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;  
%GMI Ex = % GMI Exceedances; 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 (MA94-62)

<b>Location:</b>	Unnamed tributary to Bluefish River (locally considered a portion of Bluefish River), tidal portion north of Harrison Street, Duxbury to mouth at confluence with Bluefish River, Duxbury.
<b>AU Type:</b>	ESTUARY
<b>AU Size:</b>	0.002 SQUARE MILES
<b>Classification/Qualifier:</b>	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	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 (MA94-62) is Not Assessed.	

### Shellfish Harvesting

2024/26 Use Attainment	Alert
Insufficient Information	NO
2024/26 Use Attainment Summary	
Unnamed Tributary (MA94-62): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.001 sq mi (41%). The approved shellfish growing area represents 0 sq mi (0%) and the prohibited shellfish growing area represents 0.001 sq mi (41%). 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 6)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
CCB46.5	Bluefish River	Prohibited	0.00099	40.9%

### 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 (MA94-62) 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 (MA94-62) so it is assessed as having Insufficient Information. The shellfish growing areas (0.001 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 AU.

### Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 6)

Summary
Unnamed Tributary (MA94-62): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.001 sq mi (41%). 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 (MA94-62) so it is assessed as having Insufficient Information. The shellfish growing areas (0.001 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 AU.

### ***Shellfish Growing Area Classifications***

**Summary Statement for MassDFG Shellfish Growing Area Classification Data** (MassGIS 2024) (MassDEP Undated 6)

<b>Summary</b>
----------------

Unnamed Tributary (MA94-62): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.001 sq mi (41%). 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.
--

## Upper Chandler Pond (MA94165)

<b>Location:</b>	Duxbury/Pembroke.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	8 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Upper Chandler Pond (MA94165) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

## Wampatuck Pond (MA94168)

<b>Location:</b>	Hanson.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	62 ACRES
<b>Classification/Qualifier:</b>	B

<b>AU Category 2022</b>	<b>AU Category 2024/26</b>	<b>Impairment</b>	<b>ATTAINS Action ID</b>	<b>Impairment Change Summary</b>
5	5	(Fanwort*)	--	Unchanged
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	Chlorophyll-a	--	Unchanged
5	5	Dissolved Oxygen Supersaturation	--	Unchanged
5	5	Harmful Algal Blooms	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged
5	5	Transparency / Clarity	--	Unchanged

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
Chlorophyll-a	Source Unknown (N)	X	--	--	--	--
Chlorophyll-a	Specialty Crop Production (N)	X	--	--	--	--
Dissolved Oxygen Supersaturation	Source Unknown (N)	X	--	--	--	--

<b>Impairment</b>	<b>Source (Confirmed Y/N)</b>	<b>ALU</b>	<b>FC</b>	<b>AES</b>	<b>PCR</b>	<b>SCR</b>
Dissolved Oxygen Supersaturation	Specialty Crop Production (N)	X	--	--	--	--
Harmful Algal Blooms	Agriculture (N)	X	--	X	X	X
Harmful Algal Blooms	Source Unknown (N)	X	--	X	X	X
Harmful Algal Blooms	Specialty Crop Production (N)	X	--	X	X	X
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--
Phosphorus, Total	Specialty Crop Production (N)	X	--	--	--	--
Transparency / Clarity	Agriculture (N)	--	--	--	X	X
Transparency / Clarity	Source Unknown (N)	--	--	--	X	X

## Designated Use Attainment Decisions

### Fish Consumption

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Assessed	NO

<b>2024/26 Use Attainment Summary</b>
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Wampatuck Pond (MA94168) is Not Assessed.

### Aesthetic

<b>2024/26 Use Attainment</b>	<b>Alert</b>
Not Supporting	NO

<b>2024/26 Use Attainment Summary</b>
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The Aesthetics Use for Wampatuck Pond (MA94168) continues to be assessed as Not Supporting, with the prior Harmful Algal Blooms impairment being carried forward based on the occurrence of C-HAB postings extending >20 days in 2016 and 2017. 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. During the period 2015 through 2022, C-HAB postings for Wampatuck Pond were reported to MDPH based on cell count data for 106 days in 2016 and 115 days in 2017 and no blooms were reported in other years. Since extended blooms (>20 days in duration) based on cell count data were reported in recent years, this is reflective of the existing Harmful Algal Blooms impairment for Wampatuck Pond.

### Algal Bloom Information

**Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Wampatuck Pond (MA94168) were reported to MDPH based on cell count data for 106 days in 2016 and 115 days in 2017. No blooms were reported in other years. Since extended blooms (>20 days in duration) based on cell count data were reported in recent years, the Aesthetics Use and Primary/Secondary Contact Recreational Uses continue to be assessed as Not Supporting.

**Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH** (Bailey, Logan April 26, 2023) (MassDEP Undated 2)

[\* 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
Wampatuck Pond	Hanson		106	115					

### Primary Contact Recreation

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

The Primary Contact Recreation Use for Wampatuck Pond (MA94168) continues to be assessed as Not Supporting. The prior Harmful Algal Blooms impairment is being carried forward based on the occurrence of C-HAB postings extending >20 days in 2016 and 2017. The prior Transparency / Clarity impairment is also being carried forward. During the period 2015 through 2022, C-HAB postings for Wampatuck Pond were reported to MDPH based on cell count data for 106 days in 2016 and 115 days in 2017 and no blooms were reported in other years. Since extended blooms (>20 days in duration) based on cell count data were reported in recent years, the C-HAB data continues to be indicative of a Harmful Algal Bloom impairment.

## Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

### 2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Wampatuck Pond (MA94168) continues to be assessed as Not Supporting. The prior Harmful Algal Blooms impairment is being carried forward based on the occurrence of C-HAB postings extending >20 days in 2016 and 2017. 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. During the period 2015 through 2022, C-HAB postings for Wampatuck Pond were reported to MDPH based on cell count data for 106 days in 2016 and 115 days in 2017 and no blooms were reported in other years. Since extended blooms (>20 days in duration) based on cell count data were reported in recent years, the C-HAB data continues to be indicative of a Harmful Algal Bloom impairment.

## West Chandler Pond (MA94170)

<b>Location:</b>	Pembroke.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	10 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for West Chandler Pond (MA94170) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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



## Winslow Cemetary Pond (MA94172)

<b>Location:</b>	Marshfield.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	6 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Winslow Cemetary Pond (MA94172) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Wright Pond (MA94174)

<b>Location:</b>	Duxbury.
<b>AU Type:</b>	FRESHWATER LAKE
<b>AU Size:</b>	30 ACRES
<b>Classification/Qualifier:</b>	B

No usable data were available for Wright Pond (MA94174) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

## Data Sources

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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 2.
- 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 3.
- 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 4.
- 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 5.
- MassDEP. "Open file analysis of shellfish growing area classifications using 2024 CALM guidance." Data published June 2024 and available on MassGIS website, Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 6.
- MassDEP. "Open files of fish toxicity testing data, metadata, and GIS datalayers in development." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 7.

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