

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

**Appendix 31
North Coastal 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
Alewife Brook	MA93-26	3	3	None	--	Unchanged
Alewife Brook	MA93-45	2	2	None	--	Unchanged
Alewife Brook	MA93-46	4a	4a	Fecal Coliform	50121	Unchanged
Annisquam River	MA93-12	4a	4a	Fecal Coliform	50121	Unchanged
Babson Reservoir	MA93001	3	3	None	--	Unchanged
Bass River	MA93-07	5	5	(Fish Passage Barrier*)	--	Unchanged
Bass River	MA93-07	5	5	Turbidity	--	Unchanged
Bass River	MA93-08	4a	4a	Fecal Coliform	50121	Unchanged
Beaver Brook	MA93-37	5	5	Dissolved Oxygen	--	Unchanged
Beaver Brook	MA93-37	5	5	Enterococcus	R1_MA_2024_04 P	Added
Beaver Brook	MA93-37	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Beaverdam Brook	MA93-30	5	5	Dissolved Oxygen	--	Unchanged
Beaverdam Brook	MA93-30	5	5	Escherichia Coli (E. Coli)	50120	Unchanged
Beaverdam Brook	MA93-30	5	5	Fecal Coliform	50120	Unchanged
Beck Pond	MA93003	3	5	Mercury in Fish Tissue	--	Added
Bennetts Pond Brook	MA93-48	4a	4a	Escherichia Coli (E. Coli)	50120	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Bennetts Pond Brook	MA93-48	4a	4a	Fecal Coliform	50120	Unchanged
Beverly Harbor	MA93-20	5	5	Enterococcus	50122	Added
Beverly Harbor	MA93-20	5	5	Estuarine Bioassessments	--	Unchanged
Beverly Harbor	MA93-20	5	5	Fecal Coliform	50122	Unchanged
Birch Pond	MA93004	3	3	None	--	Unchanged
Breeds Pond	MA93006	3	3	None	--	Unchanged
Browns Pond	MA93008	3	3	None	--	Unchanged
Buswell Pond	MA93009	3	3	None	--	Unchanged
Cape Pond	MA93011	5	5	Turbidity	--	Unchanged
Cat Brook	MA93-29	5	5	pH, Low	--	Unchanged
Cat Brook	MA93-29	5	5	Temperature	--	Unchanged
Causeway Brook	MA93-47	4a	4a	Escherichia Coli (E. Coli)	50120	Unchanged
Causeway Brook	MA93-47	4a	4a	Fecal Coliform	50120	Unchanged
Cedar Pond	MA93013	3	3	None	--	Unchanged
Chebacco Lake	MA93014	4a	4a	(Aquatic Plants (Macrophytes)*)	--	Added
Chebacco Lake	MA93014	4a	4a	(Curly-leaf Pondweed*)	--	Unchanged
Chebacco Lake	MA93014	4a	4a	(Fanwort*)	--	Unchanged
Chebacco Lake	MA93014	4a	4a	(Non-Native Aquatic Plants*)	--	Removed
Chebacco Lake	MA93014	4a	4a	Mercury in Fish Tissue	33880	Unchanged
Chubb Creek	MA93-63	3	3	None	--	Unchanged
Chubb Creek	MA93-64	3	3	None	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Coy Pond	MA93016	3	3	None	--	Unchanged
Crane Brook	MA93-02	5	5	Benthic Macroinvertebrates	--	Unchanged
Crane Brook	MA93-02	5	5	Enterococcus	50120	Added
Crane Brook	MA93-02	5	5	Escherichia Coli (E. Coli)	50120	Unchanged
Crane Brook	MA93-02	5	5	Fecal Coliform	50120	Unchanged
Crane River	MA93-38	5	4a	(Fish Passage Barrier*)	--	Unchanged
Crane River	MA93-38	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Crane River	MA93-41	4a	4a	Enterococcus	50121	Added
Crane River	MA93-41	4a	4a	Fecal Coliform	50121	Unchanged
Crystal Lake	MA93018	3	3	None	--	Unchanged
Danvers River	MA93-09	4a	4a	Fecal Coliform	50121	Unchanged
Days Pond	MA93092	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Dykes Pond	MA93020	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Edgewater Office Park Pond	MA93094	4c	4c	(Fanwort*)	--	Unchanged
Edgewater Office Park Pond	MA93094	4c	4c	(Water Chestnut*)	--	Unchanged
Essex Bay	MA93-16	4a	4a	Fecal Coliform	50121	Unchanged
Essex River	MA93-11	4a	4a	Fecal Coliform	50121	Unchanged
Fernwood Lake	MA93022	3	3	None	--	Unchanged
First Pond	MA93081	4c	4c	(Fanwort*)	--	Unchanged
Flax Pond	MA93023	5	5	(Curly-leaf Pondweed*)	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Flax Pond	MA93023	5	5	(Non-Native Aquatic Plants*)	--	Removed
Flax Pond	MA93023	5	5	Algae	--	Unchanged
Flax Pond	MA93023	5	5	Chlordane in Fish Tissue	--	Unchanged
Flax Pond	MA93023	5	5	DDT in Fish Tissue	--	Unchanged
Flax Pond	MA93023	5	5	Turbidity	--	Unchanged
Floating Bridge Pond	MA93024	5	5	Algae	--	Unchanged
Floating Bridge Pond	MA93024	5	5	Phosphorus, Total	--	Unchanged
Floating Bridge Pond	MA93024	5	5	Turbidity	--	Unchanged
Forest River	MA93-10	5	5	Dissolved Oxygen Supersaturation	--	Unchanged
Forest River	MA93-10	5	5	Enterococcus	--	Added
Foster Pond	MA93026	5	5	DDT in Fish Tissue	--	Unchanged
Frost Fish Brook	MA93-36	4a	4a	Enterococcus	50120	Added
Frost Fish Brook	MA93-36	4a	4a	Escherichia Coli (E. Coli)	50120	Unchanged
Frost Fish Brook	MA93-36	4a	4a	Fecal Coliform	50120	Unchanged
Gloucester Harbor	MA93-18	5	5	Combined Biota/Habitat Bioassessments	--	Unchanged
Gloucester Harbor	MA93-18	5	5	Dissolved Oxygen	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Gloucester Harbor	MA93-18	5	5	Enterococcus	50122	Unchanged
Gloucester Harbor	MA93-18	5	5	Fecal Coliform	50122	Unchanged
Goldthwait Brook	MA93-05	5	5	(Alteration in Stream-side or Littoral Vegetative Covers*)	--	Unchanged
Goldthwait Brook	MA93-05	5	5	(Dewatering*)	--	Unchanged
Goldthwait Brook	MA93-05	5	5	Dissolved Oxygen	--	Unchanged
Goldthwait Brook	MA93-05	5	5	Enterococcus	50120	Added
Goldthwait Brook	MA93-05	5	5	Escherichia Coli (E. Coli)	50120	Unchanged
Goldthwait Brook	MA93-05	5	5	Fecal Coliform	50120	Unchanged
Goldthwait Brook	MA93-05	5	5	Phosphorus, Total	--	Unchanged
Goose Cove Reservoir	MA93093	3	3	None	--	Unchanged
Gravelly Pond	MA93028	3	3	None	--	Unchanged
Griswold Pond	MA93029	4c	4c	(Aquatic Plants (Macrophytes)*)	--	Added
Griswold Pond	MA93029	4c	4c	(Fanwort*)	--	Unchanged
Griswold Pond	MA93029	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Haskell Pond	MA93031	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Hawkes Brook	MA93-32	4a	4a	Escherichia Coli (E. Coli)	50120	Unchanged
Hawkes Brook	MA93-32	4a	4a	Fecal Coliform	50120	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Hawkes Brook	MA93-33	5	5	(Debris*)	--	Unchanged
Hawkes Brook	MA93-33	5	5	Benthic Macroinvertebrates	--	Unchanged
Hawkes Brook	MA93-33	5	5	Dissolved Oxygen	--	Unchanged
Hawkes Brook	MA93-33	5	5	Escherichia Coli (E. Coli)	50120	Unchanged
Hawkes Brook	MA93-33	5	5	Fecal Coliform	50120	Unchanged
Hawkes Brook	MA93-33	5	5	Trash	--	Unchanged
Hawkes Pond	MA93032	5	5	Turbidity	--	Unchanged
Lake Quannapowitt	MA93060	5	5	(Curly-leaf Pondweed*)	--	Unchanged
Lake Quannapowitt	MA93060	5	5	(Fish Passage Barrier*)	--	Unchanged
Lake Quannapowitt	MA93060	5	5	DDT in Fish Tissue	--	Unchanged
Lake Quannapowitt	MA93060	5	5	Harmful Algal Blooms	--	Unchanged
Lake Quannapowitt	MA93060	5	5	PFAS in Fish Tissue	--	Added
Lake Quannapowitt	MA93060	5	5	Turbidity	--	Unchanged
Lily Pond	MA93039	5	5	Algae	--	Unchanged
Lily Pond	MA93039	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Lily Pond	MA93039	5	5	Turbidity	--	Unchanged
Little River	MA93-66	3	3	None	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Little River	MA93-67	3	5	Fecal Coliform	--	Added
Lower Pond	MA93044	2	5	PFAS in Fish Tissue	--	Added
Lynn Harbor	MA93-52	4a	4a	Enterococcus	50122	Unchanged
Lynn Harbor	MA93-52	4a	4a	Fecal Coliform	50122	Unchanged
Lynn Harbor	MA93-53	4a	4a	Enterococcus	50122	Added
Lynn Harbor	MA93-53	4a	4a	Fecal Coliform	50122	Unchanged
Manchester Harbor	MA93-19	4a	4a	Enterococcus	50122	Unchanged
Manchester Harbor	MA93-19	4a	4a	Fecal Coliform	50122	Unchanged
Marblehead Harbor	MA93-22	5	5	Estuarine Bioassessments	--	Unchanged
Marblehead Harbor	MA93-22	5	5	Fecal Coliform	50121	Unchanged
Mill Pond	MA93049	--	3	None	--	Unchanged
Mill Pond	MA93-60	3	3	None	--	Unchanged
Mill River	MA93-28	4a	4a	Fecal Coliform	50121	Unchanged
Mill River	MA93-31	5	5	Dissolved Oxygen	--	Unchanged
Mill River	MA93-31	5	5	Escherichia Coli (E. Coli)	50120	Unchanged
Mill River	MA93-31	5	5	Fecal Coliform	50120	Unchanged
Mill River	MA93-31	5	5	Turbidity	--	Unchanged
Nahant Bay	MA93-24	4a	4a	Enterococcus	50121	Unchanged
Nahant Bay	MA93-24	4a	4a	Fecal Coliform	50121	Unchanged
Niles Pond	MA93052	3	3	None	--	Unchanged
North River	MA93-42	5	5	Ammonia, Un-ionized	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
North River	MA93-42	5	5	Dissolved Oxygen Supersaturation	--	Unchanged
North River	MA93-42	5	5	Enterococcus	50121	Added
North River	MA93-42	5	5	Fecal Coliform	50121	Unchanged
Pillings Pond	MA93056	5	5	Algae	--	Unchanged
Pillings Pond	MA93056	5	5	Chlorophyll-a	--	Unchanged
Pillings Pond	MA93056	5	5	Dissolved Oxygen	--	Unchanged
Pillings Pond	MA93056	5	5	Dissolved Oxygen Supersaturation	--	Unchanged
Pillings Pond	MA93056	5	5	Phosphorus, Total	--	Unchanged
Pillings Pond	MA93056	5	5	Transparency / Clarity	--	Unchanged
Pines River	MA93-15	4a	4a	Fecal Coliform	50122	Unchanged
Porter River	MA93-04	4a	4a	Enterococcus	50121	Unchanged
Porter River	MA93-04	4a	4a	Fecal Coliform	50121	Unchanged
Proctor Brook	MA93-39	5	5	(Debris*)	--	Unchanged
Proctor Brook	MA93-39	5	5	Benthic Macroinvertebrates	--	Unchanged
Proctor Brook	MA93-39	5	5	Escherichia Coli (E. Coli)	50120	Unchanged
Proctor Brook	MA93-39	5	5	Fecal Coliform	50120	Unchanged
Proctor Brook	MA93-39	5	5	Nitrogen, Total	--	Unchanged
Proctor Brook	MA93-39	5	5	Phosphorus, Total	--	Unchanged
Proctor Brook	MA93-39	5	5	Sedimentation/Siltation	--	Unchanged
Proctor Brook	MA93-39	5	5	Trash	--	Unchanged
Proctor Brook	MA93-40	5	5	(Debris*)	--	Unchanged
Proctor Brook	MA93-40	5	5	Enterococcus	50123	Added

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Proctor Brook	MA93-40	5	5	Fecal Coliform	50123	Unchanged
Proctor Brook	MA93-40	5	5	Flocculant Masses	--	Removed
Proctor Brook	MA93-40	5	5	Odor	--	Unchanged
Proctor Brook	MA93-40	5	5	Oil and Grease	--	Unchanged
Proctor Brook	MA93-40	5	5	Scum/Foam	--	Removed
Proctor Brook	MA93-40	5	5	Trash	--	Unchanged
Quarry Reservoir	MA93053	3	3	None	--	Unchanged
Rockport Harbor	MA93-57	4a	4a	Fecal Coliform	50122	Unchanged
Round Pond	MA93063	3	5	Mercury in Fish Tissue	--	Added
Rum Rock Lake	MA93064	3	3	None	--	Unchanged
Salem Harbor	MA93-54	5	5	Enterococcus	50122	Unchanged
Salem Harbor	MA93-54	5	5	Estuarine Bioassessments	--	Unchanged
Salem Harbor	MA93-54	5	5	Fecal Coliform	50122	Unchanged
Salem Sound	MA93-55	4a	4a	Fecal Coliform	50121	Unchanged
Salem Sound	MA93-56	5	5	Enterococcus	50121	Added
Salem Sound	MA93-56	5	5	Estuarine Bioassessments	--	Unchanged
Salem Sound	MA93-56	5	5	Fecal Coliform	50121	Unchanged
Saugus River	MA93-34	5	5	(Fish Passage Barrier*)	--	Unchanged
Saugus River	MA93-34	5	5	(Physical Substrate Habitat Alterations*)	--	Unchanged
Saugus River	MA93-34	5	5	Algae	--	Unchanged
Saugus River	MA93-34	5	5	Dissolved Oxygen	--	Unchanged
Saugus River	MA93-34	5	5	Escherichia Coli (E. Coli)	50120	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Saugus River	MA93-34	5	5	Fecal Coliform	50120	Unchanged
Saugus River	MA93-34	5	5	Phosphorus, Total	--	Unchanged
Saugus River	MA93-34	5	5	Turbidity	--	Unchanged
Saugus River	MA93-35	5	5	(Alteration in Stream-side or Littoral Vegetative Covers*)	--	Unchanged
Saugus River	MA93-35	5	5	(Dewatering*)	--	Unchanged
Saugus River	MA93-35	5	5	(Fish Passage Barrier*)	--	Unchanged
Saugus River	MA93-35	5	5	Benthic Macroinvertebrates	--	Unchanged
Saugus River	MA93-35	5	5	Escherichia Coli (E. Coli)	50120	Unchanged
Saugus River	MA93-35	5	5	Fecal Coliform	50120	Unchanged
Saugus River	MA93-43	5	5	(Flow Regime Modification*)	--	Unchanged
Saugus River	MA93-43	5	5	Fecal Coliform	50122	Unchanged
Saugus River	MA93-43	5	5	Oil and Grease	--	Unchanged
Saugus River	MA93-43	5	5	Temperature	--	Unchanged
Saugus River	MA93-44	5	5	(Flow Regime Modification*)	--	Unchanged
Saugus River	MA93-44	5	5	Enterococcus	50122	Unchanged
Saugus River	MA93-44	5	5	Fecal Coliform	50122	Unchanged
Saugus River	MA93-44	5	5	Oil and Grease	--	Unchanged
Saugus River	MA93-44	5	5	Temperature	--	Unchanged
Shute Brook	MA93-49	4a	4a	Fecal Coliform	50121	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Shute Brook	MA93-50	4a	4a	Escherichia Coli (E. Coli)	50120	Unchanged
Shute Brook	MA93-50	4a	4a	Fecal Coliform	50120	Unchanged
Sluice Pond	MA93071	5	5	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
Sluice Pond	MA93071	5	5	Dissolved Oxygen	--	Unchanged
Spring Pond	MA93072	4c	4c	(Fanwort*)	--	Unchanged
Spring Pond	MA93072	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Spring Pond	MA93073	3	3	None	--	Unchanged
Spring Pond	MA93074	3	3	None	--	Unchanged
Strangman Pond	MA93076	5	5	(Aquatic Plants (Macrophytes)*)	--	Changed
Strangman Pond	MA93076	5	5	Algae	--	Unchanged
Strangman Pond	MA93076	5	5	Nutrient/Eutrophication Biological Indicators	--	Added
Strangman Pond	MA93076	5	5	Turbidity	--	Unchanged
Swains Pond	MA93095	4c	4c	(Fanwort*)	--	Unchanged
Unnamed Tributary	MA93-27	3	3	None	--	Unchanged
Unnamed Tributary	MA93-51	5	5	(Alteration in Stream-side or Littoral Vegetative Covers*)	--	Unchanged
Unnamed Tributary	MA93-51	5	5	(Debris*)	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Unnamed Tributary	MA93-51	5	5	(Flow Regime Modification*)	--	Unchanged
Unnamed Tributary	MA93-51	5	5	(Physical Substrate Habitat Alterations*)	--	Unchanged
Unnamed Tributary	MA93-51	5	5	Enterococcus	50123	Added
Unnamed Tributary	MA93-51	5	5	Fecal Coliform	50123	Unchanged
Unnamed Tributary	MA93-51	5	5	Odor	--	Unchanged
Unnamed Tributary	MA93-51	5	5	Trash	--	Unchanged
Unnamed Tributary	MA93-58	5	5	Benthic Macroinvertebrates	--	Unchanged
Unnamed Tributary	MA93-58	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Unnamed Tributary	MA93-59	5	5	Benthic Macroinvertebrates	--	Unchanged
Unnamed Tributary	MA93-59	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Unnamed Tributary	MA93-65	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Upper Banjo Pond	MA93080	5	5	(Aquatic Plants (Macrophytes)*)	--	Changed
Upper Banjo Pond	MA93080	5	5	Nutrient/Eutrophication Biological Indicators	--	Added

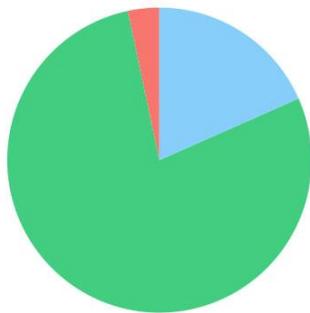
Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Upper Banjo Pond	MA93080	5	5	Turbidity	--	Unchanged
Upper Hawkes Pond	MA93082	--	2	None	--	Unchanged
Upper Pond	MA93083	3	3	None	--	Unchanged
Walden Pond	MA93084	5	5	Mercury in Fish Tissue	--	Unchanged
Walker Creek	MA93-61	4c	4c	(Fish Passage Barrier*)	--	Unchanged
Walker Creek	MA93-62	3	5	Fecal Coliform	--	Added
Wallace Pond	MA93085	3	3	None	--	Unchanged
Waters River	MA93-01	4a	4a	Fecal Coliform	50121	Unchanged
West Pond	MA93089	5	5	Algae	--	Unchanged
West Pond	MA93089	5	5	Chlorophyll-a	--	Unchanged
West Pond	MA93089	5	5	Phosphorus, Total	--	Unchanged
West Pond	MA93089	5	5	Transparency / Clarity	--	Unchanged

Alewife Brook (MA93-26)

Location:	Headwaters, perennial portion just north of B&M Railroad, Rockport to mouth at inlet Babson Reservoir, Gloucester.
AU Type:	RIVER
AU Size:	1 MILES
Classification/Qualifier:	A: PWS, ORW (Tributary)

Alewife Brook (MA93-26)

Watershed Area: 1.41 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.41	1.41	0.60	0.60
Agriculture	0%	0%	0%	0%
Developed	3.3%	3.3%	2.4%	2.4%
Natural	78.3%	78.3%	71.9%	71.9%
Wetland	18.4%	18.4%	25.7%	25.7%
Impervious	1.8%	1.8%	0.6%	0.6%

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 Alewife Brook (MA93-26) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Alewife Brook (MA93-26) 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 Alewife Brook (MA93-26) 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 Alewife Brook (MA93-26) 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 Alewife Brook at W0462 [~750 ft upstream/NE of Babson Reservoir, Gloucester] in Jun 1997 (n=1). The historic <i>E. coli</i> data at W0462 are too limited to assess according to the 2024 CALM. Additionally, 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
W0462	MassDEP	Water Quality	Alewife Brook	[approximately 750 feet upstream/northeast of Babson Reservoir, Gloucester.]	42.631319	-70.652732

Bacteria Data

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

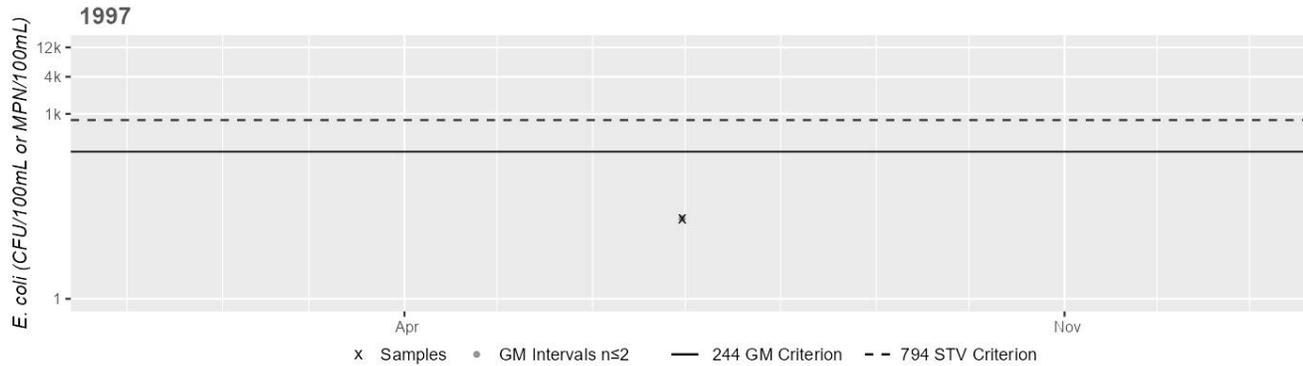
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0462	MassDEP	E. coli	06/30/97	06/30/97	1	20	20	19

Station MASSDEP_W0462 - Escherichia coli

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



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

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

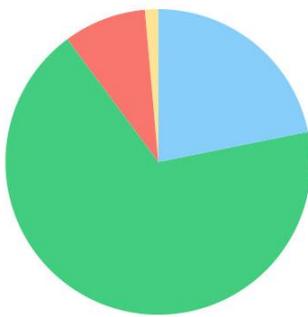
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Alewife Brook (MA93-45)

Location:	Headwaters, outlet Chebacco Lake, Essex to Landing Road, Essex.
AU Type:	RIVER
AU Size:	1.4 MILES
Classification/Qualifier:	B

Alewife Brook (MA93-45)

Watershed Area: 7.18 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	7.18	6.72	3.20	2.97
Agriculture	1.4%	1.5%	0.5%	0.5%
Developed	8.7%	8.4%	7.3%	7.2%
Natural	68%	67.9%	63.3%	63.1%
Wetland	21.8%	22.2%	28.8%	29.2%
Impervious	4.8%	4.7%	4.5%	4.4%

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 Alewife Brook (MA93-45) 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 Alewife Brook (MA93-45) is Not Assessed.

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 Alewife Brook (MA93-45) so it is assessed as having Insufficient Information. Ipswich River Watershed Association (IRWA) staff/volunteers collected <i>E. coli</i> bacteria samples three-quarters of the way down Alewife Brook at IRWA_AB [Apple St., Essex] in Jun 2022 (n=1). <i>E. coli</i> data from IRWA_AB 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
IRWA_AB	Ipswich River Watershed Association	Water Quality	Alewife Brook	Apple St., Essex	42.625840	-70.793150

Bacteria Data

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

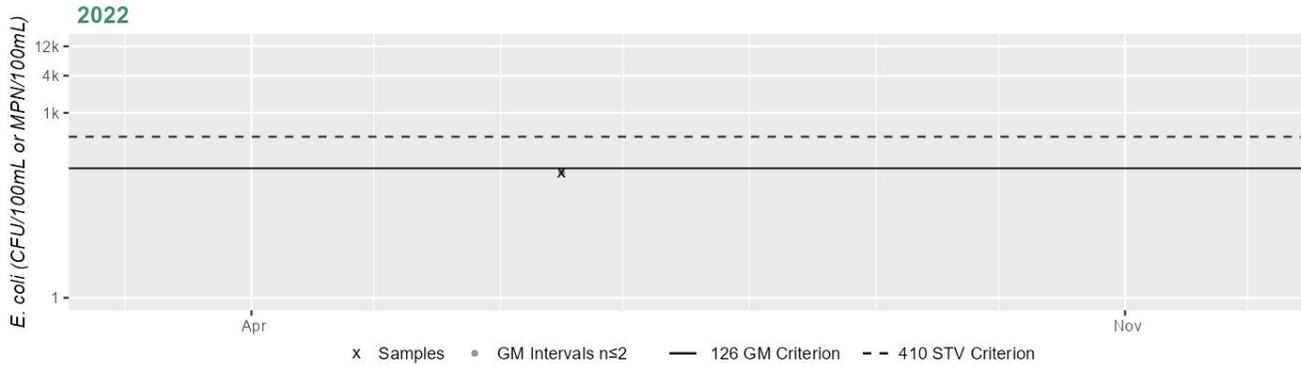
(IRWA 2022) (MassDEP Undated 2)

[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
IRWA_AB	Ipswich River Watershed Association	E. coli	06/16/22	06/16/22	1	107	107	107

Station IRWA_AB & MASSDEP_W1546 - Escherichia coli

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



Variable*	Result
Samples	1
SeasGM	107
#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
Insufficient Information	NO
2024/26 Use Attainment Summary	

Too limited bacteria data are available to assess the Secondary Contact Recreation Use for Alewife Brook (MA93-45) so it is assessed as having Insufficient Information. Ipswich River Watershed Association (IRWA) and MassDEP staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Alewife Brook from 2002-2022 at 2 stations/combined stations. Samples were collected from the following stations/sample years from upstream to downstream (both approximately three-quarters of the way down the AU): W0879 [upstream of stormdrain coming in from NW side of brook at Apple St, Essex] from May-Aug 2002 (n=4), and combined station IRWA_AB & W1546 [downstream at Apple St, Essex & Apple St., Essex] from May-Sep 2007 (historic n=6) and Jun 2022 (current n=1). Analysis of this historic single year limited frequency *E. coli* dataset from W0879 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 110 CFU/100ml. Analysis of the historic single year limited frequency *E. coli* dataset from IRWA_AB & W1546 indicated 50% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 125 CFU/100ml. *E. coli* data from IRWA_AB & W1546 (in the current IR window) are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use. Historic *E. coli* data from W0879 and IRWA_AB & W1546 both meet 2024 CALM guidance. 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
IRWA_AB	Ipswich River Watershed Association	Water Quality	Alewife Brook	Apple St., Essex	42.625840	-70.793150
W0879	MassDEP	Water Quality	Alewife Brook	[upstream of stormdrain coming in from northwest side of brook at Apple Street, Essex]	42.625766	-70.793254
W1546	MassDEP	Water Quality	Alewife Brook	[downstream at Apple Street, Essex]	42.625873	-70.793123

Bacteria Data

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

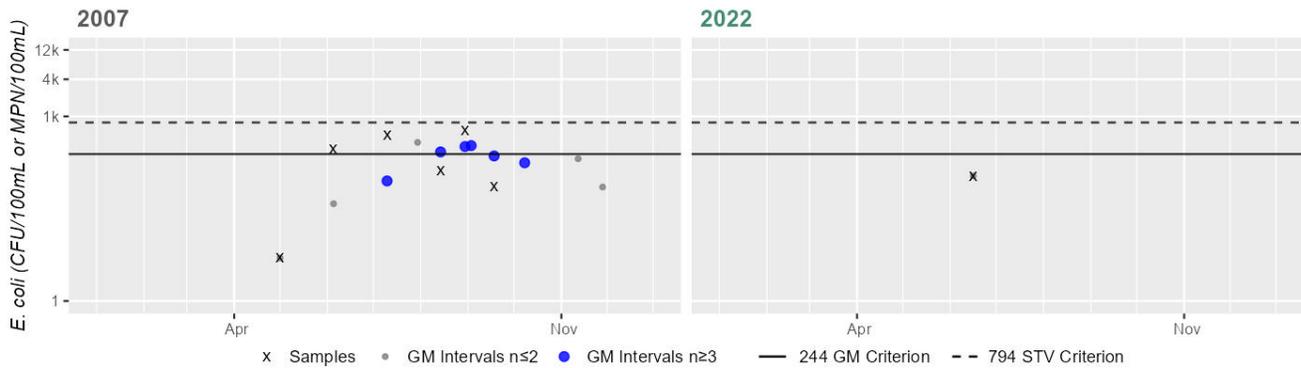
(IRWA 2022) (MassDEP Undated 1) (MassDEP Undated 7) (MassDEP Undated 3)

[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
IRWA_AB	Ipswich River Watershed Association	E. coli	06/16/22	06/16/22	1	107	107	107
W0879	MassDEP	E. coli	05/06/02	08/12/02	4	59	400	110
W1546	MassDEP	E. coli	05/01/07	09/18/07	6	5	590	125

Station IRWA_AB & MASSDEP_W1546 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	125
#GMI	6
#GMI Ex	3
%GMI Ex	50%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	1
SeasGM	107
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

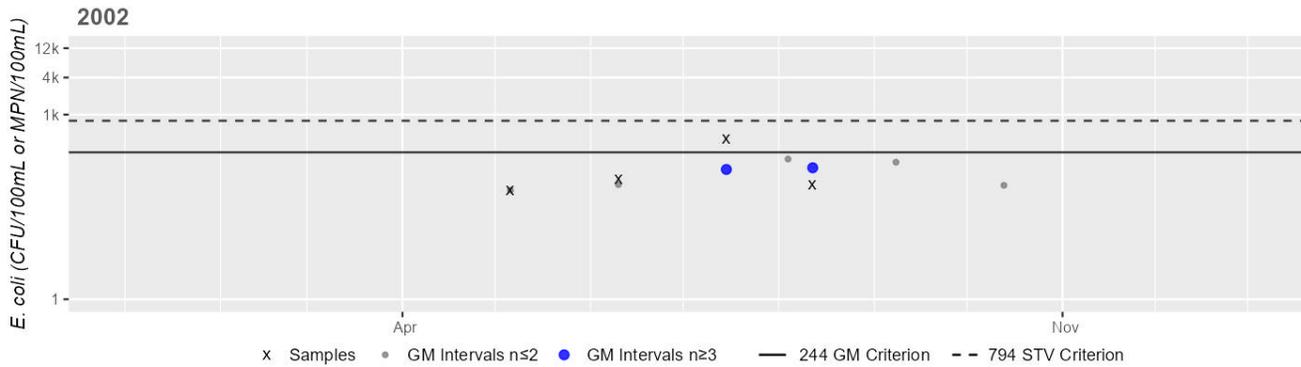
Cumulative %GMI Exceedance
Historic (1997-2010)
50%

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_W0879 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	110
#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.

Alewife Brook (MA93-46)

Location:	From Landing Road, Essex to mouth at confluence with Essex River, Essex.
AU Type:	ESTUARY
AU Size:	0.01 SQUARE MILES
Classification/Qualifier:	SA: ORW, SFO (Tributary to SA Shellfishing ORW)

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50121	Unchanged

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

Recommendations

2024/26 Recommendations
<p>2024 IR [BACTERIA, LOW] The prior Alert for elevated bacteria is being carried forward and additional sampling is recommended for Alewife Brook (MA93-46). The Alert was originally identified due to elevated bacteria concentrations documented in the “upstream” freshwater portion of Alewife brook i.e. (MA93-45). In addition at the time of the writing of the 2002 Water Quality Assessment Report (MassDEP 2007), the Town of Essex was under a consent order to remediate contaminated storm drains, some of which were known to discharge to Alewife Brook. Future monitoring for bacteria should be conducted throughout this AU with consideration given to bracket monitoring around any storm drains, especially those that discharge during dry weather conditions. 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 Alewife Brook (MA93-46) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Alewife Brook (MA93-46): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0055 sq mi (54%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0055 sq mi (54%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N7.2	Upper Essex River	Prohibited	0.00546	54.3%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Alewife Brook (MA93-46) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
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Insufficient Information	YES
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2024/26 Use Attainment Summary
No bacteria data are available to assess the Primary Contact Recreation Use for Alewife Brook (MA93-46) so it is assessed as having Insufficient Information. The prior Alert due to elevated bacteria is being carried forward. The shellfish growing areas (0.0055 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 Alewife Brook based on shellfish classification data.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Alewife Brook (MA93-46): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0055 sq mi (54%). 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 Alewife Brook (MA93-46) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0055 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 Alewife Brook based on shellfish classification data.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Alewife Brook (MA93-46): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0055 sq mi (54%). 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.

Annisquam River (MA93-12)

Location:	The waters from the Gloucester Harbor side of the Route 127 bridge, Gloucester to Ipswich Bay at an imaginary line drawn from Bald Rocks to Wigwam Point, Gloucester.
AU Type:	ESTUARY
AU Size:	0.82 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--
Fecal Coliform	Urban Runoff/Storm Sewers (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 Annisquam River (MA93-12) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>Annisquam River (MA93-12): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.7749 sq mi (94%). The approved shellfish growing area represents 0.0016 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.</p>

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N10.0	Outer North Gloucester	Approved	0.00161	0.2%
N9.0	Gloucester Harbor	Prohibited	0.00000	0.0%
N9.1	Lobster Cove	Prohibited	0.01540	1.9%
N9.13	Hucks Cove	Prohibited	0.02812	3.4%
N9.14		Prohibited	0.08384	10.2%
N9.20	Wheelers Point	Conditionally Approved	0.00057	0.1%
N9.23	Jones River Marshes South	Conditionally Approved	0.00219	0.3%
N9.24	Jones River Marshes North	Conditionally Approved	0.00166	0.2%
N9.7	Annisquam River	Conditionally Approved	0.64152	78.1%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Annisquam River (MA93-12) 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 Annisquam River (MA93-12) continues to be assessed as Fully Supporting based on DPH Beach Closure data. Annisquam River has a beach with DPH Beach Closure data: Wingersheek [Beach ID: 2864] beach in Gloucester. The beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.7749 sq mi) in this AU are less than 100% approved (0.0016 sq mi, 0%). The data were too limited to assess Primary Contact Recreation Use of Annisquam River based on shellfish classification data.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2864	Wingersheek/ Gloucester	42.65372, - 70.68990	42.65122, - 70.68570	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 5)

Summary
Annisquam River (MA93-12): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.7749 sq mi (94%). The approved shellfish growing area represents 0.0016 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 Annisquam River (MA93-12) continues to be assessed as Fully Supporting based on DPH Beach Closure data. Annisquam River has a beach with DPH Beach Closure data: Wingersheek [Beach ID: 2864] beach in Gloucester. The beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.7749 sq mi) in this AU are less than 100% approved (0.0016 sq mi, 0%). The data were too limited to assess Secondary Contact Recreation Use of Annisquam River based on shellfish classification data.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Annisquam River (MA93-12): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.7749 sq mi (94%). The approved shellfish growing area represents 0.0016 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.

Babson Reservoir (MA93001)

Location:	Gloucester.
AU Type:	FRESHWATER LAKE
AU Size:	40 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Babson Reservoir (MA93001) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Bass River (MA93-07)

Location:	Headwaters, perennial portion west of Wenham Lake, Beverly to the outlet of "lower Shoe Pond" north of Route 62, Beverly (through former 2006 segment: Shoe Pond MA93068) (portions culverted).
AU Type:	RIVER
AU Size:	2.1 MILES
Classification/Qualifier:	B

No usable data were available for Bass River (MA93-07) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(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	--	--	--	--
(Fish Passage Barrier*)	Habitat Modification - other than Hydromodification (Y)	X	--	--	--	--
Turbidity	Source Unknown (N)	--	--	X	X	X

Bass River (MA93-08)

Location:	From outlet of "lower Shoe Pond" north of Route 62, Beverly to mouth at confluence with Danvers River and Beverly Harbor, Beverley.
AU Type:	ESTUARY
AU Size:	0.12 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (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 Bass River (MA93-08) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Bass River (MA93-08): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1175 sq mi (96%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.1175 sq mi (96%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N17.0		Prohibited	0.11749	96.5%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Bass River (MA93-08) 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 Bass River (MA93-08) continues to be assessed as Fully Supporting based on DPH Beach Closure data. Bass River has a beach with DPH Beach Closure data: Goat Hill [Beach ID: 2634] beach in Beverly. The beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.1175 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 Bass River.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2634	Goat Hill/ Beverly	42.54282, -70.89010	42.54377, -70.89030	0%	0%	0%	0%	0%	0%	0%	7%	0%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Bass River (MA93-08): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1175 sq mi (96%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for the Bass River (MA93-08) continues to be assessed as Fully Supporting based on DPH Beach Closure data. Bass River has a beach with DPH Beach Closure data: Goat Hill [Beach ID: 2634] beach in Beverly. The beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.1175 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 Bass River.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

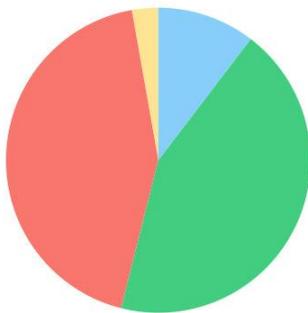
Summary
Bass River (MA93-08): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1175 sq mi (96%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Beaver Brook (MA93-37)

Location:	Headwaters, perennial portion west of Route 95, Danvers to mouth at inlet Mill Pond, Danvers.
AU Type:	RIVER
AU Size:	2.7 MILES
Classification/Qualifier:	B

Beaver Brook (MA93-37)

Watershed Area: 2.28 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.28	2.28	0.61	0.61
Agriculture	2.8%	2.8%	0.4%	0.4%
Developed	43.3%	43.3%	27.4%	27.4%
Natural	43.5%	43.5%	41.4%	41.4%
Wetland	10.4%	10.4%	30.8%	30.8%
Impervious	26.3%	26.3%	16.6%	16.6%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Dissolved Oxygen	--	Unchanged
5	5	Enterococcus	R1_MA_2024_04P	Added
5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed

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

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

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 Beaver Brook (MA93-37) 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 Beaver Brook (MA93-37) 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 Beaver Brook (MA93-37) continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being carried forward. An <i>Enterococcus</i> impairment is being added due to bacteria data not meeting the threshold at 2 stations in 2019-2020. Salem Sound Coastwatch (SSCW) staff/volunteers collected <i>Enterococcus</i> bacteria samples in Beaver Brook from 2019-2020 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: three-quarters of the way down the AU at SSCW_W1541 [48 Pickering St, Danvers] from 2019-2020 (n=9-13/yr), and the downstream end at SSCW_W0450 [54 Holten St, Danvers] from 2019-2020 (n=9-14/yr). Analysis of the multi-year moderate frequency <i>Enterococcus</i> dataset from SSCW_W1541 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml (2019 and 2020, 100 & 95%), 2 yrs had ≥2 samples exceed the 130 CFU/100ml STV (2019 and 2020, n=6 & 10), and cumulatively across years 97% of intervals had GMs >35 CFU/100ml. Analysis of the multi-year moderate frequency <i>Enterococcus</i> dataset from SSCW_W0450 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml (2019 and 2020, 100 & 100%), 2 yrs had ≥2 samples exceed the 130 CFU/100ml STV (2019 and 2020, n=7 & 12), and cumulatively across years 100% of intervals had GMs >35 CFU/100ml. <i>Enterococcus</i> data from SSCW_W1541 and SSCW_W0450 are indicative of an <i>Enterococcus</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_W0450	Salem Sound Coastwatch	Water Quality	Beaver Brook; Proctor Brook, River Stream Intermittent	Beaver Brook - 54 Holten St, Danvers	42.562080	-70.943880
SSCW_W1541	Salem Sound Coastwatch	Water Quality	Beaver Brook, River Stream Intermittent	48 Pickering St, Danvers	42.567360	-70.944620

Bacteria Data

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

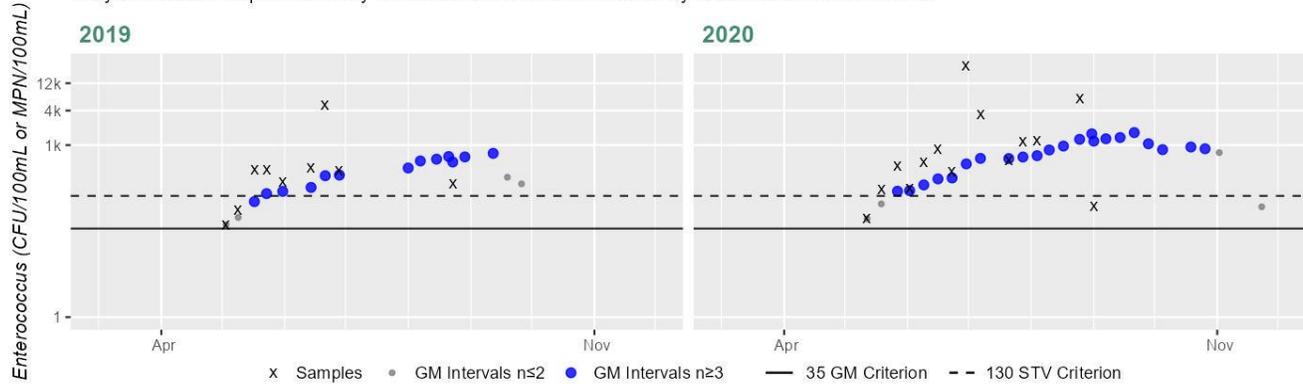
(MassDEP Undated 2)

[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
SSCW_W0450	Salem Sound Coastwatch	Enterococci	05/03/19	08/23/19	9	41	4880	288
SSCW_W0450	Salem Sound Coastwatch	Enterococci	05/11/20	08/31/20	14	52	24200	664
SSCW_W1541	Salem Sound Coastwatch	Enterococci	05/03/19	08/23/19	9	10	3870	230
SSCW_W1541	Salem Sound Coastwatch	Enterococci	05/11/20	08/31/20	13	10	2613	286

Station SSCW_W0450 - Enterococcus

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



x Samples • GM Intervals n≤2 ● GM Intervals n≥3 — 35 GM Criterion - - 130 STV Criterion

Variable*	Result
Samples	9
SeasGM	288
#GMI	13
#GMI Ex	13
%GMI Ex	100%
n>STV	7
%n>STV	77%

Variable*	Result
Samples	14
SeasGM	664
#GMI	22
#GMI Ex	22
%GMI Ex	100%
n>STV	12
%n>STV	85%

Cumulative %GMI Exceedance

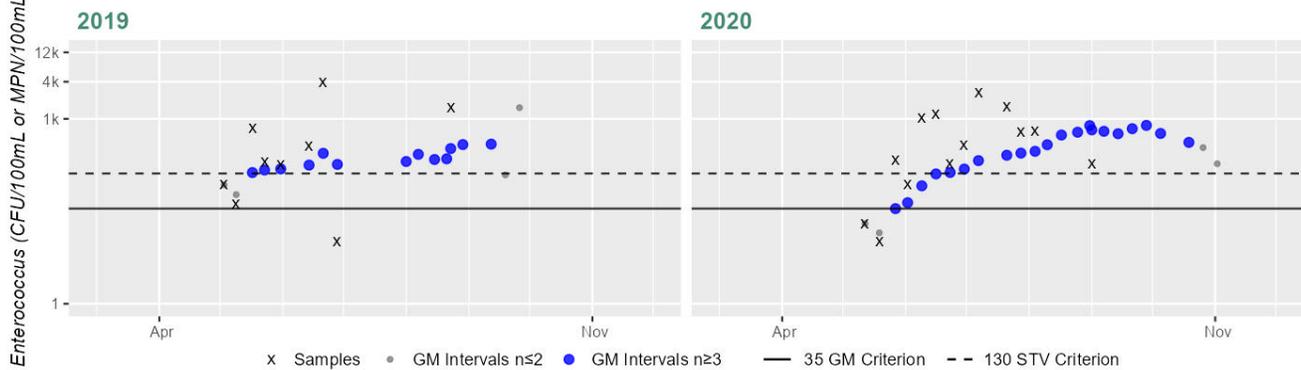
Current (2011-2022)

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 SSCW_W1541 - Enterococcus

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



Variable*	Result
Samples	9
SeasGM	230
#GMI	13
#GMI Ex	13
%GMI Ex	100%
n>STV	6
%n>STV	66%

Variable*	Result
Samples	13
SeasGM	286
#GMI	21
#GMI Ex	20
%GMI Ex	95%
n>STV	10
%n>STV	76%

Cumulative %GMI Exceedance
Current (2011-2022)
97%

*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 Beaver Brook (MA93-37) continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2007. MassDEP staff collected <i>E. coli</i> bacteria samples in Beaver Brook from 1997-2007 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: three-quarters of the way down the AU at W1541 [Pickering St, Danvers] from May-Sep 2007 (n=6), and the downstream end at W0450 [Holten St, Danvers] in 1997 and 2002 (n=2-4/yr). Analysis of the historic single year limited frequency <i>E. coli</i> dataset from W1541 indicated 100% of intervals had GMs >244 CFU/100ml, 2 samples exceeded the 794 CFU/100ml STV, and the overall GM was 822 CFU/100ml. Analysis of the historic single year limited frequency <i>E. coli</i> dataset from W0450 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. While historic <i>E. coli</i> data from W0450 meet 2024 CALM guidance, historic <i>E. coli</i> data from W1541 are indicative of an <i>E. coli</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0450	MassDEP	Water Quality	Beaver Brook	[Holten Street, Danvers]	42.562305	-70.944125
W1541	MassDEP	Water Quality	Beaver Brook	[Pickering Street, Danvers]	42.567450	-70.944745

Bacteria Data

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

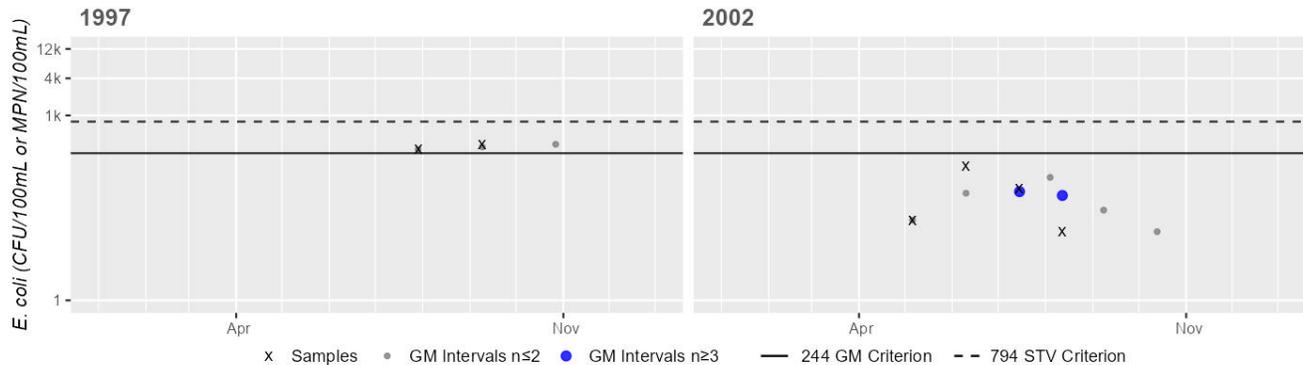
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0450	MassDEP	E. coli	07/29/97	09/09/97	2	280	340	308
W0450	MassDEP	E. coli	05/06/02	08/12/02	4	13	150	39
W1541	MassDEP	E. coli	05/01/07	09/18/07	6	150	3800	822

Station MASSDEP_W0450 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	308
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

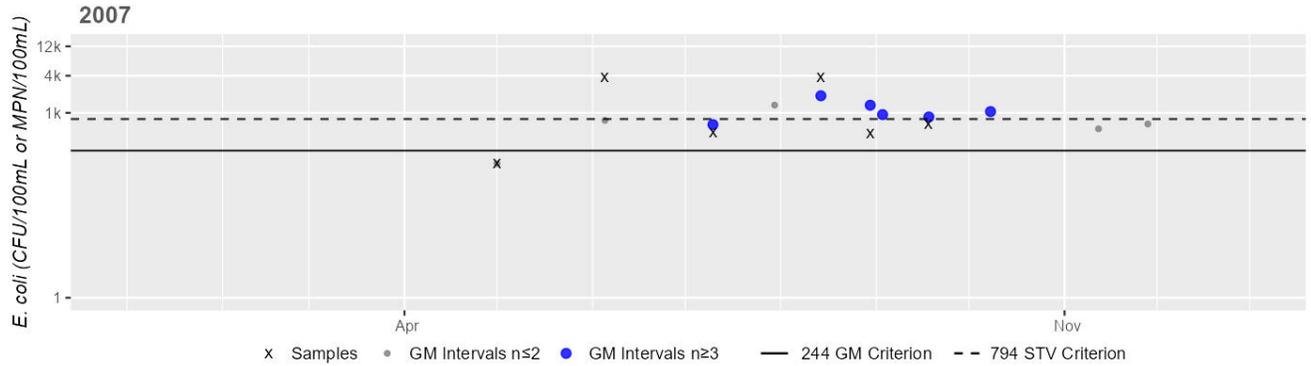
Variable*	Result
Samples	4
SeasGM	39
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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.

Station MASSDEP_W1541 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	822
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	2
%n>STV	33%

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

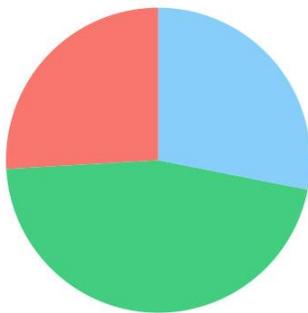
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Beaverdam Brook (MA93-30)

Location:	Headwaters west of Main Street, Lynnfield to confluence with Saugus River (Reedy Meadow), Lynnfield.
AU Type:	RIVER
AU Size:	2.5 MILES
Classification/Qualifier:	A: PWS, ORW (Tributary)

Beaverdam Brook (MA93-30)

Watershed Area: 2.38 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.38	2.38	1.07	1.07
Agriculture	0%	0%	0%	0%
Developed	25.9%	25.9%	16.9%	16.9%
Natural	46%	46%	34.3%	34.3%
Wetland	28.1%	28.1%	48.8%	48.8%
Impervious	13.3%	13.3%	8.4%	8.4%

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)	50120	Unchanged
5	5	Fecal Coliform	50120	Unchanged

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

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

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 Beaverdam Brook (MA93-30) 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 Beaverdam Brook (MA93-30) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Beaverdam Brook (MA93-30) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) and Fecal Coliform impairments are being carried forward.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Beaverdam Brook (MA93-30) continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2007. MassDEP staff collected <i>E. coli</i> bacteria samples in Beaverdam Brook from 1997-2007 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream (with both stations located approximately halfway down the AU): W0447 [upstream at Chestnut St, Lynnfield] from 1997-1998 (n=1-3/yr) and W0448 [downstream at Chestnut St, Lynnfield] in 1997 and 2007 (n=1-6/yr). Analysis of the historic single year limited frequency <i>E. coli</i> dataset from W0447 indicated 0% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV (800 CFU), and the overall GM was 197 CFU/100ml. Analysis of the historic single year limited frequency <i>E. coli</i> dataset from W0448 indicated 100% of intervals had GMs >244 CFU/100ml, 3 samples exceeded the 794 CFU/100ml STV, and the overall GM was 682 CFU/100ml. Historic <i>E. coli</i> data from W0447 are inconclusive according to the 2024 CALM to assess the Secondary Contact Recreation Use because this single year, limited frequency dataset included both GMs below the threshold and STV exceedance of the threshold. However, historic <i>E. coli</i> data from W0448 are indicative of an <i>E. coli</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0447	MassDEP	Water Quality	Beaverdam Brook	[upstream at Chestnut Street, Lynnfield]	42.537153	-71.056409
W0448	MassDEP	Water Quality	Beaverdam Brook	[downstream at Chestnut Street, Lynnfield]	42.536969	-71.056508

Bacteria Data

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

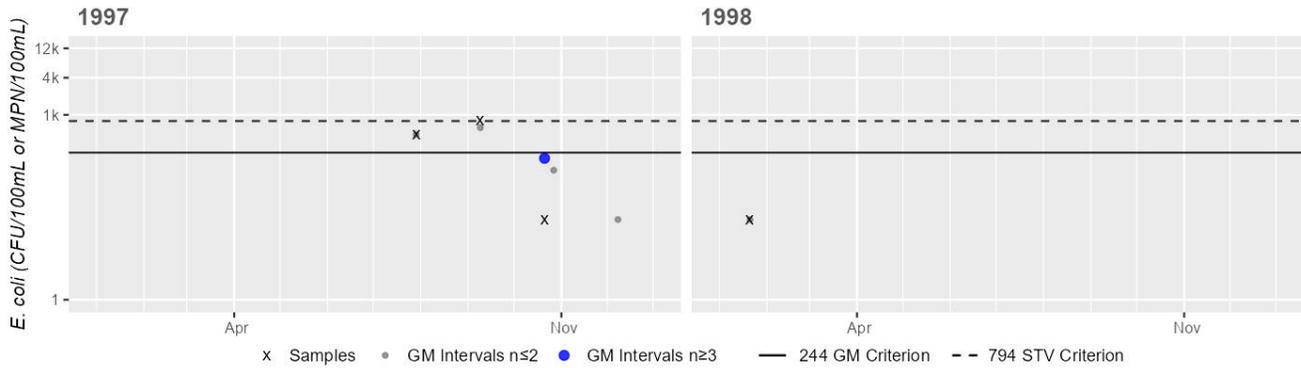
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0447	MassDEP	E. coli	07/29/97	10/21/97	3	20	800	197
W0447	MassDEP	E. coli	01/21/98	01/21/98	1	20	20	19
W0448	MassDEP	E. coli	10/21/97	10/21/97	1	400	400	399
W0448	MassDEP	E. coli	05/01/07	09/18/07	6	62	4600	682

Station MASSDEP_W0447 - Escherichia coli

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



Variable*	Result
Samples	3
SeasGM	197
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	33%

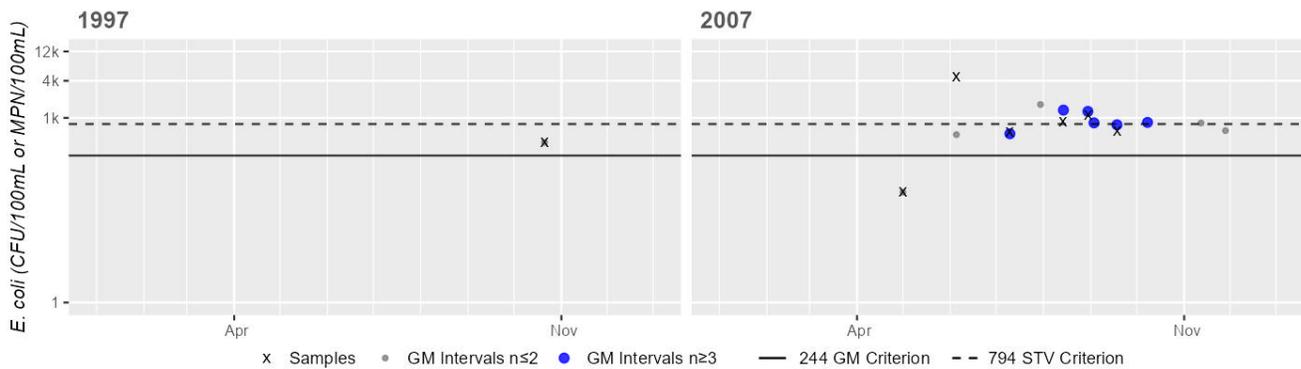
Variable*	Result
Samples	1
SeasGM	20
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W0448 - Escherichia coli

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



Variable*	Result
Samples	1
SeasGM	400
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	682
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	3
%n>STV	50%

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.

Beck Pond (MA93003)

Location:	Hamilton.
AU Type:	FRESHWATER LAKE
AU Size:	35 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	5	Mercury in Fish Tissue	--	Added

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	No

2024/26 Use Attainment Summary
<p>The Fish Consumption Use for Beck Pond (MA93003) is assessed as Not Supporting with a new impairment being added for Mercury in Fish Tissue. Fish toxics sampling for metals (mercury, arsenic, cadmium, and selenium) was performed by MassDEP WPP biologists in Beck Pond at station F0493 in 2022 as part of the MassDEP WPP targeted assessment monitoring (TAM). MDPH issued a site-specific advisory for Mercury in Beck Pond in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent DPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations. The likely source of Mercury, although not confirmed, is atmospheric deposition.</p>

Fish Consumption Advisories

Summary of Fish Toxics Sampling and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP Undated 6)

Summary Statement
Fish toxics sampling for metals (mercury, arsenic, cadmium, and selenium) was performed by MassDEP WPP biologists in Beck Pond (MA93003) at station F0493 in 2022 as part of the MassDEP WPP targeted assessment monitoring (TAM). Because of elevated Mercury measured in fish filets, MDPH issued site-specific fish consumption advisories for Beck 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 Beck Pond (MA93003).

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No data are available, so the Aesthetics Use for Beck Pond (MA93003) 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 Beck Pond (MA93003) are available, so the Primary Contact Recreation Use is Not Assessed.	

Secondary Contact Recreation

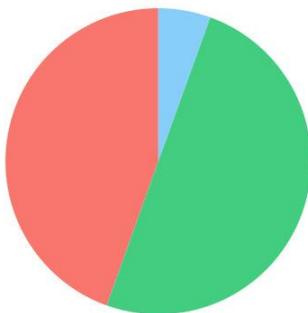
2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for Beck Pond (MA93003) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.	

Bennetts Pond Brook (MA93-48)

Location:	Headwaters east of Lynn Fells Parkway (in Bellevue Golf Course), Melrose to mouth at confluence with Saugus River, Saugus.
AU Type:	RIVER
AU Size:	2.4 MILES
Classification/Qualifier:	B

Bennetts Pond Brook (MA93-48)

Watershed Area: 3.33 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.33	3.33	0.78	0.78
Agriculture	0%	0%	0%	0%
Developed	44.5%	44.5%	44.2%	44.2%
Natural	50%	50%	47.8%	47.8%
Wetland	5.5%	5.5%	8%	8%
Impervious	28.2%	28.2%	26.6%	26.6%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Escherichia Coli (E. Coli)	50120	Unchanged
4a	4a	Fecal Coliform	50120	Unchanged

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Fecal Coliform	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 Bennetts Pond Brook (MA93-48) 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 Bennetts Pond Brook (MA93-48) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Bennetts Pond Brook (MA93-48) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) and Fecal Coliform impairments are being carried forward.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Bennetts Pond Brook (MA93-48) continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2002 and 2007. The prior Fecal Coliform impairment is being carried forward. MassDEP staff collected <i>E. coli</i> bacteria samples close to the downstream end of Bennetts Pond Brook at W0878 [at mall entrance S off Lynn Fells Parkway and E of Forest St, Saugus] in 2002 and 2007 (n=4-6/yr). Analysis of the historic multi-year limited frequency <i>E. coli</i> dataset from W0878 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2002 and 2007, 100 & 100%), 2 yrs had ≥2 samples exceed the 794 CFU/100ml STV (2002 and 2007, n=2 & 5), and cumulatively across years 100% of intervals had GMs >244 CFU/100ml. Historic <i>E. coli</i> data from W0878 are indicative of an <i>E. coli</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0878	MassDEP	Water Quality	Bennetts Pond Brook	[at mall entrance south off Lynn Fells Parkway and east of Forest Street, Saugus]	42.479662	-71.025083

Bacteria Data

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

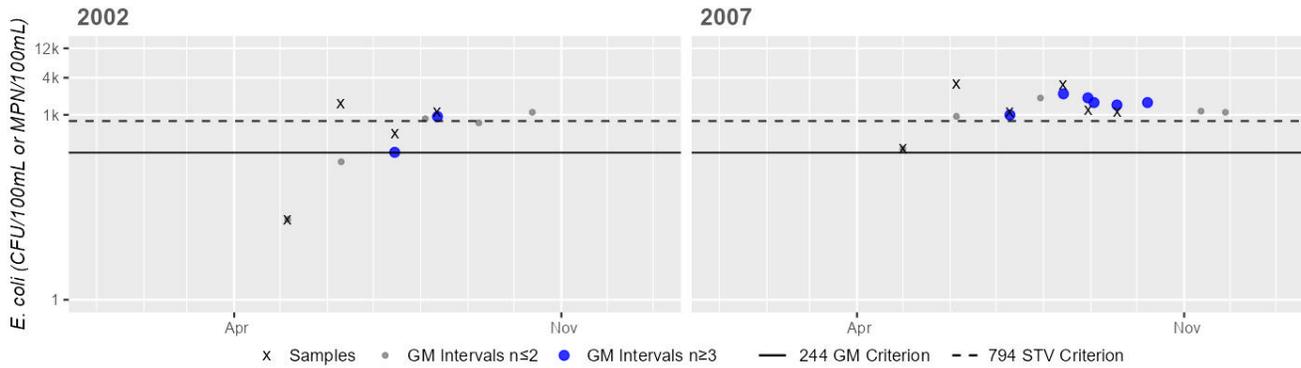
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0878	MassDEP	E. coli	05/06/02	08/12/02	4	20	1500	358
W0878	MassDEP	E. coli	05/01/07	09/18/07	6	280	3200	1254

Station MASSDEP_W0878 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	358
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	2
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	1254
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	5
%n>STV	83%

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

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

Beverly Harbor (MA93-20)

Location:	From the mouth of the Danvers River, Salem/Beverly to an imaginary line from Juniper Point, Salem to Hospital Point, Beverly.
AU Type:	ESTUARY
AU Size:	1.02 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Enterococcus	50122	Added
5	5	Estuarine Bioassessments	--	Unchanged
5	5	Fecal Coliform	50122	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Estuarine Bioassessments	Source Unknown (N)	X	--	--	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Pumpout Releases (N)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Sanitary On-vessel Discharges (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 Beverly Harbor (MA93-20) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Beverly Harbor (MA93-20): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.0012 sq mi (98%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The prohibited shellfish growing area represents 1.0012 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N16.0		Prohibited	0.00854	0.8%
N17.0		Prohibited	0.98959	97.1%
N19.0	Folger/Peaches Point	Prohibited	0.00312	0.3%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Beverly Harbor (MA93-20) 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 Beverly Harbor (MA93-20) is assessed as Not Supporting. An <i>Enterococcus</i> impairment is being added due to bacteria data not meeting the threshold at 3 stations in in 2014, 2016, and 2019-2020. Beverly Harbor has 12 beaches with DPH Beach Closure data: Woodbury [Beach ID: 2633], Dane Street [Beach ID: 2631], Independence Park [Beach ID: 2640], Rice’s [Beach ID: 2630], Lynch Park [Beach ID: 2636] and Sandy Point [Beach ID: 2639] beaches in Beverly and Juniper Point [Beach ID: 3112], Camp Naumkeag [Beach ID: 3114], Collins Cove [Beach ID: 3113], Steps [Beach ID: 3118], Willows Pier [Beach ID: 3120] and Dead Horse [Beach ID: 3110] beaches in Salem. All beaches were rarely, if at all, posted for swimming from 2018-2022 (the exceptions being Juniper Point beach with 39% of the bathing season posted in 2020 & Woodbury beach with 13% posted in 2022). The shellfish growing areas (1.0012 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 Beverly Harbor. Salem Sound Coastwatch (SSCW) staff/volunteers collected <i>Enterococcus</i> bacteria samples in Beverly Harbor from 2014-2020 at 3 stations. Samples were collected from the following stations/sample years, from upstream to downstream: SSCW_525 [Conners St, Collins Cove, Salem] from 2019-2020 (n=6/yr), SSCW_321 [Dane St Beach - Lawrence brook at beach, Beverly] in 2014, 2016, and 2019-2020 (n=5-7/yr) and SSCW_214 [Rice Beach, Stream flow onto beach] in 2014, 2016, and 2019-2020 (n=2-6/yr). Analysis of the multi-year limited frequency <i>Enterococcus</i> dataset from SSCW_525 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml (2019 and 2020, 100 & 100%), 2 yrs had ≥2 samples exceed the 130 CFU/100ml STV (2019 and 2020, n=4 & 5), and cumulatively across years 100% of intervals had GMs >35 CFU/100ml. Analysis of the multi-year limited frequency <i>Enterococcus</i> dataset from SSCW_321 indicated 4 out of 4 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml (2014, 2016, and 2019-2020, 100%), 4 yrs had ≥2 samples exceed the 130 CFU/100ml STV (2014, 2016, and 2019-2020, n=3-7), and cumulatively across years 100% of intervals had GMs >35 CFU/100ml. Analysis of the multi-year limited frequency <i>Enterococcus</i> dataset from SSCW_214 indicated 4 out of 4 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml (2014, 2016, and 2019-2020, 100%), 4 yrs had ≥2 samples exceed the 130 CFU/100ml STV (2014, 2016, and 2019-2020, n=2-6), and cumulatively across years 100% of intervals had GMs >35 CFU/100ml. <i>Enterococcus</i> data from SSCW_214, SSCW_321, and SSCW_525 are indicative of an <i>Enterococcus</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_214	Salem Sound Coastwatch	Water Quality	Stormwater Outfall; Rice Beach, River/Stream Intermittent; Rice Beach, River Stream Intermittent	Rice Beach, Stream flow onto beach	42.547130	-70.857450
SSCW_321	Salem Sound Coastwatch	Water Quality	Lawrence Brook; Lawrence Brook at Dane Beach, Channelized Stream; Rice Beach, River Stream Intermittent	Dane Street Beach - Lawrence brook at beach, Beverly	42.548760	-70.867670
SSCW_525	Salem Sound Coastwatch	Water Quality	Stormwater Outfall; Rice Beach, River Stream Intermittent	Connors Street, Collins Cove, Salem	42.530210	-70.886310

Bacteria Data

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

(MassDEP Undated 2)

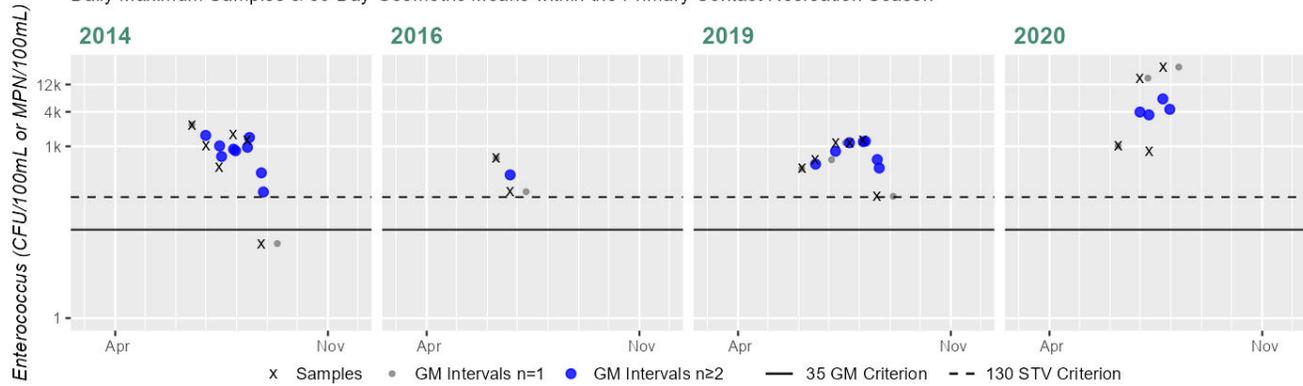
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_214	Salem Sound Coastwatch	Enterococcus	06/17/14	08/26/14	6	20	2380	591
SSCW_214	Salem Sound Coastwatch	Enterococcus	06/09/16	06/23/16	2	161	624	316
SSCW_214	Salem Sound Coastwatch	Enterococcus	06/04/19	08/19/19	6	134	1300	617
SSCW_214	Salem Sound Coastwatch	Enterococcus	06/08/20	07/23/20	4	809	24196	4188
SSCW_321	Salem Sound Coastwatch	Enterococcus	06/17/14	08/26/14	5	95	809	451
SSCW_321	Salem Sound Coastwatch	Enterococcus	06/09/16	08/18/16	5	26	791	146
SSCW_321	Salem Sound Coastwatch	Enterococcus	06/04/19	08/19/19	6	393	13000	1154
SSCW_321	Salem Sound Coastwatch	Enterococcus	06/08/20	08/25/20	7	657	17329	2293
SSCW_525	Salem Sound Coastwatch	Enterococcus	06/04/19	08/19/19	6	62	4350	297

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_525	Salem Sound Coastwatch	Enterococcus	06/08/20	08/25/20	6	10	19863	649

Station SSCW_214 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	591
#GMI	9
#GMI Ex	9
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	2
SeasGM	316
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	2
%n>STV	100%

Variable*	Result
Samples	6
SeasGM	617
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	4
SeasGM	4188
#GMI	4
#GMI Ex	4
%GMI Ex	100%
n>STV	4
%n>STV	100%

Cumulative %GMI Exceedance

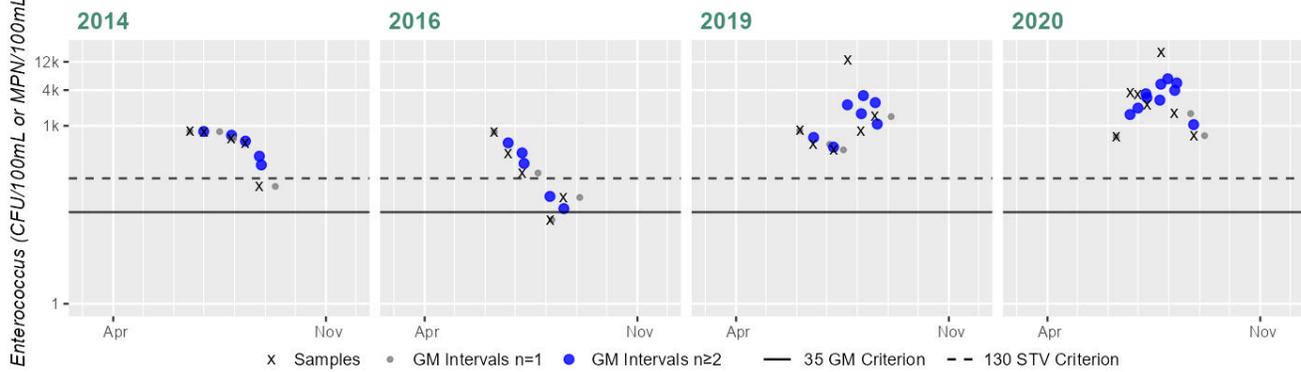
Current (2011-2022)

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.

Station SSCW_321 - Enterococcus

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



Variable*	Result
Samples	5
SeasGM	451
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	4
%n>STV	80%

Variable*	Result
Samples	5
SeasGM	146
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	3
%n>STV	60%

Variable*	Result
Samples	6
SeasGM	1154
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	6
%n>STV	100%

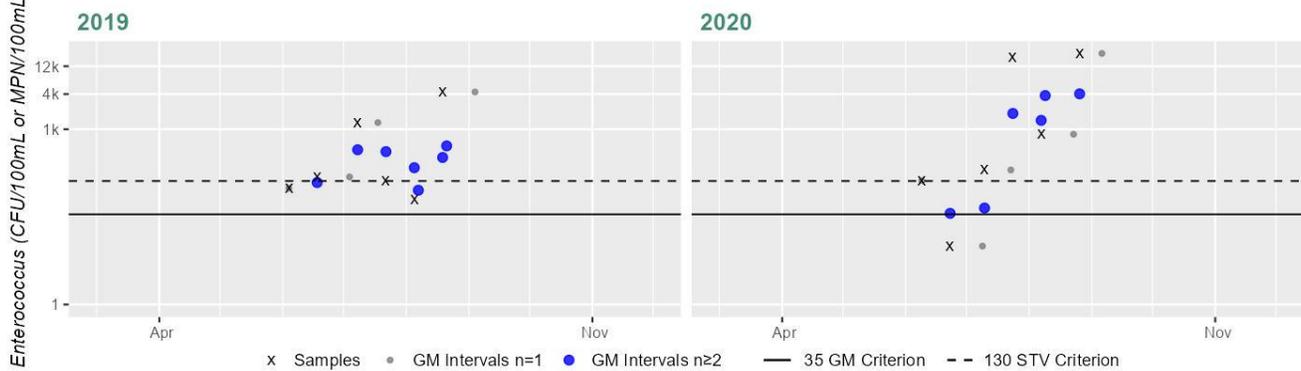
Variable*	Result
Samples	7
SeasGM	2293
#GMI	10
#GMI Ex	10
%GMI Ex	100%
n>STV	7
%n>STV	100%

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 SSCW_525 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	297
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	4
%n>STV	66%

Variable*	Result
Samples	6
SeasGM	649
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	5
%n>STV	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.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2630	Rice's/ Beverly	42.54680, -70.85840	42.54689, -70.85710	5%	0%	0%	0%	0%	0%	1%	0%	2%	0
2631	Dane Street/ Beverly	42.54681, -70.87150	42.54875, -70.86790	4%	3%	0%	0%	0%	7%	7%	2%	1%	0
2633	Woodbury/ Beverly	42.54700, -70.86280	42.54658, -70.86170	1%	4%	0%	0%	0%	8%	3%	6%	13%	1
2636	Lynch Park/ Beverly	42.54496, -70.86060	42.54565, -70.85970	0%	0%	0%	0%	0%	0%	0%	8%	0%	0
2639	Sandy Point/ Beverly	42.54010, -70.87790	42.54053, -70.87770	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
2640	Independence Park/ Beverly	42.54181, -70.87660	42.54341, -70.87580	0%	1%	0%	1%	0%	0%	10%	1%	0%	0
3110	Dead Horse/ Salem	42.53342, -70.87460	42.53381, -70.87310	0%	0%	0%	0%	0%	0%	0%	0%	7%	0
3112	Juniper Point/ Salem	42.53433, -70.86610	42.53390, -70.86590	0%	0%	0%	0%	0%	8%	39%	0%	0%	1
3113	Collins Cove/ Salem	42.52902, -70.88780	42.52751, -70.88740	0%	0%	0%	0%	0%	6%	0%	0%	0%	0
3114	Camp Naumkeag/ Salem	42.53304, -70.87680	42.53319, -70.87670	9%	0%	0%	7%	0%	0%	8%	0%	0%	0
3118	Steps/ Salem	42.53336, -70.86980	42.53357, -70.86920	0%	0%	0%	0%	0%	8%	0%	0%	0%	0
3120	Willows Pier/ Salem	42.53614, -70.86800	42.53566, -70.86740	0%	9%	0%	0%	0%	0%	0%	7%	0%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Beverly Harbor (MA93-20): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.0012 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
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Beverly Harbor (MA93-20) is assessed as Not Supporting. An <i>Enterococcus</i> impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 3 stations in 2014, 2016 and 2019-2020. Beverly Harbor has 12 beaches with DPH Beach Closure data: Woodbury [Beach ID: 2633], Dane Street [Beach ID: 2631], Independence Park [Beach ID: 2640], Rice's [Beach ID: 2630], Lynch Park [Beach ID: 2636] and Sandy Point [Beach ID: 2639] beaches in Beverly and Juniper Point [Beach ID: 3112], Camp Naumkeag [Beach ID: 3114], Collins Cove [Beach ID: 3113], Steps [Beach ID: 3118], Willows Pier [Beach ID: 3120] and Dead Horse [Beach ID: 3110] beaches in Salem. All beaches were rarely, if at all, posted for swimming from 2018-2022 (the exception being Juniper Point beach with 39% of the bathing season posted in 2020 & Woodbury beach with 13% posted in 2022). The shellfish growing areas (1.0012 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 Beverly Harbor. Salem Sound Coastwatch (SSCW) staff/volunteers collected <i>Enterococcus</i> bacteria samples in Beverly Harbor from 2014-2020 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: SSCW_525 [Conners St, Collins Cove, Salem] from 2019-2020 (n=6/yr), SSCW_321 [Dane St Beach - Lawrence brook at beach, Beverly] in 2014, 2016, and 2019-2020 (n=5-7/yr) and SSCW_214 [Rice Beach, Stream flow onto beach] in 2014, 2016, and 2019-2020 (n=2-6/yr). Analysis of the multi-year limited frequency <i>Enterococcus</i> dataset from SSCW_525 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >68 CFU/100ml (2019 and 2020, 100 & 85%), 2 yrs had ≥2 samples exceed the 252 CFU/100ml STV (2019 and 2020, n=2 & 3), and cumulatively across years 92% of intervals had GMs >68 CFU/100ml; Analysis of the multi-year limited frequency <i>Enterococcus</i> dataset from SSCW_321 indicated 4 out of 4 sufficient data yrs had intervals where >20% of the GMs were >68 CFU/100ml (2014, 2016, and 2019-2020, 80-100%), 4 yrs had ≥2 samples exceed the 252 CFU/100ml STV (2014, 2016, and 2019-2020, n=2-7), and cumulatively across years 96% of intervals had GMs >68 CFU/100ml; Analysis of the multi-year limited frequency <i>Enterococcus</i> dataset from SSCW_214 indicated 3 out of 3 sufficient data yrs had intervals where >20% of the GMs were >68 CFU/100ml (2014 and 2019-2020, 100%), 3 yrs had ≥2 samples exceed the 252 CFU/100ml STV (2014 and 2019-2020, n=4-5), and cumulatively across years 100% of intervals had GMs >68 CFU/100ml. <i>Enterococcus</i> data from SSCW_214, SSCW_321, and SSCW_525 are indicative of an <i>Enterococcus</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_214	Salem Sound Coastwatch	Water Quality	Stormwater Outfall; Rice Beach, River/Stream Intermittent; Rice Beach, River Stream Intermittent	Rice Beach, Stream flow onto beach	42.547130	-70.857450
SSCW_321	Salem Sound Coastwatch	Water Quality	Lawrence Brook; Lawrence Brook at Dane Beach, Channelized Stream; Rice Beach, River Stream Intermittent	Dane Street Beach - Lawrence brook at beach, Beverly	42.548760	-70.867670
SSCW_525	Salem Sound Coastwatch	Water Quality	Stormwater Outfall; Rice Beach, River Stream Intermittent	Conners Street, Collins Cove, Salem	42.530210	-70.886310

Bacteria Data

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

(MassDEP Undated 1)

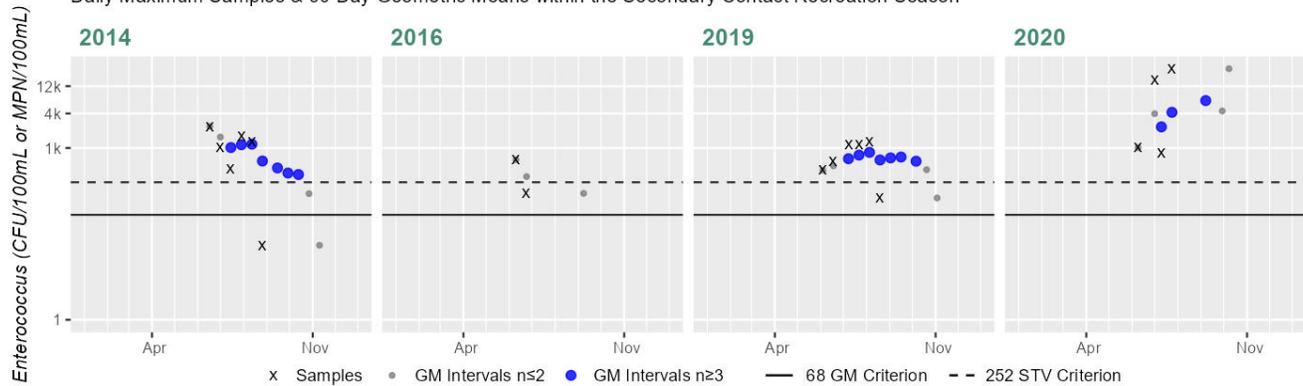
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_214	Salem Sound Coastwatch	Enterococci	06/17/14	08/26/14	6	20	2380	591
SSCW_214	Salem Sound Coastwatch	Enterococci	06/09/16	06/23/16	2	161	624	316
SSCW_214	Salem Sound Coastwatch	Enterococci	06/04/19	08/19/19	6	134	1300	617
SSCW_214	Salem Sound Coastwatch	Enterococci	06/08/20	07/23/20	4	809	24196	4188
SSCW_321	Salem Sound Coastwatch	Enterococci	06/17/14	08/26/14	5	95	809	451
SSCW_321	Salem Sound Coastwatch	Enterococci	06/09/16	08/18/16	5	26	791	146
SSCW_321	Salem Sound Coastwatch	Enterococci	06/04/19	08/19/19	6	393	13000	1154
SSCW_321	Salem Sound Coastwatch	Enterococci	06/08/20	08/25/20	7	657	17329	2293

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_525	Salem Sound Coastwatch	Enterococci	06/04/19	08/19/19	6	62	4350	297
SSCW_525	Salem Sound Coastwatch	Enterococci	06/08/20	08/25/20	6	10	19863	649

Station SSCW_214 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	591
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	2
SeasGM	316
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	50%

Variable*	Result
Samples	6
SeasGM	617
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	5
%n>STV	83%

Variable*	Result
Samples	4
SeasGM	4188
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	4
%n>STV	100%

Cumulative %GMI Exceedance

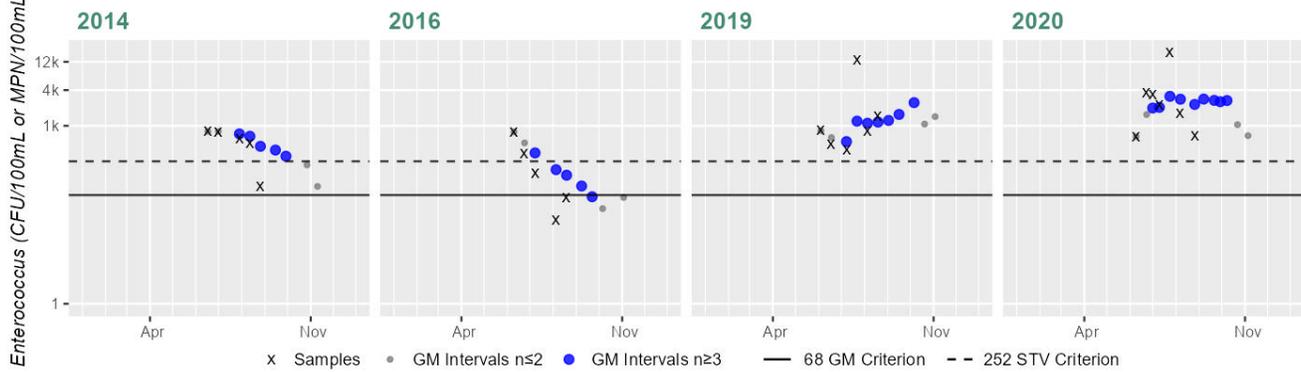
Current (2011-2022)

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.

Station SSCW_321 - Enterococcus

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



Variable*	Result
Samples	5
SeasGM	451
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	4
%n>STV	80%

Variable*	Result
Samples	5
SeasGM	146
#GMI	5
#GMI Ex	4
%GMI Ex	80%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	1154
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	7
SeasGM	2293
#GMI	9
#GMI Ex	9
%GMI Ex	100%
n>STV	7
%n>STV	100%

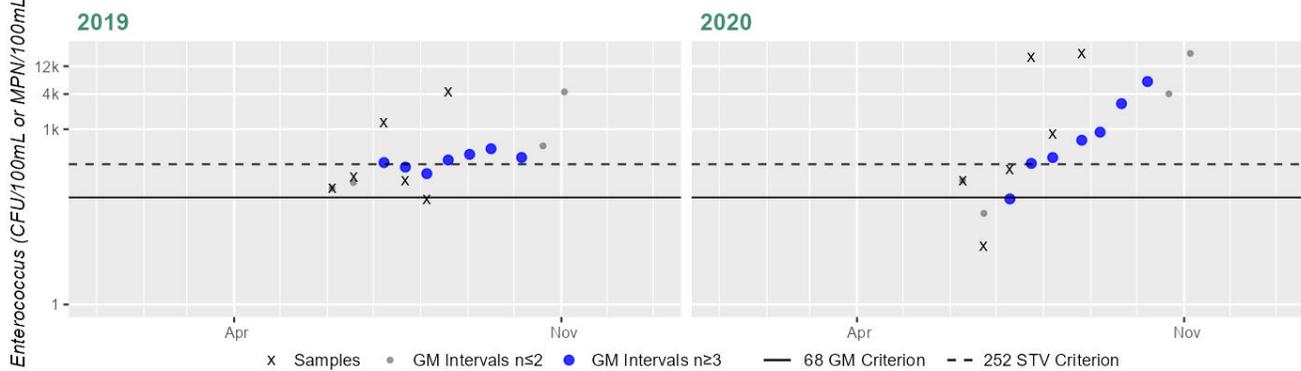
Cumulative %GMI Exceedance
Current (2011-2022)

96%

*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 SSCW_525 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	297
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	2
%n>STV	33%

Variable*	Result
Samples	6
SeasGM	649
#GMI	7
#GMI Ex	6
%GMI Ex	85%
n>STV	3
%n>STV	50%

Cumulative %GMI Exceedance
Current (2011-2022)

92%

*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 5)

Summary
Beverly Harbor (MA93-20): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.0012 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.

Birch Pond (MA93004)

Location:	Saugus/Lynn.
AU Type:	FRESHWATER LAKE
AU Size:	80 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Birch Pond (MA93004) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Breeds Pond (MA93006)

Location:	Lynn.
AU Type:	FRESHWATER LAKE
AU Size:	195 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Breeds Pond (MA93006) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Browns Pond (MA93008)

Location:	Peabody.
AU Type:	FRESHWATER LAKE
AU Size:	25 ACRES
Classification/Qualifier:	A: PWS, ORW (Tributary)

No usable data were available for Browns Pond (MA93008) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Buswell Pond (MA93009)

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

No usable data were available for Buswell Pond (MA93009) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Cape Pond (MA93011)

Location:	Rockport.
AU Type:	FRESHWATER LAKE
AU Size:	42 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Cape Pond (MA93011) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

Cat Brook (MA93-29)

Location:	Headwaters, perennial portion east of Route 128, Manchester to the edge of the designated shellfishing beds east of Powder House Lane, Manchester.
AU Type:	RIVER
AU Size:	1.5 MILES
Classification/Qualifier:	B

Cat Brook (MA93-29)

Watershed Area: 5.07 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	5.07	5.07	1.67	1.67
Agriculture	0%	0%	0%	0%
Developed	15.1%	15.1%	16.5%	16.5%
Natural	69.2%	69.2%	53.6%	53.6%
Wetland	15.7%	15.7%	29.9%	29.9%
Impervious	6.8%	6.8%	8.1%	8.1%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	pH, Low	--	Unchanged
5	5	Temperature	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
pH, Low	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	X	--	--	--	--
pH, Low	Source Unknown (N)	X	--	--	--	--
Temperature	Source Unknown (N)	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Cat Brook (MA93-29) 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 Cat Brook (MA93-29) 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 Cat Brook (MA93-29) 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 Cat Brook (MA93-29) 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 Cat Brook from 1997-2007 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream (all in the downstream third of the AU): W0889 [Lincoln St, Manchester] in 2002 and 2007 (n=4-6/yr), W0461 [upstream/E at Norwood Avenue, Manchester] in Jul 1997 (n=1), and W0460 [upstream/E at School St, Manchester] from 1997-1998 (n=2-4/yr). Analysis of the historic multi-year limited frequency *E. coli* dataset from W0889 indicated 1 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2007, 50%), 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, and cumulatively across years 37% of intervals had GMs >244 CFU/100ml. Analysis of the historic single year limited frequency *E. coli* dataset from W0460 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 185 CFU/100ml. Historic *E. coli* data from W0461 are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use. Historic *E. coli* data from W0889 and W0460 meet 2024 CALM guidance. 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
W0460	MassDEP	Water Quality	Cat Brook	[upstream/east at School Street, Manchester]	42.577826	-70.770235
W0461	MassDEP	Water Quality	Cat Brook	[upstream/east at Norwood Avenue, Manchester]	42.578996	-70.767208
W0889	MassDEP	Water Quality	Cat Brook	[Lincoln Street, Manchester]	42.580356	-70.764918

Bacteria Data

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

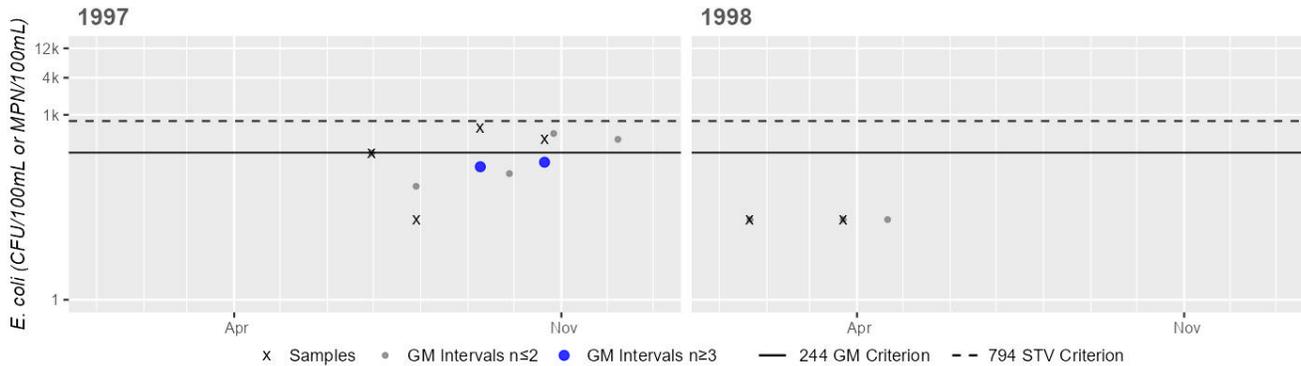
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0460	MassDEP	E. coli	06/30/97	10/21/97	4	20	620	185
W0460	MassDEP	E. coli	01/21/98	03/23/98	2	20	20	19
W0461	MassDEP	E. coli	07/29/97	07/29/97	1	20	20	19
W0889	MassDEP	E. coli	05/06/02	08/12/02	4	20	440	127
W0889	MassDEP	E. coli	05/01/07	09/18/07	6	5	540	126

Station MASSDEP_W0460 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	185
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

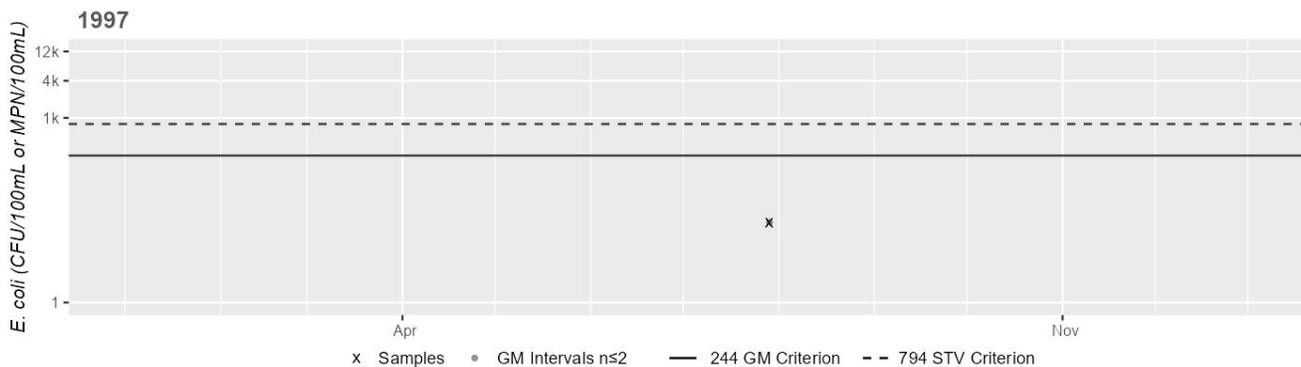
Variable*	Result
Samples	2
SeasGM	20
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W0461 - Escherichia coli

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



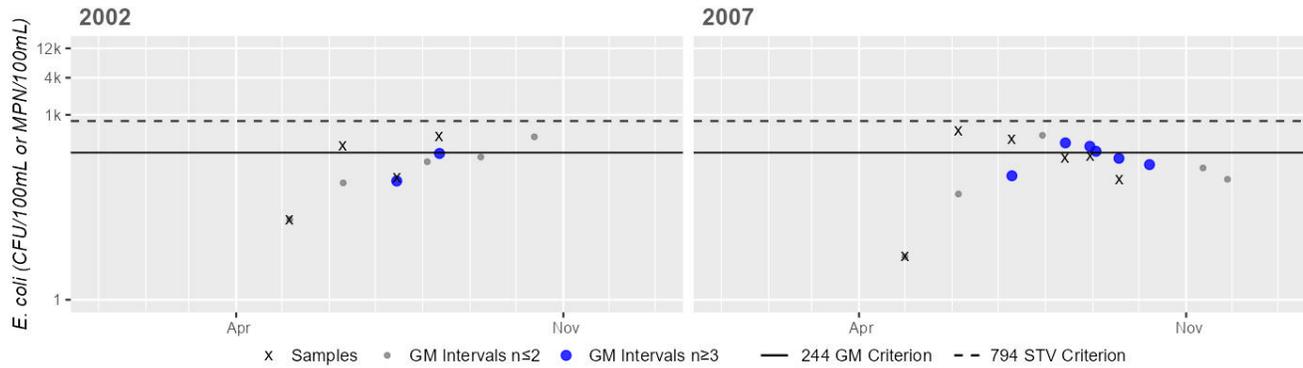
Variable*	Result
Samples	1
SeasGM	20
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W0889 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	127
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	126
#GMI	6
#GMI Ex	3
%GMI Ex	50%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
 37%

*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.

Causeway Brook (MA93-47)

Location:	Headwaters, outlet Dexter Pond, Manchester to mouth at confluence with Cat Brook, Manchester.
AU Type:	RIVER
AU Size:	1.1 MILES
Classification/Qualifier:	B

Causeway Brook (MA93-47)

Watershed Area: 0.77 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	0.77	0.77	0.25	0.25
Agriculture	0%	0%	0%	0%
Developed	15.4%	15.4%	19.1%	19.1%
Natural	68.6%	68.6%	45.2%	45.2%
Wetland	16.1%	16.1%	35.6%	35.6%
Impervious	6.4%	6.4%	7%	7%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Escherichia Coli (E. Coli)	50120	Unchanged
4a	4a	Fecal Coliform	50120	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	--
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 Causeway Brook (MA93-47) 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 Causeway Brook (MA93-47) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Causeway Brook (MA93-47) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) and Fecal Coliform impairments are being carried forward.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for Causeway Brook (MA93-47) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected *E. coli* bacteria samples close to the downstream end of Causeway Brook at W0888 [Lincoln St, Manchester] in 2002 and 2007 (n=4/yr). Analysis of the historic multi-year limited frequency *E. coli* dataset from W0888 indicated 1 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2002, 50%), 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, and cumulatively across years 33% of intervals had GMs >244 CFU/100ml. Historic *E. coli* data from W0888 meet 2024 CALM guidance. 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
W0888	MassDEP	Water Quality	Causeway Brook	[Lincoln Street, Manchester]	42.580040	-70.763623

Bacteria Data

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

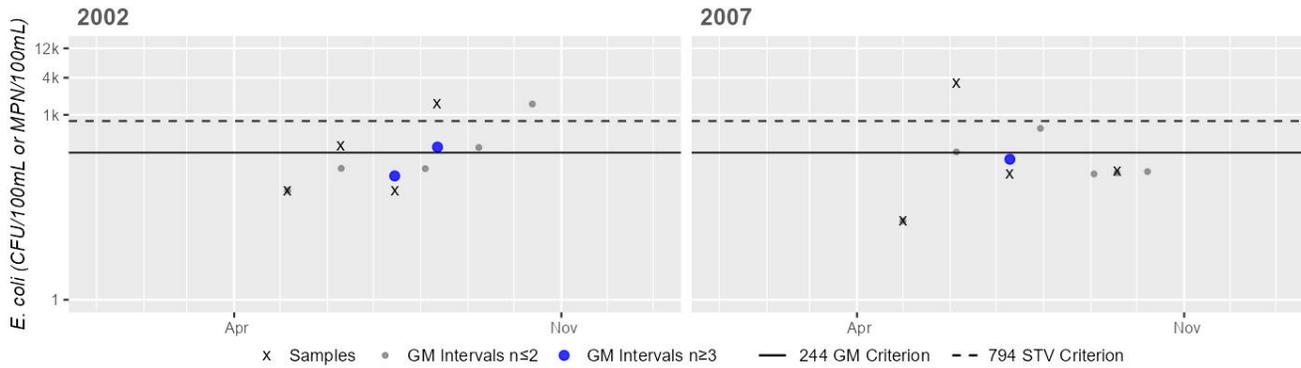
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0888	MassDEP	E. coli	05/06/02	08/12/02	4	58	1500	199
W0888	MassDEP	E. coli	05/01/07	09/18/07	4	19	3300	169

Station MASSDEP_W0888 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	199
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	4
SeasGM	169
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	25%

Cumulative %GMI Exceedance
Historic (1997-2010)
 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.

Cedar Pond (MA93013)

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

No usable data were available for Cedar Pond (MA93013) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Chebacco Lake (MA93014)

Location:	Hamilton/Essex.
AU Type:	FRESHWATER LAKE
AU Size:	204 ACRES
Classification/Qualifier:	B

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

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

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Non-Native Aquatic Plants	Clarification of listing cause	<p>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 2018/2019, where the Impairment was changed from the generic “Non-Native Aquatic Plants” to the specific macrophytes Fanwort and Curly-leaf Pondweed. The Fanwort and Curly-leaf Pondweed impairments will not be added to the Aesthetics Use at this time, since that would be a redundant duplication of these impairments across multiple uses for this waterbody and these impairments will continue to be maintained under the Aquatic Life Use. MassDEP staff previously noted approximately half the pond (50%) was covered with dense beds of plants (including Fanwort and Curly-leaf Pondweed) during an August 1997 synoptic survey (MassDEP 1997), and Google Earth images (Google Earth Pro Undated) September 2014, October 2020, October 2021 show dense coverage of Aquatic Plants throughout the littoral zone of the lake (>25% coverage of the lake overall), so an Aquatic Plants (Macrophytes) non-pollutant impairment is being added in place of the Non-Native Aquatic Plants impairment at this time.</p>

Non-Native Aquatic Plants

August 1997 synoptic survey (MassDEP 1997)

LAKE/POND: Chebacco Lake SIZE (acres): 209 PALIS NO. 93014
 TOWN/CITY: Hamilton/Essex USGS TOPO. SHEET: Marblehead North
 DATE: 8/27/97 WATERSHED: North Castrol OBSERVERS: De Cesare

ACCESS - Location [describe each observation site and assign sequential numbers (1, 2, 3, etc.) to use in subsequent records; be specific in descriptions (e.g., public boat ramp at west cove area off Simpson St., etc.)]
 Site (1) South End Boat Ramp
 Site (2) _____
 Site (3) _____

ACCESS - Type (for multiple observation sites use numbers in boxes that apply)
 Formal Boat Ramp and/or Beach Informal Boat Ramp and/or Beach
 Park Conservation Area Right-of-Way: Road Other
 Other (describe): ford Ramp

ACCESS - Ownership (for multiple observation sites use numbers in boxes that apply)
 Public Private Uncertain
 Names of Owners DFWELE No. & Street Name
 No. & Street Name
 No. & Street Name

SIGN POSTINGS -
 Warning: Stop Aquatic Plant Spread Fishing Advisory or Ban
 Public Access without Restrictions Public Access with Restrictions
 Describe any restrictions (or other notes)

WATER LAKE QUALITY OBSERVATIONS -
 Turbidity: Slight Moderate Excessive Transparency: < 1.2 m. (4 ft.) > 1.2 m. (4 ft.)
 Estimated visually
 Diss. Organics: Slight Moderate Dark Measured w/ Secchi Disk _____ meters
 meters
 Algal Bloom: Slight Moderate Dense _____ meters
 Bottom Type: Undecomposed matter Muck/silt Sand Gravel Cobble Boulders
 Vegetation Other _____
 Other Observations:

AESTHETICALLY OBJECTIONABLE - Substances attributable to wastewater or other discharges (point or nonpoint) that:
 Settle to form objectionable deposits Float as debris, scum or other matter to form a nuisance
 Describe: _____ Describe: _____
 Produce objectionable odor, color, taste, or turbidity Produce undesirable nuisance species of aquatic life
 Describe: _____ Describe: _____

RECORD OF AQUATIC PLANT "SPECIES" OBSERVED -

NON-NATIVE WETLANDS SPECIES PRESENT: *Lythrum Salicaria* *Phragmites* sp.
 NON-NATIVE AQUATIC SPECIES PRESENT: *Butomus umbellatus* *Cabomba caroliniana* *Egeria densa*
 Eichornia crassipes *Hydrilla verticillata* *Hydrocharis morsus-ranae* *Marsilea quadrifolia*
 Myriophyllum aquaticum *Myriophyllum heterophyllum* *Myriophyllum spicatum*
 M. sp. (*M. heterophyllum* requiring further confirmation when flowering heads are evident) _____
 Najas minor *Nelumbo lutea* *Nymphoides peltata* *Potamogeton crispus* *Trapa natans*

NATIVE SPECIES POPULATIONS:

Emergent Plants	Floating Leaf Plants	Submergent Plants
<input checked="" type="checkbox"/> <i>Potamogeton</i>	<input checked="" type="checkbox"/> <i>Wolffia</i>	<input type="checkbox"/> <i>Najas</i>
<input checked="" type="checkbox"/> <i>Typha</i>	<input checked="" type="checkbox"/> <i>Najas</i>	<input type="checkbox"/> <i>Sagittaria</i>
<input checked="" type="checkbox"/> <i>Sparganium</i>	<input checked="" type="checkbox"/> <i>Najas</i>	<input type="checkbox"/> <i>Valisneria</i>
<input checked="" type="checkbox"/> <i>Decodon</i>	<input type="checkbox"/> _____	<input type="checkbox"/> <i>P. natans</i>
<input checked="" type="checkbox"/> <i>Juncus</i>	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> <i>Sagittaria</i>	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> <i>Iris</i>	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> <i>Scirpus</i>	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

AQUATIC PLANT DENSITY -

Percent of surface area (at observation site) with dense (50 - 75 %) aquatic plant cover 50 % _____ % _____ %
 Forms [(E)mergent, (F)loating, or (S)ubmergent] present E/F/S _____ _____
 Percent of surface area (observation site) with very dense (75 - 100 %) plant cover _____ % _____ % _____ %
 Forms [(E)mergent, (F)loating, or (S)ubmergent] present _____ _____
 Percent of entire lake surface covered with dense or very dense aquatic plants 50 % Forms _____
 Describe locations of dense and/or very dense plant beds *Dense Cabomba beds ~ 50%*
 Loss of open water habitat over entire lake (estimated): 90 - 100 % 60 - 85 % 30 - 55 % ≤ 25 %

ASSESSMENTS -

TROPHIC STATUS ESTIMATE: Oligotrophic Mesotrophic Eutrophic Hypereutrophic Dystrophic Undetermined

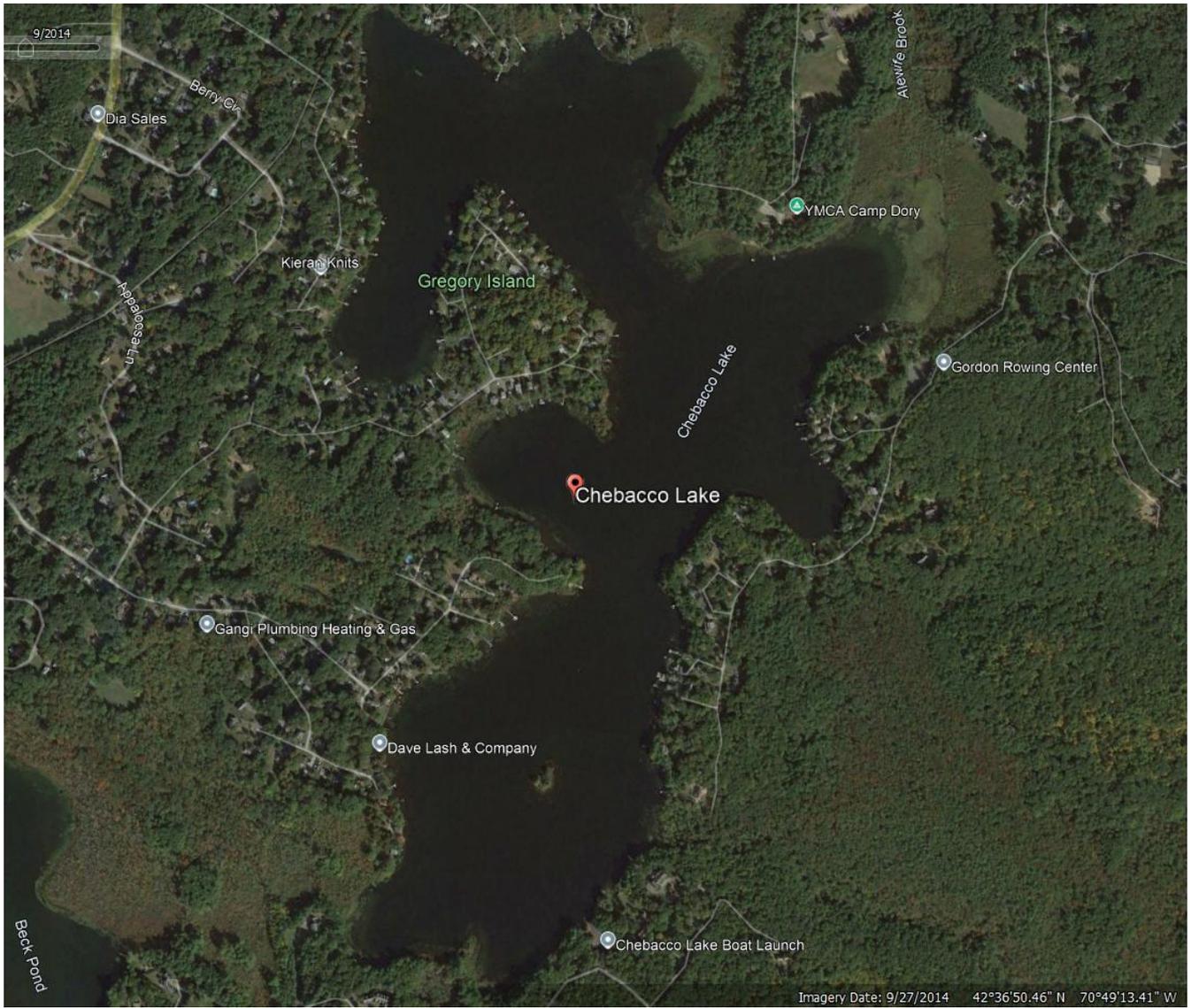
305(b) USE IMPAIRMENT ASSESSMENTS (Acres):

USES	Full Support	Threatened	Partial Support	Non-support	Not Assessed
Aquatic Life			26.4		
Fish Consumption					
Primary Contact				102.0	102.0
Secondary Contact	102.0			102.0	
Aesthetics	102.0			102.0	

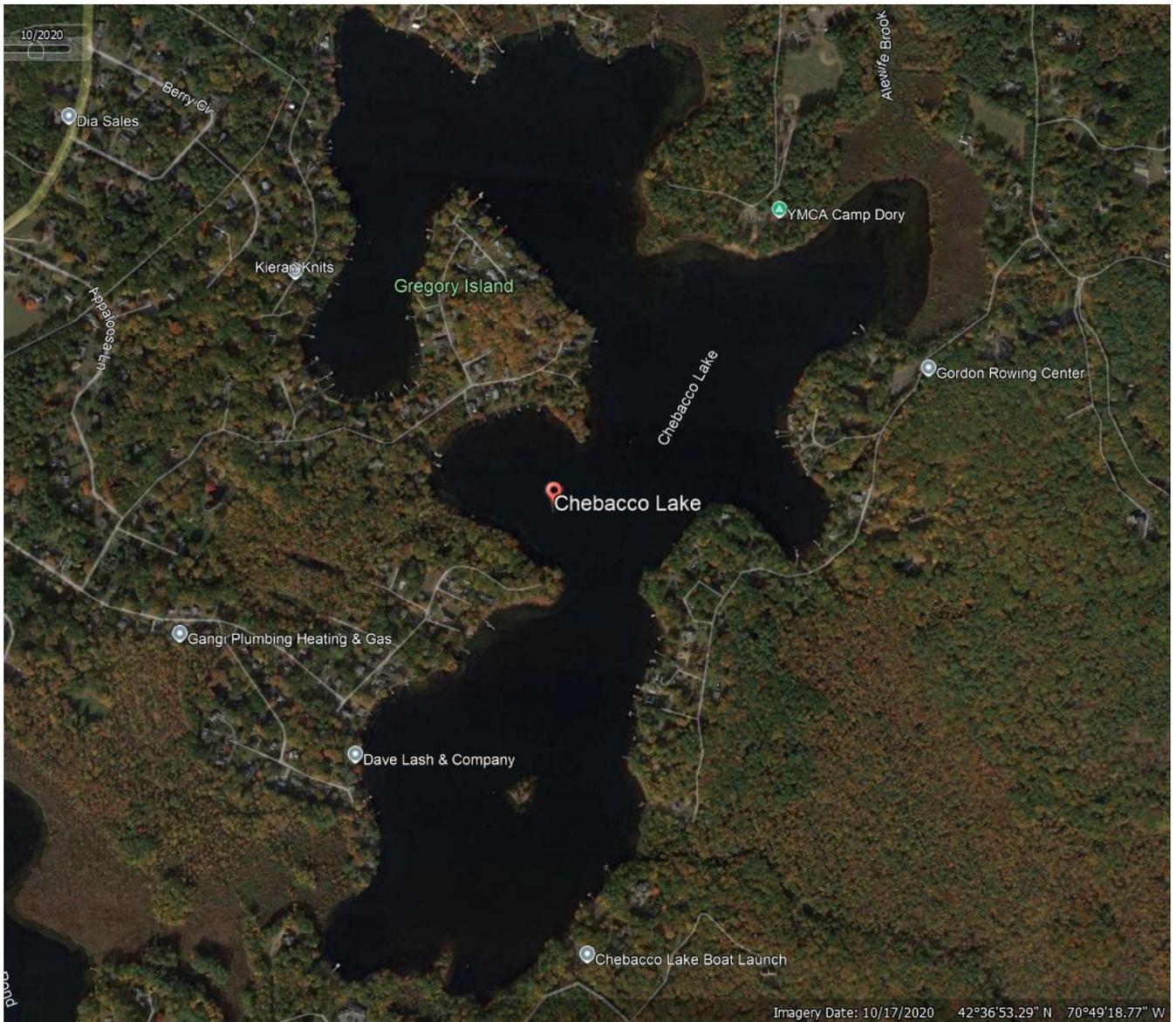
CAUSES: Noxious plants (2200) - Size 102.0 acres / Magnitude M Exotic plants (2600) - Size 20.4 acres / Magnitude M
 Turbidity (2500) - Size _____ acres / Magnitude _____ Flow alteration (1500) - Size _____ acres / Magnitude _____
 Metals (0500) Hg (0501) - Size _____ acres / Magnitude _____ Siltation (1100) - Size _____ acres / Magnitude _____
 _____ () - Size _____ acres / Magnitude _____ _____ () - Size _____ acres / Magnitude _____

SOURCES: Describe any obvious sources of impairment *Residential Development*

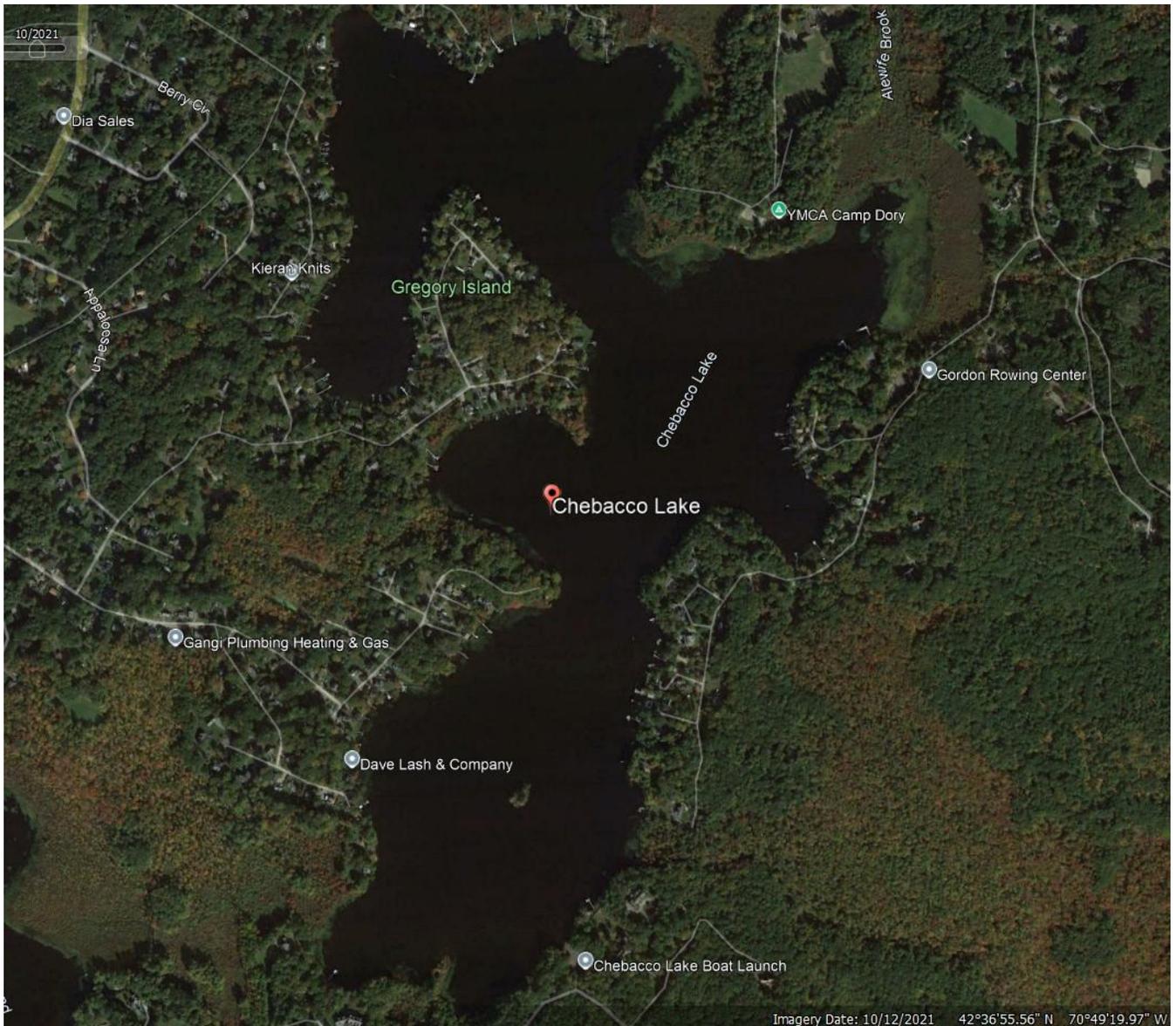
Google Earth image of Chebacco Lake, September 2014 (Google Earth Pro Undated):



Google Earth image of Chebacco Lake, October 2020 (Google Earth Pro Undated):



Google Earth image of Chebacco Lake, October 2021 (Google Earth Pro Undated):



Recommendations

2024/26 Recommendations

2024 IR [HARMFUL ALGAL BLOOMS, MEDIUM] Follow-up monitoring should be conducted in Chebacco Lake (MA93014) to determine if Harmful Algal Blooms may be impairing the Recreational and Aesthetic uses. Monitoring should include observational data and collection of cyanobacteria cell count data, as well as continued reporting of algal blooms to MDPH. This is of medium 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 Chebacco Lake (MA93014) continues to be assessed as Not Supporting and the prior Mercury in Fish Tissue impairment is being carried forward. Fish toxics sampling was conducted in Chebacco Lake at station F0062 in 2021 as part of the MassDEP Office of Research and Standards Mercury Initiative. DPH included a site-specific advisory for Chebacco Lake in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent DPH 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 6)

Summary Statement
<p>Fish toxics sampling was conducted in Chebacco Lake (MA93014) at station F0062 in 2021 as part of the MassDEP Office of Research and Standards Mercury Initiative. MDPH retained the existing site-specific fish consumption advisories for Mercury associated with Chebacco Lake in their January 2025 Freshwater Fish Consumption Advisory List. The site-specific DPH advisories are indicative of a Fish Consumption Use impairment for Mercury in Fish Tissue for Chebacco Lake (MA93014).</p>

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	YES

2024/26 Use Attainment Summary

The Aesthetics Use for Chebacco Lake (MA93014) continues to be assessed as Not Supporting with an Aquatic Plants (Macrophytes) non-pollutant impairment added. 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. 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 macrophytes Fanwort and Curly-leaf Pondweed. The Fanwort and Curly-leaf Pondweed impairments will not be added to the Aesthetics Use at this time, since that would be a redundant duplication of these impairments across multiple uses for this waterbody and these impairments will continue to be maintained under the Aquatic Life Use. MassDEP staff previously noted approximately half the pond (50%) was covered with dense beds of plants (including Fanwort and Curly-leaf Pondweed) during an August 1997 synoptic survey (MassDEP 1997), and Google Earth images (Google Earth Pro Undated) September 2014, October 2020, October 2021 show dense coverage of Aquatic Plants throughout the littoral zone of the lake (>25% coverage of the lake overall), so an Aquatic Plants (Macrophytes) non-pollutant impairment is being added in place of the Non-Native Aquatic Plants impairment at this time. During the period 2015 through 2022, C-HAB postings for Chebacco Lake were reported to MDPH based on visual observations for 59 days in 2020 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.

Aesthetic Observations

Algal Bloom Information

Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data (Bailey, Logan April 26, 2023) (MassDEP Undated 1)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Chebacco Lake (MA93014) were reported to MDPH based on visual observations for 59 days in 2020. 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 1)

[* 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
Chebacco Lake	Essex/Hamilton						59		

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	YES

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Chebacco Lake (MA93014) continues to be assessed as Not Supporting. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). The Non-Native Aquatic Plants impairment is being removed. An Alert is being identified for Harmful Algal Blooms and additional sampling is recommended for this AU. During the period 2015 through 2022, C-HAB postings for Chebacco Lake were reported to MDPH based on visual observations for 59 days in 2020. 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 Blooms Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made. Ipswich River Watershed Association (IRWA) staff/volunteers collected <i>E. coli</i> bacteria samples in Chebacco Lake in 2022 at 2 stations. Samples were collected from the following stations/sample years: IRWA_CG [Chebacco Lake, Centennial Grove] from Jun-Oct 2022 (n=5), IRWA_CLWA1 [Chebacco Lake, Gregory Island] from Jun-Oct 2022 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from IRWA_CG indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 5 CFU/100ml. Analysis of the single year limited frequency <i>E. coli</i> dataset from IRWA_CLWA1 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 8 CFU/100ml. <i>E. coli</i> data from IRWA_CG and IRWA_CLWA1 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
IRWA_CG	Ipswich River Watershed Association	Water Quality	Chebacco Lake	Chebacco Lake, Centennial Grove	42.615150	-70.806650
IRWA_CLWA1	Ipswich River Watershed Association	Water Quality	Chebacco Lake	Chebacco Lake, Gregory Island	42.612910	-70.815760

Bacteria Data

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

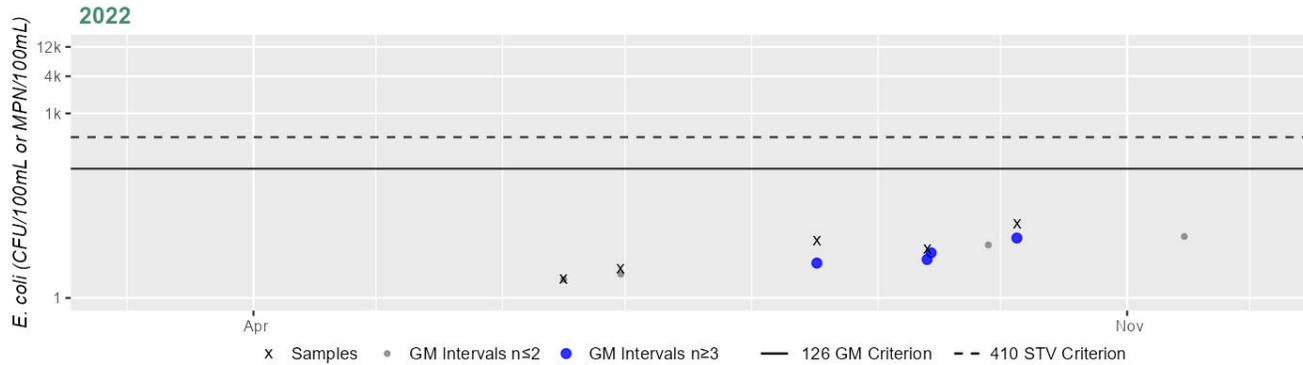
(IRWA 2022) (MassDEP Undated 2)

[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
IRWA_CG	Ipswich River Watershed Association	E. coli	06/16/22	10/05/22	5	2	15	5
IRWA_CLWA1	Ipswich River Watershed Association	E. coli	06/30/22	10/05/22	6	2	344	8

Station IRWA_CG - Escherichia coli

Daily Maximum Samples & 90 Day Geometric Means within the Primary 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

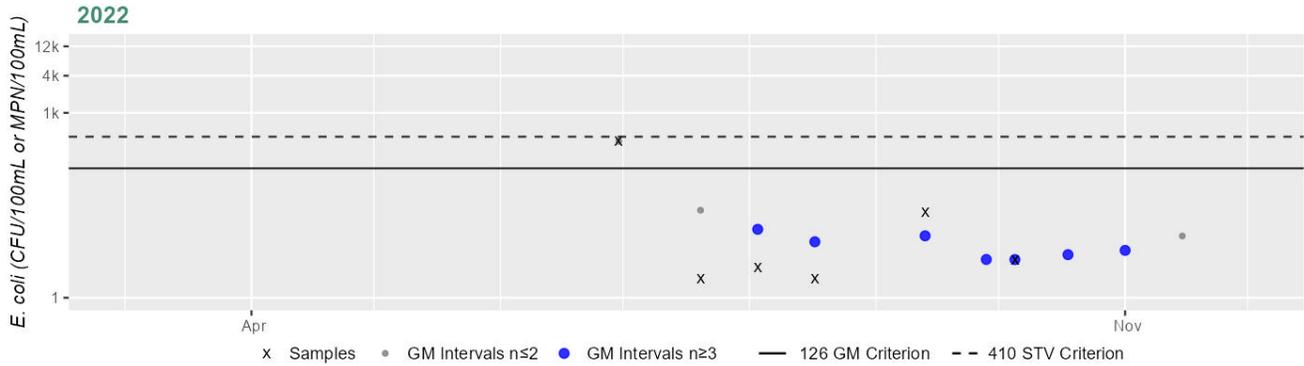
Current (2011-2022)

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 IRWA_CLWA1 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	8
#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.

Secondary Contact Recreation

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

The Secondary Contact Recreation Use for Chebacco Lake (MA93014) continues to be assessed as Not Supporting. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). The Non-Native Aquatic Plants impairment is being removed. An Alert is being identified for Harmful Algal Blooms and additional sampling is recommended for this AU. During the period 2015 through 2022, C-HAB postings for Chebacco Lake were reported to MDPH based on visual observations for 59 days in 2020. 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 Blooms Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made. Ipswich River Watershed Association (IRWA) staff/volunteers collected *E. coli* bacteria samples in Chebacco Lake in 2022 at 2 stations. Samples were collected from the following stations/sample years: IRWA_CG [Chebacco Lake, Centennial Grove] from Jun-Oct 2022 (n=5), IRWA_CLWA1 [Chebacco Lake, Gregory Island] from Jun-Oct 2022 (n=6). Analysis of the single year limited frequency *E. coli* dataset from IRWA_CG 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. Analysis of the single year limited frequency *E. coli* dataset from IRWA_CLWA1 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 8 CFU/100ml. *E. coli* data from IRWA_CG and IRWA_CLWA1 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
IRWA_CG	Ipswich River Watershed Association	Water Quality	Chebacco Lake	Chebacco Lake, Centennial Grove	42.615150	-70.806650
IRWA_CLWA1	Ipswich River Watershed Association	Water Quality	Chebacco Lake	Chebacco Lake, Gregory Island	42.612910	-70.815760

Bacteria Data

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

(IRWA 2022) (MassDEP Undated 1)

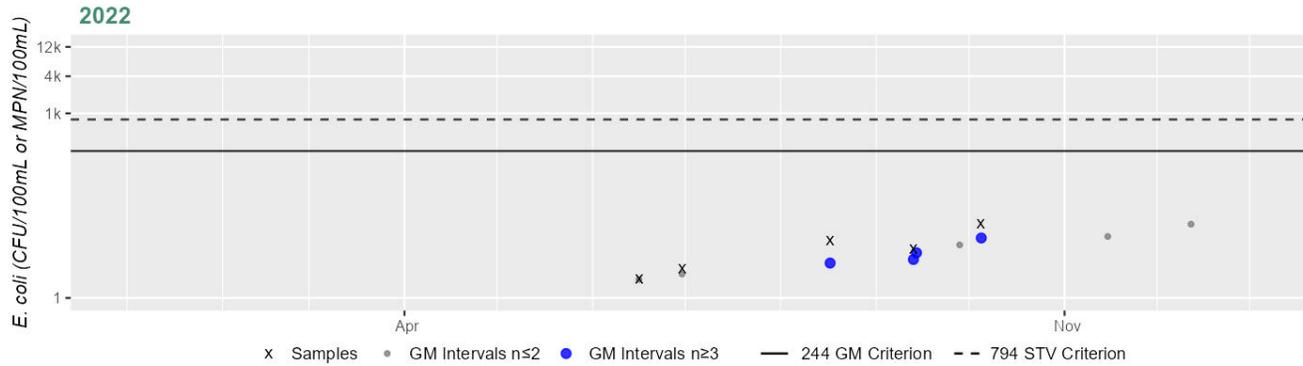
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
IRWA_CG	Ipswich River Watershed Association	E. coli	06/16/22	10/05/22	5	2	15	5

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
IRWA_CLWA1	Ipswich River Watershed Association	E. coli	06/30/22	10/05/22	6	2	344	8

Station IRWA_CG - 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

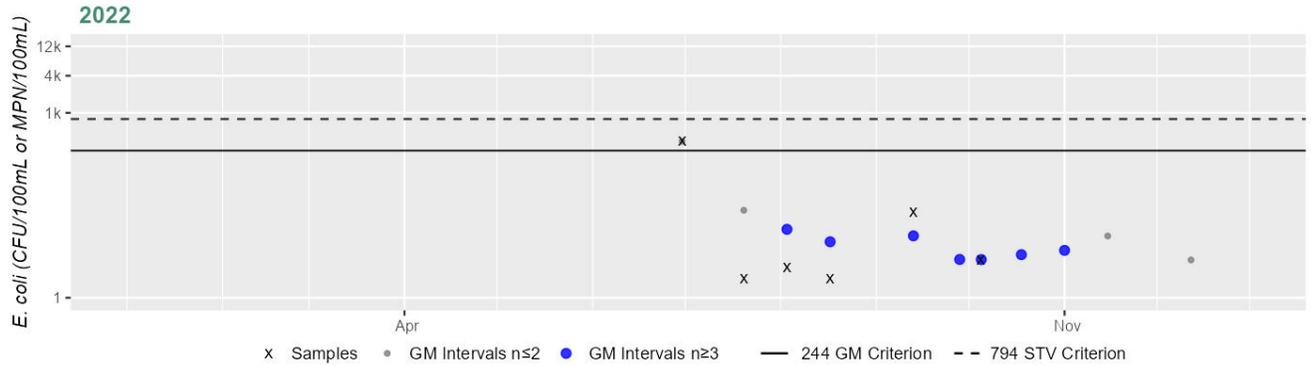
Current (2011-2022)

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 IRWA_CLWA1 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	8
#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.

Chubb Creek (MA93-63)

Location:	Tidal portion south of Route 127, Beverly/Manchester to mouth at confluence with Salem Sound, Beverly/Manchester.
AU Type:	ESTUARY
AU Size:	0.01 SQUARE MILES
Classification/Qualifier:	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 Chubb Creek (MA93-63) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Chubb Creek (MA93-63): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0034 sq mi (34%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0034 sq mi (34%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N16.0		Prohibited	0.00339	34.1%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Chubb Creek (MA93-63) 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 Chubb Creek (MA93-63) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0034 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 Chubb Creek based on shellfish classification data.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Chubb Creek (MA93-63): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0034 sq mi (34%). 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 Chubb Creek (MA93-63) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0034 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 Chubb Creek based on shellfish classification data.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Chubb Creek (MA93-63): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0034 sq mi (34%). 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.

Chubb Creek (MA93-64)

Location:	Headwaters northwest of northern end of Leather Lane, Beverly to salt water portion south of Route 127, Beverly/Manchester.
AU Type:	RIVER
AU Size:	0.6 MILES
Classification/Qualifier:	B

No usable data were available for Chubb Creek (MA93-64) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Coy Pond (MA93016)

Location:	Wenham.
AU Type:	FRESHWATER LAKE
AU Size:	23 ACRES
Classification/Qualifier:	B

No usable data were available for Coy Pond (MA93016) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

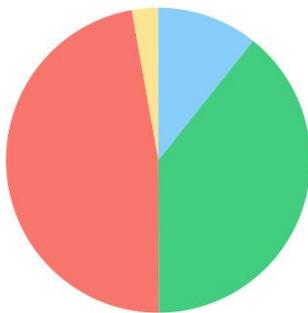
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Crane Brook (MA93-02)

Location:	Headwaters, perennial portion east of Route 95, Danvers to mouth at inlet Mill Pond, Danvers.
AU Type:	RIVER
AU Size:	1.8 MILES
Classification/Qualifier:	B

Crane Brook (MA93-02)

Watershed Area: 2.81 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.81	2.81	0.80	0.80
Agriculture	2.8%	2.8%	0.7%	0.7%
Developed	47.3%	47.3%	43.7%	43.7%
Natural	39.3%	39.3%	33.8%	33.8%
Wetland	10.7%	10.7%	21.8%	21.8%
Impervious	33.1%	33.1%	31.2%	31.2%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Enterococcus	50120	Added
5	5	Escherichia Coli (E. Coli)	50120	Unchanged
5	5	Fecal Coliform	50120	Unchanged

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

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

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 Crane Brook (MA93-02) 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 Crane Brook (MA93-02) 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 Crane Brook (MA93-02) continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) and Fecal Coliform impairments are being carried forward. An <i>Enterococcus</i> impairment is being added due to bacteria data not meeting the threshold at 1 station in 2020. Salem Sound Coastwatch (SSCW) staff/volunteers collected <i>Enterococcus</i> bacteria samples close to the downstream end of Crane Brook at SSCW_sscwd4 [Crane Brook downstream of Moulton Field, Danvers] from May-Aug 2020 (n=15). Analysis of the single year high frequency <i>Enterococcus</i> dataset from SSCW_sscwd4 indicated 100% of intervals had GMs >35 CFU/100ml and 86% of samples exceeded the 130 CFU/100ml STV. <i>Enterococcus</i> data from SSCW_sscwd4 are indicative of an <i>Enterococcus</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_sscwd4	Salem Sound Coastwatch	Water Quality	Clark Pond SE Inlet, River Stream	Crane Brook - Downstream of Moulton Field, Danvers	42.559590	-70.948140

Bacteria Data

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

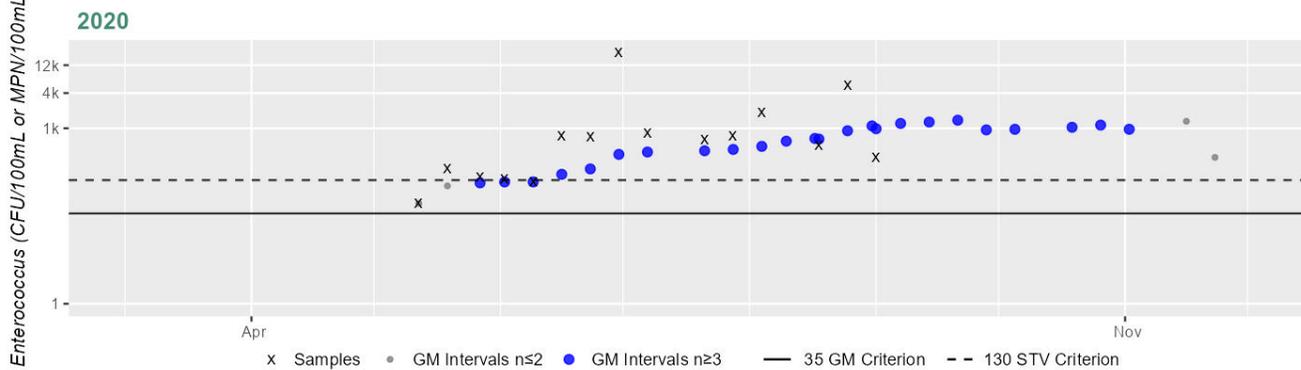
(MassDEP Undated 2)

[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
SSCW_sscwd4	Salem Sound Coastwatch	Enterococci	05/11/20	08/31/20	15	52	19900	561

Station SSCW_sscwd4 - Enterococcus

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



Variable*	Result
Samples	15
SeasGM	561
#GMI	24
#GMI Ex	24
%GMI Ex	100%
n>STV	13
%n>STV	86%

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 Crane Brook (MA93-02) is assessed as Not Supporting. An *Escherichia coli* (*E. coli*) impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 1 station in 2002 and 2007. MassDEP staff collected *E. coli* bacteria samples in Crane Brook from 1997-2007 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: a third of the way down the AU at W0449 [~20 ft downstream/NE of Rt. 114 (in front of Chevrolet dealer), Danvers] from 1997-1998 (n=1-2/yr), and close to the downstream end at W0451 [Pine St, Danvers] in 1997, 2002, and 2007 (n=2-6/yr). The historic *E. coli* data at W0449 are too limited to assess according to the 2024 CALM. Analysis of the historic multi-year limited frequency *E. coli* dataset from W0451 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2002 and 2007, 50 & 100%), and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2007, n=2), cumulatively across years 87% of intervals had GMs >244 CFU/100ml. Historic *E. coli* data from W0451 are indicative of an *E. coli* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0449	MassDEP	Water Quality	Crane Brook	[approximately 20 feet downstream/northeast of Route 114 (in front of Chevrolet dealer), Danvers]	42.553955	-70.962728
W0451	MassDEP	Water Quality	Crane Brook	[Pine Street, Danvers]	42.559861	-70.948564

Bacteria Data

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

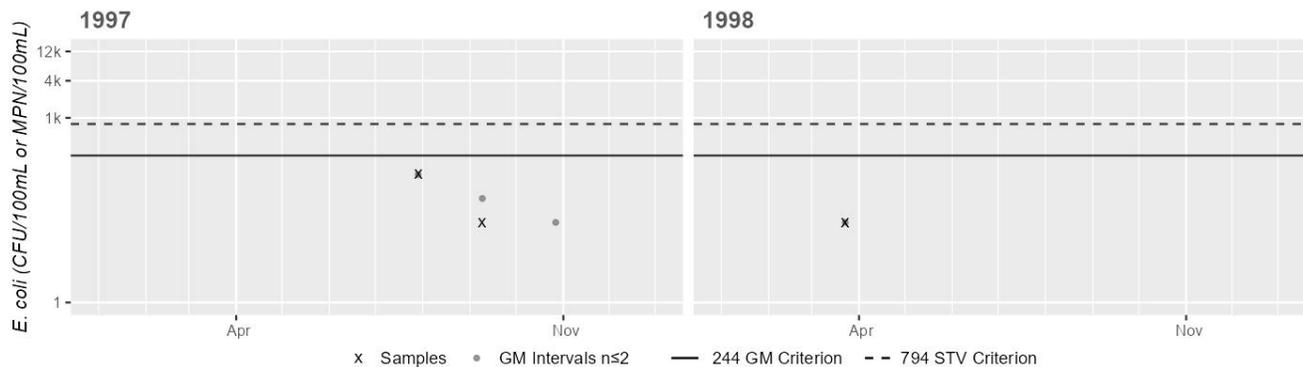
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0449	MassDEP	E. coli	07/29/97	09/09/97	2	20	120	48
W0449	MassDEP	E. coli	03/23/98	03/23/98	1	20	20	19
W0451	MassDEP	E. coli	07/29/97	09/09/97	2	60	80	69
W0451	MassDEP	E. coli	05/06/02	08/12/02	4	20	820	151
W0451	MassDEP	E. coli	05/01/07	09/18/07	6	110	2800	468

Station MASSDEP_W0449 - Escherichia coli

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



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

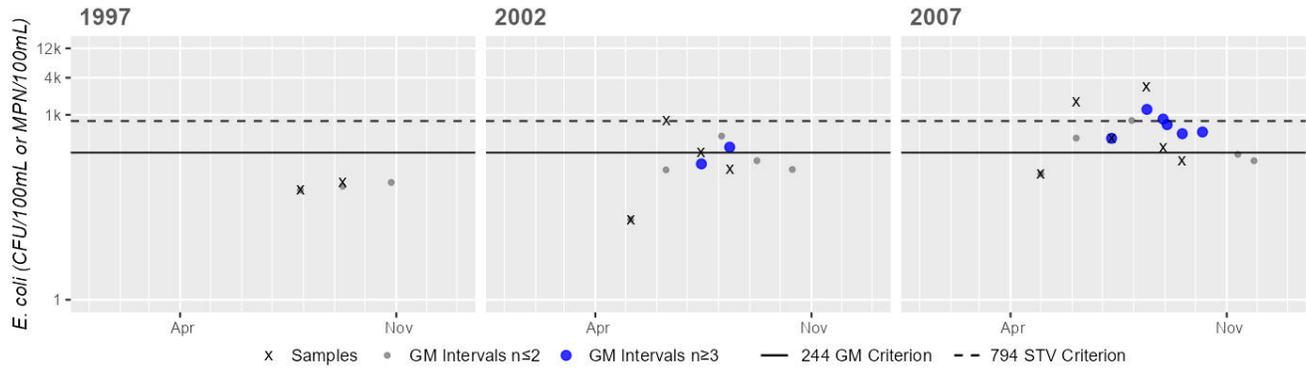
Variable*	Result
Samples	1
SeasGM	20
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W0451 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	69
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	4
SeasGM	151
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	468
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance
Historic (1997-2010)
87%

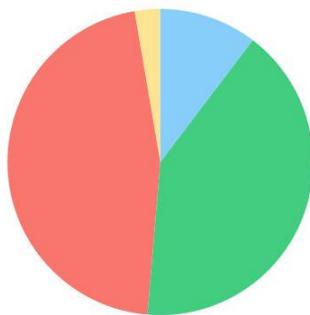
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Crane River (MA93-38)

Location:	Headwaters, outlet Mill Pond, Danvers to outlet of the pump house sluiceway, Purchase Street, Danvers (through a portion of former 1998 segment: Crane River MA93-03).
AU Type:	RIVER
AU Size:	0.3 MILES
Classification/Qualifier:	B

Crane River (MA93-38)

Watershed Area: 5.27 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	5.27	5.27	1.49	1.49
Agriculture	2.7%	2.7%	0.5%	0.5%
Developed	46%	46%	37.1%	37.1%
Natural	41%	41%	37.4%	37.4%
Wetland	10.3%	10.3%	25%	25%
Impervious	30.2%	30.2%	24.7%	24.7%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	(Fish Passage Barrier*)	--	Unchanged
5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	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 Crane River (MA93-38) 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 Crane River (MA93-38) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for the Crane River (MA93-38) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being carried forward.

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 Crane River (MA93-38) 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 downstream end of Crane River at W0452 [Ash St, Danvers] from 1997-1998, 2002, and 2007 (n=2-6/yr). Analysis of the historic multi-year limited frequency <i>E. coli</i> dataset from W0452 indicated 1 out of 3 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2007, 100%), 1 yr had ≥ 2 samples exceed the 794 CFU/100ml STV (2007, n=2), and cumulatively across years 60% of intervals had GMs >244 CFU/100ml. Historic <i>E. coli</i> data from W0452 meet 2024 CALM guidance. 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
W0452	MassDEP	Water Quality	Crane River	[Ash Street, Danvers]	42.557610	-70.937877

Bacteria Data

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

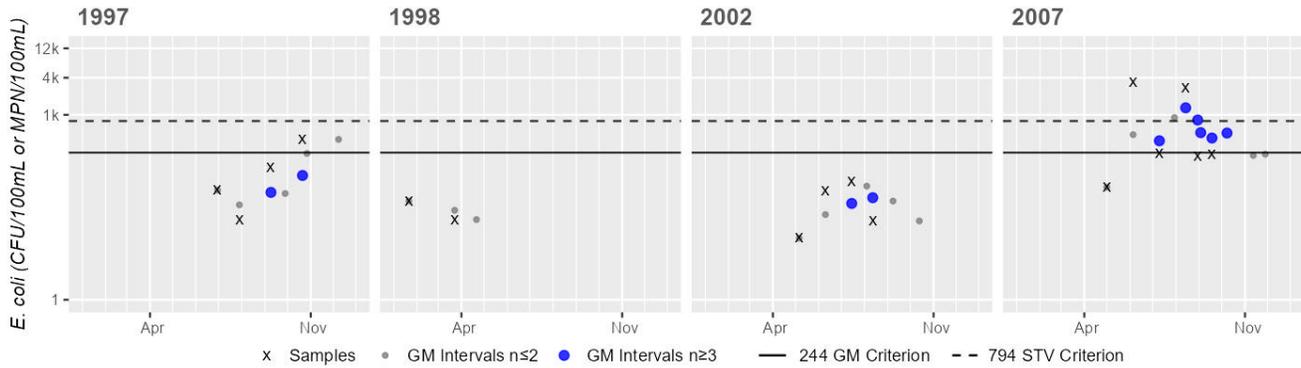
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0452	MassDEP	E. coli	06/30/97	10/21/97	4	20	400	90
W0452	MassDEP	E. coli	01/21/98	03/23/98	2	20	40	28
W0452	MassDEP	E. coli	05/06/02	08/12/02	4	10	84	31
W0452	MassDEP	E. coli	05/01/07	09/18/07	6	67	3400	438

Station MASSDEP_W0452 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	90
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

Variable*	Result
Samples	4
SeasGM	31
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	438
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	2
%n>STV	33%

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.

Crane River (MA93-41)

Location:	From outlet pump house sluiceway, Purchase Street, Danvers to mouth at confluence with Danvers River, Danvers (through a portion of former 1998 segment: Crane River MA93-03; portion formerly reported as 2002 lake segment: Crane River Pond MA93017).
AU Type:	ESTUARY
AU Size:	0.07 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Enterococcus	50121	Added
4a	4a	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Pumpout Releases (N)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Sanitary On-vessel Discharges (N)	--	--	X	--	--	--
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 Crane River (MA93-41) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Crane River (MA93-41): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0644 sq mi (92%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0644 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N17.0		Prohibited	0.06436	92.1%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Crane River (MA93-41) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert

Not Supporting	NO
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2024/26 Use Attainment Summary

The Primary Contact Recreation Use for the Crane River (MA93-41) is assessed as Not Supporting. An *Enterococcus* impairment is being added due to bacteria data not meeting the threshold at 1 station in 2020. The shellfish growing areas (0.0644 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 Crane River. Salem Sound Coastwatch (SSCW) staff/volunteers collected *Enterococcus* bacteria samples at the upstream end of Crane River at SSCW_sscwd3 [downstream side, Ash St at Purchase St, Danvers] from May-Aug 2020 (n=15). Analysis of the single year high frequency *Enterococcus* dataset from SSCW_sscwd3 indicated 100% of intervals had GMs >35 CFU/100ml and 73% of samples exceeded the 130 CFU/100ml STV. *Enterococcus* data from SSCW_sscwd3 are indicative of an *Enterococcus* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_sscwd3	Salem Sound Coastwatch	Water Quality	Clark Pond SE Inlet, River Stream	Crane Brook - Downstream side, Ash St at Purchase St, Danvers	42.557210	-70.937270

Bacteria Data

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

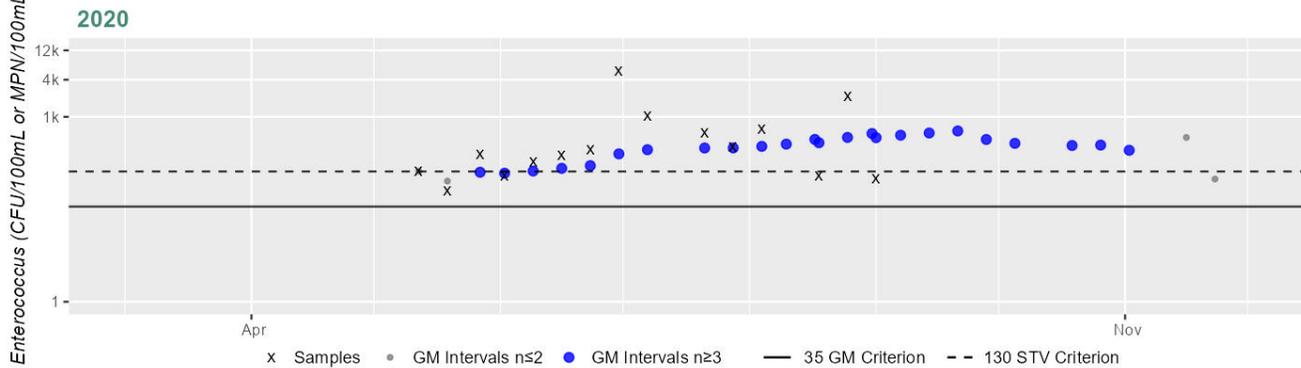
(MassDEP Undated 2)

[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
SSCW_sscwd3	Salem Sound Coastwatch	Enterococci	05/11/20	08/31/20	15	63	5480	322

Station SSCW_sscwd3 - Enterococcus

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



Variable*	Result
Samples	15
SeasGM	322
#GMI	24
#GMI Ex	24
%GMI Ex	100%
n>STV	11
%n>STV	73%

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 5)

Summary
Crane River (MA93-41): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0644 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 the Crane River (MA93-41) is assessed as Not Supporting. An *Enterococcus* impairment is being added based on bacteria data not meeting the threshold at 1 station in 2020. The shellfish growing areas (0.0644 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 Crane River. Salem Sound Coastwatch (SSCW) staff/volunteers collected *Enterococcus* bacteria samples at the upstream end of Crane River at SSCW_sscwd3 [downstream side, Ash St at Purchase St, Danvers] from May-Aug 2020 (n=15). Analysis of the single year high frequency *Enterococcus* dataset from SSCW_sscwd3 indicated 100% of intervals had GMs >68 CFU/100ml and 46% of samples exceeded the 252 CFU/100ml STV. *Enterococcus* data from SSCW_sscwd3 are indicative of an *Enterococcus* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_sscwd3	Salem Sound Coastwatch	Water Quality	Clark Pond SE Inlet, River Stream	Crane Brook - Downstream side, Ash St at Purchase St, Danvers	42.557210	-70.937270

Bacteria Data

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

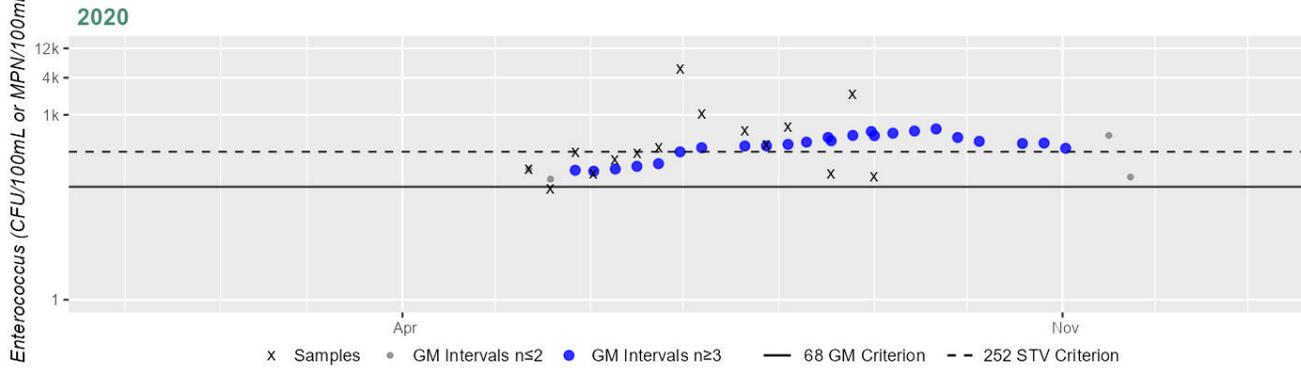
(MassDEP Undated 1)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_sscwd3	Salem Sound Coastwatch	Enterococci	05/11/20	08/31/20	15	63	5480	322

Station SSCW_sscwd3 - Enterococcus

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



Variable*	Result
Samples	15
SeasGM	322
#GMI	24
#GMI Ex	24
%GMI Ex	100%
n>STV	7
%n>STV	46%

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 5)

Summary

Crane River (MA93-41): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0644 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.

Crystal Lake (MA93018)

Location:	Wakefield/Stoneham.
AU Type:	FRESHWATER LAKE
AU Size:	79 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Crystal Lake (MA93018) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Danvers River (MA93-09)

Location:	From confluence of Porter, Crane and Waters rivers, Danvers to mouth at confluence with Bass and North rivers and Beverly Harbor, Beverly/Salem.
AU Type:	ESTUARY
AU Size:	0.53 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Pumpout Releases (N)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Sanitary On-vessel Discharges (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--

Recommendations

2024/26 Recommendations
2024 IR [ENTEROCOCCUS, LOW] Follow up monitoring is recommended at Obear Park [Beach ID: 2632] beach in Beverly for this Danvers River (MA93-09) AU since Obear Park was posted for >10% of the swimming season in 2021 (11%). 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 Danvers River (MA93-09) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Danvers River (MA93-09): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5233 sq mi (98%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.5233 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N17.0		Prohibited	0.52332	98.0%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Danvers River (MA93-09) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
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Fully Supporting	YES
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2024/26 Use Attainment Summary

The Primary Contact Recreation Use for the Danvers River (MA93-09) continues to be assessed as Fully Supporting based on DPH Beach Closure data. Danvers River has a beach with DPH Beach Closure data: Obear Park [Beach ID: 2632] beach in Beverly. The beach was rarely, if at all, posted for swimming from 2018-2022, however an Alert for *Enterococcus* is being identified since Obear Park beach was posted for >10% of the swimming season in 2021 (11%). The shellfish growing areas (0.5233 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 Danvers River.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2632	Obear Park/ Beverly	42.54548, -70.90120	42.54524, -70.90060	0%	0%	0%	0%	0%	0%	0%	11%	0%	1

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

Danvers River (MA93-09): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5233 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 the Danvers River (MA93-09) continues to be assessed as Fully Supporting based on DPH Beach Closure data. Danvers River has a beach with DPH Beach Closure data: Obear Park [Beach ID: 2632] beach in Beverly. The beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.5233 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 Danvers River based on shellfish classification data. MassDEP staff collected *Enterococcus* bacteria samples halfway down Danvers River at W0886 [Kernwood St, Beverly/Salem] from May-Sep 2002 (n=5). Analysis of the historic single year limited frequency *Enterococcus* dataset from W0886 indicated 0% of intervals had GMs >68 CFU/100ml, no samples exceeded the 252 CFU/100ml STV, and the overall GM was 12 CFU/100ml. Historic *Enterococcus* data from W0886 meet 2024 CALM guidance. 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
W0886	MassDEP	Water Quality	Danvers River	[Kernwood Street, Beverly/Salem]	42.543726	-70.898137

Bacteria Data

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

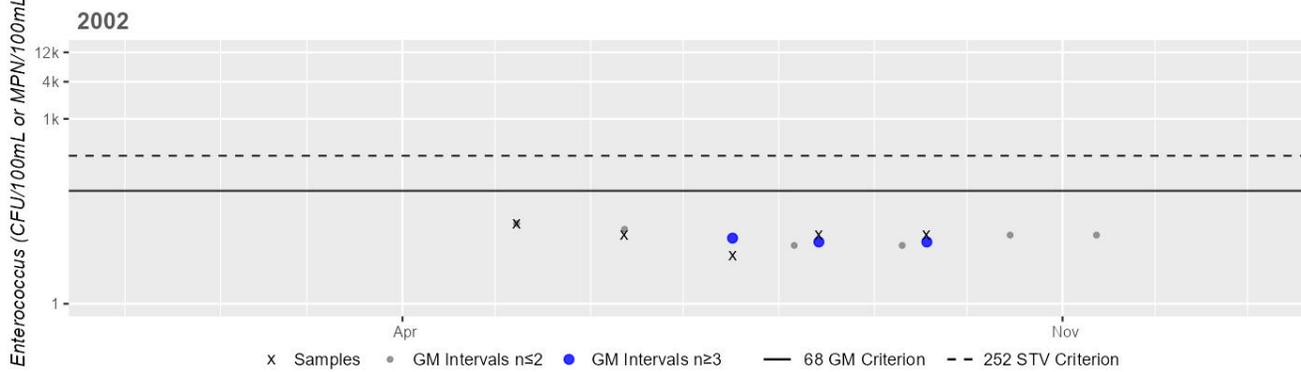
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0886	MassDEP	Enterococci	05/08/02	09/18/02	5	6	20	12

Station MASSDEP_W0886 - Enterococcus

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



Variable*	Result
Samples	5
SeasGM	12
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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 5)

Summary

Danvers River (MA93-09): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5233 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.

Days Pond (MA93092)

Location:	Gloucester.
AU Type:	FRESHWATER LAKE
AU Size:	0.5 ACRES
Classification/Qualifier:	B

No usable data were available for Days Pond (MA93092) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

Dykes Pond (MA93020)

Location:	Gloucester.
AU Type:	FRESHWATER LAKE
AU Size:	107 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Dykes Pond (MA93020) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

Edgewater Office Park Pond (MA93094)

Location:	Wakefield.
AU Type:	FRESHWATER LAKE
AU Size:	15 ACRES
Classification/Qualifier:	A: PWS, ORW (Tributary)

No usable data were available for Edgewater Office Park Pond (MA93094) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

Essex Bay (MA93-16)

Location:	The waters landward of Ipswich Bay contained within an imaginary line drawn from the northwestern tip of Gloucester near Coffins Beach to the southern tip of Castle Neck, Ipswich to the eastern most point of Dilly Island, Essex (mouth of Castle Neck River) and then from Cross Island, Essex to Conomo Point, Essex (mouth of Essex River) excluding Walker, Lanes, and Farm creeks.
AU Type:	ESTUARY
AU Size:	0.97 SQUARE MILES
Classification/Qualifier:	SA: ORW, SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (N)	--	--	X	--	--	--
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 Essex Bay (MA93-16) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Essex Bay (MA93-16): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.9567 sq mi (99%). The approved shellfish growing area represents 0.0003 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N7.0	Inner Essex Bay	Conditionally Approved	0.09571	9.9%
N7.10	Conomo Point East Mooring Area	Conditionally Approved	0.02581	2.7%
N7.6	Outer Essex Bay	Conditionally Approved	0.83492	86.2%
N8.0	Coffins Beach	Approved	0.00027	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 Essex Bay (MA93-16) 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 Essex Bay (MA93-16) so it is assessed as having Insufficient Information. The shellfish growing areas (0.9567 sq mi) in this AU are less than 100% approved (0.0003 sq mi, 0%), which means that shellfish classification data were too limited to assess the Primary Contact Recreation Use of Essex Bay.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

Essex Bay (MA93-16): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.9567 sq mi (99%). The approved shellfish growing area represents 0.0003 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 Essex Bay (MA93-16) so it is assessed as having Insufficient Information. The shellfish growing areas (0.9567 sq mi) in this AU are less than 100% approved (0.0003 sq mi, 0%), which means that shellfish classification data were too limited to assess the Secondary Contact Recreation Use of Essex Bay.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

Essex Bay (MA93-16): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.9567 sq mi (99%). The approved shellfish growing area represents 0.0003 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.

Essex River (MA93-11)

Location:	From salt water portion west of Southern Avenue, Essex to mouth at Essex Bay, Essex.
AU Type:	ESTUARY
AU Size:	0.51 SQUARE MILES
Classification/Qualifier:	SA: ORW, SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
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 Essex River (MA93-11) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Essex River (MA93-11): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.4961 sq mi (97%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N7.0	Inner Essex Bay	Conditionally Approved	0.39069	76.1%
N7.11	Conomo Point West Mooring Area	Conditionally Approved	0.00770	1.5%
N7.2	Upper Essex River	Prohibited	0.06838	13.3%
N7.3	Lower Essex River	Prohibited	0.02929	5.7%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Essex River (MA93-11) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for the Essex River (MA93-11) continues to be assessed as Fully Supporting based on DPH Beach Closure data. Essex River has a beach with DPH Beach Closure data: Front Beach [Beach ID: 2814] beach in Essex. The beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.4961 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 Essex River.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2814	Front Beach/ Essex	42.65091, -70.74520	42.65085, -70.74500	0%	0%	0%	0%	0%	0%	0%	3%	0%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Essex River (MA93-11): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.4961 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
The Secondary Contact Recreation Use for the Essex River (MA93-11) continues to be assessed as Fully Supporting based on DPH Beach Closure data. Essex River has a beach with DPH Beach Closure data: Front Beach [Beach ID: 2814] beach in Essex. The beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.4961 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 Essex River. MassDEP staff collected <i>Enterococcus</i> bacteria samples a quarter of the way down the Essex River at W0890 [Rt. 133 (Main St), Essex] from May-Sep 2002 (n=5). Analysis of the historic single year limited frequency <i>Enterococcus</i> dataset from W0890 indicated 33% of intervals had GMs >68 CFU/100ml, no samples exceeded the 252 CFU/100ml STV, and the overall GM was 41 CFU/100ml. Historic <i>Enterococcus</i> data from W0890 meet 2024 CALM guidance. 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
W0890	MassDEP	Water Quality	Essex River	[Route 133 (Main Street), Essex]	42.631927	-70.778561

Bacteria Data

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

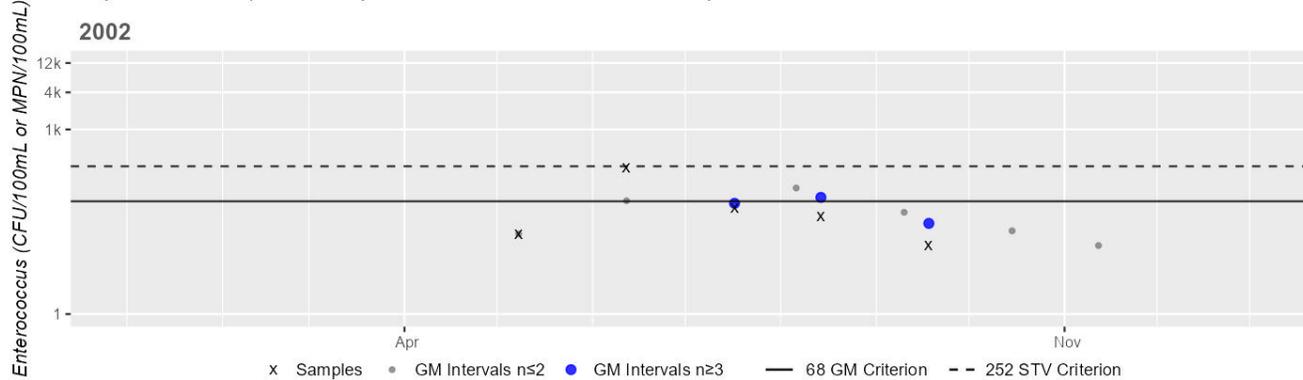
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0890	MassDEP	Enterococci	05/08/02	09/18/02	5	13	240	41

Station MASSDEP_W0890 - Enterococcus

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



Variable*	Result
Samples	5
SeasGM	41
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Historic (1997-2010)

33%

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

5)

Summary

Essex River (MA93-11): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.4961 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.

Fernwood Lake (MA93022)

Location:	Gloucester.
AU Type:	FRESHWATER LAKE
AU Size:	25 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Fernwood Lake (MA93022) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

First Pond (MA93081)

Location:	Saugus (also known as Upper Griswold Pond).
AU Type:	FRESHWATER LAKE
AU Size:	4 ACRES
Classification/Qualifier:	B

No usable data were available for First Pond (MA93081) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

Flax Pond (MA93023)

Location:	Lynn.
AU Type:	FRESHWATER LAKE
AU Size:	55 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Curly-leaf Pondweed*)	--	Unchanged
5	5	(Non-Native Aquatic Plants*)	--	Removed
5	5	Algae	--	Unchanged
5	5	Chlordane in Fish Tissue	--	Unchanged
5	5	DDT in Fish Tissue	--	Unchanged
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Curly-leaf Pondweed*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Algae	Source Unknown (N)	--	--	X	X	X
Chlordane in Fish Tissue	Source Unknown (N)	--	X	--	--	--
DDT in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Turbidity	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 is being removed from the Aesthetics and Recreational Uses to be consistent with a “Clarification of Listing Cause” under the Aquatic Life Use submitted for the 2018/201R, where it was identified that the generic “Non-Native Aquatic Plants” was being delisted and replaced with the specific macrophyte Curly-leaf Pondweed (<i>Potamogeton crispus</i>). The Curly-leaf Pondweed impairment will continue to be maintained under the Aquatic Life Use.

Non-Native Aquatic Plants

Please see the removal comment in the table above.

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	No

2024/26 Use Attainment Summary
The Fish Consumption Use for Flax Pond (MA93023) continues to be assessed as Not Supporting and the prior Chlordane in Fish Tissue and DDT in Fish Tissue impairment is being carried forward. DPH included a site-specific advisory for Flax Pond in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent DPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Flax Pond (MA93023) continues to be assessed as Not Supporting with the Algae and Turbidity impairments being carried forward. 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 2018/20IR, where it was identified that the generic “Non-Native Aquatic Plants” was being delisted and replaced with the specific macrophyte Curly-leaf Pondweed (*Potamogeton crispus*). The Curly-leaf Pondweed impairment will not be duplicated here, but will continue to be maintained under the Aquatic Life Use. No new data are available to evaluate the Aesthetics Use for Flax Pond.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Flax Pond (MA93023) 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. The Non-Native Aquatic Plants impairment is being removed because the specific non-native species (Curly-leaf Pondweed) is being maintained under Aquatic Life Use.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Flax Pond (MA93023) 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 and Turbidity impairments (from the Aesthetics Use) are being carried forward. The Non-Native Aquatic Plants impairment is being removed because the specific non-native species (Curly-leaf Pondweed) is being maintained under Aquatic Life Use.

Floating Bridge Pond (MA93024)

Location:	Lynn.
AU Type:	FRESHWATER LAKE
AU Size:	12 ACRES
Classification/Qualifier:	B

No usable data were available for Floating Bridge Pond (MA93024) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

Forest River (MA93-10)

Location:	From saltwater wetlands upstream of Loring Avenue, Salem to mouth at confluence with Salem Harbor, Salem.
AU Type:	ESTUARY
AU Size:	0.03 SQUARE MILES
Classification/Qualifier:	SA: SFO

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

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Dissolved Oxygen Supersaturation	Source Unknown (N)	X	--	--	--	--	--
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	--	X
Enterococcus	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 Forest River (MA93-10) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary

Forest River (MA93-10): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0216 sq mi (81%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0216 sq mi (81%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N18.0	Salem Harbor	Prohibited	0.02161	81.3%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary

No data are available, so the Aesthetics Use for Forest River (MA93-10) 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 Forest River (MA93-10) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0216 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 Forest River.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Forest River (MA93-10): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0216 sq mi (81%). 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 Forest River (MA93-10) is assessed as Not Supporting. An <i>Enterococcus</i> impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 1 station in 2002. The shellfish growing areas (0.0216 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 Forest River. MassDEP staff collected <i>Enterococcus</i> bacteria samples halfway down Forest River at W0885 [Loring Avenue, Salem] from May-Sep 2002 (n=5). Analysis of the historic single year limited frequency <i>Enterococcus</i> dataset from W0885 indicated 100% of intervals had GMs >68 CFU/100ml, 3 samples exceeded the 252 CFU/100ml STV, and the overall GM was 433 CFU/100ml. Historic <i>Enterococcus</i> data from W0885 are indicative of an <i>Enterococcus</i> impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0885	MassDEP	Water Quality	Forest River	[Loring Avenue, Salem]	42.491612	-70.894534

Bacteria Data

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

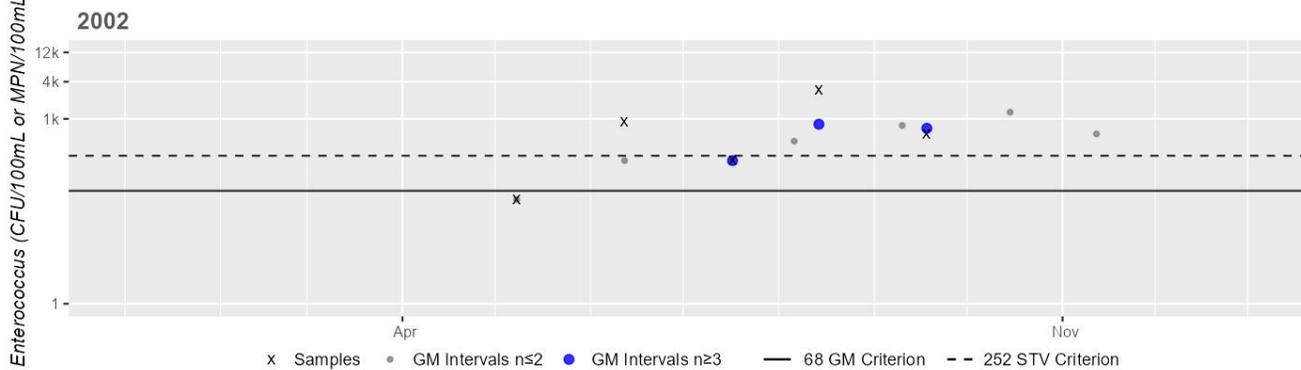
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0885	MassDEP	Enterococci	05/08/02	09/18/02	5	49	2900	433

Station MASSDEP_W0885 - Enterococcus

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



Variable*	Result
Samples	5
SeasGM	433
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	3
%n>STV	60%

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

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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 5)

Summary

Forest River (MA93-10): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0216 sq mi (81%). 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.

Foster Pond (MA93026)

Location:	Swampscott.
AU Type:	FRESHWATER LAKE
AU Size:	5 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	DDT in Fish Tissue	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
DDT in Fish Tissue	Source Unknown (N)	--	X	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	No

2024/26 Use Attainment Summary
The Fish Consumption Use for Foster Pond (MA93026) continues to be assessed as Not Supporting and the prior DDT in Fish Tissue impairment is being carried forward. DPH included a site-specific advisory for Foster Pond in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent DPH 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 Foster Pond (MA93026) 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 Foster Pond (MA93026) are available, so the Primary Contact Recreation Use is Not Assessed.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

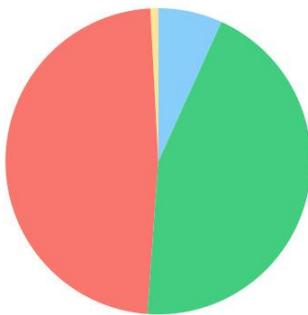
2024/26 Use Attainment Summary
No bacteria or other indicator data for Foster Pond (MA93026) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.

Frost Fish Brook (MA93-36)

Location:	From Cabot Road, Danvers to mouth at confluence with Porter River, Route 62, Danvers.
AU Type:	RIVER
AU Size:	1 MILES
Classification/Qualifier:	B

Frost Fish Brook (MA93-36)

Watershed Area: 3.00 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.00	3.00	0.78	0.78
Agriculture	0.8%	0.8%	0.6%	0.6%
Developed	48%	48%	43.3%	43.3%
Natural	44.4%	44.4%	45.2%	45.2%
Wetland	6.8%	6.8%	11%	11%
Impervious	23.1%	23.1%	20.7%	20.7%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Enterococcus	50120	Added
4a	4a	Escherichia Coli (E. Coli)	50120	Unchanged
4a	4a	Fecal Coliform	50120	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Enterococcus	Source Unknown (N)	--	--	--	X	--
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
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 Frost Fish Brook (MA93-36) 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 Frost Fish Brook (MA93-36) 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 Frost Fish Brook (MA93-36) continues to be assessed as Not Supporting. The prior *Escherichia coli* (*E. coli*) and Fecal Coliform impairments are being carried forward. An *Enterococcus* impairment is being added due to bacteria data not meeting the threshold at 3 stations in in 2019-2020. Salem Sound Coastwatch (SSCW) staff/volunteers collected *Enterococcus* bacteria samples in Frost Fish Brook from 2019-2020 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at SSCW_W0459 [Cabot Rd, Danvers] from 2019-2020 (n=9-15/yr), halfway down at SSCW_W1540 [47 Coolidge Rd, Danvers] from 2019-2020 (n=9-15/yr) and the downstream end at SSCW_400 [Porter River at Rt. 62 and Holten-Richmond School, Danvers] from 2019-2020 (n=6/yr). Analysis of the multi-year high frequency *Enterococcus* dataset from SSCW_W0459 indicated 2 out of 2 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2019 and 2020, 100 & 100%), 2 yrs had >10% of samples exceed the 130 CFU/100ml STV (2019 and 2020, 55 & 86%), and cumulatively across years 100% of intervals had GMs >35 CFU/100ml. Analysis of the multi-year high frequency *Enterococcus* dataset from SSCW_W1540 indicated 2 out of 2 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2019 and 2020, 100 & 100%), 2 yrs had >10% of samples exceed the 130 CFU/100ml STV (2019 and 2020, 66 & 100%), and cumulatively across years 100% of intervals had GMs >35 CFU/100ml. Analysis of the multi-year limited frequency *Enterococcus* dataset from SSCW_400 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml (2019 and 2020, 100 & 100%), 2 yrs had ≥2 samples exceed the 130 CFU/100ml STV (2019 and 2020, n=6 & 6), and cumulatively across years 100% of intervals had GMs >35 CFU/100ml. *Enterococcus* data from SSCW_W0459, SSCW_W1540, and SSCW_400 are indicative of an *Enterococcus* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_400	Salem Sound Coastwatch	Water Quality	Frost Fish Brook/Porter River; Rice Beach, River Stream Intermittent	Porter River at Rt. 62 and Holten-Richmond School, Danvers	42.568090	-70.927790
SSCW_W0459	Salem Sound Coastwatch	Water Quality	Frost Fish Brook; Proctor Brook, River Stream	Cabot Rd, Danvers	42.580900	-70.929890
SSCW_W1540	Salem Sound Coastwatch	Water Quality	Frost Fish Brook; Proctor Brook, River Stream	47 Coolidge Rd, Danvers	42.574180	-70.929300

Bacteria Data

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

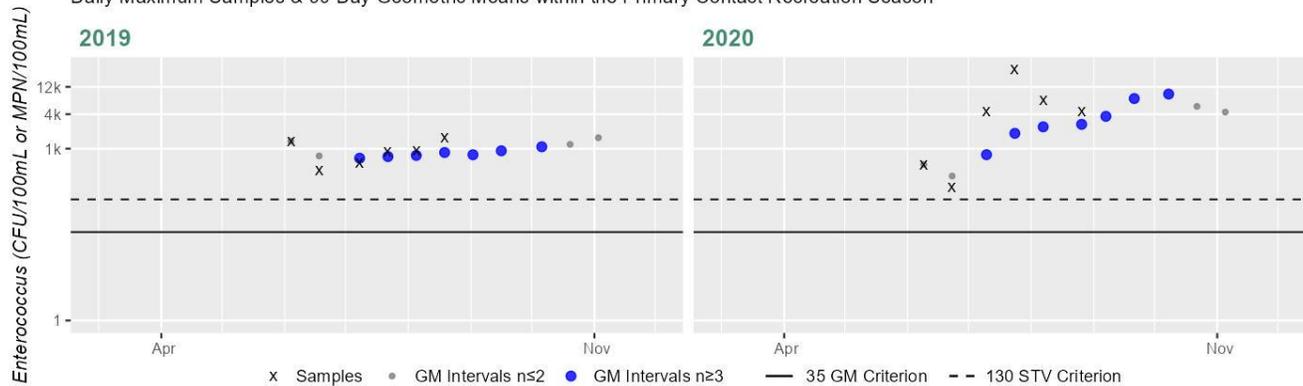
(MassDEP Undated 2)

[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
SSCW_400	Salem Sound Coastwatch	Enterococci	06/04/19	08/19/19	6	414	1550	857
SSCW_400	Salem Sound Coastwatch	Enterococci	06/08/20	08/25/20	6	210	24196	2654
SSCW_W0459	Salem Sound Coastwatch	Enterococci	05/03/19	08/23/19	9	41	5480	237
SSCW_W0459	Salem Sound Coastwatch	Enterococci	05/11/20	08/31/20	15	63	24200	700
SSCW_W1540	Salem Sound Coastwatch	Enterococci	05/03/19	08/23/19	9	20	5790	198
SSCW_W1540	Salem Sound Coastwatch	Enterococci	05/11/20	08/31/20	15	161	24200	2422

Station MASSDEP_W0881 & SSCW_400 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	857
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	6
%n>STV	100%

Variable*	Result
Samples	6
SeasGM	2654
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	6
%n>STV	100%

Cumulative %GMI Exceedance

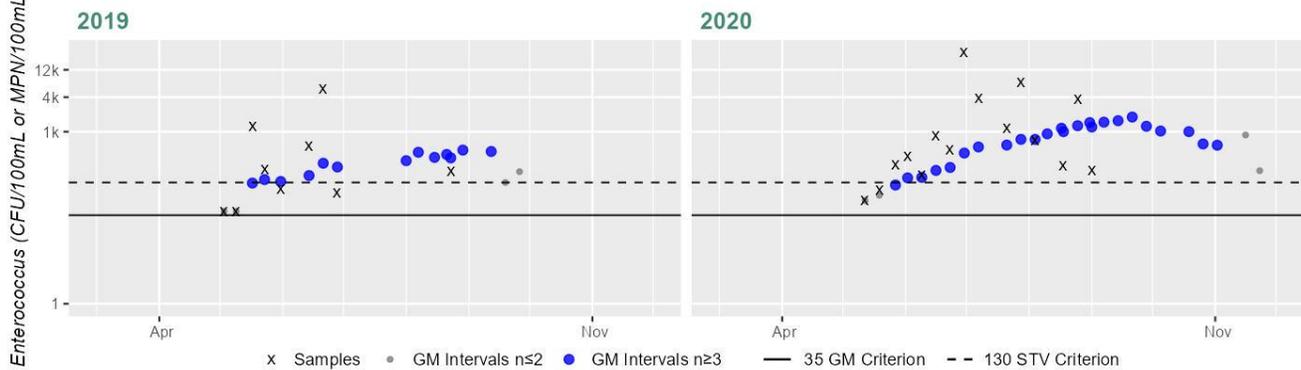
Current (2011-2022)

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 SSCW_W0459 - Enterococcus

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



Variable*	Result
Samples	9
SeasGM	237
#GMI	13
#GMI Ex	13
%GMI Ex	100%
n>STV	5
%n>STV	55%

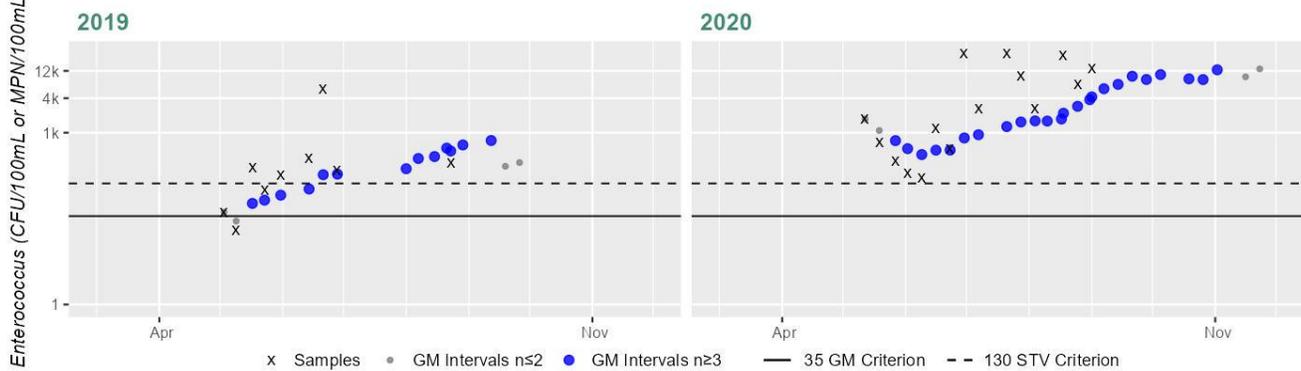
Variable*	Result
Samples	15
SeasGM	700
#GMI	24
#GMI Ex	24
%GMI Ex	100%
n>STV	13
%n>STV	86%

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_W1540 & SSCW_W1540 - Enterococcus

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



Variable*	Result
Samples	9
SeasGM	198
#GMI	13
#GMI Ex	13
%GMI Ex	100%
n>STV	6
%n>STV	66%

Variable*	Result
Samples	15
SeasGM	2422
#GMI	24
#GMI Ex	24
%GMI Ex	100%
n>STV	15
%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 Frost Fish Brook (MA93-36) is assessed as Not Supporting. An <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 3 stations in 1997, 2002 & 2007. MassDEP staff collected <i>E. coli</i> bacteria samples in Frost Fish Brook from 1997-2007 at 4 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at W0459 [downstream/S at Cabot Rd, Danvers (stream culverted for ~700 ft upstream of Rd)] from Jul 1997 (n=1), halfway down at W1540 [Coolidge Rd, Danvers] from May-Sep 2007 (n=6), W0455 [upstream/N at Rt. 62, Danvers] from 1997-1998 (n=2-4/yr), and close to the downstream end at W0881 [directly downstream at Rt. 62, Danvers] from May-Sep 2002 (n=5). Analysis of the historic single year limited frequency <i>E. coli</i> dataset from W1540 indicated 100% of intervals had GMs >244 CFU/100ml, 2 samples exceeded the 794 CFU/100ml STV, and the overall GM was 531 CFU/100ml. Analysis of the historic single year limited frequency <i>E. coli</i> dataset from W0455 indicated 100% of intervals had GMs >244 CFU/100ml, 3 samples exceeded the 794 CFU/100ml STV, and the overall GM was 658 CFU/100ml. Analysis of the historic single year limited frequency <i>E. coli</i> dataset from W0881 indicated 100% of intervals had GMs >244 CFU/100ml, 4 samples exceeded the 794 CFU/100ml STV, and the overall GM was 1606 CFU/100ml. Historic <i>E. coli</i> data from W1540, W0455, and W0881 are indicative of an <i>E. coli</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0455	MassDEP	Water Quality	Frost Fish Brook	[upstream/north at Route 62, Danvers]	42.568376	-70.927970
W0459	MassDEP	Water Quality	Frost Fish Brook	[downstream/south at Cabot Road, Danvers (stream culverted for approximately 700 feet upstream of road)]	42.580881	-70.930027
W0881	MassDEP	Water Quality	Frost Fish Brook	[directly downstream at Route 62, Danvers]	42.568090	-70.927982
W1540	MassDEP	Water Quality	Frost Fish Brook	[Coolidge Road, Danvers]	42.574212	-70.929388

Bacteria Data

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

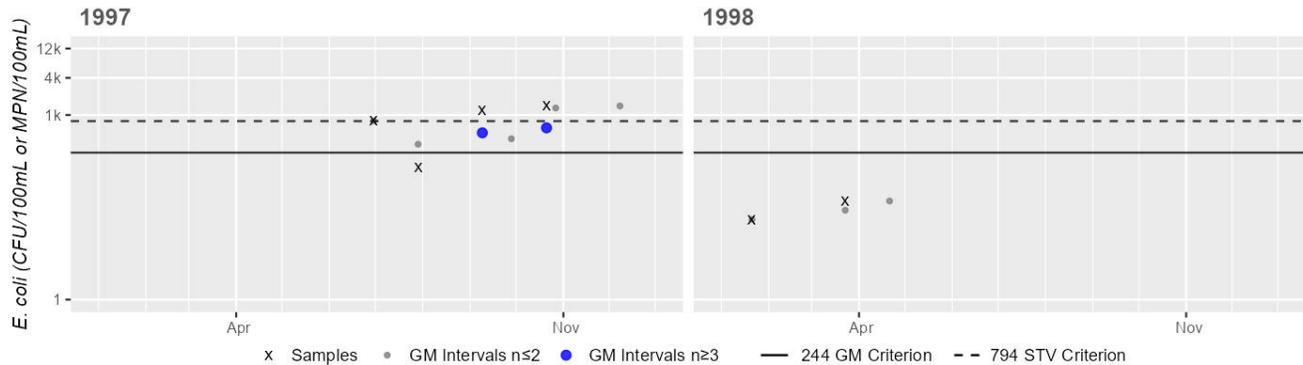
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0455	MassDEP	E. coli	06/30/97	10/21/97	4	140	1400	658
W0455	MassDEP	E. coli	01/21/98	03/23/98	2	20	40	28
W0459	MassDEP	E. coli	07/29/97	07/29/97	1	100	100	100
W0881	MassDEP	E. coli	05/06/02	09/18/02	5	78	13000	1606
W1540	MassDEP	E. coli	05/01/07	09/18/07	6	24	3700	531

Station MASSDEP_W0455 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	658
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	3
%n>STV	75%

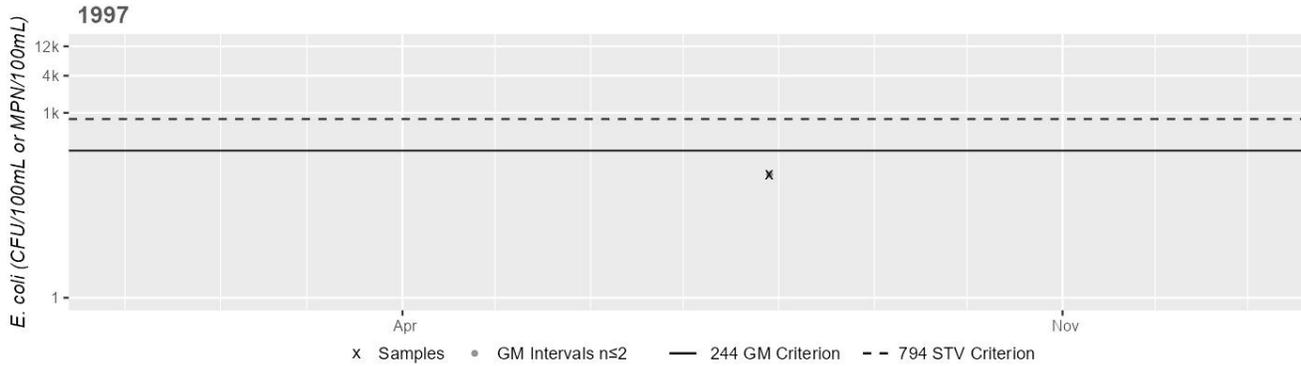
Variable*	Result
Samples	2
SeasGM	28
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W0459 - Escherichia coli

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



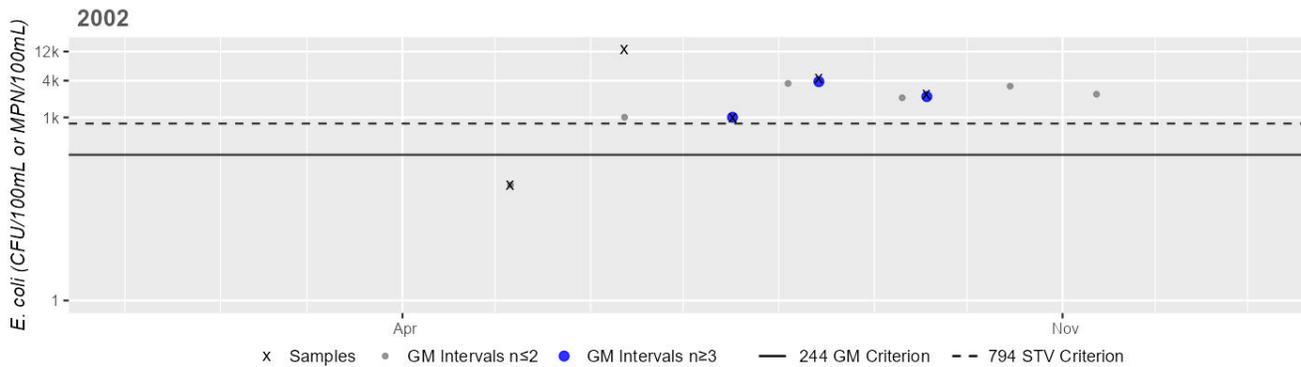
Variable*	Result
Samples	1
SeasGM	100
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W0881 - Escherichia coli

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



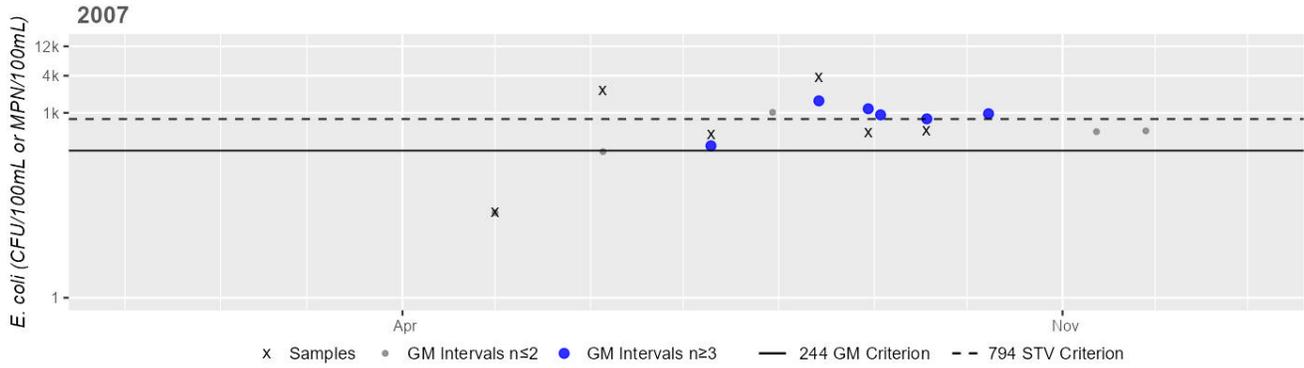
Variable*	Result
Samples	5
SeasGM	1606
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	4
%n>STV	80%

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_W1540 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	531
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	2
%n>STV	33%

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.

Gloucester Harbor (MA93-18)

Location:	The waters landward of an imaginary line drawn between Mussel Point, Gloucester and the tip of the Dog Bar Breakwater, Gloucester excluding the Annisquam River.
AU Type:	ESTUARY
AU Size:	2.32 SQUARE MILES
Classification/Qualifier:	SB: SFR, CSO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Combined Biota/Habitat Bioassessments	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Enterococcus	50122	Unchanged
5	5	Fecal Coliform	50122	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Combined Biota/Habitat Bioassessments	Changes in Ordinary Stratification and Bottom Water Hypoxia/Anoxia (Y)	X	--	--	--	--	--
Combined Biota/Habitat Bioassessments	Changes in Tidal Circulation/Flushing (Y)	X	--	--	--	--	--
Combined Biota/Habitat Bioassessments	Combined Sewer Overflows (Y)	X	--	--	--	--	--
Combined Biota/Habitat Bioassessments	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	X	--	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Combined Biota/Habitat Bioassessments	Dredging (e.g., for Navigation Channels) (Y)	X	--	--	--	--	--
Dissolved Oxygen	Changes in Ordinary Stratification and Bottom Water Hypoxia/Anoxia (Y)	X	--	--	--	--	--
Dissolved Oxygen	Changes in Tidal Circulation/Flushing (Y)	X	--	--	--	--	--
Dissolved Oxygen	Combined Sewer Overflows (Y)	X	--	--	--	--	--
Dissolved Oxygen	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	X	--	--	--	--	--
Enterococcus	Combined Sewer Overflows (Y)	--	--	--	--	X	X
Fecal Coliform	Combined Sewer Overflows (Y)	--	--	X	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (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 Gloucester Harbor (MA93-18) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>Gloucester Harbor (MA93-18): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.3006 sq mi (99%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The prohibited shellfish growing area represents 2.3006 sq mi (99%). 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.</p>

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N13.0		Prohibited	0.00019	0.0%
N14.0		Prohibited	0.00491	0.2%
N9.0	Gloucester Harbor	Prohibited	2.26908	97.7%
N9.14		Prohibited	0.00000	0.0%
N9.15	Freshwater Cove	Prohibited	0.02647	1.1%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
<p>No new data are available, so the Aesthetics Use for Gloucester Harbor (MA93-18) is Not Assessed. The Alert previously identified due to CSO presence is being removed from the Aesthetics Use (due to redundant duplication across multiple Uses), since the Primary and Secondary Contact Recreation uses for Gloucester Harbor will continue to be impaired for Enterococcus based on a presumptive impairment due to the presence of active CSO outfalls.</p>

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Gloucester Harbor (MA93-18) continues to be assessed as Not Supporting. The prior *Enterococcus* impairment is being carried forward due to a presumptive impairment due the presence of active CSO outfalls. Gloucester Harbor has 4 beaches with DPH Beach Closure data: Pavilion Beach [Beach ID: 2866], Cressy’s [Beach ID: 2869], Half Moon [Beach ID: 2868] and Niles [Beach ID: 2867] beaches in Gloucester. Pavilion Beach was posted for >10% of the swimming season in 2022 (37%). The shellfish growing areas (2.3006 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 Gloucester Harbor.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2866	Pavilion Beach/ Gloucester	42.60882, -70.66510	42.60983, -70.66830	0%	0%	3%	0%	0%	0%	9%	4%	37%	1
2867	Niles/ Gloucester	42.59850, -70.65570	42.59621, -70.65420	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
2868	Half Moon/ Gloucester	42.60470, -70.67710	42.60407, -70.67720	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
2869	Cressy's/ Gloucester	42.60266, -70.68020	42.60297, -70.67830	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 5)

Summary
Gloucester Harbor (MA93-18): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.3006 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Gloucester Harbor (MA93-18) continues to be assessed as Not Supporting. The prior *Enterococcus* impairment is being carried forward based on a presumptive impairment due to the presence of CSOs. Gloucester Harbor has 4 beaches with DPH Beach Closure data: Pavilion Beach [Beach ID: 2866], Cressy’s [Beach ID: 2869], Half Moon [Beach ID: 2868] and Niles [Beach ID: 2867] beaches in Gloucester. All beaches were rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (2.3006 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 Gloucester Harbor.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

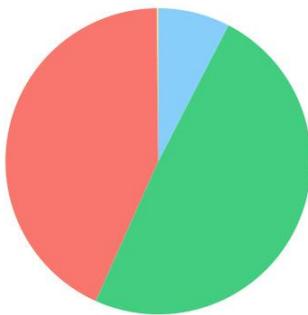
Summary
Gloucester Harbor (MA93-18): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.3006 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Goldthwait Brook (MA93-05)

Location:	Headwaters, outlet Cedar Pond, Peabody to mouth at confluence with Proctor Brook, Peabody (portions culverted).
AU Type:	RIVER
AU Size:	3.3 MILES
Classification/Qualifier:	B

Goldthwait Brook (MA93-05)

Watershed Area: 6.54 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	6.54	5.79	2.36	2.25
Agriculture	0.2%	0.2%	0.1%	0.1%
Developed	43.1%	42.5%	31.8%	32.4%
Natural	49.1%	50%	55.9%	56.7%
Wetland	7.6%	7.3%	12.2%	10.8%
Impervious	27.2%	26.6%	19.2%	19.5%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Alteration in Stream-side or Littoral Vegetative Covers*)	--	Unchanged
5	5	(Dewatering*)	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Enterococcus	50120	Added
5	5	Escherichia Coli (E. Coli)	50120	Unchanged
5	5	Fecal Coliform	50120	Unchanged
5	5	Phosphorus, Total	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Alteration in Stream-side or Littoral Vegetative Covers*)	Channelization (Y)	X	--	--	--	--
(Dewatering*)	Source Unknown (N)	X	--	--	--	--
Dissolved Oxygen	Industrial Point Source Discharge (N)	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Enterococcus	Source Unknown (N)	--	--	--	X	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--
Phosphorus, Total	Urban Runoff/Storm Sewers (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 Goldthwait Brook (MA93-05) 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 Goldthwait Brook (MA93-05) 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 Goldthwait Brook (MA93-05) continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) and Fecal Coliform impairments are being carried forward. An <i>Enterococcus</i> impairment is being added due to bacteria data not meeting the threshold at 3 stations in 2019-2020. Salem Sound Coastwatch (SSCW) staff/volunteers collected <i>Enterococcus</i> bacteria samples in Goldthwait Brook from 2019-2020 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 SSCW_SSCWP1 [245 Lynnfield St, Peabody] from 2019-2020 (n=9-15/yr), three-quarters of the way down at SSCW_SSCWP3 [5 Allens Lane, Peabody] from 2019-2020 (n=9-10/yr), close to the downstream end at SSCW_W0454 [107 Foster St, Peabody] from 2019-2020 (n=9-15/yr). Analysis of the multi-year high frequency <i>Enterococcus</i> dataset from SSCW_SSCWP1 indicated 2 out of 2 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2019 and 2020, 53 & 87%), and while just 2 yrs had >10% of samples exceed the 130 CFU/100ml STV (2019 and 2020, 33 & 46%), cumulatively across years 75% of intervals had GMs >35 CFU/100ml. Analysis of the multi-year moderate frequency <i>Enterococcus</i> dataset from SSCW_SSCWP3 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml (2019 and 2020, 69 & 73%) and while just 2 yrs had ≥2 samples exceed the 130 CFU/100ml STV (2019 and 2020, n=2 & 4), cumulatively across years 71% of intervals had GMs >35 CFU/100ml. Analysis of the multi-year high frequency <i>Enterococcus</i> dataset from SSCW_W0454 indicated 2 out of 2 sufficient data yrs had intervals where >10% of the GMs were >35 CFU/100ml (2019 and 2020, 69 & 91%), and while just 2 yrs had >10% of samples exceed the 130 CFU/100ml STV (2019 and 2020, 33 & 53%), cumulatively across years 83% of intervals had GMs >35 CFU/100ml. <i>Enterococcus</i> data from all sites are indicative of an <i>Enterococcus</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_SSCWP1	Salem Sound Coastwatch	Water Quality	Goldthwait Brook, Channelized Stream	245 Lynnfield St, Peabody	42.517200	-70.972710
SSCW_SSCWP3	Salem Sound Coastwatch	Water Quality	Goldthwait Brook, River Stream Intermittent	5 Allens Lane, Peabody	42.522720	-70.939860
SSCW_W0454	Salem Sound Coastwatch	Water Quality	Goldthwait Brook, Channelized Stream	107 Foster St, Peabody	42.522310	-70.931260

Bacteria Data

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

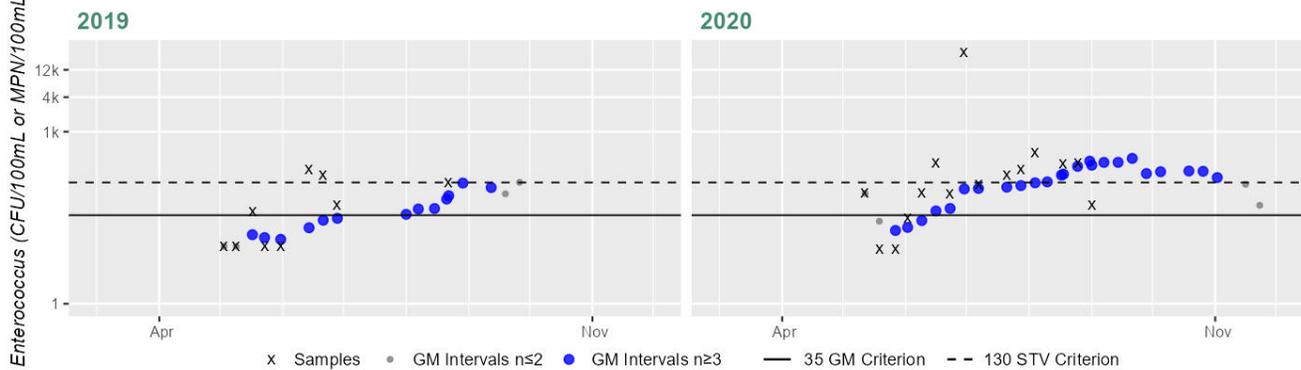
(MassDEP Undated 2)

[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
SSCW_SSCWP1	Salem Sound Coastwatch	Enterococci	05/03/19	08/22/19	9	10	218	36
SSCW_SSCWP1	Salem Sound Coastwatch	Enterococci	05/11/20	08/31/20	15	9	24200	133
SSCW_SSCWP3	Salem Sound Coastwatch	Enterococci	05/03/19	08/22/19	9	10	556	42
SSCW_SSCWP3	Salem Sound Coastwatch	Enterococci	05/11/20	07/27/20	10	9	24200	134
SSCW_W0454	Salem Sound Coastwatch	Enterococci	05/03/19	08/22/19	9	10	1150	67
SSCW_W0454	Salem Sound Coastwatch	Enterococci	05/11/20	08/31/20	15	9	13000	197

Station SSCW_SSCWP1 - Enterococcus

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



Variable*	Result
Samples	9
SeasGM	36
#GMI	13
#GMI Ex	7
%GMI Ex	53%
n>STV	3
%n>STV	33%

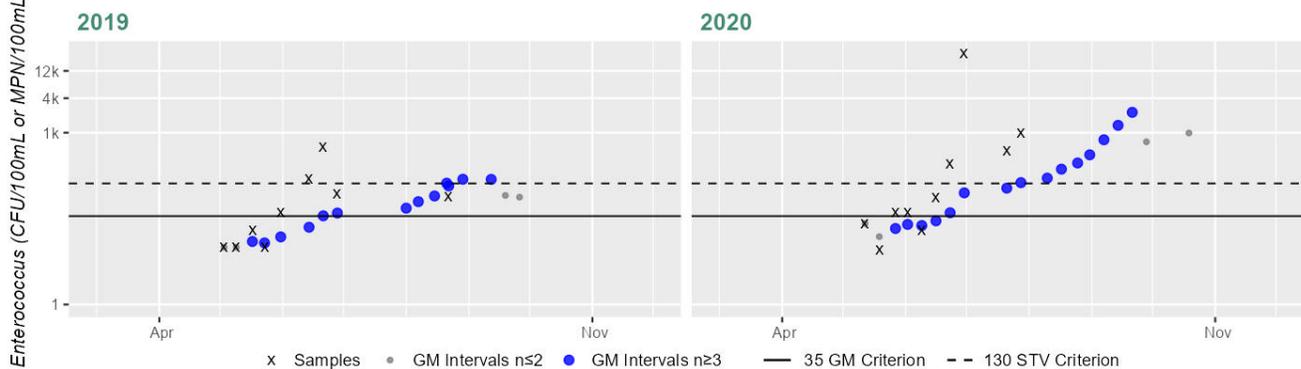
Variable*	Result
Samples	15
SeasGM	133
#GMI	24
#GMI Ex	21
%GMI Ex	87%
n>STV	7
%n>STV	46%

Cumulative %GMI Exceedance
Current (2011-2022)
75%

*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 SSCW_SSCWP3 - Enterococcus

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



Variable*	Result
Samples	9
SeasGM	42
#GMI	13
#GMI Ex	9
%GMI Ex	69%
n>STV	2
%n>STV	22%

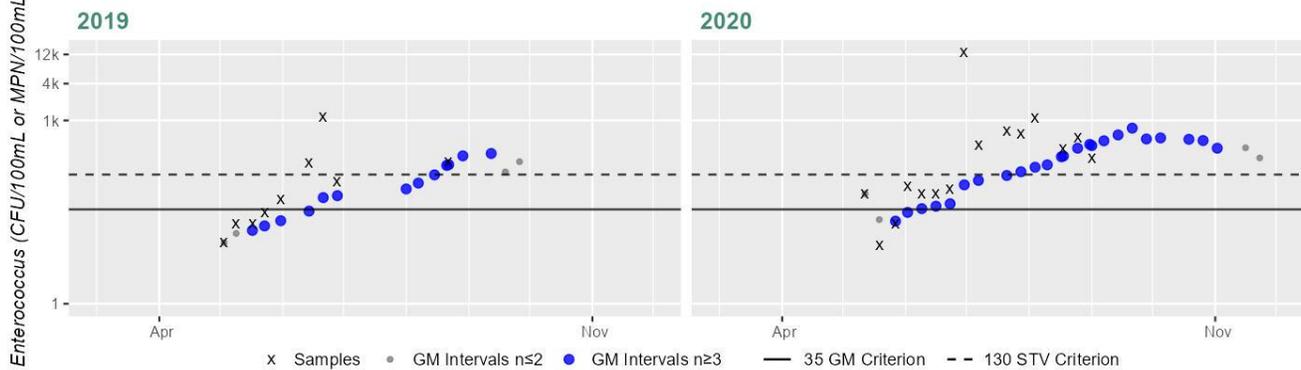
Variable*	Result
Samples	10
SeasGM	134
#GMI	15
#GMI Ex	11
%GMI Ex	73%
n>STV	4
%n>STV	40%

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

*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_W0454 & SSCW_W0454 - Enterococcus

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



Variable*	Result
Samples	9
SeasGM	67
#GMI	13
#GMI Ex	9
%GMI Ex	69%
n>STV	3
%n>STV	33%

Variable*	Result
Samples	15
SeasGM	197
#GMI	24
#GMI Ex	22
%GMI Ex	91%
n>STV	8
%n>STV	53%

Cumulative %GMI Exceedance
Current (2011-2022)
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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Goldthwait Brook (MA93-05) 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 Goldthwait Brook at W0454 [Foster St, Peabody] in 1998, 2002, and 2007 (n=2-6/yr). Analysis of the historic multi-year limited frequency <i>E. coli</i> dataset from W0454 indicated 1 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2007, 50%), 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, and cumulatively across years 37% of intervals had GMs >244 CFU/100ml. Historic <i>E. coli</i> data from W0454 meet 2024 CALM guidance. 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
W0454	MassDEP	Water Quality	Goldthwait Brook	[Foster Street, Peabody]	42.522206	-70.931093

Bacteria Data

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

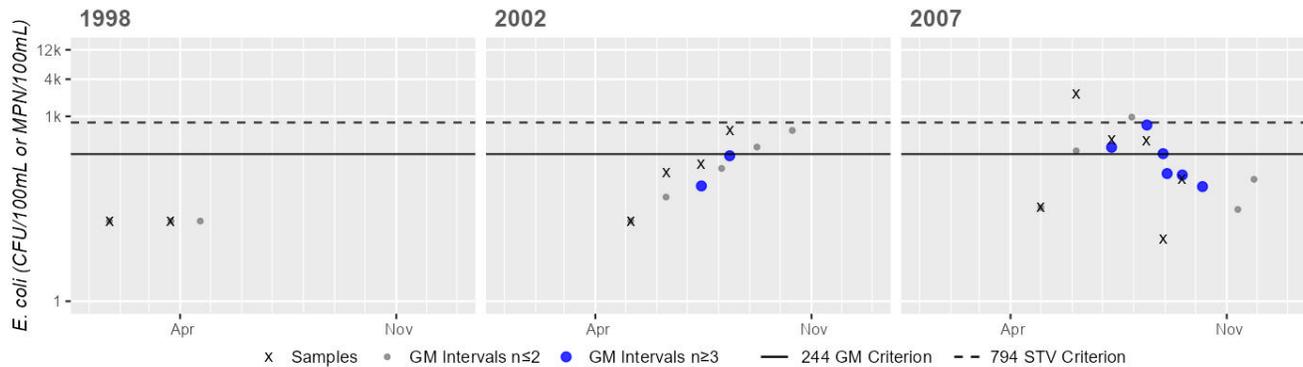
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0454	MassDEP	E. coli	01/21/98	03/23/98	2	20	20	19
W0454	MassDEP	E. coli	05/06/02	08/12/02	4	20	590	124
W0454	MassDEP	E. coli	05/01/07	09/18/07	6	10	2300	150

Station MASSDEP_W0454 - Escherichia coli

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



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

Variable*	Result
Samples	4
SeasGM	124
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	150
#GMI	6
#GMI Ex	3
%GMI Ex	50%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance
Historic (1997-2010)
37%

*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.

Goose Cove Reservoir (MA93093)

Location:	Gloucester.
AU Type:	FRESHWATER LAKE
AU Size:	58 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Goose Cove Reservoir (MA93093) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Gravelly Pond (MA93028)

Location:	Hamilton.
AU Type:	FRESHWATER LAKE
AU Size:	50 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Gravelly Pond (MA93028) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Griswold Pond (MA93029)

Location:	Saugus.
AU Type:	FRESHWATER LAKE
AU Size:	13 ACRES
Classification/Qualifier:	B: ORW

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

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

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 Griswold Pond (MA93029) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Griswold Pond (MA93029) 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 a high percentage coverage of aquatic macrophytes (with the entire bottom being covered with aquatic vegetation and growing to the surface in the summer months) based on a Lycott Environmental survey in 2000 (MassDEP 2021) 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 this Griswold Pond AU.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Griswold Pond (MA93029) 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 Griswold Pond (MA93029) 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.

Haskell Pond (MA93031)

Location:	Gloucester.
AU Type:	FRESHWATER LAKE
AU Size:	58 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Haskell Pond (MA93031) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Habitat Modification - other than Hydromodification (Y)	X	--	--	--	--

Hawkes Brook (MA93-32)

Location:	Headwaters near the Lynn/Lynnfield border to the inlet of Hawkes Pond, Lynnfield.
AU Type:	RIVER
AU Size:	2.6 MILES
Classification/Qualifier:	A: PWS, ORW (Tributary)

Hawkes Brook (MA93-32)

Watershed Area: 1.37 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.37	1.37	0.55	0.55
Agriculture	0%	0%	0%	0%
Developed	31.5%	31.5%	26.9%	26.9%
Natural	54.9%	54.9%	50.7%	50.7%
Wetland	13.6%	13.6%	22.4%	22.4%
Impervious	21.7%	21.7%	18.8%	18.8%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Escherichia Coli (E. Coli)	50120	Unchanged
4a	4a	Fecal Coliform	50120	Unchanged

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

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

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 Hawkes Brook (MA93-32) 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 Hawkes Brook (MA93-32) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Hawkes Brook (MA93-32) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) and Fecal Coliform impairments are being carried forward.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Hawkes Brook (MA93-32) continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 1997 & 2007. MassDEP staff collected <i>E. coli</i> bacteria samples close to the downstream end of Hawkes Brook at W0436 [N of Hawkes Pond, Salem St, Lynnfield] in 1997 and 2007 (n=3-6/yr). Analysis of the historic multi-year limited frequency <i>E. coli</i> dataset from W0436 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (1997 and 2007, 100 & 100%), and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2007, n=3), cumulatively across years 100% of intervals had GMs >244 CFU/100ml. Historic <i>E. coli</i> data from W0436 are indicative of an <i>E. coli</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0436	MassDEP	Water Quality	Hawkes Brook	[north of Hawkes Pond, Salem Street, Lynnfield]	42.512448	-71.027299

Bacteria Data

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

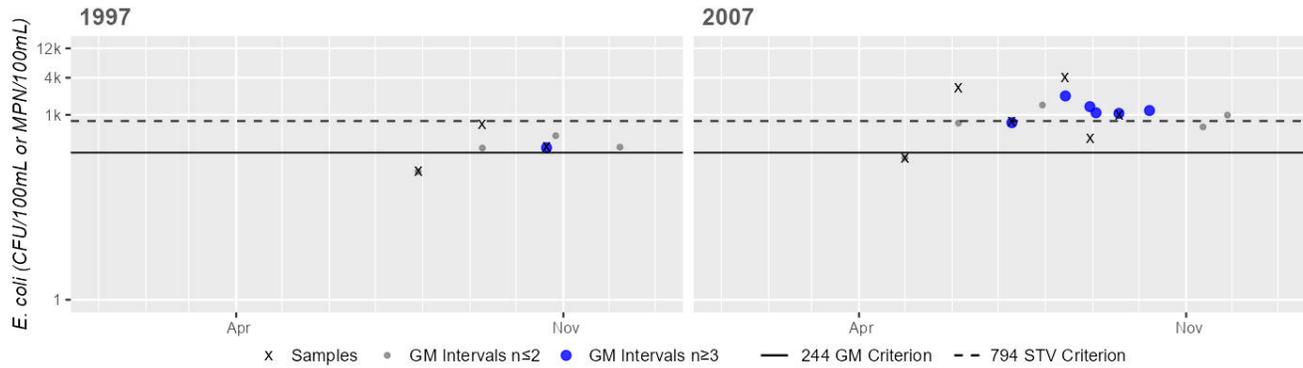
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0436	MassDEP	E. coli	07/29/97	10/21/97	3	120	700	293
W0436	MassDEP	E. coli	05/01/07	09/18/07	6	200	4000	936

Station MASSDEP_W0436 - Escherichia coli

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



Variable*	Result
Samples	3
SeasGM	293
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	936
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	3
%n>STV	50%

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

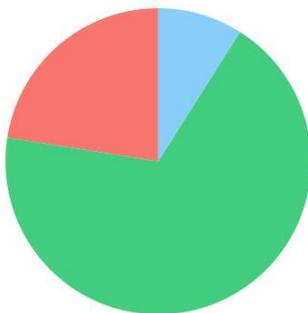
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
 %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
 "Recent 5 Years" may not be consecutive as the analysis excludes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

Hawkes Brook (MA93-33)

Location:	From outlet of Hawkes Pond, Saugus to mouth at confluence with Saugus River, Saugus.
AU Type:	RIVER
AU Size:	1.1 MILES
Classification/Qualifier:	B

Hawkes Brook (MA93-33)

Watershed Area: 3.95 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.95	3.95	2.10	2.10
Agriculture	0%	0%	0%	0%
Developed	22.5%	22.5%	15.1%	15.1%
Natural	68.5%	68.5%	72.8%	72.8%
Wetland	9%	9%	12.1%	12.1%
Impervious	15.5%	15.5%	9.9%	9.9%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Debris*)	--	Unchanged
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Escherichia Coli (E. Coli)	50120	Unchanged
5	5	Fecal Coliform	50120	Unchanged
5	5	Trash	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Debris*)	Illegal Dumps or Other Inappropriate Waste Disposal (Y)	--	--	X	X	X
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Trash	Illegal Dumps or Other Inappropriate Waste Disposal (Y)	--	--	X	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Hawkes Brook (MA93-33) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Hawkes Brook (MA93-33) continues to be assessed as Not Supporting, with the Trash and Debris impairments being carried forward. No new data are available to evaluate the Aesthetics Use for this Hawkes Brook AU.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for Hawkes Brook (MA93-33) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior *Escherichia coli* (*E. coli*) and Fecal Coliform impairments are being carried forward and the prior Debris and Trash 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 Hawkes Brook (MA93-33) continues to be assessed as Not Supporting. The prior Debris and Trash impairments (from the Aesthetics Use) are being carried forward. An *Escherichia coli* (*E. coli*) impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 1 station in 1997 & 2007. MassDEP staff collected *E. coli* bacteria samples a third of the way down Hawkes Brook at W0435 [S of Hawkes Pond, Spring St, Saugus] in 1997-1998 and 2007 (n=1-6/yr). Analysis of the historic multi-year limited frequency *E. coli* dataset from W0435 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (1997 and 2007, 100 & 83%), and while only 1 yr had ≥ 2 samples exceed the 794 CFU/100ml STV (2007, n=2), cumulatively across years 85% of intervals had GMs >244 CFU/100ml. Historic *E. coli* data from W0435 are indicative of an *E. coli* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0435	MassDEP	Water Quality	Hawkes Brook	[south of Hawkes Pond, Spring Street, Saugus]	42.495772	-71.019074

Bacteria Data

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

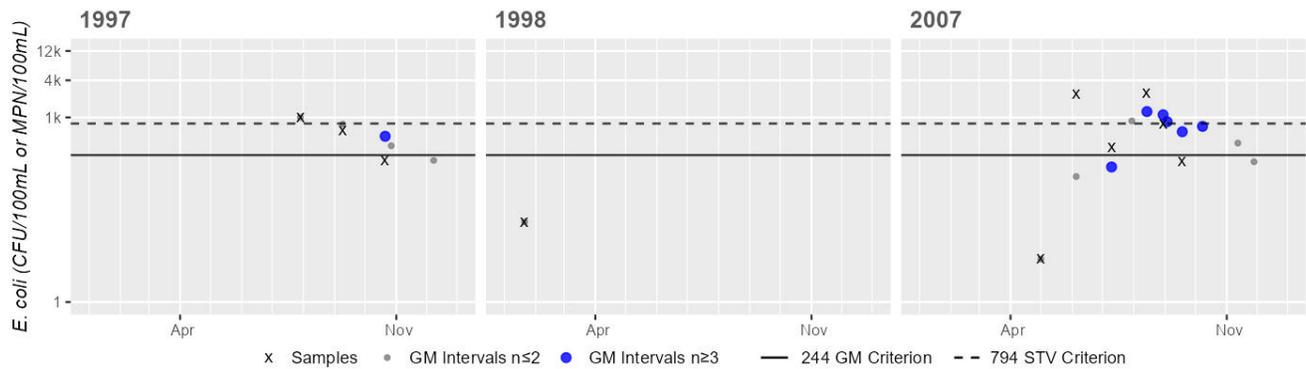
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0435	MassDEP	E. coli	07/29/97	10/21/97	3	200	1000	493
W0435	MassDEP	E. coli	01/21/98	01/21/98	1	20	20	19
W0435	MassDEP	E. coli	05/01/07	09/18/07	6	5	2500	334

Station MASSDEP_W0435 - Escherichia coli

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



Variable*	Result
Samples	3
SeasGM	493
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	33%

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

Variable*	Result
Samples	6
SeasGM	334
#GMI	6
#GMI Ex	5
%GMI Ex	83%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance
Historic (1997-2010)
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.

Hawkes Pond (MA93032)

Location:	Lynnfield/Saugus.
AU Type:	FRESHWATER LAKE
AU Size:	65 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Hawkes Pond (MA93032) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

Lake Quannapowitt (MA93060)

Location:	Wakefield.
AU Type:	FRESHWATER LAKE
AU Size:	246 ACRES
Classification/Qualifier:	A: PWS, ORW (Tributary)

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Curly-leaf Pondweed*)	--	Unchanged
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	DDT in Fish Tissue	--	Unchanged
5	5	Harmful Algal Blooms	--	Unchanged
5	5	PFAS in Fish Tissue	--	Added
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Curly-leaf Pondweed*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
DDT in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Harmful Algal Blooms	Source Unknown (N)	X	--	X	X	X
PFAS in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Turbidity	Source Unknown (N)	X	--	X	X	X

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 Lake Quannapowitt (MA93060) continues to be assessed as Not Supporting. The prior DDT in Fish Tissue impairment is being carried forward and a new impairment is being added for PFAS in Fish Tissue. Fish toxics sampling was conducted in Lake Quannapowitt at station F0061 (PFAS Study ID 19) on 10/03/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. MDPH issued a site-specific advisory for PFAS in Lake Quannapowitt (referred to by MDPH as "Quannapowitt, Lake") in their May 2024 Freshwater Fish Consumption Advisory List and retained both this advisory as well as the existing DDT advisory in the January 2025 list. The public should refer to the most recent DPH 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.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
F0061	MassDEP	Fish Toxics	Lake Quannapowitt	[Wakefield (impounded by Lake Quannapowitt Dam, NAT ID: MA01145)]	42.517776	-71.079729

Fish Tissue Data

Summary of Fish Tissue Data and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP 2023) (MassDEP Undated 6)

Summary
<p>Fish toxics sampling was conducted in Lake Quannapowitt (MA93060) at station F0061 (PFAS Study ID 19) on 10/03/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. Because of elevated PFAS measured in fish filets, MDPH issued site-specific fish consumption advisories for Lake Quannapowitt (referred to by MDPH as Quannapowitt, Lake) in their May 2024 Freshwater Fish Consumption Advisory List and retained them in the January 2025 list. Additionally, MDPH retained the existing site-specific fish consumption advisories for DDT associated with Lake Quannapowitt (referred to by MDPH as Quannapowitt, Lake) in their January 2025 Freshwater Fish Consumption Advisory List. The site-specific DPH advisories are indicative of Fish Consumption Use impairments for PFAS in Fish Tissue and DDT in Fish Tissue for Lake Quannapowitt (MA93060).</p>

MassDEP 2022 PFAS in Fish Tissue Data for Massachusetts Surface Waters (MassDEP 2023) (MassDEP Undated 6) (MA DPH 2023c)

[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 MDPH's 2023 Technical Support Document for the evaluation of PFAS in recreational waterbodies.]

[Species List: WP = white perch, 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
F0061	19	10/03/2022	WP	ND	ND	ND	2.80	
F0061	19	10/03/2022	YP	ND	0.21	ND	15.00	PFNA

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Lake Quannapowitt (MA93060) continues to be assessed as Not Supporting with the Harmful Algal Blooms and Turbidity impairments being carried forward. No new data are available to evaluate the Aesthetics Use for this Lake Quannapowitt AU.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Lake Quannapowitt (MA93060) continues to be assessed as Not Supporting. The prior Harmful Algal Blooms and Turbidity impairments (from the Aesthetics Use) are being carried forward. Surface water sampling was conducted in Lake Quannapowitt at station W3281 (PFAS Study ID 19) on 10/03/2022 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.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W3281	MassDEP	Water Quality	Lake Quannapowitt	[the default location representing co-located water/fish PFAS sampling, Wakefield]	42.517776	-71.079729

Other Indicators

Summary Statement(s) for MassDEP 2022 PFAS in Water Column Data (MassDEP 2023) (MassDEP Undated 4)

Summary

Surface water sampling was conducted in Lake Quannapowitt (MA93060) at station W3281 (PFAS Study ID 19) on 10/03/2022 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 4)

[HFPO-DA is also known as GenX; the Σ PFAS6 equals the sum of PFOA, PFOS, PFNA, PFHxS, PFDA, PFHpA (not all shown individually here); * indicates the Σ 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	Σ PFAS6 ng/L
W3281	19	10/03/2022	6.8	5	1.6j	0.93j	5.1j	3.7	<2	18.7*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for Lake Quannapowitt (MA93060) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. The prior Harmful Algal Blooms and Turbidity impairments (from the Aesthetics Use) are being carried forward.

Lily Pond (MA93039)

Location:	Gloucester.
AU Type:	FRESHWATER LAKE
AU Size:	24 ACRES
Classification/Qualifier:	B

No usable data were available for Lily Pond (MA93039) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Algae	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Turbidity	--	Unchanged

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

Little River (MA93-66)

Location:	Headwaters outlet Lily Pond, Gloucester to salt water portion north at Route 133, Gloucester.
AU Type:	RIVER
AU Size:	0.5 MILES
Classification/Qualifier:	B

No usable data were available for Little River (MA93-66) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Little River (MA93-67)

Location:	From salt water portion north at Route 133, Gloucester to mouth at confluence with Annisquam River, Gloucester.
AU Type:	ESTUARY
AU Size:	0.19 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	5	Fecal Coliform	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
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 Little River (MA93-67) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Little River (MA93-67): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1811 sq mi (97%). 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. As a result of the growing area classifications, a Fecal Coliform impairment is being added.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N9.10	Little River South	Conditionally Approved	0.07481	39.9%
N9.11	Little River North	Conditionally Approved	0.06733	35.9%
N9.18	Little River Buffer Zones	Prohibited	0.01909	10.2%
N9.25	Heron Way Marina	Prohibited	0.00741	3.9%
N9.7	Annisquam River	Conditionally Approved	0.01248	6.6%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Little River (MA93-67) 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 Little River (MA93-67) so it is assessed as having Insufficient Information. The shellfish growing areas (0.1811 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 Little River based on shellfish classification data.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Little River (MA93-67): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1811 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
Insufficient Information	NO

2024/26 Use Attainment Summary
No bacteria data are available to assess the Secondary Contact Recreation Use for the Little River (MA93-67) so it is assessed as having Insufficient Information. The shellfish growing areas (0.1811 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 Little River based on shellfish classification data.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Little River (MA93-67): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1811 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.

Lower Pond (MA93044)

Location:	Saugus.
AU Type:	FRESHWATER LAKE
AU Size:	21 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	5	PFAS in Fish Tissue	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
PFAS in Fish Tissue	Source Unknown (N)	--	X	--	--	--

Recommendations

2024/26 Recommendations
2024IR [Bacteria, Low] Additional sampling and testing for bacteria should be conducted in Lower Pond (MA93044) to determine if this AU should be impaired for Enterococcus bacteria. Pearce Lake @ Breakheart (DCR) [Beach ID: 4850] beach in Saugus (located at the North-east corner of the pond) was posted for >10% of the swimming season in 2020 (14%). 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 Lower Pond (MA93044) is assessed as Not Supporting with a new impairment being added for PFAS in Fish Tissue. Fish toxics sampling was conducted at Lower Pond in Saugus as part of a June 2022 MDPH study assessing 40 PFAS analytes in fish tissue samples collected from lakes and ponds in state parks. DPH issued a site-specific advisory for PFAS in Lower Pond (referred to by MDPH as "Pearce Lake (Lower Pond)") in their February 2023 Freshwater Fish Consumption Advisory List and retained it in the January 2025 list. The public should refer to the most recent DPH 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.

Fish Consumption Advisories**Summary of Fish Toxics Sampling and Resulting Fish Consumption Advisories (MA DPH 2025) (MA DPH 2023b)****Summary Statement**

Fish toxics sampling was conducted at Lower Pond (MA93044) in Saugus as part of a June 2022 MDPH study assessing 40 PFAS analytes in fish tissue samples collected from lakes and ponds in state parks. Because of elevated PFAS measured in fish filets, MDPH issued site-specific fish consumption advisories for Lower Pond (referred to by MDPH as Pearce Lake (Lower Pond)) in their February 2023 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 Lower Pond (MA93044).

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary

No data are available, so the Aesthetics Use for Lower Pond (MA93044) 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 Lower Pond (MA93044) continues to be assessed as Fully Supporting. An Alert for Enterococcus is being identified based on DPH Beach Closure data. Surface water sampling was conducted at Pearce Lake Beach on Lower Pond (MA93044, called Pearce Lake by MDPH) in Saugus as part of a May 2022 MDPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.20 ng/L PFOA and PFOS). Lower Pond has a beach with DPH Beach Closure data: Pearce Lake @ Breakheart (DCR) [Beach ID: 4850] beach in Saugus. The beach was rarely, if at all, posted for swimming from 2018-2022, however an Alert for Enterococcus is being identified since Pearce Lake @ Breakheart (DCR) was posted for >10% of the swimming season in 2020 (14%).

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
4850	Pearce Lake @ Breakheart (DCR)/ Saugus	42.49263, -71.03610	42.49159, -71.03520	2%	1%	0%	0%	0%	10%	14%	9%	0%	1

Other Indicators

Summary of MDPH 2021 and 2022 PFAS in Water Column Data

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

Surface water sampling was conducted at Pearce Lake Beach on Lower Pond (MA93044, called Pearce Lake by MDPH) in Saugus as part of a May 2022 MDPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.20 ng/L PFOA and PFOS).

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Lower Pond (MA93044) continues to be assessed as Fully Supporting. Lower Pond has a beach with DPH Beach Closure data: Pearce Lake @ Breakheart (DCR) [Beach ID: 4850] beach in Saugus. The beach was rarely, if at all, posted for swimming from 2018-2022.

Lynn Harbor (MA93-52)

Location:	The "inner" portion of Lynn Harbor; the waters landward of an imaginary line drawn from Black Rock Point, Nahant to the eastern edge of Point of Pines, Revere excluding the Saugus River (formerly part of 2006 segment: Lynn Harbor MA93-23).
AU Type:	ESTUARY
AU Size:	1.62 SQUARE MILES
Classification/Qualifier:	SB: SFR, CSO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Enterococcus	50122	Unchanged
4a	4a	Fecal Coliform	50122	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Combined Sewer Overflows (Y)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Fecal Coliform	Combined Sewer Overflows (Y)	--	--	X	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	X	--	--	--
Fecal Coliform	Sanitary Sewer Overflows (Collection System Failures) (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 Lynn Harbor (MA93-52) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Lynn Harbor (MA93-52): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.6009 sq mi (99%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.017 sq mi (1%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N26.0	Lynn Harbor/Broad Sound	Prohibited	1.58390	97.9%
N26.7	Point of Pines	Conditionally Restricted	0.01696	1.0%

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 Lynn Harbor (MA93-52), so it is Not Assessed. The Alert previously identified due to CSO presence is being removed from the Aesthetics Use (due to redundant duplication across multiple Uses), since the Primary and Secondary Contact Recreation uses for Lynn Harbor will continue to be impaired for *Enterococcus* based on a presumptive impairment due to the presence of active CSO outfalls.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
 The Primary Contact Recreation Use for Lynn Harbor (MA93-52) continues to be assessed as Not Supporting. The prior *Enterococcus* impairment is being carried forward based on a presumptive impairment due to the presence of active CSO outfalls. Lynn Harbor has a beach with DPH Beach Closure data: Black Rock [Beach ID: 2992] beach in Nahant. The beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (1.6009 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 Lynn Harbor.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2992	Black Rock/ Nahant	42.43373, -70.93600	42.43003, -70.93480	7%	9%	0%	1%	4%	0%	2%	0%	0%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
 Lynn Harbor (MA93-52): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.6009 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Lynn Harbor (MA93-52) continues to be assessed as Not Supporting. The prior <i>Enterococcus</i> impairment is being carried forward based on a presumptive impairment due to the presence of active CSO outfalls. Lynn Harbor has a beach with DPH Beach Closure data: Black Rock [Beach ID: 2992] beach in Nahant. The beach was rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (1.6009 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 Lynn Harbor.</p>

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
<p>Lynn Harbor (MA93-52): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 1.6009 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.</p>

Lynn Harbor (MA93-53)

Location:	The "outer" portion of Lynn Harbor into Broad Sound; the waters landward of an imaginary line drawn from Baileys Hill, Nahant to the eastern point of Winthrop Highlands, Winthrop to the seaward edge of the "inner" portion of Lynn Harbor (at an imaginary line drawn from Black Rock Point, Nahant to the eastern edge of Point of Pines, Revere) (formerly part of 2006 segment: Lynn Harbor MA93-23).
AU Type:	ESTUARY
AU Size:	6.57 SQUARE MILES
Classification/Qualifier:	SB: SFR, CSO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Enterococcus	50122	Added
4a	4a	Fecal Coliform	50122	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Combined Sewer Overflows (N)	--	--	--	--	X	X
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Fecal Coliform	Combined Sewer Overflows (N)	--	--	X	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Sanitary Sewer Overflows (Collection System Failures) (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 Lynn Harbor (MA93-53) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Lynn Harbor (MA93-53): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 6.4591 sq mi (98%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.1754 sq mi (3%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N25.0	Nahant Harbor	Prohibited	0.00000	0.0%
N26.0	Lynn Harbor/Broad Sound	Prohibited	6.11756	93.1%

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N26.2		Prohibited	0.16609	2.5%
N26.7	Point of Pines	Conditionally Restricted	0.17541	2.7%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Lynn Harbor (MA93-53) 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 Lynn Harbor (MA93-53) is assessed as Not Supporting. An <i>Enterococcus</i> impairment is being added due to DPH Beach Closures data not meeting the threshold at Halford [Beach ID: 3216] and the presence of CSOs. Surface water sampling was conducted at Revere Beach on Lynn Harbor in Revere as part of a May 2022 MDPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.05 ng/L PFOA). Lynn Harbor has 3 beaches with DPH Beach Closure data: Short (DCR) [Beach ID: 3102] and Revere (DCR) [Beach ID: 3101] beaches in Revere and Halford [Beach ID: 3216] beach in Winthrop. Beaches were posted for >10% of the swimming season at Halford in 2021 (11%) and 2022 (18%) indicating an <i>Enterococcus</i> impairment (it should also be noted that 17% of the bathing season was posted at Short beach in 2017). The shellfish growing areas (6.459 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 Lynn Harbor. Additionally, there is a presumptive <i>Enterococcus</i> impairment decision in place due to the presence of active CSO outfalls.</p>

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
3101	Revere (DCR)/ Revere	42.43592, -70.96870	42.40227, -70.98830	0%	0%	0%	0%	0%	1%	0%	0%	0%	0
3102	Short (DCR)/ Revere	42.39394, -70.98180	42.39045, -70.97980	0%	3%	0%	17%	0%	0%	0%	2%	0%	1
3216	Halford/ Winthrop	42.38945, -70.97600	42.38943, -70.97560	0%	0%	0%	0%	3%	0%	0%	11%	18%	2

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Lynn Harbor (MA93-53): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 6.4591 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.

Other Indicators

Summary of MDPH 2021 and 2022 PFAS in Water Column Data

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

Surface water sampling was conducted at Revere Beach on Lynn Harbor (MA93-53) in Revere as part of a May 2022 MDPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.05 ng/L PFOA).

Secondary Contact Recreation

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

The Secondary Contact Recreation Use for Lynn Harbor (MA93-53) is assessed as Not Supporting. An *Enterococcus* impairment is being added due to the presence of CSOs. Lynn Harbor has 3 beaches with DPH Beach Closure data: Short (DCR) [Beach ID: 3102] and Revere (DCR) [Beach ID: 3101] beaches in Revere and Halford [Beach ID: 3216] beach in Winthrop. Available DPH Beach Closure data cannot be used to positively assess the Secondary Contact Recreation Use since beaches were posted for >10% of the swimming season: Halford in 2021 and 2022. The shellfish growing areas (6.459 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 Lynn Harbor based on shellfish classification data. There is a presumptive *Enterococcus* impairment decision in place due to the presence of active CSO outfalls.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Lynn Harbor (MA93-53): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 6.4591 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.

Manchester Harbor (MA93-19)

Location:	The waters landward of an imaginary line drawn between Gales Point, Manchester and Chubb Point, Manchester excluding Cat Brook.
AU Type:	ESTUARY
AU Size:	0.33 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Enterococcus	50122	Unchanged
4a	4a	Fecal Coliform	50122	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (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 Manchester Harbor (MA93-19) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

Manchester Harbor (MA93-19): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3264 sq mi (98%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.3264 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N15.0		Prohibited	0.00320	1.0%
N15.1		Prohibited	0.32317	97.3%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary

No data are available, so the Aesthetics Use for Manchester Harbor (MA93-19) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Manchester Harbor (MA93-19) continues to be assessed as Not Supporting. The prior *Enterococcus* impairment is being carried forward based on DPH Beach Closures data not meeting the threshold at West Manchester [Beach ID: 2933] and bacteria data not meeting the threshold at 2 stations in 2014. Manchester Harbor has 2 beaches with DPH Beach Closure data: West Manchester [Beach ID: 2933] and Tuck's Point [Beach ID: 2935] beaches in Manchester. Beaches were posted for >10% of the swimming season at West Manchester in 2021 (13%) and 2022 (18%) indicating an *Enterococcus* impairment (it should also be noted that Tucks Point beach was posted for 23% of the season in 2021). The shellfish growing areas (0.3264 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 Manchester Harbor. Salem Sound Coastwatch (SSCW) staff/volunteers collected *Enterococcus* bacteria samples in Manchester Harbor in 2014 at 2 stations. Samples were collected from the following stations/sample years: the upstream end of the AU at SSCW_169 [Manchester Inner Harbor Off boat ramp] from Jun-Aug 2014 (n=6) and roughly a third of the way downstream on the west bank at SSCW_168 [Inlet into Tuck's Point, Manchester-by-the-sea] from Jun-Aug 2014 (n=4). Analysis of the single year limited frequency *Enterococcus* dataset from SSCW_169 indicated 100% of intervals had GMs >35 CFU/100ml, 4 samples exceeded the 130 CFU/100ml STV, and the seasonal GM was 156 CFU/100ml. Analysis of the single year limited frequency *Enterococcus* dataset from SSCW_168 indicated 100% of intervals had GMs >35 CFU/100ml, 3 samples exceeded the 130 CFU/100ml STV, and the seasonal GM was 124 CFU/100ml. *Enterococcus* data from SSCW_168 and SSCW_169 are indicative of an *Enterococcus* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_168	Salem Sound Coastwatch	Water Quality	Tuck's Point, Wetland Estuarine-Emergent	Inlet into Tuck's Point, Manchester-by-the-sea	42.568370	-70.778461
SSCW_169	Salem Sound Coastwatch	Water Quality	Manchester Inner Harbor, Estuary	Manchester Inner Harbor - Off boat ramp	42.574560	-70.772883

Bacteria Data

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

(MassDEP Undated 2)

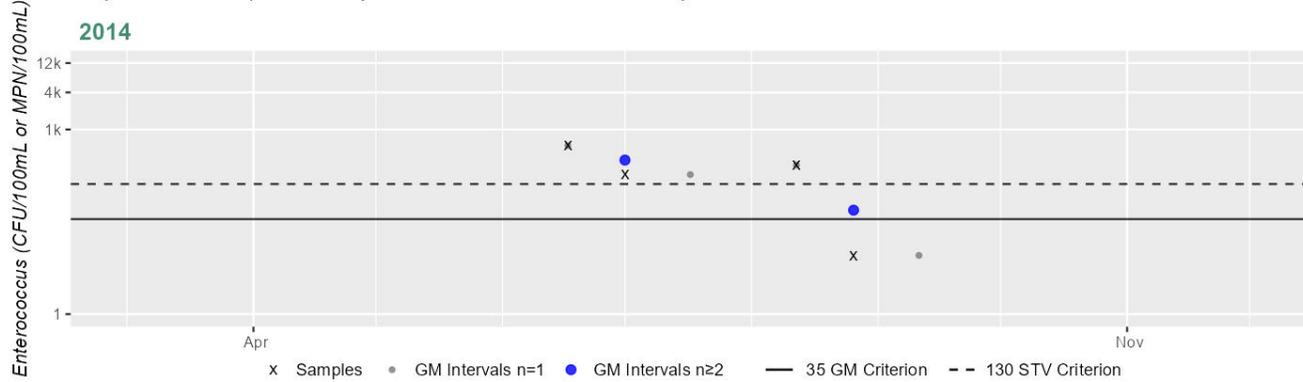
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_168	Salem Sound Coastwatch	Enterococcus	06/17/14	08/26/14	4	9	548	124

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_169	Salem Sound Coastwatch	Enterococcus	06/17/14	08/26/14	6	10	703	156

Station SSCW_168 - Enterococcus

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



Variable*	Result
Samples	4
SeasGM	124
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	3
%n>STV	75%

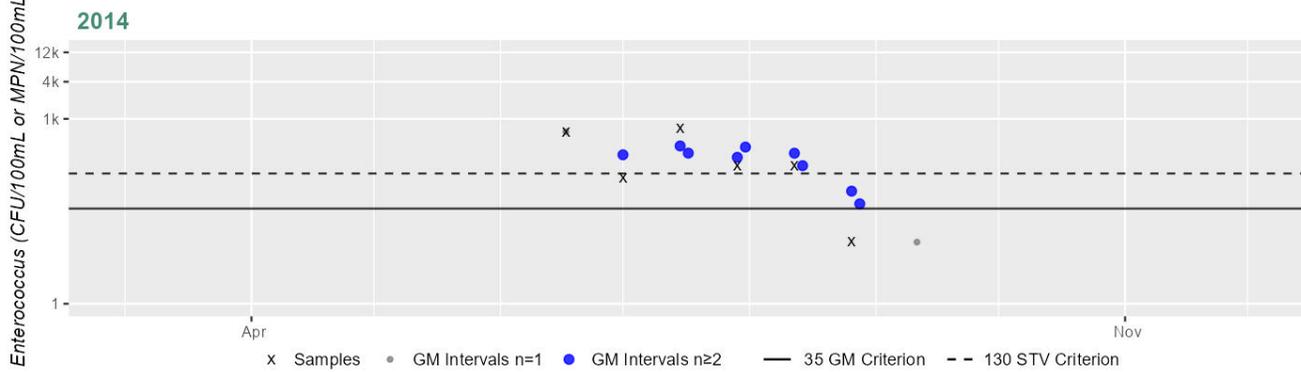
Cumulative %GMI Exceedance

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 SSCW_169 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	156
#GMI	9
#GMI Ex	9
%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.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2933	West Manchester/ Manchester	42.56481, - 70.78690	42.56543, - 70.78610	7%	2%	2%	0%	0%	9%	0%	13%	18%	2
2935	Tuck's Point/ Manchester	42.56699, - 70.77880	42.56718, - 70.77830	0%	0%	0%	0%	0%	2%	0%	23%	0%	1

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Manchester Harbor (MA93-19): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3264 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
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Manchester Harbor (MA93-19) is assessed as Not Supporting. An <i>Enterococcus</i> impairment is being added based on bacteria data not meeting the threshold at 2 stations in 2014. Manchester Harbor has 2 beaches with DPH Beach Closure data: West Manchester [Beach ID: 2933] and Tuck’s Point [Beach ID: 2935] beaches in Manchester. Available DPH Beach Closure data cannot be used to positively assess the Secondary Contact Recreation Use since beaches were posted for >10% of the swimming season: West Manchester in 2021 and 2022. The shellfish growing areas (0.3264 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 Manchester Harbor. Salem Sound Coastwatch (SSCW) staff/volunteers collected <i>Enterococcus</i> bacteria samples in Manchester Harbor in 2014 at 2 stations. Samples were collected from the following stations/sample years: the upstream end of the AU at SSCW_169 [Manchester Inner Harbor Off boat ramp] from Jun-Aug 2014 (n=6) and roughly a third of the way downstream on the west bank at SSCW_168 [Inlet into Tuck’s Point, Manchester-by-the-sea] from Jun-Aug 2014 (n=4). Analysis of the single year limited frequency <i>Enterococcus</i> dataset from SSCW_169 indicated 85% of intervals had GMs >68 CFU/100ml, 2 samples exceeded the 252 CFU/100ml STV, and the overall GM was 156 CFU/100ml. Analysis of the single year limited frequency <i>Enterococcus</i> dataset from SSCW_168 indicated 100% of intervals had GMs >68 CFU/100ml, 2 samples exceeded the 252 CFU/100ml STV, and the overall GM was 124 CFU/100ml. <i>Enterococcus</i> data from both stations are indicative of an <i>Enterococcus</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_168	Salem Sound Coastwatch	Water Quality	Tuck’s Point, Wetland Estuarine-Emergent	Inlet into Tuck’s Point, Manchester-by-the-sea	42.568370	-70.778461
SSCW_169	Salem Sound Coastwatch	Water Quality	Manchester Inner Harbor, Estuary	Manchester Inner Harbor - Off boat ramp	42.574560	-70.772883

Bacteria Data

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

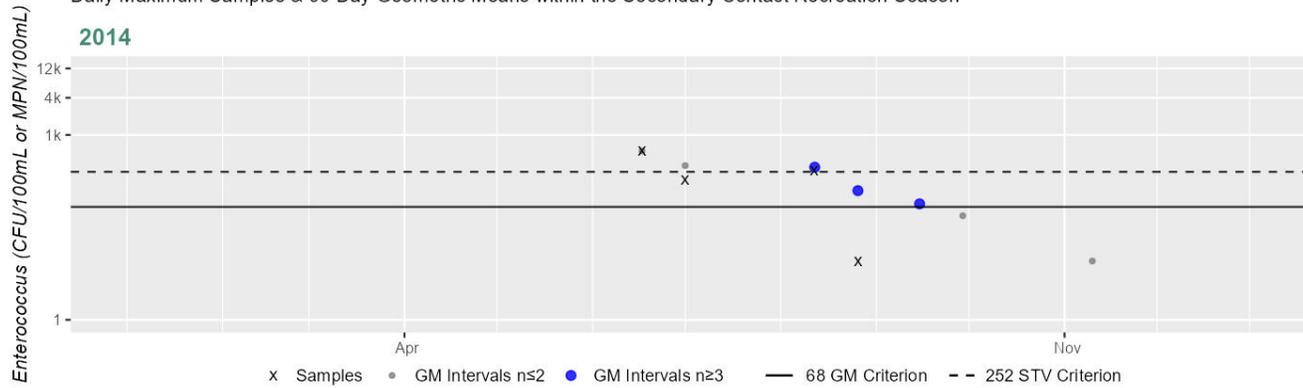
(MassDEP Undated 1)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_168	Salem Sound Coastwatch	Enterococci	06/17/14	08/26/14	4	9	548	124
SSCW_169	Salem Sound Coastwatch	Enterococci	06/17/14	08/26/14	6	10	703	156

Station SSCW_168 - Enterococcus

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



Variable*	Result
Samples	4
SeasGM	124
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	2
%n>STV	50%

Cumulative %GMI Exceedance

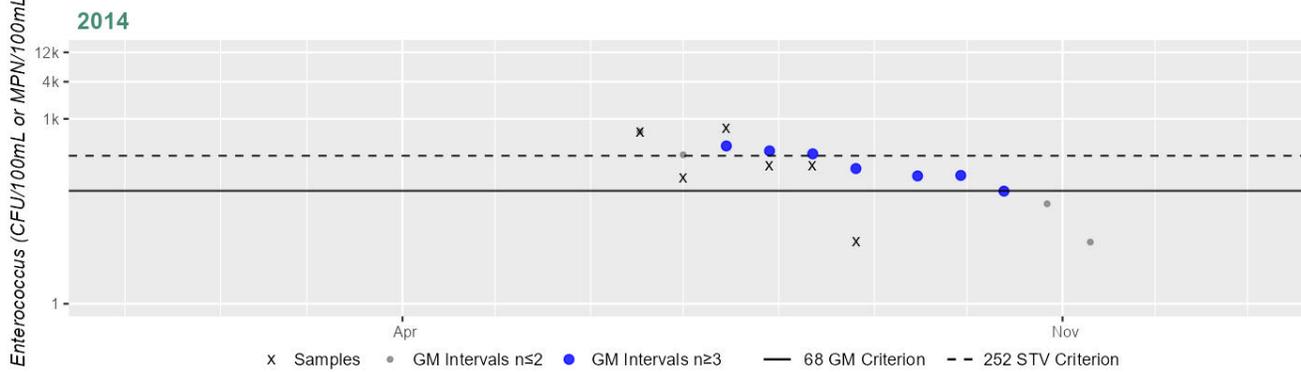
Current (2011-2022)

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.

Station SSCW_169 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	156
#GMI	7
#GMI Ex	6
%GMI Ex	85%
n>STV	2
%n>STV	33%

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.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Manchester Harbor (MA93-19): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3264 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.

Marblehead Harbor (MA93-22)

Location:	The waters landward of an imaginary line drawn northwesterly from the northern tip of Marblehead Neck, Marblehead to Fort Sewall, Marblehead.
AU Type:	ESTUARY
AU Size:	0.57 SQUARE MILES
Classification/Qualifier:	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	50121	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	--	--	--

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 Marblehead Harbor (MA93-22) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Marblehead Harbor (MA93-22): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5609 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.5609 sq mi (99%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N20.0	Marblehead Harbor	Prohibited	0.56087	99.2%
N21.0	Marblehead Outer Coastal	Prohibited	0.00006	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 Marblehead Harbor (MA93-22) 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 Marblehead Harbor (MA93-22) continues to be assessed as Fully Supporting. Marblehead Harbor has a beach with DPH Beach Closure data: Crocker Park [Beach ID: 2942] beach in Marblehead. The beach was never posted for swimming from 2018-2022. The shellfish growing areas (0.5609 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 Marblehead Harbor.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2942	Crocker Park/ Marblehead	42.50268, -70.84840	42.50269, -70.84840	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 5)

Summary
Marblehead Harbor (MA93-22): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5609 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Marblehead Harbor (MA93-22) continues to be assessed as Fully Supporting. Marblehead Harbor has a beach with DPH Beach Closure data: Crocker Park [Beach ID: 2942] beach in Marblehead. The beach was never posted for swimming from 2018-2022. The shellfish growing areas (0.5609 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 Marblehead Harbor.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Marblehead Harbor (MA93-22): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5609 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Mill Pond (MA93049)

Location:	west of Sylvan Street, Danvers.
AU Type:	FRESHWATER LAKE
AU Size:	5 ACRES
Classification/Qualifier:	B

No usable data were available for Mill Pond (MA93049) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Mill Pond (MA93-60)

Location:	East of Route 127, Gloucester (formerly reported as 2014 lake segment: Mill Pond MA93050).
AU Type:	ESTUARY
AU Size:	0.03 SQUARE MILES
Classification/Qualifier:	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 Mill Pond (MA93-60) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
Mill Pond (MA93-60): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0252 sq mi (91%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0252 sq mi (91%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N9.31	Mill Pond	Prohibited	0.02521	91.4%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Mill Pond (MA93-60) 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 Mill Pond (MA93-60) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0252 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 Mill Pond.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Mill Pond (MA93-60): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0252 sq mi (91%). 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 Mill Pond (MA93-60) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0252 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 Mill Pond.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

Mill Pond (MA93-60): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0252 sq mi (91%). 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.

Mill River (MA93-28)

Location:	Headwaters, outlet Mill Pond, Gloucester to mouth at confluence with Annisquam River, Gloucester.
AU Type:	ESTUARY
AU Size:	0.1 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
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 Mill River (MA93-28) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Mill River (MA93-28): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0954 sq mi (98%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N9.20	Wheelers Point	Conditionally Approved	0.00107	1.1%
N9.3	Mill River	Conditionally Approved	0.08505	87.4%
N9.32	Willow Rest Cove	Conditionally Approved	0.00151	1.6%
N9.7	Annisquam River	Conditionally Approved	0.00775	8.0%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Mill River (MA93-28) 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 Mill River (MA93-28) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0954 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 Mill River.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Mill River (MA93-28): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0954 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 the Mill River (MA93-28) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0954 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 Mill River. MassDEP staff collected <i>Enterococcus</i> bacteria samples at the upstream end of Mill River at W0891 [downstream at Rt. 127 (Washington St), Gloucester] from May-Sep 2002 (n=5). Analysis of the historic single year limited frequency <i>Enterococcus</i> dataset from W0891 indicated 0% of intervals had GMs >68 CFU/100ml, no samples exceeded the 252 CFU/100ml STV, and the overall GM was 12 CFU/100ml. Historic <i>Enterococcus</i> data from W0891 meet 2024 CALM guidance. 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
W0891	MassDEP	Water Quality	Mill River	[downstream at Route 127 (Washington Street), Gloucester]	42.632917	-70.677433

Bacteria Data

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

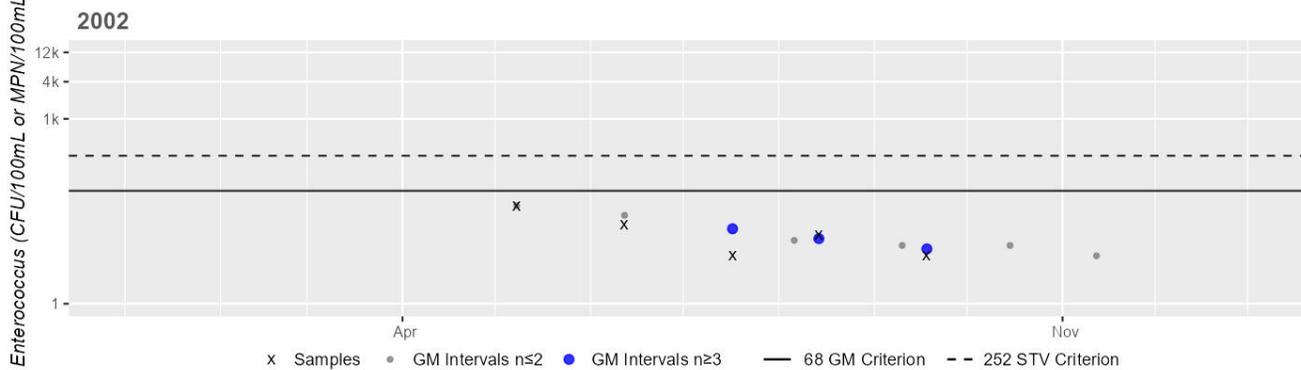
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0891	MassDEP	Enterococci	05/08/02	09/18/02	5	6	39	12

Station MASSDEP_W0891 - Enterococcus

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



Variable*	Result
Samples	5
SeasGM	12
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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 5)

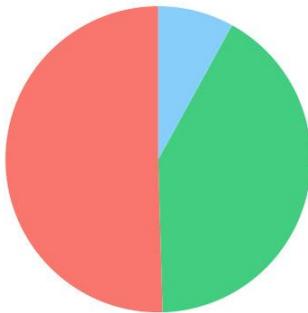
Summary
Mill River (MA93-28): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0954 sq mi (98%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Mill River (MA93-31)

Location:	Headwaters in wetlands north of Salem Street, Wakefield to mouth at confluence with Saugus River, Wakefield.
AU Type:	RIVER
AU Size:	2 MILES
Classification/Qualifier:	B

Mill River (MA93-31)

Watershed Area: 3.52 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.52	3.52	0.85	0.85
Agriculture	0%	0%	0%	0%
Developed	50.5%	50.5%	34.5%	34.5%
Natural	41.5%	41.5%	47.5%	47.5%
Wetland	8%	8%	17.9%	17.9%
Impervious	34.8%	34.8%	24.1%	24.1%

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)	50120	Unchanged
5	5	Fecal Coliform	50120	Unchanged
5	5	Turbidity	--	Unchanged

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Municipal (Urbanized High Density Area) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Fecal Coliform	Municipal (Urbanized High Density Area) (N)	--	--	--	X	X
Fecal Coliform	Source Unknown (N)	--	--	--	X	X
Turbidity	Municipal (Urbanized High Density Area) (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 Mill River (MA93-31) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Mill River (MA93-31) continues to be assessed as Not Supporting, with the Turbidity impairment being carried forward. No new data are available to evaluate the Aesthetics Use for this Mill River AU. The prior Alert for Turbidity is being removed in light of the impairment for the same Cause on Mill 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 Mill River (MA93-31) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) and Fecal Coliform impairments are being carried forward and the prior Turbidity impairment (from the Aesthetics Use) is being carried forward.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for the Mill River (MA93-31) continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2007. The prior Fecal Coliform impairment is being carried forward and the prior Turbidity impairment (from the Aesthetics Use) is being carried forward. MassDEP staff collected <i>E. coli</i> bacteria samples in the Mill River from 1997-2007 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: a third of the way down the AU at W0438 [upstream/N at Water St/Rt. 129, Wakefield] in Sep 1997 (n=1), two-thirds of the way down at W0437 [Farm St (S off of Rt. 129), Wakefield] from 1997-1998 and 2007 (n=1-6/yr), and the downstream end at W0441 [just upstream of confluence with Saugus River, S of Rt. 129 near Wakefield/Saugus border, Wakefield] from Jul-Sep 1997 (n=2). Analysis of the historic single year limited frequency <i>E. coli</i> dataset from W0437 indicated 100% of intervals had GMs >244 CFU/100ml, 3 samples exceeded the 794 CFU/100ml STV, and the overall GM was 970 CFU/100ml. Historic <i>E. coli</i> data from W0438 and W0441 are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use. However, historic <i>E. coli</i> data from W0437 are indicative of an <i>E. coli</i> impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0437	MassDEP	Water Quality	Mill River	[Farm Street (south off of Route 129), Wakefield]	42.499637	-71.050971
W0438	MassDEP	Water Quality	Mill River	[upstream/north at Water Street/Route 129, Wakefield]	42.503328	-71.061751

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0441	MassDEP	Water Quality	Mill River	[just upstream of confluence with Saugus River, south of Route 129 near Wakefield/Saugus border, Wakefield.]	42.498015	-71.042381

Bacteria Data

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

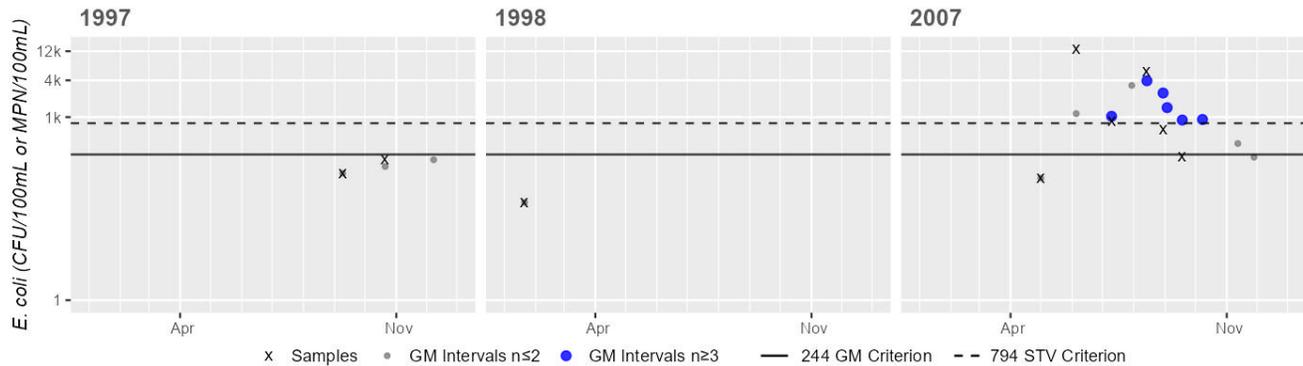
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0437	MassDEP	E. coli	09/09/97	10/21/97	2	120	200	154
W0437	MassDEP	E. coli	01/21/98	01/21/98	1	40	40	40
W0437	MassDEP	E. coli	05/01/07	09/18/07	6	100	13000	970
W0438	MassDEP	E. coli	09/09/97	09/09/97	1	40	40	40
W0441	MassDEP	E. coli	07/29/97	09/09/97	2	20	60	34

Station MASSDEP_W0437 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	154
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	1
SeasGM	40
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

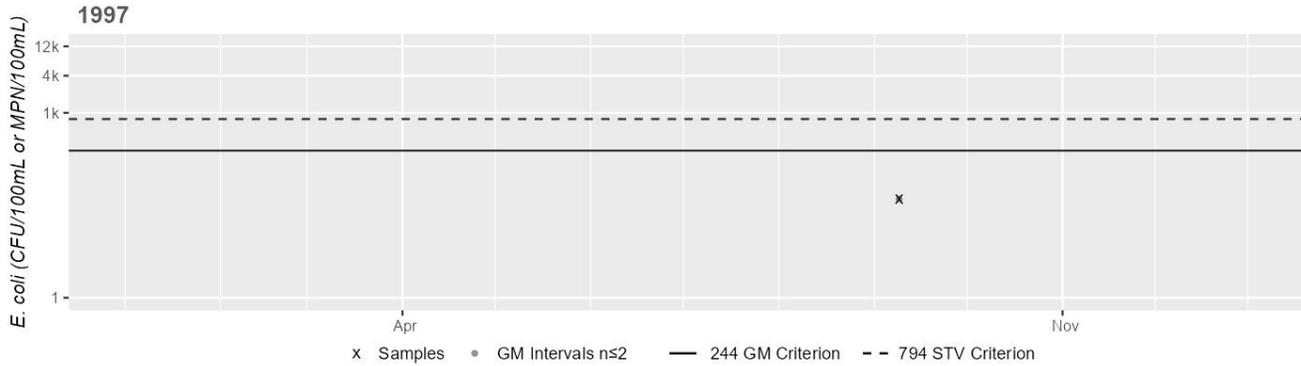
Variable*	Result
Samples	6
SeasGM	970
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	3
%n>STV	50%

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_W0438 - Escherichia coli

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



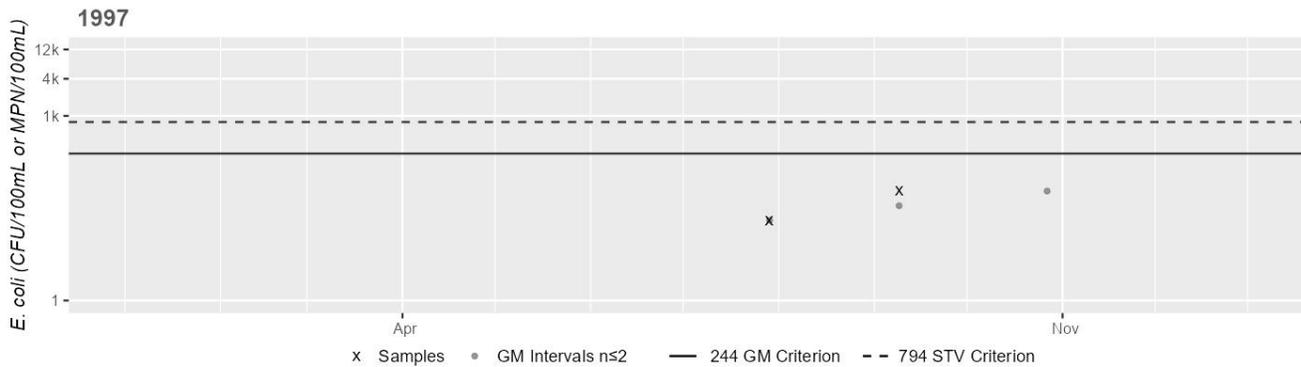
Variable*	Result
Samples	1
SeasGM	40
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W0441 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	34
#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.

Nahant Bay (MA93-24)

Location:	The waters landward of an imaginary line drawn between Galloupes Point, Swampscott and East Point, Nahant.
AU Type:	ESTUARY
AU Size:	5.12 SQUARE MILES
Classification/Qualifier:	SA: SFO, CSO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Enterococcus	50121	Unchanged
4a	4a	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Combined Sewer Overflows (Y)	--	--	--	--	X	X
Fecal Coliform	Combined Sewer Overflows (Y)	--	--	X	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Pumpout Releases (N)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Sanitary On-vessel Discharges (N)	--	--	X	--	--	--
Fecal Coliform	Unpermitted Discharge (Domestic Wastes) (Y)	--	--	X	--	--	--

Recommendations

2024/26 Recommendations
2002 IR [ALGAE, LOW] The prior Alert due to nuisance growth/blooms of <i>Pilayella littoralis</i> is being carried forward and additional monitoring is recommended. Historically it was noted that Nahant Bay experienced a locally abundant but globally very rare mutant algal species, <i>Pilayella littoralis</i> , which may at times cover large portions of beaches in the Bay with a thick brown mat. Historically the alga affected the entire bay and shoreline from Nahant all the way up to Swampscott (MassDEP 2007) and decomposition of the algae that washed up on the beach resulted in objectionable odors. Much money was spent on removing the algae (through regular beach cleanups) to improve aesthetics. Additional monitoring is recommended to determine if these algal growths are impairing the Aesthetics Use. 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 Nahant Bay (MA93-24) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Nahant Bay (MA93-24): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 5.0503 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 5.0503 sq mi (99%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N22.0	Swampscott Outer Coastal	Prohibited	0.75798	14.8%
N22.1	Fisherman's Beach	Prohibited	0.04716	0.9%
N23.0	Lynn Outer Coastal	Prohibited	1.77230	34.6%
N24.0	Nahant Bay	Prohibited	2.47284	48.3%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	YES

2024/26 Use Attainment Summary

No new data are available, so the Aesthetics Use for Nahant Bay (MA93-24) is Not Assessed. The Alert for Algae (nuisance growth/blooms of *Pilayella littoralis*) is being carried forward.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Nahant Bay (MA93-24) continues to be assessed as Not Supporting. The prior *Enterococcus* impairment is being carried forward based on a presumptive impairment due to the presence of CSOs and DPH Beach Closures data not meeting the threshold at Kings [Beach ID: 5141] and Kings (DCR) [Beach ID: 2929]. The prior Alert for nuisance growth/blooms of *Pilayella littoralis* is being removed from the Recreational Uses but continues to be maintained under the Aesthetics Use. Surface water sampling was conducted at Kings Beach on Nahant Bay in Lynn as part of a May 2022 MDPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.13 ng/L PFOA). The shellfish growing areas (5.0503 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 Nahant Bay. Nahant Bay has 9 beaches with DPH Beach Closure data: Kings (DCR) [Beach ID: 2929] beach in Lynn, Nahant (DCR) [Beach ID: 2989], Short [Beach ID: 2991], Canoe [Beach ID: 2993] and Forty Steps Beach [Beach ID: 5556] beaches in Nahant and Kings [Beach ID: 5141], Fisherman's [Beach ID: 5140], Eisman's [Beach ID: 5139] and Whales [Beach ID: 5138] beaches in Swampscott. Beaches were posted for >10% of the swimming season at Kings in 2021 (27%) and 2022 (26%) and Kings (DCR) in 2018 (28%), 2019 (56%), 2020 (57%), 2021 (66%), and 2022 (63%) indicating an *Enterococcus* impairment.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2929	Kings (DCR)/ Lynn	42.46204, - 70.92760	42.46680, - 70.92180	10%	27%	15%	4%	28%	56%	57%	66%	63%	7
2929	Kings (DCR)/ Lynn	42.46204, - 70.92760	42.46680, - 70.92180	10%	27%	15%	4%	28%	56%	57%	66%	63%	7
2929	Kings (DCR)/ Lynn	42.46204, - 70.92760	42.46680, - 70.92180	10%	27%	15%	4%	28%	56%	57%	66%	63%	7
2989	Nahant Beach (DCR)/ Nahant	42.46027, - 70.93190	42.43712, - 70.93670	0%	0%	0%	0%	0%	1%	1%	7%	7%	0
2989	Nahant Beach (DCR)/ Nahant	42.46027, - 70.93190	42.43712, - 70.93670	0%	0%	0%	0%	0%	1%	1%	7%	7%	0
2989	Nahant Beach (DCR)/ Nahant	42.46027, - 70.93190	42.43712, - 70.93670	0%	0%	0%	0%	0%	1%	1%	7%	7%	0
2989	Nahant Beach (DCR)/ Nahant	42.46027, - 70.93190	42.43712, - 70.93670	0%	0%	0%	0%	0%	1%	1%	7%	7%	0
2991	Short/ Nahant	42.43371, - 70.93460	42.42809, - 70.92890	7%	0%	0%	0%	6%	0%	0%	0%	2%	0
2993	Canoe/ Nahant	42.41966, - 70.90790	42.41956, - 70.90640	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
5138	Whales/ Swampscott	42.46354, - 70.90600	42.46372, - 70.90450	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
5139	Eisman's/ Swampscott	42.46399, - 70.90370	42.46369, - 70.90000	0%	0%	0%	0%	0%	8%	0%	0%	0%	0
5140	Fisherman's/ Swampscott	42.46724, - 70.91230	42.46552, - 70.90590	0%	0%	0%	0%	0%	0%	0%	14%	0%	1

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
5141	Kings/ Swampscott	42.46678, - 70.92180	42.46795, - 70.91730	0%	0%	0%	0%	7%	0%	1%	27%	26%	2
5556	Forty Steps Beach/ Nahant	42.42278, - 70.90880	42.42193, - 70.90900	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 5)

Summary
Nahant Bay (MA93-24): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 5.0503 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Other Indicators

Summary of MDPH 2021 and 2022 PFAS in Water Column Data

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

Surface water sampling was conducted at Kings Beach on Nahant Bay (MA93-24) in Lynn as part of a May 2022 MDPH study assessing 40 PFAS analytes in surface water and fish tissue samples collected from waterbodies in state parks. The average concentrations of the seven analytes with individual toxicity criteria (PFOA, PFOS, PFNA, PFHxS, PFBA, PFBS, HFPO-DA/GenX) were all less than the 90 ng/L (ppt) recreational screening value (maximum average 0.13 ng/L PFOA).

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Nahant Bay (MA93-24) continues to be assessed as Not Supporting. The prior *Enterococcus* impairment is being carried forward based on a presumptive impairment decision due to the presence of CSOs. The prior Alert for nuisance growth/blooms of *Pilayella littoralis* is being removed from the Recreational Uses but continues to be maintained under the Aesthetics Use. Nahant Bay has 9 beaches with DPH Beach Closure data: Kings (DCR) [Beach ID: 2929] beach in Lynn, Nahant (DCR) [Beach ID: 2989], Short [Beach ID: 2991], Canoe [Beach ID: 2993] and Forty Steps Beach [Beach ID: 5556] beaches in Nahant and Kings [Beach ID: 5141], Fisherman’s [Beach ID: 5140], Eisman’s [Beach ID: 5139] and Whales [Beach ID: 5138] beaches in Swampscott. Available DPH Beach Closure data cannot be used to positively assess the Secondary Contact Recreation Use since beaches were posted for >10% of the swimming season: Kings in 2021 and 2022 and Kings (DCR) in 2018, 2019, 2020, 2021, and 2022. The shellfish growing areas (5.0503 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 Nahant Bay.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Nahant Bay (MA93-24): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 5.0503 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Niles Pond (MA93052)

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

No usable data were available for Niles Pond (MA93052) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

North River (MA93-42)

Location:	Downstream of Route 114 bridge (Proctor Brook becomes North River at this bridge), Salem to mouth at confluence with Danvers River and Beverly Harbor, Salem (formerly part of 1998 segment: North River MA93-06).
AU Type:	ESTUARY
AU Size:	0.15 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Ammonia, Un-ionized	--	Unchanged
5	5	Dissolved Oxygen Supersaturation	--	Unchanged
5	5	Enterococcus	50121	Added
5	5	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Ammonia, Un-ionized	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	X	--	--	--	--	--
Ammonia, Un-ionized	Industrial Point Source Discharge (N)	X	--	--	--	--	--
Ammonia, Un-ionized	Source Unknown (N)	X	--	--	--	--	--
Dissolved Oxygen Supersaturation	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	X	--	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Dissolved Oxygen Supersaturation	Industrial Point Source Discharge (N)	X	--	--	--	--	--
Dissolved Oxygen Supersaturation	Source Unknown (N)	X	--	--	--	--	--
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Pumpout Releases (N)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Sanitary On-vessel Discharges (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 (MA93-42) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

North River (MA93-42): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1439 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.1439 sq mi (99%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N17.0		Prohibited	0.14395	99.3%

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 (MA93-42) 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 North River (MA93-42) is assessed as Not Supporting. An <i>Enterococcus</i> impairment is being added due to bacteria data not meeting the threshold at 1 station in 2020. The shellfish growing areas (0.1439 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. Salem Sound Coastwatch (SSCW) staff/volunteers collected <i>Enterococcus</i> bacteria samples in the North River at SSCW_501 [N River Outlet - downstream side of culvert, Salem] from Jun-Aug 2020 (n=6). Analysis of the single year limited frequency <i>Enterococcus</i> dataset from SSCW_501 indicated 100% of intervals had GMs >35 CFU/100ml, 6 samples exceeded the 130 CFU/100ml STV, and the seasonal GM was 902 CFU/100ml. <i>Enterococcus</i> data from SSCW_501 are indicative of an <i>Enterococcus</i> impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_501	Salem Sound Coastwatch	Water Quality	Rice Beach, River Stream Intermittent	North River Outlet - Downstream side of culvert, Salem	42.525032	-70.898992

Bacteria Data

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

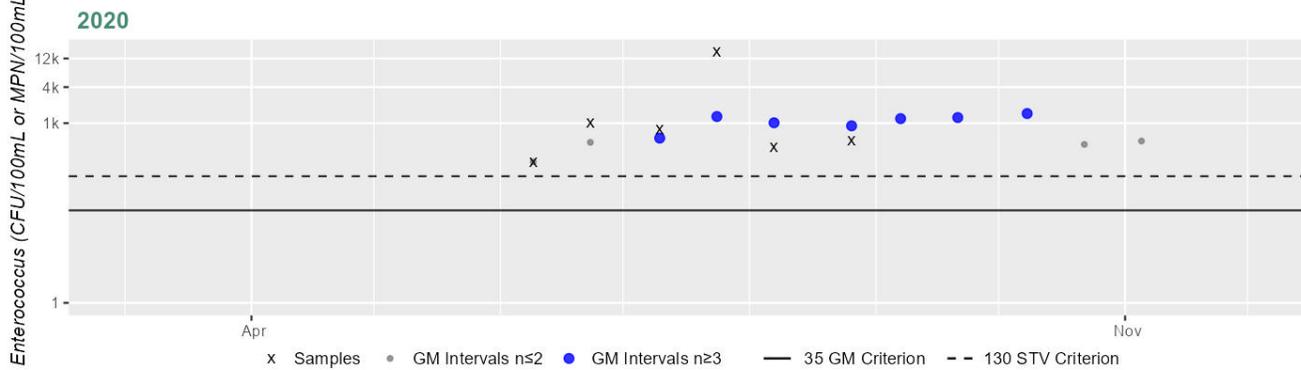
(MassDEP Undated 2)

[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
SSCW_501	Salem Sound Coastwatch	Enterococci	06/08/20	08/25/20	6	226	15531	902

Station SSCW_501 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	902
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	6
%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.

Shellfish Growing Area Classifications

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

5)

Summary
North River (MA93-42): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1439 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for the North River (MA93-42) is assessed as Not Supporting. An <i>Enterococcus</i> impairment is being added based on bacteria data not meeting the threshold at 1 station in 2020. The shellfish growing areas (0.1439 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. Salem Sound Coastwatch (SSCW) staff/volunteers collected <i>Enterococcus</i> bacteria samples in the North River at SSCW_501 [N River Outlet downstream side of culvert, Salem] from Jun-Aug 2020 (n=6). Analysis of the single year limited frequency <i>Enterococcus</i> dataset from SSCW_501 indicated 100% of intervals had GMs >68 CFU/100ml, 5 samples exceeded the 252 CFU/100ml STV, and the overall GM was 902 CFU/100ml. <i>Enterococcus</i> data from SSCW_501 are indicative of an <i>Enterococcus</i> impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_501	Salem Sound Coastwatch	Water Quality	Rice Beach, River Stream Intermittent	North River Outlet - Downstream side of culvert, Salem	42.525032	-70.898992

Bacteria Data

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

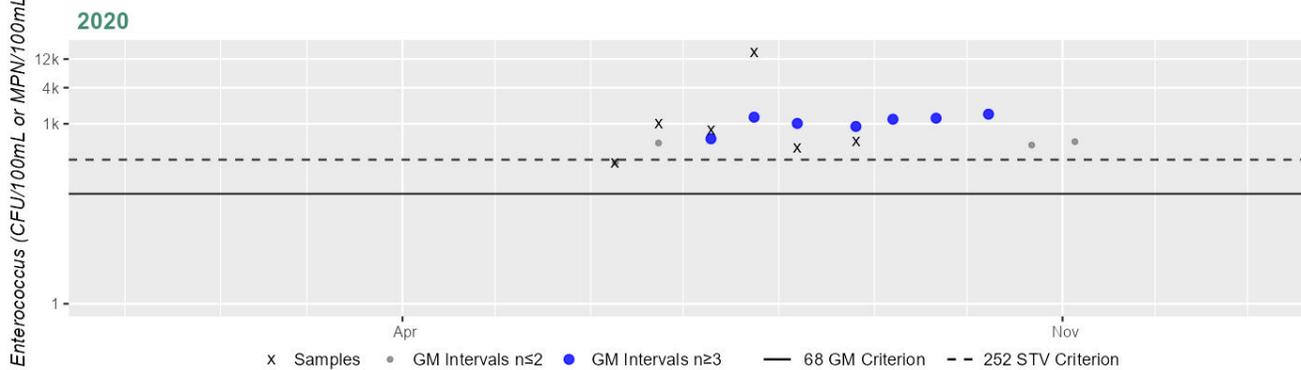
(MassDEP Undated 1)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_501	Salem Sound Coastwatch	Enterococci	06/08/20	08/25/20	6	226	15531	902

Station SSCW_501 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	902
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	5
%n>STV	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.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

North River (MA93-42): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1439 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Pillings Pond (MA93056)

Location:	Lynnfield.
AU Type:	FRESHWATER LAKE
AU Size:	90 ACRES
Classification/Qualifier:	A: PWS, ORW (Tributary)

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Algae	--	Unchanged
5	5	Chlorophyll-a	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Dissolved Oxygen Supersaturation	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged
5	5	Transparency / Clarity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Algae	Internal Nutrient Recycling (Y)	X	--	X	X	X
Algae	Other Turf Management (N)	X	--	X	X	X
Algae	Source Unknown (N)	X	--	X	X	X
Chlorophyll-a	Internal Nutrient Recycling (Y)	X	--	--	--	--
Chlorophyll-a	Source Unknown (N)	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Dissolved Oxygen Supersaturation	Source Unknown (N)	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Phosphorus, Total	Internal Nutrient Recycling (Y)	X	--	--	--	--
Phosphorus, Total	Other Turf Management (N)	X	--	--	--	--
Transparency / Clarity	Internal Nutrient Recycling (Y)	--	--	--	X	X
Transparency / Clarity	Source Unknown (N)	--	--	--	X	X

Recommendations

2024/26 Recommendations
2024 IR [HARMFUL ALGAL BLOOMS, MEDIUM] Follow-up monitoring should be conducted in Pillings Pond (MA93056) to determine if Harmful Algal Blooms may be impairing the Recreational and Aesthetic uses. Monitoring should include observational data and collection of cyanobacteria cell count data, as well as continued reporting of algal blooms to MDPH.

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Pillings Pond (MA93056) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Pillings Pond (MA93056) continues to be assessed as Not Supporting with the Algae impairment being carried forward. Since the Transparency/Clarity impairment was redundantly duplicated across multiple uses for this waterbody, the Transparency/Clarity impairment is being removed from the Aesthetics Use but will continue to be maintained under the Primary Contact Recreation Use. During the period 2015 through 2022, C-HAB postings for Pillings Pond were reported to MDPH based on visual observations of an unknown duration in 2022. No blooms were reported in other years. A recommendation for follow-up monitoring will be made.

Algal Bloom Information

Cyanobacteria Harmful Algal Bloom (C-HAB) Summary Statements for 2015-2022 MDPH Data (Bailey, Logan April 26, 2023) (MassDEP Undated 1)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Pillings Pond (MA93056) were reported to MDPH based on visual observations of an unknown duration in 2022. No blooms were reported in other years. A recommendation for follow-up monitoring will be made.

Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH (Bailey, Logan April 26, 2023) (MassDEP Undated 1)

[* 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
Pillings Pond	Lynnfield								*

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Pillings Pond (MA93056) continues to be assessed as Not Supporting. The prior Transparency / Clarity impairment is being carried forward and the prior Algae impairment (from the Aesthetics Use) is being carried forward. During the period 2015 through 2022, C-HAB postings for Pillings Pond were reported to MDPH based on visual observations of an unknown duration in 2022. No blooms were reported in other years. A recommendation for follow-up monitoring will be made.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Pillings Pond (MA93056) continues to be assessed as Not Supporting. The prior Algae impairment (from the Aesthetics Use) is being carried forward. 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 Pillings Pond were reported to MDPH based on visual observations of an unknown duration in 2022. No blooms were reported in other years. A recommendation for follow-up monitoring will be made.</p>

Pines River (MA93-15)

Location:	Headwaters east of Route 1, Revere/Saugus to mouth at confluence with the Saugus River and Lynn Harbor, Saugus/Revere (portion formerly reported as 2002 lake segment: Seaplane Basin MA93067).
AU Type:	ESTUARY
AU Size:	0.58 SQUARE MILES
Classification/Qualifier:	SB: ORW

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50122	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	X	--	--	--
Fecal Coliform	Illicit Connections/Hook-ups to Storm Sewers (N)	--	--	X	--	--	--
Fecal Coliform	Upstream Source (Y)	--	--	X	--	--	--
Fecal Coliform	Urban Runoff/Storm Sewers (Y)	--	--	X	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
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Not Assessed	No
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2024/26 Use Attainment Summary	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Pines River (MA93-15) is Not Assessed.	

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary	
Pines River (MA93-15): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5372 sq mi (93%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.4202 sq mi (72%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.	

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N26.1	Lower Pines River and Center Bar	Conditionally Restricted	0.33313	57.5%
N26.4	Seaplane Basin	Conditionally Restricted	0.08712	15.0%
N26.5	Gravel Guerties	Prohibited	0.04296	7.4%
N26.6	Upper Pines River	Prohibited	0.07403	12.8%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary	
No data are available, so the Aesthetics Use for Pines River (MA93-15) 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 Pines River (MA93-15) so it is assessed as having Insufficient Information. The shellfish growing areas (0.5372 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 Pines River.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

Pines River (MA93-15): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5372 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
Insufficient Information	NO

2024/26 Use Attainment Summary

No bacteria data are available to assess the Secondary Contact Recreation Use for the Pines River (MA93-15) so it is assessed as having Insufficient Information. The shellfish growing areas (0.5372 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 Pines River.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

Pines River (MA93-15): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.5372 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.

Porter River (MA93-04)

Location:	Headwaters, confluence with Frost Fish Brook, Route 62, Danvers to mouth at confluence with Danvers River, Danvers (through former 2002 segment: Porters Pond MA93058).
AU Type:	ESTUARY
AU Size:	0.13 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Enterococcus	50121	Unchanged
4a	4a	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Source Unknown (N)	--	--	--	--	X	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	X	--	X	X
Fecal Coliform	Illicit Connections/Hook-ups to Storm Sewers (N)	--	--	X	--	X	X
Fecal Coliform	Marina/Boating Pumpout Releases (N)	--	--	X	--	X	X
Fecal Coliform	Marina/Boating Sanitary On-vessel Discharges (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 Porter River (MA93-04) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Porter River (MA93-04): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1236 sq mi (92%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.1236 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N17.0		Prohibited	0.12359	92.0%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Porter River (MA93-04) 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 Porter River (MA93-04) continues to be assessed as Not Supporting. The prior *Enterococcus* impairment is being carried forward based on DPH Beach Closures data not meeting the threshold at Sandy Beach [Beach ID: 2726]. The prior Fecal Coliform impairment is being carried forward. Porter River has a beach with DPH Beach Closure data: Sandy Beach [Beach ID: 2726] beach in Danvers. Beaches were posted for >10% of the swimming season at Sandy Beach in 2019 (22%) and 2020 (56%) indicating an *Enterococcus* impairment. The shellfish growing areas (0.1236 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 Porter River.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2726	Sandy Beach/ Danvers	42.55520, -70.91900	42.55481, -70.91860	13%	4%	0%	7%	0%	22%	56%	0%	0%	3

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Porter River (MA93-04): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1236 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 the Porter River (MA93-04) continues to be assessed as Not Supporting. The prior Fecal Coliform impairment is being carried forward. Porter River has a beach with DPH Beach Closure data: Sandy Beach [Beach ID: 2726] beach in Danvers. Available DPH Beach Closure data cannot be used to positively assess the Secondary Contact Recreation Use since beaches were posted for >10% of the swimming season: Sandy Beach in 2019 and 2020. The shellfish growing areas (0.1236 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 Porter River..

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

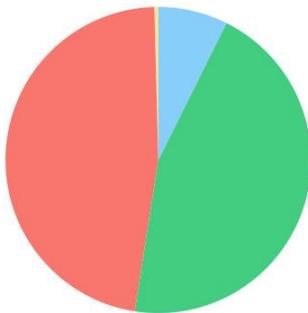
Porter River (MA93-04): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.1236 sq mi (92%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Proctor Brook (MA93-39)

Location:	Headwaters, outlet small pond in wetland north of Downing Road, Peabody to Grove/Goodhue Street bridge, Salem (formerly part of 1998 segment: North River MA93-06) (interrupted urban).
AU Type:	RIVER
AU Size:	2.9 MILES
Classification/Qualifier:	B

Proctor Brook (MA93-39)

Watershed Area: 11.01 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	11.01	7.47	3.33	2.54
Agriculture	0.4%	0.4%	0.1%	0.1%
Developed	47.1%	49.9%	34.9%	36.5%
Natural	45.1%	43.4%	51%	51.5%
Wetland	7.4%	6.3%	14%	11.9%
Impervious	29.9%	32.2%	21.5%	22.9%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Debris*)	--	Unchanged
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Escherichia Coli (E. Coli)	50120	Unchanged
5	5	Fecal Coliform	50120	Unchanged
5	5	Nitrogen, Total	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged
5	5	Sedimentation/Siltation	--	Unchanged
5	5	Trash	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Debris*)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	X	X
(Debris*)	Illegal Dumps or Other Inappropriate Waste Disposal (N)	--	--	X	X	X
(Debris*)	Source Unknown (N)	--	--	X	X	X
Benthic Macroinvertebrates	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	X	--	--	--	--
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Fecal Coliform	Source Unknown (N)	--	--	--	X	X
Nitrogen, Total	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	X	--	--	--	--
Nitrogen, Total	Source Unknown (N)	X	--	--	--	--
Phosphorus, Total	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Phosphorus, Total	Source Unknown (N)	--	--	--	X	--
Sedimentation/Siltation	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	X	--	--	--	--
Sedimentation/Siltation	Source Unknown (N)	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Trash	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	X	X
Trash	Illegal Dumps or Other Inappropriate Waste Disposal (N)	--	--	X	X	X
Trash	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 Proctor Brook (MA93-39) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Proctor Brook (MA93-39) continues to be assessed as Not Supporting, with the Debris and Trash impairments being carried forward. No new data are available to evaluate the Aesthetics Use for this Proctor Brook AU.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Proctor Brook (MA93-39) continues to be assessed as Not Supporting. The prior *Escherichia coli* (*E. coli*), Total Phosphorus, and Fecal Coliform impairments are being carried forward and the prior Debris, and Trash impairments (from the Aesthetics Use) are being carried forward. *It must be noted that the Total Phosphorus impairment on the Primary Recreation Use was made in error during a previous IR cycle. The Total Phosphorus impairment for Proctor Brook should instead be associated with the Aquatic Life Use and this correction will be made during the 2028IR cycle.*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Proctor Brook (MA93-39) 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 3 stations in 1997, 2002, 2007 and 2010. The prior Fecal Coliform impairment is being carried forward and the prior Debris and Trash impairments (from the Aesthetics Use) are being carried forward. MassDEP staff collected *E. coli* bacteria samples in Proctor Brook from 1997-2010 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream (all in the downstream quarter of the AU): W2151 [~200 ft downstream of Caller St, Peabody] from May-Oct 2010 (n=6), W0453 [Howley St, Peabody] from 1997-1998 and 2007 (n=2-6/yr), and the downstream end at W0887 [Grove St, Salem] from May-Sep 2002 (n=5). Analysis of the historic single year limited frequency *E. coli* dataset from W2151 indicated 100% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 382 CFU/100ml. Analysis of the historic multi-year limited frequency *E. coli* dataset from W0453 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (1997 and 2007, 100 & 100%), 2 yrs had ≥2 samples exceed the 794 CFU/100ml STV (1997 and 2007, n=2 & 2, max 6,000 CFU), and cumulatively across years 100% of intervals had GMs >244 CFU/100ml. Analysis of the historic single year limited frequency *E. coli* dataset from W0887 indicated 66% of intervals had GMs >244 CFU/100ml, 2 samples exceeded the 794 CFU/100ml STV (max 1,300 CFU), and the overall GM was 280 CFU/100ml. Historic *E. coli* data from W2151, W0453, and W0887 are indicative of an *E. coli* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0453	MassDEP	Water Quality	Proctor Brook	[Howley Street, Peabody]	42.524523	-70.918596
W0887	MassDEP	Water Quality	Proctor Brook	[Grove Street, Salem]	42.521543	-70.910437

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2151	MassDEP	Water Quality	Proctor Brook	[approximately 200 feet downstream of Caller Street, Peabody]	42.524820	-70.920712

Bacteria Data

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

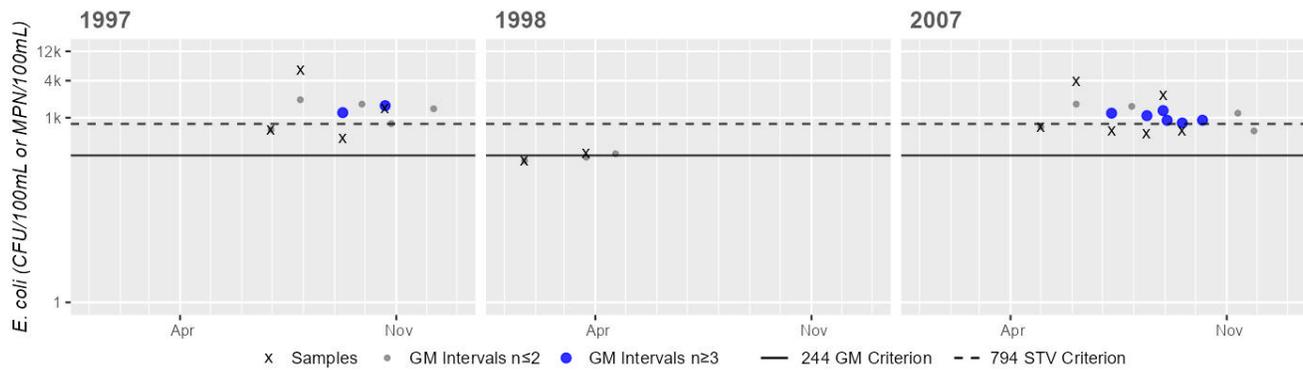
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0453	MassDEP	E. coli	06/30/97	10/21/97	4	460	6000	1254
W0453	MassDEP	E. coli	01/21/98	03/23/98	2	200	260	228
W0453	MassDEP	E. coli	05/01/07	09/18/07	6	540	3900	1039
W0887	MassDEP	E. coli	05/06/02	09/18/02	5	20	1300	280
W2151	MassDEP	E. coli	05/25/10	10/05/10	6	260	700	382

Station MASSDEP_W0453 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	1254
#GMI	2
#GMI Ex	2
%GMI Ex	100%
n>STV	2
%n>STV	50%

Variable*	Result
Samples	2
SeasGM	228
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	6
SeasGM	1039
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	2
%n>STV	33%

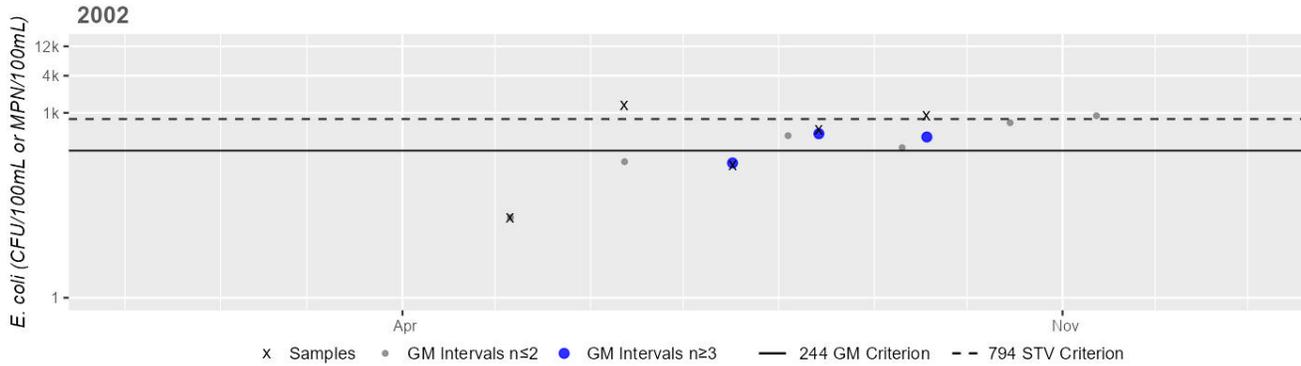
Cumulative %GMI Exceedance

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_W0887 - Escherichia coli

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



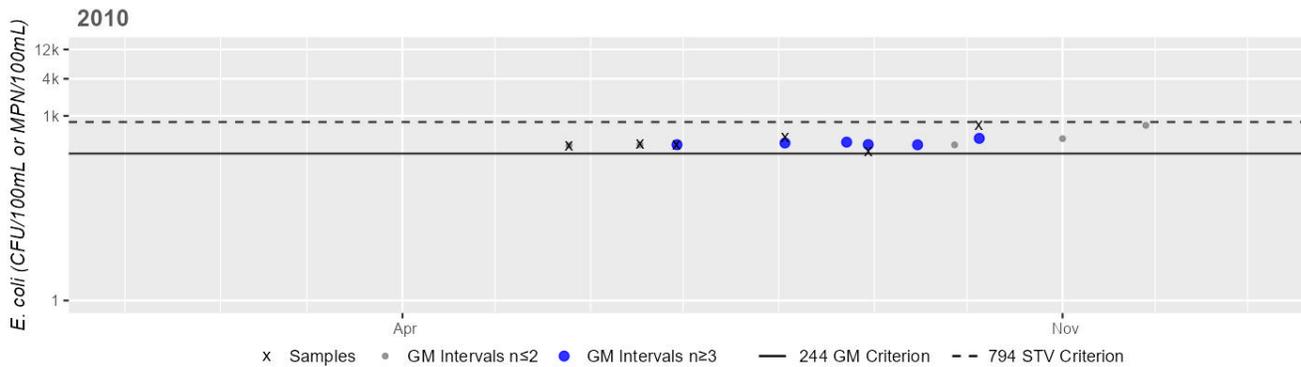
Variable*	Result
Samples	5
SeasGM	280
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	2
%n>STV	40%

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

*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_W2151 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	382
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	0
%n>STV	0%

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.

Proctor Brook (MA93-40)

Location:	From Grove/Goodhue Street bridge, Salem to mouth at Route 114 culvert, Salem (formerly part of 1998 segment: North River MA93-06).
AU Type:	ESTUARY
AU Size:	0.01 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Debris*)	--	Unchanged
5	5	Enterococcus	50123	Added
5	5	Fecal Coliform	50123	Unchanged
5	5	Flocculant Masses	--	Removed
5	5	Odor	--	Unchanged
5	5	Oil and Grease	--	Unchanged
5	5	Scum/Foam	--	Removed
5	5	Trash	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
(Debris*)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X	X
(Debris*)	Source Unknown (N)	--	--	--	X	X	X
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	X
Fecal Coliform	Source Unknown (N)	--	--	--	--	X	X
Odor	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X	X
Odor	Source Unknown (N)	--	--	--	X	X	X
Oil and Grease	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X	X
Oil and Grease	Source Unknown (N)	--	--	--	X	X	X
Trash	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X	X
Trash	Source Unknown (N)	--	--	--	X	X	X

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Flocculant Masses	Data and/or information lacking to determine WQ status; original basis for listing was incorrect	The ADB impairment “Foam/Flocs/Scum/Oil Slicks” was previously applied to Proctor Brook (MA93-40) during the 2008 reporting cycle. The impairment was based on field observations by MassDEP staff at the upstream end of the AU at station W0887 (Grove Street, Salem) during summer 2002, where oil sheens were noted. The “Foam/Flocs/Scum/Oil Slicks” impairment code was subsequently divided into more specific codes and applied automatically to this AU for the final 2016 reporting cycle submittal to EPA’s new ATTAINS database. Since there was no mention of “Flocculant Masses” or “Scum/foam” in the field observations, these impairments are being removed (the impairments for “Oil and Grease” is being carried forward).
Scum/Foam	Data and/or information lacking to determine WQ status; original basis for listing was incorrect	The ADB impairment “Foam/Flocs/Scum/Oil Slicks” was previously applied to Proctor Brook (MA93-40) during the 2008 reporting cycle. The impairment was based on field observations by MassDEP staff at the upstream end of the AU at station W0887 (Grove Street, Salem) during summer 2002, where oil sheens were noted. The “Foam/Flocs/Scum/Oil Slicks” impairment code was subsequently divided into more specific codes and applied automatically to this AU for the final 2016 reporting cycle submittal to EPA’s new ATTAINS database. Since there was no mention of “Flocculant Masses” or “Scum/foam” in the field observations, these impairments are being removed (the impairments for “Oil and Grease” is being carried forward).

Flocculant Masses

See the above removal comment.

Scum/Foam

See the above removal comment.

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 Proctor Brook (MA93-40) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Proctor Brook (MA93-40): There are no shellfish growing area classifications within this AU, therefore the Shellfish Harvesting Use is Not Assessed for 2024.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Proctor Brook (MA93-40) continues to be assessed as Not Supporting, with the Odor, Debris, Trash and Oil/Grease impairments being carried forward. The Flocculant Masses and Scum/foam impairments are being removed (see supporting information for removed impairments). No new data are available to evaluate the Aesthetics Use for this Proctor Brook AU.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Proctor Brook (MA93-40) continues to be assessed as Not Supporting. The prior Fecal Coliform impairment is being carried forward and the prior Debris, Odor, Oil and Grease and Trash impairments (from the Aesthetics Use) are being carried forward. The Flocculant Masses and Scum/Foam impairments are being removed (from the Aesthetics Use). An *Enterococcus* impairment is being added due to bacteria data not meeting the threshold at SSCW_559. Salem Sound Coastwatch (SSCW) staff/volunteers collected *Enterococcus* bacteria samples three-quarters of the way down Proctor Brook at SSCW_559 [N River - Commercial St near foot bridge, Salem] in 2014 and 2016 (n=5-6/yr). Analysis of the multi-year limited frequency *Enterococcus* dataset from SSCW_559 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >35 CFU/100ml (2014 and 2016, 100 & 100%), 2 yrs had ≥2 samples exceed the 130 CFU/100ml STV (2014 and 2016, n=5 & 3), and cumulatively across years 100% of intervals had GMs >35 CFU/100ml. *Enterococcus* data from SSCW_559 are indicative of an *Enterococcus* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_559	Salem Sound Coastwatch	Water Quality	North River, Channelized Stream	North River - Commercial St near foot bridge, Salem	42.523540	-70.902903

Bacteria Data

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

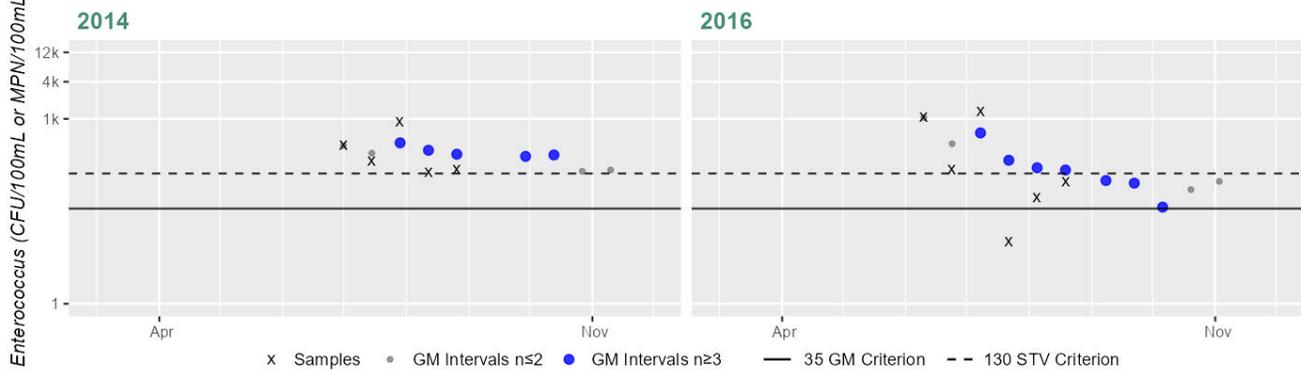
(MassDEP Undated 2)

[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
SSCW_559	Salem Sound Coastwatch	Enterococci	07/01/14	08/26/14	5	134	884	266
SSCW_559	Salem Sound Coastwatch	Enterococci	06/09/16	08/18/16	6	10	1330	147

Station SSCW_559 - Enterococcus

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



Variable*	Result
Samples	5
SeasGM	266
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	5
%n>STV	100%

Variable*	Result
Samples	6
SeasGM	147
#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 5)

Summary
Proctor Brook (MA93-40): There are no shellfish growing area classifications within this AU, therefore 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 Proctor Brook (MA93-40) continues to be assessed as Not Supporting. The prior Fecal Coliform impairment is being carried forward and the prior Debris, Odor, Oil and Grease, and Trash impairments (from the Aesthetics Use) are being carried forward. Flocculant Masses and Scum/Foam impairments are being removed (from the Aesthetics Use). An *Enterococcus* impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 1 station in 2014 and 2016. Salem Sound Coastwatch (SSCW) staff/volunteers collected *Enterococcus* bacteria samples in Proctor Brook at SSCW_559 [N River - Commercial St near foot bridge, Salem] in 2014 and 2016 (n=5-6/yr). Analysis of the multi-year limited frequency *Enterococcus* dataset from SSCW_559 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >68 CFU/100ml (2014 and 2016, 100 & 85%), 2 yrs had ≥2 samples exceed the 252 CFU/100ml STV (2014 and 2016, n=2 & 2), and cumulatively across years 91% of intervals had GMs >68 CFU/100ml. *Enterococcus* data from SSCW_559 are indicative of an *Enterococcus* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_559	Salem Sound Coastwatch	Water Quality	North River, Channelized Stream	North River - Commercial St near foot bridge, Salem	42.523540	-70.902903

Bacteria Data

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

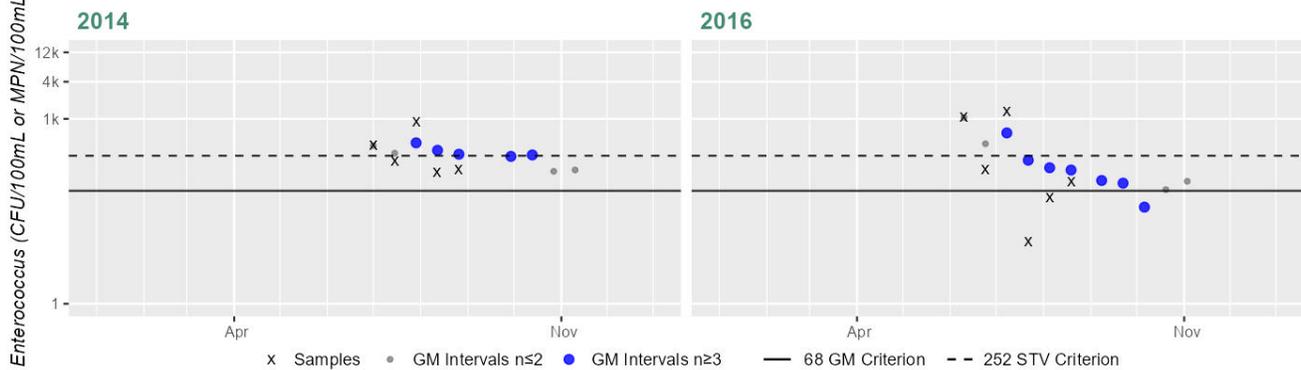
(MassDEP Undated 1)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_559	Salem Sound Coastwatch	Enterococci	07/01/14	08/26/14	5	134	884	266
SSCW_559	Salem Sound Coastwatch	Enterococci	06/09/16	08/18/16	6	10	1330	147

Station SSCW_559 - Enterococcus

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



Variable*	Result
Samples	5
SeasGM	266
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	2
%n>STV	40%

Variable*	Result
Samples	6
SeasGM	147
#GMI	7
#GMI Ex	6
%GMI Ex	85%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance
Current (2011-2022)
 91%

*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 5)

Summary
Proctor Brook (MA93-40): There are no shellfish growing area classifications within this AU, therefore the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Quarry Reservoir (MA93053)

Location:	Rockport.
AU Type:	FRESHWATER LAKE
AU Size:	7 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Quarry Reservoir (MA93053) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Rockport Harbor (MA93-57)

Location:	Waters landward of an imaginary line from Gully Point, Rockport to Granite Pier, Rockport (including Back Harbor and a portion of Sandy Bay) (area includes former 2010 segment: Rockport Harbor MA93-17).
AU Type:	ESTUARY
AU Size:	0.35 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50122	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Pumpout Releases (N)	--	--	X	--	--	--
Fecal Coliform	Marina/Boating Sanitary On-vessel Discharges (N)	--	--	X	--	--	--
Fecal Coliform	Source Unknown (N)	--	--	X	--	--	--

Recommendations

2024/26 Recommendations
2024 IR [ENTEROCOCCUS, LOW] Additional sampling at Old Garden [Beach ID: 3103] is recommended for Rockport Harbor (MA93-57) since Old Garden was posted for >10% of the swimming season in 2021 (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 Rockport Harbor (MA93-57) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Rockport Harbor (MA93-57): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3434 sq mi (99%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.3434 sq mi (99%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N11.1	Sandy Bay	Prohibited	0.34338	99.3%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Rockport Harbor (MA93-57) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert

Fully Supporting	YES
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2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Rockport Harbor (MA93-57) continues to be assessed as Fully Supporting. Rockport Harbor has 3 beaches with DPH Beach Closure data: Old Garden [Beach ID: 3103], Back Beach [Beach ID: 3104] and Front Beach [Beach ID: 3106] beaches in Rockport. All beaches were rarely, if at all, posted for swimming from 2018-2022. However, an Alert for *Enterococcus* is being identified since Old Garden beach was posted for >10% of the swimming season in 2021 (12%). The shellfish growing areas (0.3434 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 Rockport Harbor.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
3103	Old Garden/ Rockport	42.65849, -70.60790	42.65846, -70.60620	0%	0%	0%	0%	0%	0%	0%	12%	0%	1
3104	Back Beach/ Rockport	42.66293, -70.62370	42.66062, -70.62270	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
3106	Front Beach/ Rockport	42.65948, -70.62180	42.65857, -70.61950	0%	0%	0%	0%	0%	0%	3%	0%	0%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Rockport Harbor (MA93-57): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3434 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Rockport Harbor (MA93-57) continues to be assessed as Fully Supporting. Rockport Harbor has 3 beaches with DPH Beach Closure data: Old Garden [Beach ID: 3103], Back Beach [Beach ID: 3104] and Front Beach [Beach ID: 3106] beaches in Rockport. All beaches were rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (0.3434 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 Rockport Harbor.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

Rockport Harbor (MA93-57): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3434 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Round Pond (MA93063)

Location:	Hamilton.
AU Type:	FRESHWATER LAKE
AU Size:	37 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	5	Mercury in Fish Tissue	--	Added

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

Recommendations

2024/26 Recommendations
2024 IR [HARMFUL ALGAL BLOOMS, LOW] Follow-up monitoring should be conducted in Round Pond (MA93063) to determine if Harmful Algal Blooms may be impairing the Recreational and Aesthetic uses. Monitoring should include observational data and collection of cyanobacteria cell count data, as well as continued reporting of algal blooms to MDPH. This is of low priority.

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	No

2024/26 Use Attainment Summary

The Fish Consumption Use for Round Pond (MA93063) is assessed as Not Supporting with a new impairment being added for Mercury in Fish Tissue. Fish toxics sampling for metals (mercury, arsenic, cadmium, and selenium) was performed by MassDEP WPP biologists in Round Pond at station F0494 in 2022 as part of the MassDEP WPP targeted assessment monitoring (TAM). MDPH issued a site-specific advisory for Mercury in Round Pond in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent DPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations. The likely source of Mercury, although not confirmed, is atmospheric deposition.

Fish Consumption Advisories

Summary of Fish Toxics Sampling and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP Undated 6)

Summary Statement

Fish toxics sampling for metals (mercury, arsenic, cadmium, and selenium) was performed by MassDEP WPP biologists in Round Pond (MA93063) at station F0494 in 2022 as part of the MassDEP WPP targeted assessment monitoring (TAM). Because of elevated Mercury measured in fish filets, MDPH issued site-specific fish consumption advisories for Round 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 Round Pond (MA93063).

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 Round Pond (MA93063) 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 2019. During the period 2015 through 2022, C-HAB postings for Round Pond were reported to MDPH based on visual observations for 34 days in 2019 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 1)

C-HAB Summary Statement
During the period 2015 through 2022, C-HAB postings for Round Pond (MA93063) were reported to MDPH based on visual observations for 34 days in 2019. 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 1)

[* 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
Round Pond	Hamilton					34			

Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary
No bacteria data are available to assess the Primary Contact Recreation Use for Round Pond (MA93063) 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 and additional sampling is recommended for this AU. During the period 2015 through 2022, C-HAB postings for Round Pond were reported to MDPH based on visual observations for 34 days in 2019. 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 Blooms Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary

No bacteria data are available to assess the Secondary Contact Recreation Use for Round Pond (MA93063) 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 and additional sampling is recommended for this AU. During the period 2015 through 2022, C-HAB postings for Round Pond were reported to MDPH based on visual observations for 34 days in 2019. 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 Blooms Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made.

Rum Rock Lake (MA93064)

Location:	Rockport.
AU Type:	FRESHWATER LAKE
AU Size:	10 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Rum Rock Lake (MA93064) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Salem Harbor (MA93-54)

Location:	Waters landward of an imaginary line from Naugus Head, Marblehead to the northwest point of Bakers Island, Salem to Hospital Point, Beverly to Juniper Point, Salem (excluding Forest River) (area includes former 2010 segment: Salem Harbor MA93-21 and part of former 2010 segment: Salem Sound MA93-25 [waterbody code 93907]).
AU Type:	ESTUARY
AU Size:	4.91 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Enterococcus	50122	Unchanged
5	5	Estuarine Bioassessments	--	Unchanged
5	5	Fecal Coliform	50122	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Estuarine Bioassessments	Source Unknown (N)	X	--	--	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	X	--	X	--
Fecal Coliform	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 Salem Harbor (MA93-54) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Salem Harbor (MA93-54): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 4.8934 sq mi (100%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The prohibited shellfish growing area represents 4.8934 sq mi (100%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N16.0		Prohibited	0.71992	14.7%
N18.0	Salem Harbor	Prohibited	0.74237	15.1%
N18.1		Prohibited	0.71004	14.5%
N19.0	Folger/Peaches Point	Prohibited	2.72109	55.4%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Salem Harbor (MA93-54) 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 Salem Harbor (MA93-54) continues to be assessed as Not Supporting. The prior <i>Enterococcus</i> impairment is being carried forward based on DPH Beach Closures data not meeting the threshold at Ocean Avenue [Beach ID: 3109] and Osgood [Beach ID: 3116] and bacteria data not meeting the threshold at 2 stations in 2014. The prior Fecal Coliform impairment is being carried forward. Salem Harbor has 8 beaches with DPH Beach Closure data: Stramski [Beach ID: 2938] beach in Marblehead and Steps [Beach ID: 3118], Osgood [Beach ID: 3116], Ocean Avenue [Beach ID: 3109], Forest River - Point [Beach ID: 3111], Waikiki (Winter Island) [Beach ID: 3115], Willow Avenue [Beach ID: 3119] and Forest River - Pioneer [Beach ID: 3121] beaches in Salem. Beaches were posted for >10% of the swimming season at Ocean Avenue in 2021 (31%) and 2022 (49%) and Osgood in 2020 (23%) and 2022 (15%) indicating an <i>Enterococcus</i> impairment. It should be noted that Forest River – Point beach was also posted for 27% of the season in 2022. The shellfish growing areas (4.8934 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 Salem Harbor. Salem Sound Coastwatch (SSCW) staff/volunteers collected <i>Enterococcus</i> bacteria samples in Salem Harbor in 2014 at 2 stations. Samples were collected from the following stations/sample years: the upstream end of the AU at SSCW_601 [Forest River off of Lafayette St, Salem] from Jun-Aug 2014 (n=6), and a little further downstream at SSCW_643 [S River - Off floating dock on Congress St., Salem] from Jun-Aug 2014 (n=6). Analysis of the single year limited frequency <i>Enterococcus</i> dataset from SSCW_601 indicated 100% of intervals had GMs >35 CFU/100ml, 5 samples exceeded the 130 CFU/100ml STV, and the seasonal GM was 218 CFU/100ml. Analysis of the single year limited frequency <i>Enterococcus</i> dataset from SSCW_643 indicated 100% of intervals had GMs >35 CFU/100ml, 6 samples exceeded the 130 CFU/100ml STV, and the seasonal GM was 542 CFU/100ml. <i>Enterococcus</i> data from SSCW_601 and SSCW_643 are indicative of an <i>Enterococcus</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_601	Salem Sound Coastwatch	Water Quality	Forest River, Estuary	Forest River off of Lafayette St, Salem	42.497294	-70.886256
SSCW_643	Salem Sound Coastwatch	Water Quality	South River, Estuary	South River - Off floating dock on Congress St., Salem	42.519247	-70.889494

Bacteria Data

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

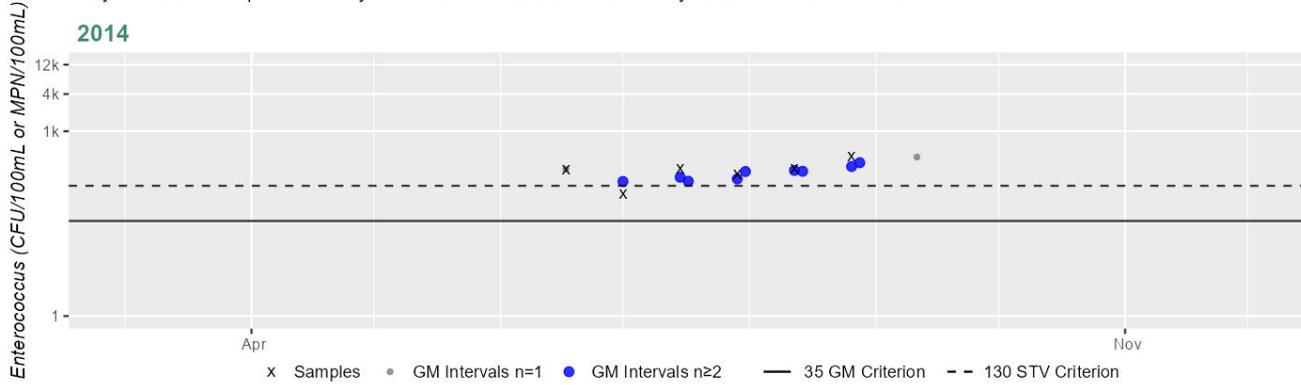
(MassDEP Undated 2)

[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
SSCW_601	Salem Sound Coastwatch	Enterococcus	06/17/14	08/26/14	6	97	381	218
SSCW_643	Salem Sound Coastwatch	Enterococcus	06/17/14	08/26/14	6	231	1790	542

Station SSCW_601 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	218
#GMI	9
#GMI Ex	9
%GMI Ex	100%
n>STV	5
%n>STV	83%

Cumulative %GMI Exceedance

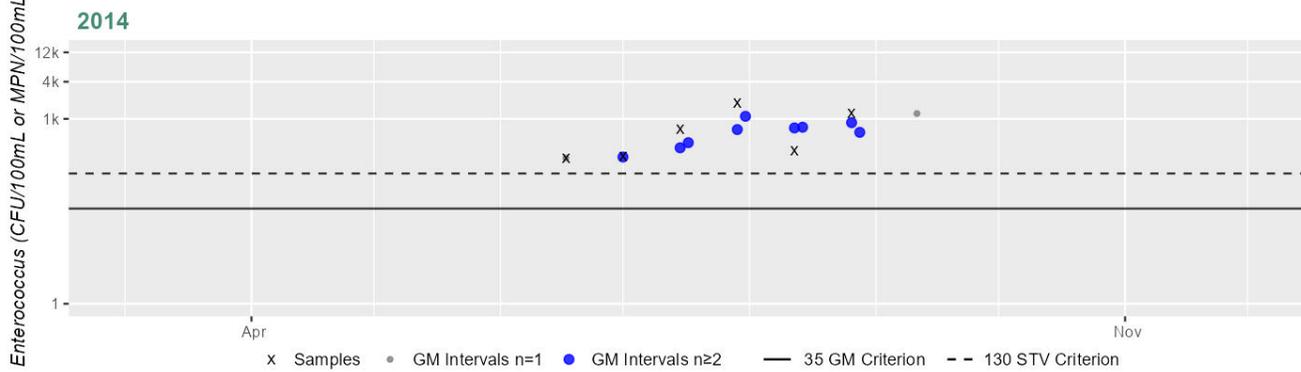
Current (2011-2022)

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 SSCW_643 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	542
#GMI	9
#GMI Ex	9
%GMI Ex	100%
n>STV	6
%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.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2938	Stramski/ Marblehead	42.51432, - 70.86590	42.51438, - 70.86580	1%	0%	0%	0%	0%	0%	0%	0%	0%	0
3109	Ocean Avenue/ Salem	42.50886, - 70.88760	42.50869, - 70.88740	0%	9%	0%	7%	0%	8%	0%	31%	49%	2
3111	Forest River - Point/ Salem	42.50557, - 70.88270	42.50514, - 70.88290	0%	0%	0%	0%	0%	0%	0%	0%	27%	1
3115	Waikiki Beach (Winter Island)/ Salem	42.52905, - 70.86780	42.52754, - 70.86730	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
3116	Osgood/ Salem	42.50401, - 70.88640	42.50352, - 70.88650	0%	6%	0%	19%	0%	8%	23%	0%	15%	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%
3118	Steps/ Salem	42.53336, - 70.86980	42.53357, - 70.86920	0%	0%	0%	0%	0%	8%	0%	0%	0%	0
3119	Willow Avenue/ Salem	42.51043, - 70.88820	42.50987, - 70.88810	0%	9%	0%	7%	0%	8%	10%	8%	0%	0
3121	Forest River - Pioneer/ Salem	42.50783, - 70.88470	42.50731, - 70.88400	0%	0%	0%	0%	0%	0%	0%	0%	7%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Salem Harbor (MA93-54): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 4.8934 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

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

The Secondary Contact Recreation Use for Salem Harbor (MA93-54) is assessed as Not Supporting. An *Enterococcus* impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 2 stations in 2014. Salem Harbor has 8 beaches with DPH Beach Closure data: Stramski [Beach ID: 2938] beach in Marblehead and Steps [Beach ID: 3118], Osgood [Beach ID: 3116], Ocean Avenue [Beach ID: 3109], Forest River - Point [Beach ID: 3111], Waikiki (Winter Island) [Beach ID: 3115], Willow Avenue [Beach ID: 3119] and Forest River - Pioneer [Beach ID: 3121] beaches in Salem. Available DPH Beach Closure data cannot be used to positively assess the Secondary Contact Recreation Use since beaches were posted for >10% of the swimming season: Ocean Avenue in 2021 and 2022 and Osgood in 2020 and 2022 (as well as Forest River – Point in 2022). The shellfish growing areas (4.8934 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 Salem Harbor. Salem Sound Coastwatch (SSCW) staff/volunteers collected *Enterococcus* bacteria samples in Salem Harbor in 2014 at 2 stations. Samples were collected from the following stations/sample years: the upstream end of the AU at SSCW_601 [Forest River off of Lafayette St, Salem] from Jun-Aug 2014 (n=6), and further down at SSCW_643 [S River - Off floating dock on Congress St., Salem] from Jun-Aug 2014 (n=6). Analysis of the single year limited frequency *Enterococcus* dataset from SSCW_601 indicated 100% of intervals had GMs >68 CFU/100ml, 1 sample exceeded the 252 CFU/100ml STV, and the overall GM was 218 CFU/100ml. Analysis of the single year limited frequency *Enterococcus* dataset from SSCW_643 indicated 100% of intervals had GMs >68 CFU/100ml, 4 samples exceeded the 252 CFU/100ml STV, and the overall GM was 542 CFU/100ml. *Enterococcus* data from SSCW_601 and SSCW_643 are indicative of an *Enterococcus* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_601	Salem Sound Coastwatch	Water Quality	Forest River, Estuary	Forest River off of Lafayette St, Salem	42.497294	-70.886256
SSCW_643	Salem Sound Coastwatch	Water Quality	South River, Estuary	South River - Off floating dock on Congress St., Salem	42.519247	-70.889494

Bacteria Data

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

(MassDEP Undated 1)

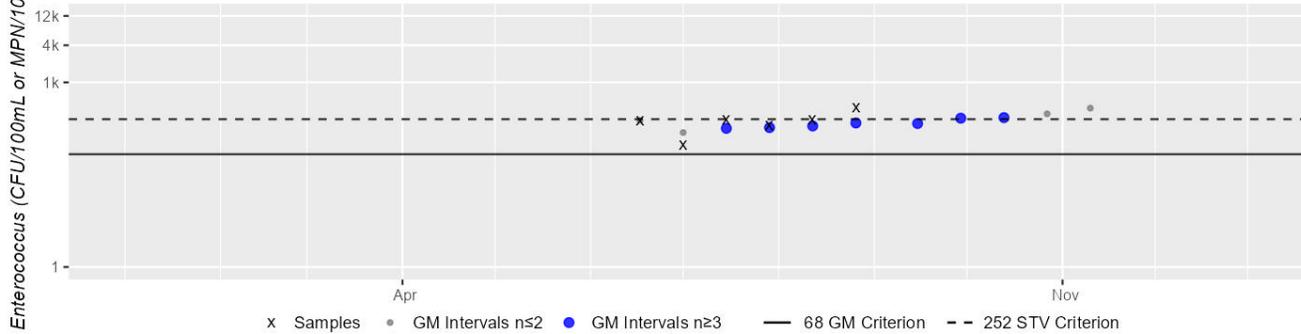
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_601	Salem Sound Coastwatch	Enterococci	06/17/14	08/26/14	6	97	381	218
SSCW_643	Salem Sound Coastwatch	Enterococci	06/17/14	08/26/14	6	231	1790	542

Station SSCW_601 - Enterococcus

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

2014



Variable*	Result
Samples	6
SeasGM	218
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance

Current (2011-2022)

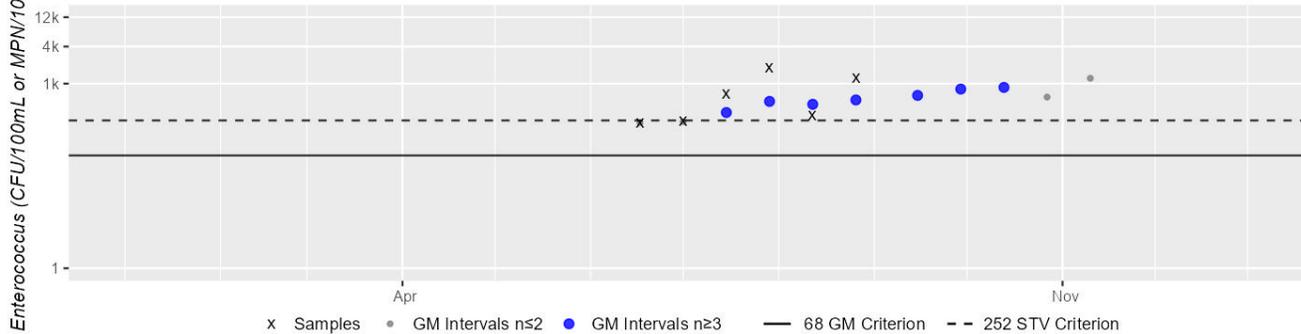
100%

*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 SSCW_643 - Enterococcus

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

2014



Variable*	Result
Samples	6
SeasGM	542
#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 5)

Summary
Salem Harbor (MA93-54): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 4.8934 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Salem Sound (MA93-55)

Location:	Northern portion of Salem Sound, waters landward of and within imaginary lines from Chubb Point, Manchester to Gales Point, Manchester to the northwest point of Bakers Island, Salem to Hospital Point, Beverly (formerly part of 2010 segment: Salem Sound MA93-25).
AU Type:	ESTUARY
AU Size:	3.46 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50121	Unchanged

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

Recommendations

2024/26 Recommendations
2024 IR [ENTEROCOCCUS, MEDIUM] Additional monitoring for Salem Sound (MA93-55) is recommended since Brackenbury [Beach ID: 2637] and Mingo [Beach ID: 2635] beaches in Beverly were posted for >10% of the swimming season in 2021 (20%) and 2021 (14%), respectively. 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 Salem Sound (MA93-55) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Salem Sound (MA93-55): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 3.4487 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 3.4487 sq mi (100%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N15.0		Prohibited	0.55459	16.0%
N15.1		Prohibited	0.00028	0.0%
N16.0		Prohibited	2.84565	82.1%
N19.0	Folger/Peaches Point	Prohibited	0.04815	1.4%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Salem Sound (MA93-55) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
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Fully Supporting	YES
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2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Salem Sound (MA93-55) continues to be assessed as Fully Supporting. Salem Sound has 3 beaches with DPH Beach Closure data: Brackenbury [Beach ID: 2637], Mingo [Beach ID: 2635] and West [Beach ID: 2638] beaches in Beverly. All beaches were rarely, if at all, posted for swimming from 2018-2022, however an Alert for *Enterococcus* is being identified since Brackenbury and Mingo beaches were posted for >10% of the swimming season in 2021 (20%) and 2021 (14%), respectively. The shellfish growing areas (3.4487 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 Salem Sound.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2635	Mingo/ Beverly	42.55008, - 70.84120	42.55072, - 70.83930	10%	0%	1%	1%	0%	7%	0%	14%	1%	1
2637	Brackenbury/ Beverly	42.55049, - 70.85240	42.55077, - 70.85150	0%	0%	0%	0%	0%	6%	0%	20%	0%	1
2638	West/ Beverly	42.56095, - 70.80570	42.56172, - 70.80330	0%	0%	0%	0%	0%	0%	3%	0%	0%	0

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Salem Sound (MA93-55): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 3.4487 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

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

The Secondary Contact Recreation Use for Salem Sound (MA93-55) continues to be assessed as Fully Supporting. Salem Sound has 3 beaches with DPH Beach Closure data: Brackenbury [Beach ID: 2637], Mingo [Beach ID: 2635] and West [Beach ID: 2638] beaches in Beverly. All beaches were rarely, if at all, posted for swimming from 2018-2022. The shellfish growing areas (3.4487 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 Salem Sound.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

Salem Sound (MA93-55): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 3.4487 sq mi (100%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Salem Sound (MA93-56)

Location:	Southern portion of Salem Sound, waters landward of and within imaginary lines from Fort Sewall, Marblehead to the Marblehead Lighthouse on Marblehead Neck, Marblehead to the northwest point of Bakers Island, Salem to Naugus Head, Marblehead (formerly part of 2010 segment: Salem Sound MA93-25).
AU Type:	ESTUARY
AU Size:	2.55 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Enterococcus	50121	Added
5	5	Estuarine Bioassessments	--	Unchanged
5	5	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	X
Enterococcus	Source Unknown (N)	--	--	--	--	X	X
Estuarine Bioassessments	Source Unknown (N)	X	--	--	--	--	--
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (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 Salem Sound (MA93-56) is Not Assessed.	

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
Salem Sound (MA93-56): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.5327 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 2.5327 sq mi (99%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N16.0		Prohibited	0.01291	0.5%
N19.0	Folger/Peaches Point	Prohibited	2.10007	82.5%
N20.0	Marblehead Harbor	Prohibited	0.17088	6.7%
N20.1	Brown's Island	Prohibited	0.01849	0.7%
N21.0	Marblehead Outer Coastal	Prohibited	0.23038	9.0%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No data are available, so the Aesthetics Use for Salem Sound (MA93-56) 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 Salem Sound (MA93-56) is assessed as Not Supporting. An <i>Enterococcus</i> impairment is being added due to DPH Beach Closures data not meeting the threshold at Grace Oliver [Beach ID: 2937] and bacteria data not meeting the threshold at 1 station in 2014. The prior Alert identified for Enterococcus is being removed in light of the new impairment for the same cause in Salem Sound. Salem Sound has 2 beaches with DPH Beach Closure data: Grace Oliver [Beach ID: 2937] and Gas House [Beach ID: 2939] beaches in Marblehead. Beaches were posted for >10% of the swimming season at Grace Oliver in 2021 (18%) and 2022 (15%) indicating an <i>Enterococcus</i> impairment. It should be noted that Gas House beach was also posted for 19% of the season in 2022. The shellfish growing areas (2.5327 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 Salem Sound based on shellfish classification data. Salem Sound Coastwatch (SSCW) staff/volunteers collected <i>Enterococcus</i> bacteria samples along the shoreline of Salem Sound at SSCW_700 [Doliber Cover Creek Grace Oliver Beach, Marblehead] from Jun-Aug 2014 (n=6). Analysis of the single year limited frequency <i>Enterococcus</i> dataset from SSCW_700 indicated 100% of intervals had GMs >35 CFU/100ml, 6 samples exceeded the 130 CFU/100ml STV, and the seasonal GM was 669 CFU/100ml. <i>Enterococcus</i> data from SSCW_700 are indicative of an <i>Enterococcus</i> impairment. The prior <i>Enterococcus</i> Alert is being removed due to an <i>Enterococcus</i> impairment being added.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_700	Salem Sound Coastwatch	Water Quality	Doliber Cover Creek, Wetland Estuarine-Emergent	Doliber Cover Creek - Grace Oliver Beach, Marblehead	42.514606	-70.846267

Bacteria Data

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

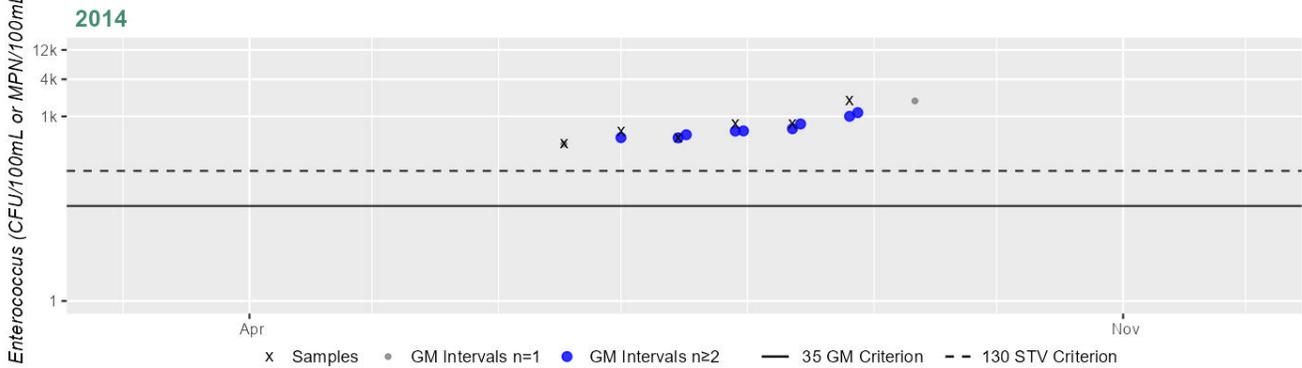
(MassDEP Undated 2)

[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
SSCW_700	Salem Sound Coastwatch	Enterococcus	06/17/14	08/26/14	6	355	1780	669

Station SSCW_700 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	669
#GMI	9
#GMI Ex	9
%GMI Ex	100%
n>STV	6
%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.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2937	Grace Oliver/ Marblehead	42.51503, - 70.84650	42.51446, - 70.84630	0%	0%	0%	0%	0%	4%	0%	18%	15%	2
2939	Gas House/ Marblehead	42.51006, - 70.84490	42.50974, - 70.84460	0%	0%	0%	0%	0%	0%	0%	5%	19%	1

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Salem Sound (MA93-56): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.5327 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Primary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Salem Sound (MA93-56) is assessed as Not Supporting. An <i>Enterococcus</i> impairment is being added based on bacteria data not meeting the threshold at 1 station in 2014. Salem Sound has 2 beaches with DPH Beach Closure data: Grace Oliver [Beach ID: 2937] and Gas House [Beach ID: 2939] beaches in Marblehead. Available DPH Beach Closure data cannot be used to positively assess the Secondary Contact Recreation Use since beaches were posted for >10% of the swimming season: Grace Oliver in 2021 and 2022. The shellfish growing areas (2.5327 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 Salem Sound. Salem Sound Coastwatch (SSCW) staff/volunteers collected <i>Enterococcus</i> bacteria samples along the shoreline of Salem Sound at SSCW_700 [Doliber Cover Creek Grace Oliver Beach, Marblehead] from Jun-Aug 2014 (n=6). Analysis of the single year limited frequency <i>Enterococcus</i> dataset from SSCW_700 indicated 100% of intervals had GMs >68 CFU/100ml, 6 samples exceeded the 252 CFU/100ml STV, and the overall GM was 669 CFU/100ml. <i>Enterococcus</i> data from SSCW_700 are indicative of an <i>Enterococcus</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
SSCW_700	Salem Sound Coastwatch	Water Quality	Doliber Cover Creek, Wetland Estuarine-Emergent	Doliber Cover Creek - Grace Oliver Beach, Marblehead	42.514606	-70.846267

Bacteria Data

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

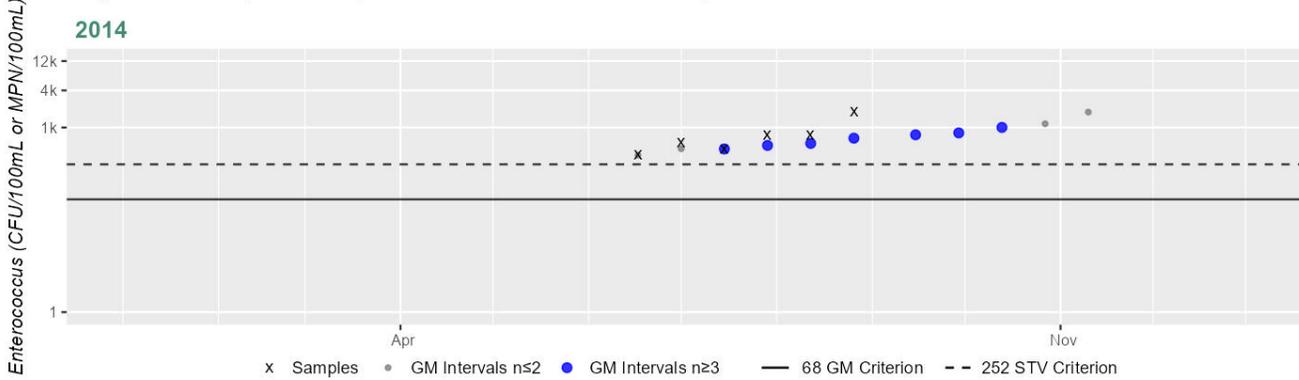
(MassDEP Undated 1)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
SSCW_700	Salem Sound Coastwatch	Enterococci	06/17/14	08/26/14	6	355	1780	669

Station SSCW_700 - Enterococcus

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



Variable*	Result
Samples	6
SeasGM	669
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	6
%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.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

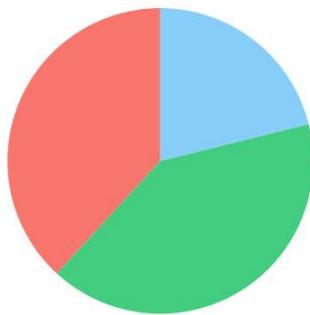
Salem Sound (MA93-56): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 2.5327 sq mi (99%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than "approved", the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Saugus River (MA93-34)

Location:	Headwaters, outlet Lake Quannapowitt, Wakefield (thru Reedy Meadow) to Lynn Water & Sewer Commission diversion canal impoundment dam (Saugus River Dam, NATID: MA02276), Wakefield/Lynnfield (canal diverts to Hawkes Pond) (formerly part of 1998 segment: Saugus River MA93-13).
AU Type:	RIVER
AU Size:	3.1 MILES
Classification/Qualifier:	A: PWS, ORW

Saugus River (MA93-34)

Watershed Area: 11.40 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	11.40	9.54	4.46	4.28
Agriculture	0%	0%	0%	0%
Developed	38.2%	34.6%	25%	24.7%
Natural	40.7%	42.2%	40.1%	40.8%
Wetland	21.1%	23.2%	34.9%	34.5%
Impervious	23.3%	20.9%	14.5%	14.5%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	(Physical Substrate Habitat Alterations*)	--	Unchanged
5	5	Algae	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged
5	5	Escherichia Coli (E. Coli)	50120	Unchanged
5	5	Fecal Coliform	50120	Unchanged
5	5	Phosphorus, Total	--	Unchanged
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
(Physical Substrate Habitat Alterations*)	Source Unknown (N)	X	--	--	--	--
Algae	Source Unknown (N)	--	--	X	X	X
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
Fecal Coliform	Source Unknown (N)	--	--	--	X	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--
Turbidity	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	X	X
Turbidity	Source Unknown (N)	--	--	X	X	X

Recommendations

2024/26 Recommendations
2016 IR [AESTHETICS, MEDIUM] Since aesthetics observations recorded in 2007 at {W0882} were insufficient to delist the Algae and Turbidity impairments for Saugus River (MA93-34), it is recommended that future sampling efforts include specific observations of these parameters to confirm if they are still of concern.

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
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Not Assessed	No
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2024/26 Use Attainment Summary	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Saugus River (MA93-34) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary	
The Aesthetics Use for Saugus River (MA93-34) 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 this Saugus 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 Saugus River (MA93-34) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) and Fecal Coliform impairments are being carried forward and 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	
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The Secondary Contact Recreation Use for the Saugus River (MA93-34) continues to be assessed as Not Supporting. The prior *Escherichia coli* (*E. coli*) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2002 & 2007. The prior Algae and Turbidity impairments (from the Aesthetics Use) are being carried forward. MassDEP staff collected *E. coli* bacteria samples in the Saugus River from 1997-2007 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at W0446 [outlet Lake Quannapowitt Main St, Wakefield] in Jul 1997 (n=1), and a third of the way down the AU at W0882 [Vernon St/Main St, Wakefield/Lynnfield] in 2002 and 2007 (n=4-6/yr). Analysis of the historic multi-year limited frequency *E. coli* dataset from W0882 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2002 and 2007, 50 & 100%), and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2007, n=3), cumulatively across years 87% of intervals had GMs >244 CFU/100ml. Historic *E. coli* data from W0446 are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use. Historic *E. coli* data from W0882 are indicative of an *E. coli* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0446	MassDEP	Water Quality	Saugus River	[outlet Lake Quannapowitt - Main Street, Wakefield]	42.522516	-71.077302
W0882	MassDEP	Water Quality	Saugus River	[Vernon Street/Main Street, Wakefield/Lynnfield]	42.524755	-71.065948

Bacteria Data

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

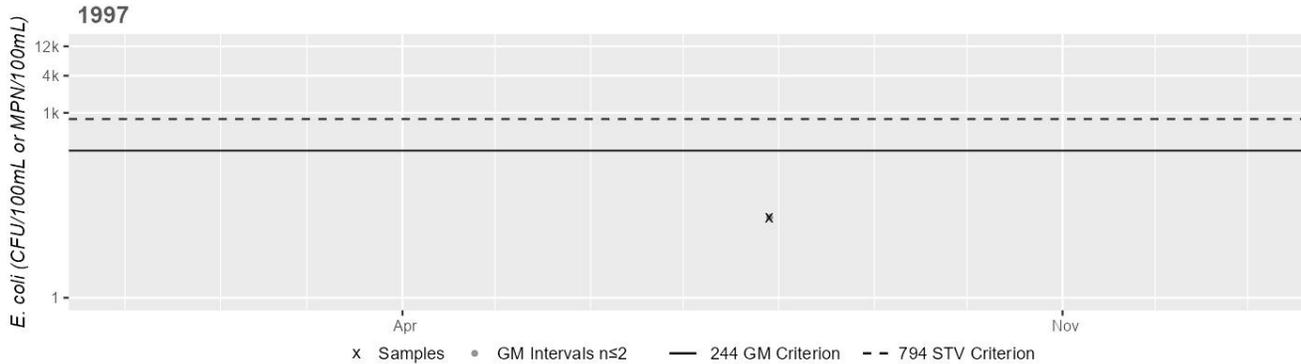
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0446	MassDEP	E. coli	07/29/97	07/29/97	1	20	20	19
W0882	MassDEP	E. coli	05/06/02	08/12/02	4	20	1200	166
W0882	MassDEP	E. coli	05/01/07	09/18/07	6	67	11000	698

Station MASSDEP_W0446 - Escherichia coli

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



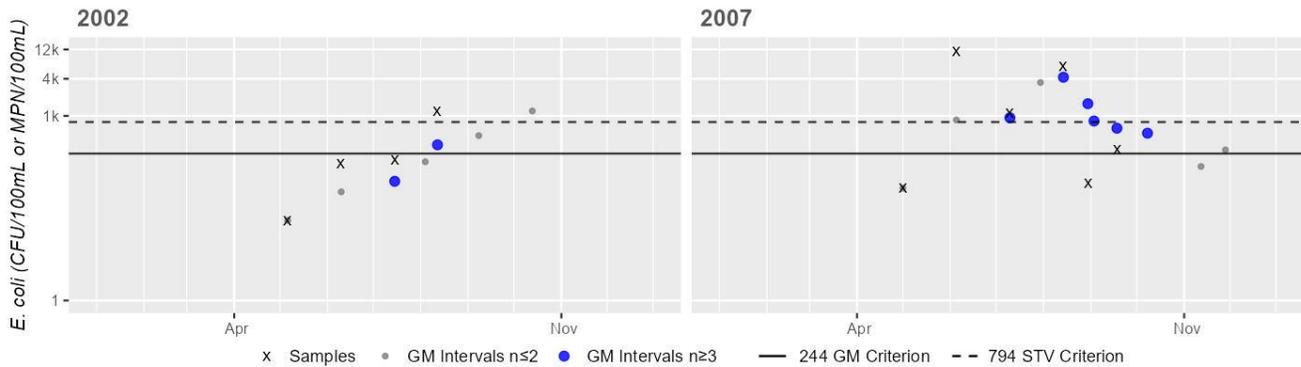
Variable*	Result
Samples	1
SeasGM	20
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W0882 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	166
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	698
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	3
%n>STV	50%

Cumulative %GMI Exceedance
Historic (1997-2010)
87%

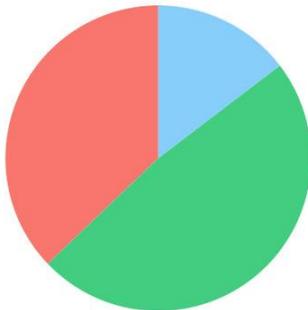
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Saugus River (MA93-35)

Location:	From the Lynn Water & Sewer Commission diversion canal impoundment dam (Saugus River Dam, NATID: MA02276), Wakefield/Lynnfield to Saugus Iron Works, Bridge Street, Saugus (formerly part of 1998 segment: Saugus River MA93-13).
AU Type:	RIVER
AU Size:	5.4 MILES
Classification/Qualifier:	B

Saugus River (MA93-35)

Watershed Area: 25.35 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	25.35	9.54	9.52	3.77
Agriculture	0%	0%	0%	0%
Developed	37.1%	30.4%	25.3%	21.6%
Natural	48.2%	60.6%	50.3%	64.5%
Wetland	14.6%	9%	24.4%	13.9%
Impervious	23.7%	19.4%	15.5%	13.3%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Alteration in Stream-side or Littoral Vegetative Covers*)	--	Unchanged
5	5	(Dewatering*)	--	Unchanged
5	5	(Fish Passage Barrier*)	--	Unchanged
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Escherichia Coli (E. Coli)	50120	Unchanged
5	5	Fecal Coliform	50120	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Alteration in Stream-side or Littoral Vegetative Covers*)	Streambank Modifications/Destabilization (N)	X	--	--	--	--
(Dewatering*)	Source Unknown (N)	X	--	--	--	--
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Fecal Coliform	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 Saugus River (MA93-35) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Saugus River (MA93-35) continues to be assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station a third of the way down this Saugus River AU, ~1600 feet downstream/south of Rt. 129, Saugus (W2519, n=5), as part of the MAP2 wadeable streams monitoring project in summer 2015. 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
W2519	MassDEP	Water Quality	Saugus River	[approximately 1600 feet downstream/south of Route 129, Saugus]	42.495806	-71.038741

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 4)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2519	2015	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2519 on Saugus River (MA93-35) during 5 site visits between May 2015 and Aug 2015. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 7) (MassDEP Undated 4)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2519	2015	5	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2519	Saugus River	2015	Aesthetics Impaired?	No	5	5
W2519	Saugus River	2015	Aquatic Plant Density, Overall	Moderate	3	5
W2519	Saugus River	2015	Aquatic Plant Density, Overall	Sparse	2	5
W2519	Saugus River	2015	Color	Light Yellow/Tan	5	5
W2519	Saugus River	2015	Objectionable Deposits	No	4	5
W2519	Saugus River	2015	Objectionable Deposits	Yes	1	5

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2519	Saugus River	2015	Odor	None	5	5
W2519	Saugus River	2015	Periphyton Density, Filamentous	None	5	5
W2519	Saugus River	2015	Periphyton Density, Film	None	5	5
W2519	Saugus River	2015	Scum	No	5	5
W2519	Saugus River	2015	Turbidity	None	2	5
W2519	Saugus River	2015	Turbidity	Slightly Turbid	3	5

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for the Saugus River (MA93-35) continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2015. The prior Fecal Coliform impairment is being carried forward. MassDEP staff collected <i>E. coli</i> bacteria samples a third of the way down Saugus River at W2519 [~1600 ft downstream/S of Rt. 129, Saugus] from May-Aug 2015 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2519 indicated 100% of intervals had GMs >126 CFU/100ml and while only 1 sample exceeded the 410 CFU/100ml STV, the seasonal GM was 275 CFU/100ml. <i>E. coli</i> data from W2519 are indicative of an <i>E. coli</i> impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2519	MassDEP	Water Quality	Saugus River	[approximately 1600 feet downstream/south of Route 129, Saugus]	42.495806	-71.038741

Bacteria Data

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

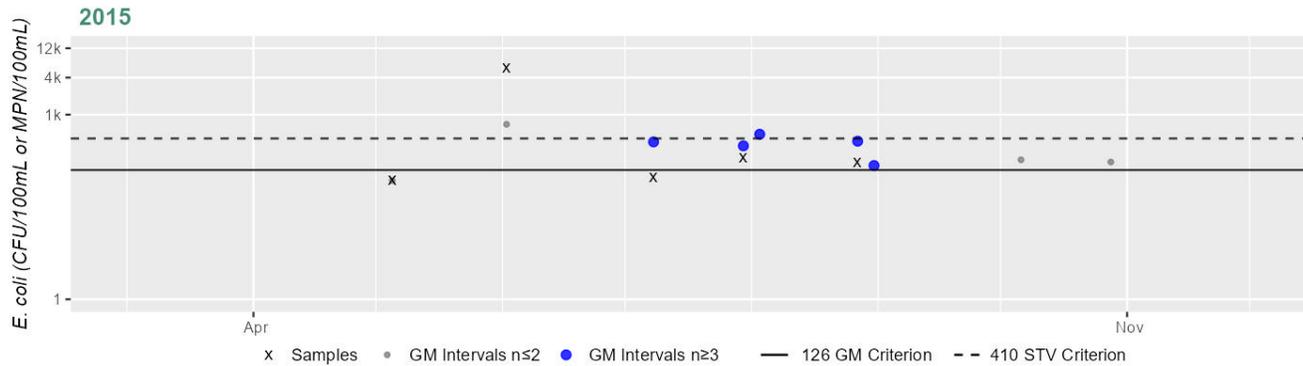
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2519	MassDEP	E. coli	05/05/15	08/27/15	5	85	5700	275

Station MASSDEP_W2519 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	275
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	1
%n>STV	20%

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 Saugus River (MA93-35) continues to be assessed as Not Supporting. The prior *Escherichia coli* (*E. coli*) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2015. The prior Fecal Coliform impairment is being carried forward. MassDEP staff collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Saugus River from 1997-2015 at 7 stations. Samples were collected from the following stations/sample years from upstream to downstream: towards the upstream end of the AU at W0445 [upstream/N at Salem St, Wakefield/Lynnfield] from 1997-1998 (n=1-3/yr), and W2150 [~970 ft downstream of Salem St, Lynnfield/Wakefield] from May-Oct 2010 (n=6), a third of the way down the AU at W2519 [~1600 ft downstream/S of Rt. 129, Saugus] from May-Aug 2015 (n=5), halfway down at W1545 [Cedar Glen Golf Course footbridge due W from club house, Saugus] from May-Sep 2007 (n=6), three-quarters of the way down at W0444 [upstream/W at Rt. 1, Saugus] from 1997-1998 (n=1-2/yr), close to the downstream end at W0883 [Elm St, Saugus] in 2002 and 2007 (n=4-6/yr), and the downstream end at W0443 [E of the Saugus River Iron Works, due W of the end of Bridge St, Saugus] from 1997-1998 (n=1-3/yr). Since there are some bacteria data from the current IR window that are indicative of poor water quality conditions (with a mix of good and poor conditions in the historic window), only the analysis from the current IR window will be summarized here as follows: Analysis of the single year limited frequency *E. coli* dataset from W2519 indicated 80% of intervals had GMs >244 CFU/100ml, and while only 1 sample exceeded the 794 CFU/100ml STV, the overall GM was 275 CFU/100ml. *E. coli* data from W2519 are indicative of an *E. coli* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0443	MassDEP	Water Quality	Saugus River	[east of the Saugus River Iron Works, due west of the end of Bridge Street, Saugus]	42.469421	-71.007161
W0444	MassDEP	Water Quality	Saugus River	[upstream/west at Route 1, Saugus]	42.482672	-71.020466
W0445	MassDEP	Water Quality	Saugus River	[upstream/north at Salem Street, Wakefield/Lynnfield]	42.511785	-71.036623
W0883	MassDEP	Water Quality	Saugus River	[Elm Street, Saugus]	42.472283	-71.006823
W1545	MassDEP	Water Quality	Saugus River	[Cedar Glen Golf Course footbridge due west from club house, Saugus]	42.495474	-71.027595
W2150	MassDEP	Water Quality	Saugus River	[approximately 970 feet downstream of Salem Street, Lynnfield/Wakefield]	42.509551	-71.036400
W2519	MassDEP	Water Quality	Saugus River	[approximately 1600 feet downstream/south of Route 129, Saugus]	42.495806	-71.038741

Bacteria Data

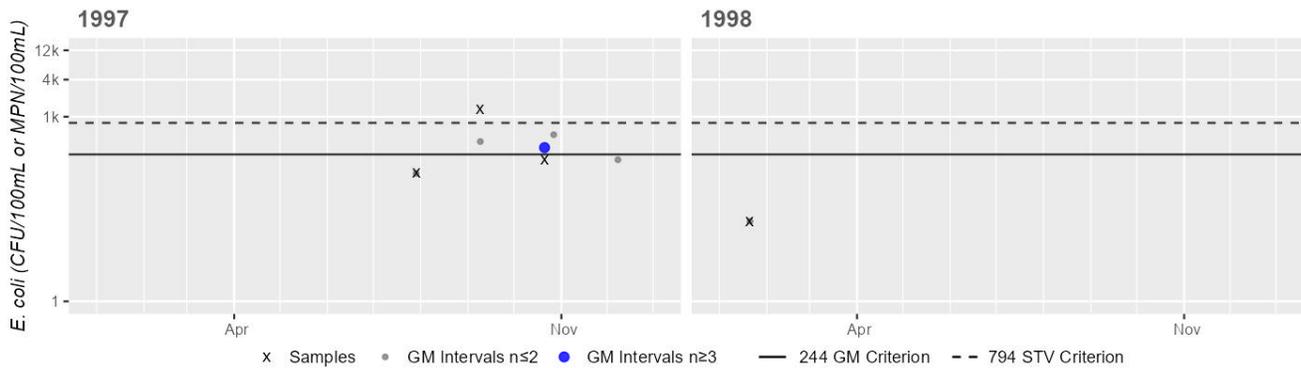
Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis)
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0443	MassDEP	E. coli	07/29/97	10/21/97	3	120	1300	314
W0443	MassDEP	E. coli	01/21/98	01/21/98	1	20	20	19
W0444	MassDEP	E. coli	07/29/97	09/09/97	2	60	80	69
W0444	MassDEP	E. coli	01/21/98	01/21/98	1	20	20	19
W0445	MassDEP	E. coli	07/29/97	10/21/97	3	20	100	43
W0445	MassDEP	E. coli	01/21/98	01/21/98	1	20	20	19
W0883	MassDEP	E. coli	05/06/02	08/12/02	4	20	360	126
W0883	MassDEP	E. coli	05/01/07	09/18/07	6	67	9100	655
W1545	MassDEP	E. coli	05/01/07	09/18/07	6	38	9500	638
W2150	MassDEP	E. coli	05/25/10	10/05/10	6	60	590	170
W2519	MassDEP	E. coli	05/05/15	08/27/15	5	85	5700	275

Station MASSDEP_W0443 - Escherichia coli

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



Variable*	Result
Samples	3
SeasGM	314
#GMI	1
#GMI Ex	1
%GMI Ex	100%
n>STV	1
%n>STV	33%

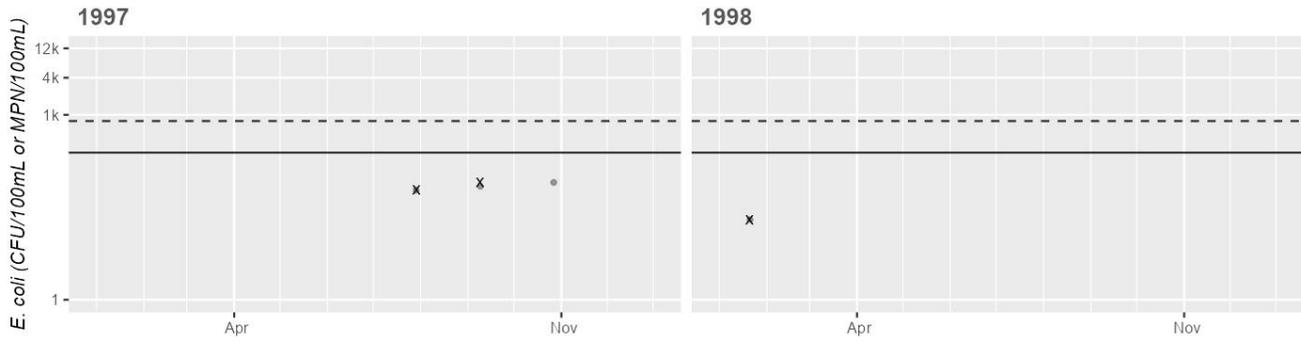
Variable*	Result
Samples	1
SeasGM	20
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W0444 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	69
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

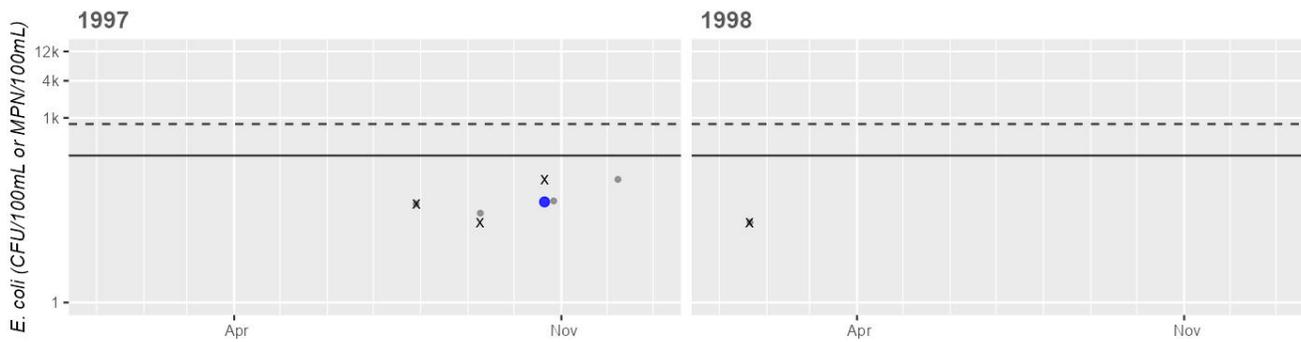
Variable*	Result
Samples	1
SeasGM	20
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W0445 - Escherichia coli

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



Variable*	Result
Samples	3
SeasGM	43
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

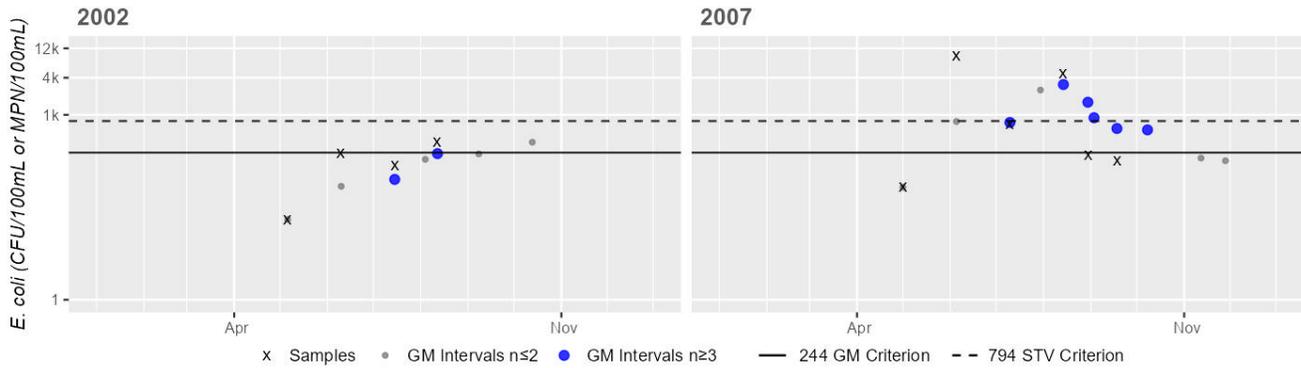
Variable*	Result
Samples	1
SeasGM	20
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W0883 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	126
#GMI	2
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

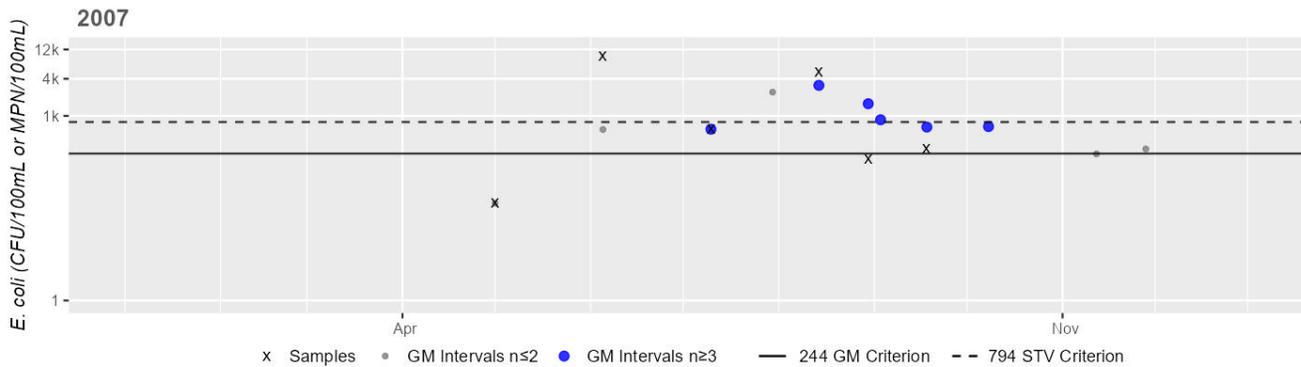
Variable*	Result
Samples	6
SeasGM	655
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance
Historic (1997-2010)
75%

*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_W1545 - Escherichia coli

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



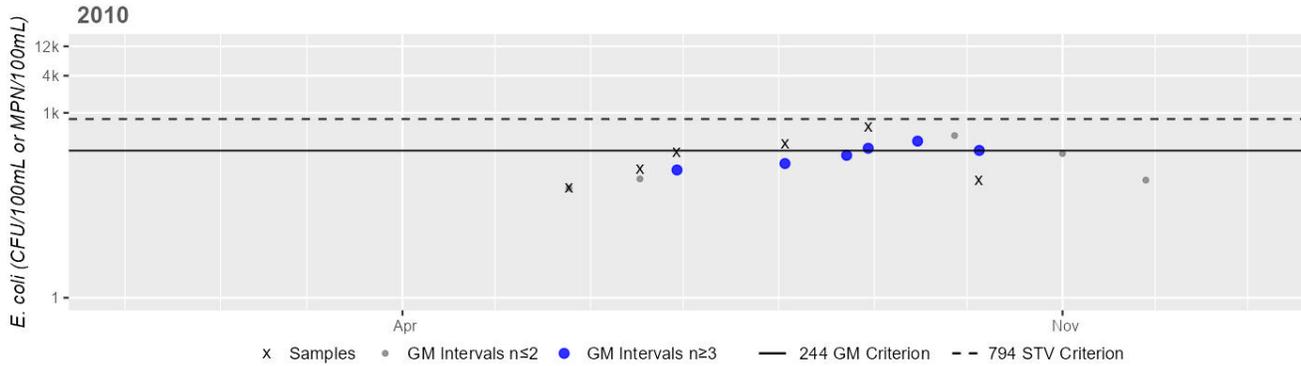
Variable*	Result
Samples	6
SeasGM	638
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	2
%n>STV	33%

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_W2150 - Escherichia coli

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



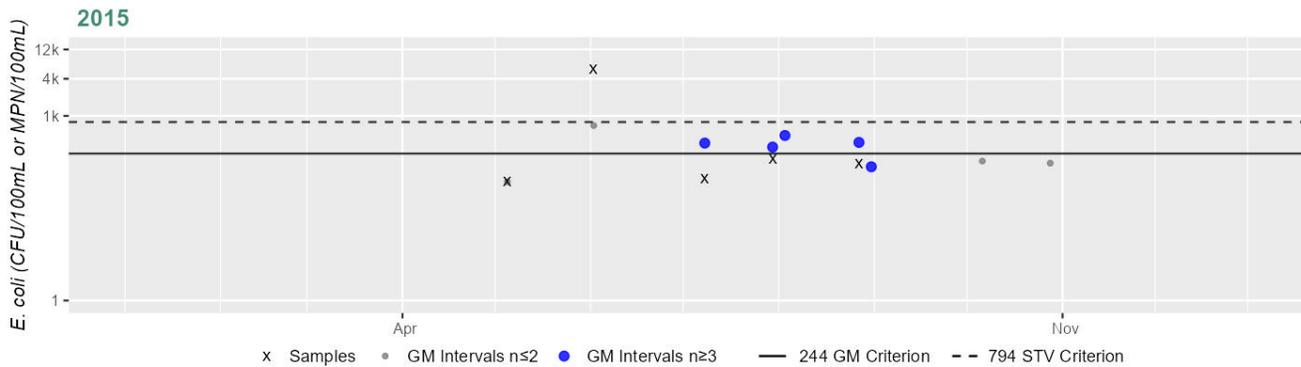
Variable*	Result
Samples	6
SeasGM	170
#GMI	6
#GMI Ex	3
%GMI Ex	50%
n>STV	0
%n>STV	0%

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.

Station MASSDEP_W2519 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	275
#GMI	5
#GMI Ex	4
%GMI Ex	80%
n>STV	1
%n>STV	20%

Cumulative %GMI Exceedance
Current (2011-2022)
80%

*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.

Saugus River (MA93-43)

Location:	From Saugus Iron Works, Bridge Street, Saugus to Lincoln Avenue/Boston Street, Saugus/Lynn (formerly part of 2006 segment: Saugus River MA93-14).
AU Type:	ESTUARY
AU Size:	0.04 SQUARE MILES
Classification/Qualifier:	SB: SFR

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Flow Regime Modification*)	--	Unchanged
5	5	Fecal Coliform	50122	Unchanged
5	5	Oil and Grease	--	Unchanged
5	5	Temperature	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
(Flow Regime Modification*)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	X	--	--	--	--	--
(Flow Regime Modification*)	Impacts from Hydrostructure Flow Regulation/Modification (N)	X	--	--	--	--	--
(Flow Regime Modification*)	Municipal Point Source Discharges (N)	X	--	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	X	X
Fecal Coliform	Industrial Point Source Discharge (N)	--	--	X	--	X	X
Fecal Coliform	Municipal (Urbanized High Density Area) (N)	--	--	X	--	X	X
Fecal Coliform	Municipal Point Source Discharges (N)	--	--	X	--	X	X
Fecal Coliform	Sanitary Sewer Overflows (Collection System Failures) (Y)	--	--	X	--	X	X
Oil and Grease	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	X	--	--	X	X	X
Oil and Grease	Industrial Point Source Discharge (N)	X	--	--	X	X	X
Oil and Grease	Municipal (Urbanized High Density Area) (N)	X	--	--	X	X	X
Oil and Grease	Municipal Point Source Discharges (N)	X	--	--	X	X	X
Temperature	Impacts from Hydrostructure Flow Regulation/Modification (N)	X	--	--	--	--	--
Temperature	Industrial Point Source Discharge (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 Saugus River (MA93-43) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Saugus River (MA93-43): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0295 sq mi (78%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0295 sq mi (78%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N26.0	Lynn Harbor/Broad Sound	Prohibited	0.02954	77.8%

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Saugus River (MA93-43) continues to be assessed as Not Supporting, with the Oil and Grease impairment being carried forward. No new data are available to evaluate the Aesthetics Use for this Saugus River AU.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for the Saugus River (MA93-43) continues to be assessed as Not Supporting. The prior Fecal Coliform impairment is being carried forward and the prior Oil and Grease impairment (from the Aesthetics Use) is being carried forward. The shellfish growing areas (0.0295 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 Saugus River.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

Saugus River (MA93-43): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0295 sq mi (78%). 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 Saugus River (MA93-43) continues to be assessed as Not Supporting. The prior Fecal Coliform impairment is being carried forward and the prior Oil and Grease impairment (from the Aesthetics Use) is being carried forward. The shellfish growing areas (0.0295 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 Saugus River.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

Saugus River (MA93-43): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0295 sq mi (78%). 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.

Saugus River (MA93-44)

Location:	From Lincoln Avenue/Boston Street, Saugus/Lynn to mouth (east of Route 1A) at Lynn Harbor, Lynn/Revere (formerly part of 2006 segment: Saugus River MA93-14).
AU Type:	ESTUARY
AU Size:	0.37 SQUARE MILES
Classification/Qualifier:	SB: ORW, SFR, CSO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Flow Regime Modification*)	--	Unchanged
5	5	Enterococcus	50122	Unchanged
5	5	Fecal Coliform	50122	Unchanged
5	5	Oil and Grease	--	Unchanged
5	5	Temperature	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
(Flow Regime Modification*)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	X	--	--	--	--	--
(Flow Regime Modification*)	Impacts from Hydrostructure Flow Regulation/Modification (N)	X	--	--	--	--	--
(Flow Regime Modification*)	Municipal Point Source Discharges (N)	X	--	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Enterococcus	Combined Sewer Overflows (Y)	--	--	--	--	X	X
Fecal Coliform	Combined Sewer Overflows (Y)	--	--	X	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	--	--	X	--	X	X
Fecal Coliform	Industrial Point Source Discharge (N)	--	--	X	--	X	X
Fecal Coliform	Municipal (Urbanized High Density Area) (N)	--	--	X	--	X	X
Fecal Coliform	Municipal Point Source Discharges (N)	--	--	X	--	X	X
Fecal Coliform	Sanitary Sewer Overflows (Collection System Failures) (Y)	--	--	X	--	X	X
Oil and Grease	Discharges from Municipal Separate Storm Sewer Systems (MS4) (Y)	X	--	--	X	X	X
Oil and Grease	Industrial Point Source Discharge (N)	X	--	--	X	X	X
Oil and Grease	Municipal (Urbanized High Density Area) (N)	X	--	--	X	X	X
Oil and Grease	Municipal Point Source Discharges (N)	X	--	--	X	X	X
Temperature	Impacts from Hydrostructure Flow Regulation/Modification (N)	X	--	--	--	--	--
Temperature	Industrial Point Source Discharge (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 Saugus River (MA93-44) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Saugus River (MA93-44): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3427 sq mi (93%). The sum of the approved, conditionally approved, and restricted shellfish growing areas represents 0 sq mi (0%). The conditionally restricted shellfish growing area represents 0.0165 sq mi (4%). The Shellfish Harvesting Use is assessed as Not Supporting because the growing areas (normalized to the AU area) are < 100% approved, conditionally approved, and/or restricted. Based on the new growing area classifications and the prior classifications, the existing Fecal Coliform impairment is being retained.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N26.0	Lynn Harbor/Broad Sound	Prohibited	0.32624	88.1%
N26.1	Lower Pines River and Center Bar	Conditionally Restricted	0.00024	0.1%
N26.7	Point of Pines	Conditionally Restricted	0.01623	4.4%

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Saugus River (MA93-44) continues to be assessed as Not Supporting, with the Oil and Grease impairment being carried forward. No new data are available to evaluate the Aesthetics Use for this Saugus River AU.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for the Saugus River (MA93-44) continues to be assessed as Not Supporting. The prior *Enterococcus* impairment is being carried forward based on the presence of CSOs. The prior Fecal Coliform impairment is being carried forward and the prior Oil and Grease impairment (from the Aesthetics Use) is being carried forward. The shellfish growing areas (0.3427 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 Saugus River. There is a presumptive *Enterococcus* impairment decision in place due to the presence of active CSO outfalls.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary

Saugus River (MA93-44): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3427 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 Saugus River (MA93-44) continues to be assessed as Not Supporting. The prior *Enterococcus* impairment is being carried forward based on the presence of CSOs. The prior Fecal Coliform impairment is being carried forward and the prior Oil and Grease impairment (from the Aesthetics Use) is being carried forward. The shellfish growing areas (0.3427 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 Saugus River based on shellfish classification data. There is a presumptive *Enterococcus* impairment decision in place due to the presence of active CSO outfalls. MassDEP staff collected *Enterococcus* bacteria samples halfway down the Saugus River at W0892 [~800 ft upstream of Rt. 107, Saugus] from May-Sep 2002 (n=5). Analysis of the historic single year limited frequency *Enterococcus* dataset from W0892 indicated 0% of intervals had GMs >68 CFU/100ml, no samples exceeded the 252 CFU/100ml STV, and the overall GM was 18 CFU/100ml. Historic *Enterococcus* data from W0892 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
W0892	MassDEP	Water Quality	Saugus River	[approximately 800 feet upstream of Route 107, Saugus]	42.450997	-70.982703

Bacteria Data

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

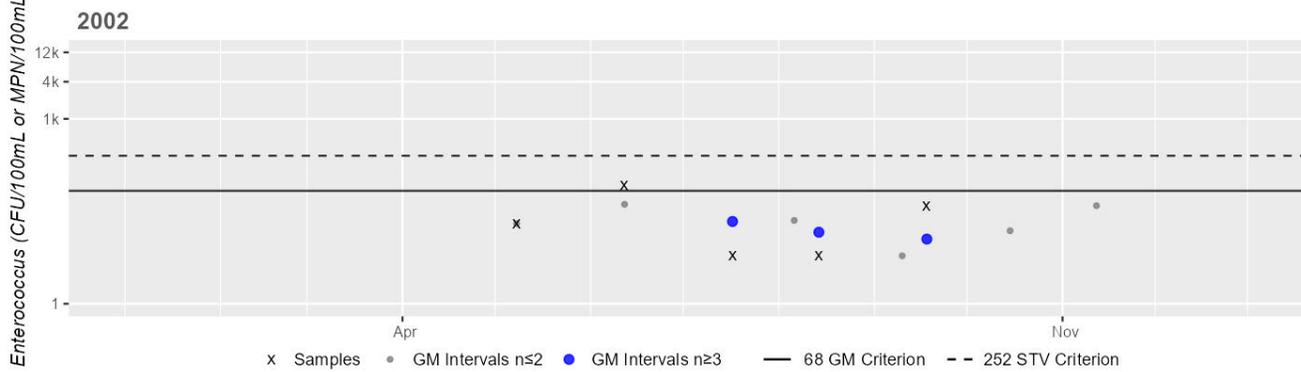
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0892	MassDEP	Enterococci	05/08/02	09/18/02	5	6	84	18

Station MASSDEP_W0892 - Enterococcus

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



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

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

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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 5)

Summary

Saugus River (MA93-44): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.3427 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.

Shute Brook (MA93-49)

Location:	From saltwater wetland downstream of Central Street, Saugus to mouth at confluence with the Saugus River, Saugus.
AU Type:	ESTUARY
AU Size:	0.01 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50121	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	--	X	X
Fecal Coliform	Highway/Road/Bridge Runoff (Non-construction Related) (N)	--	--	X	--	X	X
Fecal Coliform	Illicit Connections/Hook-ups to Storm Sewers (N)	--	--	X	--	X	X
Fecal Coliform	Source Unknown (N)	--	--	X	--	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
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Not Assessed	No
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2024/26 Use Attainment Summary	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Shute Brook (MA93-49) is Not Assessed.	

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary	
Shute Brook (MA93-49): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.003 sq mi (44%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.003 sq mi (44%). 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N26.0	Lynn Harbor/Broad Sound	Prohibited	0.00299	44.1%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary	
No data are available, so the Aesthetics Use for Shute Brook (MA93-49) is Not Assessed.	

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 Shute Brook (MA93-49) continues to be assessed as Not Supporting. The prior Fecal Coliform impairment is being carried forward. The shellfish growing areas (0.003 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 Shute Brook.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Shute Brook (MA93-49): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.003 sq mi (44%). 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 Shute Brook (MA93-49) continues to be assessed as Not Supporting. The prior Fecal Coliform impairment is being carried forward. The shellfish growing areas (0.003 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 Shute Brook.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

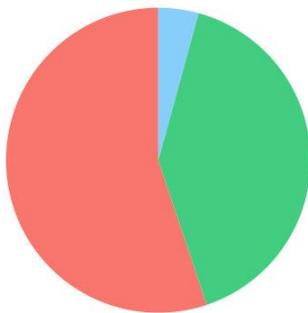
Summary
Shute Brook (MA93-49): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.003 sq mi (44%). The approved shellfish growing area represents 0 sq mi (0%). Because the total of all shellfish growing area classifications is anything less than “approved”, the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Shute Brook (MA93-50)

Location:	From the confluence of Fiske Brook, Saugus to approximately 350 feet downstream from Central Street, Saugus.
AU Type:	RIVER
AU Size:	0.9 MILES
Classification/Qualifier:	B

Shute Brook (MA93-50)

Watershed Area: 2.99 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.99	2.99	0.82	0.82
Agriculture	0%	0%	0%	0%
Developed	55.2%	55.2%	48.2%	48.2%
Natural	40.6%	40.6%	42.2%	42.2%
Wetland	4.3%	4.3%	9.6%	9.6%
Impervious	34.6%	34.6%	29.1%	29.1%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Escherichia Coli (E. Coli)	50120	Unchanged
4a	4a	Fecal Coliform	50120	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Highway/Road/Bridge Runoff (Non-construction Related) (N)	--	--	--	X	X

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Illicit Connections/Hook-ups to Storm Sewers (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Fecal Coliform	Highway/Road/Bridge Runoff (Non-construction Related) (N)	--	--	--	X	X
Fecal Coliform	Illicit Connections/Hook-ups to Storm Sewers (N)	--	--	--	X	X
Fecal Coliform	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 Shute Brook (MA93-50) 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 Shute Brook (MA93-50) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Shute Brook (MA93-50) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) and Fecal Coliform impairments 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 Shute Brook (MA93-50) continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2002 & 2007. The prior Fecal Coliform impairment is being carried forward. MassDEP staff collected <i>E. coli</i> bacteria samples close to the downstream end of Shute Brook at W0877 [upstream of Central St (upstream of railroad tracks), Saugus] in 2002 and 2007 (n=4-6/yr). Analysis of the historic multi-year limited frequency <i>E. coli</i> dataset from W0877 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2002 and 2007, 50 & 100%), and while only 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2007, n=5), cumulatively across years 87% of intervals had GMs >244 CFU/100ml. Historic <i>E. coli</i> data from W0877 are indicative of an <i>E. coli</i> impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0877	MassDEP	Water Quality	Shute Brook	[upstream of Central Street (upstream of railroad tracks), Saugus]	42.462305	-71.010480

Bacteria Data

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

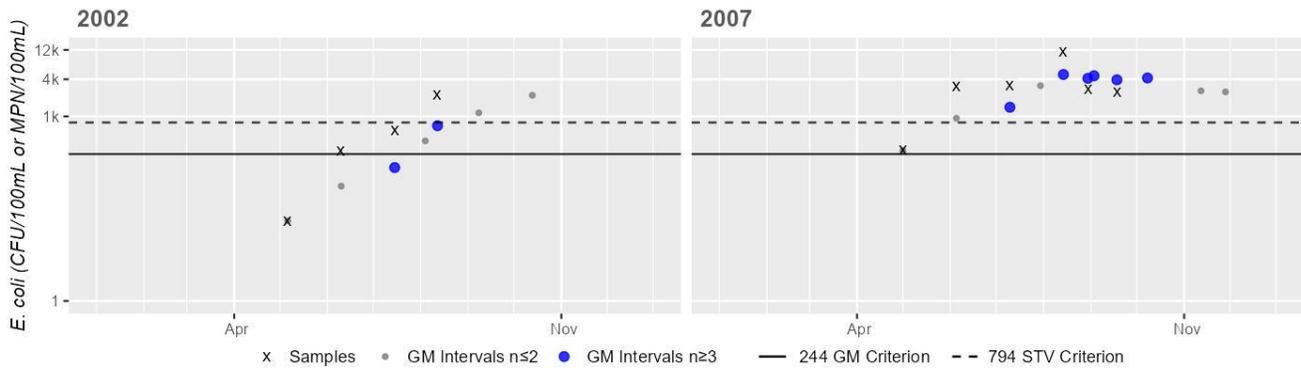
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0877	MassDEP	E. coli	05/06/02	08/12/02	4	20	2200	289
W0877	MassDEP	E. coli	05/01/07	09/18/07	6	280	11000	2430

Station MASSDEP_W0877 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	289
#GMI	2
#GMI Ex	1
%GMI Ex	50%
n>STV	1
%n>STV	25%

Variable*	Result
Samples	6
SeasGM	2430
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	5
%n>STV	83%

Cumulative %GMI Exceedance
Historic (1997-2010)
 87%

*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.

Sluice Pond (MA93071)

Location:	Lynn.
AU Type:	FRESHWATER LAKE
AU Size:	42 ACRES
Classification/Qualifier:	B

No usable data were available for Sluice Pond (MA93071) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
5	5	Dissolved Oxygen	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Eurasian Water Milfoil, Myriophyllum Spicatum*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--

Spring Pond (MA93072)

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

No usable data were available for Spring Pond (MA93072) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

Spring Pond (MA93073)

Location:	[South Basin] Peabody/Lynn/Salem.
AU Type:	FRESHWATER LAKE
AU Size:	67 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Spring Pond (MA93073) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Spring Pond (MA93074)

Location:	[North Basin] Peabody.
AU Type:	FRESHWATER LAKE
AU Size:	17 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Spring Pond (MA93074) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Strangman Pond (MA93076)

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

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Aquatic Plants (Macrophytes)*)	Source Unknown (N)	--	--	X	X	X
Algae	Source Unknown (N)	--	--	X	X	X
Nutrient/Eutrophication Biological Indicators	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	X	X	X
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	--	--	X	X	X
Turbidity	Source Unknown (N)	--	--	X	X	X

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Aquatic Plants (Macrophytes)	Not caused by a pollutant (4c)	<p>As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Strangman Pond (MA93076) was first listed as impaired for Noxious Aquatic Plants in 2002 and this cause was remapped to Aquatic Plants (Macrophytes) during the 2008 IR cycle (MassDEP 2024). The original impairment was based on a September 1997 synoptic survey conducted by MassDEP staff in which it was noted that 90% of the pond was very densely covered with water lilies and that the water column was filled with, among others, the non-rooted, floating species, <i>Utricularia</i> sp. (MassDEP 1997, MassDEP 2002). Google Earth images from August 2013 and October 2020 show patches of dense vegetation in the pond, totaling roughly 25-50% of the pond's surface area (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of a non-rooted, floating, aquatic macrophyte species (<i>Utricularia</i> sp.). Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since 25% or more of the pond was covered in aquatic macrophytes in recent years.</p>

Aquatic Plants (Macrophytes)

1999 WBS Coding Sheet (MassDEP 2002):

WBID MA 93076 ✓
 NAME Strangman Pond
 CODE 93076

WATERSHED North Coastal
 TYPE Lake/Pond
 SIZE 3.0 acres

✓ RSM
 (Printed 08/01/96)

CLASS: B/
 ORW?: Yes or No
 Water Supply?: Yes or No

LATITUDE:
 LONGITUDE:
 Lake/Pond Name:
 Ecoregion Name:
 Description: Strangman Pond, Gloucester

Assessment Date: 9810
 Cycle: 9899
 Begin Sampling: 9709
 End Sampling: 9709
 Water Quality Limited?: YES or NO
 303(d) List?: YES or NO

1996	1999
Significantly Publicly Owned:	Significantly Publicly Owned: Y or N
Trophic Status:	Trophic Status: O M E H D U
Trophic Trend:	Trophic Trend: I S D U
Acidity/Toxics Trend:	Acidity/Toxics Trend: I S D U
Acidity Effects:	Acidity Effects: I V N U

Uses	Support	Threat	Partial	Non-Sup	Not-Asses	Not-Attain
OVERALL USE SUPPORT				3.0		
ALUS						
FISH CONSUMPTION					3.0	
PRIMARY CONTACT					3.0	
SECONDARY CONTACT				3.0		
Aesthetics				3.0		
ALUS Bio				3.0		
ALUS Chem/Phys						
ALUS Toxicity						

Nonattainment Causes	Code	Size	Magnitude
		2200	3.0 H
		2500	3.0 H

Nonattainment Sources	Code	Size	Magnitude
		9000	3.0 H

Assessment Type
 1996 Assessment Category => M E NA
 R35

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

Comments:
 1999: 16 September 1997 synoptic survey indicated very dense emergent, floating, and submergent vegetation covering most of the pond. Also, algal scums observed to reduce transparency below safety criterion (4 ft)

LAKE/POND: Strangman Pond SIZE (acres): 3 PALIS NO. 93076
 TOWN/CITY: Gloucester USGS TOPO. SHEET: Gloucester
 DATE: 9/16/97 WATERSHED: North Coast OBSERVERS: DeLore / Gil

ACCESS - Location [describe each observation site and assign sequential numbers (1, 2, 3, etc.) to use in subsequent records; be specific in descriptions (e.g., public boat ramp at west cove area off Simpson St., etc.)]
 Site (1) Drive up road to dam @ Sportsmans Club
 Site (2) _____
 Site (3) _____

ACCESS - Type (for multiple observation sites use numbers in boxes that apply)
 Formal Boat Ramp and/or Beach Informal Boat Ramp and/or Beach
 Park Conservation Area Right-of-Way: Road Other Dam
 Other (describe): _____

ACCESS - Ownership (for multiple observation sites use numbers in boxes that apply)
 Public Private Uncertain
 Names of Owners Cape Ann Sportsman's Club No. & Street Name Private Rd. off Cherry St
 _____ No. & Street Name _____
 _____ No. & Street Name _____

SIGN POSTINGS -
 Warning: Stop Aquatic Plant Spread Fishing Advisory or Ban
 Public Access without Restrictions Public Access with Restrictions
 Describe any restrictions (or other notes) _____

WATER / LAKE QUALITY OBSERVATIONS -
 Turbidity: Slight Moderate Excessive Transparency: < 1.2 m. (4 ft.) > 1.2 m. (4 ft.)
 Estimated visually _____ meters
 Measured w/ Secchi Disk _____ meters
 Diss. Organics: Slight Moderate Dark _____ meters
 Algal Bloom: Slight Moderate Dense _____ meters
 Bottom Type: Undecomposed matter Muck/silt Sand Gravel Cobble Boulders
 Vegetation Other _____ _____
 Other Observations: _____

AESTHETICALLY OBJECTIONABLE - Substances attributable to wastewater or other discharges (point or nonpoint) that:
 Settle to form objectionable deposits Float as debris, scum or other matter to form a nuisance
 Describe: _____ Describe: Surface scum + sheen
 Produce objectionable odor, color, taste, or turbidity Produce undesirable nuisance species of aquatic life
 Describe: Green Describe: Algae / weeds

RECORD OF AQUATIC PLANT "SPECIES" OBSERVED -

NON-NATIVE WETLANDS SPECIES PRESENT: *Lythrum Salicaria* *Phragmites* sp.

NON-NATIVE AQUATIC SPECIES PRESENT: *Butomus umbellatus* *Cabomba caroliniana* *Egeria densa*

Eichornia crassipes *Hydrilla verticillata* *Hydrocharis morsus-ranae* *Marsilea quadrifolia*

Myriophyllum aquaticum *Myriophyllum heterophyllum* *Myriophyllum spicatum*

M. sp. (*M. heterophyllum* requiring further confirmation when flowering heads are evident)

Najas minor *Nelumbo lutea* *Nymphoides peltata* *Potamogeton crispus* *Trapa natans*

NATIVE SPECIES POPULATIONS:

Emergent Plants	Floating Leaf Plants	Submergent Plants
<input type="checkbox"/> <input type="checkbox"/> <i>Calygonum</i>	<input type="checkbox"/> <input type="checkbox"/> <i>Nuphar</i>	<input type="checkbox"/> <input type="checkbox"/> <i>Utricularia</i>
<input type="checkbox"/> <input type="checkbox"/> <i>Pink doria</i>	<input type="checkbox"/> <input type="checkbox"/> <i>Brasenia</i>	<input type="checkbox"/> <input type="checkbox"/> <i>M. humile</i>
<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____
<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____
<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____
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<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____
<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____
<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____
<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____
<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____
<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____	<input type="checkbox"/> <input type="checkbox"/> _____

AQUATIC PLANT DENSITY -

Percent of surface area (at observation site) with dense (50 - 75 %) aquatic plant cover _____ % _____ % _____ %

Forms ((E)mergent, (F)loating, or (S)ubmergent) present _____ _____ _____

Percent of surface area (observation site) with very dense (75 - 100 %) plant cover 90 % _____ % _____ %

Forms ((E)mergent, (F)loating, or (S)ubmergent) present E/F/S _____ _____

Percent of entire lake surface covered with dense or very dense aquatic plants 90 % Forms E/F/S

Describe locations of dense and/or very dense plant beds Surface 90% covered w/ lilies - water column filled w/ Utricularia + Myriophyllum

Loss of open water habitat over entire lake (estimated): 90 - 100 % 60 - 85 % 30 - 55 % ≤ 25 %

ASSESSMENTS -

TROPIC STATUS ESTIMATE: Oligotrophic Mesotrophic Eutrophic Hypereutrophic Dystrophic Undetermined

305(b) USE IMPAIRMENT ASSESSMENTS (Acres):

USES	Full Support	Threatened	Partial Support	Non-support	Not Assessed
Aquatic Life					3.0
Fish Consumption					3.0
Primary Contact				3.0	
Secondary Contact				3.0	
Aesthetics				3.0	

CAUSES: Noxious plants (2200) - Size 3.0 acres / Magnitude M Exotic plants (2600) - Size _____ acres / Magnitude _____

Turbidity (2500) - Size 3.0 acres / Magnitude M Flow alteration (1500) - Size _____ acres / Magnitude _____

Metals (0500) Hg (0501) - Size _____ acres / Magnitude _____ Siltation (1100) - Size _____ acres / Magnitude _____

_____ () - Size _____ acres / Magnitude _____ _____ () - Size _____ acres / Magnitude _____

SOURCES: Describe any obvious sources of impairment Run off from Sportsman's Club.

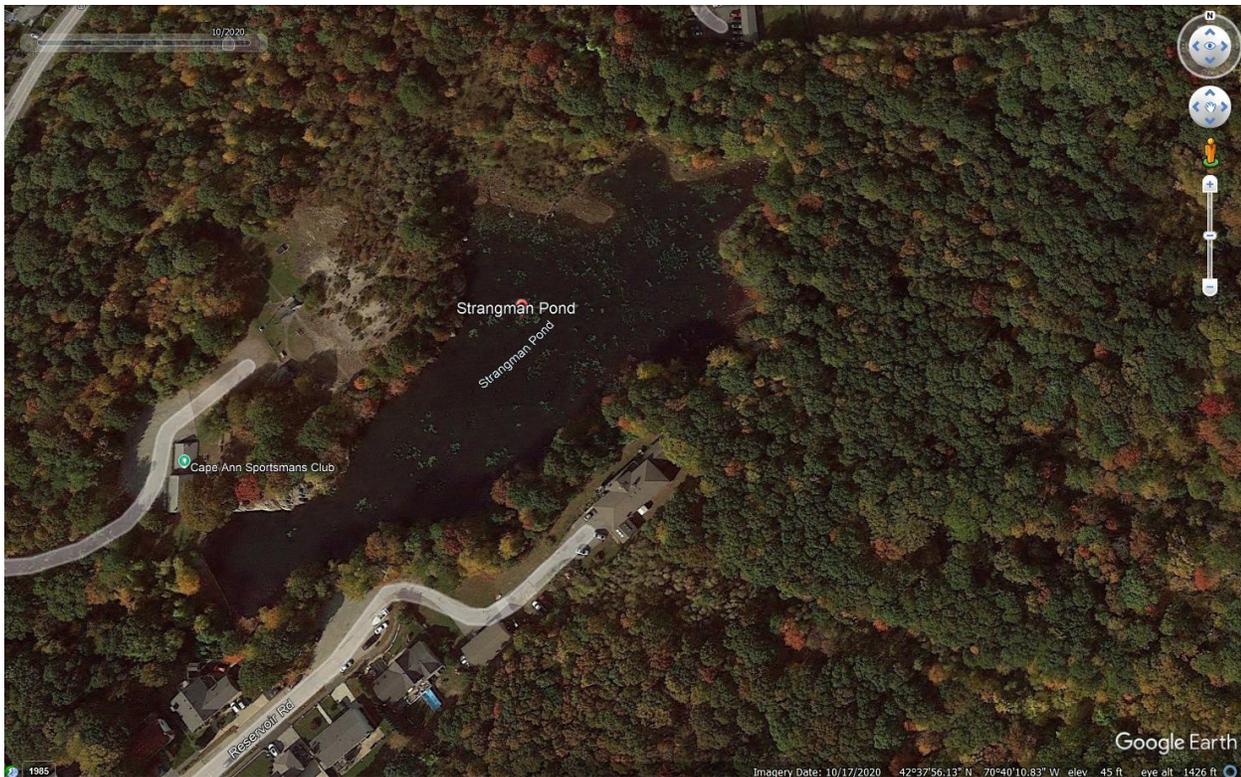
Google Earth image of Strangman Pond when relatively clear, 12/31/2000 (Google Earth Pro Undated):



[Google Earth image of Strangman Pond, 8/24/2013.](#) (Google Earth Pro Undated):



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



Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary

Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Strangman Pond (MA93076) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Strangman Pond (MA93076) continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. Additionally the prior Algae and Turbidity impairments are being carried forward and a Nutrient/Eutrophication Biological Indicators impairment being added. As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Strangman Pond was first listed as impaired for Noxious Aquatic Plants in 2002 and this cause was remapped to Aquatic Plants (Macrophytes) during the 2008 IR cycle (MassDEP 2024). The original impairment was based on a September 1997 synoptic survey conducted by MassDEP staff in which it was noted that 90% of the pond was very densely covered with water lilies and that the water column was filled with, among others, the non-rooted, floating species, *Utricularia sp.* (MassDEP 1997, MassDEP 2002). Google Earth images from August 2013 and October 2020 show patches of dense vegetation in the pond, totaling roughly 25-50% of the pond's surface area (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of a non-rooted, floating, aquatic macrophyte species (*Utricularia sp.*). Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since 25% or more of the pond was covered in aquatic macrophytes in recent years. No new data are available to evaluate the Aesthetics Use for Strangman Pond.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Strangman Pond (MA93076) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment (from the Aesthetics Use) is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. The prior Algae and Turbidity impairments (from the Aesthetics Use) are being carried forward. A Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use).

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for Strangman Pond (MA93076) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment (from the Aesthetics Use) is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. The prior Algae and Turbidity impairments (from the Aesthetics Use) are being carried forward. A Nutrient/Eutrophication Biological Indicators impairment is also being added (from the Aesthetics Use).

Swains Pond (MA93095)

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

No usable data were available for Swains Pond (MA93095) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

Unnamed Tributary (MA93-27)

Location:	Headwaters, outlet Babson Reservoir, Gloucester to culvert outlet into saltwater wetland northwest of Bertoni Road, Gloucester (portion culverted).
AU Type:	RIVER
AU Size:	0.4 MILES
Classification/Qualifier:	B

No usable data were available for Unnamed Tributary (MA93-27) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Unnamed Tributary (MA93-51)

Location:	Unnamed tributary locally known as "Town Line Brook", from Route 99, Malden to mouth at confluence with Pines River, Revere.
AU Type:	ESTUARY
AU Size:	0.02 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Alteration in Stream-side or Littoral Vegetative Covers*)	--	Unchanged
5	5	(Debris*)	--	Unchanged
5	5	(Flow Regime Modification*)	--	Unchanged
5	5	(Physical Substrate Habitat Alterations*)	--	Unchanged
5	5	Enterococcus	50123	Added
5	5	Fecal Coliform	50123	Unchanged
5	5	Odor	--	Unchanged
5	5	Trash	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
(Alteration in Stream-side or Littoral Vegetative Covers*)	Channelization (Y)	X	--	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
(Alteration in Stream-side or Littoral Vegetative Covers*)	Streambank Modifications/Destabilization (Y)	X	--	--	--	--	--
(Debris*)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X	X
(Debris*)	Illicit Connections/Hook-ups to Storm Sewers (N)	--	--	--	X	X	X
(Debris*)	Municipal (Urbanized High Density Area) (Y)	--	--	--	X	X	X
(Debris*)	Sanitary Sewer Overflows (Collection System Failures) (Y)	--	--	--	X	X	X
(Debris*)	Urban Runoff/Storm Sewers (Y)	--	--	--	X	X	X
(Flow Regime Modification*)	Channelization (Y)	X	--	--	--	--	--
(Flow Regime Modification*)	Streambank Modifications/Destabilization (Y)	X	--	--	--	--	--
(Physical Substrate Habitat Alterations*)	Channelization (Y)	X	--	--	--	--	--
(Physical Substrate Habitat Alterations*)	Streambank Modifications/Destabilization (Y)	X	--	--	--	--	--
Enterococcus	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	--	X
Enterococcus	Source Unknown (N)	--	--	--	--	--	X
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	--	X	--

Impairment	Source (Confirmed Y/N)	ALU	FC	SH	AES	PCR	SCR
Fecal Coliform	Illicit Connections/Hook-ups to Storm Sewers (N)	--	--	--	--	X	--
Fecal Coliform	Municipal (Urbanized High Density Area) (Y)	--	--	--	--	X	--
Fecal Coliform	Sanitary Sewer Overflows (Collection System Failures) (Y)	--	--	--	--	X	--
Fecal Coliform	Urban Runoff/Storm Sewers (Y)	--	--	--	--	X	--
Odor	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X	X
Odor	Illicit Connections/Hook-ups to Storm Sewers (N)	--	--	--	X	X	X
Odor	Municipal (Urbanized High Density Area) (Y)	--	--	--	X	X	X
Odor	Sanitary Sewer Overflows (Collection System Failures) (Y)	--	--	--	X	X	X
Odor	Urban Runoff/Storm Sewers (Y)	--	--	--	X	X	X
Trash	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X	X
Trash	Illicit Connections/Hook-ups to Storm Sewers (N)	--	--	--	X	X	X
Trash	Municipal (Urbanized High Density Area) (Y)	--	--	--	X	X	X
Trash	Sanitary Sewer Overflows (Collection System Failures) (Y)	--	--	--	X	X	X
Trash	Urban Runoff/Storm Sewers (Y)	--	--	--	X	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unnamed Tributary (MA93-51) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
Unnamed Tributary (MA93-51): There are no shellfish growing area classifications within this AU, therefore the Shellfish Harvesting Use is Not Assessed for 2024.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No new data are available to evaluate the Aesthetics Use for Unnamed Tributary (MA93-51) so it continues to be assessed as Not Supporting with the Trash, Odor, and Debris impairments being carried forward.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Unnamed Tributary (MA93-51) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Fecal Coliform impairment is being carried forward and the prior Debris, Odor, and Trash impairments (from the Aesthetics Use) are also being carried forward.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Unnamed Tributary (MA93-51): There are no shellfish growing area classifications within this AU, therefore 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 Unnamed Tributary (MA93-51) continues to be assessed as Not Supporting. The prior Fecal Coliform impairment is being carried forward and the prior Debris, Odor, and Trash impairments (from the Aesthetics Use) are being carried forward. An <i>Enterococcus</i> impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 1 station in 2002. MassDEP staff collected <i>Enterococcus</i> bacteria samples a third of the way down Unnamed Tributary at W0880 [unnamed tributary to Pines River locally known as Town Line Brook, N of Fuller St, Everett at northern end of Beth Israel Cemetery, Malden] from May-Sep 2002 (n=5). Analysis of the historic single year limited frequency <i>Enterococcus</i> dataset from W0880 indicated 100% of intervals had GMs >68 CFU/100ml, 3 samples exceeded the 252 CFU/100ml STV, and the overall GM was 269 CFU/100ml. Historic <i>Enterococcus</i> data from W0880 are indicative of an <i>Enterococcus</i> impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W0880	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Pines River locally known as Town Line Brook, north of Fuller Street, Everett at northern end of Beth Israel Cemetery, Malden]	42.425055	-71.032530

Bacteria Data

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

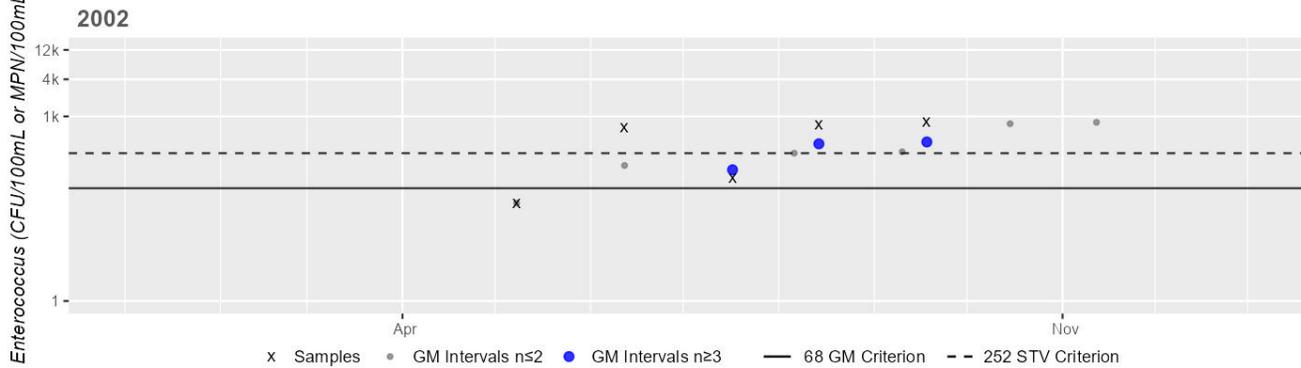
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0880	MassDEP	Enterococci	05/08/02	09/18/02	5	39	800	269

Station MASSDEP_W0880 - Enterococcus

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



Variable*	Result
Samples	5
SeasGM	269
#GMI	3
#GMI Ex	3
%GMI Ex	100%
n>STV	3
%n>STV	60%

Cumulative %GMI Exceedance

Historic (1997-2010)

100%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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 5)

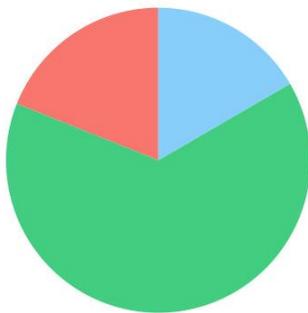
Summary
Unnamed Tributary (MA93-51): There are no shellfish growing area classifications within this AU, therefore the Secondary Contact Recreational Use cannot be assessed for 2024 using the shellfish classification data.

Unnamed Tributary (MA93-58)

Location:	Unnamed tributary to Beverly Cove, perennial portion, Route 22, Beverly to saltwater wetlands south of Route 127, Beverly.
AU Type:	RIVER
AU Size:	2.1 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA93-58)

Watershed Area: 1.62 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.62	1.62	0.70	0.70
Agriculture	0%	0%	0%	0%
Developed	19%	19%	19.5%	19.5%
Natural	64.4%	64.4%	56%	56%
Wetland	16.6%	16.6%	24.4%	24.4%
Impervious	11.2%	11.2%	11.3%	11.3%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Benthic Macroinvertebrates	Source Unknown (N)	X	--	--	--	--
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	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 Unnamed Tributary (MA93-58) 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 (MA93-58) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Unnamed Tributary (MA93-58) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being carried forward.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for Unnamed Tributary (MA93-58) 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 two-thirds of the way down Unnamed Tributary at W1543 [unnamed tributary to Beverly Cove locally known as “Curtis Brook”, Tall Tree Drive, Beverly] from May-Sep 2007 (n=5). Analysis of the historic single year limited frequency *E. coli* dataset from W1543 indicated 33% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV (1,600 CFU), and the overall GM was 167 CFU/100ml. Historic *E. coli* data from W1543 are inconclusive according to the 2024 CALM to assess the Secondary Contact Recreation Use because this single year, limited frequency dataset included both GMs below the threshold and STV exceedance of the threshold. Additionally, 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
W1543	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Beverly Cove locally known as "Curtis Brook", Tall Tree Drive, Beverly]	42.561819	-70.848394

Bacteria Data

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

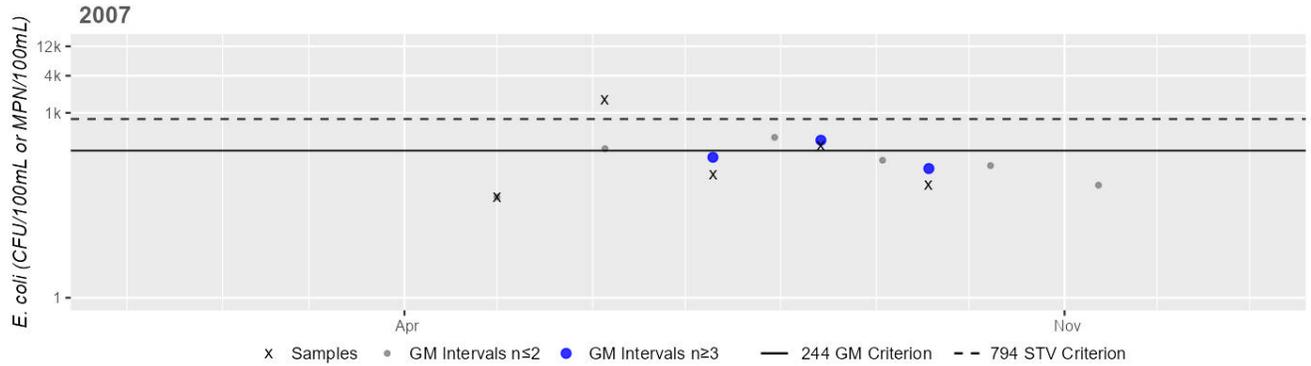
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1543	MassDEP	E. coli	05/01/07	09/18/07	5	43	1600	167

Station MASSDEP_W1543 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	167
#GMI	3
#GMI Ex	1
%GMI Ex	33%
n>STV	1
%n>STV	20%

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

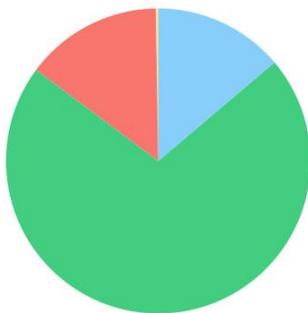
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Unnamed Tributary (MA93-59)

Location:	Unnamed tributary to Chubb Creek, headwaters west of Hale Street, Beverly to mouth at confluence with Chubb Creek east of Route 127, Beverly.
AU Type:	RIVER
AU Size:	0.8 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA93-59)

Watershed Area: 1.73 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.73	1.73	0.68	0.68
Agriculture	0.3%	0.3%	0.4%	0.4%
Developed	14.6%	14.6%	17.9%	17.9%
Natural	71.4%	71.4%	61.3%	61.3%
Wetland	13.8%	13.8%	20.5%	20.5%
Impervious	8.9%	8.9%	10.4%	10.4%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Benthic Macroinvertebrates	--	Unchanged
5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Benthic Macroinvertebrates	Source Unknown (N)	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 Unnamed Tributary (MA93-59) 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 (MA93-59) is Not Assessed.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Unnamed Tributary (MA93-59) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior <i>Escherichia coli</i> (<i>E. coli</i>) impairment is being carried forward.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Unnamed Tributary (MA93-59) is assessed as Not Supporting. An *Escherichia coli* (*E. coli*) impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 1 station in 2007. MassDEP staff collected *E. coli* bacteria samples halfway down Unnamed Tributary at W1542 [unnamed tributary to Chubb Creek, Oak St, Beverly] from May-Sep 2007 (n=6). Analysis of the historic single year limited frequency *E. coli* dataset from W1542 indicated 100% of intervals had GMs >244 CFU/100ml, 3 samples exceeded the 794 CFU/100ml STV, and the overall GM was 451 CFU/100ml. Historic *E. coli* data from W1542 are indicative of an *E. coli* impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1542	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Chubb Creek, Oak Street, Beverly]	42.562899	-70.810299

Bacteria Data

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

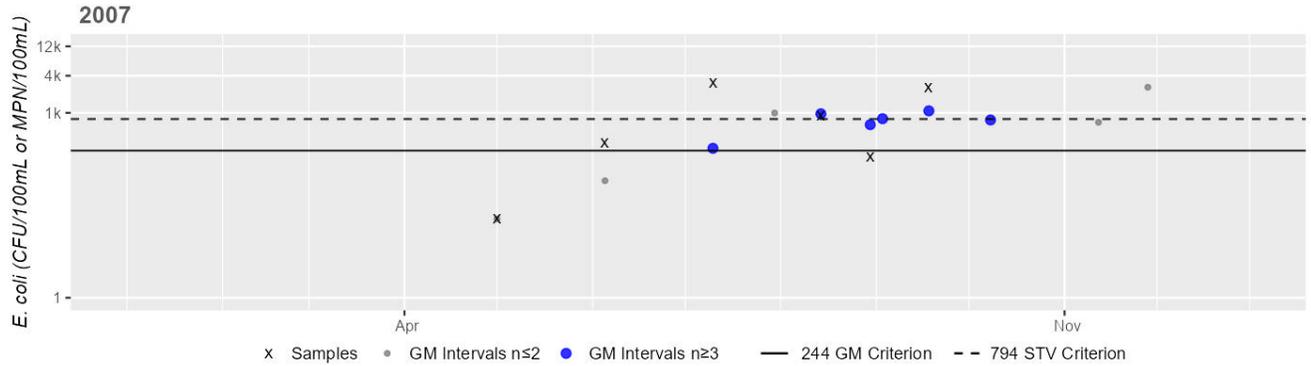
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1542	MassDEP	E. coli	05/01/07	09/18/07	6	19	3000	451

Station MASSDEP_W1542 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	451
#GMI	6
#GMI Ex	6
%GMI Ex	100%
n>STV	3
%n>STV	50%

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.

Unnamed Tributary (MA93-65)

Location:	Unnamed Tributary to Lily Pond, headwaters outlet Dykes Pond, Gloucester to mouth at inlet Lily Pond, Gloucester.
AU Type:	RIVER
AU Size:	0.2 MILES
Classification/Qualifier:	B

No usable data were available for Unnamed Tributary (MA93-65) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

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

Upper Banjo Pond (MA93080)

Location:	Gloucester.
AU Type:	FRESHWATER LAKE
AU Size:	11 ACRES
Classification/Qualifier:	B

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

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

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Aquatic Plants (Macrophytes)	Not caused by a pollutant (4c)	<p>As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Upper Banjo Pond (MA93080) was first listed as impaired for Noxious Aquatic Plants in 2002 and this cause was remapped to Aquatic Plants (Macrophytes) during the 2008 IR cycle (MassDEP 2024). The original impairment was based on a September 1997 synoptic survey conducted by MassDEP staff in which it was noted that 90% of the pond was covered with dense vegetation (50-75%), including several species of the non-rooted <i>Utricularia</i> genus (MassDEP 1997, MassDEP 2002). Google Earth images from August 2013, and October 2020 show dense or very dense amounts of plant coverage over most of the pond (Google Earth Pro Undated).</p> <p>Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of non-rooted, floating, aquatic macrophyte species (<i>Utricularia</i> spp.).</p> <p>Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since more than 25% of the pond was covered in aquatic macrophytes in recent years.</p>

Aquatic Plants (Macrophytes)

1999 WBS Coding Sheet (MassDEP 2002):

WBIID: *6107* MA *93080* ✓
 NAME: *Upper Banjo Pond* WATERSHED: *North Coastal* ✓ *PSM*
 FODI: *93080* TYPE: *Lake/Pond* (Printed 08/01/1996)
 SIZE: *11.0 acres* CLASS: *B/*
 ORW?: Yes or *No*
 Water Supply?: Yes or *No*

LATITUDE:
 LONGITUDE:
 Lake/Pond Name:
 Ecoregion Name:
 Description: *Upper Banjo Pond, Gloucester*

Assessment Date: *9810* Begin Sampling: *9709* Water Quality Limited?: YES or NO
 Cycle: *9899* End Sampling: *9709* 303(d) List?: YES or NO

Lake Specific Information
 Significantly Publicly Owned: 1999 *Y* or *N*
 Trophic Status: *O M E H D U*
 Trophic Trend: *I S D U*
 Acidity/Toxics Trend: *I S D U*
 Acidity Effects: *I V N U*

Uses	Support	Threat	Partial	Non-Sup	Not-Asses	Not-Attain
OVERALL USE SUPPORT				<i>11.0</i>		
ALUS						
FISH CONSUMPTION					<i>11.0</i>	
PRIMARY CONTACT					<i>11.0</i>	
SECONDARY CONTACT				<i>11.0</i>		
Aesthetics				<i>11.0</i>		
ALUS Bio				<i>11.0</i>		
ALUS Chem/Phys						
ALUS Toxicity						

Nonattainment Causes
 Code: *#*

Code	Size	Magnitude	1999 Code	Size	Magnitude
			<i>2200</i>	<i>11.0</i>	<i>H</i>
			<i>2500</i>	<i>11.0</i>	<i>S</i>

Nonattainment Sources
 Code:

Code	Size	Magnitude	1999 Code	Size	Magnitude
			<i>9000</i>	<i>11.0</i>	<i>H</i>

Assessment Type: 1999 Assessment Category = *> M E NA*
R35

Media/Pollutants Assessed: 1999 Toxics Monitoring = *> YES or NO*
H

Comments:
1999: 10 September 1997 synoptic survey indicated most of the surface covered with very dense emergent, floating, and submergent vegetation. Also, turbidity reduced the transparency to below the safety criterion (Secchi disk 2.4 ft).

1997 Synoptic Survey Field Sheet (MassDEP 1997):

LAKE/POND: Upper Banjo Pond SIZE (acres): 11 PALIS NO. 93080
 TOWN/CITY: Gloversville USGS TOPO. SHEET: Gloversville
 DATE: 9/10/97 WATERSHED: North Coastal OBSERVERS: DeGore/R1

ACCESS - Location (describe each observation site and assign sequential numbers (1, 2, 3, etc.) to use in subsequent records; be specific in descriptions (e.g., public boat ramp at west cove area off Simpson St., etc.))
 Site (1) Park @ base of dam - NE corner of pond off RT 133 - walk up side of dam
 Site (2) _____
 Site (3) _____

ACCESS - Type (for multiple observation sites use numbers in boxes that apply)
 Formal Boat Ramp and/or Beach Informal Boat Ramp and/or Beach
 Park Conservation Area Right-of-Way: Road Other
 Other (describe): DAM

ACCESS - Ownership (for multiple observation sites use numbers in boxes that apply)
 Public Private Uncertain
 Names of Owners _____ No. & Street Name RT 133
 _____ No. & Street Name _____
 _____ No. & Street Name _____

SIGN POSTINGS -
 Warning: Stop Aquatic Plant Spread Fishing Advisory or Ban
 Public Access without Restrictions Public Access with Restrictions
 Describe any restrictions (or other notes) No Trespassing

WATER /LAKE QUALITY OBSERVATIONS -
 Turbidity: Slight Moderate Excessive Transparency: < 1.2 m. (4 ft.) > 1.2 m. (4 ft.)
 Estimated visually
 Diss. Organics: Slight Moderate Dark Measured w/ Secchi Disk _____ meters
 meters
 Algal Bloom: Slight Moderate Dense _____ meters
 Bottom Type: Undecomposed matter Muck/silt Sand Gravel Cobble Boulders
 Vegetation Other _____ _____
 Other Observations: Grey "milky" turbidity

AESTHETICALLY OBJECTIONABLE - Substances attributable to wastewater or other discharges (point or nonpoint) that:
 Settle to form objectionable deposits Float as debris, scum or other matter to form a nuisance
 Describe: Muck/silt Describe: _____
 Produce objectionable odor, color, taste, or turbidity Produce undesirable nuisance species of aquatic life
 Describe: Grey/Brown turbidity Describe: _____

RECORD OF AQUATIC PLANT "SPECIES" OBSERVED --

NON-NATIVE WETLANDS SPECIES PRESENT: *Lythrum Salicaria* *Phragmites* sp.
 NON-NATIVE AQUATIC SPECIES PRESENT: *Bulorus umbellatus* *Cabomba caroliniana* *Egeria densa*
 Eichornia crassipes *Hydrilla verticillata* *Hydrocharis morsus-ranae* *Marsilea quadrifolia*
 Myriophyllum aquaticum *Myriophyllum heterophyllum* *Myriophyllum spicatum*
 M. sp. (*M. heterophyllum* requiring further confirmation when flowering heads are evident) _____
 Najas minor *Nelumbo lutea* *Nymphoides peltata* *Potamogeton crispus* *Trapa natans*

NATIVE SPECIES POPULATIONS:

Emergent Plants	Floating Leaf Plants	Submergent Plants
<input type="checkbox"/> <i>Sporogonium</i>	<input type="checkbox"/> <i>Brasenia</i>	<input type="checkbox"/> <i>P. epiphydrus</i>
<input type="checkbox"/> <i>Decodon</i>	<input type="checkbox"/> <i>Nymphaea</i>	<input type="checkbox"/> <i>U. radiata</i>
<input type="checkbox"/> <i>Polygonum</i>	<input type="checkbox"/> _____	<input type="checkbox"/> <i>Sporogonium</i>
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> <i>Potamogeton (thin leaf)</i>
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> <i>Utricularia (dunk)</i>
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> <i>U. vulgaris</i>
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

AQUATIC PLANT DENSITY --

Percent of surface area (at observation site) with dense (50 - 75 %) aquatic plant cover 90 % _____ % _____ %
 Forms [(E)mergent, (F)loating, or (S)ubmergent] present E/F/S _____ _____
 Percent of surface area (observation site) with very dense (75 - 100 %) plant cover _____ % _____ % _____ %
 Forms [(E)mergent, (F)loating, or (S)ubmergent] present _____ _____
 Percent of entire lake surface covered with dense or very dense aquatic plants 90 % Forms E/F/S
 Describe locations of dense and/or very dense plant beds Most of surface covered w/ likes submergent
 Loss of open water habitat over entire lake (estimated): 90 - 100 % 60 - 85 % 30 - 55 % ≤ 25 %

ASSESSMENTS --

TROPHIC STATUS ESTIMATE: Oligotrophic Mesotrophic Eutrophic Hypereutrophic Dystrophic Undetermined

305(b) USE IMPAIRMENT ASSESSMENTS (Acres):

USES	Full Support	Threatened	Partial Support	Non-support	Not Assessed
Aquatic Life					11.0
Fish Consumption					11.0
Primary Contact				11.0	
Secondary Contact				11.0	
Aesthetics				11.0	

CAUSES: Noxious plants (2200) -- Size 11.0 acres / Magnitude H Exotic plants (2600) -- Size _____ acres / Magnitude _____
 Turbidity (2500) -- Size 11.0 acres / Magnitude S Flow alteration (1500) -- Size _____ acres / Magnitude _____
 Metals (0500) Hg (0501) -- Size _____ acres / Magnitude _____ Siltation (1100) -- Size _____ acres / Magnitude _____
 _____ () -- Size _____ acres / Magnitude _____ _____ () -- Size _____ acres / Magnitude _____

SOURCES: Describe any obvious sources of impairment _____

Google Earth image of Upper Banjo Pond while relatively clear, 12/31/2000 (Google Earth Pro Undated):



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



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



Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No
2024/26 Use Attainment Summary	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Upper Banjo Pond (MA93080) is Not Assessed.	

Aesthetic

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

The Aesthetics Use for Upper Banjo Pond (MA93080) continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. Additionally the prior Turbidity impairment is being carried forward and a Nutrient/Eutrophication Biological Indicators impairment being added. As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Upper Banjo Pond was first listed as impaired for Noxious Aquatic Plants in 2002 and this cause was remapped to Aquatic Plants (Macrophytes) during the 2008 IR cycle (MassDEP 2024). The original impairment was based on a September 1997 synoptic survey conducted by MassDEP staff in which it was noted that 90% of the pond was covered with dense vegetation (50-75%), including several species of the non-rooted *Utricularia* genus (MassDEP 1997, MassDEP 2002). Google Earth images from August 2013, and October 2020 show dense or very dense amounts of plant coverage over most of the pond (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of non-rooted, floating, aquatic macrophyte species (*Utricularia* spp.). Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since more than 25% of the pond was covered in aquatic macrophytes in recent years. No new data are available to evaluate the Aesthetics Use for this Upper Banjo Pond AU.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Upper Banjo Pond (MA93080) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment (from the Aesthetics Use) is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. The Turbidity impairment (from the Aesthetics Use) is being carried forward and a Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use).

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for Upper Banjo Pond (MA93080) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment (from the Aesthetics Use) is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. The Turbidity impairment (from the Aesthetics Use) is being carried forward and a Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use).

Upper Hawkes Pond (MA93082)

Location:	west of Route 129, upstream of the confluence of Hawkes Brook with the Saugus River, Saugus.
AU Type:	FRESHWATER LAKE
AU Size:	8 ACRES
Classification/Qualifier:	B

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

Recommendations

2024/26 Recommendations
2024IR [Bacteria, Low] Additional sampling and testing for bacteria should be conducted in Upper Hawkes Pond (MA93082) to determine if this AU should be impaired for Enterococcus bacteria. Peckham Pond @ Camp Nihan (DCR) [Beach ID: 4851] beach in Saugus (located on the west bank of the pond) was posted for >10% of the swimming season in 2021 (24%). It should also be noted that this beach was posted for 29% of the season 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 Upper Hawkes Pond (MA93082) 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 Upper Hawkes Pond (MA93082) 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 Upper Hawkes Pond (MA93082) is assessed as Fully Supporting. An Alert is being identified for <i>Enterococcus</i> based on DPH Beach Closure data. Upper Hawkes Pond has a beach with DPH Beach Closure data: Peckham Pond @ Camp Nihan (DCR) [Beach ID: 4851] beach in Saugus. The beach was rarely, if at all, posted for swimming from 2018-2022, however an Alert for Enterococcus is being identified since Peckham Pond @ Camp Nihan (DCR) was posted for >10% of the swimming season in 2021 (24%). It should also be noted that this beach was posted for 29% of the season in 2017.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
4851	Peckham Pond @ Camp Nihan (DCR)/ Saugus	42.48847, -71.02210	42.48762, -71.02150	5%	9%	0%	29%	1%	10%	3%	24%	1%	2

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Upper Hawkes Pond (MA93082) is assessed as Fully Supporting. Upper Hawkes Pond has a beach with DPH Beach Closure data: Peckham Pond @ Camp Nihan (DCR) [Beach ID: 4851] beach in Saugus. The beach was rarely, if at all, posted for swimming from 2018-2022. It should also be noted that this beach was posted for 29% of the season in 2017.

Upper Pond (MA93083)

Location:	Saugus.
AU Type:	FRESHWATER LAKE
AU Size:	13 ACRES
Classification/Qualifier:	B

No usable data were available for Upper Pond (MA93083) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Walden Pond (MA93084)

Location:	Lynn/Saugus/Lynnfield.
AU Type:	FRESHWATER LAKE
AU Size:	222 ACRES
Classification/Qualifier:	A: PWS, ORW

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Mercury in Fish Tissue	--	Unchanged

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

Recommendations

2024/26 Recommendations
2024 IR [E. COLI, MEDIUM] Additional sampling is recommended for Walden Pond (MA93084) at {W2702} i.e. at the eastern edge of pond at the Walden Pond E End Dam (T ID: MA00235) N of Great Woods Rd, Lynn, because the monitoring results were inconclusive for this single year (2017). Analysis was inconclusive because this was a limited frequency dataset with 1 sample greatly exceeding the STV for the Primary Contact Recreation Use (3,100 CFU/100ml in September 2017).

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	No

2024/26 Use Attainment Summary
The Fish Consumption Use for Walden Pond (MA93084) continues to be assessed as Not Supporting and the prior Mercury in Fish Tissue impairment is being carried forward. DPH included a site-specific advisory for Walden Pond in their January 2025 Freshwater Fish Consumption Advisory List. The public should refer to the most recent DPH Freshwater Fish Consumption Advisory List for the most up to date meal advice for sensitive and general populations.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Walden Pond (MA93084) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations as part of the MAP2 lake monitoring project in summer 2017 at two stations, for this Walden Pond AU, at the eastern edge of pond at the Walden Pond East End Dam (NAT ID: MA00235) north of Great Woods Road, Lynn (W2702/MAP2L-157S, n=5) and at the deep hole index station in Saugus (W2701/MAP2L-157, 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 staff noted minor trash deposits on two occasions at the shoreline station (W2702). During the MAP2 macrophyte mapping survey (n=1) in Sep 2017, less than 25% (2.7%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2701	MassDEP	Water Quality	Walden Pond	[index site, Saugus]	42.495176	-71.005026
W2702	MassDEP	Water Quality	Walden Pond	[eastern edge of pond at the Walden Pond East End Dam (NAT ID: MA00235) north of Great Woods Road, Lynn]	42.493130	-70.979410

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2020) (MassDEP Undated 4)

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

Station Code	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2701	2017	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2701 (MAP2L-157) on Walden Pond (MA93084) during 3 site visits between Jun 2017 and Aug 2017. 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 2017, less than 25% (2.7%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%.
W2702	2017	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2702 (MAP2L-157S) on Walden Pond (MA93084) during 5 site visits between May 2017 and Sep 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits (n=2). 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 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2701	Walden Pond	2017	Aesthetics Impaired?	No	3	3
W2701	Walden Pond	2017	Aquatic Plant Density, Overall	None	2	3
W2701	Walden Pond	2017	Aquatic Plant Density, Overall	NR	1	3
W2701	Walden Pond	2017	Aquatic Plant Density, Whole Lake	None	1	1
W2701	Walden Pond	2017	Color	Greenish	1	3
W2701	Walden Pond	2017	Color	Light Yellow/Tan	1	3
W2701	Walden Pond	2017	Color	NR	1	3
W2701	Walden Pond	2017	Duckweed Density, Whole Lake	None	1	1
W2701	Walden Pond	2017	Objectionable Deposits	No	3	3
W2701	Walden Pond	2017	Odor	None	3	3
W2701	Walden Pond	2017	Scum	No	3	3
W2701	Walden Pond	2017	Turbidity	None	2	3
W2701	Walden Pond	2017	Turbidity	Slightly Turbid	1	3
W2702	Walden Pond	2017	Aesthetics Impaired?	No	5	5
W2702	Walden Pond	2017	Color	Light Yellow/Tan	4	5
W2702	Walden Pond	2017	Color	None	1	5
W2702	Walden Pond	2017	Objectionable Deposits	No	3	5
W2702	Walden Pond	2017	Objectionable Deposits	Yes	2	5
W2702	Walden Pond	2017	Odor	None	5	5
W2702	Walden Pond	2017	Scum	No	4	5
W2702	Walden Pond	2017	Scum	Yes	1	5
W2702	Walden Pond	2017	Turbidity	None	5	5

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 Walden Pond (MA93084) and available other indicators and 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 <i>Escherichia coli</i> (<i>E. coli</i>) and additional sampling is recommended for this AU. In Walden Pond, MassDEP collected Secchi depth and cyanobacteria cell count data at W2701 [MAP2L-157, Index-deep hole] (2017) and cyanobacteria cell count and cyanotoxins data at W2702 [MAP2L-157S, Shoreline station at eastern edge of pond at the Walden Pond E End Dam (T ID: MA00235) N of Great Woods Rd, Lynn] (2017). Secchi depth data indicated water clarity meeting the 1.2m (4ft) threshold at W2701 in 2017 (n=3, 2.35-3.6m). The cyanobacteria cell count did not exceed 70,000 cells/ml in any of the water samples in 2017 (n=6). Analysis of microcystins and cylindrospermopsin samples from W2702 in 2017 (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 Walden Pond at shoreline station W2702 from May-Sep 2017 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2702 indicated 0% of intervals had GMs >126 CFU/100ml, 1 sample exceeded the 410 CFU/100ml STV (3,100 CFU/100ml) and the seasonal GM was 36 CFU/100ml. <i>E. coli</i> data from W2702 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 STV exceedance of the threshold. An Alert is being identified for <i>Escherichia coli</i> at W2702 due to 1 sample greatly exceeding the STV.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2701	MassDEP	Water Quality	Walden Pond	[index site, Saugus]	42.495176	-71.005026
W2702	MassDEP	Water Quality	Walden Pond	[eastern edge of pond at the Walden Pond East End Dam (NAT ID: MA00235) north of Great Woods Road, Lynn]	42.493130	-70.979410

Bacteria Data

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

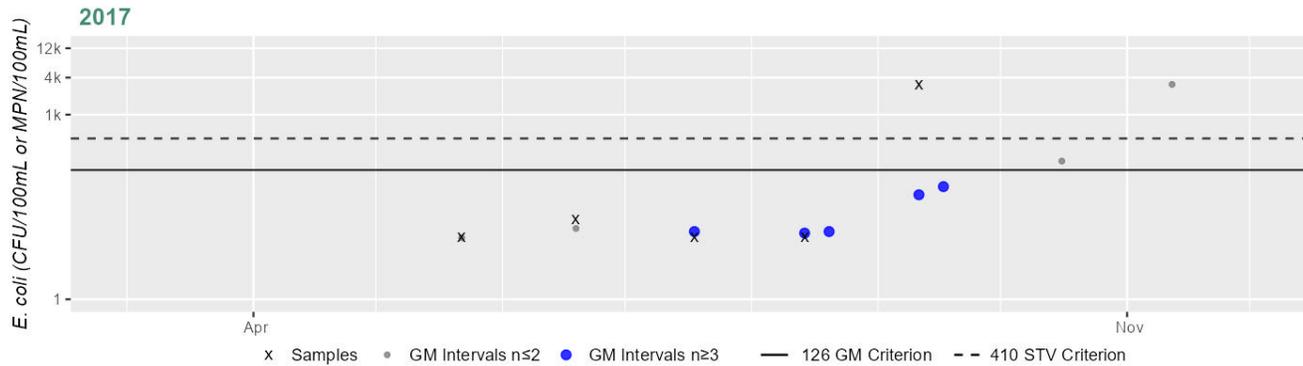
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2702	MassDEP	E. coli	05/22/17	09/11/17	5	10	3100	36

Station MASSDEP_W2702 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	36
#GMI	5
#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.

Other Indicators

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

(MassDEP Undated 7) (MassDEP Undated 4)

Data Year(s)	Summary
2017	In Walden Pond (MA93084) in 2017, MassDEP collected Secchi and cyanobacteria cell count data at W2701 [MAP2L-157, Index-deep hole], and cyanobacteria cell count and cyanotoxin data at W2702 [MAP2L-157S, Shoreline]. At station W2701 (station depth=10.4 m) the Secchi depth measurements ranged from 2.35-3.6 m (n=3) indicating water clarity meeting the 1.2 m (4 ft) threshold. The cyanobacteria cell count did not exceed 70,000 cells/mL in any of the water samples (n=6). Analysis of microcystins and cylindrospermopsin samples from the shoreline station W2702 (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 7) (MassDEP Undated 4)

Station Code	Waterbody	Station Type	Data Year	Sample Count	Count >70,000 cells/mL	Exceedance Date(s)
W2701	Walden Pond	Index	2017	3	0	NA
W2702	Walden Pond	Shoreline	2017	3	0	NA

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 Walden Pond (MA93084) and available other indicators and aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. In Walden Pond MassDEP staff collected cyanobacteria cell count data at W2701 [MAP2L-157, Index-deep hole] (2017) and cyanobacteria cell count and cyanotoxins data at W2702 [MAP2L-157S, Shoreline at eastern edge of pond at the Walden Pond E End Dam (T ID: MA00235) N of Great Woods Rd, Lynn] (2017). The cyanobacteria cell count did not exceed 70,000 cells/ml in any of the water samples in 2017 (n=6). Analysis of microcystins and cylindrospermopsin samples from W2702 in 2017 (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 Walden Pond at station W2702 from May-Sep 2017 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2702 indicated 0% of intervals had GMs >244 CFU/100ml, 1 sample greatly exceeded the 794 CFU/100ml STV (3,100 CFU/100ml) and the overall GM was 36 CFU/100ml. <i>E. coli</i> data from W2702 are inconclusive according to the 2024 CALM to assess the Secondary Contact Recreation Use because this single year, limited frequency dataset included both GMs below the threshold and STV exceedance of the threshold.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2702	MassDEP	Water Quality	Walden Pond	[eastern edge of pond at the Walden Pond East End Dam (NAT ID: MA00235) north of Great Woods Road, Lynn]	42.493130	-70.979410

Bacteria Data

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

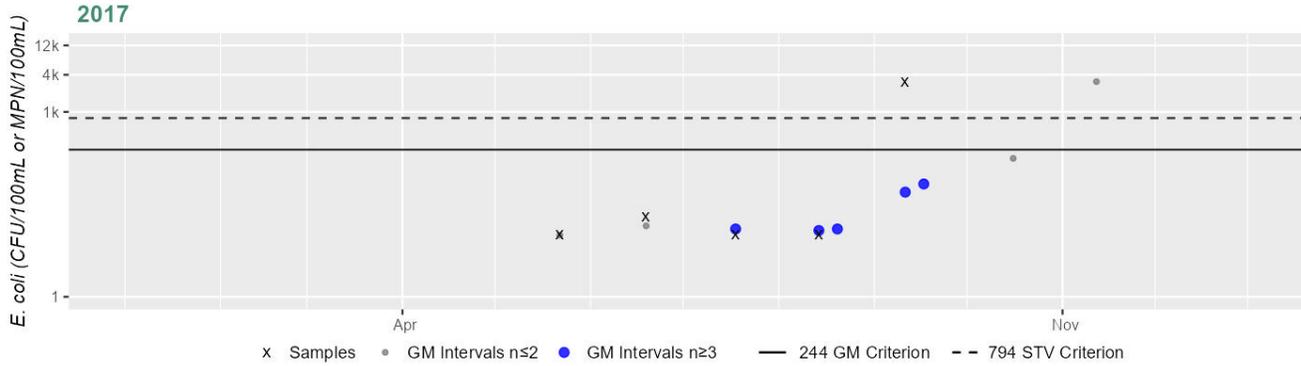
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2702	MassDEP	E. coli	05/22/17	09/11/17	5	10	3100	36

Station MASSDEP_W2702 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	36
#GMI	5
#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.

Walker Creek (MA93-61)

Location:	Headwaters outlet Haskell Pond, Gloucester to tidal portion approximately 460 feet north of Route 133, Gloucester.
AU Type:	RIVER
AU Size:	0.7 MILES
Classification/Qualifier:	B

No usable data were available for Walker Creek (MA93-61) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fish Passage Barrier*)	Dam or Impoundment (Y)	X	--	--	--	--
(Fish Passage Barrier*)	Habitat Modification - other than Hydromodification (Y)	X	--	--	--	--

Walker Creek (MA93-62)

Location:	From tidal portion approximately 460 feet north of Route 133, Gloucester to mouth at confluence with Essex Bay, Essex.
AU Type:	ESTUARY
AU Size:	0.09 SQUARE MILES
Classification/Qualifier:	SA: ORW, SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	5	Fecal Coliform	--	Added

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 Walker Creek (MA93-62) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
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Not Supporting	NO
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2024/26 Use Attainment Summary
Walker Creek (MA93-62): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0755 sq mi (88%). 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. As a result of the growing area classifications, a Fecal Coliform impairment is being added.

Shellfish Growing Area Classifications

MassDFG-Division of Marine Fisheries Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N7.0	Inner Essex Bay	Conditionally Approved	0.06565	76.1%
N7.1	Upper Walker Creek	Prohibited	0.00606	7.0%
N7.6	Outer Essex Bay	Conditionally Approved	0.00381	4.4%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Walker Creek (MA93-62) 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 Walker Creek (MA93-62) is assessed as Fully Supporting. Walker Creek has a beach with DPH Beach Closure data: Clammer’s Beach [Beach ID: 2813] beach in Essex. The beach was never posted for swimming from 2018-2022. The shellfish growing areas (0.0755 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 Walker Creek.

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
2813	Clammer's Beach/ Essex	42.64876, -70.74390	42.64855, -70.74390	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 5)

Summary
Walker Creek (MA93-62): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0755 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
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Walker Creek (MA93-62) is assessed as Fully Supporting. Walker Creek has a beach with DPH Beach Closure data: Clammer’s Beach [Beach ID: 2813] beach in Essex. The beach was never posted for swimming from 2018-2022. The shellfish growing areas (0.0755 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 Walker Creek.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Walker Creek (MA93-62): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0755 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.

Wallace Pond (MA93085)

Location:	Gloucester.
AU Type:	FRESHWATER LAKE
AU Size:	22 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Wallace Pond (MA93085) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Waters River (MA93-01)

Location:	From west of Route 128, Peabody/Danvers to mouth at confluence with Danvers River and Beverly Harbor, Danvers (formerly reported as 2002 lake segment: Waters River Pond MA93088).
AU Type:	ESTUARY
AU Size:	0.09 SQUARE MILES
Classification/Qualifier:	SA: SFO

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	Fecal Coliform	50121	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 Waters River (MA93-01) is Not Assessed.

Shellfish Harvesting

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
Waters River (MA93-01): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0833 sq mi (90%). The approved shellfish growing area represents 0 sq mi (0%). The prohibited shellfish growing area represents 0.0833 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 5)

Area Name	Waterbody/Area Description	Classification	Area (Sq. Mi.)	Area (% of AU)
N17.0		Prohibited	0.08329	89.9%

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Waters River (MA93-01) 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 the Waters River (MA93-01) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0833 sq mi) in this AU are less than 100% approved (0 sq mi, 0%), which means shellfish classification data were too limited to assess the Primary Contact Recreation Use of Waters River.

Shellfish Growing Area Classifications

Summary Statement for MassDFG Shellfish Growing Area Classification Data (MassGIS 2024) (MassDEP Undated 5)

Summary
Waters River (MA93-01): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0833 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 the Waters River (MA93-01) so it is assessed as having Insufficient Information. The shellfish growing areas (0.0833 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 Waters River. MassDEP staff collected <i>Enterococcus</i> bacteria samples close to the downstream end of the Waters River at W0884 [Water St (Rt. 35), Danvers] from May-Sep 2002 (n=5). Analysis of the historic single year limited frequency <i>Enterococcus</i> dataset from W0884 indicated 0% of intervals had GMs >68 CFU/100ml, no samples exceeded the 252 CFU/100ml STV, and the overall GM was 23 CFU/100ml. Historic <i>Enterococcus</i> data from W0884 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
W0884	MassDEP	Water Quality	Waters River	[Water Street (Route 35), Danvers]	42.546329	-70.920430

Bacteria Data

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

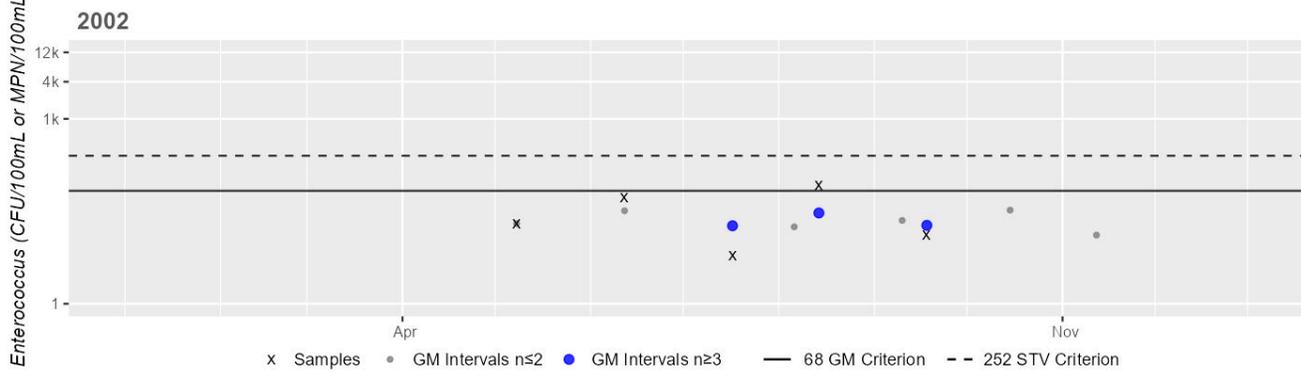
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W0884	MassDEP	Enterococci	05/08/02	09/18/02	5	6	84	23

Station MASSDEP_W0884 - Enterococcus

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



Variable*	Result
Samples	5
SeasGM	23
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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 5)

Summary

Waters River (MA93-01): The total of all shellfish growing area classifications (MassGIS, 2024) within this AU is 0.0833 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.

West Pond (MA93089)

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

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Algae	--	Unchanged
5	5	Chlorophyll-a	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged
5	5	Transparency / Clarity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Algae	Source Unknown (N)	X	--	X	X	X
Chlorophyll-a	Source Unknown (N)	X	--	--	--	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--
Transparency / Clarity	Source Unknown (N)	X	--	--	X	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary

Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for West Pond (MA93089) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for West Pond (MA93089) continues to be assessed as Not Supporting with the Algae impairment being carried forward. Since the Transparency/Clarity impairment was redundantly duplicated across multiple uses for this waterbody, the Transparency/Clarity impairment is being removed from the Aesthetics Use but will continue to be maintained under the Primary Contact Recreation Use. Since the 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 West Pond.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for West Pond (MA93089) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Transparency / Clarity impairment is being carried forward and the prior Algae impairment (from the Aesthetics Use) is 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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for West Pond (MA93089) 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. 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.

Data Sources

- Bailey, Logan. "DPH 2022 freshwater beach posting data provided to Laurie Kennedy and Dan Davis (MassDEP Watershed Planning Program) via Excel file (FreshwaterBeachPostings_2022) attached to email (RE: DPH Beach Posting information update needed for 2024 IR)." Additional 2020-2022 freshwater/marine beach posting data downloaded from the Mass Environmental Public Health Tracker tool or EPA BEACON tool, respectively, Environmental Toxicology Program, Bureau of Environmental Health, Massachusetts Department of Public Health, Boston, MA, Sept. 10, 2023.
- Bailey, Logan. "Email providing Harmful Algal Bloom advisory data (2015-2022) in the attached spreadsheet "CyanoHAB_Advisories.csv"." Email to Dan Davis and Laurie Kennedy (MassDEP Watershed Planning Program) with subject line "RE: DPH Beach Posting information update needed for 2024 IR", Environmental Toxicology Program, Bureau of Environmental Health, Massachusetts Department of Public Health, Boston, MA, April 26, 2023.
- Bailey, Logan. "RE: Beaches Bill reporting data." Email to Dan Davis (MassDEP Watershed Planning Program) providing an Excel file (DEP_BeachDataRequest) with 2014-2019 data for marine and DCR freshwater beaches, Environmental Toxicology Program, Bureau of Environmental Health, Massachusetts Department of Public Health, Boston, MA, Feb. 2, 2021.
- Google Earth Pro. "Satellite Imagery of selected stream and lake/pond segments." Massachusetts, Undated.
- IRWA. "2022 bacteria data submitted to MassDEP WPP portal or downloaded from WQX (last submittal/download 12/23/2022)." Ipswich River Watershed Association, Ipswich, MA, 2022.
- MA DPH. "2022 Emerging Contaminant Surveillance: Results of PFAS in Surface Water and Fish." Environmental Toxicology Program, Bureau of Environmental Health, Massachusetts Department of Public Health, 2023a.
- . "Emerging Contaminants in Surface Water and Fish: Results from Statewide Monitoring." Environmental Toxicology Program, Massachusetts Department of Public Health. December 26, 2023b. <https://www.mass.gov/doc/2022-summary-of-sampling-data-for-dcr-waterbodies-0/download> (accessed March 2024).
- . "Evaluation of PFAS in Recreational Waterbodies in Massachusetts, Technical Support Document." Environmental Toxicology Program, Bureau of Environmental Health,

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