

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

**Appendix 16
Connecticut River Basin
Assessment and Listing Decision Summary**

**Prepared by:
Watershed Planning Program
Division of Watershed Management, Bureau of Water Resources
Massachusetts Department of Environmental Protection**

**Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
Rebecca L. Tepper, Secretary
Massachusetts Department of Environmental Protection
Bonnie Heiple, Commissioner
Bureau of Water Resources
Kathleen M. Baskin, Assistant Commissioner**

December 2025

CN 625.0



Watershed Planning Program

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

Acknowledgements

The 2024/2026 Integrated Report (IR) could not have been produced without the dedicated efforts of program staff and input from other Executive Office of Energy and Environmental Affairs (EEA) staff, EPA colleagues, and stakeholder groups. Many thanks to WPP staff who worked directly on the assessments and supporting tasks (e.g., GIS support, data reviews, data analyses, ATTAINS and reports), including Mason Saleeba, Jenny Peet, Jenny Sheppard, Kari Winfield, Stephanie Figary, Bob Smith, Tim Gardner, Anna Mayor, Shervon De Leon, Matt Reardon, Richard Chase, and Richard Carey. Many thanks to WPP field sampling crews, WPP interns, laboratory staff at the Wall Experiment Station, and external data providers who all played important roles in generating the water quality data used to inform decisions.

Disclaimer

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Contact Information

Watershed Planning Program
Division of Watershed Management, Bureau of Water Resources
Massachusetts Department of Environmental Protection
8 New Bond Street, Worcester, MA 01606
[Watershed Planning Program website](#)
Email address: dep.wpp@mass.gov

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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
Adams Brook	MA34-75	2	2	None	--	Unchanged
Amethyst Brook	MA34-35	2	5	Escherichia Coli (E. Coli)	--	Added
Arcadia Lake	MA34005	5	5	(Fanwort*)	--	Unchanged
Arcadia Lake	MA34005	5	5	(Non-Native Aquatic Plants*)	--	Unchanged
Arcadia Lake	MA34005	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Atkins Reservoir	MA34006	5	5	Mercury in Fish Tissue	--	Unchanged
Bachelor Brook	MA34-07	5	4a	(Water Chestnut*)	--	Unchanged
Bachelor Brook	MA34-07	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Barton Cove	MA34122	5	5	(Curly-leaf Pondweed*)	--	Unchanged
Barton Cove	MA34122	5	5	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
Barton Cove	MA34122	5	5	(Fanwort*)	--	Unchanged
Barton Cove	MA34122	5	5	(Water Chestnut*)	--	Unchanged
Barton Cove	MA34122	5	5	Escherichia Coli (E. Coli)	--	Unchanged
Barton Cove	MA34122	5	5	PCBs in Fish Tissue	--	Unchanged
Barton Cove	MA34122	5	5	PFAS in Fish Tissue	--	Added

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Bloody Brook	MA34-36	5	5	Dissolved Oxygen	--	Unchanged
Bloody Brook	MA34-36	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Bloody Brook	MA34-36	5	5	Phosphorus, Total	--	Unchanged
Bloody Brook	MA34-36	5	5	Turbidity	--	Unchanged
Bradford Brook	MA34-71	2	2	None	--	Unchanged
Brewer Brook	MA34-69	2	2	None	--	Unchanged
Brickyard Brook	MA34-13	3	3	None	--	Unchanged
Broad Brook	MA34-18	2	2	None	--	Unchanged
Buffum Brook	MA34-49	3	3	None	--	Unchanged
Buttery Brook	MA34-42	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Buttery Brook	MA34-42	5	5	Trash	--	Added
Connecticut River	MA34-01	5	5	(Alteration in Stream-side or Littoral Vegetative Covers*)	--	Unchanged
Connecticut River	MA34-01	5	5	(Flow Regime Modification*)	--	Unchanged
Connecticut River	MA34-01	5	5	PCBs in Fish Tissue	--	Unchanged
Connecticut River	MA34-01	5	5	PFAS in Fish Tissue	--	Added
Connecticut River	MA34-02	5	5	(Alteration in Stream-side or Littoral Vegetative Covers*)	--	Unchanged
Connecticut River	MA34-02	5	5	(Flow Regime Modification*)	--	Unchanged
Connecticut River	MA34-02	5	5	(Water Chestnut*)	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Connecticut River	MA34-02	5	5	PCBs in Fish Tissue	--	Unchanged
Connecticut River	MA34-02	5	5	PFAS in Fish Tissue	--	Added
Connecticut River	MA34-03	5	5	(Dewatering*)	--	Unchanged
Connecticut River	MA34-03	5	5	(Flow Regime Modification*)	--	Unchanged
Connecticut River	MA34-03	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Connecticut River	MA34-03	5	5	PCBs in Fish Tissue	--	Unchanged
Connecticut River	MA34-03	5	5	PFAS in Fish Tissue	--	Added
Connecticut River	MA34-03	5	5	Total Suspended Solids (TSS)	--	Unchanged
Connecticut River	MA34-04	5	5	(Water Chestnut*)	--	Unchanged
Connecticut River	MA34-04	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Connecticut River	MA34-04	5	5	PCBs in Fish Tissue	--	Unchanged
Connecticut River	MA34-04	5	5	PFAS in Fish Tissue	--	Added
Connecticut River	MA34-05	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Connecticut River	MA34-05	5	5	PCBs in Fish Tissue	--	Unchanged
Connecticut River	MA34-05	5	5	PFAS in Fish Tissue	--	Added
Cooley Brook	MA34-20	3	5	Escherichia Coli (E. Coli)	--	Added
Couch Brook	MA34-96	--	3	None	--	Unchanged
Cranberry Pond	MA34018	4c	4c	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Cranberry Pond Brook	MA34-97	--	2	None	--	Unchanged
Cushman Brook	MA34-34	2	2	None	--	Unchanged
Danks Pond	MA34019	4c	4c	(Water Chestnut*)	--	Unchanged
Day Brook	MA34-67	2	2	None	--	Unchanged
Dean Brook	MA34-50	2	2	None	--	Unchanged
Doolittle Brook	MA34-107	--	2	None	--	Unchanged
Dry Brook	MA34-64	2	2	None	--	Unchanged
East Branch Mill River	MA34-37	2	2	None	--	Unchanged
Elmer Brook	MA34-100	--	5	Escherichia Coli (E. Coli)	--	Added
Esther Brook	MA34-78	2	2	None	--	Unchanged
Factory Hollow Pond	MA34021	3	3	None	--	Unchanged
Fall River	MA34-33	2	2	None	--	Unchanged
Forge Pond	MA34024	5	5	(Water Chestnut*)	--	Unchanged
Forge Pond	MA34024	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Fort River	MA34-27	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Fourmile Brook	MA34-56	2	2	None	--	Unchanged
Goddard Brook	MA34-84	2	2	None	--	Unchanged
Grass Hill Brook	MA34-70	2	2	None	--	Unchanged
Green Pond	MA34028	3	3	None	--	Unchanged
Hannegan Brook	MA34-83	2	2	None	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Harris Brook	MA34-48	2	2	None	--	Unchanged
Harris Brook	MA34-94	2	2	None	--	Unchanged
Hearthstone Brook	MA34-76	2	2	None	--	Unchanged
Hop Brook	MA34-61	2	3	None	--	Unchanged
Ingraham Brook Pond	MA34037	4c	4c	(Water Chestnut*)	--	Unchanged
Joe Wright Brook	MA34-52	2	2	None	--	Unchanged
Lake Bray	MA34013	4c	4c	(Curly-leaf Pondweed*)	--	Unchanged
Lake Bray	MA34013	4c	4c	(Water Chestnut*)	--	Unchanged
Lake Holland	MA34035	4c	4c	(Fanwort*)	--	Unchanged
Lake Holland	MA34035	4c	4c	(Non-Native Aquatic Plants*)	--	Unchanged
Lake Lookout	MA34044	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Lake Pleasant	MA34070	3	3	None	--	Unchanged
Lake Warner	MA34098	4a	4a	(Fanwort*)	--	Unchanged
Lake Warner	MA34098	4a	4a	(Water Chestnut*)	--	Unchanged
Lake Warner	MA34098	4a	4a	Algae	651	Unchanged
Lake Warner	MA34098	4a	4a	Dissolved Oxygen	651	Unchanged
Lake Warner	MA34098	4a	4a	Phosphorus, Total	651	Unchanged
Lake Warner	MA34098	4a	4a	Turbidity	651	Unchanged
Lake Wyola	MA34103	4a	5	Enterococcus	--	Added
Lake Wyola	MA34103	4a	5	Nutrient/Eutrophication Biological Indicators	653	Unchanged
Lake Wyola	MA34103	4a	5	Phosphorus, Total	653	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Lampson Brook	MA34-06	5	5	Benthic Macroinvertebrates	--	Unchanged
Lampson Brook	MA34-06	5	5	Escherichia Coli (E. Coli)	--	Added
Lampson Brook	MA34-06	5	5	Phosphorus, Total	--	Unchanged
Lampson Brook	MA34-108	--	5	Escherichia Coli (E. Coli)	--	Added
Leaping Well Reservoir	MA34040	5	5	Algae	--	Unchanged
Leverett Pond	MA34042	4a	4a	(Aquatic Plants (Macrophytes)*)	--	Added
Leverett Pond	MA34042	4a	4a	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
Leverett Pond	MA34042	4a	4a	(Non-Native Aquatic Plants*)	--	Unchanged
Leverett Pond	MA34042	4a	4a	Nutrient/Eutrophication Biological Indicators	675	Unchanged
Log Pond Cove	MA34124	5	5	(Aquatic Plants (Macrophytes)*)	--	Added
Log Pond Cove	MA34124	5	5	(Water Chestnut*)	--	Unchanged
Log Pond Cove	MA34124	5	5	Escherichia Coli (E. Coli)	--	Added
Log Pond Cove	MA34124	5	5	PCBs in Fish Tissue	--	Unchanged
Log Pond Cove	MA34124	5	5	PFAS in Fish Tissue	--	Added
Long Plain Brook	MA34-09	2	2	None	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Longmeadow Brook	MA34-21	5	5	(Debris*)	--	Removed
Longmeadow Brook	MA34-21	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Longmeadow Brook	MA34-21	5	5	Phosphorus, Total	--	Unchanged
Longmeadow Brook	MA34-21	5	5	Trash	--	Removed
Longmeadow Brook	MA34-21	5	5	Turbidity	--	Unchanged
Loon Pond	MA34045	3	3	None	--	Unchanged
Louisiana Brook	MA34-91	2	2	None	--	Unchanged
Lower Highland Lake	MA34047	3	3	None	--	Unchanged
Lower Mill Pond	MA34048	4c	4c	(Water Chestnut*)	--	Unchanged
Lower Van Horn Park Pond	MA34129	4c	4c	(Water Chestnut*)	--	Unchanged
Manhan River	MA34-10	3	3	None	--	Unchanged
Manhan River	MA34-11	5	4a	(Water Chestnut*)	--	Unchanged
Manhan River	MA34-11	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Meekin Brook	MA34-72	2	2	None	--	Unchanged
Metacomet Lake	MA34051	5	5	(Fanwort*)	--	Unchanged
Metacomet Lake	MA34051	5	5	(Non-Native Aquatic Plants*)	--	Unchanged
Metacomet Lake	MA34051	5	5	Dissolved Oxygen	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Mill Brook	MA34-55	2	5	Escherichia Coli (E. Coli)	--	Added
Mill Pond	MA34052	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Mill Pond	MA34052	5	5	Odor	--	Unchanged
Mill River	MA34-24	5	5	Temperature	--	Unchanged
Mill River	MA34-25	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Mill River	MA34-28	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Mill River	MA34-29	5	5	(Debris*)	--	Unchanged
Mill River	MA34-29	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Mill River	MA34-29	5	5	Odor	--	Unchanged
Mill River	MA34-29	5	5	Trash	--	Unchanged
Mill River Diversion	MA34-32	4c	5	(Water Chestnut*)	--	Unchanged
Mill River Diversion	MA34-32	4c	5	Escherichia Coli (E. Coli)	--	Added
Millers Brook	MA34-90	2	2	None	--	Unchanged
Mohawk Brook	MA34-82	2	2	None	--	Unchanged
Moose Brook	MA34-17	2	2	None	--	Unchanged
Mountain Brook	MA34-81	2	2	None	--	Unchanged
Mountain Street Reservoir	MA34056	3	3	None	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Nashawannuck Pond	MA34057	5	5	(Water Chestnut*)	--	Unchanged
Nashawannuck Pond	MA34057	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Nashawannuck Pond	MA34057	5	5	Phosphorus, Total	--	Unchanged
Nine Mile Pond	MA34127	3	3	None	--	Unchanged
Noonan Cove	MA34058	5	5	(Aquatic Plants (Macrophytes)*)	--	Changed
Noonan Cove	MA34058	5	5	Nutrient/Eutrophication Biological Indicators	--	Added
Noonan Cove	MA34058	5	5	Turbidity	--	Unchanged
North Branch Manhan River	MA34-54	2	2	None	--	Unchanged
Northampton Reservoir	MA34059	3	3	None	--	Unchanged
Northfield Mountain Reservoir	MA34061	3	3	None	--	Unchanged
Nurse Brook	MA34-59	3	3	None	--	Unchanged
Oxbow	MA34066	5	5	(Water Chestnut*)	--	Unchanged
Oxbow	MA34066	5	5	PFAS in Fish Tissue	--	Added
Oxbow	MA34066	5	5	Turbidity	--	Unchanged
Oxbow Cutoff	MA34067	4c	4c	(Water Chestnut*)	--	Unchanged
Parsons Brook	MA34-66	3	3	None	--	Unchanged
Pine Island Lake	MA34069	3	3	None	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Plympton Brook Pond	MA34071	3	3	None	--	Unchanged
Pond Brook	MA34-98	--	2	None	--	Unchanged
Porter Lake	MA34073	5	5	(Curly-leaf Pondweed*)	--	Unchanged
Porter Lake	MA34073	5	5	Algae	--	Unchanged
Porter Lake	MA34073	5	5	Aquatic Plants (Macrophytes)	--	Removed
Porter Lake West	MA34072	5	5	(Aquatic Plants (Macrophytes)*)	--	Changed
Porter Lake West	MA34072	5	5	Algae	--	Unchanged
Porter Lake West	MA34072	5	5	Nutrient/Eutrophication Biological Indicators	--	Added
Potash Brook	MA34-12	3	3	None	--	Unchanged
Raspberry Brook	MA34-22	3	3	None	--	Unchanged
Red Brook	MA34-88	2	2	None	--	Unchanged
Red Brook	MA34-92	3	3	None	--	Unchanged
Red Brook	MA34-95	--	3	None	--	Unchanged
Rice Brook	MA34-47	3	3	None	--	Unchanged
Roaring Brook	MA34-63	2	2	None	--	Unchanged
Roaring Brook	MA34-79	2	2	None	--	Unchanged
Roaring Brook	MA34-80	2	2	None	--	Unchanged
Roaring Brook Upper Reservoir	MA34123	--	2	None	--	Unchanged
Roberts Meadow Brook	MA34-68	2	2	None	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Roberts Meadow Reservoir	MA34076	3	3	None	--	Unchanged
Rogers Brook	MA34-51	2	2	None	--	Unchanged
Russellville Brook	MA34-62	2	5	Escherichia Coli (E. Coli)	--	Added
Sacket Brook	MA34-45	3	3	None	--	Unchanged
Sawmill River	MA34-40	2	2	None	--	Unchanged
Sawmill River	MA34-41	2	2	None	--	Unchanged
Sawyer Ponds	MA34078	3	3	None	--	Unchanged
Sawyer Ponds	MA34079	3	3	None	--	Unchanged
Scantic River	MA34-30	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Scarboro Brook	MA34-46	2	2	None	--	Unchanged
Schneelock Brook	MA34-44	3	3	None	--	Unchanged
Schoolhouse Brook	MA34-43	3	3	None	--	Unchanged
Shattuck Brook	MA34-57	2	2	None	--	Unchanged
Silver Lake	MA34084	3	3	None	--	Unchanged
Sodom Brook	MA34-53	2	2	None	--	Unchanged
Spaulding Brook	MA34-85	2	2	None	--	Unchanged
Stony Brook	MA34-19	5	5	(Water Chestnut*)	--	Unchanged
Stony Brook	MA34-19	5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Stony Brook	MA34-19	5	5	Turbidity	--	Unchanged
Temple Brook	MA34-08	3	3	None	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Tighe Carmody Reservoir	MA34089	3	3	None	--	Unchanged
Tripple Brook	MA34-16	3	3	None	--	Unchanged
Tucker Brook	MA34-99	--	2	None	--	Unchanged
Unnamed Tributary	MA34-101	--	2	None	--	Unchanged
Unnamed Tributary	MA34-102	--	2	None	--	Unchanged
Unnamed Tributary	MA34-103	--	5	Escherichia Coli (E. Coli)	--	Added
Unnamed Tributary	MA34-104	--	2	None	--	Unchanged
Unnamed Tributary	MA34-105	--	2	None	--	Unchanged
Unnamed Tributary	MA34-106	--	5	Escherichia Coli (E. Coli)	--	Added
Unnamed Tributary	MA34-109	--	2	None	--	Unchanged
Unnamed Tributary	MA34-110	--	2	None	--	Unchanged
Unnamed Tributary	MA34-31	3	2	None	--	Unchanged
Unnamed Tributary	MA34-60	5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
Unnamed Tributary	MA34-65	2	2	None	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
Unnamed Tributary	MA34-73	2	2	None	--	Unchanged
Unnamed Tributary	MA34-74	2	2	None	--	Unchanged
Unnamed Tributary	MA34-77	2	2	None	--	Unchanged
Unnamed Tributary	MA34-87	2	2	None	--	Unchanged
Unnamed Tributary	MA34-93	2	2	None	--	Unchanged
Upper Highland Lake	MA34093	2	2	None	--	Unchanged
Upper Van Horn Park Pond	MA34128	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Upper Van Horn Park Pond	MA34128	5	5	Phosphorus, Total	--	Unchanged
Venture Pond	MA34096	5	5	Dissolved Oxygen	--	Unchanged
Venture Pond	MA34096	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
Venture Pond	MA34096	5	5	Phosphorus, Total	--	Unchanged
Watershops Pond	MA34099	5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
West Branch Mill River	MA34-38	2	2	None	--	Unchanged
West Branch Mill River	MA34-39	3	3	None	--	Unchanged

Waterbody	AU_ID	AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
West Brook	MA34-58	2	2	None	--	Unchanged
West Wait Brook	MA34-89	2	2	None	--	Unchanged
Weston Brook	MA34-23	5	5	Phosphorus, Total	--	Unchanged
White Brook	MA34-14	2	2	None	--	Unchanged
Whiting Street Reservoir	MA34101	4c	4c	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
Whiting Street Reservoir	MA34101	4c	4c	(Water Chestnut*)	--	Unchanged
Williams Brook	MA34-86	2	2	None	--	Unchanged
Wilton Brook	MA34-15	5	5	(Aquatic Plants (Macrophytes)*)	--	Changed
Wilton Brook	MA34-15	5	5	(Water Chestnut*)	--	Unchanged
Wilton Brook	MA34-15	5	5	Nutrient/Eutrophication Biological Indicators	--	Added

Adams Brook (MA34-75)

Location:	Headwaters confluence of Nurse and Dean brooks in small "diversion pool" for Atkins Reservoir, Shutesbury to mouth at confluence with Amethyst Brook (forming headwater Fort River), Amherst.
AU Type:	RIVER
AU Size:	3.5 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Adams Brook (MA34-75) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

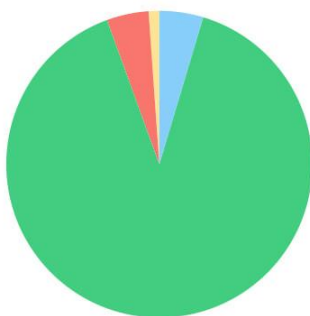
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

Amethyst Brook (MA34-35)

Location:	Headwaters, confluence of Buffum and Harris brooks, Pelham to mouth at confluence with Adams River (forming headwaters Fort River), Amherst.
AU Type:	RIVER
AU Size:	2.1 MILES
Classification/Qualifier:	B

Amethyst Brook (MA34-35)

Watershed Area: 9.36 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	9.36	4.51	5.16	2.18
Agriculture	1.1%	1.4%	1.2%	1.2%
Developed	4.4%	7.1%	3.9%	6.4%
Natural	89.8%	90.3%	87.2%	90.7%
Wetland	4.6%	1.2%	7.7%	1.7%
Impervious	2.1%	3.3%	1.9%	2.9%

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

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Amethyst Brook (MA34-35) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Amethyst Brook (MA34-35) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station close to the upstream end of this Amethyst Brook AU ~150 feet upstream of the North Valley Road crossing nearest Amherst Road intersection, Pelham (W2896) in summer 2019 n=4. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2896	MassDEP	Water Quality	Amethyst Brook	[approximately 150 feet upstream of the North Valley Road crossing nearest Amherst Road intersection, Pelham]	42.380334	-72.465102

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
W2896	2019	4	Aesthetic observations were made by MassDEP field sampling crews at Station W2896 on Amethyst Brook (MA34-35) during 4 site visits between Jun 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W2896	2019	4	4	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2896	Amethyst Brook	2019	Aesthetics Impaired?	No	4	4
W2896	Amethyst Brook	2019	Aquatic Plant Density, Overall	None	4	4
W2896	Amethyst Brook	2019	Color	None	4	4
W2896	Amethyst Brook	2019	Objectionable Deposits	No	4	4
W2896	Amethyst Brook	2019	Odor	None	4	4
W2896	Amethyst Brook	2019	Periphyton Density, Filamentous	None	3	4
W2896	Amethyst Brook	2019	Periphyton Density, Filamentous	Sparse	1	4
W2896	Amethyst Brook	2019	Periphyton Density, Film	None	3	4
W2896	Amethyst Brook	2019	Periphyton Density, Film	Sparse	1	4
W2896	Amethyst Brook	2019	Scum	No	4	4
W2896	Amethyst Brook	2019	Turbidity	None	4	4

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Amethyst Brook (MA34-35) is assessed as Not Supporting. An <i>Escherichia Coli</i> (<i>E. Coli</i>) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2020 & 2021. Connecticut River Conservancy (CRC) staff/volunteers collected <i>E. coli</i> bacteria samples three-quarters of the way down Amethyst Brook at CRC_AMTH0.5 [Amethyst Brook, Amherst] from 2020-2021 (n=6-7/yr). Analysis of the multi-year moderate frequency <i>E. coli</i> dataset from CRC_AMTH0.5 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2020 and 2021, 28 & 33%), and while 0 yrs had ≥2 samples exceed the 410 CFU/100ml STV, cumulatively across years 31% of intervals had GMs >126 CFU/100ml. <i>E. coli</i> data from CRC_AMTH0.5 are indicative of an <i>Escherichia Coli</i> (<i>E. Coli</i>) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_AMTH0.5	Connecticut River Conservancy	Water Quality	Amethyst Brook	Amethyst Brook, Amherst	42.378879	-72.485174

Bacteria Data

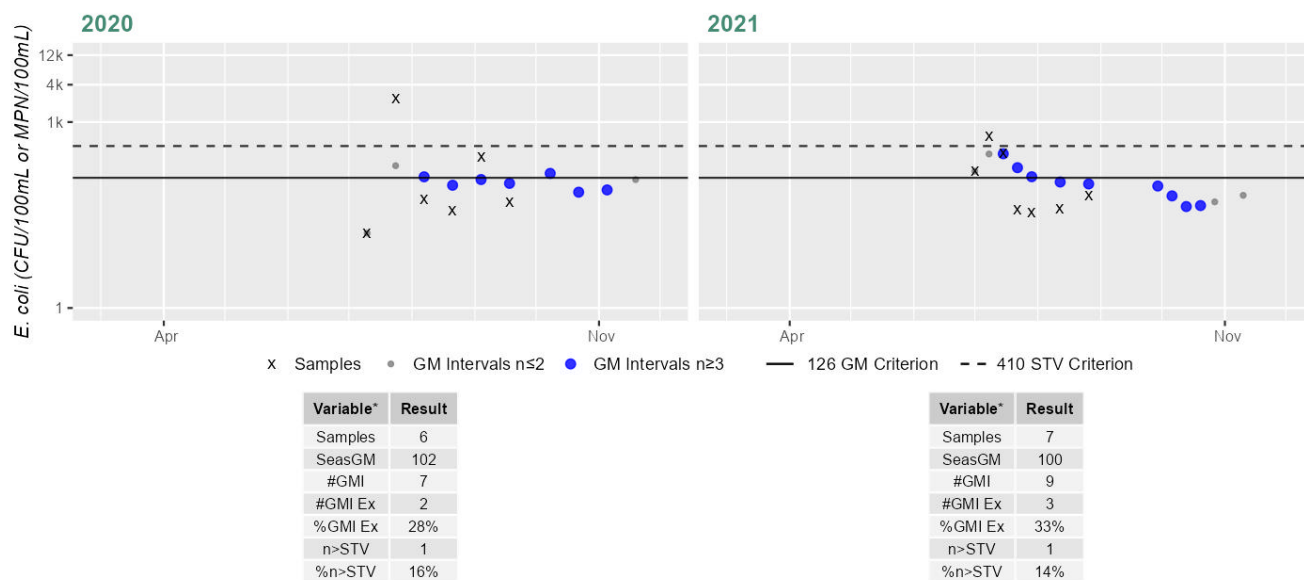
Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_AMTH0.5	Connecticut River Conservancy	E. coli	07/09/20	09/17/20	6	16	2419	102
CRC_AMTH0.5	Connecticut River Conservancy	E. coli	07/01/21	08/26/21	7	34	579	100

Station CRC_AMTH0.5 - Escherichia coli

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



Cumulative %GMI Exceedance
Current (2011-2022)
31%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Amethyst Brook (MA34-35) continues to be assessed as Fully Supporting. Connecticut River Conservancy (CRC) and MassDEP staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Amethyst Brook (MA34-35) from 2008-2021 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: two-thirds of the way down the AU at W1783 [hiking trail bridge crossing north/W off Allen Mill Rd, Amherst] from May-Sep 2008 (n=6), and three-quarters of the way down at CRC_AMTH0.5 [Amethyst Brook, Amherst] from 2020-2021 (n=6-7/yr). Since bacteria data from the historic IR window are indicative of good water quality conditions, only the analysis from the current IR window (1 station) will be summarized here: Analysis of the multi-year moderate frequency *E. coli* dataset from CRC_AMTH0.5 indicated 0 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml, 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, and cumulatively across years 6% of intervals had GMs >244 CFU/100ml. *E. coli* data from CRC_AMTH0.5 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_AMTH0.5	Connecticut River Conservancy	Water Quality	Amethyst Brook	Amethyst Brook, Amherst	42.378879	-72.485174
W1783	MassDEP	Water Quality	Amethyst Brook	[hiking trail bridge crossing north/west off Allen Mill Road, Amherst]	42.378333	-72.481710

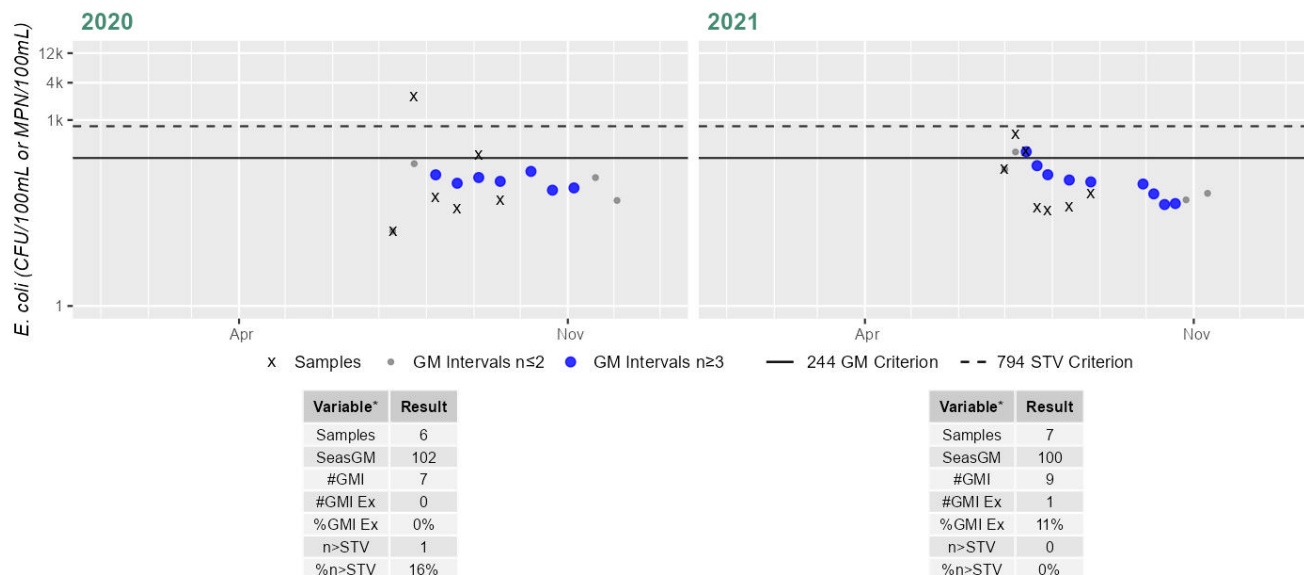
Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis) (CRC 2023) (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
CRC_AMTH0.5	Connecticut River Conservancy	<i>E. coli</i>	07/09/20	09/17/20	6	16	2419	102
CRC_AMTH0.5	Connecticut River Conservancy	<i>E. coli</i>	07/01/21	08/26/21	7	34	579	100
W1783	MassDEP	<i>E. coli</i>	05/06/08	09/09/08	6	4	340	14

Station CRC_AMTH0.5 - *Escherichia coli*

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



Cumulative %GMI Exceedance

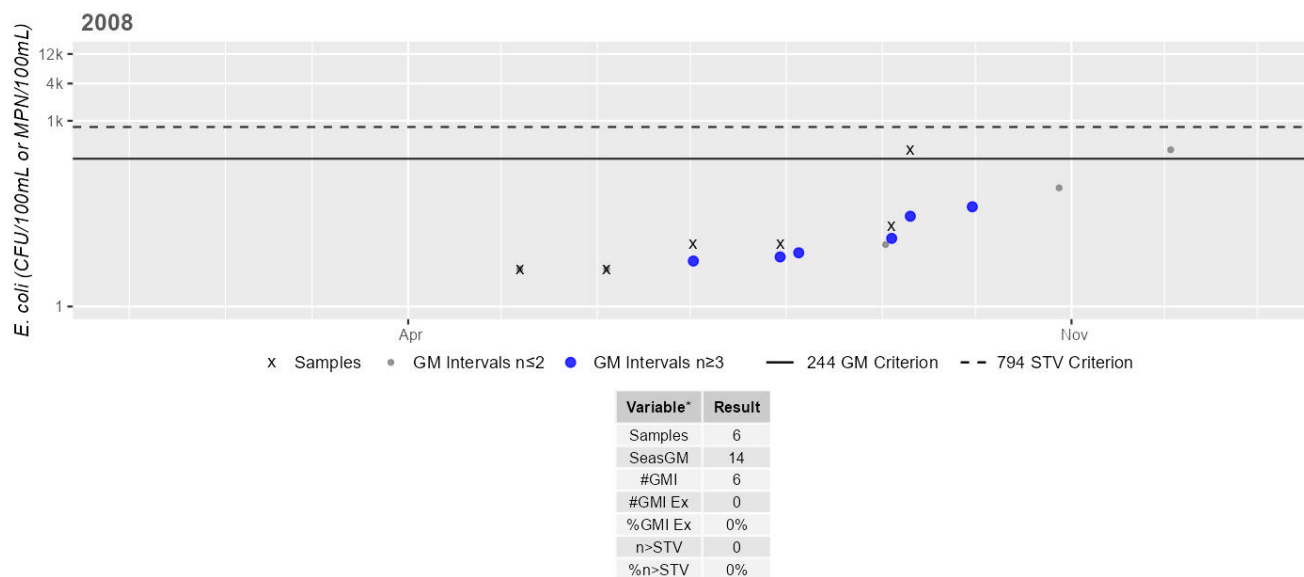
Current (2011-2022)

6%

*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_W1783 - *Escherichia coli*

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



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.

Arcadia Lake (MA34005)

Location:	Belchertown.
AU Type:	FRESHWATER LAKE
AU Size:	32 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fanwort*)	--	Unchanged
5	5	(Non-Native Aquatic Plants*)	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	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	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	--	--	X	X	X

Recommendations

2024/26 Recommendations
2024/2026 IR [Harmful Algal Blooms, Medium] Follow-up monitoring should be conducted in Arcadia Lake (MA34005) 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 Arcadia Lake (MA34005) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	YES
2024/26 Use Attainment Summary	
<p>The Aesthetics Use for Arcadia Lake (MA34005) continues to be assessed as Not Supporting with the Nutrient/Eutrophication Biological Indicators impairment being carried forward. An Alert is being identified for Harmful Algal Blooms in this waterbody since C-HAB postings (a bloom of >15 days in duration) were reported to MDPH for 2021.</p> <p>Since the Non-Native Aquatic Plants impairment was redundantly duplicated across multiple uses for this waterbody, the Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use but will continue to be maintained under the Aquatic Life Use. MassDEP staff recorded aesthetics observations at one station for Arcadia Lake at the deep hole, southwestern quadrant, Belchertown (W2642) in the summer of 2016 (n=3). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff once noted green water color. During the period 2015 through 2022, C-HAB postings for Arcadia Lake were reported to MDPH based on visual observations for 22 days in 2021 and no blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, an Alert is being identified for Harmful Algal Blooms and a recommendation for follow-up sampling will be made.</p>	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2642	MassDEP	Water Quality	Arcadia Lake	[deep hole, southwestern quadrant, Belchertown]	42.312501	-72.428096

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
W2642	2016	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2642 on Arcadia Lake (MA34005) during 3 site visits between Jun 2016 and Sep 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted green water color (n=1).

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2642	Arcadia Lake	2016	Aesthetics Impaired?	No	3	3
W2642	Arcadia Lake	2016	Aquatic Plant Density, Overall	Moderate	1	3
W2642	Arcadia Lake	2016	Aquatic Plant Density, Overall	None	2	3
W2642	Arcadia Lake	2016	Color	Greenish	1	3
W2642	Arcadia Lake	2016	Color	Light Yellow/Tan	1	3
W2642	Arcadia Lake	2016	Color	None	1	3
W2642	Arcadia Lake	2016	Objectionable Deposits	No	3	3
W2642	Arcadia Lake	2016	Odor	None	3	3
W2642	Arcadia Lake	2016	Scum	No	3	3
W2642	Arcadia Lake	2016	Turbidity	None	3	3

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 Arcadia Lake (MA34005) were reported to MDPH based on visual observations for 22 days in 2021. No blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, an Alert is being identified for C-HABs in this waterbody and a recommendation for follow-up sampling will be made.

Cyanobacteria Harmful Algal Bloom (C-HAB) Data (2015-2022) Provided by MDPH (Bailey, Logan April 26, 2023)
(MassDEP Undated 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
Arcadia Lake	Belchertown							22	

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	YES

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Arcadia Lake (MA34005) continues to be assessed as Not Supporting. The prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is being carried forward. Since the Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Primary Contact Recreation Use. 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 Arcadia Lake (MA34005) were reported to MDPH based on visual observations for 22 days in 2021. No blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, a Harmful Algal Blooms Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made. In Arcadia Lake MassDEP collected Secchi depth data at W2642 [42.312501, -72.428096, deep hole, southwestern quadrant, Belchertown] (2016). Secchi depth data indicated water clarity meeting the 1.2m (4ft) threshold at W2642 in 2016 (n=3, 2.6-3m).

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
2016	In Arcadia Lake (MA34005), MassDEP collected Secchi data at W2642 [42.312501, -72.428096, deep hole, southwestern quadrant, Belchertown] in 2016. At station W2642 (station depth=3 m) the Secchi depth measurements ranged from 2.6-3 m (n=3) indicating water clarity meeting the 1.2 m (4 ft) threshold.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	YES

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Arcadia Lake (MA34005) continues to be assessed as Not Supporting. The prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is being carried forward. Since the Non-Native Aquatic Plants impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Secondary Contact Recreation Use. 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 Arcadia Lake (MA34005) were reported to MDPH based on visual observations for 22 days in 2021. No blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, a Harmful Algal Bloom Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made.</p>

Atkins Reservoir (MA34006)

Location:	Shutesbury/Amherst.
AU Type:	FRESHWATER LAKE
AU Size:	46 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	--	--	--

Recommendations

2024/26 Recommendations
2024/2026 IR [Harmful Algal Blooms, Medium] Follow-up monitoring should be conducted in Atkins Reservoir (MA34006) to determine if Harmful Algal Blooms may be impairing the Recreational and Aesthetic uses. Monitoring should include observational data and collection of cyanobacteria cell count data, as well as continued reporting of algal blooms to MDPH.

Designated Use Attainment Decisions

Fish Consumption

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

The Fish Consumption Use for Atkins Reservoir (MA34006) 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 Atkins Reservoir 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 Atkins Reservoir (MA34006) is assessed as Fully Supporting based on the lack of any objectionable conditions documented by MassDEP staff during the summer of 2016. MassDEP staff surveyed this Atkins Reservoir AU at two stations in Shutesbury, in 2016 as part of the MAP2 lake monitoring project; at the deep hole index station in the north western portion of the reservoir W2620 (MAP2L-003) and a shoreline station at the northern end of reservoir, at the Atkins Reservoir Dam (NAT ID: MA00508), south of January Hills Road W2605 (MAP2L-003S). There were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded during summer site visits to W2620 (n=3) and W2605 (n=4) or littoral zone duckweed recorded in ten shoreline plots (n=1). During the macrophyte mapping survey in July (n=1) less than 25% (3.5%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2605	MassDEP	Water Quality	Atkins Reservoir	[northern end of reservoir, at the Atkins Reservoir Dam (NAT ID: MA00508), south of January Hills Road, Shutesbury]	42.425660	-72.486843
W2620	MassDEP	Water Quality	Atkins Reservoir	[index site, north western portion of reservoir, Shutesbury]	42.424846	-72.486721

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
W2605	2016	4	Aesthetic observations were made by MassDEP field sampling crews at Station W2605 (MAP2L-003S) on Atkins Reservoir (MA34006) during 4 site visits between Jun 2016 and Sep 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. During the MAP2 littoral survey (n=1), duckweed was not noted in any of the 10 shoreline plots.
W2620	2016	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2620 (MAP2L-003) on Atkins Reservoir (MA34006) during 3 site visits between Jun 2016 and Aug 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted green water color (n=1). During the MAP2 macrophyte mapping survey (n=1) in Jul 2016, less than 25% (3.5%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%.

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2605	Atkins Reservoir	2016	Aesthetics Impaired?	No	4	4
W2605	Atkins Reservoir	2016	Color	None	4	4
W2605	Atkins Reservoir	2016	Objectionable Deposits	No	4	4
W2605	Atkins Reservoir	2016	Odor	None	4	4
W2605	Atkins Reservoir	2016	Scum	No	3	4
W2605	Atkins Reservoir	2016	Scum	Yes	1	4
W2605	Atkins Reservoir	2016	Turbidity	None	4	4
W2620	Atkins Reservoir	2016	Aesthetics Impaired?	No	3	3
W2620	Atkins Reservoir	2016	Aquatic Plant Density, Overall	None	3	3
W2620	Atkins Reservoir	2016	Color	Greenish	1	3
W2620	Atkins Reservoir	2016	Color	None	2	3
W2620	Atkins Reservoir	2016	Objectionable Deposits	No	3	3
W2620	Atkins Reservoir	2016	Odor	None	3	3
W2620	Atkins Reservoir	2016	Scum	No	3	3
W2620	Atkins Reservoir	2016	Turbidity	None	3	3

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Atkins Reservoir (MA34006) is assessed as Fully Supporting. An Alert is being identified for Harmful Algal Blooms and additional sampling is recommended for this AU. In Atkins Reservoir MassDEP staff collected Secchi depth and cyanobacteria cell count data at W2620 [MAP2L-003, Index-deep hole] (2016) and cyanobacteria cell count and cyanotoxin data at W2605 [MAP2L-003S, Shoreline] (2016). Secchi depth data indicated water clarity meeting the 1.2m (4ft) threshold at W2620 in 2016 (n=3, 4-6.7m). The cyanobacteria cell count exceeded 70,000 cells/ml for a single sample on Sep 12, 2016 (n=6). The elevated cyanobacteria cell count measurement is indicative of a Harmful Algal Blooms Alert. Analysis of microcystins samples from W2605 in 2016 (n=3) indicated that the concentrations did not exceed the threshold of 8 µg/L. MassDEP staff also collected *E. coli* bacteria samples in Atkins Reservoir (MA34006) at W2605 [northern end of reservoir, at the Atkins Reservoir Dam (T ID: MA00508), South of January Hills Rd, Shutesbury] from Jun-Sep 2016 (n=4). Analysis of the single year limited frequency *E. coli* dataset from W2605 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 6 CFU/100ml. *E. coli* data from W2605 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2605	MassDEP	Water Quality	Atkins Reservoir	[northern end of reservoir, at the Atkins Reservoir Dam (NAT ID: MA00508), south of January Hills Road, Shutesbury]	42.425660	-72.486843
W2620	MassDEP	Water Quality	Atkins Reservoir	[index site, north western portion of reservoir, Shutesbury]	42.424846	-72.486721

Bacteria Data

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

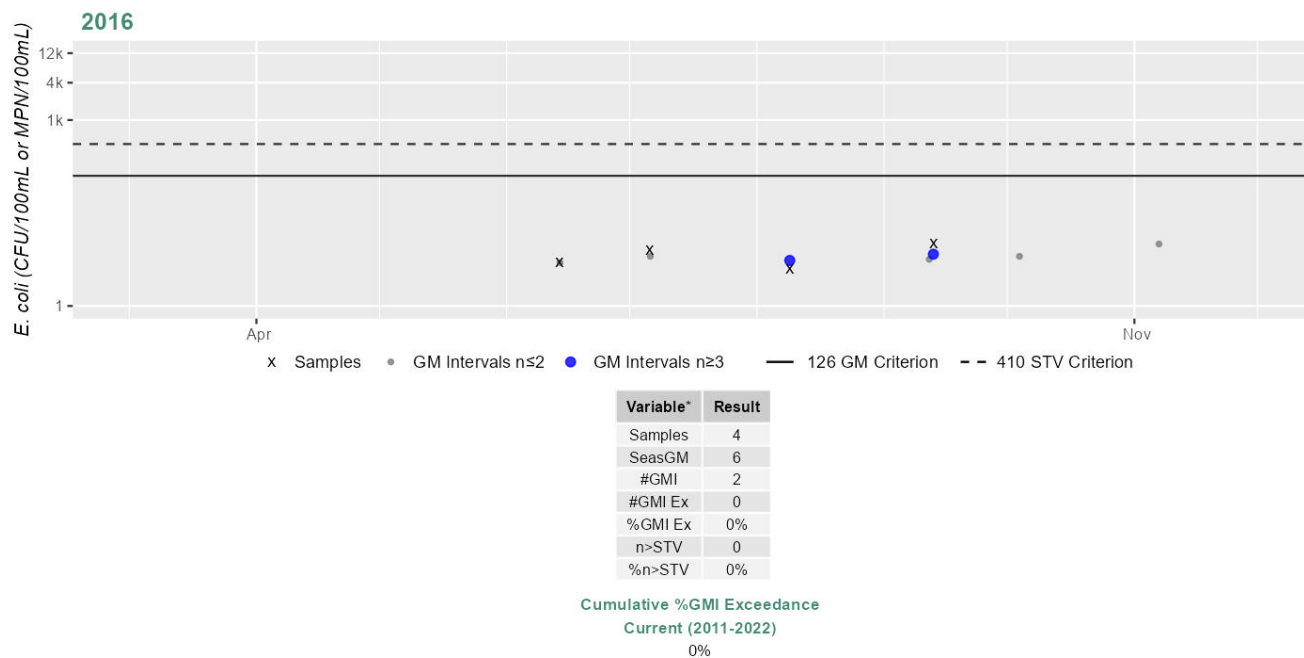
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2605	MassDEP	E. coli	06/13/16	09/12/16	4	4	10	6

Station MASSDEP_W2605 - *Escherichia coli*

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



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

Other Indicators

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

(MassDEP Undated 7) (MassDEP Undated 4)

Data Year(s)	Summary
2016	In Atkins Reservoir (MA34006) in 2016, MassDEP collected Secchi and cyanobacteria cell count data at W2620 [MAP2L-003, Index-deep hole], and cyanobacteria cell count and cyanotoxin data at W2605 [MAP2L-003S, Shoreline]. At station W2620 (station depth=7.5 m) the Secchi depth measurements ranged from 4-6.7 m (n=3) indicating water clarity meeting the 1.2 m (4 ft) threshold. The cyanobacteria cell count exceeded 70,000 cells/mL for a single sample on Sep 12, 2016 (n=6). The elevated cyanobacteria cell count measurement is indicative of a Harmful Algal Blooms Alert. Analysis of microcystins samples from the shoreline station W2605 (n=3) indicated that the concentrations did not exceed the threshold of 8 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)
W2605	Atkins Reservoir	Shoreline	2016	3	1	9/12/2016
W2620	Atkins Reservoir	Index	2016	3	0	NA

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Atkins Reservoir (MA34006) is assessed as Fully Supporting. An Alert is being identified for Harmful Algal Blooms and additional sampling is recommended for this AU. In Atkins Reservoir MassDEP staff collected cyanobacteria cell count data at W2620 [MAP2L-003, Index-deep hole] (2016) and cyanobacteria cell count and cyanotoxin data at W2605 [MAP2L-003S, Shoreline] (2016). The cyanobacteria cell count exceeded 70,000 cells/ml for a single sample on Sep 12, 2016 (n=6). The elevated cyanobacteria cell count measurement is indicative of a Harmful Algal Blooms Alert. Analysis of microcystins samples from W2605 in 2016 (n=3) indicated that the concentrations did not exceed the threshold of 8 µg/L. MassDEP staff also collected <i>E. coli</i> bacteria samples in Atkins Reservoir at W2605 [northern end of reservoir, at the Atkins Reservoir Dam (T ID: MA00508), South of January Hills Rd, Shutesbury] from Jun-Sep 2016 (n=4). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2605 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 6 CFU/100ml. <i>E. coli</i> data from W2605 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2605	MassDEP	Water Quality	Atkins Reservoir	[northern end of reservoir, at the Atkins Reservoir Dam (NAT ID: MA00508), south of January Hills Road, Shutesbury]	42.425660	-72.486843

Bacteria Data

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

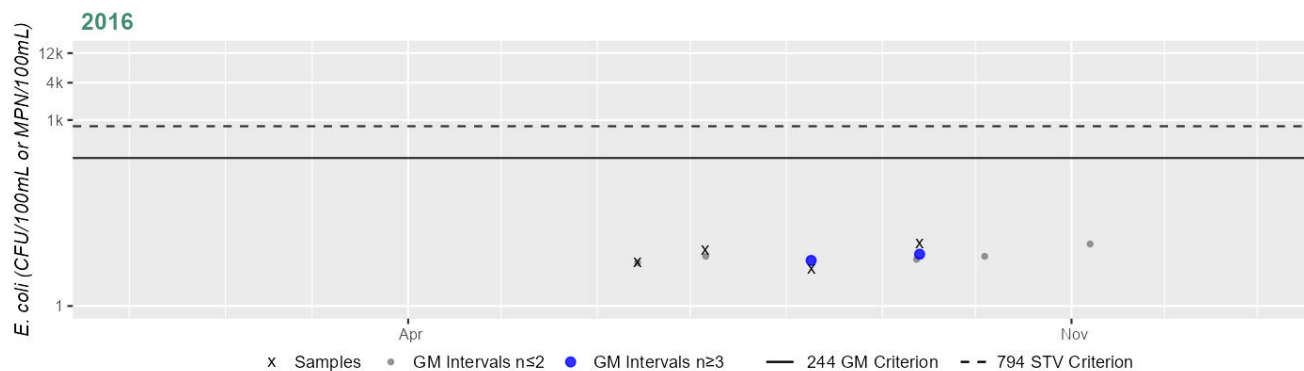
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2605	MassDEP	E. coli	06/13/16	09/12/16	4	4	10	6

Station MASSDEP_W2605 - Escherichia coli

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



Variable*	Result
Samples	4
SeasGM	6
#GMI	2
#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.

Bachelor Brook (MA34-07)

Location:	Outlet Forge Pond, Granby to mouth at confluence with Connecticut River, South Hadley (through former 2006 segments: Aldrich Lake [East Basin] MA34002 and Aldrich Lake [West Basin] MA34106).
AU Type:	RIVER
AU Size:	11.5 MILES
Classification/Qualifier:	B: WWF

Bachelor Brook (MA34-07)

Watershed Area: 31.53 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	31.53	6.79	8.83	1.89
Agriculture	4.4%	5.4%	4.3%	3.5%
Developed	11%	8.8%	8.4%	4.8%
Natural	74.1%	73.8%	66.4%	65.1%
Wetland	10.5%	12%	20.9%	26.7%
Impervious	4.1%	3.5%	3.3%	2.2%

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

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

Recommendations

2024/26 Recommendations
2024/26 IR [Bacteria, Low] Conduct high frequency monitoring for Bachelor Brook (MA34-07), since E. coli data from stations {W2849} and {W2463} in 2014 & 2019 marginally meet 2024 CALM guidance, but there is insufficient evidence to delist the existing impairment.

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 Bachelor Brook (MA34-07) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Bachelor Brook (MA34-07) continues to be assessed as Fully Supporting based on the lack of any objectionable conditions documented by MassDEP staff during the summers of 2014 and 2019. MassDEP staff recorded aesthetics observations at two stations in South Hadley on the downstream half of Bachelor Brook from up to downstream as follows: at Woodbridge Street (W2849 in 2019, n=8) and close to the downstream end of the AU west of Rt. 47, ~1300 feet upstream of confluence with Connecticut River (W2463 in 2014, n=5). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though during a probe deployment at W2463 field staff noted high turbidity (n=1).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2463	MassDEP	Water Quality	Bachelor Brook	[west of Route 47, approximately 1300 feet upstream of confluence with Connecticut River, South Hadley]	42.270034	-72.594205
W2849	MassDEP	Water Quality	Bachelor Brook	[Woodbridge Street, South Hadley]	42.278201	-72.575416

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.]

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
W2463	2014	5	4	0
W2849	2019	8	7	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2463	Bachelor Brook	2014	Aesthetics Impaired?	No	5	5
W2463	Bachelor Brook	2014	Aquatic Plant Density, Overall	None	5	5
W2463	Bachelor Brook	2014	Color	Light Yellow/Tan	3	5
W2463	Bachelor Brook	2014	Color	None	1	5
W2463	Bachelor Brook	2014	Color	NR	1	5
W2463	Bachelor Brook	2014	Objectionable Deposits	No	5	5
W2463	Bachelor Brook	2014	Odor	None	5	5
W2463	Bachelor Brook	2014	Periphyton Density, Filamentous	None	4	5
W2463	Bachelor Brook	2014	Periphyton Density, Filamentous	Unobservable	1	5
W2463	Bachelor Brook	2014	Periphyton Density, Film	None	4	5
W2463	Bachelor Brook	2014	Periphyton Density, Film	Unobservable	1	5
W2463	Bachelor Brook	2014	Scum	No	5	5
W2463	Bachelor Brook	2014	Turbidity	Moderately Turbid	1	5
W2463	Bachelor Brook	2014	Turbidity	Slightly Turbid	4	5
W2849	Bachelor Brook	2019	Aesthetics Impaired?	No	8	8

W2849	Bachelor Brook	2019	Aquatic Plant Density, Overall	None	7	8
W2849	Bachelor Brook	2019	Aquatic Plant Density, Overall	Unobservable	1	8
W2849	Bachelor Brook	2019	Color	Brownish	1	8
W2849	Bachelor Brook	2019	Color	Light Yellow/Tan	6	8
W2849	Bachelor Brook	2019	Color	None	1	8
W2849	Bachelor Brook	2019	Objectionable Deposits	No	8	8
W2849	Bachelor Brook	2019	Odor	Musty (Basement)	1	8
W2849	Bachelor Brook	2019	Odor	None	7	8
W2849	Bachelor Brook	2019	Periphyton Density, Filamentous	None	7	8
W2849	Bachelor Brook	2019	Periphyton Density, Filamentous	Unobservable	1	8
W2849	Bachelor Brook	2019	Periphyton Density, Film	None	3	8
W2849	Bachelor Brook	2019	Periphyton Density, Film	NR	1	8
W2849	Bachelor Brook	2019	Periphyton Density, Film	Sparse	3	8
W2849	Bachelor Brook	2019	Periphyton Density, Film	Unobservable	1	8
W2849	Bachelor Brook	2019	Scum	No	7	8
W2849	Bachelor Brook	2019	Scum	Yes	1	8
W2849	Bachelor Brook	2019	Turbidity	None	5	8
W2849	Bachelor Brook	2019	Turbidity	Slightly Turbid	3	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for the Bachelor Brook (MA34-07) continues to be assessed as Not Supporting. The prior Escherichia Coli (<i>E. Coli</i>) impairment is being carried forward based on bacteria data at 1 station in 2014. MassDEP staff collected <i>E. coli</i> bacteria samples on the downstream half of Bachelor Brook from 2014-2019 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the downstream end at W2849 [Woodbridge St, S Hadley] from Jul-Sep 2019 (n=6), and W2463 [W of Rt. 47, ~1300 ft upstream of confluence with Connecticut River, S Hadley] from May-Sep 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2849 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 107 CFU/100ml. Analysis of the single year limited frequency <i>E. coli</i> dataset from W2463 indicated 60% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 137 CFU/100ml. While <i>E. coli</i> data from stations W2849 and W2463 marginally meet 2024 CALM guidance, there is insufficient evidence to delist the existing impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2463	MassDEP	Water Quality	Bachelor Brook	[west of Route 47, approximately 1300 feet upstream of confluence with Connecticut River, South Hadley]	42.270034	-72.594205
W2849	MassDEP	Water Quality	Bachelor Brook	[Woodbridge Street, South Hadley]	42.278201	-72.575416

Bacteria Data

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

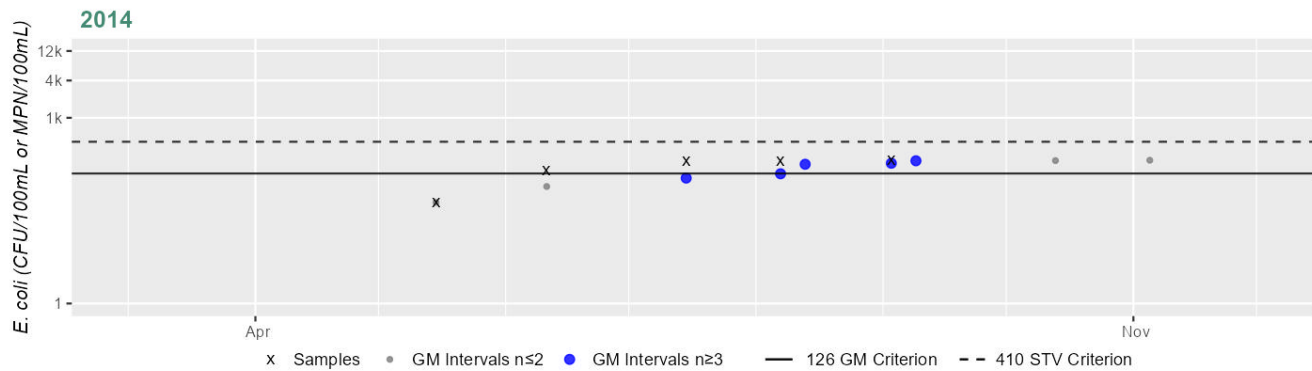
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2463	MassDEP	E. coli	05/15/14	09/03/14	5	43	206	137
W2849	MassDEP	E. coli	07/10/19	09/18/19	6	58	160	107

Station MASSDEP_W2463 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	137
#GMI	5
#GMI Ex	3
%GMI Ex	60%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

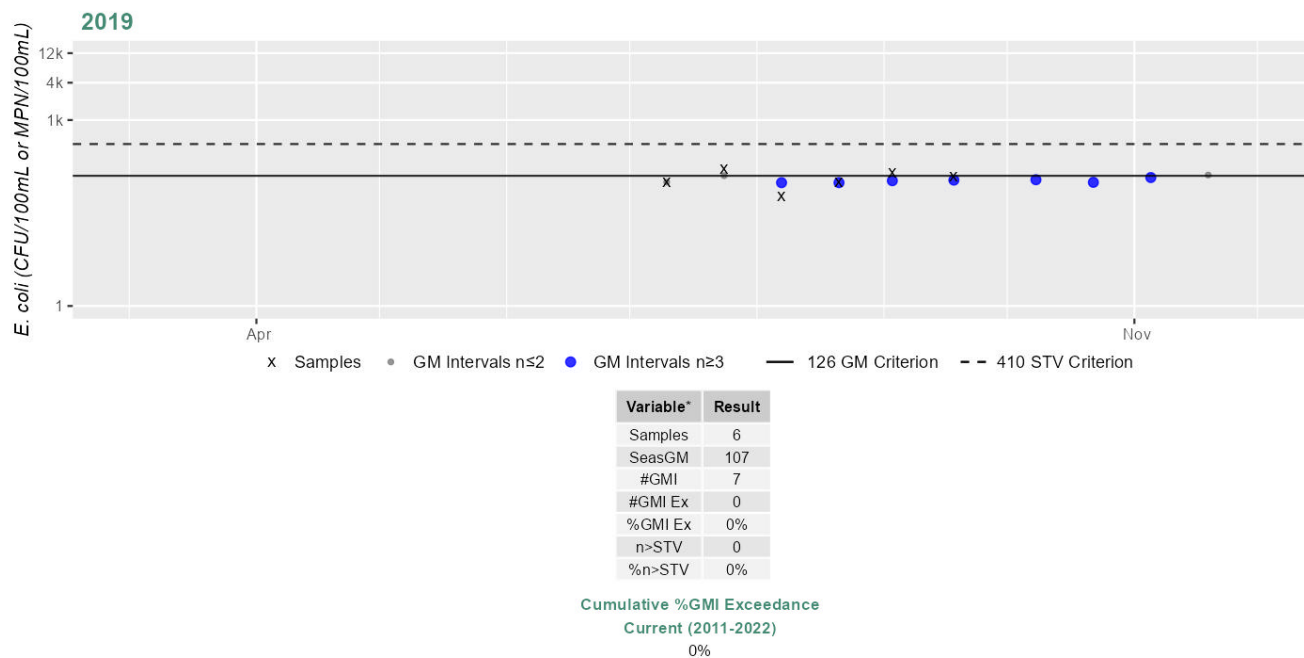
Current (2011-2022)

60%

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

Station MASSDEP_W2849 - *Escherichia coli*

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



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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Bachelor Brook (MA34-07) continues to be assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Bachelor Brook from 2003-2019 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: three-quarters of the way down the AU at W2849 [Woodbridge St, S Hadley] from Jul-Sep 2019 (n=6), and close to the downstream end at W1052 [Rt. 47 (Hadley St), S Hadley] in 2003 & 2008 (n=6/yr), and W2463 [W of Rt. 47, ~1300 ft upstream of confluence with Connecticut River, S Hadley] from May-Sep 2014 (n=5). Since bacteria data from the historic IR window are indicative of good water quality conditions, only the analysis from the current IR window (2 stations) will be summarized here: Analysis of the single year limited frequency <i>E. coli</i> dataset from W2849 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 107 CFU/100ml. Analysis of the single year limited frequency <i>E. coli</i> dataset from W2463 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 137 CFU/100ml. <i>E. coli</i> data from W2849 and W2463 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1052	MassDEP	Water Quality	Bachelor Brook	[Route 47 (Hadley Street), South Hadley]	42.270153	-72.586895
W2463	MassDEP	Water Quality	Bachelor Brook	[west of Route 47, approximately 1300 feet upstream of confluence with Connecticut River, South Hadley]	42.270034	-72.594205
W2849	MassDEP	Water Quality	Bachelor Brook	[Woodbridge Street, South Hadley]	42.278201	-72.575416

Bacteria Data

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

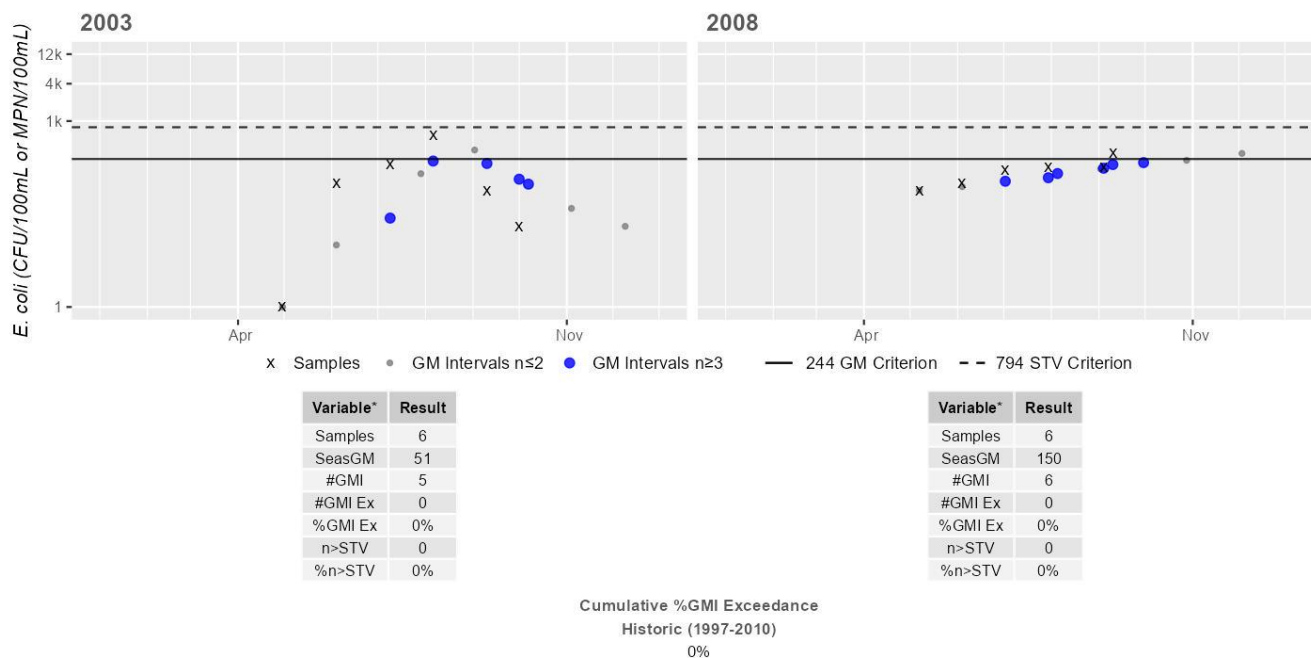
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1052	MassDEP	E. coli	04/30/03	10/01/03	6	1	580	51
W1052	MassDEP	E. coli	05/06/08	09/09/08	6	76	300	150
W2463	MassDEP	E. coli	05/15/14	09/03/14	5	43	206	137
W2849	MassDEP	E. coli	07/10/19	09/18/19	6	58	160	107

Station MASSDEP_W1052 - Escherichia coli

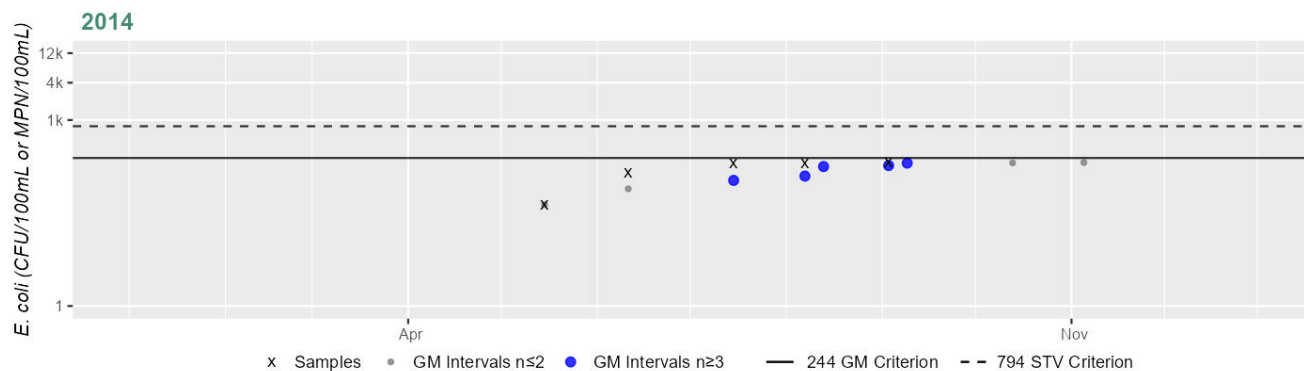
Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



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

Station MASSDEP_W2463 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	137
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

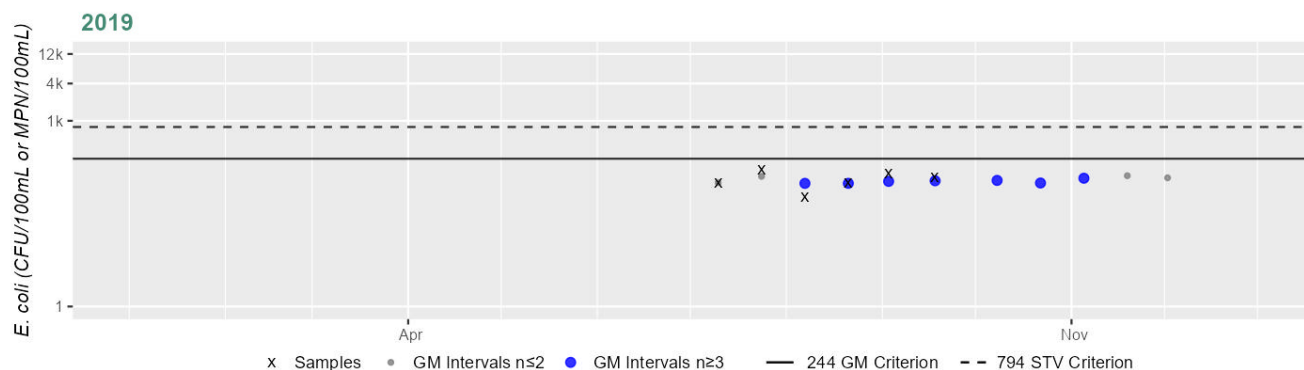
Current (2011-2022)

0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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_W2849 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	107
#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.

Barton Cove (MA34122)

Location:	Gill (cove of Connecticut River upstream of Turners Falls dams (NATID: MA00848 and MA00849)).
AU Type:	FRESHWATER LAKE
AU Size:	160 ACRES
Classification/Qualifier:	B: WWF (cove on river designated B/WWF)

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Curly-leaf Pondweed*)	--	Unchanged
5	5	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
5	5	(Fanwort*)	--	Unchanged
5	5	(Water Chestnut*)	--	Unchanged
5	5	Escherichia Coli (E. Coli)	--	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	PFAS in Fish Tissue	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Curly-leaf Pondweed*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Eurasian Water Milfoil, Myriophyllum Spicatum*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Fanwort*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	--
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
PFAS 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 Barton Cove (MA34122) continues to be assessed as Not Supporting. The prior PCBs 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 the most downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. MA DPH issued a site-specific advisory for PFAS in Barton Cove (referred to by MA DPH as "Connecticut River") in their May 2024 Freshwater Fish Consumption Advisory List and retained both this advisory as well as the existing PCBs 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>

Fish Tissue Data

Summary of Fish Tissue Data and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP 2023) (MassDEP Undated 5)

Summary
Fish toxics sampling was conducted in the most downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. Because of elevated PFAS measured in fish filets, MA DPH issued site-specific fish consumption advisories for Barton Cove (referred to by MA DPH as Connecticut River) in their May 2024 Freshwater Fish Consumption Advisory List and retained them in the January 2025 list. Additionally, MA DPH retained the existing site-specific fish consumption advisories for PCBs associated with Barton Cove (referred to by MA DPH as Connecticut River) 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 PCBs in Fish Tissue for Barton Cove (MA34122).

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No data are available, so the Aesthetics Use for Barton Cove (MA34122) 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 Barton Cove (MA34122) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2018-2022. Connecticut River Conservancy (CRC) staff/volunteers collected <i>E. coli</i> bacteria samples in Barton Cove at CRC_MAG4 [Barton Cove Boat Ramp, Gill] from 2012-2022 (n=16-19/yr). Analysis of the recent five years of this multi-year high frequency <i>E. coli</i> dataset from CRC_MAG4 indicated 3 out of 5 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2018 and 2021-2022, 35-90%), 4 yrs had >10% of samples exceed the 410 CFU/100ml STV (2018 and 2020-2022, 11-33%), and cumulatively across years 43% of intervals had GMs >126 CFU/100ml. <i>E. coli</i> data from CRC_MAG4 are indicative of an Escherichia Coli (E. Coli) impairment.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_MAG4	Connecticut River Conservancy	Water Quality	Connecticut River	Barton Cove Boat Ramp, Gill	42.607576	-72.541783

Bacteria Data

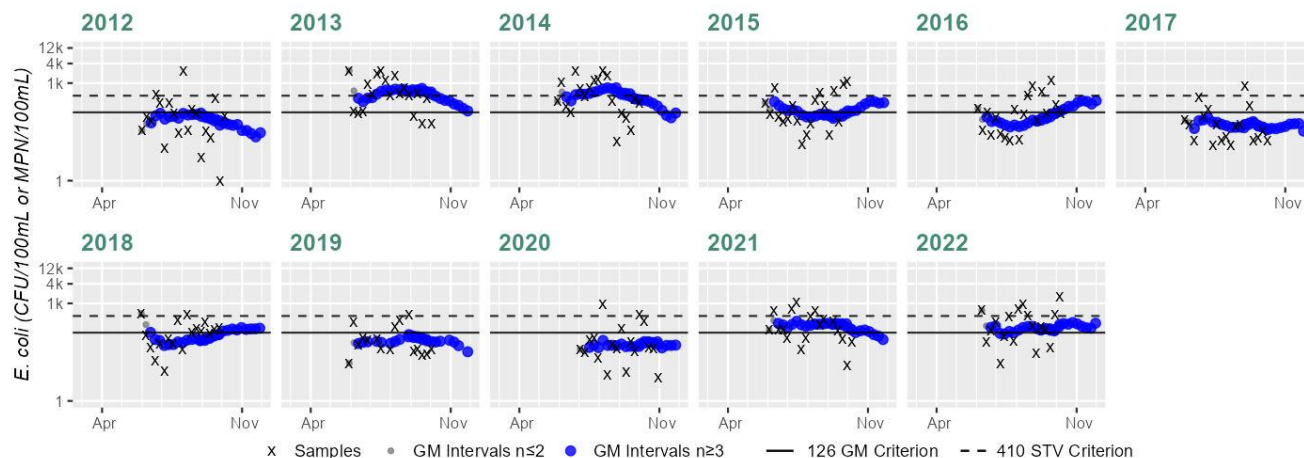
Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MAG4	Connecticut River Conservancy	E. coli	05/31/12	10/04/12	19	1	2419	65
CRC_MAG4	Connecticut River Conservancy	E. coli	05/30/13	10/03/13	19	54	2419	417
CRC_MAG4	Connecticut River Conservancy	E. coli	05/29/14	10/02/14	19	16	2419	348
CRC_MAG4	Connecticut River Conservancy	E. coli	05/28/15	10/01/15	19	13	1119	141
CRC_MAG4	Connecticut River Conservancy	E. coli	06/02/16	10/06/16	19	17	1203	104
CRC_MAG4	Connecticut River Conservancy	E. coli	06/01/17	10/05/17	19	12	816	47
CRC_MAG4	Connecticut River Conservancy	E. coli	05/31/18	09/27/18	18	8	488	99
CRC_MAG4	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	16	14	435	66
CRC_MAG4	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	5	920	51
CRC_MAG4	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	12	1046	173
CRC_MAG4	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	18	14	1553	187

Station CRC_MAG4 - *Escherichia coli*

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



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	19	Samples	19	Samples	19	Samples	19	Samples	19	Samples	19
SeasGM	65	SeasGM	417	SeasGM	348	SeasGM	141	SeasGM	104	SeasGM	47
#GMI	33	#GMI	33	#GMI	33	#GMI	33	#GMI	33	#GMI	33
#GMI Ex	0	#GMI Ex	32	#GMI Ex	29	#GMI Ex	17	#GMI Ex	12	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	96%	%GMI Ex	87%	%GMI Ex	51%	%GMI Ex	36%	%GMI Ex	0%
n>STV	2	n>STV	12	n>STV	8	n>STV	5	n>STV	4	n>STV	1
%n>STV	10%	%n>STV	63%	%n>STV	42%	%n>STV	26%	%n>STV	21%	%n>STV	5%

Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	18	Samples	16	Samples	18	Samples	18	Samples	18
SeasGM	99	SeasGM	66	SeasGM	51	SeasGM	173	SeasGM	187
#GMI	31	#GMI	27	#GMI	31	#GMI	31	#GMI	31
#GMI Ex	11	#GMI Ex	0	#GMI Ex	0	#GMI Ex	26	#GMI Ex	28
%GMI Ex	35%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	83%	%GMI Ex	90%
n>STV	2	n>STV	1	n>STV	2	n>STV	4	n>STV	6
%n>STV	11%	%n>STV	6%	%n>STV	11%	%n>STV	22%	%n>STV	33%

Cumulative %GMI Exceedance
Current (2011-2022)
44%

Cumulative %GMI Exceedance
Current (Recent 5 Years)
43%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Barton Cove (MA34122) is assessed as Fully Supporting. Connecticut River Conservancy (CRC) staff/volunteers collected <i>E. coli</i> bacteria samples in Barton Cove at CRC_MAG4 [Barton Cove Boat Ramp, Gill] from 2012-2022 (n=16-19/yr). Analysis of the recent five years of the multi-year high frequency <i>E. coli</i> dataset from CRC_MAG4 indicated 1 out of 5 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml (2022, 12%), 1 yr had >10% of samples exceed the 794 CFU/100ml STV (2022, 11%), and cumulatively across years 3% of intervals had GMs >244 CFU/100ml. <i>E. coli</i> data from CRC_MAG4 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_MAG4	Connecticut River Conservancy	Water Quality	Connecticut River	Barton Cove Boat Ramp, Gill	42.607576	-72.541783

Bacteria Data

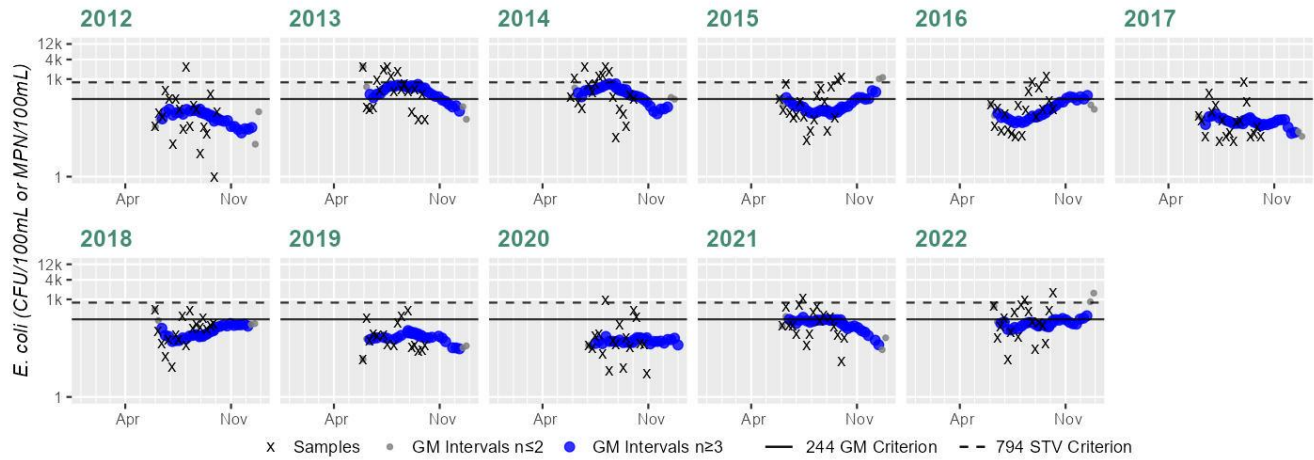
Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 1)

[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
CRC_MAG4	Connecticut River Conservancy	E. coli	05/31/12	10/04/12	19	1	2419	65
CRC_MAG4	Connecticut River Conservancy	E. coli	05/30/13	10/03/13	19	54	2419	417
CRC_MAG4	Connecticut River Conservancy	E. coli	05/29/14	10/02/14	19	16	2419	348
CRC_MAG4	Connecticut River Conservancy	E. coli	05/28/15	10/01/15	19	13	1119	141
CRC_MAG4	Connecticut River Conservancy	E. coli	06/02/16	10/06/16	19	17	1203	104
CRC_MAG4	Connecticut River Conservancy	E. coli	06/01/17	10/05/17	19	12	816	47
CRC_MAG4	Connecticut River Conservancy	E. coli	05/31/18	09/27/18	18	8	488	99
CRC_MAG4	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	16	14	435	66
CRC_MAG4	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	5	920	51
CRC_MAG4	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	12	1046	173
CRC_MAG4	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	18	14	1553	187

Station CRC_MAG4 - Escherichia coli

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



Variable*	Result
Samples	19
SeasGM	65
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	417
#GMI	33
#GMI Ex	27
%GMI Ex	81%
n>STV	6
%n>STV	31%

Variable*	Result
Samples	19
SeasGM	348
#GMI	33
#GMI Ex	25
%GMI Ex	75%
n>STV	6
%n>STV	31%

Variable*	Result
Samples	19
SeasGM	141
#GMI	33
#GMI Ex	6
%GMI Ex	18%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	19
SeasGM	104
#GMI	33
#GMI Ex	5
%GMI Ex	15%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	19
SeasGM	47
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	99
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	16
SeasGM	66
#GMI	27
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	51
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	173
#GMI	31
#GMI Ex	2
%GMI Ex	6%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	187
#GMI	31
#GMI Ex	4
%GMI Ex	12%
n>STV	2
%n>STV	11%

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

Cumulative %GMI Exceedance
Current (Recent 5 Years)
3%

*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.

Bloody Brook (MA34-36)

Location:	Headwaters, perennial portion, from the railroad tracks north of North Main Street, Deerfield to mouth at confluence with Mill River, Whately.
AU Type:	RIVER
AU Size:	3.7 MILES
Classification/Qualifier:	B

Bloody Brook (MA34-36)

Watershed Area: 5.65 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	5.65	4.78	1.49	1.26
Agriculture	28.2%	27.7%	30.1%	27.8%
Developed	19.4%	21.5%	19%	21.4%
Natural	44.2%	41.8%	38.4%	36.7%
Wetland	8.2%	9%	12.5%	14.1%
Impervious	8.4%	9.3%	8.8%	10%

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)	R1_MA_2024_04	Changed
5	5	Phosphorus, Total	--	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)	Source Unknown (N)	--	--	--	X	X
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Turbidity	Source Unknown (N)	--	--	X	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 Bloody Brook (MA34-36) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Bloody Brook (MA34-36) continues to be assessed as as Not Supporting with the Turbidity impairment being carried forward. MassDEP staff recorded aesthetics observations at two stations in Deerfield, about halfway down Bloody Brook: at Pleasant Street (W2844) during summer 2019 (n=8) and Whately Road (W1063) during summer 2019 (n=8). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted moderate turbidity (n=4) and high turbidity (n=1) at both sites.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1063	MassDEP	Water Quality	Bloody Brook	[Whately Road, Deerfield]	42.478362	-72.618936
W2844	MassDEP	Water Quality	Bloody Brook	[Pleasant Street, Deerfield]	42.481763	-72.605133

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
W1063	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W1063 on Bloody Brook (MA34-36) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted moderate turbidity (n=4) and high turbidity (n=1).
W2844	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2844 on Bloody Brook (MA34-36) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted moderate turbidity (n=4) and high turbidity (n=1).

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
W1063	2019	8	5	0
W2844	2019	8	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1063	Bloody Brook	2019	Aesthetics Impaired?	No	8	8
W1063	Bloody Brook	2019	Aquatic Plant Density, Overall	None	6	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1063	Bloody Brook	2019	Aquatic Plant Density, Overall	Sparse	1	8
W1063	Bloody Brook	2019	Aquatic Plant Density, Overall	Unobservable	1	8
W1063	Bloody Brook	2019	Color	Light Yellow/Tan	6	8
W1063	Bloody Brook	2019	Color	None	2	8
W1063	Bloody Brook	2019	Objectionable Deposits	No	8	8
W1063	Bloody Brook	2019	Odor	Musty (Basement)	2	8
W1063	Bloody Brook	2019	Odor	None	6	8
W1063	Bloody Brook	2019	Periphyton Density, Filamentous	None	5	8
W1063	Bloody Brook	2019	Periphyton Density, Filamentous	Unobservable	3	8
W1063	Bloody Brook	2019	Periphyton Density, Film	None	5	8
W1063	Bloody Brook	2019	Periphyton Density, Film	Unobservable	3	8
W1063	Bloody Brook	2019	Scum	No	5	8
W1063	Bloody Brook	2019	Scum	Yes	3	8
W1063	Bloody Brook	2019	Turbidity	Highly Turbid	1	8
W1063	Bloody Brook	2019	Turbidity	Moderately Turbid	4	8
W1063	Bloody Brook	2019	Turbidity	Slightly Turbid	3	8
W2844	Bloody Brook	2019	Aesthetics Impaired?	No	8	8
W2844	Bloody Brook	2019	Aquatic Plant Density, Overall	None	5	8
W2844	Bloody Brook	2019	Aquatic Plant Density, Overall	Unobservable	3	8
W2844	Bloody Brook	2019	Color	Light Yellow/Tan	7	8
W2844	Bloody Brook	2019	Color	None	1	8
W2844	Bloody Brook	2019	Objectionable Deposits	No	7	8
W2844	Bloody Brook	2019	Objectionable Deposits	Unobservable	1	8
W2844	Bloody Brook	2019	Odor	None	8	8
W2844	Bloody Brook	2019	Periphyton Density, Filamentous	None	5	8
W2844	Bloody Brook	2019	Periphyton Density, Filamentous	Unobservable	3	8
W2844	Bloody Brook	2019	Periphyton Density, Film	None	4	8
W2844	Bloody Brook	2019	Periphyton Density, Film	Sparse	1	8
W2844	Bloody Brook	2019	Periphyton Density, Film	Unobservable	3	8
W2844	Bloody Brook	2019	Scum	No	8	8
W2844	Bloody Brook	2019	Turbidity	Highly Turbid	1	8
W2844	Bloody Brook	2019	Turbidity	Moderately Turbid	4	8
W2844	Bloody Brook	2019	Turbidity	Slightly Turbid	3	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Bloody Brook (MA34-36) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2019. The prior Turbidity impairment (from the Aesthetics Use) is also being carried forward. MassDEP staff collected *E. coli* bacteria samples at 2 stations around halfway down Bloody Brook in 2019. Samples were collected from the following stations/sample years from upstream to downstream: W2844 [Pleasant St, Deerfield] from Jul-Sep 2019 (n=6), and W1063 [Whately Rd, Deerfield] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency *E. coli* dataset from W2844 indicated 100% of intervals had GMs >126 CFU/100ml, 4 samples exceeded the 410 CFU/100ml STV (max 2000 CFU), and the seasonal GM was 886 CFU/100ml. Analysis of the single year limited frequency *E. coli* dataset from W1063 indicated that while 71% of intervals had GMs >126 CFU/100ml, only 1 sample exceeded the 410 CFU/100ml STV (1600 CFU), and the seasonal GM was 149 CFU/100ml. *E. coli* data from W2844 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1063	MassDEP	Water Quality	Bloody Brook	[Whately Road, Deerfield]	42.478362	-72.618936
W2844	MassDEP	Water Quality	Bloody Brook	[Pleasant Street, Deerfield]	42.481763	-72.605133

Bacteria Data

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

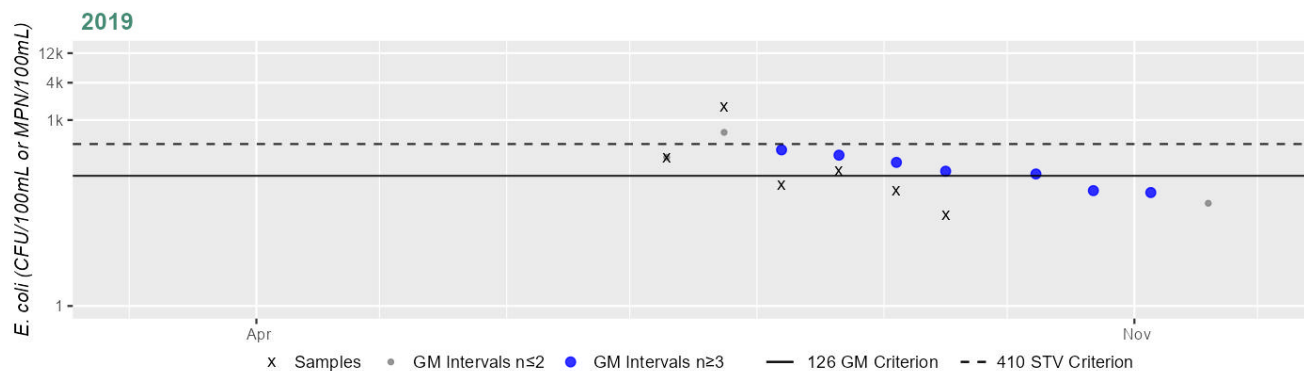
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1063	MassDEP	E. coli	07/10/19	09/16/19	6	29	1600	149
W2844	MassDEP	E. coli	07/10/19	09/16/19	6	340	2000	886

Station MASSDEP_W1063 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	149
#GMI	7
#GMI Ex	5
%GMI Ex	71%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance

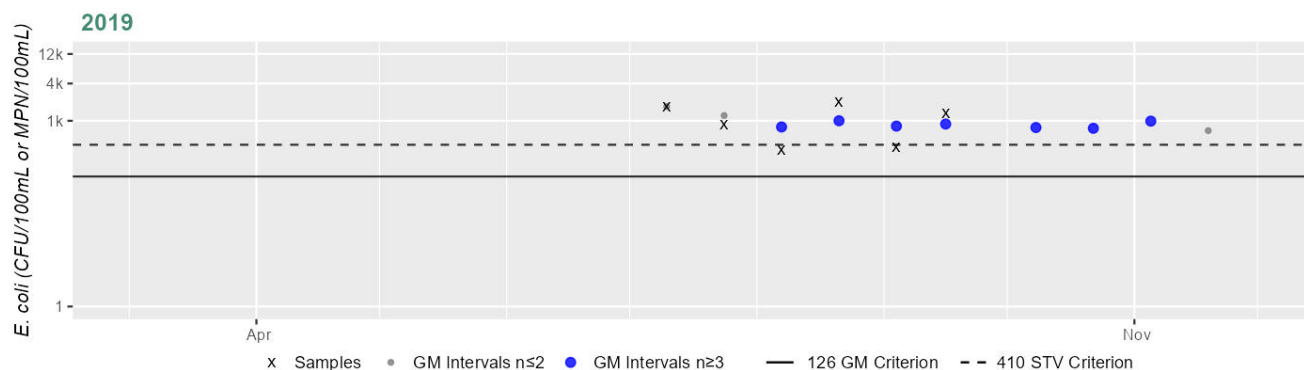
Current (2011-2022)

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_W2844 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	886
#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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Bloody Brook (MA34-36) continues to be assessed as Not Supporting. The prior Turbidity impairment (from the Aesthetics Use) is being carried forward. An Escherichia Coli (E. Coli) impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 1 station in 2019. MassDEP staff collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) at 2 stations around halfway down Bloody Brook from 2003-2019. Samples were collected from the following stations/sample years from upstream to downstream: W2844 [Pleasant St, Deerfield] from Jul-Sep 2019 (n=6), and W1063 [Whately Rd, Deerfield] in 2003 & 2008 (historic n=6/yr) as well as Jul-Sep 2019 (current n=6). Since bacteria data from the historic IR window at W1063 are indicative of poor water quality conditions, only the analysis from the current IR window (at both stations) will be summarized here: Analysis of the single year limited frequency <i>E. coli</i> dataset from W2844 indicated 100% of intervals had GMs >244 CFU/100ml, 4 samples exceeded the 794 CFU/100ml STV (max 2000 CFU) and the overall GM was 886 CFU/100ml. Analysis of the single year limited frequency <i>E. coli</i> dataset from W1063 indicated 28% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV (1600 CFU), and the overall GM was 149 CFU/100ml. <i>E. coli</i> data from W2844 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1063	MassDEP	Water Quality	Bloody Brook	[Whately Road, Deerfield]	42.478362	-72.618936
W2844	MassDEP	Water Quality	Bloody Brook	[Pleasant Street, Deerfield]	42.481763	-72.605133

Bacteria Data

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

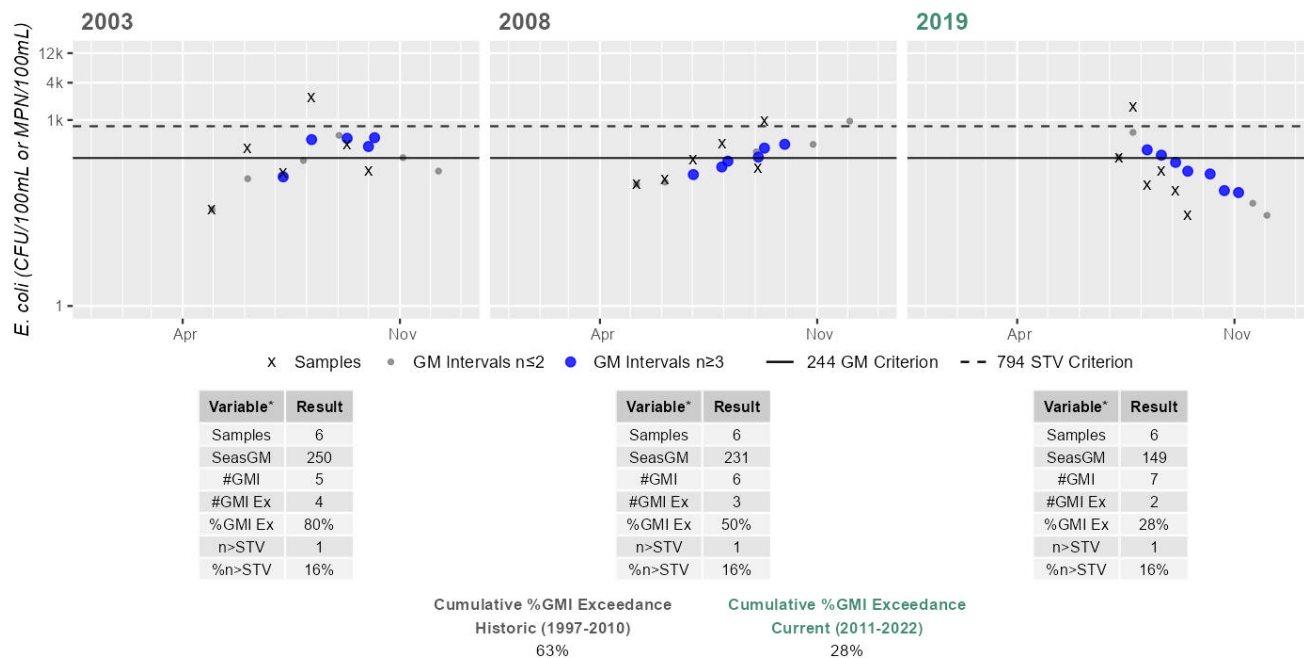
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1063	MassDEP	E. coli	04/30/03	10/01/03	6	36	2280	250
W1063	MassDEP	E. coli	05/06/08	09/09/08	6	92	960	231
W1063	MassDEP	E. coli	07/10/19	09/16/19	6	29	1600	149
W2844	MassDEP	E. coli	07/10/19	09/16/19	6	340	2000	886

Station MASSDEP_W1063 - *Escherichia coli*

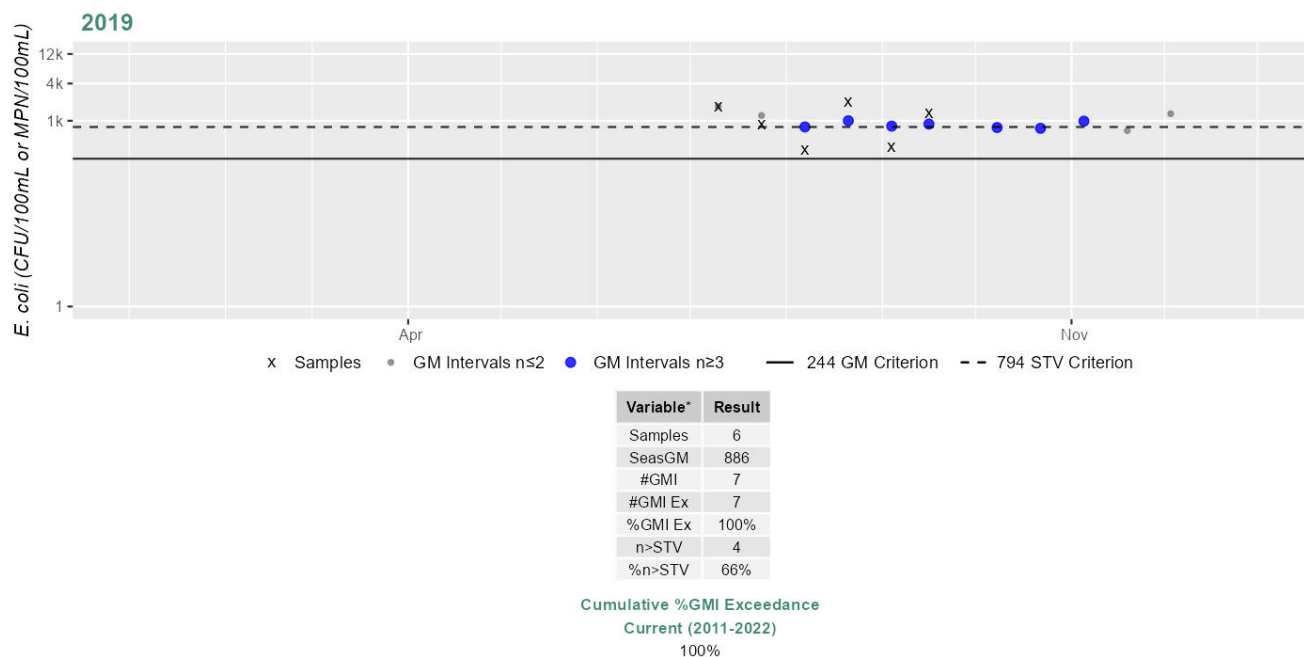
Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



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

Station MASSDEP_W2844 - *Escherichia coli*

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



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

Bradford Brook (MA34-71)

Location:	Headwaters east of Williamsburg Road, Ashfield to mouth at confluence with East Branch Mill River, Williamsburg.
AU Type:	RIVER
AU Size:	4 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Bradford Brook (MA34-71) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Brewer Brook (MA34-69)

Location:	Headwaters south of Route 143 in the southwest corner of Williamsburg to mouth at confluence with Roberts Meadow Brook, Westhampton.
AU Type:	RIVER
AU Size:	2.3 MILES
Classification/Qualifier:	A: PWS, ORW (Tributary)

No usable data were available for Brewer Brook (MA34-69) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Brickyard Brook (MA34-13)

Location:	Headwaters, perennial portion, Westfield to mouth at confluence with Manhan River, Westfield.
AU Type:	RIVER
AU Size:	1.6 MILES
Classification/Qualifier:	B

No usable data were available for Brickyard Brook (MA34-13) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

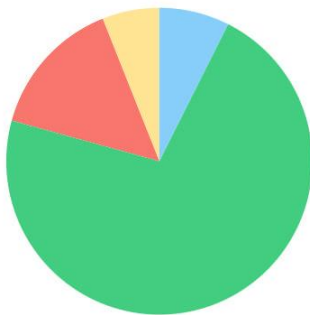
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Broad Brook (MA34-18)

Location:	Headwaters, Holyoke to mouth at inlet Nashawannuck Pond, Easthampton.
AU Type:	RIVER
AU Size:	9.3 MILES
Classification/Qualifier:	B: CWF

Broad Brook (MA34-18)

Watershed Area: 6.23 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	6.23	3.90	1.43	0.85
Agriculture	6%	4.9%	4.8%	5.1%
Developed	14.7%	14.2%	11.4%	12%
Natural	71.8%	73.1%	61%	58.6%
Wetland	7.4%	7.7%	22.8%	24.3%
Impervious	5.6%	5.5%	4.1%	4.2%

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 Broad Brook (MA34-18) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Broad Brook (MA34-18) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations for one station towards the downstream end of Broad Brook, west of Holyoke Road (Rt. 141), ~2300 feet upstream from mouth at inlet of Nashawannuck Pond, East Hampton (W2219) in summer 2014 (n=5). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits in the form of slight trash (n=2).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2219	MassDEP	Water Quality	Broad Brook	[west of Holyoke Road (Route 141), approximately 2300 feet upstream from mouth at inlet of Nashawannuck Pond, East Hampton]	42.250209	-72.658927

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
W2219	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2219 on Broad Brook (MA34-18) during 5 site visits between May 2014 and Sep 2014. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits (n=2).

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
W2219	2014	5	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2219	Broad Brook	2014	Aesthetics Impaired?	No	5	5
W2219	Broad Brook	2014	Aquatic Plant Density, Overall	None	5	5
W2219	Broad Brook	2014	Color	Light Yellow/Tan	1	5
W2219	Broad Brook	2014	Color	None	4	5
W2219	Broad Brook	2014	Objectionable Deposits	No	3	5
W2219	Broad Brook	2014	Objectionable Deposits	Yes	2	5
W2219	Broad Brook	2014	Odor	None	5	5
W2219	Broad Brook	2014	Periphyton Density, Filamentous	None	5	5
W2219	Broad Brook	2014	Periphyton Density, Film	None	5	5
W2219	Broad Brook	2014	Scum	No	5	5
W2219	Broad Brook	2014	Turbidity	None	4	5
W2219	Broad Brook	2014	Turbidity	Slightly Turbid	1	5

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Broad Brook (MA34-18) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples close to the downstream end of Broad Brook at W2219 [West of Holyoke Rd (Rt. 141), ~2300 ft upstream from mouth at inlet of Nashawannuck Pond, East Hampton] from May-Sep 2014 (n=5). <i>E. coli</i> data from W2219 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2219	MassDEP	Water Quality	Broad Brook	[west of Holyoke Road (Route 141), approximately 2300 feet upstream from mouth at inlet of Nashawannuck Pond, East Hampton]	42.250209	-72.658927

Bacteria Data

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

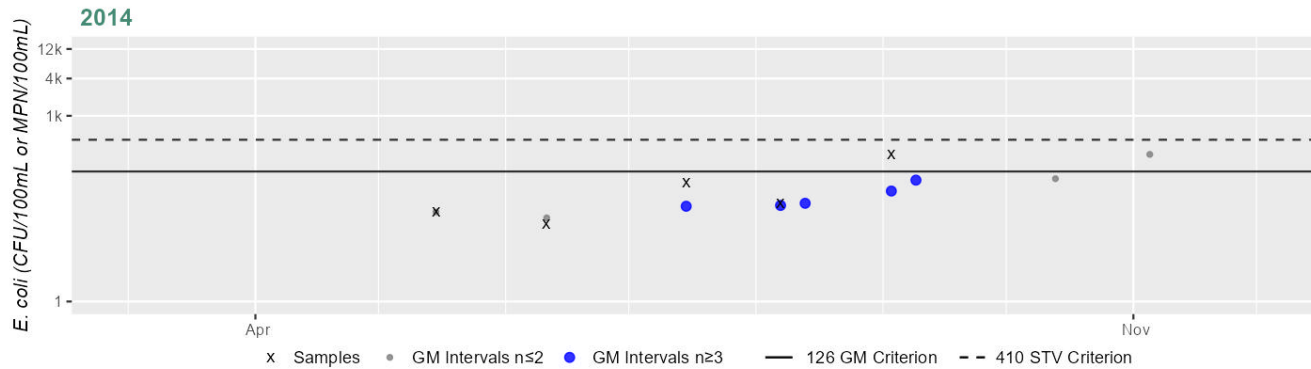
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2219	MassDEP	E. coli	05/15/14	09/03/14	5	18	238	52

Station MASSDEP_W2219 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	52
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Broad Brook (MA34-18) is assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples close to the downstream end of Broad Brook at W2219 [West of Holyoke Rd (Rt. 141), ~2300 ft upstream from mouth at inlet of Nashawannuck Pond, East Hampton] from May-Sep 2014 (n=5). *E. coli* data from W2219 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2219	MassDEP	Water Quality	Broad Brook	[west of Holyoke Road (Route 141), approximately 2300 feet upstream from mouth at inlet of Nashawannuck Pond, East Hampton]	42.250209	-72.658927

Bacteria Data

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

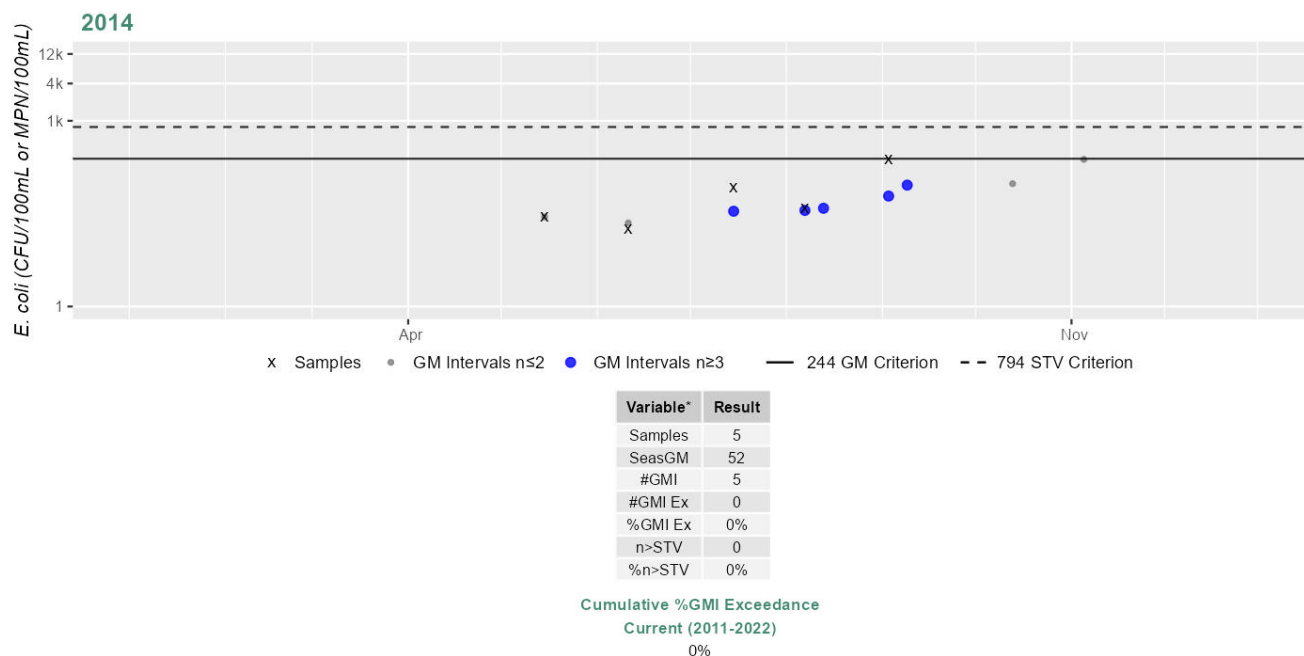
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2219	MassDEP	E. coli	05/15/14	09/03/14	5	18	238	52

Station MASSDEP_W2219 - *Escherichia coli*

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



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

Buffum Brook (MA34-49)

Location:	Headwaters, west of West Pelham Road, Shutesbury to mouth at confluence with Harris Brook, (forming headwaters Amethyst Brook), Pelham (variant name: Buffam Brook).
AU Type:	RIVER
AU Size:	3 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Buffum Brook (MA34-49) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

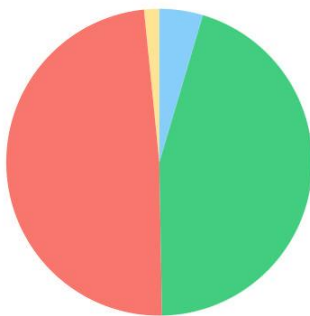
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Buttery Brook (MA34-42)

Location:	Headwaters (perennial portion), west of Haig Avenue, South Hadley to mouth at confluence with the Connecticut River, South Hadley (interrupted urban, approximately 1200 feet culverted).
AU Type:	RIVER
AU Size:	1.6 MILES
Classification/Qualifier:	B

Buttery Brook (MA34-42)

Watershed Area: 3.16 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.16	3.16	0.70	0.70
Agriculture	1.6%	1.6%	4.1%	4.1%
Developed	48.7%	48.7%	33.6%	33.6%
Natural	45.1%	45.1%	50.5%	50.5%
Wetland	4.6%	4.6%	11.8%	11.8%
Impervious	23.3%	23.3%	17.7%	17.7%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
5	5	Trash	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	X
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	X
Trash	Source Unknown (N)	--	--	X	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 Buttery Brook (MA34-42) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Buttery Brook (MA34-42) is assessed as Not Supporting. A Trash impairment is being added due to observations at one station in 2019. MassDEP staff recorded aesthetics observations at one station at the upstream end of Buttery Brook: at Bridge Street (Route 116), South Hadley (W2852) during summer 2019 (n=8). There were some objectionable conditions recorded, including an aesthetics impairment flag (n=2), petroleum odor (n=2) and effluent odor (n=1). Field staff also noted trash (n=6), on one occasion in abundant quantities.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2852	MassDEP	Water Quality	Buttery Brook	[Bridge Street (Route 116), South Hadley]	42.213966	-72.595149

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
W2852	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2852 on Buttery Brook (MA34-42) during 8 site visits between May 2019 and Sep 2019. There were some objectionable conditions recorded, including an aesthetics impairment flag (n=2) and petroleum or effluent odor (n=3). Field staff also noted objectionable deposits (n=6) and abundant trash (n=1). These conditions are indicative of an Alert status.

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
W2852	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2852	Buttery Brook	2019	Aesthetics Impaired?	No	6	8
W2852	Buttery Brook	2019	Aesthetics Impaired?	Yes	2	8
W2852	Buttery Brook	2019	Aquatic Plant Density, Overall	None	8	8
W2852	Buttery Brook	2019	Color	Brownish	1	8
W2852	Buttery Brook	2019	Color	Light Yellow/Tan	1	8
W2852	Buttery Brook	2019	Color	None	6	8
W2852	Buttery Brook	2019	Objectionable Deposits	No	2	8
W2852	Buttery Brook	2019	Objectionable Deposits	Yes	6	8
W2852	Buttery Brook	2019	Odor	Effluent (Treated)	1	8
W2852	Buttery Brook	2019	Odor	None	4	8
W2852	Buttery Brook	2019	Odor	Other (Farm/Animals)	1	8
W2852	Buttery Brook	2019	Odor	Petroleum	2	8
W2852	Buttery Brook	2019	Periphyton Density, Filamentous	None	8	8
W2852	Buttery Brook	2019	Periphyton Density, Film	None	5	8
W2852	Buttery Brook	2019	Periphyton Density, Film	Sparse	3	8
W2852	Buttery Brook	2019	Scum	No	8	8
W2852	Buttery Brook	2019	Turbidity	Moderately Turbid	1	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2852	Buttery Brook	2019	Turbidity	None	4	8
W2852	Buttery Brook	2019	Turbidity	Slightly Turbid	3	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Buttery Brook (MA34-42) continues to be assessed as Not Supporting. A Trash impairment (from the Aesthetics Use) is being added, and the prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2019. MassDEP staff collected <i>E. coli</i> bacteria samples at the upstream end of Buttery Brook at W2852 [Bridge St (Rt. 116), S Hadley] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2852 indicated 100% of intervals had GMs >126 CFU/100ml, 4 samples exceeded the 410 CFU/100ml STV (max 730 CFU), and the seasonal GM was 440 CFU/100ml. <i>E. coli</i> data from W2852 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2852	MassDEP	Water Quality	Buttery Brook	[Bridge Street (Route 116), South Hadley]	42.213966	-72.595149

Bacteria Data

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

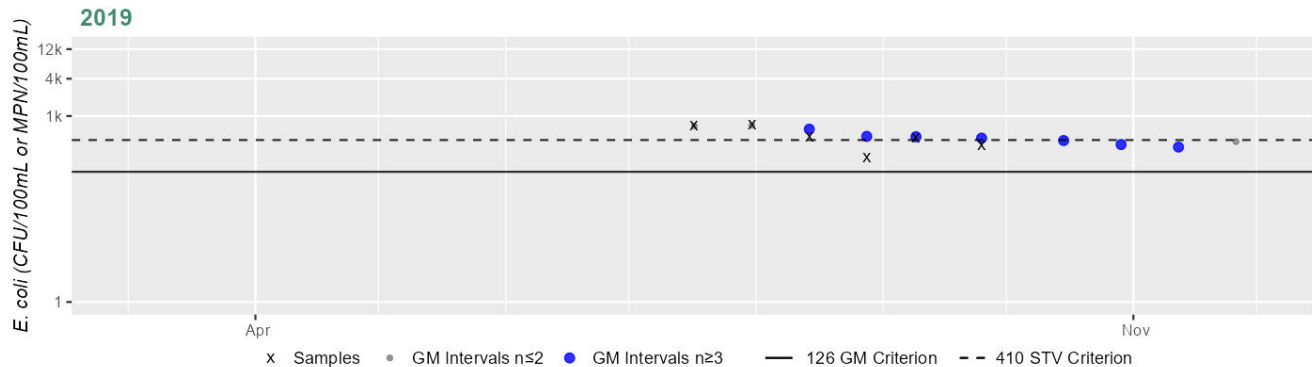
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2852	MassDEP	E. coli	07/17/19	09/25/19	6	210	730	440

Station MASSDEP_W2852 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	440
#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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Buttery Brook (MA34-42) is assessed as Not Supporting. A Trash impairment (from the Aesthetics Use) is being added, and 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 1 station in 2019. MassDEP staff collected <i>E. coli</i> bacteria samples at the upstream end of Buttery Brook at W2852 [Bridge St (Rt. 116), S Hadley] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2852 indicated 100% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 440 CFU/100ml. <i>E. coli</i> data from W2852 are indicative of an <i>Escherichia Coli</i> (<i>E. Coli</i>) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2852	MassDEP	Water Quality	Buttery Brook	[Bridge Street (Route 116), South Hadley]	42.213966	-72.595149

Bacteria Data

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

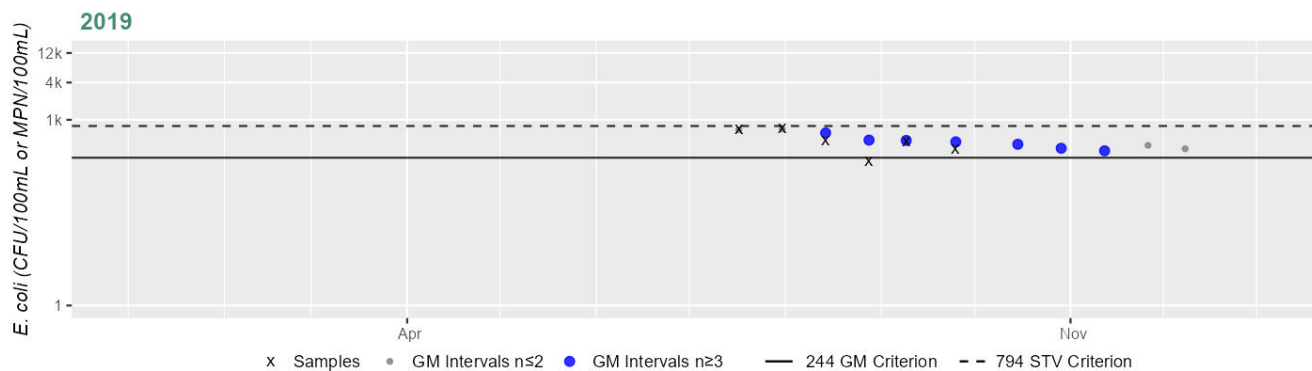
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2852	MassDEP	E. coli	07/17/19	09/25/19	6	210	730	440

Station MASSDEP_W2852 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	440
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

100%

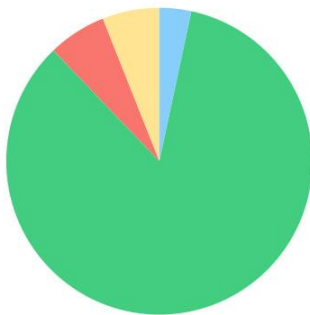
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Connecticut River (MA34-01)

Location:	New Hampshire/Massachusetts state line, Northfield to Route 10 bridge, Northfield.
AU Type:	RIVER
AU Size:	3.5 MILES
Classification/Qualifier:	B: WWF

Connecticut River (MA34-01)

Watershed Area: 462.87 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area* (square miles)	25.66	8.88	5.55	2.29
Agriculture	6%	15%	5.3%	11.9%
Developed	6.1%	14.1%	5.1%	8%
Natural	84.5%	67.6%	82.6%	75.4%
Wetland	3.4%	3.2%	7%	4.6%
Impervious	1.9%	4%	2%	2.8%

*Land cover analysis only includes watershed area within Massachusetts.

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	(Flow Regime Modification*)	--	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	PFAS in Fish Tissue	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Alteration in Stream-side or Littoral Vegetative Covers*)	Streambank Modifications/Destabilization (Y)	X	--	--	--	--
(Flow Regime Modification*)	Impacts from Hydrostructure Flow Regulation/Modification (Y)	X	--	--	--	--
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
PFAS 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 this Connecticut River AU (MA34-01) continues to be assessed as Not Supporting. The prior PCBs 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 the most downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. MA DPH issued a site-specific advisory for PFAS in the Connecticut River in their May 2024 Freshwater Fish Consumption Advisory List and retained both this advisory as well as the existing PCBs 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>

Fish Tissue Data

Summary of Fish Tissue Data and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP 2023) (MassDEP Undated 5)

Summary
Fish toxics sampling was conducted in the most downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. Because of elevated PFAS measured in fish filets, MA DPH issued site-specific fish consumption advisories for Connecticut River in their May 2024 Freshwater Fish Consumption Advisory List and retained them in the January 2025 list. Additionally, MA DPH retained the existing site-specific fish consumption advisories for PCBs associated with the Connecticut River 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 PCBs in Fish Tissue for this Connecticut River AU (MA34-01).

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	YES
2024/26 Use Attainment Summary	
There are no data available to assess the status of the Aesthetics Use for this Connecticut River AU (MA34-01), so it is Not Assessed. The Alert Status previously identified due to the episodic turbidity and alteration in stream-side or littoral vegetative covers (due to severe bank erosion issues associated with the operation of hydroelectric plants) is being carried forward. Since the prior Flow Regime Modification Alert was redundantly duplicated across multiple uses for this waterbody, the Flow Regime Modification Alert is being removed from the Aesthetics Use but is currently maintained as an impairment under the Aquatic Life Use.	

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO
2024/26 Use Attainment Summary	
The Primary Contact Recreation Use for the Connecticut River (MA34-01) continues to be assessed as Fully Supporting. Connecticut River Conservancy (CRC) staff/volunteers collected <i>E. coli</i> bacteria samples a quarter of the way down this Connecticut River AU at CRC_MAG7 [Pauchaug Boat Ramp, Northfield] from 2013-2022 (n=6-18/yr). Analysis of the recent five years of this multi-year mixed frequency <i>E. coli</i> dataset from CRC_MAG7 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml, 0 yrs had >10% of samples exceed the 410 CFU/100ml STV, and cumulatively across years 0% of intervals had GMs >126 CFU/100ml. <i>E. coli</i> data from CRC_MAG7 meet 2024 CALM guidance.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_MAG7	Connecticut River Conservancy	Water Quality	Connecticut River	Pauchaug Boat Ramp, Northfield	42.715540	-72.452724

Bacteria Data

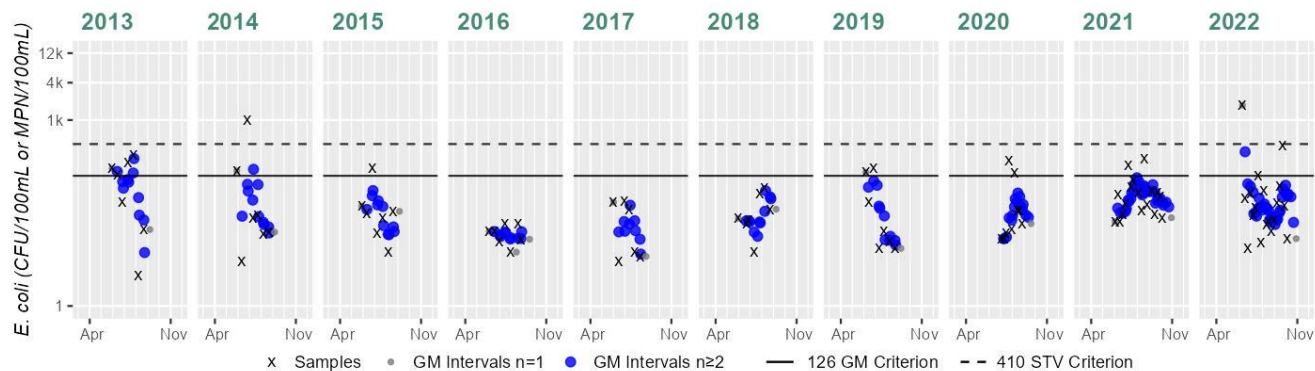
Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis) (CRC 2023) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MAG7	Connecticut River Conservancy	E. coli	05/30/13	08/22/13	7	3	275	61
CRC_MAG7	Connecticut River Conservancy	E. coli	05/29/14	08/21/14	7	5	980	38
CRC_MAG7	Connecticut River Conservancy	E. coli	05/28/15	08/20/15	7	7	167	29
CRC_MAG7	Connecticut River Conservancy	E. coli	06/02/16	08/25/16	7	7	21	14
CRC_MAG7	Connecticut River Conservancy	E. coli	06/01/17	08/10/17	6	5	49	16
CRC_MAG7	Connecticut River Conservancy	E. coli	05/31/18	08/23/18	7	7	79	29
CRC_MAG7	Connecticut River Conservancy	E. coli	06/06/19	08/22/19	7	8	165	28
CRC_MAG7	Connecticut River Conservancy	E. coli	07/02/20	08/27/20	9	12	224	31
CRC_MAG7	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	17	23	235	54
CRC_MAG7	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	18	8	1732	45

Station CRC_MAG7 - *Escherichia coli*

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



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	7	Samples	7	Samples	7	Samples	7	Samples	6	Samples	7	Samples	7	Samples	9	Samples	17
SeasGM	61	SeasGM	38	SeasGM	29	SeasGM	14	SeasGM	16	SeasGM	29	SeasGM	28	SeasGM	31	SeasGM	54
#GMI	11	#GMI	11	#GMI	11	#GMI	10	#GMI	9	#GMI	11	#GMI	11	#GMI	15	#GMI	31
#GMI Ex	3	#GMI Ex	1	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	27%	%GMI Ex	9%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0
%n>STV	0%	%n>STV	14%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

3%

Cumulative %GMI Exceedance

Current (Recent 5 Years)

0%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for the Connecticut River (MA34-01) continues to be assessed as Fully Supporting. Connecticut River Conservancy (CRC) and MassDEP staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Connecticut River from 2003-2022 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: a quarter of the way down at CRC_MAG7 [Pauchaug Boat Ramp, Northfield] from 2013-2022 (n=6-18/yr), close to the downstream end at W1799 [~800 ft N of the Rt. 10 bridge (near the eastern end of old Bernardston Rd), Northfield] from May-Sep 2008 (n=6), and the downstream end at W0478 [Rt. 10 bridge, Northfield] from Apr-Oct 2003 (n=6). Analysis of the recent five years of this multi-year mixed frequency *E. coli* dataset from CRC_MAG7 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml, 0 yrs had >10% of samples exceed the 794 CFU/100ml STV, and cumulatively across years 0% of intervals had GMs >244 CFU/100ml. *E. coli* data from CRC_MAG7 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_MAG7	Connecticut River Conservancy	Water Quality	Connecticut River	Pauchaug Boat Ramp, Northfield	42.715540	-72.452724
W0478	MassDEP	Water Quality	Connecticut River	[Route 10 bridge, Northfield.]	42.683717	-72.471587
W1799	MassDEP	Water Quality	Connecticut River	[approximately 800 feet north of the Route 10 bridge (near the eastern end of old Bernardston Road), Northfield]	42.685367	-72.473746

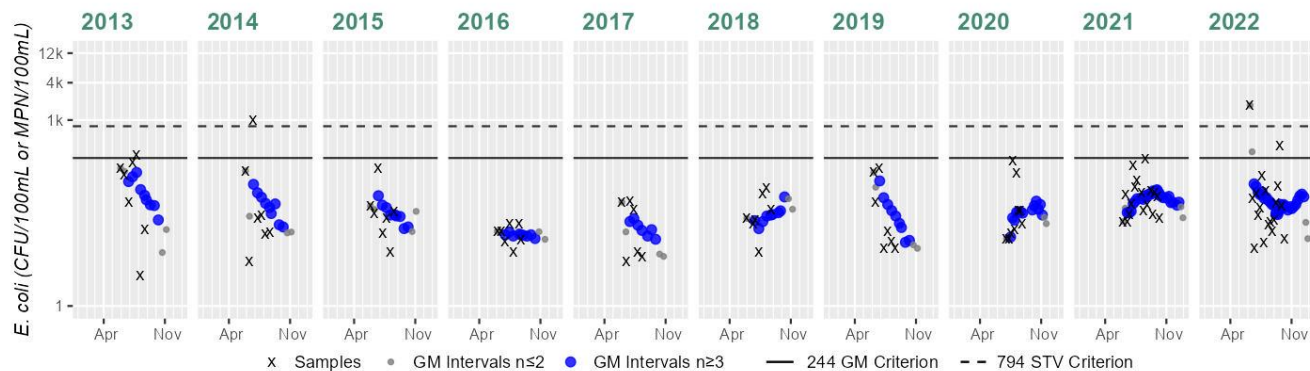
Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis) (CRC 2023) (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
CRC_MAG7	Connecticut River Conservancy	E. coli	05/30/13	08/22/13	7	3	275	61
CRC_MAG7	Connecticut River Conservancy	E. coli	05/29/14	08/21/14	7	5	980	38
CRC_MAG7	Connecticut River Conservancy	E. coli	05/28/15	08/20/15	7	7	167	29
CRC_MAG7	Connecticut River Conservancy	E. coli	06/02/16	08/25/16	7	7	21	14
CRC_MAG7	Connecticut River Conservancy	E. coli	06/01/17	08/10/17	6	5	49	16
CRC_MAG7	Connecticut River Conservancy	E. coli	05/31/18	08/23/18	7	7	79	29
CRC_MAG7	Connecticut River Conservancy	E. coli	06/06/19	08/22/19	7	8	165	28
CRC_MAG7	Connecticut River Conservancy	E. coli	07/02/20	08/27/20	9	12	224	31
CRC_MAG7	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	17	23	235	54
CRC_MAG7	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	18	8	1732	45
W0478	MassDEP	E. coli	04/30/03	10/01/03	6	1	120	9
W1799	MassDEP	E. coli	05/06/08	09/09/08	6	2	220	19

Station CRC_MAG7 - Escherichia coli

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



Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result	Variable*	Result
Samples	7	Samples	7	Samples	7	Samples	7	Samples	6	Samples	7	Samples	7	Samples	9	Samples	17
SeasGM	61	SeasGM	38	SeasGM	29	SeasGM	14	SeasGM	16	SeasGM	29	SeasGM	28	SeasGM	31	SeasGM	54
#GMI	9	#GMI	9	#GMI	9	#GMI	9	#GMI	7	#GMI	9	#GMI	9	#GMI	13	#GMI	29
#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0	#GMI Ex	0
%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%	%GMI Ex	0%
n>STV	0	n>STV	1	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	0	n>STV	1
%n>STV	0%	%n>STV	14%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	0%	%n>STV	5%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

Cumulative %GMI Exceedance

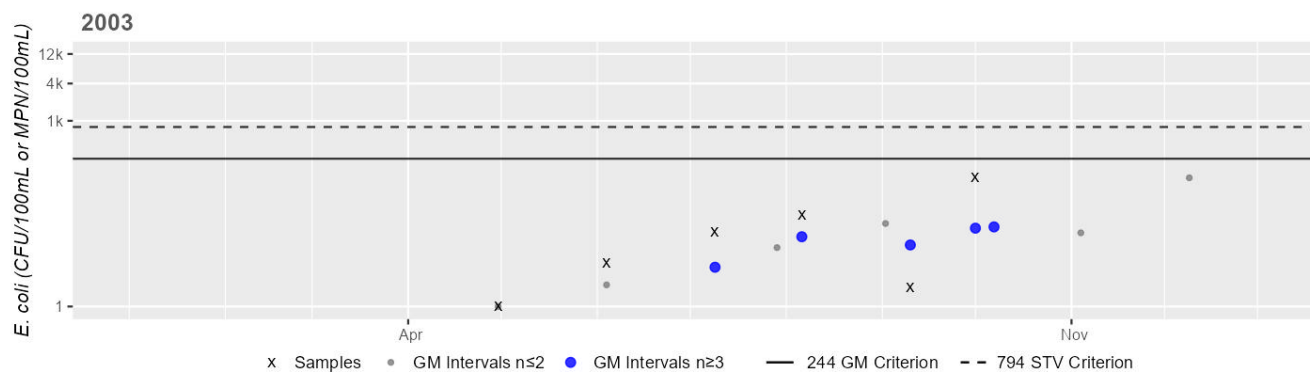
Current (Recent 5 Years)

0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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_W0478 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	9
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

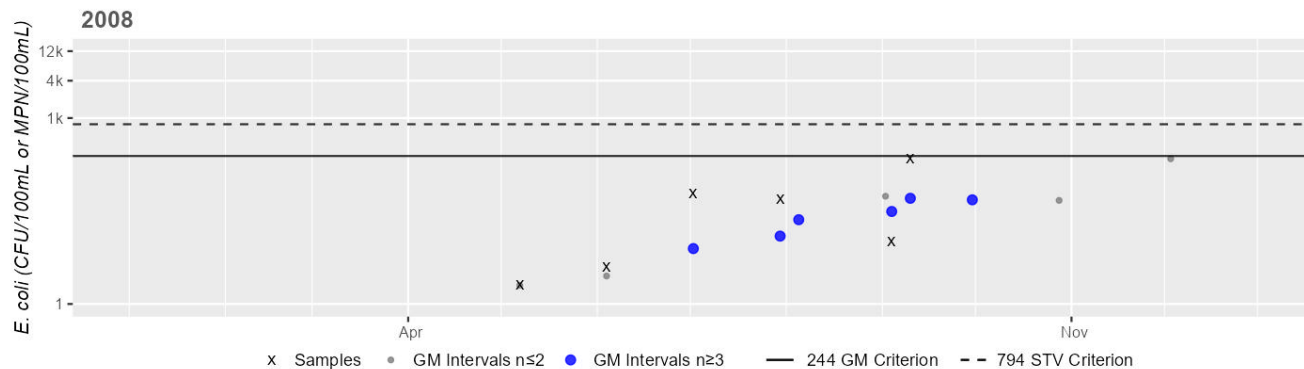
Historic (1997-2010)

0%

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

Station MASSDEP_W1799 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	19
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Historic (1997-2010)

0%

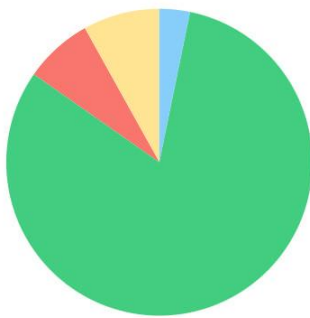
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
 %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
 "Recent 5 Years" may not be consecutive as the analysis excludes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

Connecticut River (MA34-02)

Location:	Route 10 bridge, Northfield to Turners Falls dams (NATID: MA00848 and MA00849), Gill/Montague (excluding the delineated segment; Barton Cove MA34122).
AU Type:	RIVER
AU Size:	11.4 MILES
Classification/Qualifier:	B: WWF

Connecticut River (MA34-02)

Watershed Area: 506.80 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area* (square miles)	69.58	10.14	18.15	3.40
Agriculture	8.1%	3.8%	7.3%	4%
Developed	7.2%	11.9%	6.1%	7.3%
Natural	81.5%	81.7%	80.4%	83.1%
Wetland	3.2%	2.6%	6.2%	5.7%
Impervious	2.7%	5.4%	2.4%	3.2%

*Land cover analysis only includes watershed area within Massachusetts.

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	(Flow Regime Modification*)	--	Unchanged
5	5	(Water Chestnut*)	--	Unchanged
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	PFAS in Fish Tissue	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Alteration in Stream-side or Littoral Vegetative Covers*)	Streambank Modifications/Destabilization (Y)	X	--	--	--	--
(Flow Regime Modification*)	Impacts from Hydrostructure Flow Regulation/Modification (Y)	X	--	--	--	--
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
PFAS 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 this Connecticut River AU (MA34-02) continues to be assessed as Not Supporting. The prior PCBs 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 the most downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. MA DPH issued a site-specific advisory for PFAS in the Connecticut River in their May 2024 Freshwater Fish Consumption Advisory List and retained both this advisory as well as the existing PCBs 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>

Fish Tissue Data

Summary of Fish Tissue Data and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP 2023) (MassDEP Undated 5)

Summary
Fish toxics sampling was conducted in the most downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. Because of elevated PFAS measured in fish filets, MA DPH issued site-specific fish consumption advisories for the Connecticut River in their May 2024 Freshwater Fish Consumption Advisory List and retained them in the January 2025 list. Additionally, MA DPH retained the existing site-specific fish consumption advisories for PCBs associated with the Connecticut River 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 PCBs in Fish Tissue for this Connecticut River AU (MA34-02).

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	YES

2024/26 Use Attainment Summary
There are no data available to assess the status of the Aesthetics Use for Connecticut River (MA34-02), so it is Not Assessed. The Alert status previously identified due to the episodic turbidity and alteration in stream-side or littoral vegetative covers (due to severe bank erosion issues associated with the operation of hydroelectric plants) is being carried forward. Since the prior Flow Regime Modification Alert was redundantly duplicated across multiple uses for this waterbody, the Flow Regime Modification Alert is being removed from the Aesthetics Use but is currently maintained as an impairment under the Aquatic Life Use.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for the Connecticut River (MA34-02) are available, so the Primary Contact Recreation Use is Not Assessed.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary

No bacteria or other indicator data for the Connecticut River (MA34-02) 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 almost two-thirds of the way down this Connecticut River AU at W1044 [~500 ft upstream of the Northfield Mountain pumped storage intake, Northfield] from Jul-Sep 2003 (n=3). Historic *E. coli* data from W1044 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
W1044	MassDEP	Water Quality	Connecticut River	[approximately 500 feet upstream of the Northfield Mountain pumped storage intake, Northfield]	42.613757	-72.480621

Bacteria Data

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

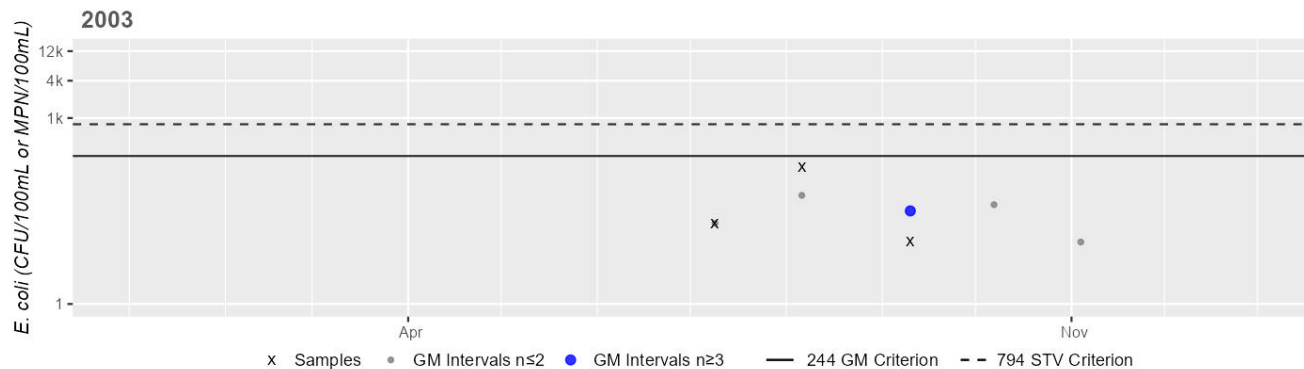
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1044	MassDEP	E. coli	07/09/03	09/10/03	3	10	160	31

Station MASSDEP_W1044 - Escherichia coli

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



Variable*	Result
Samples	3
SeasGM	31
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Historic (1997-2010)

0%

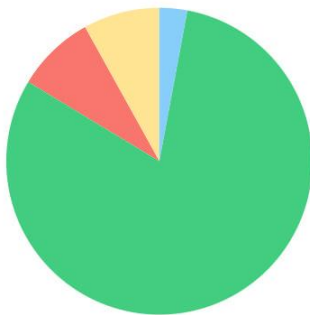
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
 %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
 "Recent 5 Years" may not be consecutive as the analysis excludes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

Connecticut River (MA34-03)

Location:	Turners Falls dams (NATID: MA00848 and MA00849), Gil/Montague to confluence with Deerfield River, Greenfield/Deerfield.
AU Type:	RIVER
AU Size:	3.7 MILES
Classification/Qualifier:	B: WWF, CSO

Connecticut River (MA34-03)

Watershed Area: 545.62 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area* (square miles)	94.91	6.19	24.94	2.82
Agriculture	8.1%	0.7%	8%	0%
Developed	8.3%	27.7%	8.2%	17.1%
Natural	80.7%	68.1%	78%	77.3%
Wetland	2.9%	3.6%	5.9%	5.6%
Impervious	3.2%	13.6%	3.4%	8.6%

*Land cover analysis only includes watershed area within Massachusetts.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Dewatering*)	--	Unchanged
5	5	(Flow Regime Modification*)	--	Unchanged
5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	PFAS in Fish Tissue	--	Added
5	5	Total Suspended Solids (TSS)	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Dewatering*)	Impacts from Hydrostructure Flow Regulation/Modification (Y)	X	--	--	--	--
(Flow Regime Modification*)	Impacts from Hydrostructure Flow Regulation/Modification (Y)	X	--	--	--	--
Escherichia Coli (E. Coli)	Combined Sewer Overflows (N)	--	--	--	X	X
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
PFAS in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Total Suspended Solids (TSS)	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 Supporting	No
2024/26 Use Attainment Summary	

The Fish Consumption Use for this Connecticut River AU (MA34-03) continues to be assessed as Not Supporting. The prior PCBs 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 the most downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. MA DPH issued a site-specific advisory for PFAS in the Connecticut River in their May 2024 Freshwater Fish Consumption Advisory List and retained both this advisory as well as the existing PCBs 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.

Fish Tissue Data

Summary of Fish Tissue Data and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP 2023)
(MassDEP Undated 5)

Summary
Fish toxics sampling was conducted in the most downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. Because of elevated PFAS measured in fish filets, MA DPH issued site-specific fish consumption advisories for the Connecticut River in their May 2024 Freshwater Fish Consumption Advisory List and retained them in the January 2025 list. Additionally, MA DPH retained the existing site-specific fish consumption advisories for PCBs associated with the Connecticut River 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 PCBs in Fish Tissue for this Connecticut River AU (MA34-03).

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No data are available, so the Aesthetics Use for Connecticut River (MA34-03) is Not Assessed.	

Primary Contact Recreation

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

The Primary Contact Recreation Use for the Connecticut River (MA34-03) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on the presence of CSOs. There is a presumptive Escherichia Coli (E. Coli) impairment decision in place due to the presence of active CSO outfalls in this Connecticut River AU.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

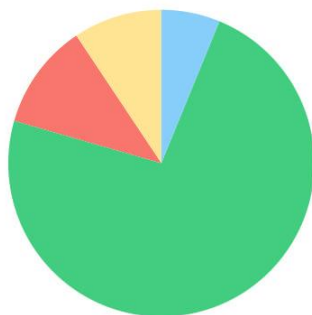
The Secondary Contact Recreation Use for the Connecticut River (MA34-03) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on the presence of CSOs. There is a presumptive Escherichia Coli (E. Coli) impairment decision in place due to the presence of active CSO outfalls in this Connecticut River AU.

Connecticut River (MA34-04)

Location:	Confluence with Deerfield River, Greenfield/Deerfield to Holyoke Dam (NATID: MA00973), Holyoke/South Hadley.
AU Type:	RIVER
AU Size:	34.5 MILES
Classification/Qualifier:	B: WWF, CSO

Connecticut River (MA34-04)

Watershed Area: 988.06 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area* (square miles)	537.34	13.37	159.09	4.10
Agriculture	9.4%	4.1%	8.4%	4.3%
Developed	11.2%	30.9%	8.3%	15.8%
Natural	73.2%	56.1%	71.2%	65.3%
Wetland	6.2%	9%	12%	14.7%
Impervious	4.8%	14.4%	3.6%	7%

*Land cover analysis only includes watershed area within Massachusetts.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Water Chestnut*)	--	Unchanged
5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	PFAS in Fish Tissue	--	Added

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Combined Sewer Overflows (N)	--	--	--	X	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
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
PFAS in Fish Tissue	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 Supporting	No
2024/26 Use Attainment Summary	

The Fish Consumption Use for this Connecticut River AU (MA34-04) continues to be assessed as Not Supporting. The prior PCBs 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 the downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. MA DPH issued a site-specific advisory for PFAS in the Connecticut River in their May 2024 Freshwater Fish Consumption Advisory List and retained both this advisory as well as the existing PCBs 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.

Fish Tissue Data

Summary of Fish Tissue Data and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP 2023) (MassDEP Undated 5)

Summary
Fish toxics sampling was conducted in the downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. Because of elevated PFAS measured in fish filets, MA DPH issued site-specific fish consumption advisories for the Connecticut River in their May 2024 Freshwater Fish Consumption Advisory List and retained them in the January 2025 list. Additionally, MA DPH retained the existing site-specific fish consumption advisories for PCBs associated with the Connecticut River 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 PCBs in Fish Tissue for this Connecticut River AU (MA34-04).

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 this Connecticut River AU (MA34-04), so it 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 Connecticut River (MA34-04) continues to be assessed as Not Supporting. The prior *Escherichia Coli* (*E. Coli*) impairment is being carried forward based on the presence of CSOs and bacteria data not meeting the threshold at 2 stations in 2012 & 2018-2022. There is a presumptive *Escherichia Coli* (*E. Coli*) impairment decision in place due to the presence of active CSO outfalls. Connecticut River Conservancy (CRC) staff/volunteers collected *E. coli* bacteria samples in the Connecticut River from 2012-2022 at 4 stations. Samples were collected from the following stations/sample years from upstream to downstream: one-third of the way down at CRC_CRS1 [Sunderland Boat Ramp, Rte 116, Sunderland] from 2012-2022 (n=18-19/yr), two-thirds of the way down at CRC_MA-CTR_097.3 [Northampton Beach, Northampton] from Jun-Oct 2022 (n=15), a little further down at CRC_CRN1 [DCR/UMASS boat dock, Bridge St, Northampton] from 2012-2022 (n=16-19/yr), and three-quarters of the way down at CRC_MAH4 [Brunelles Marina, Chicopee] in 2012 and 2019-2022 (n=14-17/yr). Analysis of the recent five years of this multi-year high frequency *E. coli* dataset from CRC_CRS1 indicated 2 out of 5 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2018 and 2021, 51 & 18%), 1 yr had >10% of samples exceed the 410 CFU/100ml STV (2018, 21%), and cumulatively across years 14% of intervals had GMs >126 CFU/100ml. Analysis of the single year high frequency *E. coli* dataset from CRC_MA-CTR_097.3 indicated 0% of intervals had GMs >126 CFU/100ml and 6% of samples exceeded the 410 CFU/100ml STV. Analysis of the recent five years of this multi-year high frequency *E. coli* dataset from CRC_CRN1 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml, 0 yrs had >10% of samples exceed the 410 CFU/100ml STV, and cumulatively across years 1% of intervals had GMs >126 CFU/100ml. Analysis of the multi-year mixed frequency *E. coli* dataset from CRC_MAH4 indicated 3 out of 5 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2012 and 2021-2022, 12-24%), 1 yr had >10% of samples exceed the 410 CFU/100ml STV (2022, 23%), and cumulatively across years 11% of intervals had GMs >126 CFU/100ml. While *E. coli* data from CRC_MA-CTR_097.3 and CRC_CRN1 meet 2024 CALM guidance, *E. coli* data from CRC_CRS1 and CRC_MAH4 are indicative of an *Escherichia Coli* (*E. Coli*) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_CRN1	Connecticut River Conservancy	Water Quality	Connecticut River	DCR/UMASS boat dock, Bridge Street, Northampton	42.335269	-72.620142
CRC_CRS1	Connecticut River Conservancy	Water Quality	Connecticut River	Sunderland Boat Ramp, Rte 116, Sunderland	42.467340	-72.583361
CRC_MA-CTR_097.3	Connecticut River Conservancy	Water Quality	Connecticut River	Northampton Beach, Northampton	42.343956	-72.634917
CRC_MAH4	Connecticut River Conservancy	Water Quality	Connecticut River	Brunelles Marina, Chicopee	42.263335	-72.601340

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis) (CRC 2023) (MassDEP Undated 2)

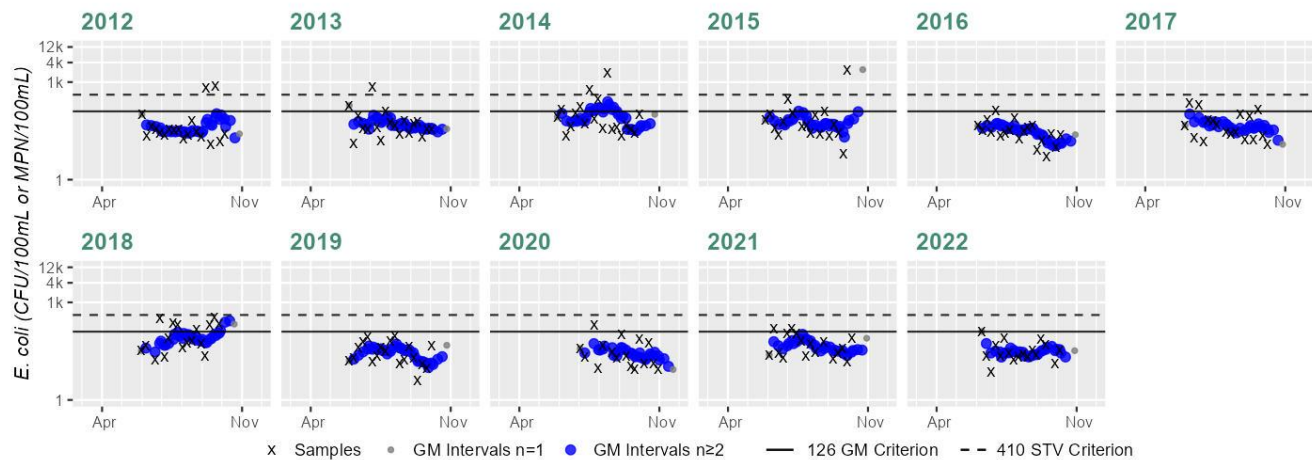
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_CRN1	Connecticut River Conservancy	E. coli	05/31/12	10/04/12	19	12	770	40
CRC_CRN1	Connecticut River Conservancy	E. coli	05/30/13	10/03/13	19	13	686	49
CRC_CRN1	Connecticut River Conservancy	E. coli	05/29/14	10/02/14	19	22	1986	80
CRC_CRN1	Connecticut River Conservancy	E. coli	05/28/15	10/01/15	18	6	2419	59
CRC_CRN1	Connecticut River Conservancy	E. coli	06/02/16	10/06/16	19	5	133	27
CRC_CRN1	Connecticut River Conservancy	E. coli	06/01/17	10/05/17	18	12	228	43
CRC_CRN1	Connecticut River Conservancy	E. coli	05/31/18	09/27/18	17	17	344	80
CRC_CRN1	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	19	4	88	26
CRC_CRN1	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	16	8	201	26
CRC_CRN1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	17	14	155	44
CRC_CRN1	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	17	7	127	30
CRC_CRS1	Connecticut River Conservancy	E. coli	05/31/12	10/04/12	19	8	1203	55
CRC_CRS1	Connecticut River Conservancy	E. coli	05/30/13	10/03/13	19	16	866	65
CRC_CRS1	Connecticut River Conservancy	E. coli	05/29/14	10/02/14	19	21	1986	104
CRC_CRS1	Connecticut River Conservancy	E. coli	05/28/15	10/01/15	19	15	1986	74
CRC_CRS1	Connecticut River Conservancy	E. coli	06/02/16	10/06/16	19	6	198	28
CRC_CRS1	Connecticut River Conservancy	E. coli	06/01/17	10/05/17	19	6	240	40
CRC_CRS1	Connecticut River Conservancy	E. coli	05/31/18	10/04/18	19	24	1413	116
CRC_CRS1	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	19	3	119	17
CRC_CRS1	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	5	344	28
CRC_CRS1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	20	1732	61
CRC_CRS1	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	18	3	866	30
CRC_MA-CTR_097.3	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	15	4	613	24
CRC_MAH4	Connecticut River Conservancy	E. coli	05/31/12	09/27/12	14	7	488	62

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MAH4	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	16	7	201	28
CRC_MAH4	Connecticut River Conservancy	E. coli	07/09/20	10/29/20	14	2	166	19
CRC_MAH4	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	17	14	1553	77
CRC_MAH4	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	17	7	2419	73

Station CRC_CRN1 - Escherichia coli

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



Variable*	Result
Samples	19
SeasGM	40
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	19
SeasGM	49
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	80
#GMI	35
#GMI Ex	10
%GMI Ex	28%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	18
SeasGM	59
#GMI	33
#GMI Ex	1
%GMI Ex	3%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	27
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	43
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	80
#GMI	31
#GMI Ex	3
%GMI Ex	9%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	26
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	16
SeasGM	26
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	44
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	30
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

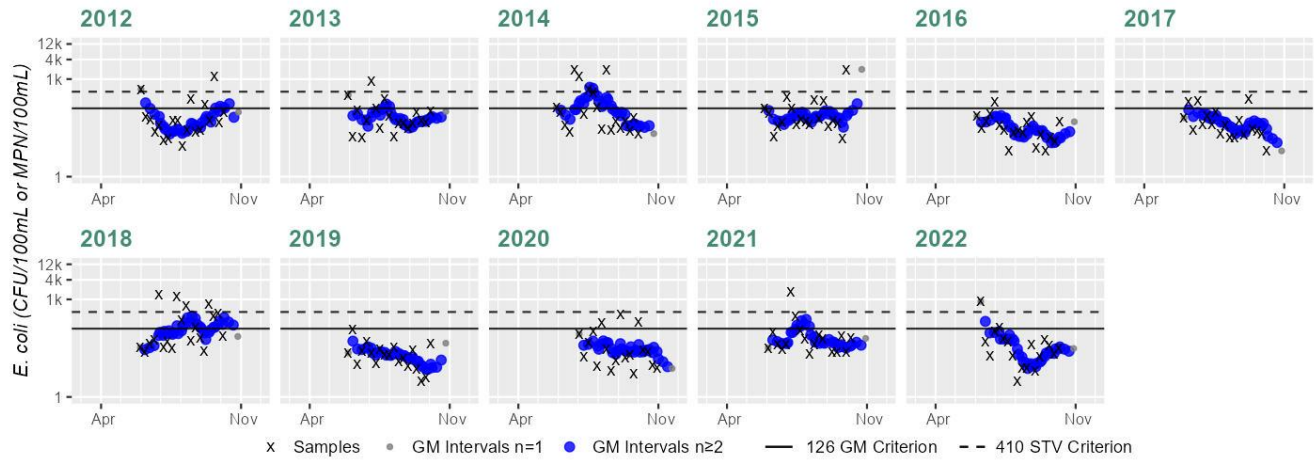
Cumulative %GMI Exceedance
Current (2011-2022)
3%

Cumulative %GMI Exceedance
Current (Recent 5 Years)
1%

*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 CRC_CRS1 - Escherichia coli

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



Variable*	Result
Samples	19
SeasGM	55
#GMI	35
#GMI Ex	6
%GMI Ex	17%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	19
SeasGM	65
#GMI	35
#GMI Ex	3
%GMI Ex	8%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	104
#GMI	35
#GMI Ex	15
%GMI Ex	42%
n>STV	4
%n>STV	21%

Variable*	Result
Samples	19
SeasGM	74
#GMI	35
#GMI Ex	1
%GMI Ex	2%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	28
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	40
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	116
#GMI	35
#GMI Ex	18
%GMI Ex	51%
n>STV	4
%n>STV	21%

Variable*	Result
Samples	19
SeasGM	17
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	28
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	61
#GMI	33
#GMI Ex	6
%GMI Ex	18%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	30
#GMI	33
#GMI Ex	1
%GMI Ex	3%
n>STV	1
%n>STV	5%

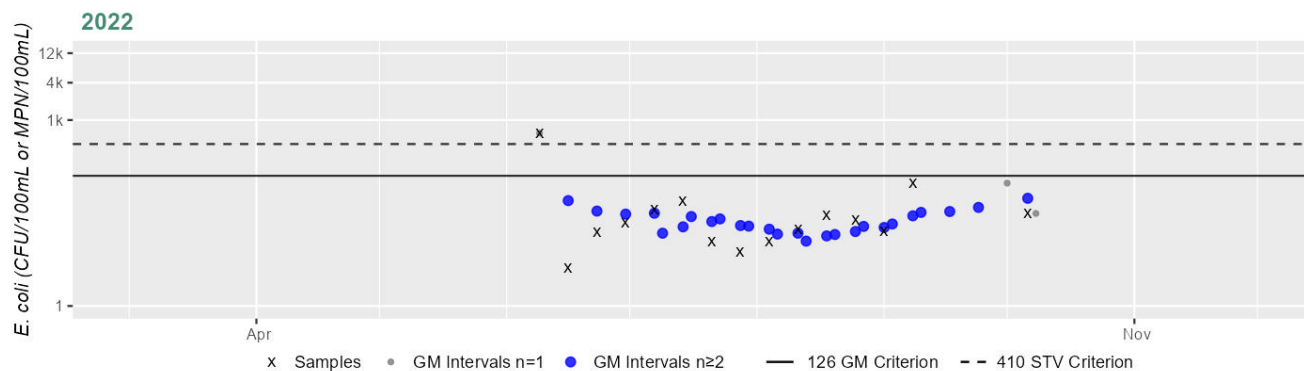
Cumulative %GMI Exceedance
Current (2011-2022)
13%

Cumulative %GMI Exceedance
Current (Recent 5 Years)
14%

*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 CRC_MA-CTR_097.3 - Escherichia coli

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



Variable*	Result
Samples	15
SeasGM	24
#GMI	26
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	6%

Cumulative %GMI Exceedance

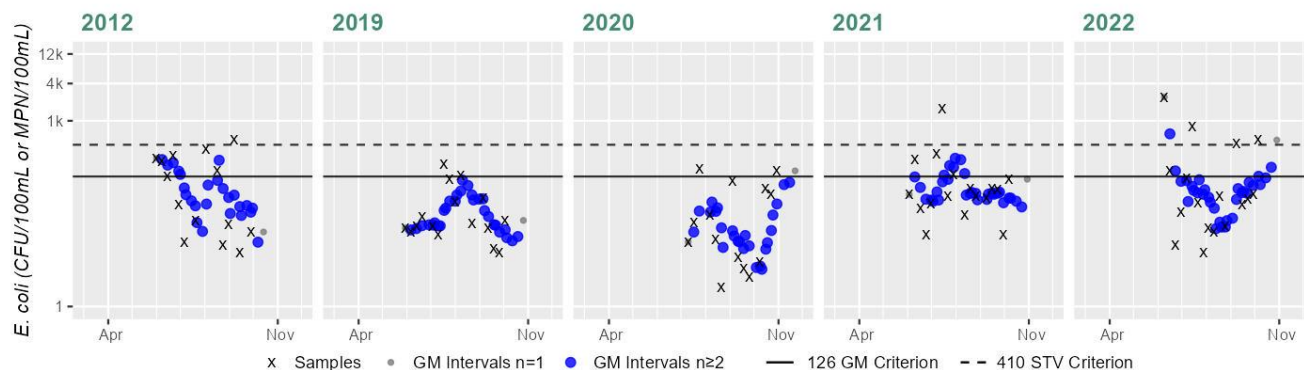
Current (2011-2022)

0%

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

Station CRC_MAH4 - Escherichia coli

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



Variable*	Result
Samples	14
SeasGM	62
#GMI	25
#GMI Ex	6
%GMI Ex	24%
n>STV	1
%n>STV	7%

Variable*	Result
Samples	16
SeasGM	28
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	19
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	77
#GMI	31
#GMI Ex	6
%GMI Ex	19%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	17
SeasGM	73
#GMI	31
#GMI Ex	4
%GMI Ex	12%
n>STV	4
%n>STV	23%

Cumulative %GMI Exceedance

Current (2011-2022)

11%

*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 the Connecticut River (MA34-04) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on the presence of CSOs. There is a presumptive Escherichia Coli (E. Coli) impairment decision in place due to the presence of active CSO outfalls. Connecticut River Conservancy (CRC) and MassDEP staff/volunteers collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Connecticut River from 2003-2022 at 7 stations. Samples were collected from the following stations/sample years from upstream to downstream: one-third of the way down at CRC_CRS1 [Sunderland Boat Ramp, Rte 116, Sunderland] from 2012-2022 (n=18-19/yr) and W1045 [Rt.116, Deerfield/Sunderland] in 2003 & 2008 (n=5-6/yr), two-thirds of the way down at CRC_MA-CTR_097.3 [Northampton Beach, Northampton] from Jun-Oct 2022 (n=15), a little further down at CRC_CRN1 [DCR/UMASS boat dock, Bridge St, Northampton] from 2012-2022 (n=16-19/yr) and W1784 [~450 ft downstream from Rt. 9 bridge (northern shore), Hadley] from May-Sep 2008 (n=6), three-quarters of the way down at W1046 [upstream of the confluence of the Mill River, near the Oxbow, Northampton/Hadley] from Jul-Sep 2003 (n=3), close to the downstream end at CRC_MAH4 [Brunelles Marina, Chicopee] in 2012 and 2019-2022 (n=14-17/yr). <i>E. coli</i> data from the 4 stations in the current IR window CRC_CRS1, CRC_MA-CTR_097.3, CRC_CRN1, and CRC_MAH4 meet 2024 CALM guidance (as does the data in the historic IR window at the remaining 3 stations).</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_CRN1	Connecticut River Conservancy	Water Quality	Connecticut River	DCR/UMASS boat dock, Bridge Street, Northampton	42.335269	-72.620142
CRC_CRS1	Connecticut River Conservancy	Water Quality	Connecticut River	Sunderland Boat Ramp, Rte 116, Sunderland	42.467340	-72.583361
CRC_MA-CTR_097.3	Connecticut River Conservancy	Water Quality	Connecticut River	Northampton Beach, Northampton	42.343956	-72.634917
CRC_MAH4	Connecticut River Conservancy	Water Quality	Connecticut River	Brunelles Marina, Chicopee	42.263335	-72.601340
W1045	MassDEP	Water Quality	Connecticut River	[Route116, Deerfield/Sunderland]	42.467599	-72.584790
W1046	MassDEP	Water Quality	Connecticut River	[upstream of the confluence of the Mill River, near the Oxbow, Northampton/Hadley]	42.293622	-72.612880

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1784	MassDEP	Water Quality	Connecticut River	[approximately 450 feet downstream from Route 9 bridge (northern shore), Hadley]	42.336499	-72.615573

Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 1) (MassDEP Undated 7) (MassDEP Undated 3)

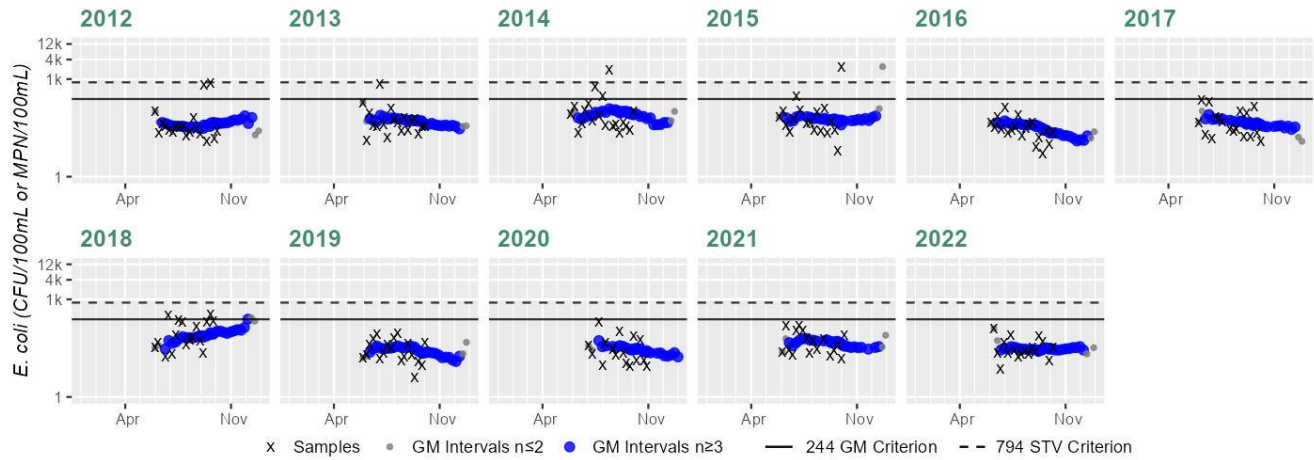
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_CRN1	Connecticut River Conservancy	E. coli	05/31/12	10/04/12	19	12	770	40
CRC_CRN1	Connecticut River Conservancy	E. coli	05/30/13	10/03/13	19	13	686	49
CRC_CRN1	Connecticut River Conservancy	E. coli	05/29/14	10/02/14	19	22	1986	80
CRC_CRN1	Connecticut River Conservancy	E. coli	05/28/15	10/01/15	18	6	2419	59
CRC_CRN1	Connecticut River Conservancy	E. coli	06/02/16	10/06/16	19	5	133	27
CRC_CRN1	Connecticut River Conservancy	E. coli	06/01/17	10/05/17	18	12	228	43
CRC_CRN1	Connecticut River Conservancy	E. coli	05/31/18	09/27/18	17	17	344	80
CRC_CRN1	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	19	4	88	26
CRC_CRN1	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	16	8	201	26
CRC_CRN1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	17	14	155	44
CRC_CRN1	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	17	7	127	30
CRC_CRS1	Connecticut River Conservancy	E. coli	05/31/12	10/04/12	19	8	1203	55
CRC_CRS1	Connecticut River Conservancy	E. coli	05/30/13	10/03/13	19	16	866	65
CRC_CRS1	Connecticut River Conservancy	E. coli	05/29/14	10/02/14	19	21	1986	104
CRC_CRS1	Connecticut River Conservancy	E. coli	05/28/15	10/01/15	19	15	1986	74
CRC_CRS1	Connecticut River Conservancy	E. coli	06/02/16	10/06/16	19	6	198	28
CRC_CRS1	Connecticut River Conservancy	E. coli	06/01/17	10/05/17	19	6	240	40
CRC_CRS1	Connecticut River Conservancy	E. coli	05/31/18	10/04/18	19	24	1413	116
CRC_CRS1	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	19	3	119	17
CRC_CRS1	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	5	344	28

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_CRS1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	20	1732	61
CRC_CRS1	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	18	3	866	30
CRC_MA-CTR_097.3	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	15	4	613	24
CRC_MAH4	Connecticut River Conservancy	E. coli	05/31/12	09/27/12	14	7	488	62
CRC_MAH4	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	16	7	201	28
CRC_MAH4	Connecticut River Conservancy	E. coli	07/09/20	10/29/20	14	2	166	19
CRC_MAH4	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	17	14	1553	77
CRC_MAH4	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	17	7	2419	73
W1045	MassDEP	E. coli	04/30/03	09/10/03	5	2	80	8
W1045	MassDEP	E. coli	05/06/08	09/09/08	6	8	140	18
W1046	MassDEP	E. coli	07/09/03	09/10/03	3	18	450	73
W1784	MassDEP	E. coli	05/06/08	09/09/08	6	2	180	19

Station CRC_CRN1 - Escherichia coli

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



Variable*	Result
Samples	19
SeasGM	40
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	49
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	80
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	59
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	27
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	43
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	80
#GMI	29
#GMI Ex	1
%GMI Ex	3%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	26
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	16
SeasGM	26
#GMI	27
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	44
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	30
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

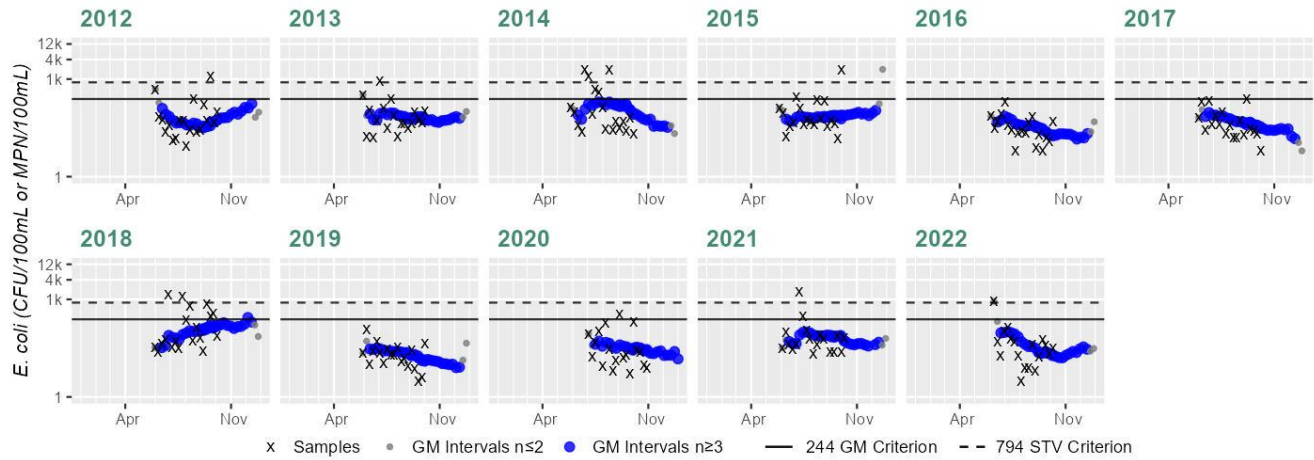
Cumulative %GMI Exceedance
Current (2011-2022)
0%

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

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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 CRC_CRS1 - Escherichia coli

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



Variable*	Result
Samples	19
SeasGM	55
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	65
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	104
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	3
%n>STV	15%

Variable*	Result
Samples	19
SeasGM	74
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	28
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	40
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	116
#GMI	33
#GMI Ex	1
%GMI Ex	3%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	19
SeasGM	17
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	28
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	61
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	30
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

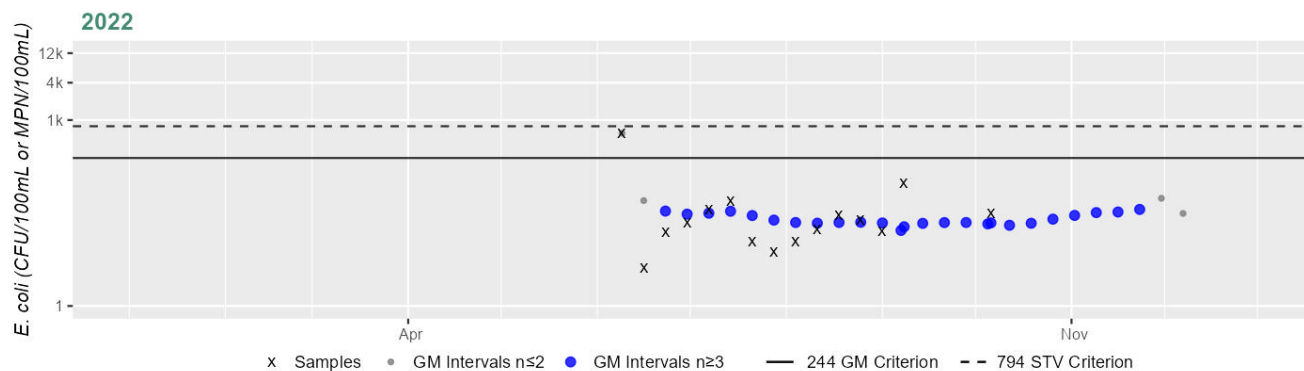
Cumulative %GMI Exceedance
Current (2011-2022)
0%

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

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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 CRC_MA-CTR_097.3 - Escherichia coli

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



Variable*	Result
Samples	15
SeasGM	24
#GMI	25
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

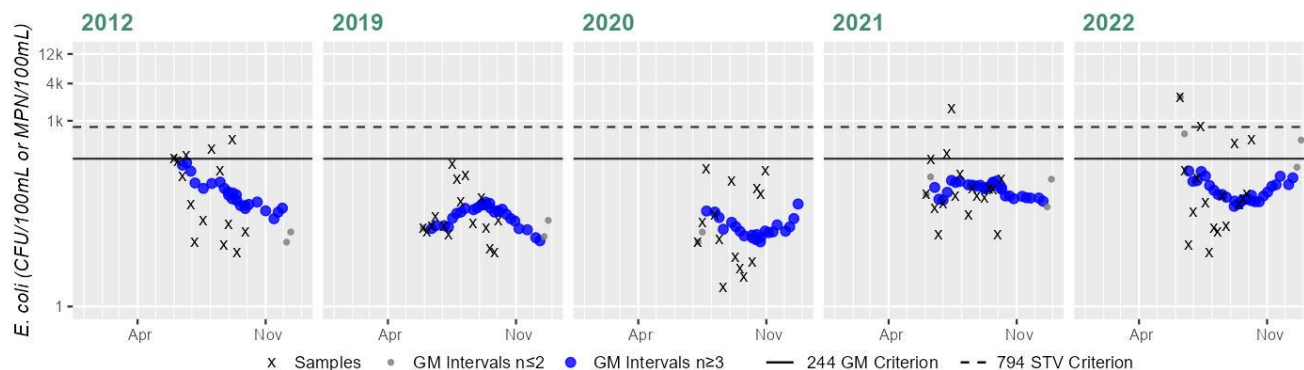
Current (2011-2022)

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 CRC_MAH4 - Escherichia coli

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



Variable*	Result
Samples	14
SeasGM	62
#GMI	23
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	16
SeasGM	28
#GMI	27
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	14
SeasGM	19
#GMI	23
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	17
SeasGM	77
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	17
SeasGM	73
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	11%

Cumulative %GMI Exceedance

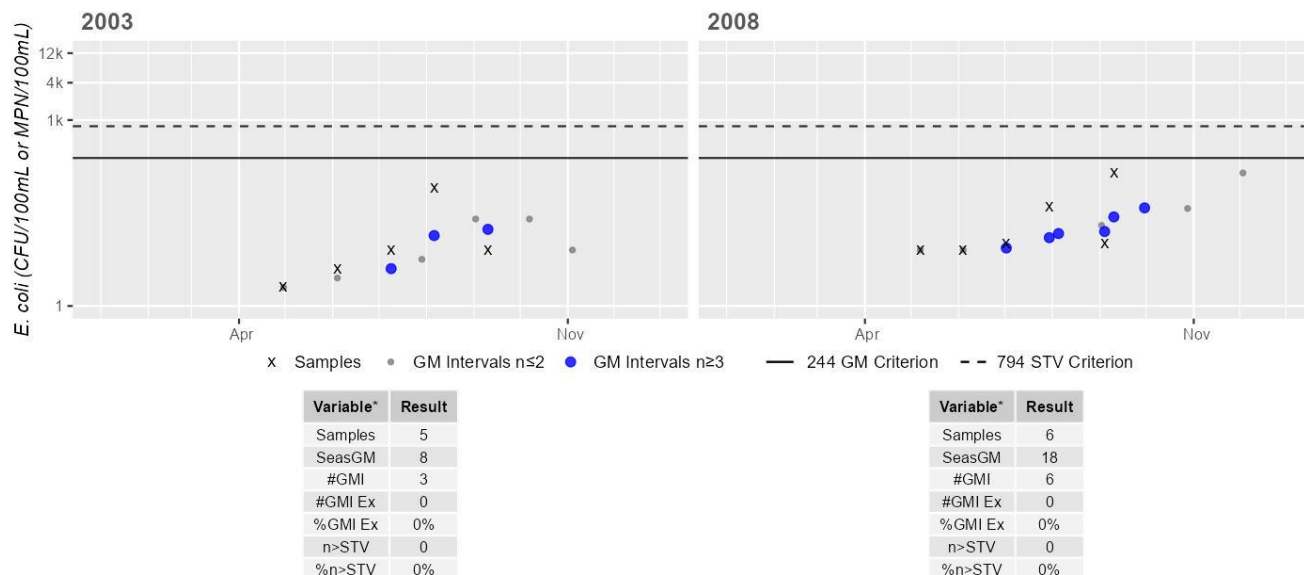
Current (2011-2022)

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_W1045 - *Escherichia coli*

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



Cumulative %GMI Exceedance

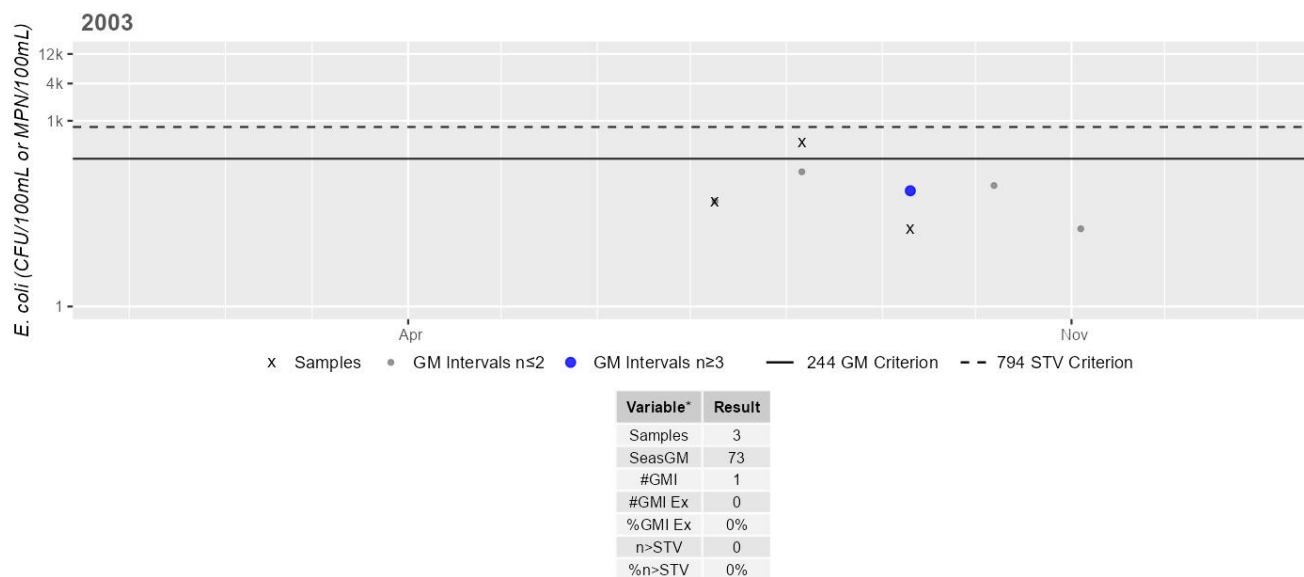
Historic (1997-2010)

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_W1046 - *Escherichia coli*

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



Cumulative %GMI Exceedance

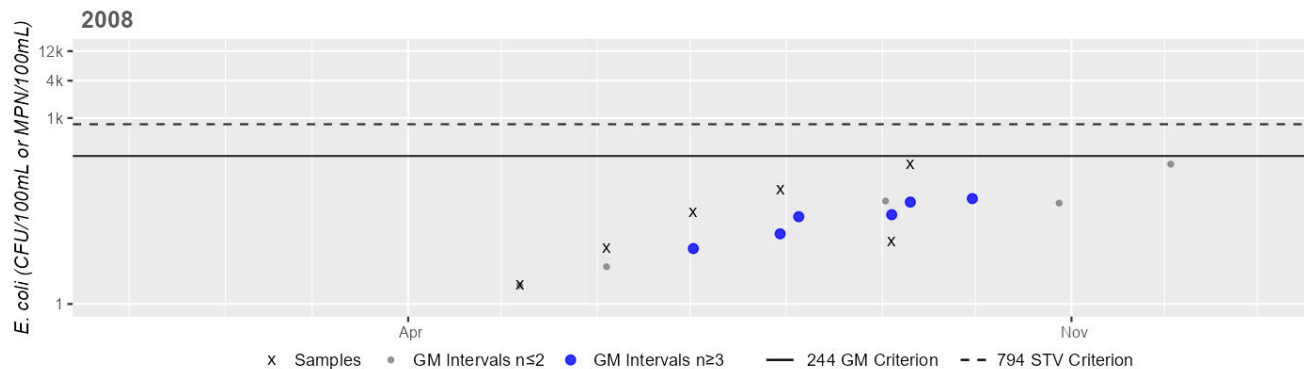
Historic (1997-2010)

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_W1784 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	19
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Historic (1997-2010)

0%

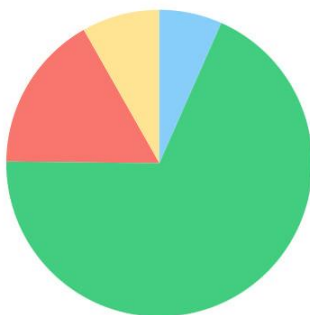
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
 %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
 "Recent 5 Years" may not be consecutive as the analysis excludes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

Connecticut River (MA34-05)

Location:	Holyoke Dam (NATID: MA00973), Holyoke/South Hadley to Massachusetts/Connecticut border, Longmeadow.
AU Type:	RIVER
AU Size:	15.9 MILES
Classification/Qualifier:	B: WWF, CSO

Connecticut River (MA34-05)

Watershed Area: 1080.98 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area* (square miles)	627.42	12.10	181.54	4.24
Agriculture	8.2%	4.2%	7.5%	1.9%
Developed	16.6%	36.5%	10.8%	22.8%
Natural	68.5%	44.1%	68.6%	50.2%
Wetland	6.6%	15.3%	13%	25%
Impervious	8.1%	17.6%	5.1%	10%

*Land cover analysis only includes watershed area within Massachusetts.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	PFAS in Fish Tissue	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Combined Sewer Overflows (N)	--	--	--	X	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)	Source Unknown (N)	--	--	--	X	X
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
PFAS in Fish Tissue	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 Supporting	No

2024/26 Use Attainment Summary
<p>The Fish Consumption Use for this Connecticut River AU (MA34-05) continues to be assessed as Not Supporting. The prior PCBs 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 this Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. MA DPH issued a site-specific advisory for PFAS in the Connecticut River in their May 2024 Freshwater Fish Consumption Advisory List and retained both this advisory as well as the existing PCBs 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
F0470	MassDEP	Fish Toxics	Connecticut River	[south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield]	42.145931	-72.620854

Fish Tissue Data

Summary of Fish Tissue Data and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP 2023) (MassDEP Undated 5)

Summary
Fish toxics sampling was conducted in this Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. Because of elevated PFAS measured in fish filets, MA DPH issued site-specific fish consumption advisories for the Connecticut River in their May 2024 Freshwater Fish Consumption Advisory List and retained them in the January 2025 list. Additionally, MA DPH retained the existing site-specific fish consumption advisories for PCBs associated with the Connecticut River 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 PCBs in Fish Tissue for this Connecticut River AU (MA34-05).

MassDEP 2022 PFAS in Fish Tissue Data for Massachusetts Surface Waters (MassDEP 2023) (MassDEP Undated 5) (MA DPH 2023)

[ng/g = ppb. All PFBA, PFBS, and HFPO-DA (Genx) concentrations <MDL. ND indicates that the PFAS analyte was not detected in any of the composite samples (i.e., it was <MDL). Means weighted by the number of fish in the contributing composites were calculated for any PFAS analyte – waterbody – species combination where an analyte was detected in at least one sample; if a sample did not have the analyte detected, the concentration for that sample was set to ½*MDL for the purposes of calculating a mean. Data are highlighted red per the fish consumption advisory thresholds summarized in Table 4.2 of MA DPH's 2023 Technical Support Document for the evaluation of PFAS in recreational waterbodies.]

[Species List: SMB = smallmouth bass, 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
F0470	3	05/31/2022	SMB	ND	ND	ND	5.25	
F0470	3	05/31/2022	YP	0.12	ND	ND	6.00	PFHxS

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 this Connecticut River AU (MA34-05), so it 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 Connecticut River (MA34-05) continues to be assessed as Not Supporting. The prior *Escherichia Coli* (*E. Coli*) impairment is being carried forward based on the presence of CSOs and bacteria data not meeting the threshold at 5 stations/combined stations in 2012 & 2019-2022. There is a presumptive *Escherichia Coli* (*E. Coli*) impairment decision in place due to the presence of active CSO outfalls. Connecticut River Conservancy (CRC) staff/volunteers collected *E. coli* bacteria samples in the Connecticut River from 2012-2022 at 6 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at CRC_MAC4 [Berchulski Fisherman Access, Chicopee] in 2012 & 2019-2021 (n=15-18/yr) and CRC_MA-CTR_082.5 [Berchulski Fisherman Access, Chicopee] from Jun-Sep 2022 (n=13), a quarter of the way down at CRC_MAH3 [Jones Ferry River Access Center, Holyoke] from 2012-2013 & 2019-2022 (n=1-18/yr), a third of the way down at CRC_MAC3 [Medina St boat ramp, Chicopee] in 2012, 2019, & 2021-2022 (n=15-18/yr), halfway down at combined station CRC_MA-CTR_075.4 & CRC_MAC1 [Pioneer Valley Riverfront Club, Springfield & N End Bridge/N Riverfront Park, Springfield] in 2012 & 2019-2022 (n=14-18/yr), three-quarters of the way down at CRC_MAH1 [Pioneer Valley Yacht Club, Longmeadow] in 2012 & 2019-2022 (n=15-18/yr). Analysis of the multi-year high frequency *E. coli* dataset from CRC_MAC4 indicated 4 out of 4 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2012 and 2019-2021, 22-66%), 3 yrs had >10% of samples exceed the 410 CFU/100ml STV (2012 and 2020-2021, 13-22%), and cumulatively across years 42% of intervals had GMs >126 CFU/100ml. Analysis of the single year moderate frequency *E. coli* dataset from CRC_MA-CTR_082.5 indicated 39% of intervals had GMs >126 CFU/100ml and 2 samples exceeded the 410 CFU/100ml STV. Analysis of the multi-year high frequency *E. coli* dataset from CRC_MAH3 indicated 3 out of 5 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2019 and 2021-2022, 16-36%), 3 yrs had >10% of samples exceed the 410 CFU/100ml STV (2012 and 2020-2021, 11-11%), and cumulatively across years 21% of intervals had GMs >126 CFU/100ml. Analysis of the multi-year high frequency *E. coli* dataset from CRC_MAC3 indicated 4 out of 4 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2012, 2019, and 2021-2022, 12-77%), 3 yrs had >10% of samples exceed the 410 CFU/100ml STV (2019 and 2021-2022, 17-29%), and cumulatively across years 48% of intervals had GMs >126 CFU/100ml. Analysis of the multi-year high frequency *E. coli* dataset from CRC_MA-CTR_075.4 & CRC_MAC1 indicated 5 out of 5 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2012 and 2019-2022, 48-100%), 5 yrs had >10% of samples exceed the 410 CFU/100ml STV (2012 and 2019-2022, 28-52%), and cumulatively across years 88% of intervals had GMs >126 CFU/100ml. Analysis of the multi-year high frequency *E. coli* dataset from CRC_MAH1 indicated 4 out of 5 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2019-2022, 24-100%), 4 yrs had >10% of samples exceed the 410 CFU/100ml STV (2019-2022, 18-50%), and cumulatively across years 49% of intervals had GMs >126 CFU/100ml. While *E. coli* data from CRC_MA-CTR_082.5 meet 2024 CALM guidance, *E. coli* data from CRC_MAC4, CRC_MAH3, CRC_MAC3, CRC_MA-CTR_075.4 & CRC_MAC1, and CRC_MAH1 are indicative of an *E. coli* impairment. Additionally, surface water sampling was conducted at station W3261 (PFAS Study ID 3) on 05/31/2022 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
CRC_MAC1	Connecticut River Conservancy	Water Quality	Connecticut River	North End Bridge/North Riverfront Park, Springfield	42.110083	-72.612883
CRC_MAC3	Connecticut River Conservancy	Water Quality	Connecticut River	Medina Street boat ramp, Chicopee	42.153408	-72.625472
CRC_MAC4	Connecticut River Conservancy	Water Quality	Connecticut River	Berchulski Fisherman Access, Chicopee	42.210653	-72.591177
CRC_MA-CTR_075.4	Connecticut River Conservancy	Water Quality	Connecticut River	Pioneer Valley Riverfront Club, Springfield	42.110083	-72.612883
CRC_MA-CTR_082.5	Connecticut River Conservancy	Water Quality	Connecticut River	Berchulski Fisherman Access, Chicopee	42.210557	-72.590766
CRC_MAH1	Connecticut River Conservancy	Water Quality	Connecticut River	Pioneer Valley Yacht Club, Longmeadow	42.063513	-72.593290
CRC_MAH3	Connecticut River Conservancy	Water Quality	Connecticut River	Jones Ferry River Access Center, Holyoke	42.172379	-72.629898
W3261	MassDEP	Water Quality	Connecticut River	[the default location representing co-located water/fish PFAS sampling, south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield]	42.145931	-72.620854

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis) (CRC 2023) (MassDEP Undated 2)

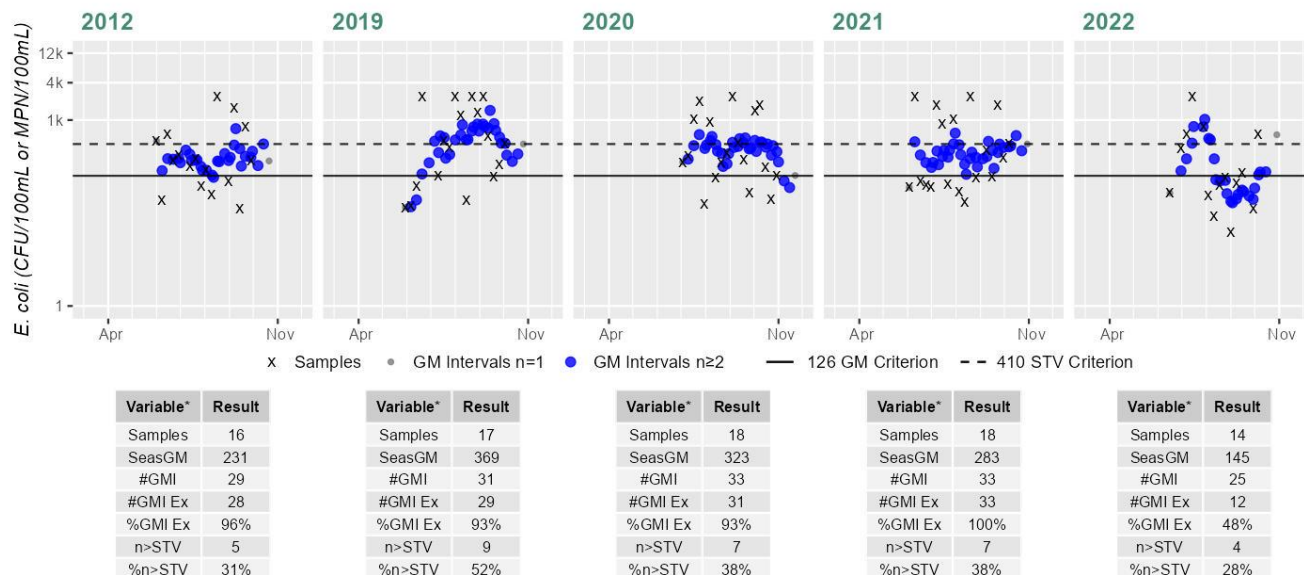
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MAC1	Connecticut River Conservancy	E. coli	05/31/12	09/27/12	16	37	2419	231
CRC_MAC1	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	17	38	2419	369
CRC_MAC1	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	45	2419	323
CRC_MAC1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	47	2419	283
CRC_MAC3	Connecticut River Conservancy	E. coli	05/31/12	09/27/12	18	8	866	66
CRC_MAC3	Connecticut River Conservancy	E. coli	06/06/19	10/03/19	17	13	1119	134
CRC_MAC3	Connecticut River Conservancy	E. coli	06/24/21	10/07/21	15	9	2419	171

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MAC3	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	17	8	2419	119
CRC_MAC4	Connecticut River Conservancy	E. coli	05/31/12	09/27/12	15	21	727	88
CRC_MAC4	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	16	16	488	79
CRC_MAC4	Connecticut River Conservancy	E. coli	07/09/20	10/29/20	15	35	1203	120
CRC_MAC4	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	18	2419	147
CRC_MA-CTR_075.4	Connecticut River Conservancy	E. coli	06/16/22	10/06/22	14	15	2419	145
CRC_MA-CTR_082.5	Connecticut River Conservancy	E. coli	06/09/22	09/29/22	13	19	2419	125
CRC_MAH1	Connecticut River Conservancy	E. coli	05/31/12	09/27/12	18	7	648	39
CRC_MAH1	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	18	8	2419	95
CRC_MAH1	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	15	18	2419	252
CRC_MAH1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	16	69	2419	422
CRC_MAH1	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	16	19	2419	82
CRC_MAH3	Connecticut River Conservancy	E. coli	05/31/12	09/20/12	17	9	488	58
CRC_MAH3	Connecticut River Conservancy	E. coli	07/11/13	07/11/13	1	517	517	517
CRC_MAH3	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	18	14	920	83
CRC_MAH3	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	10	2419	70
CRC_MAH3	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	20	2419	95
CRC_MAH3	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	17	12	461	70

Station CRC_MA-CTR_075.4 & CRC_MAC1 - *Escherichia coli*

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



Cumulative %GMI Exceedance

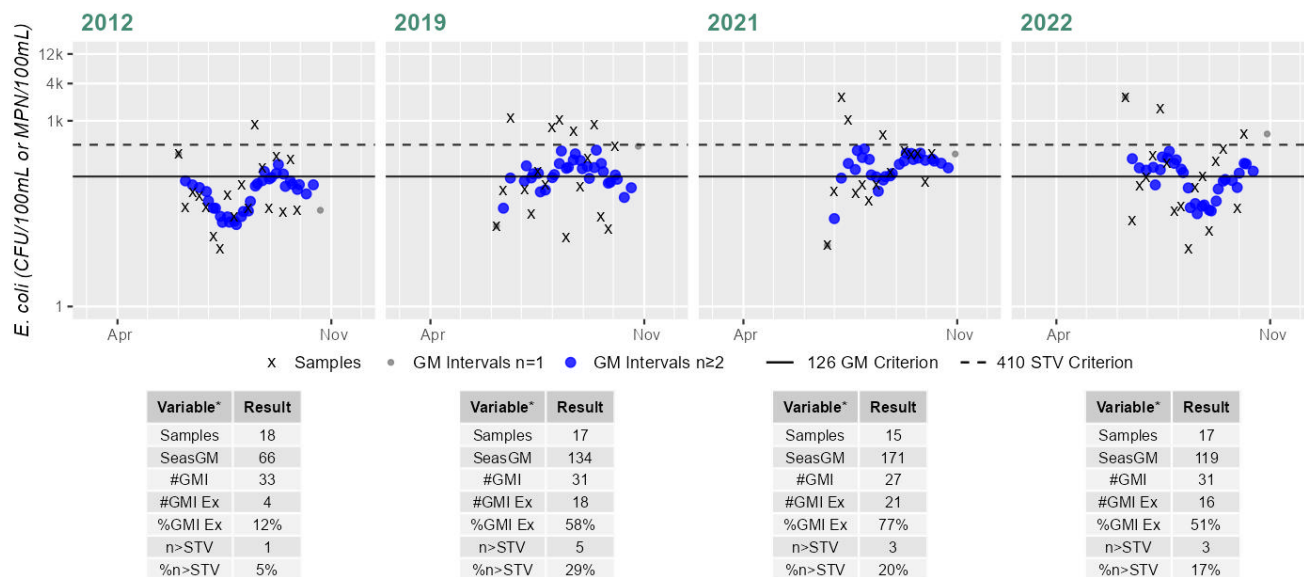
Current (2011-2022)

88%

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

Station CRC_MAC3 - *Escherichia coli*

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



Cumulative %GMI Exceedance

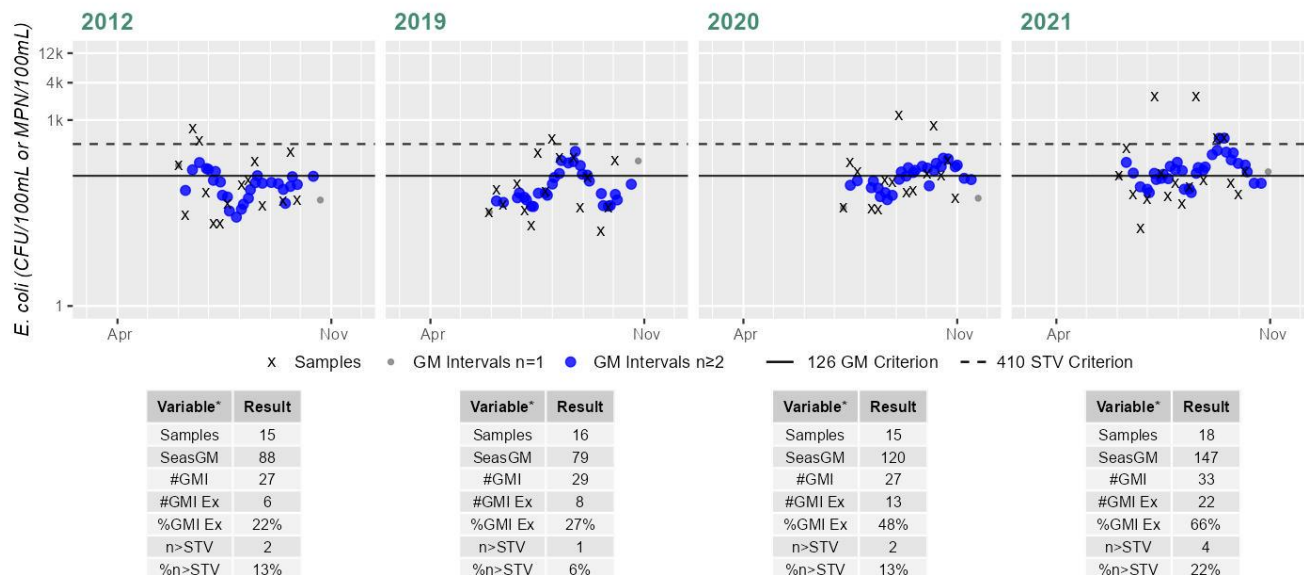
Current (2011-2022)

48%

*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 CRC_MAC4 - *Escherichia coli*

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



Cumulative %GMI Exceedance

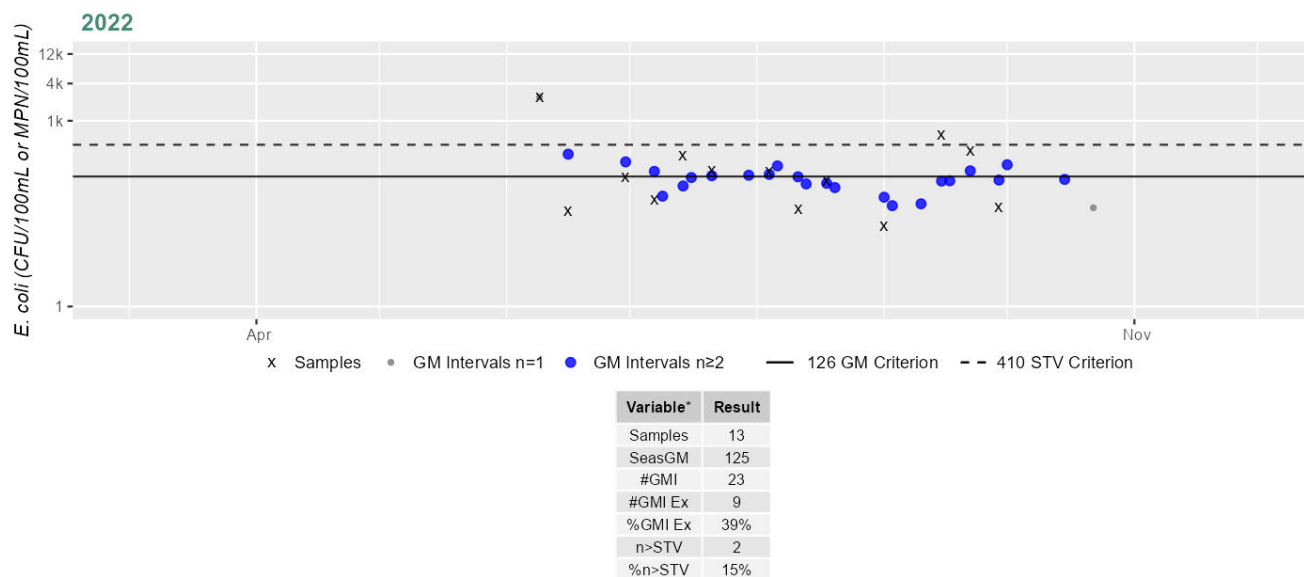
Current (2011-2022)

42%

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

Station CRC_MA-CTR_082.5 - *Escherichia coli*

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



Cumulative %GMI Exceedance

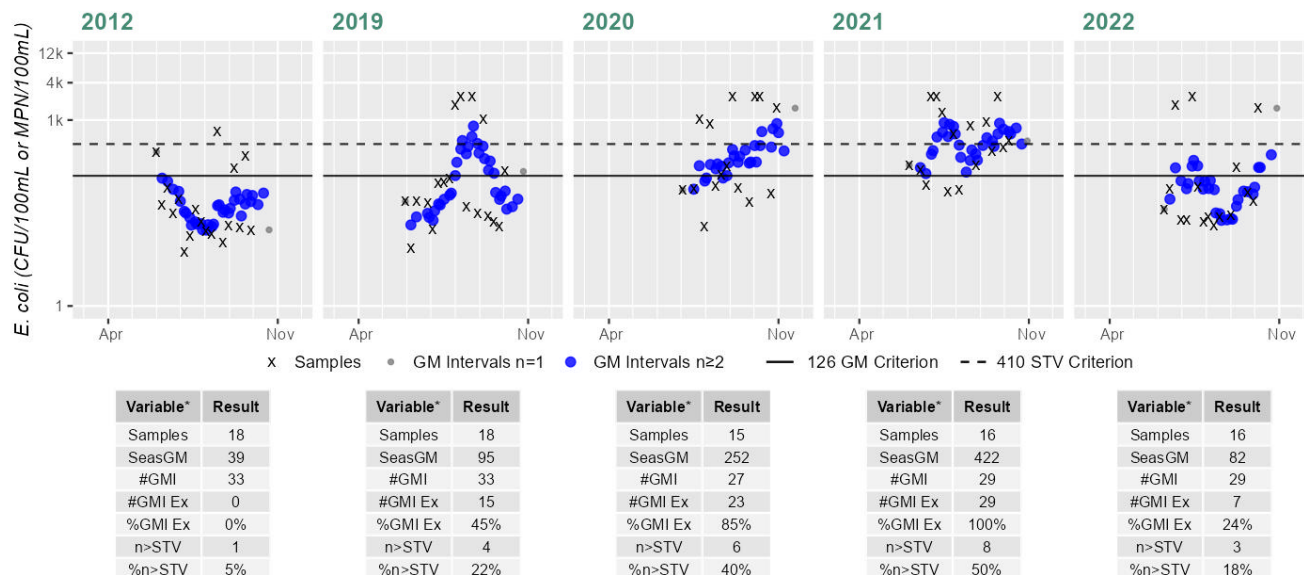
Current (2011-2022)

39%

*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 CRC_MAH1 - *Escherichia coli*

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



Cumulative %GMI Exceedance

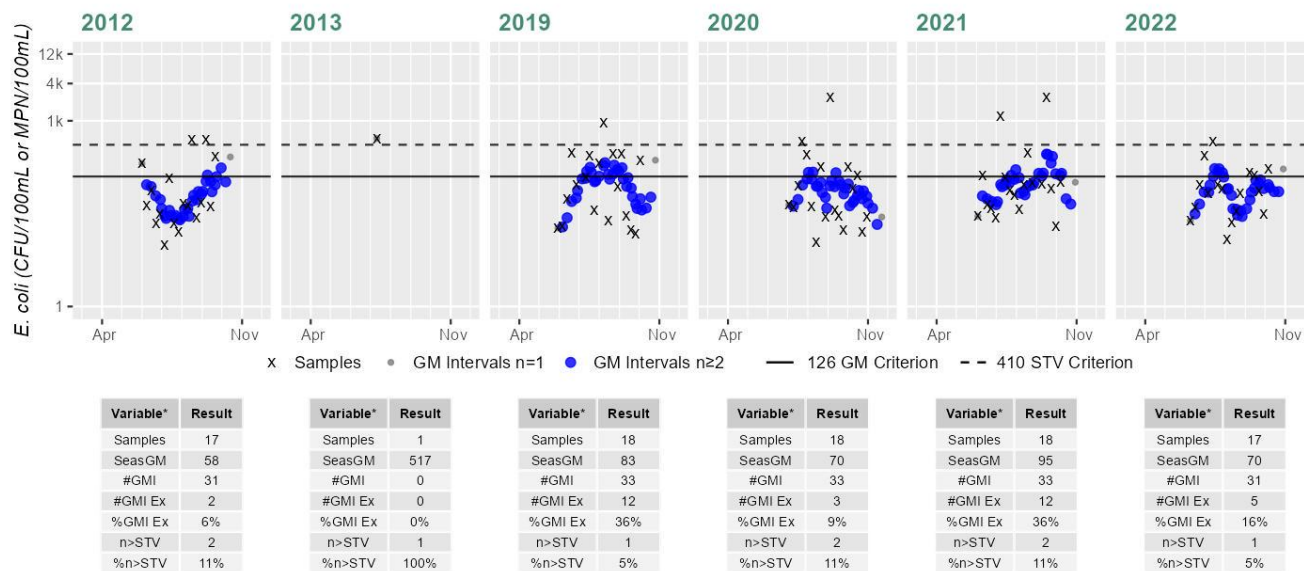
Current (2011-2022)

49%

*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 CRC_MAH3 - *Escherichia coli*

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



Cumulative %GMI Exceedance

Current (2011-2022)

21%

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

Summary
Surface water sampling was conducted in Connecticut River (Chicopee) (MA34-05) at station W3261 (PFAS Study ID 3) on 05/31/2022 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
W3261	3	05/31/2022	1.3j	1.5j	<0.56	<0.64	<2.3	<0.34	<2.3	5.2*

Secondary Contact Recreation

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

The Secondary Contact Recreation Use for the Connecticut River (MA34-05) continues to be assessed as Not Supporting. The prior *Escherichia Coli* (*E. Coli*) impairment is being carried forward based on the presence of CSOs and bacteria data not meeting the threshold at 2 stations/combined stations in 2012 & 2019-2022. There is a presumptive *Escherichia Coli* (*E. Coli*) impairment decision in place due to the presence of active CSO outfalls. Connecticut River Conservancy (CRC) and MassDEP staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Connecticut River from 2003-2022 at 8 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at CRC_MAC4 [Berchulski Fisherman Access, Chicopee] in 2012 & 2019-2021 (n=15-18/yr), and CRC_MA-CTR_082.5 [Berchulski Fisherman Access, Chicopee] from Jun-Sep 2022 (n=13), a quarter of the way down at CRC_MAH3 [Jones Ferry River Access Center, Holyoke] from 2012-2013 & 2019-2022 (n=1-18/yr), a third of the way down at W1047 [Rt. 90, W Springfield/Chicopee] from Jul-Sep 2003 (n=3), & CRC_MAC3 [Medina St boat ramp, Chicopee] in 2012, 2019, & 2021-2022 (n=15-18/yr), halfway down at combined station CRC_MA-CTR_075.4 & CRC_MAC1 [Pioneer Valley Riverfront Club, Springfield & N End Bridge/N Riverfront Park, Springfield] in 2012 & 2019-2022 (n=14-18/yr), three-quarters of the way down at CRC_MAH1 [Pioneer Valley Yacht Club, Longmeadow] in 2012 & 2019-2022 (n=15-18/yr), and just downstream of the AU at W1395 [At the USGS flow gaging station #01184000 downstream of Rt. 190, Suffield/Enfield Connecticut] in 2003 & 2008 (n=5/yr). Since bacteria data from the historic IR window (2 MassDEP stations W1047 & W1395) are indicative of good water quality conditions, only the analysis from the current IR window (6 CRC stations) will be summarized here:

Analysis of the multi-year high frequency *E. coli* dataset from CRC_MAC4 indicated 0 out of 4 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml, 2 yrs had >10% of samples exceed the 794 CFU/100ml STV (2020 and 2021, 13 & 11%), and cumulatively across years 0% of intervals had GMs >244 CFU/100ml. Analysis of the single year moderate frequency *E. coli* dataset from CRC_MA-CTR_082.5 indicated 0% of intervals had GMs >244 CFU/100ml and 1 sample exceeded the 794 CFU/100ml STV. Analysis of the multi-year high frequency *E. coli* dataset from CRC_MAH3 indicated 0 out of 5 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml, 1 yr had >10% of samples exceed the 794 CFU/100ml STV (2021, 11%), and cumulatively across years 0% of intervals had GMs >244 CFU/100ml. Analysis of the multi-year high frequency *E. coli* dataset from CRC_MAC3 indicated 0 out of 4 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml, 3 yrs had >10% of samples exceed the 794 CFU/100ml STV (2019 & 2021-2022, 11-17%), and cumulatively across years 2% of intervals had GMs >244 CFU/100ml. Analysis of the multi-year high frequency *E. coli* dataset from CRC_MA-CTR_075.4 & CRC_MAC1 indicated 5 out of 5 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml (2012 & 2019-2022, 13-87%), 4 yrs had >10% of samples exceed the 794 CFU/100ml STV (2012 & 2019-2021, 12-35%), and cumulatively across years 60% of intervals had GMs >244 CFU/100ml. Analysis of the multi-year high frequency *E. coli* dataset from CRC_MAH1 indicated 2 out of 5 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml (2020 & 2021, 52 & 96%), 4 yrs had >10% of samples exceed the 794 CFU/100ml STV (2019-2022, 18-40%), and cumulatively across years 27% of intervals had GMs >244 CFU/100ml. While *E. coli* data from CRC_MAC4, CRC_MA-CTR_082.5, CRC_MAH3, and CRC_MAC3 meet 2024 CALM guidance, *E. coli* data from

CRC_MA-CTR_075.4 & CRC_MAC1 and CRC_MAH1 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_MAC1	Connecticut River Conservancy	Water Quality	Connecticut River	North End Bridge/North Riverfront Park, Springfield	42.110083	-72.612883
CRC_MAC3	Connecticut River Conservancy	Water Quality	Connecticut River	Medina Street boat ramp, Chicopee	42.153408	-72.625472
CRC_MAC4	Connecticut River Conservancy	Water Quality	Connecticut River	Berchulski Fisherman Access, Chicopee	42.210653	-72.591177
CRC_MA-CTR_075.4	Connecticut River Conservancy	Water Quality	Connecticut River	Pioneer Valley Riverfront Club, Springfield	42.110083	-72.612883
CRC_MA-CTR_082.5	Connecticut River Conservancy	Water Quality	Connecticut River	Berchulski Fisherman Access, Chicopee	42.210557	-72.590766
CRC_MAH1	Connecticut River Conservancy	Water Quality	Connecticut River	Pioneer Valley Yacht Club, Longmeadow	42.063513	-72.593290
CRC_MAH3	Connecticut River Conservancy	Water Quality	Connecticut River	Jones Ferry River Access Center, Holyoke	42.172379	-72.629898
W1047	MassDEP	Water Quality	Connecticut River	[Route 90, West Springfield/Chicopee]	42.153988	-72.627668
W1395	MassDEP	Water Quality	Connecticut River	[At the USGS flow gaging station #01184000 downstream of Route 190, Suffield/Enfield Connecticut]	41.987313	-72.605356

Bacteria Data

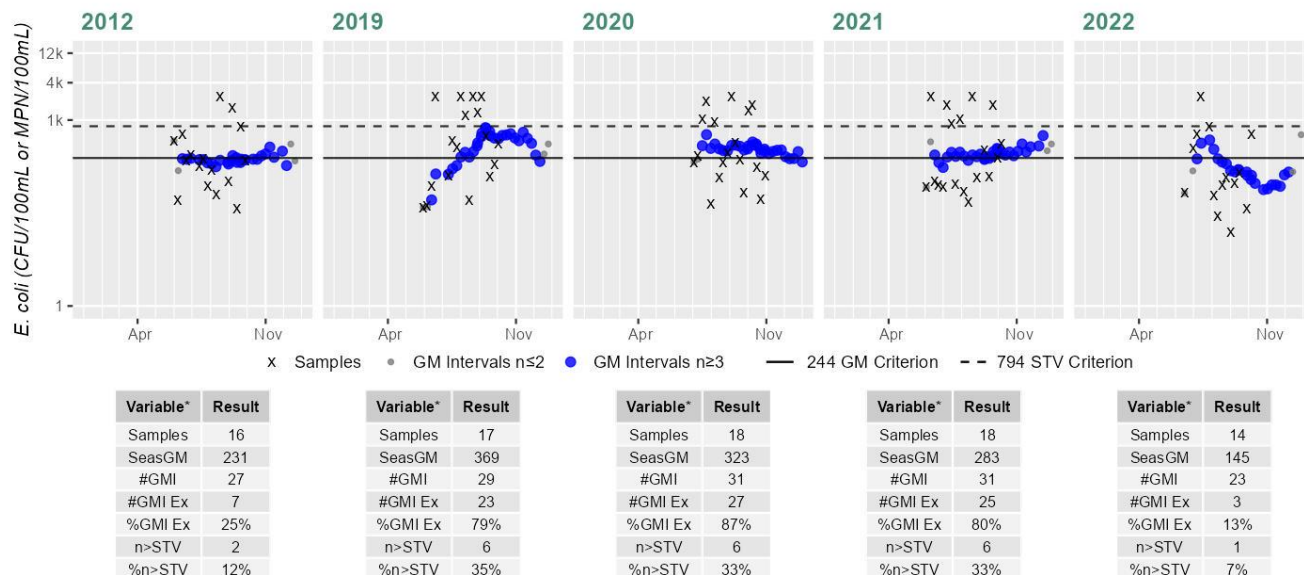
Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 1) (MassDEP Undated 7) (MassDEP Undated 3)
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MAC1	Connecticut River Conservancy	E. coli	05/31/12	09/27/12	16	37	2419	231
CRC_MAC1	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	17	38	2419	369
CRC_MAC1	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	45	2419	323

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MAC1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	47	2419	283
CRC_MAC3	Connecticut River Conservancy	E. coli	05/31/12	09/27/12	18	8	866	66
CRC_MAC3	Connecticut River Conservancy	E. coli	06/06/19	10/03/19	17	13	1119	134
CRC_MAC3	Connecticut River Conservancy	E. coli	06/24/21	10/07/21	15	9	2419	171
CRC_MAC3	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	17	8	2419	119
CRC_MAC4	Connecticut River Conservancy	E. coli	05/31/12	09/27/12	15	21	727	88
CRC_MAC4	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	16	16	488	79
CRC_MAC4	Connecticut River Conservancy	E. coli	07/09/20	10/29/20	15	35	1203	120
CRC_MAC4	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	18	2419	147
CRC_MA-CTR_075.4	Connecticut River Conservancy	E. coli	06/16/22	10/06/22	14	15	2419	145
CRC_MA-CTR_082.5	Connecticut River Conservancy	E. coli	06/09/22	09/29/22	13	19	2419	125
CRC_MAH1	Connecticut River Conservancy	E. coli	05/31/12	09/27/12	18	7	648	39
CRC_MAH1	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	18	8	2419	95
CRC_MAH1	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	15	18	2419	252
CRC_MAH1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	16	69	2419	422
CRC_MAH1	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	16	19	2419	82
CRC_MAH3	Connecticut River Conservancy	E. coli	05/31/12	09/20/12	17	9	488	58
CRC_MAH3	Connecticut River Conservancy	E. coli	07/11/13	07/11/13	1	517	517	517
CRC_MAH3	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	18	14	920	83
CRC_MAH3	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	10	2419	70
CRC_MAH3	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	20	2419	95
CRC_MAH3	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	17	12	461	70
W1047	MassDEP	E. coli	07/09/03	09/10/03	3	22	330	93
W1395	MassDEP	E. coli	04/30/03	10/01/03	5	1	210	20
W1395	MassDEP	E. coli	05/06/08	09/03/08	5	10	260	57

Station CRC_MA-CTR_075.4 & CRC_MAC1 - *Escherichia coli*

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



Cumulative %GMI Exceedance

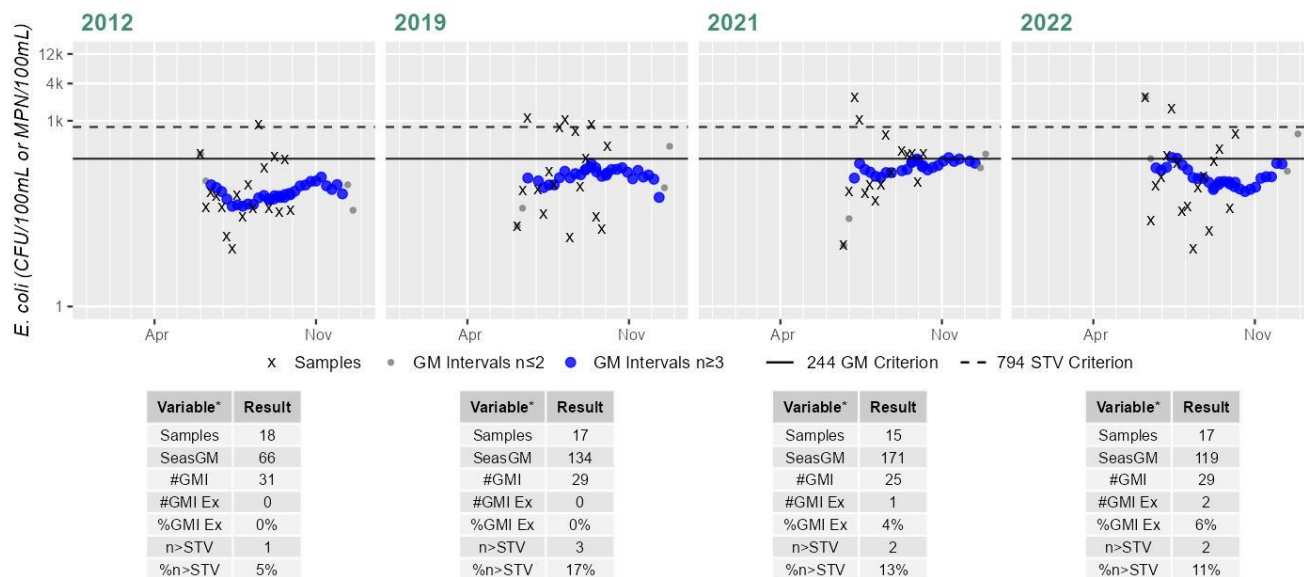
Current (2011-2022)

60%

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

Station CRC_MAC3 - *Escherichia coli*

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



Cumulative %GMI Exceedance

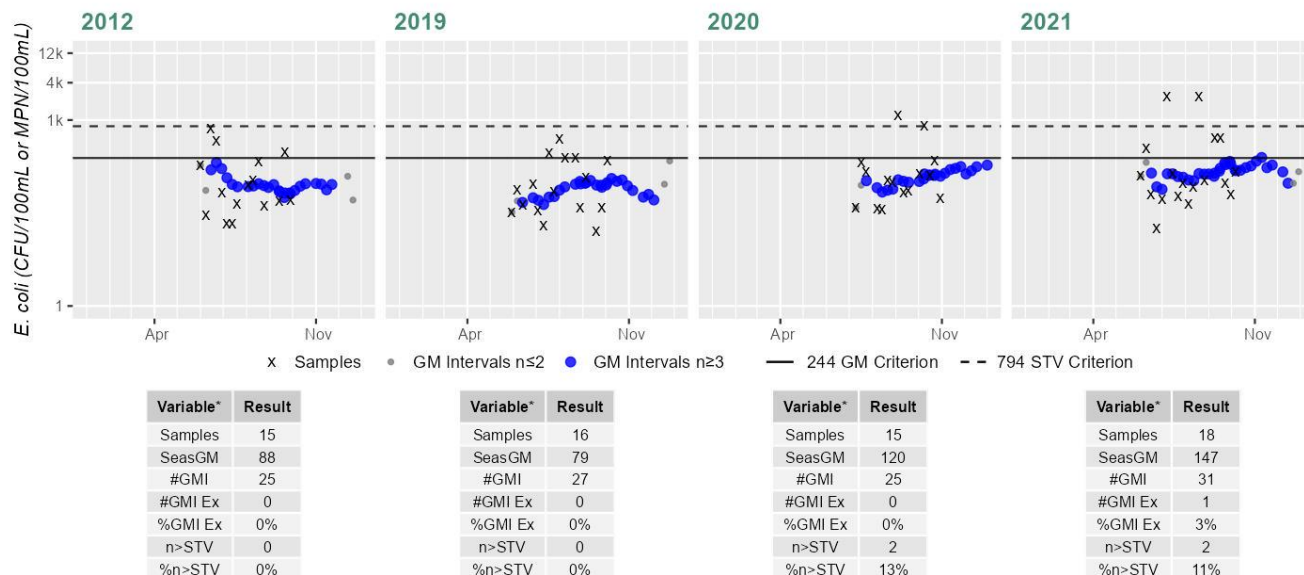
Current (2011-2022)

2%

*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 CRC_MAC4 - *Escherichia coli*

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



Cumulative %GMI Exceedance

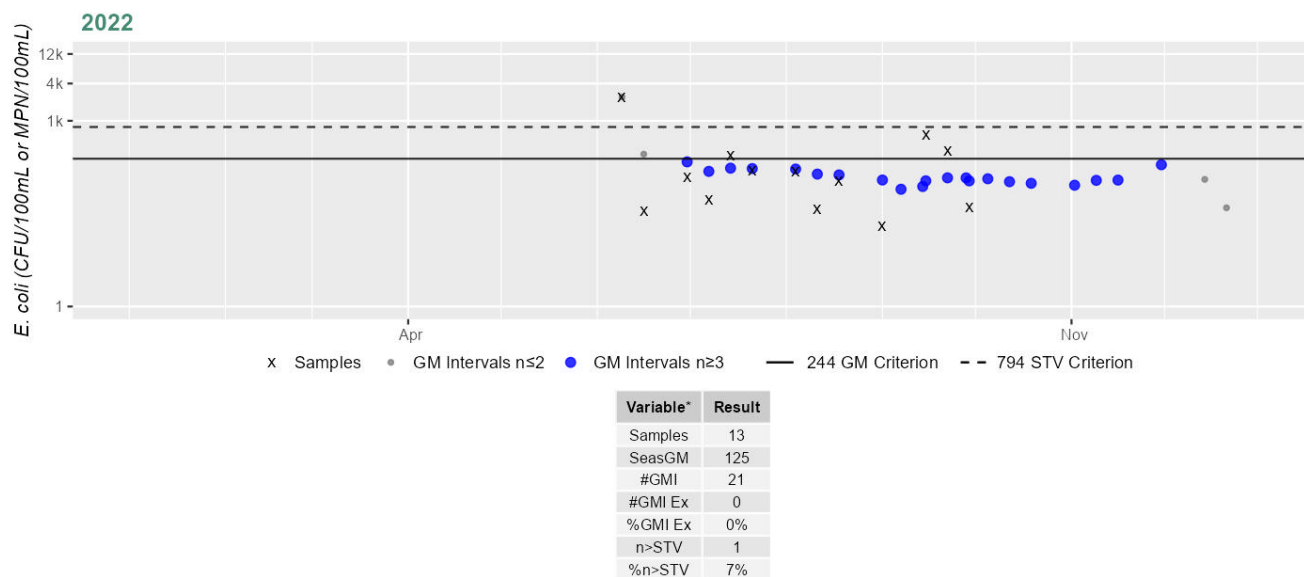
Current (2011-2022)

0%

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

Station CRC_MA-CTR_082.5 - *Escherichia coli*

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



Cumulative %GMI Exceedance

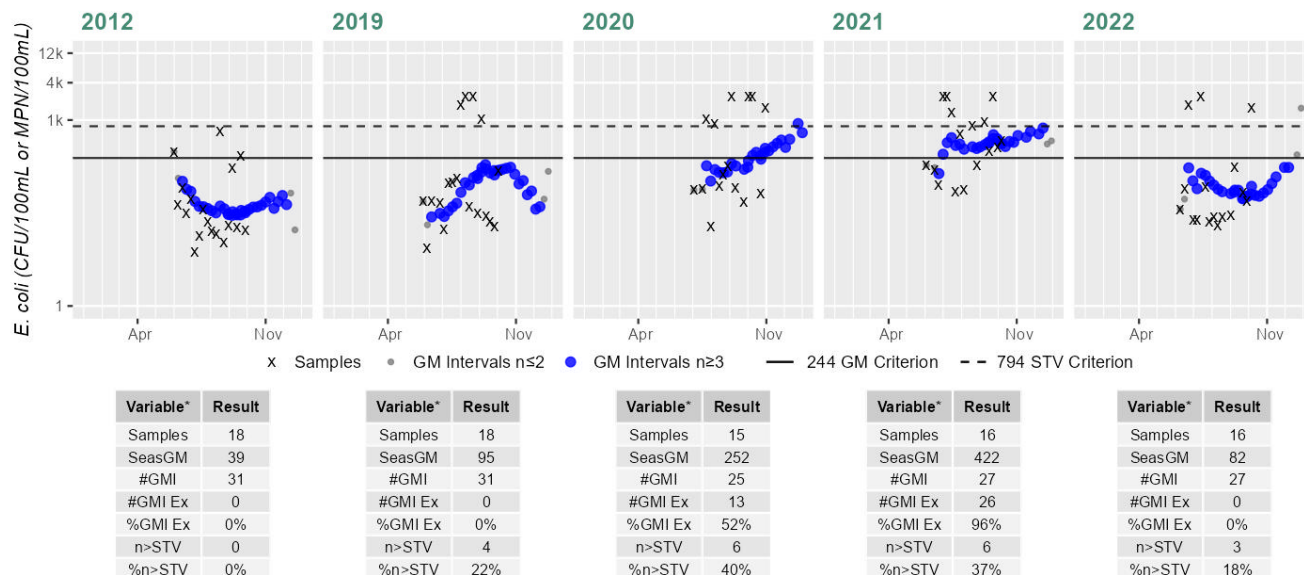
Current (2011-2022)

0%

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

Station CRC_MAH1 - *Escherichia coli*

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



Cumulative %GMI Exceedance

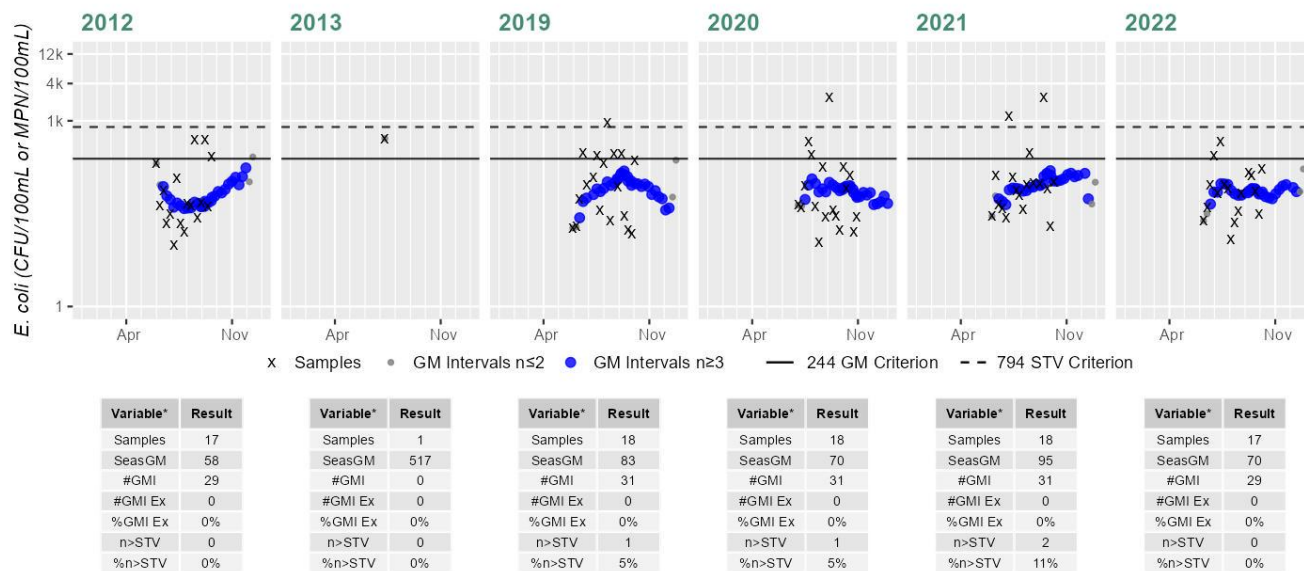
Current (2011-2022)

27%

*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 CRC_MAH3 - *Escherichia coli*

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



Cumulative %GMI Exceedance

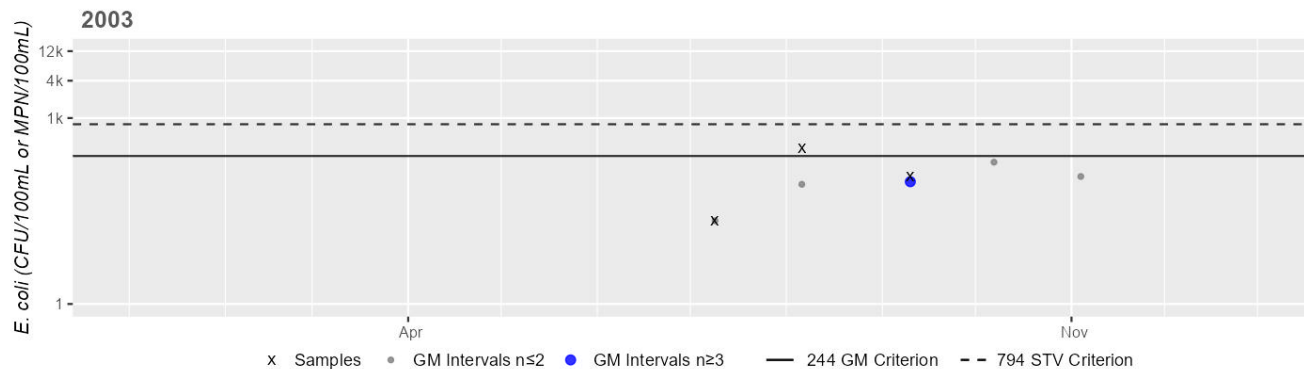
Current (2011-2022)

0%

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

Station MASSDEP_W1047 - *Escherichia coli*

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



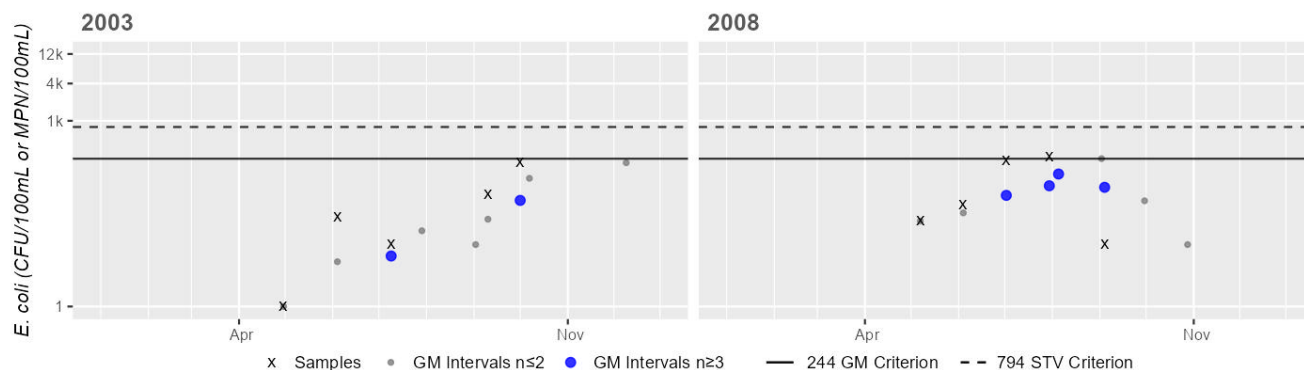
Variable*	Result
Samples	3
SeasGM	93
#GMI	1
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

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

Station MASSDEP_W1395 - *Escherichia coli*

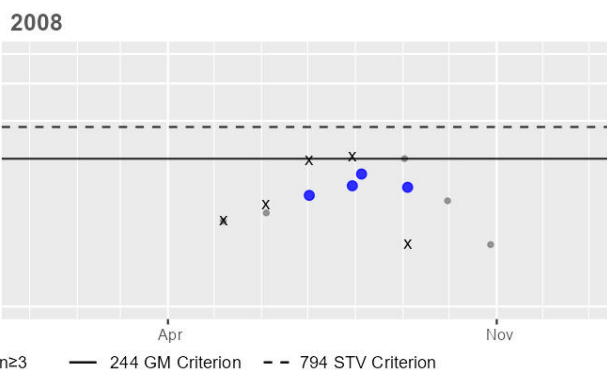
Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



Variable*	Result
Samples	5
SeasGM	20
#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.



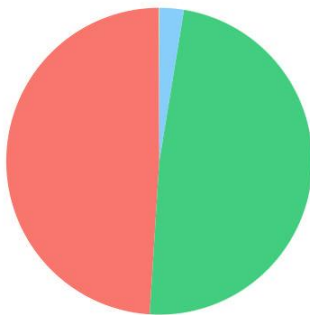
Variable*	Result
Samples	5
SeasGM	57
#GMI	4
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cooley Brook (MA34-20)

Location:	Headwaters, Longmeadow to mouth at confluence with Connecticut River, Longmeadow.
AU Type:	RIVER
AU Size:	1.4 MILES
Classification/Qualifier:	B

Cooley Brook (MA34-20)

Watershed Area: 0.75 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	0.75	0.75	0.17	0.17
Agriculture	0.1%	0.1%	0.3%	0.3%
Developed	48.9%	48.9%	26.7%	26.7%
Natural	48.4%	48.4%	64.3%	64.3%
Wetland	2.6%	2.6%	8.7%	8.7%
Impervious	28.9%	28.9%	15.1%	15.1%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	5	Escherichia Coli (E. Coli)	--	Added

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

Recommendations

2024/26 Recommendations
2024/2026 IR [Bacteria, Medium] Additional bacteria monitoring should be conducted in Cooley Brook (MA34-20) as <i>E. coli</i> data collected at Station CRC_Cool0.9 [Laurel Park] in 2022 exceeded GM and STV criterion. The Primary Contact Use is already impaired. {CRC_Cool0.9}. This is a 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 Cooley Brook (MA34-20) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No data are available, so the Aesthetics Use for Cooley Brook (MA34-20) is Not Assessed.	

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
The Primary Contact Recreation Use for Cooley Brook (MA34-20) is assessed as Not Supporting. An <i>Escherichia Coli</i> (<i>E. Coli</i>) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2021-2022. Connecticut River Conservancy (CRC) staff/volunteers collected <i>E. coli</i> bacteria samples halfway down Cooley Brook at CRC_Cool0.9 [Laurel Park] from 2021-2022 (n=6/yr). Analysis of the multi-year limited frequency <i>E. coli</i> dataset from CRC_Cool0.9 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >126 CFU/100ml (2021 and 2022, 100 & 100%), and while only 1 yr had ≥2 samples exceed the 410 CFU/100ml STV (2022, n=3), cumulatively across years 100% of intervals had GMs >126 CFU/100ml. <i>E. coli</i> data from CRC_Cool0.9 are indicative of an <i>Escherichia Coli</i> (<i>E. Coli</i>) impairment.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_Cool0.9	Connecticut River Conservancy	Water Quality	Cooley Brook, Longmeadow, MA	Laurel Park	42.060598	-72.579457

Bacteria Data

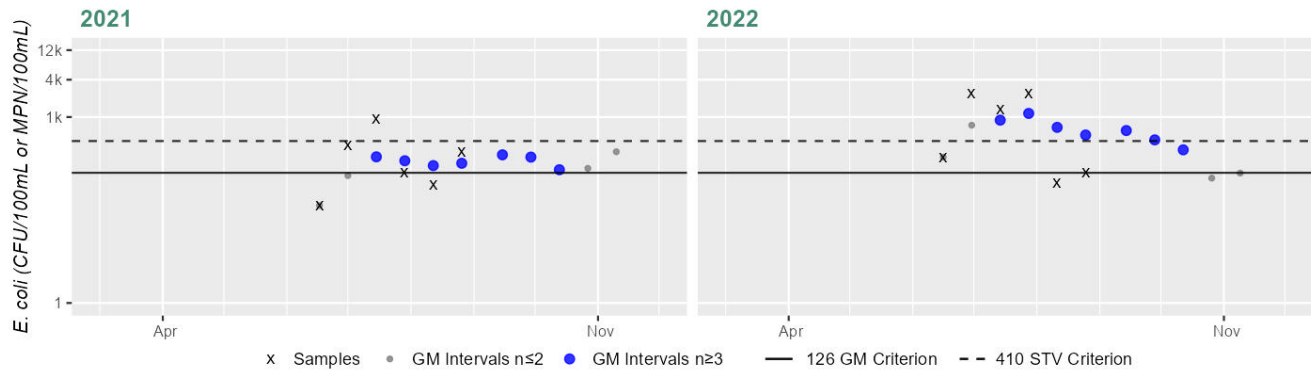
Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_Cool0.9	Connecticut River Conservancy	E. coli	06/17/21	08/26/21	6	37	920	179
CRC_Cool0.9	Connecticut River Conservancy	E. coli	06/16/22	08/25/22	6	85	2419	513

Station CRC_Cool0.9 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	179
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	513
#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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Cooley Brook (MA34-20) is assessed as Fully Supporting. Connecticut River Conservancy (CRC) staff/volunteers collected <i>E. coli</i> bacteria samples in Cooley Brook at CRC_Cool0.9 [Laurel Park] from 2021-2022 (n=6/yr). Analysis of the multi-year limited frequency <i>E. coli</i> dataset from CRC_Cool0.9 indicated 1 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2022, 100%), 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2022, n=3, max 2419 CFU), and cumulatively across years 57% of intervals had GMs >244 CFU/100ml. <i>E. coli</i> data from CRC_Cool0.9 meet 2024 CALM guidance. An Alert is being identified for Escherichia coli at CRC_Cool0.9.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_Cool0.9	Connecticut River Conservancy	Water Quality	Cooley Brook, Longmeadow, MA	Laurel Park	42.060598	-72.579457

Bacteria Data

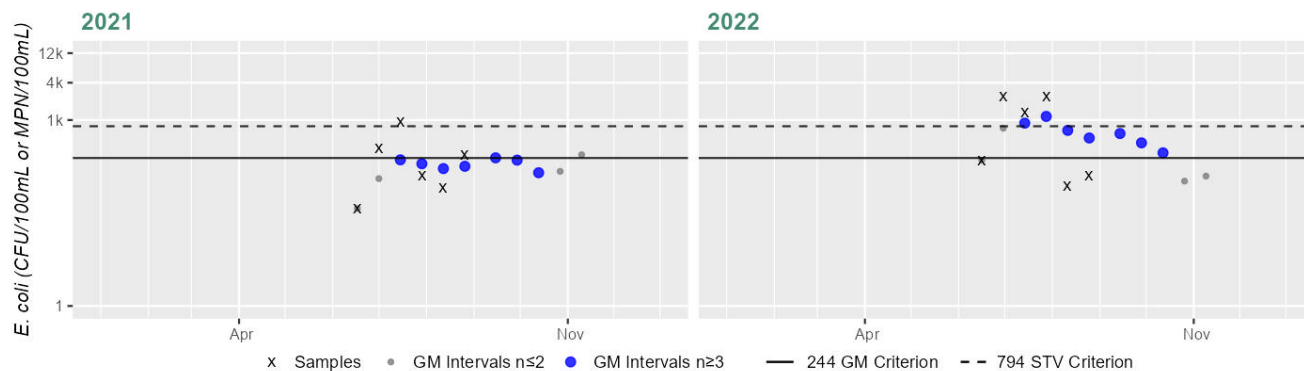
Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 1)

[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
CRC_Cool0.9	Connecticut River Conservancy	E. coli	06/17/21	08/26/21	6	37	920	179
CRC_Cool0.9	Connecticut River Conservancy	E. coli	06/16/22	08/25/22	6	85	2419	513

Station CRC_Cool0.9 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	179
#GMI	7
#GMI Ex	1
%GMI Ex	14%
n>STV	1
%n>STV	16%

Variable*	Result
Samples	6
SeasGM	513
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	3
%n>STV	50%

Cumulative %GMI Exceedance

Current (2011-2022)

57%

*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.

Couch Brook (MA34-96)

Location:	Headwaters, east of East Hill Road, Leyden to mouth at confluence with Fall River, Bernardston.
AU Type:	RIVER
AU Size:	2.5 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Couch Brook (MA34-96) 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

Cranberry Pond (MA34018)

Location:	Sunderland.
AU Type:	FRESHWATER LAKE
AU Size:	28 ACRES
Classification/Qualifier:	B

No usable data were available for Cranberry Pond (MA34018) 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	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged

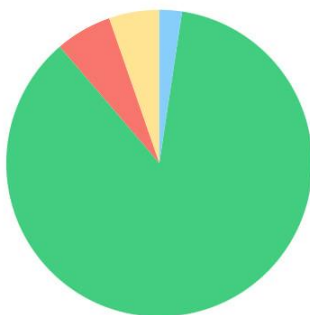
Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Eurasian Water Milfoil, Myriophyllum Spicatum*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Cranberry Pond Brook (MA34-97)

Location:	Headwaters, outlet Cranberry Pond, Sunderland to mouth at confluence with the Connecticut River, Deerfield.
AU Type:	RIVER
AU Size:	3.3 MILES
Classification/Qualifier:	B

Cranberry Pond Brook (MA34-97)

Watershed Area: 4.03 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	4.03	3.82	0.92	0.92
Agriculture	5.3%	5.5%	7.6%	7.6%
Developed	6%	5.9%	6.2%	6.2%
Natural	86.3%	86.1%	78.9%	78.8%
Wetland	2.4%	2.5%	7.4%	7.4%
Impervious	2.5%	2.5%	2.6%	2.6%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
--	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 Cranberry Pond Brook (MA34-97) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Cranberry Pond Brook (MA34-97) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station close to the upstream end of Cranberry Pond Brook: ~1400 feet north from Reservation Road and the outlet of Cranberry Pond, Sunderland (W1883/MAP2-502) in summer 2014 (n=5). 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
W1883	MassDEP	Water Quality	Cranberry Pond Brook	[approximately 1400 feet north from Reservation Road and the outlet of Cranberry Pond, Sunderland]	42.506774	-72.527076

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
W1883	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W1883 on Cranberry Pond Brook (MA34-97) during 5 site visits between May 2014 and Aug 2014. 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
W1883	2014	5	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1883	Cranberry Pond Brook	2014	Aesthetics Impaired?	No	5	5
W1883	Cranberry Pond Brook	2014	Aquatic Plant Density, Overall	None	5	5
W1883	Cranberry Pond Brook	2014	Color	None	5	5
W1883	Cranberry Pond Brook	2014	Objectionable Deposits	No	5	5
W1883	Cranberry Pond Brook	2014	Odor	None	5	5
W1883	Cranberry Pond Brook	2014	Periphyton Density, Filamentous	None	5	5
W1883	Cranberry Pond Brook	2014	Periphyton Density, Film	None	4	5
W1883	Cranberry Pond Brook	2014	Periphyton Density, Film	Sparse	1	5
W1883	Cranberry Pond Brook	2014	Scum	No	3	5
W1883	Cranberry Pond Brook	2014	Scum	Yes	2	5
W1883	Cranberry Pond Brook	2014	Turbidity	None	5	5

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Cranberry Pond Brook (MA34-97) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples close to the upstream end of Cranberry Pond Brook at W1883 [~1400 ft N from Reservation Rd and the outlet of Cranberry Pond, Sunderland] from May-Aug 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W1883 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 4 CFU/100ml. <i>E. coli</i> data from W1883 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1883	MassDEP	Water Quality	Cranberry Pond Brook	[approximately 1400 feet north from Reservation Road and the outlet of Cranberry Pond, Sunderland]	42.506774	-72.527076

Bacteria Data

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

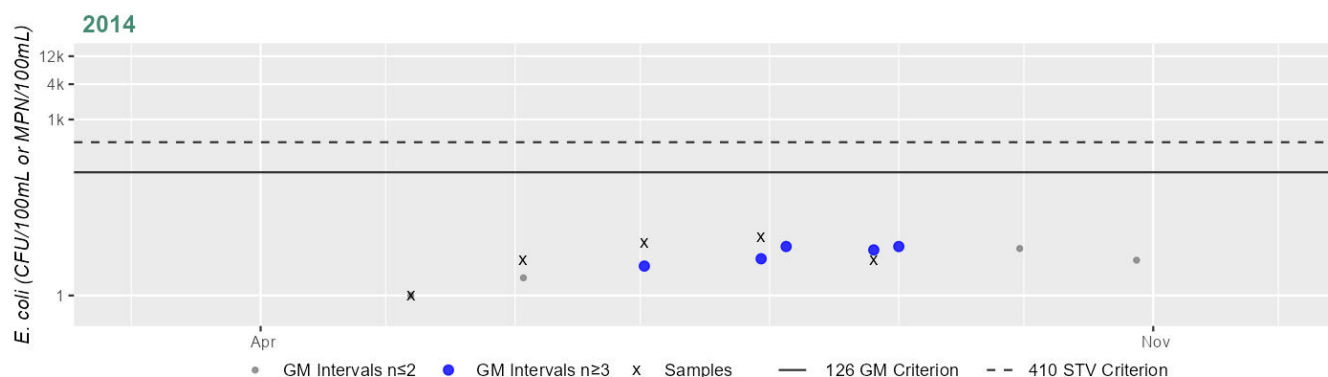
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1883	MassDEP	E. coli	05/07/14	08/26/14	5	1	10	4

Station MASSDEP_W1883 - Escherichia coli

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



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

Cumulative %GMI Exceedance

Current (2011-2022)

0%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Cranberry Pond Brook (MA34-97) is assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples close to the upstream end of Cranberry Pond Brook at W1883 [~1400 ft N from Reservation Rd and the outlet of Cranberry Pond, Sunderland] from May-Aug 2014 (n=5). Analysis of the single year limited frequency *E. coli* dataset from W1883 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 4 CFU/100ml. *E. coli* data from W1883 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1883	MassDEP	Water Quality	Cranberry Pond Brook	[approximately 1400 feet north from Reservation Road and the outlet of Cranberry Pond, Sunderland]	42.506774	-72.527076

Bacteria Data

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

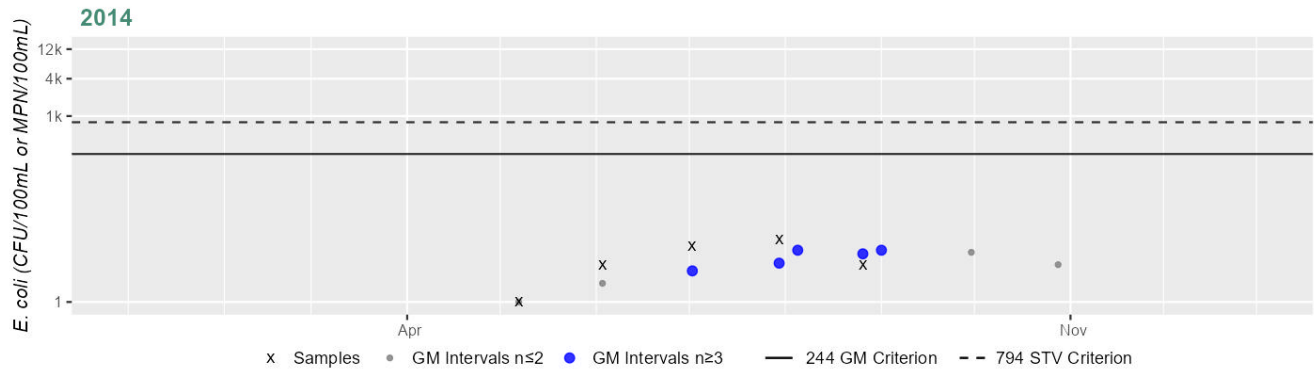
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1883	MassDEP	E. coli	05/07/14	08/26/14	5	1	10	4

Station MASSDEP_W1883 - Escherichia coli

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



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

Cumulative %GMI Exceedance

Current (2011-2022)

0%

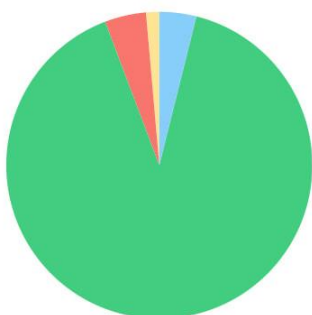
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Cushman Brook (MA34-34)

Location:	Headwaters, outlet Atkins Reservoir, Shutesbury to mouth at inlet Factory Hollow Pond, Amherst.
AU Type:	RIVER
AU Size:	2.5 MILES
Classification/Qualifier:	B

Cushman Brook (MA34-34)

Watershed Area: 16.62 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	16.62	5.69	6.44	2.32
Agriculture	1.4%	2.9%	1.6%	2.6%
Developed	4.4%	5.7%	4.1%	5.4%
Natural	90.3%	86.7%	87.9%	84.2%
Wetland	3.9%	4.6%	6.5%	7.9%
Impervious	1.8%	2.6%	1.9%	2.6%

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 Cushman Brook (MA34-34) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Cushman Brook (MA34-34) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station close to the downstream end of Cushman Brook: ~900 feet upstream of Factory Hollow Pond/State Street, Amherst (W2846) during summer 2019 (n=8). 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
W2846	MassDEP	Water Quality	Cushman Brook	[approximately 900 feet upstream of Factory Hollow Pond/State Street, Amherst]	42.415508	-72.512583

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
W2846	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2846 on Cushman Brook (MA34-34) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W2846	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2846	Cushman Brook	2019	Aesthetics Impaired?	No	8	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2846	Cushman Brook	2019	Aquatic Plant Density, Overall	None	8	8
W2846	Cushman Brook	2019	Color	None	7	8
W2846	Cushman Brook	2019	Color	NR	1	8
W2846	Cushman Brook	2019	Objectionable Deposits	No	8	8
W2846	Cushman Brook	2019	Odor	None	8	8
W2846	Cushman Brook	2019	Periphyton Density, Filamentous	None	7	8
W2846	Cushman Brook	2019	Periphyton Density, Filamentous	Sparse	1	8
W2846	Cushman Brook	2019	Periphyton Density, Film	None	5	8
W2846	Cushman Brook	2019	Periphyton Density, Film	NR	1	8
W2846	Cushman Brook	2019	Periphyton Density, Film	Sparse	2	8
W2846	Cushman Brook	2019	Scum	No	8	8
W2846	Cushman Brook	2019	Turbidity	None	8	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Cushman Brook (MA34-34) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples close to the downstream end of Cushman Brook at W2846 [~900 ft upstream of Factory Hollow Pond/State St, Amherst] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2846 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 11 CFU/100ml. <i>E. coli</i> data from W2846 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2846	MassDEP	Water Quality	Cushman Brook	[approximately 900 feet upstream of Factory Hollow Pond/State Street, Amherst]	42.415508	-72.512583

Bacteria Data

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

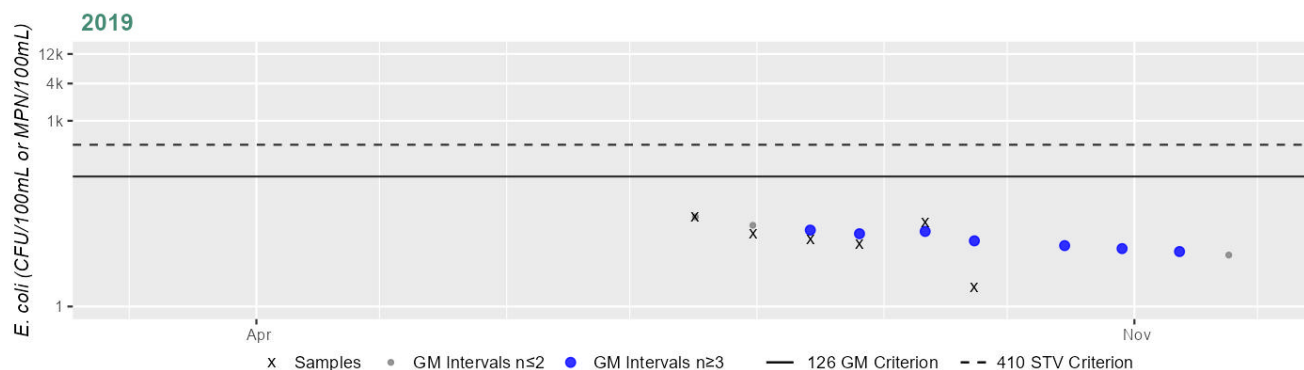
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2846	MassDEP	E. coli	07/17/19	09/23/19	6	2	28	11

Station MASSDEP_W2846 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	11
#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
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Cushman Brook (MA34-34) is assessed as Fully Supporting. MassDEP staff collected E. coli bacteria samples close to the downstream end of Cushman Brook at W2846 [~900 ft upstream of Factory Hollow Pond/State St, Amherst] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency E. coli dataset from W2846 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 11 CFU/100ml. E. coli data from W2846 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2846	MassDEP	Water Quality	Cushman Brook	[approximately 900 feet upstream of Factory Hollow Pond/State Street, Amherst]	42.415508	-72.512583

Bacteria Data

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

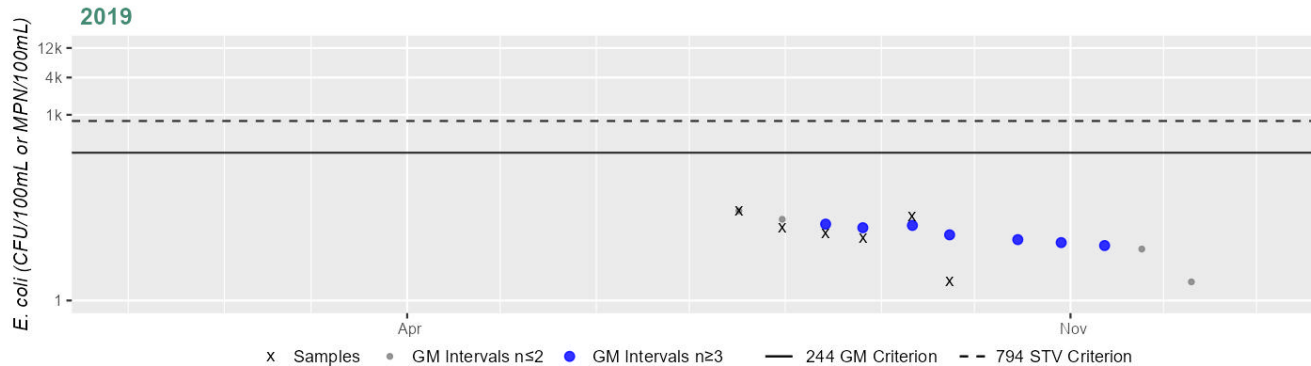
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2846	MassDEP	E. coli	07/17/19	09/23/19	6	2	28	11

Station MASSDEP_W2846 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	11
#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.

Danks Pond (MA34019)

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

No usable data were available for Danks Pond (MA34019) 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	(Water Chestnut*)	--	Unchanged

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

Day Brook (MA34-67)

Location:	Headwaters southwest of Miller Hill, Williamsburg to mouth at confluence with unnamed tributary to Mill River, Northampton.
AU Type:	RIVER
AU Size:	1.7 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Day Brook (MA34-67) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Dean Brook (MA34-50)

Location:	Headwaters, east of West Pelham Road (at mouth of Baker Brook), Shutesbury to mouth at confluence with Adams Brook (in small "diversion pool" for Atkins Reservoir), Shutesbury.
AU Type:	RIVER
AU Size:	2.4 MILES
Classification/Qualifier:	A: PWS, ORW, CWF (Tributary)

No usable data were available for Dean Brook (MA34-50) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

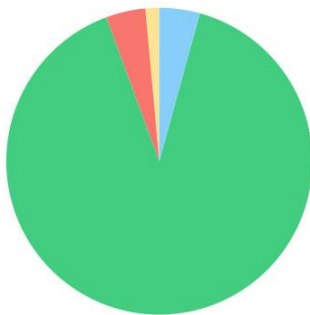
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

Doolittle Brook (MA34-107)

Location:	Headwaters west of Cave Hill Road, Leverett to mouth at confluence with Cushman Brook, Amherst.
AU Type:	RIVER
AU Size:	4 MILES
Classification/Qualifier:	B

Doolittle Brook (MA34-107)

Watershed Area: 13.85 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	13.85	8.72	5.03	3.38
Agriculture	1.5%	1.8%	1.9%	1.8%
Developed	4.2%	4%	4.2%	4.6%
Natural	90.1%	90.7%	86.5%	87%
Wetland	4.3%	3.5%	7.4%	6.6%
Impervious	1.7%	1.7%	1.8%	2%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
--	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 Doolittle Brook (MA34-107) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Doolittle Brook (MA34-107) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations for one station on the downstream half of Doolittle Brook ~1550 feet south/downstream of Shutesbury Road, Leverett (W2897) in summer 2019 (n=4). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2897	MassDEP	Water Quality	Doolittle Brook	[approximately 1550 feet south/downstream of Shutesbury Road, Leverett]	42.447043	-72.491909

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
W2897	2019	4	Aesthetic observations were made by MassDEP field sampling crews at Station W2897 on Doolittle Brook (MA34-107) during 4 site visits between Jun 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W2897	2019	4	4	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2897	Doolittle Brook	2019	Aesthetics Impaired?	No	4	4
W2897	Doolittle Brook	2019	Aquatic Plant Density, Overall	Sparse	4	4
W2897	Doolittle Brook	2019	Color	Light Yellow/Tan	2	4
W2897	Doolittle Brook	2019	Color	None	2	4
W2897	Doolittle Brook	2019	Objectionable Deposits	No	4	4
W2897	Doolittle Brook	2019	Odor	None	4	4
W2897	Doolittle Brook	2019	Periphyton Density, Filamentous	None	4	4
W2897	Doolittle Brook	2019	Periphyton Density, Film	None	4	4
W2897	Doolittle Brook	2019	Scum	No	4	4
W2897	Doolittle Brook	2019	Turbidity	None	4	4

Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
No bacteria data are available to assess the Primary Contact Recreation Use for Doolittle Brook (MA34-107) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information.

Secondary Contact Recreation

2024/26 Use Attainment	Alert	Use Trend
Insufficient Information	NO	Unknown

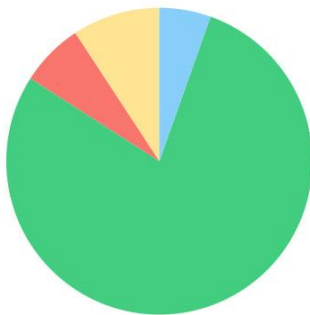
2024/26 Use Attainment Summary
No bacteria data are available to assess the Secondary Contact Recreation Use for Doolittle Brook (MA34-107) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information.

Dry Brook (MA34-64)

Location:	Headwaters, west of Huckle Hill Road, Bernardston to mouth at confluence with the Connecticut River, Gill.
AU Type:	RIVER
AU Size:	8.3 MILES
Classification/Qualifier:	B: CWF

Dry Brook (MA34-64)

Watershed Area: 9.38 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	9.38	5.88	2.21	1.70
Agriculture	9.3%	12.8%	11.7%	13.5%
Developed	6.7%	8.5%	7.3%	8.7%
Natural	78.6%	71.9%	67.8%	62.8%
Wetland	5.4%	6.8%	13.1%	14.9%
Impervious	2.1%	2.8%	2.4%	2.9%

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 Dry Brook (MA34-64) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
There are no data available to assess the status of the Aesthetics Use for Dry Brook (MA34-64), so it 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 Dry Brook (MA34-64) 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 Dry Brook (MA34-64) 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 Dry Brook at W1785 [Main Rd, Gill] from May-Sep 2008 (n=6). Analysis of the historic single year limited frequency <i>E. coli</i> dataset from W1785 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 121 CFU/100ml. Historic <i>E. coli</i> data from W1785 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
W1785	MassDEP	Water Quality	Dry Brook	[Main Road, Gill]	42.642016	-72.497712

Bacteria Data

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

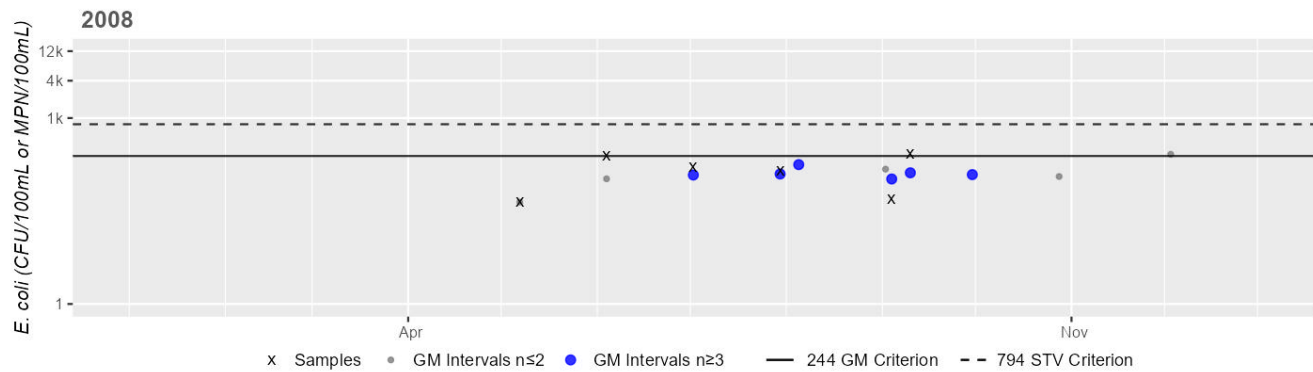
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1785	MassDEP	E. coli	05/06/08	09/09/08	6	44	260	121

Station MASSDEP_W1785 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	121
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Historic (1997-2010)

0%

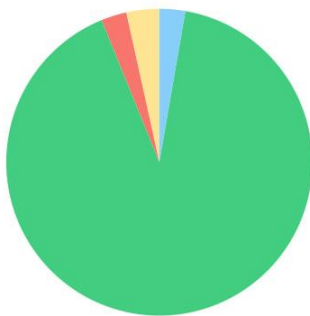
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

East Branch Mill River (MA34-37)

Location:	Headwaters, confluence with Bradford Brook, Williamsburg to mouth at confluence with West Branch Mill River (forming headwaters Mill River), Williamsburg.
AU Type:	RIVER
AU Size:	2.8 MILES
Classification/Qualifier:	B: CWF

East Branch Mill River (MA34-37)

Watershed Area: 9.53 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	9.53	3.31	2.77	0.91
Agriculture	3.5%	4.1%	2.5%	3%
Developed	2.7%	4.4%	2.8%	5.1%
Natural	91.1%	90.9%	87.5%	89.7%
Wetland	2.7%	0.6%	7.2%	2.2%
Impervious	1.2%	1.8%	1.5%	2.5%

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for East Branch Mill River (MA34-37) 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 East Branch Mill River (MA34-37) is Not Assessed.	

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for the East Branch Mill River (MA34-37) are available, so the Primary Contact Recreation Use is Not Assessed.	

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for the East Branch Mill River (MA34-37) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected <i>E. coli</i> bacteria samples at the downstream end of East Branch Mill River at W1056 [S of E Main St ~200 ft from confluence with W Branch Mill River, Williamsburg] from Apr-Oct 2003 (n=6). Historic <i>E. coli</i> data from W1056 are indeterminate 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 a single STV exceedance of the threshold (1370 CFU/100ml). Since these data were collected prior to the current IR window (2011-2022) the Secondary Contact Recreation Use cannot be positively assessed using bacteria data.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1056	MassDEP	Water Quality	East Branch Mill River	[south of East Main Street approximately 200 feet from confluence with West Branch Mill River, Williamsburg]	42.392091	-72.726690

Bacteria Data

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

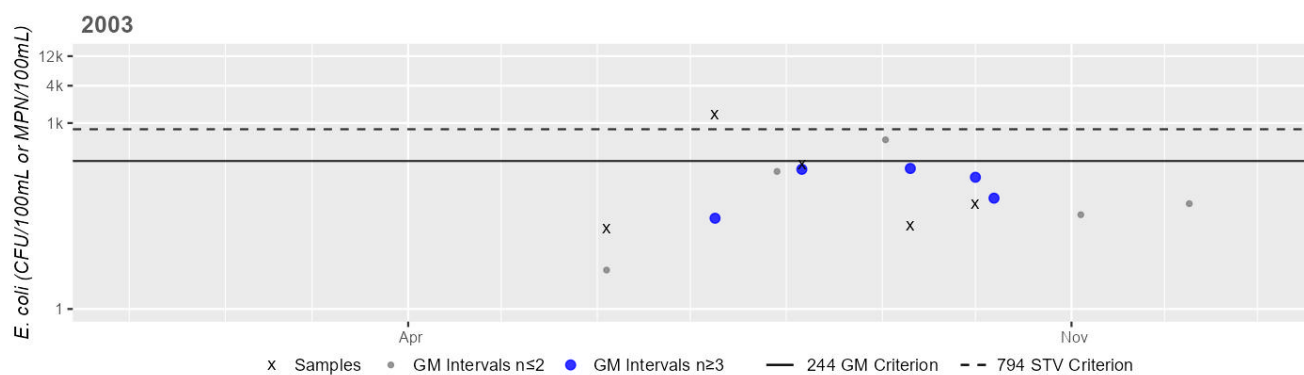
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1056	MassDEP	E. coli	04/30/03	10/01/03	6	0	1370	42

Station MASSDEP_W1056 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	42
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance

Historic (1997-2010)

0%

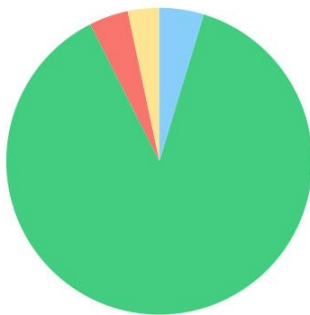
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Elmer Brook (MA34-100)

Location:	Headwaters, south of Mt. Hitchcock, South Hadley to mouth at confluence with Bachelor Brook, east of Route 47, South Hadley.
AU Type:	RIVER
AU Size:	4.5 MILES
Classification/Qualifier:	B

Elmer Brook (MA34-100)

Watershed Area: 4.07 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	4.07	3.86	0.93	0.93
Agriculture	3.3%	3.5%	2.7%	2.7%
Developed	4.1%	4.4%	1.2%	1.2%
Natural	87.8%	87.3%	82.1%	82.1%
Wetland	4.7%	4.9%	13.9%	13.9%
Impervious	1.7%	1.8%	0.6%	0.6%

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

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Elmer Brook (MA34-100) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Elmer Brook (MA34-100) is assessed as Fully Supporting based on the lack of any objectionable conditions documented by MassDEP staff during the summers of 2014, 2017 and 2019. MassDEP staff recorded aesthetics observations at two stations in South Hadley about two thirds of the way down Elmer Brook from up to downstream as follows: ~170 feet downstream of Pearl Street (W2850 in 2019, n=8) and ~1400 feet downstream/south from Pearl Street (W1989/MAP2-510 in 2014, n=5 and 2017 n=5). 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
W1989	MassDEP	Water Quality	Elmer Brook	[approximately 1400 feet downstream/south from Pearl Street, South Hadley]	42.279627	-72.586730
W2850	MassDEP	Water Quality	Elmer Brook	[approximately 170 feet downstream of Pearl Street, South Hadley]	42.282300	-72.587086

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
W1989	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W1989 on Elmer Brook (MA34-100) during 5 site visits between May 2014 and Sep 2014. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W1989	2017	5	Aesthetic observations were made by MassDEP field sampling crews at Station W1989 on Elmer Brook (MA34-100) during 5 site visits between May 2017 and Sep 2017. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W2850	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2850 on Elmer Brook (MA34-100) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W1989	2014	5	5	0
W1989	2017	5	5	0
W2850	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1989	Elmer Brook	2014	Aesthetics Impaired?	No	5	5
W1989	Elmer Brook	2014	Aquatic Plant Density, Overall	None	4	5
W1989	Elmer Brook	2014	Aquatic Plant Density, Overall	Sparse	1	5
W1989	Elmer Brook	2014	Color	Light Yellow/Tan	2	5
W1989	Elmer Brook	2014	Color	None	2	5
W1989	Elmer Brook	2014	Color	NR	1	5
W1989	Elmer Brook	2014	Objectionable Deposits	No	5	5
W1989	Elmer Brook	2014	Odor	None	5	5
W1989	Elmer Brook	2014	Periphyton Density, Filamentous	None	5	5
W1989	Elmer Brook	2014	Periphyton Density, Film	None	5	5
W1989	Elmer Brook	2014	Scum	No	4	5
W1989	Elmer Brook	2014	Scum	Yes	1	5
W1989	Elmer Brook	2014	Turbidity	None	3	5
W1989	Elmer Brook	2014	Turbidity	Slightly Turbid	2	5

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1989	Elmer Brook	2017	Aesthetics Impaired?	No	5	5
W1989	Elmer Brook	2017	Aquatic Plant Density, Overall	None	4	5
W1989	Elmer Brook	2017	Aquatic Plant Density, Overall	Sparse	1	5
W1989	Elmer Brook	2017	Color	None	5	5
W1989	Elmer Brook	2017	Objectionable Deposits	No	5	5
W1989	Elmer Brook	2017	Odor	None	5	5
W1989	Elmer Brook	2017	Periphyton Density, Filamentous	None	5	5
W1989	Elmer Brook	2017	Periphyton Density, Film	None	5	5
W1989	Elmer Brook	2017	Scum	No	5	5
W1989	Elmer Brook	2017	Turbidity	None	4	5
W1989	Elmer Brook	2017	Turbidity	Slightly Turbid	1	5
W2850	Elmer Brook	2019	Aesthetics Impaired?	No	8	8
W2850	Elmer Brook	2019	Aquatic Plant Density, Overall	None	8	8
W2850	Elmer Brook	2019	Color	Light Yellow/Tan	3	8
W2850	Elmer Brook	2019	Color	None	5	8
W2850	Elmer Brook	2019	Objectionable Deposits	No	8	8
W2850	Elmer Brook	2019	Odor	None	8	8
W2850	Elmer Brook	2019	Periphyton Density, Filamentous	None	8	8
W2850	Elmer Brook	2019	Periphyton Density, Film	None	8	8
W2850	Elmer Brook	2019	Scum	No	8	8
W2850	Elmer Brook	2019	Turbidity	None	5	8
W2850	Elmer Brook	2019	Turbidity	Slightly Turbid	3	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Elmer Brook (MA34-100) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 2 stations in 2014 & 2019. MassDEP staff collected *E. coli* bacteria samples in Elmer Brook from 2014-2019 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: about two thirds of the way down the AU at W2850 [~170 ft downstream of Pearl St, S Hadley] from Jul-Sep 2019 (n=6), and a short distance further down at W1989 [~1400 ft downstream/S from Pearl St, S Hadley] from May-Sep 2014 (n=5). Analysis of the single year limited frequency *E. coli* dataset from W2850 indicated 100% of intervals had GMs >126 CFU/100ml, 4 samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 791 CFU/100ml. Analysis of the single year limited frequency *E. coli* dataset from W1989 indicated 100% of intervals had GMs >126 CFU/100ml, 4 samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 484 CFU/100ml. *E. coli* data from W2850 and W1989 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1989	MassDEP	Water Quality	Elmer Brook	[approximately 1400 feet downstream/south from Pearl Street, South Hadley]	42.279627	-72.586730
W2850	MassDEP	Water Quality	Elmer Brook	[approximately 170 feet downstream of Pearl Street, South Hadley]	42.282300	-72.587086

Bacteria Data

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

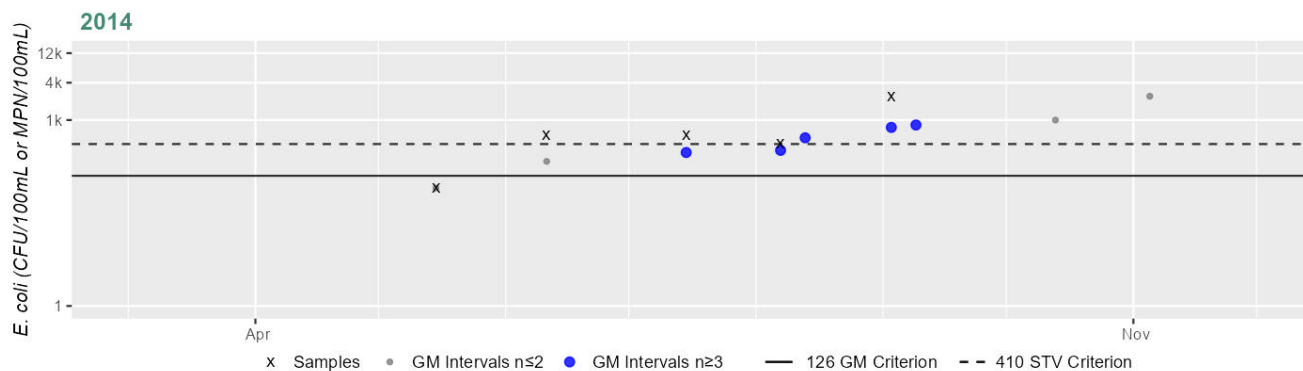
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1989	MassDEP	E. coli	05/15/14	09/03/14	5	80	2420	484
W2850	MassDEP	E. coli	07/10/19	09/18/19	6	310	2400	791

Station MASSDEP_W1989 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	484
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	4
%n>STV	80%

Cumulative %GMI Exceedance

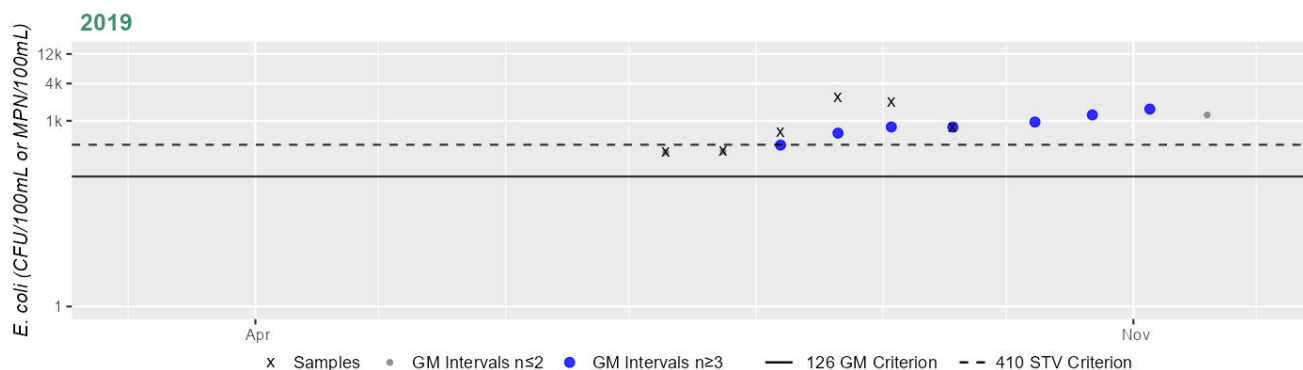
Current (2011-2022)

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_W2850 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	791
#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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Elmer Brook (MA34-100) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 2 stations in 2014 & 2019. MassDEP staff collected <i>E. coli</i> bacteria samples in Elmer Brook in 2014 & 2019 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: about two thirds of the way down the AU at W2850 [~170 ft downstream of Pearl St, S Hadley] from Jul-Sep 2019 (n=6), and a little further downstream at W1989 [~1400 ft downstream/S from Pearl St, S Hadley] from May-Sep 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2850 indicated 100% of intervals had GMs >244 CFU/100ml, 2 samples exceeded the 794 CFU/100ml STV (max 2400 CFU) and the overall GM was 791 CFU/100ml. Analysis of the single year limited frequency <i>E. coli</i> dataset from W1989 indicated 100% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV (max 2420 CFU), and the overall GM was 484 CFU/100ml. <i>E. coli</i> data from W2850 and W1989 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1989	MassDEP	Water Quality	Elmer Brook	[approximately 1400 feet downstream/south from Pearl Street, South Hadley]	42.279627	-72.586730
W2850	MassDEP	Water Quality	Elmer Brook	[approximately 170 feet downstream of Pearl Street, South Hadley]	42.282300	-72.587086

Bacteria Data

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

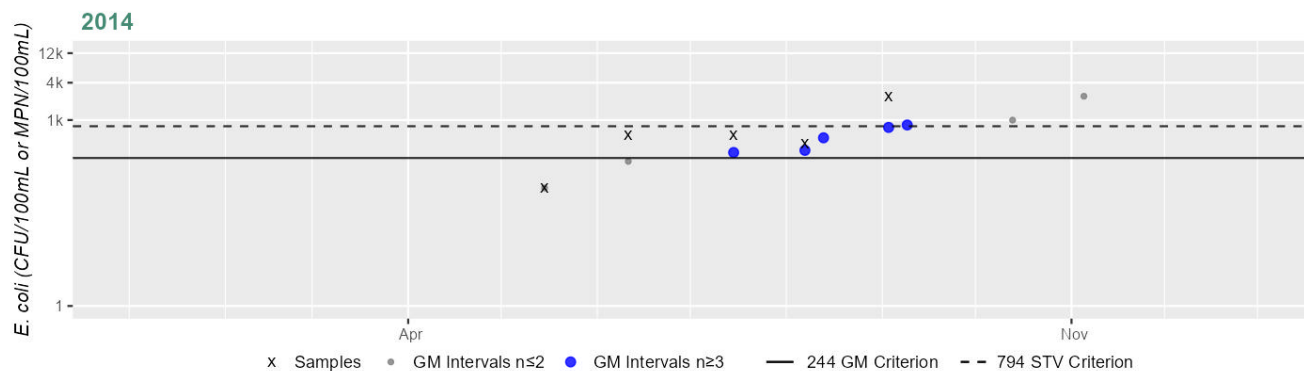
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1989	MassDEP	E. coli	05/15/14	09/03/14	5	80	2420	484
W2850	MassDEP	E. coli	07/10/19	09/18/19	6	310	2400	791

Station MASSDEP_W1989 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	484
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	1
%n>STV	20%

Cumulative %GMI Exceedance

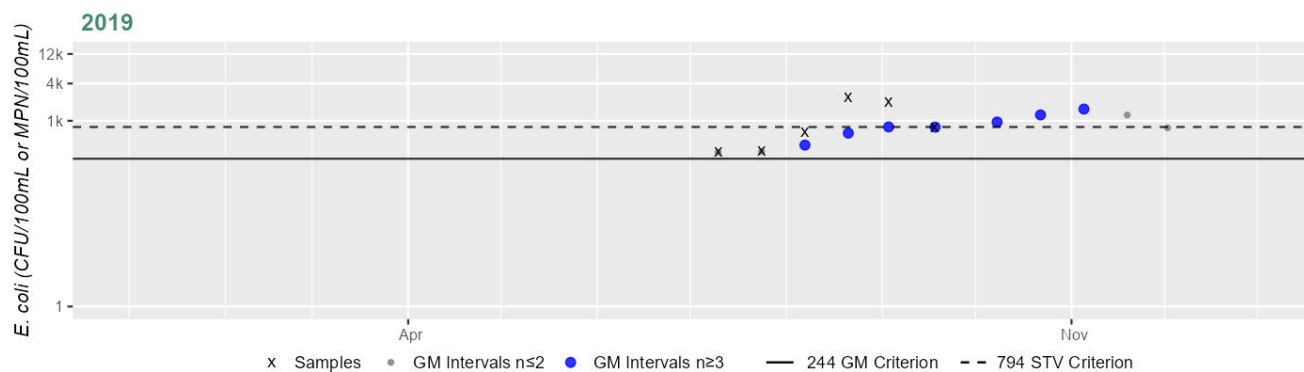
Current (2011-2022)

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.

Station MASSDEP_W2850 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	791
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance

Current (2011-2022)

100%

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

Esther Brook (MA34-78)

Location:	Headwaters, perennial portion, near Dickinson Hill Road crossing, Whately to mouth at confluence with Mill River, Whately.
AU Type:	RIVER
AU Size:	1.3 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Esther Brook (MA34-78) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Factory Hollow Pond (MA34021)

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

No usable data were available for Factory Hollow Pond (MA34021) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

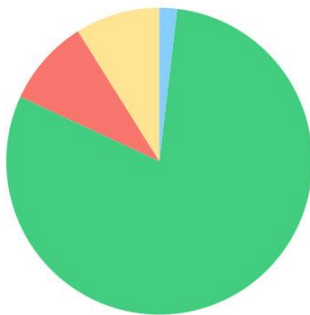
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Fall River (MA34-33)

Location:	Vermont/Massachusetts border, Bernardston to mouth at confluence with Connecticut River, Greenfield/Gill.
AU Type:	RIVER
AU Size:	10.2 MILES
Classification/Qualifier:	B: CWF

Fall River (MA34-33)

Watershed Area: 36.04 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area* (square miles)	22.53	4.84	5.38	1.32
Agriculture	8.9%	10.3%	12.2%	11.3%
Developed	9.2%	11%	11.3%	10.2%
Natural	80%	75.7%	72.1%	71.5%
Wetland	1.9%	3%	4.5%	7%
Impervious	3.4%	4.8%	4.7%	5.1%

*Land cover analysis only includes watershed area within Massachusetts.

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

Recommendations

2024/26 Recommendations

2024/2026 IR [Bacteria, Medium] Conduct follow-up monitoring for E. coli in Fall River (MA34-33) at Station W1782 (~1000 ft upstream from eastern end of Factory Hollow Road, Greenfield) to confirm elevated bacteria levels measured in 2019. {W1782}. 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 Fall River (MA34-33) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Fall River (MA34-33) continues to be assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at three stations in Greenfield at the downstream end of Fall River; ~1800 feet upstream from eastern end of Factory Hollow Rd (W1778/MAP2-496 in 2014 n=3), ~1000 feet upstream from eastern end of Factory Hollow Rd (W1782 in 2019 n=8) and ~1000 feet upstream from Rt. 2, south of Factory Hollow Rd (W2856 between Oct 2018 and Jun 2019, n=2). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded although some trash was noted at W1778.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1778	MassDEP	Water Quality	Fall River	[approximately 1800 feet upstream from eastern end of Factory Hollow Road, Greenfield (approximately 800 feet upstream of power lines)]	42.622729	-72.549708
W1782	MassDEP	Water Quality	Fall River	[approximately 1000 feet upstream from eastern end of Factory Hollow Road, Greenfield (under power lines)]	42.620583	-72.549887
W2856	MassDEP	Water Quality	Fall River	[approximately 1000 feet upstream from Route 2, south of Factory Hollow Road, Greenfield]	42.617644	-72.549429

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
W1778	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W1778 on Fall River (MA34-33) during 5 site visits between May 2014 and Aug 2014. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits (n=3).
W1782	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W1782 on Fall River (MA34-33) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W2856	2019	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2856 on Fall River (MA34-33) during 2 site visits between Oct 2018 and Jun 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W1778	2014	5	5	0
W1782	2019	8	8	0
W2856	2019	2	2	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1778	Fall River	2014	Aesthetics Impaired?	No	5	5
W1778	Fall River	2014	Aquatic Plant Density, Overall	None	4	5
W1778	Fall River	2014	Aquatic Plant Density, Overall	Sparse	1	5
W1778	Fall River	2014	Color	None	5	5
W1778	Fall River	2014	Objectionable Deposits	No	2	5
W1778	Fall River	2014	Objectionable Deposits	Yes	3	5
W1778	Fall River	2014	Odor	None	5	5
W1778	Fall River	2014	Periphyton Density, Filamentous	None	5	5
W1778	Fall River	2014	Periphyton Density, Film	None	3	5
W1778	Fall River	2014	Periphyton Density, Film	Sparse	2	5
W1778	Fall River	2014	Scum	No	5	5
W1778	Fall River	2014	Turbidity	None	5	5
W1782	Fall River	2019	Aesthetics Impaired?	No	8	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1782	Fall River	2019	Aquatic Plant Density, Overall	None	8	8
W1782	Fall River	2019	Color	None	8	8
W1782	Fall River	2019	Objectionable Deposits	No	8	8
W1782	Fall River	2019	Odor	None	8	8
W1782	Fall River	2019	Periphyton Density, Filamentous	None	7	8
W1782	Fall River	2019	Periphyton Density, Filamentous	Sparse	1	8
W1782	Fall River	2019	Periphyton Density, Film	None	3	8
W1782	Fall River	2019	Periphyton Density, Film	Sparse	5	8
W1782	Fall River	2019	Scum	No	8	8
W1782	Fall River	2019	Turbidity	None	8	8
W2856	Fall River	2019	Aesthetics Impaired?	No	2	2
W2856	Fall River	2019	Aquatic Plant Density, Overall	None	2	2
W2856	Fall River	2019	Color	None	2	2
W2856	Fall River	2019	Objectionable Deposits	No	2	2
W2856	Fall River	2019	Odor	None	2	2
W2856	Fall River	2019	Periphyton Density, Filamentous	Moderate	1	2
W2856	Fall River	2019	Periphyton Density, Filamentous	None	1	2
W2856	Fall River	2019	Periphyton Density, Film	None	2	2
W2856	Fall River	2019	Scum	No	2	2
W2856	Fall River	2019	Turbidity	None	2	2

Primary Contact Recreation

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

The Primary Contact Recreation Use for the Fall River (MA34-33) continues to be assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples at the downstream end of the Fall River AU from 2014-2019 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: W1778 [~1800 ft upstream from eastern end of Factory Hollow Rd, Greenfield (~800 ft upstream of power lines)] from May-Aug 2014 (n=5), and W1782 [~1000 ft upstream from eastern end of Factory Hollow Rd, Greenfield (under power lines)] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency *E. coli* dataset from W1778 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 60 CFU/100ml. Analysis of the single year limited frequency *E. coli* dataset from W1782 indicated 0% of intervals had GMs >126 CFU/100ml, 2 samples exceeded the 410 CFU/100ml STV (max 650 CFU), and the seasonal GM was 71 CFU/100ml. *E. coli* data from W1782 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. *E. coli* data from W1778 meet 2024 CALM guidance, however an Alert is being identified for *Escherichia coli* at W1782.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1778	MassDEP	Water Quality	Fall River	[approximately 1800 feet upstream from eastern end of Factory Hollow Road, Greenfield (approximately 800 feet upstream of power lines)]	42.622729	-72.549708
W1782	MassDEP	Water Quality	Fall River	[approximately 1000 feet upstream from eastern end of Factory Hollow Road, Greenfield (under power lines)]	42.620583	-72.549887

Bacteria Data

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

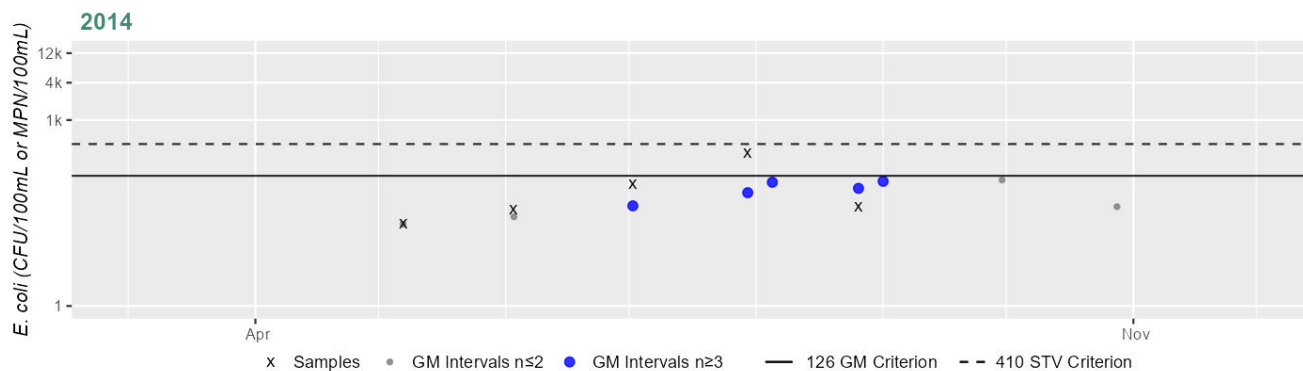
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1778	MassDEP	<i>E. coli</i>	05/07/14	08/26/14	5	21	291	60
W1782	MassDEP	<i>E. coli</i>	07/10/19	09/16/19	6	18	650	71

Station MASSDEP_W1778 - *Escherichia coli*

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



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

Cumulative %GMI Exceedance

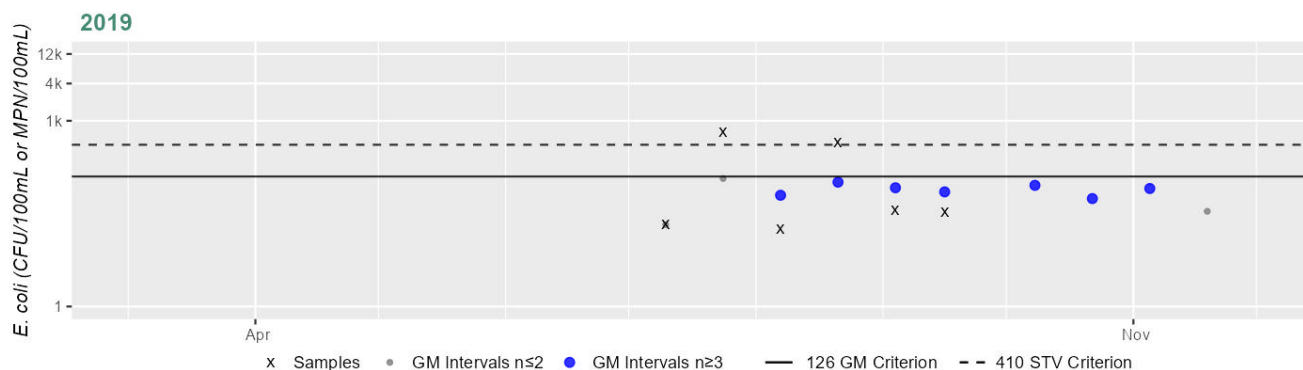
Current (2011-2022)

0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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_W1782 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	71
#GMI	7
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for the Fall River (MA34-33) continues to be assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) at the downstream end of the Fall River AU from 2008-2019 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: W1778 [~1800 ft upstream from eastern end of Factory Hollow Rd, Greenfield (~800 ft upstream of power lines)] from May-Aug 2014 (n=5) and W1782 [~1000 ft upstream from eastern end of Factory Hollow Rd, Greenfield (under power lines)] from May-Sep 2008 (historic n=6) and Jul-Sep 2019 (current n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W1778 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 60 CFU/100ml. Analysis of the single year limited frequency <i>E. coli</i> dataset from W1782 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 71 CFU/100ml. <i>E. coli</i> data from W1778 and W1782 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1778	MassDEP	Water Quality	Fall River	[approximately 1800 feet upstream from eastern end of Factory Hollow Road, Greenfield (approximately 800 feet upstream of power lines)]	42.622729	-72.549708
W1782	MassDEP	Water Quality	Fall River	[approximately 1000 feet upstream from eastern end of Factory Hollow Road, Greenfield (under power lines)]	42.620583	-72.549887

Bacteria Data

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

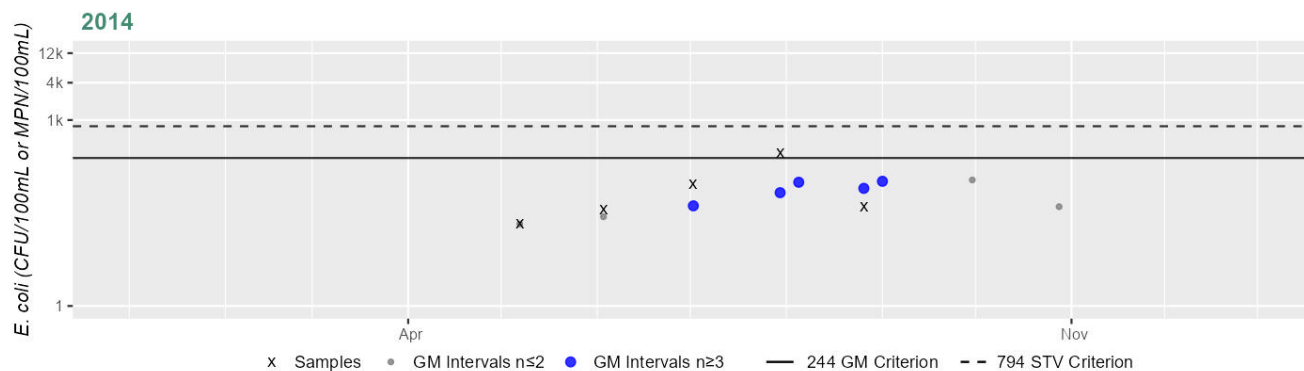
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1778	MassDEP	E. coli	05/07/14	08/26/14	5	21	291	60
W1782	MassDEP	E. coli	05/06/08	09/09/08	6	6	740	53
W1782	MassDEP	E. coli	07/10/19	09/16/19	6	18	650	71

Station MASSDEP_W1778 - *Escherichia coli*

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



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

Cumulative %GMI Exceedance

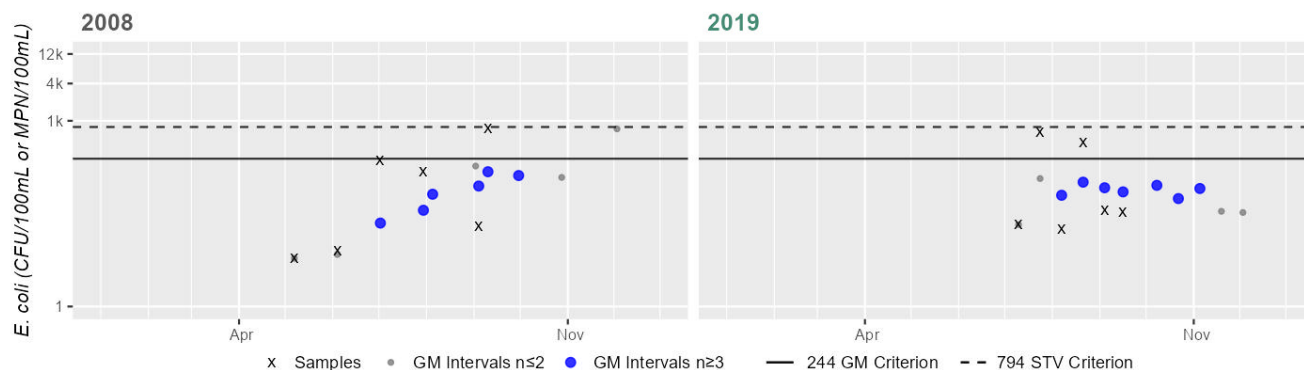
Current (2011-2022)

0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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_W1782 - *Escherichia coli*

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



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

Cumulative %GMI Exceedance

Historic (1997-2010)

0%

Variable*	Result
Samples	6
SeasGM	71
#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.

Forge Pond (MA34024)

Location:	Granby.
AU Type:	FRESHWATER LAKE
AU Size:	72 ACRES
Classification/Qualifier:	B: WWF (impoundment on river designated B/WWF)

No usable data were available for Forge Pond (MA34024) 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	(Water Chestnut*)	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged

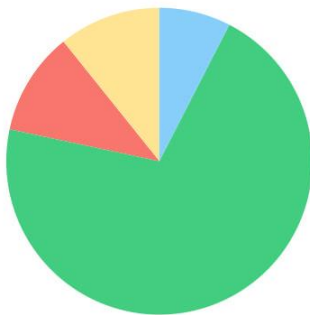
Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X	--	X	X	X

Fort River (MA34-27)

Location:	Headwaters (confluence of Adams and Amethyst brooks, Amherst), to mouth at confluence Connecticut River, Hadley.
AU Type:	RIVER
AU Size:	12.8 MILES
Classification/Qualifier:	B

Fort River (MA34-27)

Watershed Area: 54.77 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	54.77	9.10	19.24	3.34
Agriculture	10.8%	31.6%	10.2%	33.3%
Developed	10.9%	14.6%	7.1%	10.9%
Natural	70.8%	45.9%	69.9%	40.8%
Wetland	7.6%	7.9%	12.8%	15%
Impervious	5%	7%	3.2%	4.8%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed

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

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Escherichia Coli (E. Coli)	TMDL approved or established by EPA (4a)	Impairment covered under TMDL: Massachusetts Statewide TMDL for Pathogen-Impaired Waterbodies (Report CN 515.1, approved 2/13/2024, ATTAINS Action ID: R1_MA_2024_04)

Recommendations

2024/26 Recommendations
2024/2026 IR [Turbidity, Medium] Conduct follow-up monitoring for turbidity in Fort River (MA34-27) at Station W1051 to confirm observations of moderate turbidity and gray color at Route 47 in Hadley in 2018-2019. {W1051}. 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 Fort River (MA34-27) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	YES
2024/26 Use Attainment Summary	
The Aesthetics Use for Fort River (MA34-27) continues to be assessed as as Fully Supporting, with the prior Alert identified for Turbidity being carried forward. MassDEP staff recorded aesthetics observations at two stations on this Fort River AU, between Oct 2018 and Sep 2019: close to the upstream end of the AU at Pelham Road, Amherst (W2845 n=10) and close to the downstream end of the AU at Rt. 47, Hadley (W1051 n=10). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded at either site, though field staff noted grey water color (n=1) and moderate turbidity (n=3) at W1051.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1051	MassDEP	Water Quality	Fort River	[Route 47, Hadley]	42.332786	-72.578583
W2845	MassDEP	Water Quality	Fort River	[Pelham Road, Amherst]	42.376838	-72.494926

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
W1051	2019	10	Aesthetic observations were made by MassDEP field sampling crews at Station W1051 on Fort River (MA34-27) during 10 site visits between Oct 2018 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted grey water color (n=1) and moderate turbidity (n=3).
W2845	2019	10	Aesthetic observations were made by MassDEP field sampling crews at Station W2845 on Fort River (MA34-27) during 10 site visits between Oct 2018 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W1051	2019	10	9	0
W2845	2019	10	10	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1051	Fort River	2019	Aesthetics Impaired?	No	10	10
W1051	Fort River	2019	Aquatic Plant Density, Overall	None	9	10
W1051	Fort River	2019	Aquatic Plant Density, Overall	Unobservable	1	10

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1051	Fort River	2019	Color	Brownish	3	10
W1051	Fort River	2019	Color	Greyish	1	10
W1051	Fort River	2019	Color	Light Yellow/Tan	1	10
W1051	Fort River	2019	Color	None	4	10
W1051	Fort River	2019	Color	NR	1	10
W1051	Fort River	2019	Objectionable Deposits	No	10	10
W1051	Fort River	2019	Odor	Musty (Basement)	1	10
W1051	Fort River	2019	Odor	None	8	10
W1051	Fort River	2019	Odor	NR	1	10
W1051	Fort River	2019	Periphyton Density, Filamentous	Moderate	1	10
W1051	Fort River	2019	Periphyton Density, Filamentous	None	4	10
W1051	Fort River	2019	Periphyton Density, Filamentous	Sparse	4	10
W1051	Fort River	2019	Periphyton Density, Filamentous	Unobservable	1	10
W1051	Fort River	2019	Periphyton Density, Film	Moderate	1	10
W1051	Fort River	2019	Periphyton Density, Film	None	7	10
W1051	Fort River	2019	Periphyton Density, Film	Sparse	1	10
W1051	Fort River	2019	Periphyton Density, Film	Unobservable	1	10
W1051	Fort River	2019	Scum	No	8	10
W1051	Fort River	2019	Scum	Yes	2	10
W1051	Fort River	2019	Turbidity	Moderately Turbid	3	10
W1051	Fort River	2019	Turbidity	None	2	10
W1051	Fort River	2019	Turbidity	NR	1	10
W1051	Fort River	2019	Turbidity	Slightly Turbid	4	10
W2845	Fort River	2019	Aesthetics Impaired?	No	10	10
W2845	Fort River	2019	Aquatic Plant Density, Overall	None	8	10
W2845	Fort River	2019	Aquatic Plant Density, Overall	Sparse	2	10
W2845	Fort River	2019	Color	None	9	10
W2845	Fort River	2019	Color	NR	1	10
W2845	Fort River	2019	Objectionable Deposits	No	10	10
W2845	Fort River	2019	Odor	Effluent (Treated)	1	10
W2845	Fort River	2019	Odor	None	9	10
W2845	Fort River	2019	Periphyton Density, Filamentous	None	9	10
W2845	Fort River	2019	Periphyton Density, Filamentous	Sparse	1	10

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2845	Fort River	2019	Periphyton Density, Film	None	9	10
W2845	Fort River	2019	Periphyton Density, Film	Sparse	1	10
W2845	Fort River	2019	Scum	No	10	10
W2845	Fort River	2019	Turbidity	None	10	10

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for the Fort River (MA34-27) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 3 stations in 2019-2021. Connecticut River Conservancy (CRC) and MassDEP staff/volunteers collected <i>E. coli</i> bacteria samples in the Fort River from 2019-2021 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 W2845 [Pelham Rd, Amherst] from Jul-Sep 2019 (n=6), halfway down at CRC_FORT08.4 [Groff Park, Amherst] from 2020-2021 (n=6-7/yr), and close to the downstream end of the AU at W1051 [Rt. 47, Hadley] from Jul-Sep 2019 (n=6). <i>E. coli</i> data from W2845, CRC_FORT08.4, and W1051 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_FORT08.4	Connecticut River Conservancy	Water Quality	Fort River	Groff Park, Amherst	42.359087	-72.516419
W1051	MassDEP	Water Quality	Fort River	[Route 47, Hadley]	42.332786	-72.578583
W2845	MassDEP	Water Quality	Fort River	[Pelham Road, Amherst]	42.376838	-72.494926

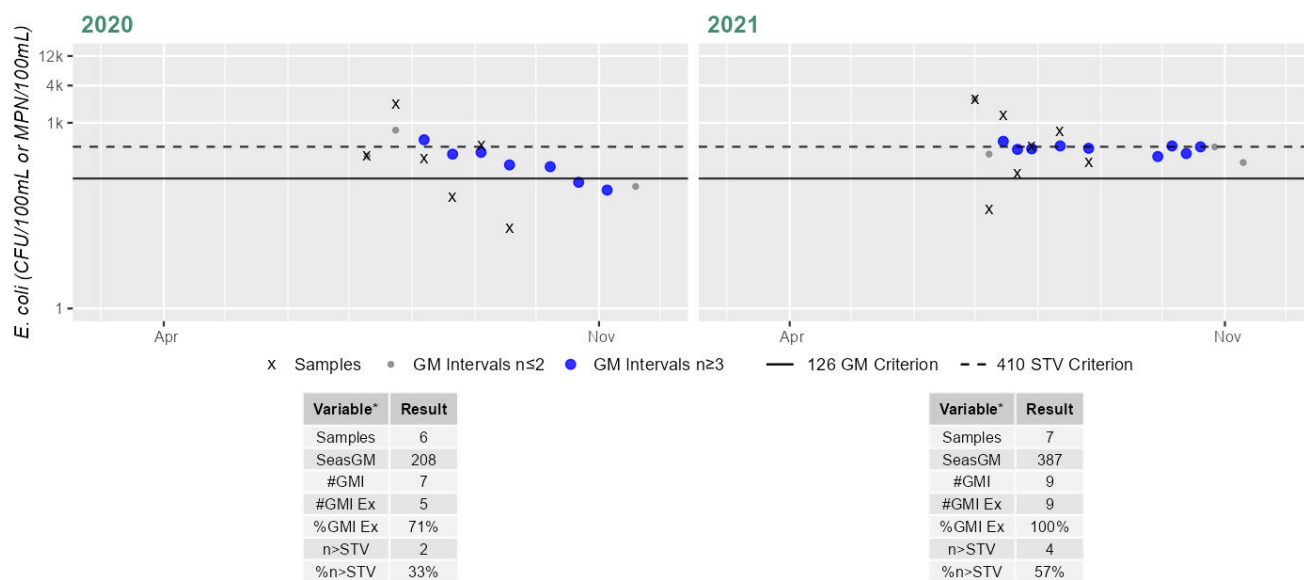
Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 2) (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
CRC_FORT08.4	Connecticut River Conservancy	E. coli	07/09/20	09/17/20	6	20	1986	208
CRC_FORT08.4	Connecticut River Conservancy	E. coli	07/01/21	08/26/21	7	40	2419	387
W1051	MassDEP	E. coli	07/17/19	09/23/19	6	180	340	246
W2845	MassDEP	E. coli	07/17/19	09/23/19	6	49	550	211

Station CRC_FORT08.4 - Escherichia coli

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



Cumulative %GMI Exceedance

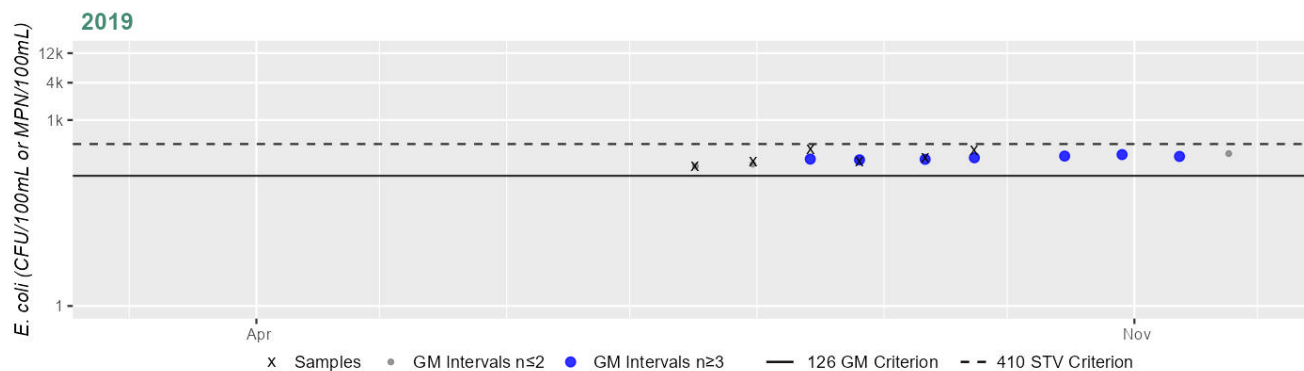
Current (2011-2022)

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.

Station MASSDEP_W1051 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	246
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

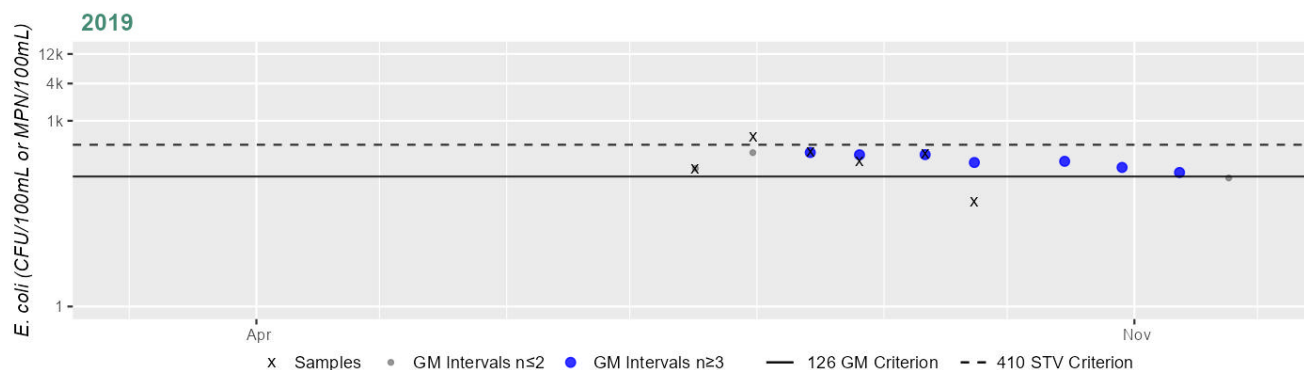
Current (2011-2022)

100%

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

Station MASSDEP_W2845 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	211
#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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for the Fort River (MA34-27) is assessed as Not Supporting. An <i>Escherichia Coli</i> (<i>E. Coli</i>) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2020-2021. Connecticut River Conservancy (CRC) and MassDEP staff/volunteers collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Fort River from 2003-2021 at 4 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the upstream end of the AU at W2845 [Pelham Rd, Amherst] from Jul-Sep 2019 (n=6), halfway down at CRC_FORT08.4 [Groff Park, Amherst] from 2020-2021 (n=6-7/yr), and W1804 [bike path bridge ~50 ft E of Rt. 116 bridge crossing, Amherst] from May-Sep 2008 (n=6), close to the downstream end of the AU at W1051 [Rt. 47, Hadley] in 2003 and 2008 (historic n=6/yr) and Jul-Sep 2019 (current n=6).</p> <p>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 multi-year moderate frequency <i>E. coli</i> dataset from CRC_FORT08.4 indicated 2 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2020 and 2021, 42 & 100%), 1 yr had ≥2 samples exceed the 794 CFU/100ml STV (2021, n=2), and cumulatively across years 75% of intervals had GMs >244 CFU/100ml. While <i>E. coli</i> data in the current IR window from W2845 and W1051 meet 2024 CALM guidance, <i>E. coli</i> data from CRC_FORT08.4 are indicative of an <i>Escherichia Coli</i> (<i>E. Coli</i>) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_FORT08.4	Connecticut River Conservancy	Water Quality	Fort River	Groff Park, Amherst	42.359087	-72.516419
W1051	MassDEP	Water Quality	Fort River	[Route 47, Hadley]	42.332786	-72.578583
W1804	MassDEP	Water Quality	Fort River	[bike path bridge approximately 50 feet east of Route 116 bridge crossing, Amherst]	42.355650	-72.520654
W2845	MassDEP	Water Quality	Fort River	[Pelham Road, Amherst]	42.376838	-72.494926

Bacteria Data

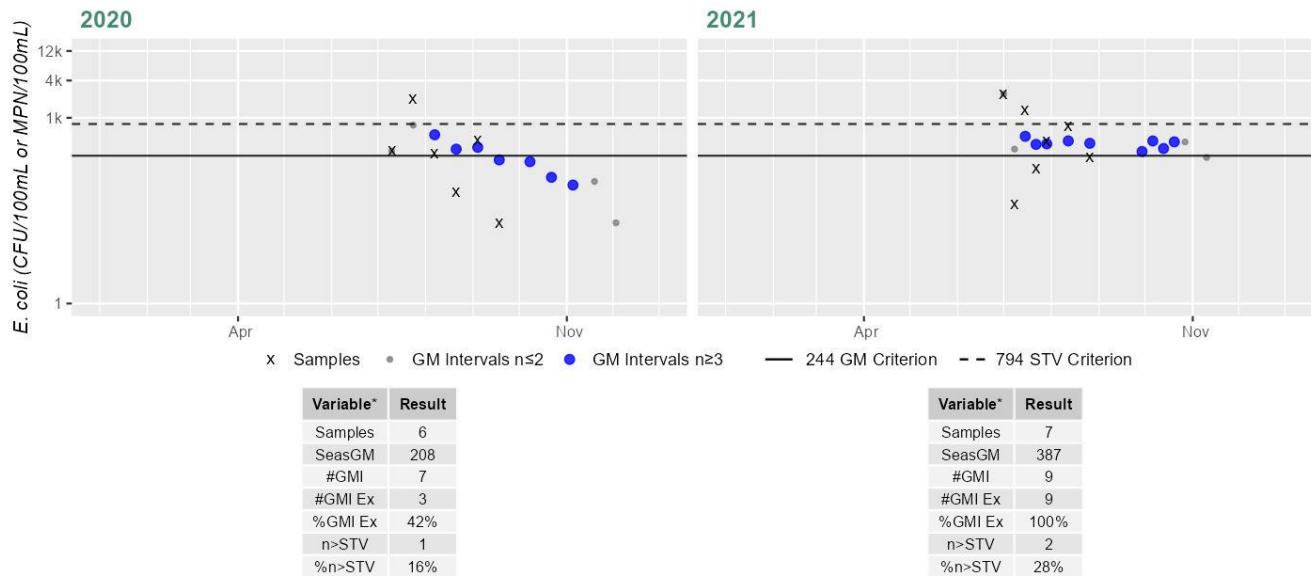
Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 1) (MassDEP Undated 7) (MassDEP Undated 3)

[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
CRC_FORT08.4	Connecticut River Conservancy	E. coli	07/09/20	09/17/20	6	20	1986	208
CRC_FORT08.4	Connecticut River Conservancy	E. coli	07/01/21	08/26/21	7	40	2419	387
W1051	MassDEP	E. coli	04/30/03	10/01/03	6	16	3000	253
W1051	MassDEP	E. coli	05/06/08	09/09/08	6	52	1500	241
W1051	MassDEP	E. coli	07/17/19	09/23/19	6	180	340	246
W1804	MassDEP	E. coli	05/06/08	09/09/08	6	24	460	80
W2845	MassDEP	E. coli	07/17/19	09/23/19	6	49	550	211

Station CRC_FORT08.4 - Escherichia coli

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

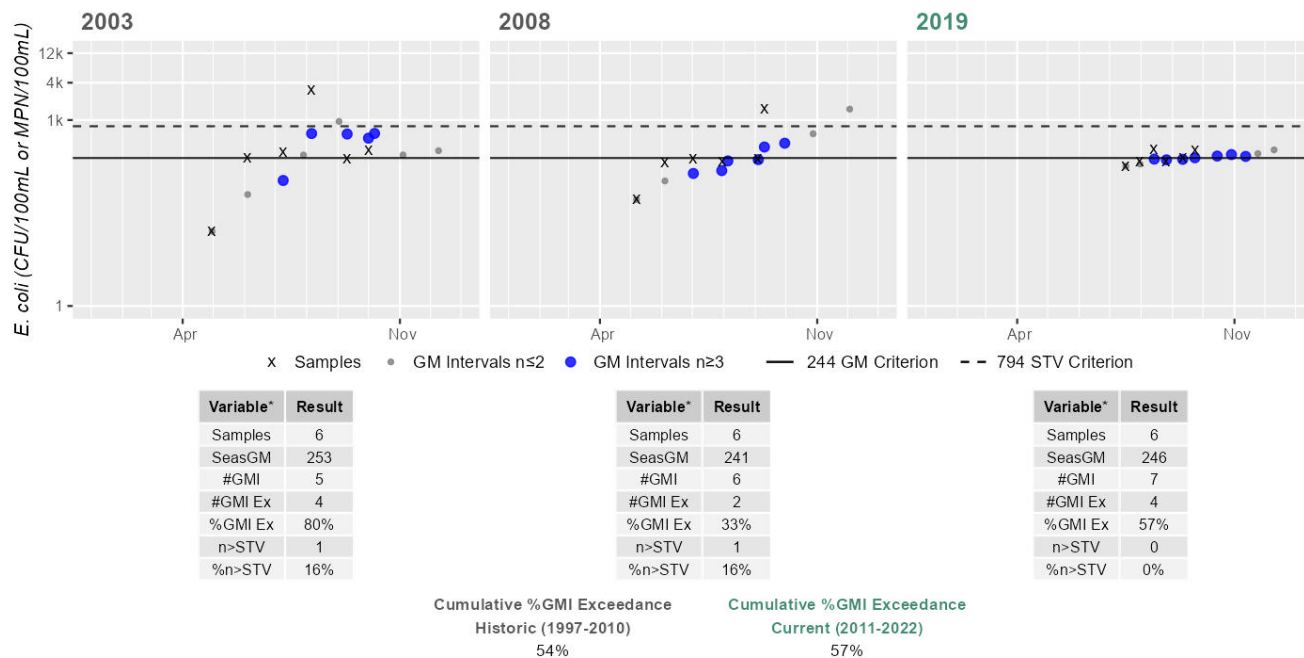


Cumulative %GMI Exceedance
Current (2011-2022)
75%

*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 MASSDEP_W1051 - *Escherichia coli*

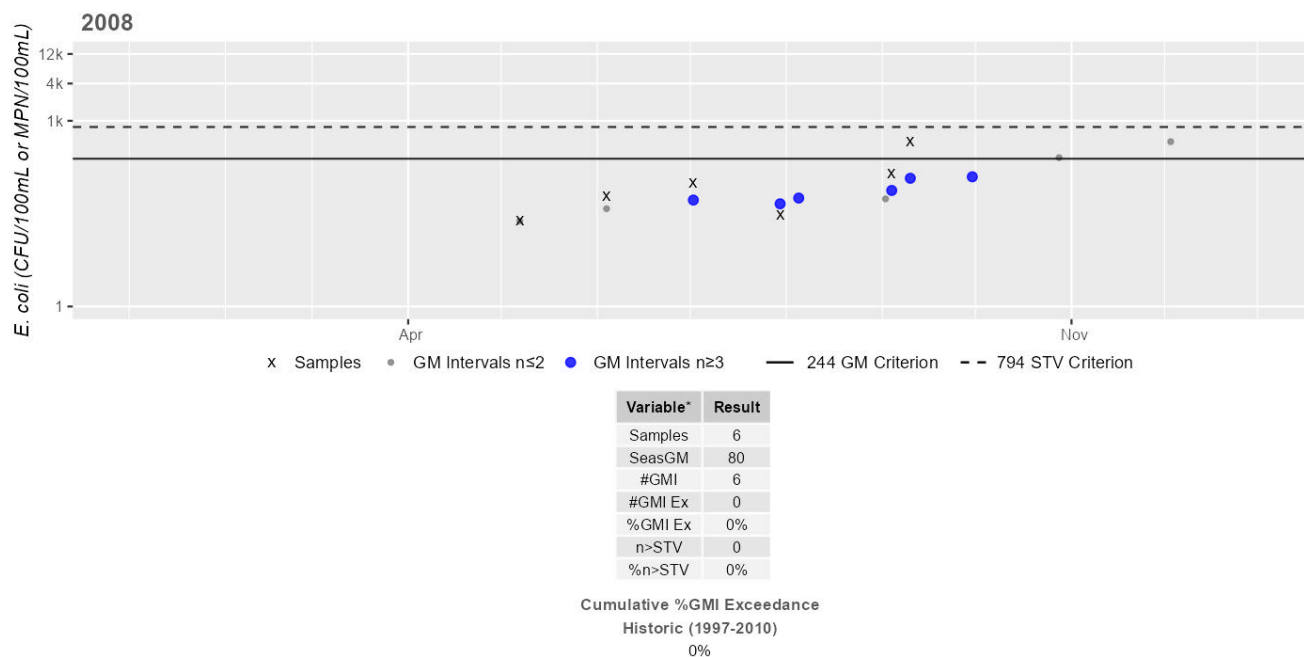
Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



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

Station MASSDEP_W1804 - *Escherichia coli*

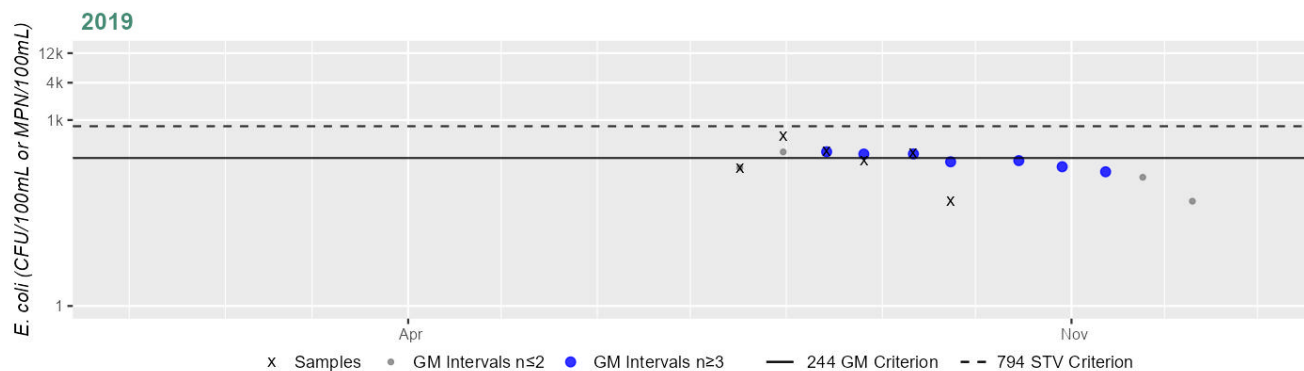
Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



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

Station MASSDEP_W2845 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	211
#GMI	7
#GMI Ex	3
%GMI Ex	42%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

42%

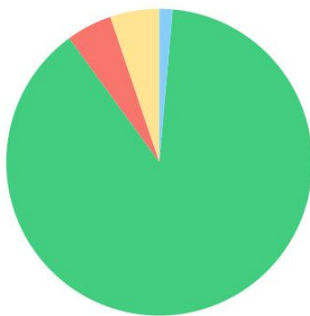
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
 %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
 "Recent 5 Years" may not be consecutive as the analysis excludes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

Fourmile Brook (MA34-56)

Location:	Headwaters, south of the intersection of Four Mile Brook Road and South Mountain Road, Northfield, to mouth at confluence with Connecticut River, Northfield.
AU Type:	RIVER
AU Size:	3.4 MILES
Classification/Qualifier:	B: CWF

Fourmile Brook (MA34-56)

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	3.87	1.24	1.05
Agriculture	5.2%	3.3%	6.5%	3.9%
Developed	4.8%	4.7%	5.4%	5.7%
Natural	88.6%	91%	86.3%	88.9%
Wetland	1.4%	0.9%	1.8%	1.4%
Impervious	2%	1.9%	2.2%	2.2%

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 Fourmile Brook (MA34-56) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
There are no data available to assess the status of the Aesthetics Use for Fourmile Brook (MA34-56), so it 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 Fourmile Brook (MA34-56) 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 Fourmile Brook (MA34-56) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected <i>E. coli</i> bacteria samples in Fourmile Brook at W1803 [Pine Meadow Rd, Northfield] from May-Sep 2008 (n=6). Historic <i>E. coli</i> data from W1803 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
W1803	MassDEP	Water Quality	Fourmile Brook	[Pine Meadow Road, Northfield]	42.616338	-72.477605

Bacteria Data

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

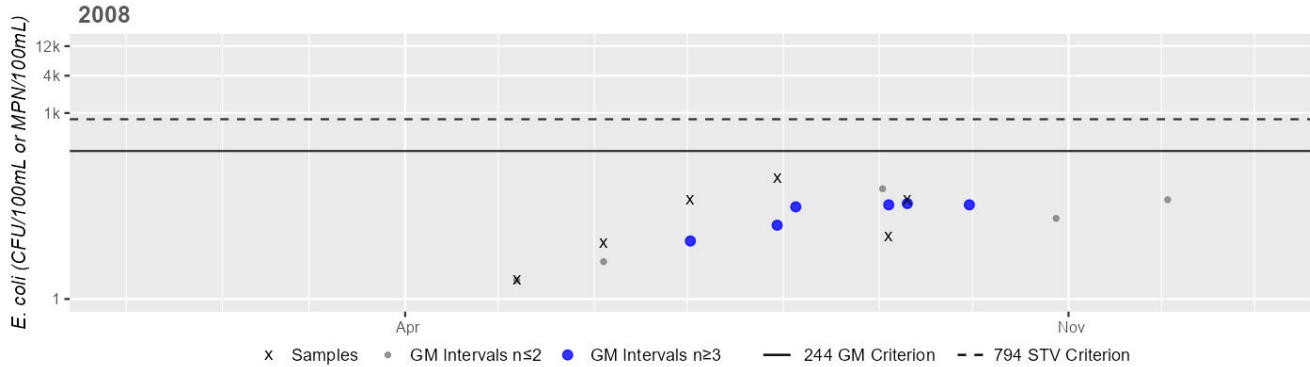
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1803	MassDEP	E. coli	05/06/08	09/09/08	6	2	90	16

Station MASSDEP_W1803 - Escherichia coli

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



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

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

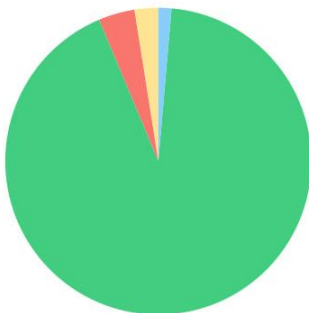
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Goddard Brook (MA34-84)

Location:	Headwaters east of Dry Hill Road, Montague to mouth at confluence with Sawmill River, Montague.
AU Type:	RIVER
AU Size:	2.9 MILES
Classification/Qualifier:	B: CWF

Goddard Brook (MA34-84)

Watershed Area: 2.50 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.50	2.50	0.40	0.40
Agriculture	2.5%	2.5%	2.1%	2.1%
Developed	3.8%	3.8%	11.1%	11.1%
Natural	92.3%	92.3%	81.5%	81.5%
Wetland	1.4%	1.4%	5.3%	5.3%
Impervious	1.6%	1.6%	4.7%	4.7%

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No
2024/26 Use Attainment Summary	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Goddard Brook (MA34-84) 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 Goddard Brook (MA34-84) 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 Goddard Brook (MA34-84) are available, so the Primary Contact Recreation Use is Not Assessed.	

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
<p>No bacteria or other indicator data for Goddard Brook (MA34-84) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected <i>E. coli</i> bacteria samples in Goddard Brook in 2006 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: about halfway down at W1697 [Dry Hill Rd crossing nearest Rt. 63, Montague] from Jul-Sep 2006 (n=2), two-thirds of the way down at W1696 [Wonsey Rd (Old Federal St), Montague] from Jul-Sep 2006 (n=2), and three-quarters of the way down at W1695 [Swamp Rd, Montague] from Jul-Sep 2006 (n=2). The historic <i>E. coli</i> data at W1697 are too limited to assess according to the 2024 CALM. 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
W1695	MassDEP	Water Quality	Goddard Brook	[Swamp Road, Montague]	42.543030	-72.521944
W1696	MassDEP	Water Quality	Goddard Brook	[Wonsey Road (Old Federal Street), Montague]	42.546125	-72.517021
W1697	MassDEP	Water Quality	Goddard Brook	[Dry Hill Road crossing nearest Route 63, Montague]	42.545634	-72.503596

Bacteria Data

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

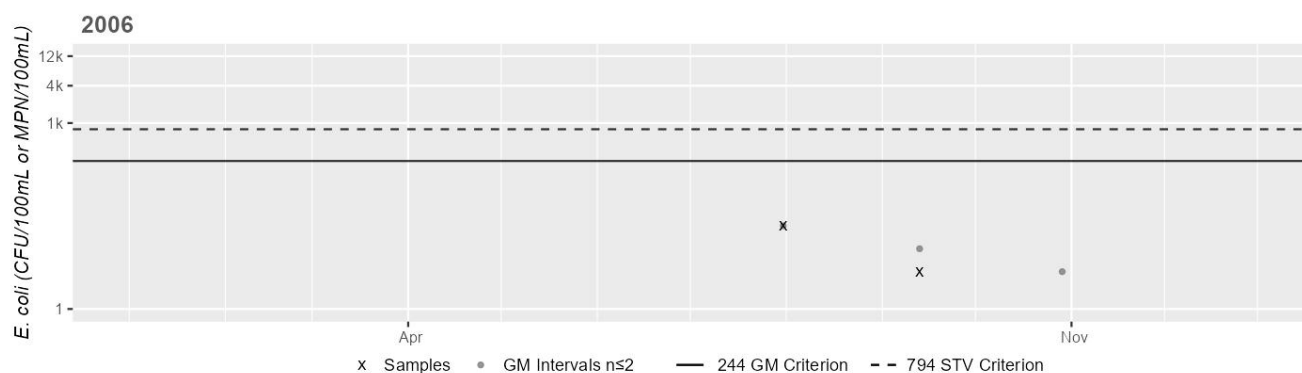
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1695	MassDEP	E. coli	07/31/06	09/13/06	2	4	22	9
W1696	MassDEP	E. coli	07/31/06	09/13/06	2	14	99	37
W1697	MassDEP	E. coli	07/31/06	09/13/06	2	1	22	4

Station MASSDEP_W1695 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	9
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

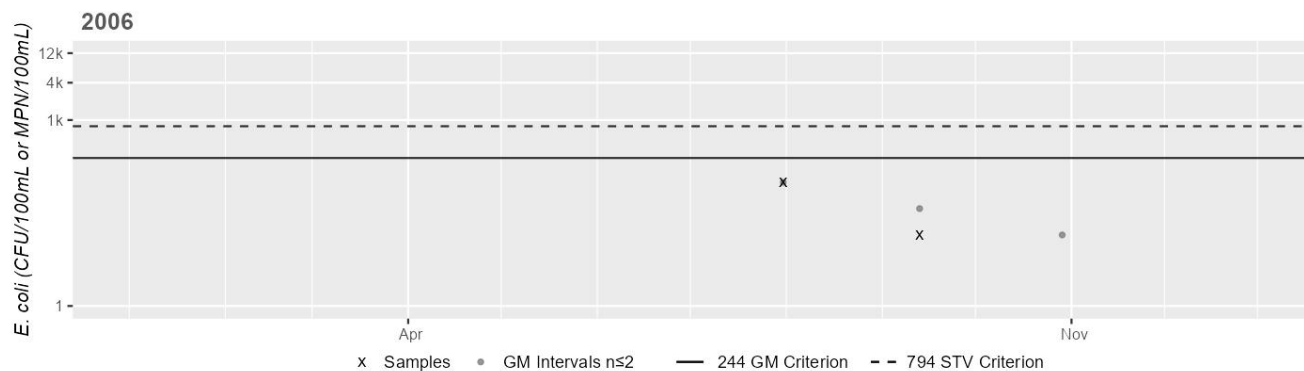
Historic (1997-2010)

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_W1696 - *Escherichia coli*

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



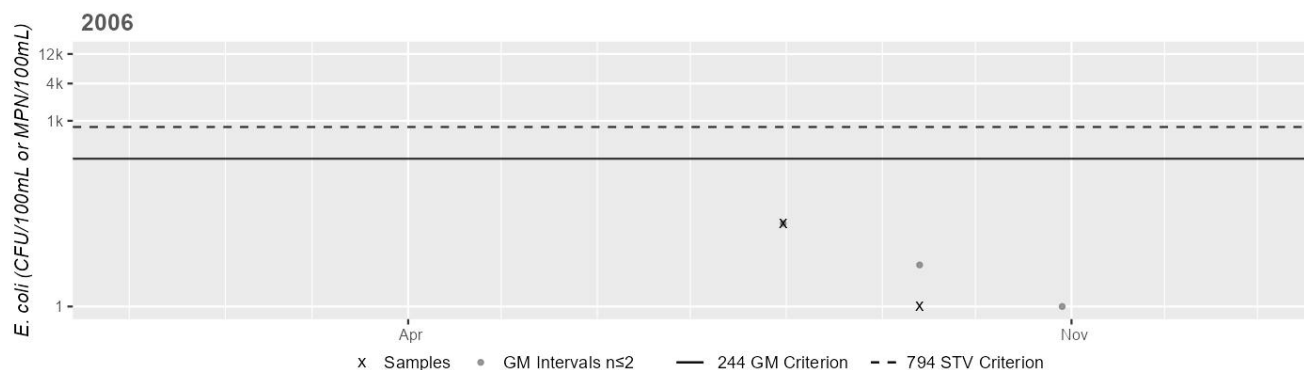
Variable*	Result
Samples	2
SeasGM	37
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W1697 - *Escherichia coli*

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



Variable*	Result
Samples	2
SeasGM	4
#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.

Grass Hill Brook (MA34-70)

Location:	Headwaters east of Grass Hill Road, Whately to mouth at confluence with Beaver Brook, Williamsburg.
AU Type:	RIVER
AU Size:	2.2 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Grass Hill Brook (MA34-70) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Green Pond (MA34028)

Location:	Montague.
AU Type:	FRESHWATER LAKE
AU Size:	15 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Green Pond (MA34028) 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

Hannegan Brook (MA34-83)

Location:	Headwaters southwest of Country Hill, Montague to mouth at inlet Lake Pleasant, Montague.
AU Type:	RIVER
AU Size:	1.7 MILES
Classification/Qualifier:	A: PWS, ORW, CWF (Tributary)

No usable data were available for Hannegan Brook (MA34-83) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Harris Brook (MA34-48)

Location:	Headwaters, northeast of Enfield Road, Pelham to Intake Reservoir Dam (NATID: MA01270) outlet, Pelham (excluding approximately 0.2 miles through Hawley Reservoir, Pelham).
AU Type:	RIVER
AU Size:	1.2 MILES
Classification/Qualifier:	A: PWS, ORW, CWF (PWS and Tributary to PWS)

No usable data were available for Harris Brook (MA34-48) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Harris Brook (MA34-94)

Location:	From outlet of Intake Reservoir Dam (NATID: MA01270), Pelham to mouth at confluence with Buffum Brook (forming headwaters Amethyst Brook), Pelham.
AU Type:	RIVER
AU Size:	0.3 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Harris Brook (MA34-94) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Hearthstone Brook (MA34-76)

Location:	Headwaters, perennial portion, south of Poverty Mountain, Pelham to mouth at confluence with Adams Brook, Amherst.
AU Type:	RIVER
AU Size:	2.3 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Hearthstone Brook (MA34-76) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

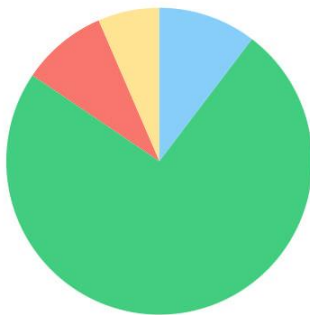
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

Hop Brook (MA34-61)

Location:	Headwaters, west of Oasis Drive, Belchertown to mouth at confluence with Fort River, Amherst.
AU Type:	RIVER
AU Size:	8.6 MILES
Classification/Qualifier:	B

Hop Brook (MA34-61)

Watershed Area: 16.84 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	16.84	8.13	3.58	1.92
Agriculture	6.5%	10.5%	7.1%	11.8%
Developed	9.1%	11.2%	6.2%	6%
Natural	74.1%	61.7%	65.5%	53.1%
Wetland	10.3%	16.6%	21.2%	29.1%
Impervious	4%	5.1%	3.2%	3.1%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	3	None	--	Unchanged

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Hop Brook (MA34-61) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
There are no data available to assess the status of the Aesthetics Use for Hop Brook (MA34-61), so it 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 Hop Brook (MA34-61) 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 Hop Brook (MA34-61) 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 three-quarters of the way down Hop Brook (MA34-61) at W1800 [Station Rd, Amherst] from May-Sep 2008 (n=6). Analysis of this historic single year limited frequency <i>E. coli</i> dataset from W1800 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 72 CFU/100ml. Historic <i>E. coli</i> data from W1800 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
W1800	MassDEP	Water Quality	Hop Brook	[Station Road, Amherst]	42.342049	-72.493586

Bacteria Data

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

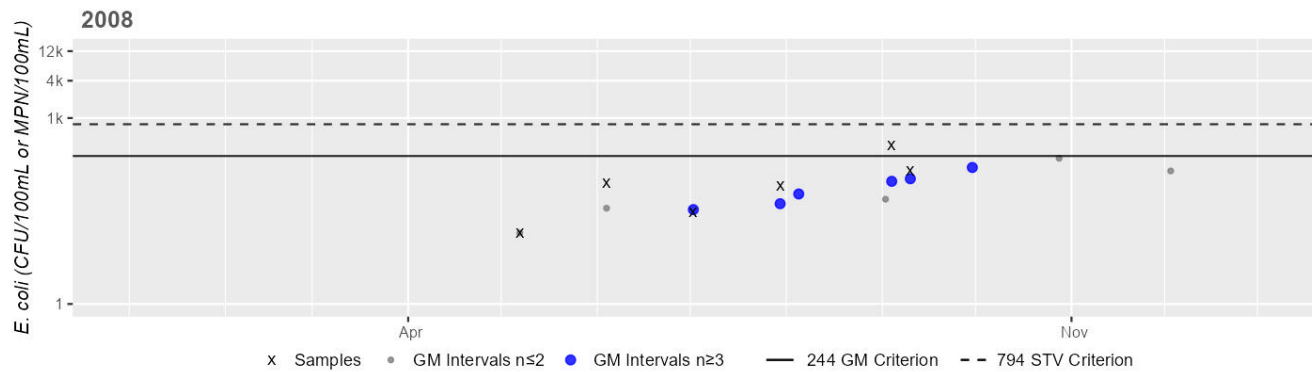
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1800	MassDEP	E. coli	05/06/08	09/09/08	6	14	360	72

Station MASSDEP_W1800 - Escherichia coli

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



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

Cumulative %GMI Exceedance

Historic (1997-2010)

0%

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

Ingraham Brook Pond (MA34037)

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

No usable data were available for Ingraham Brook Pond (MA34037) 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	(Water Chestnut*)	--	Unchanged

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

Joe Wright Brook (MA34-52)

Location:	Headwaters south of Hemenway Trail and east of Nash Hill Road, Williamsburg to mouth at confluence with Mill River, Williamsburg.
AU Type:	RIVER
AU Size:	2.9 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Joe Wright Brook (MA34-52) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Lake Bray (MA34013)

Location:	Holyoke.
AU Type:	FRESHWATER LAKE
AU Size:	10 ACRES
Classification/Qualifier:	B

No usable data were available for Lake Bray (MA34013) 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	(Curly-leaf Pondweed*)	--	Unchanged
4c	4c	(Water Chestnut*)	--	Unchanged

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

Lake Holland (MA34035)

Location:	Belchertown.
AU Type:	FRESHWATER LAKE
AU Size:	11 ACRES
Classification/Qualifier:	B

No usable data were available for Lake Holland (MA34035) 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	--	--	--	--

Lake Lookout (MA34044)

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

No usable data were available for Lake Lookout (MA34044) 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	Nutrient/Eutrophication Biological Indicators	--	Unchanged

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

Lake Pleasant (MA34070)

Location:	Montague.
AU Type:	FRESHWATER LAKE
AU Size:	54 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Lake Pleasant (MA34070) 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

Lake Warner (MA34098)

Location:	Hadley.
AU Type:	FRESHWATER LAKE
AU Size:	65 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	(Fanwort*)	--	Unchanged
4a	4a	(Water Chestnut*)	--	Unchanged
4a	4a	Algae	651	Unchanged
4a	4a	Dissolved Oxygen	651	Unchanged
4a	4a	Phosphorus, Total	651	Unchanged
4a	4a	Turbidity	651	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Fanwort*)	Source Unknown (N)	X	--	--	--	--
(Water Chestnut*)	Source Unknown (N)	X	--	--	--	--
Algae	Source Unknown (N)	X	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--
Turbidity	Source Unknown (N)	X	--	--	--	--

Recommendations

2024/26 Recommendations
2024/2026 IR [Harmful Algal Blooms, Medium] Follow-up monitoring should be conducted in Lake Warner (MA34098) 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 Assessed	No
2024/26 Use Attainment Summary	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Lake Warner (MA34098) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Insufficient Information	YES
2024/26 Use Attainment Summary	
Too limited data are available to evaluate the Aesthetics Use for Lake Warner (MA34098), so it is assessed as Insufficient Information. An Alert is being identified for Harmful Algal Blooms in this waterbody since C-HAB postings (blooms of >15 days in duration) were reported to MDPH for 2019 and 2020. During the period 2015 through 2022, C-HAB postings for Lake Warner were reported to MDPH based on visual observations for 110 days in 2019 and 135 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 and a recommendation for follow-up sampling will be made. There are no other data available to assess the status of the Aesthetics Use for Lake Warner.	

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 Lake Warner (MA34098) were reported to MDPH based on visual observations for 110 days in 2019 and 135 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]

		Posting Days 2015	Posting Days 2016	Posting Days 2017	Posting Days 2018	Posting Days 2019	Posting Days 2020	Posting Days 2021	Posting Days 2022
DEP Waterbody (DPH Waterbody)	DPH Town								
Lake Warner	Hadley					110	135		

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 Lake Warner (MA34098) 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 Lake Warner (MA34098) were reported to MDPH based on visual observations for 110 days in 2019 and 135 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.

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 Lake Warner (MA34098) 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 Lake Warner (MA34098) were reported to MDPH based on visual observations for 110 days in 2019 and 135 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.

Lake Wyola (MA34103)

Location:	Shutesbury.
AU Type:	FRESHWATER LAKE
AU Size:	124 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	5	Enterococcus	--	Added
4a	5	Nutrient/Eutrophication Biological Indicators	653	Unchanged
4a	5	Phosphorus, Total	653	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Enterococcus	Source Unknown (N)	--	--	--	X	--
Nutrient/Eutrophication Biological Indicators	Internal Nutrient Recycling (N)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X	--	--	--	--
Phosphorus, Total	Internal Nutrient Recycling (N)	X	--	--	--	--
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No
2024/26 Use Attainment Summary	
Fish toxics sampling has not been conducted, so the Fish Consumption Use for Lake Wyola (MA34103) 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 Lake Wyola (MA34103) 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 Lake Wyola (MA34103) is assessed as Not Supporting. An Enterococcus impairment is being added due to DPH Beach Closures data not meeting the threshold at Lake Wyola (DCR) [Beach ID: 5168]. Lake Wyola has a beach with DPH Beach Closure data: Lake Wyola (DCR) [Beach ID: 5168] beach in Shutesbury. Beaches were posted for >10% of the swimming season at Lake Wyola (DCR) in 2021 (33%) and 2022 (64%) indicating an Enterococcus impairment.	

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
5168	Lake Wyola (DCR)/ Shutesbury	42.50315, - 72.43470	42.50382, -72.43360	0%	4%	5%	5%	8%	2%	0%	33%	64%	2

Secondary Contact Recreation

2024/26 Use Attainment	Alert
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Insufficient Information	NO
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2024/26 Use Attainment Summary

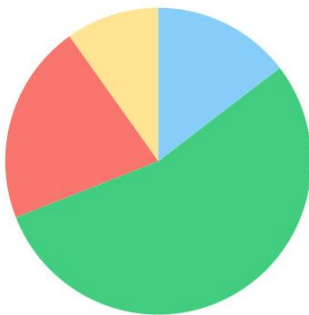
No bacteria data are available to assess the Secondary Contact Recreation Use for Lake Wyola (MA34103), so it is assessed as having Insufficient Information. Lake Wyola has a beach with DPH Beach Closure data: Lake Wyola (DCR) [Beach ID: 5168] beach in Shutesbury. Available DPH Beach Closure data cannot be used to positively assess the Secondary Contact Recreation Use since beaches were posted for >10% of the swimming season: Lake Wyola (DCR) in 2021 and 2022.

Lampson Brook (MA34-06)

Location:	Belchertown WWTP discharge, Belchertown to mouth at confluence with Weston Brook, Belchertown.
AU Type:	RIVER
AU Size:	1 MILES
Classification/Qualifier:	B: WWF

Lampson Brook (MA34-06)

Watershed Area: 1.90 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.90	1.90	0.56	0.56
Agriculture	9.9%	9.9%	14%	14%
Developed	21.1%	21.1%	11.5%	11.5%
Natural	54.4%	54.4%	48.9%	48.9%
Wetland	14.6%	14.6%	25.7%	25.7%
Impervious	9.3%	9.3%	5.4%	5.4%

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)	--	Added
5	5	Phosphorus, Total	--	Unchanged

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Source Unknown (N)	--	--	--	X	--
Phosphorus, Total	Municipal Point Source Discharges (Y)	X	--	--	--	--
Phosphorus, Total	Wet Weather Discharges (Non-Point Source) (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 Lampson Brook (MA34-06) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Lampson Brook (MA34-06) continues to be assessed as Fully Supporting based on the lack of any objectionable conditions documented by MassDEP staff during the summer of 2019. MassDEP staff recorded aesthetics observations at one station at the upstream end of Lampson Brook at George Hannum Street, (downstream from 2001 upgrade location of Belchertown WWTP (MA0102148) discharge, Belchertown (W1055), in summer 2019 (n=8). 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
W1055	MassDEP	Water Quality	Lampson Brook	[George Hannum Street, (downstream from 2001 upgrade location of Belchertown WWTP (MA0102148) discharge), Belchertown]	42.281899	-72.427265

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
W1055	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W1055 on Lampson Brook (MA34-06) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W1055	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1055	Lampson Brook	2019	Aesthetics Impaired?	No	8	8
W1055	Lampson Brook	2019	Aquatic Plant Density, Overall	None	8	8
W1055	Lampson Brook	2019	Color	Light Yellow/Tan	3	8
W1055	Lampson Brook	2019	Color	None	4	8
W1055	Lampson Brook	2019	Color	NR	1	8
W1055	Lampson Brook	2019	Objectionable Deposits	No	8	8
W1055	Lampson Brook	2019	Odor	Effluent (Treated)	1	8
W1055	Lampson Brook	2019	Odor	None	6	8
W1055	Lampson Brook	2019	Odor	NR	1	8
W1055	Lampson Brook	2019	Periphyton Density, Filamentous	None	7	8
W1055	Lampson Brook	2019	Periphyton Density, Filamentous	Sparse	1	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1055	Lampson Brook	2019	Periphyton Density, Film	Moderate	1	8
W1055	Lampson Brook	2019	Periphyton Density, Film	None	5	8
W1055	Lampson Brook	2019	Periphyton Density, Film	Sparse	2	8
W1055	Lampson Brook	2019	Scum	No	8	8
W1055	Lampson Brook	2019	Turbidity	Moderately Turbid	1	8
W1055	Lampson Brook	2019	Turbidity	None	4	8
W1055	Lampson Brook	2019	Turbidity	NR	1	8
W1055	Lampson Brook	2019	Turbidity	Slightly Turbid	2	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Lampson Brook (MA34-06) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2019. MassDEP staff collected <i>E. coli</i> bacteria samples close to the upstream end of Lampson Brook at W1055 [George Hannum St, (downstream from 2001 upgrade location of Belchertown WWTP (MA0102148) discharge), Belchertown] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W1055 indicated 100% of intervals had GMs >126 CFU/100ml, 2 samples exceeded the 410 CFU/100ml STV (max 1100 CFU), and the seasonal GM was 236 CFU/100ml. <i>E. coli</i> data from W1055 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1055	MassDEP	Water Quality	Lampson Brook	[George Hannum Street, (downstream from 2001 upgrade location of Belchertown WWTP (MA0102148) discharge), Belchertown]	42.281899	-72.427265

Bacteria Data

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

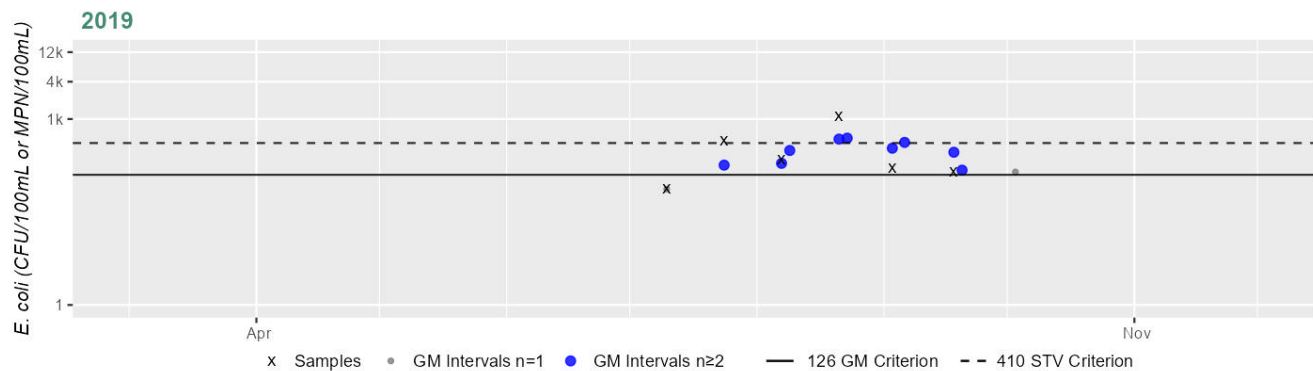
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1055	MassDEP	E. coli	07/10/19	09/18/19	6	74	1100	236

Station MASSDEP_W1055 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	236
#GMI	9
#GMI Ex	9
%GMI Ex	100%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance

Current (2011-2022)
100%

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

Secondary Contact Recreation

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

The Secondary Contact Recreation Use for Lampson Brook (MA34-06) continues to be assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) close to the upstream end of Lampson Brook at W1055 [George Hannum St, (downstream from 2001 upgrade location of Belchertown WWTP (MA0102148) discharge), Belchertown] in 2003 and 2008 (historic n=6/yr) and Jul-Sep 2019 (current n=6). Since bacteria data from the historic IR window are indicative of good water quality conditions, only the analysis from the current IR window will be summarized here: Analysis of the single year limited frequency *E. coli* dataset in the current IR window from W1055 indicated 71% of intervals had GMs >244 CFU/100ml, and while 1 sample exceeded the 794 CFU/100ml STV (1100 CFU), the overall GM was only 236 CFU/100ml. *E. coli* data from W1055 are inconclusive according to the 2024 CALM to assess the Secondary Contact Recreation Use because this single year, limited frequency dataset included both GMs below the threshold and an exceedance of the STV threshold.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1055	MassDEP	Water Quality	Lampson Brook	[George Hannum Street, (downstream from 2001 upgrade location of Belchertown WWTP (MA0102148) discharge), Belchertown]	42.281899	-72.427265

Bacteria Data

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

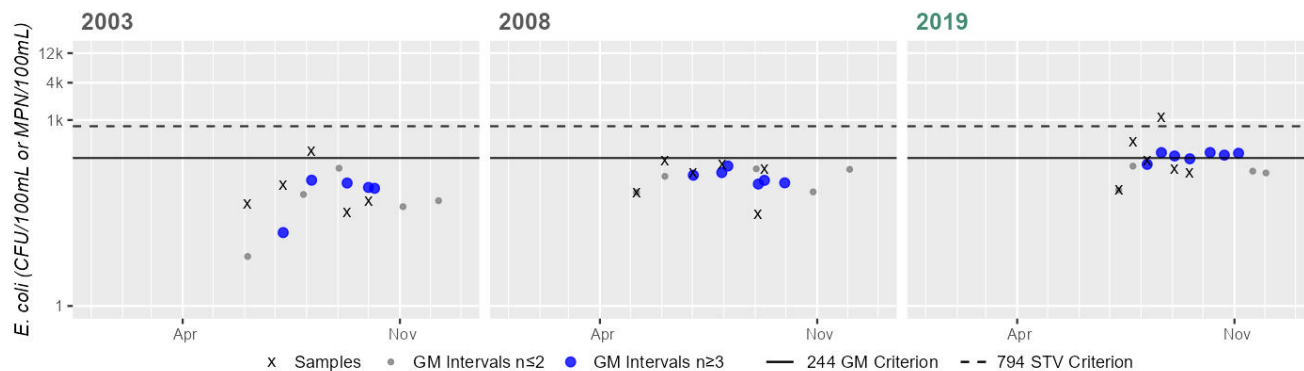
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1055	MassDEP	E. coli	04/30/03	10/01/03	6	0	310	34
W1055	MassDEP	E. coli	05/06/08	09/09/08	6	30	224	111
W1055	MassDEP	E. coli	07/10/19	09/18/19	6	74	1100	236

Station MASSDEP_W1055 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	34
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

Variable*	Result
Samples	6
SeasGM	236
#GMI	7
#GMI Ex	5
%GMI Ex	71%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance

Historic (1997-2010)

0%

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.

Lampson Brook (MA34-108)

Location:	Headwaters, outlet unnamed pond north of Route 202, Belchertown to Belchertown WWTP discharge southeast of George Hannum Street, Belchertown.
AU Type:	RIVER
AU Size:	1 MILES
Classification/Qualifier:	B

Lampson Brook (MA34-108)

Watershed Area: 1.31 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.31	1.31	0.36	0.36
Agriculture	6.5%	6.5%	8.4%	8.4%
Developed	29.5%	29.5%	16.5%	16.5%
Natural	52.2%	52.2%	52.5%	52.5%
Wetland	11.8%	11.8%	22.5%	22.5%
Impervious	12.9%	12.9%	7.5%	7.5%

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

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Lampson Brook (MA34-108) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Lampson Brook (MA34-108) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations for one station close to the downstream end of this Lampson Brook AU ~500 feet upstream of the Belchertown WWTP (MA0102148) discharge (2001 upgrade location), east of George Hannum Street, Belchertown (W2848) in summer 2019 (n=8). 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
W2848	MassDEP	Water Quality	Lampson Brook	[approximately 500 feet upstream of the Belchertown WWTP (MA0102148) discharge (2001 upgrade location), east of George Hannum Street, Belchertown]	42.280710	-72.425292

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
W2848	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2848 on Lampson Brook (MA34-108) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W2848	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2848	Lampson Brook	2019	Aesthetics Impaired?	No	8	8
W2848	Lampson Brook	2019	Aquatic Plant Density, Overall	None	8	8
W2848	Lampson Brook	2019	Color	Brownish	1	8
W2848	Lampson Brook	2019	Color	Light Yellow/Tan	3	8
W2848	Lampson Brook	2019	Color	None	4	8
W2848	Lampson Brook	2019	Objectionable Deposits	No	8	8
W2848	Lampson Brook	2019	Odor	None	8	8
W2848	Lampson Brook	2019	Periphyton Density, Filamentous	None	6	8
W2848	Lampson Brook	2019	Periphyton Density, Filamentous	Sparse	2	8
W2848	Lampson Brook	2019	Periphyton Density, Film	Moderate	1	8
W2848	Lampson Brook	2019	Periphyton Density, Film	None	4	8
W2848	Lampson Brook	2019	Periphyton Density, Film	Sparse	3	8
W2848	Lampson Brook	2019	Scum	No	8	8
W2848	Lampson Brook	2019	Turbidity	Moderately Turbid	1	8
W2848	Lampson Brook	2019	Turbidity	None	5	8
W2848	Lampson Brook	2019	Turbidity	Slightly Turbid	2	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Lampson Brook (MA34-108) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2019. MassDEP staff collected *E. coli* bacteria samples close to the downstream end of Lampson Brook at W2848 [~500 ft upstream of the Belchertown WWTP (MA0102148) discharge (2001 upgrade location), East of George Hannum St, Belchertown] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency *E. coli* dataset from W2848 indicated 100% of intervals had GMs >126 CFU/100ml, 1 sample exceeded the 410 CFU/100ml STV (2,419 CFU) and the seasonal GM was 203 CFU/100ml. *E. coli* data from W2848 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2848	MassDEP	Water Quality	Lampson Brook	[approximately 500 feet upstream of the Belchertown WWTP (MA0102148) discharge (2001 upgrade location), east of George Hannum Street, Belchertown]	42.280710	-72.425292

Bacteria Data

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

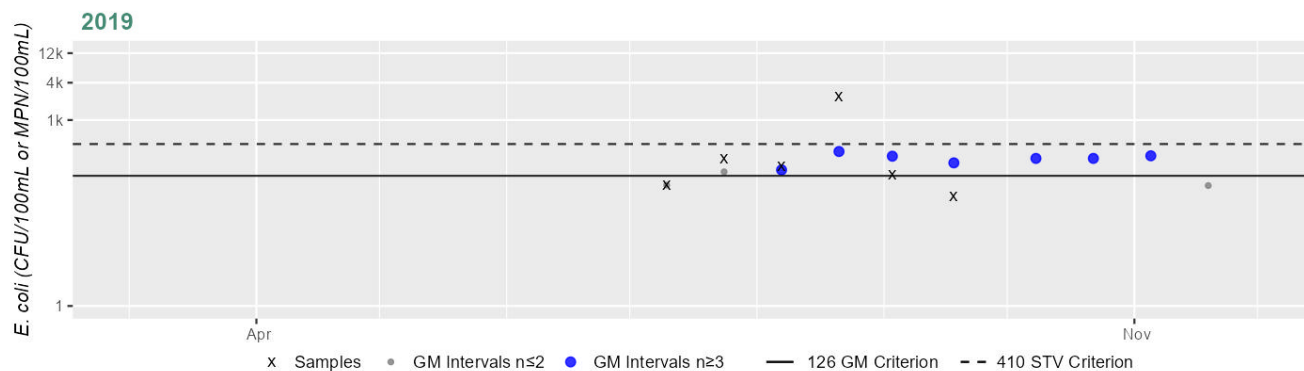
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2848	MassDEP	E. coli	07/10/19	09/18/19	6	59	2419	203

Station MASSDEP_W2848 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	203
#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.

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 Lampson Brook (MA34-108) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. MassDEP staff collected *E. coli* bacteria samples close to the downstream end of Lampson Brook at W2848 [~500 ft upstream of the Belchertown WWTP (MA0102148) discharge (2001 upgrade location), East of George Hannum St, Belchertown] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency *E. coli* dataset from W2848 indicated 42% of intervals had GMs >244 CFU/100mL, 1 sample exceeded the 794 CFU/100mL STV (2,419 CFU) and the overall GM was 203 CFU/100mL. *E. coli* data from W2848 are inconclusive according to the 2024 CALM to assess the Secondary Contact Recreation Use because this single year, limited frequency dataset included both GMs below the threshold and an exceedance of the STV threshold.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2848	MassDEP	Water Quality	Lampson Brook	[approximately 500 feet upstream of the Belchertown WWTP (MA0102148) discharge (2001 upgrade location), east of George Hannum Street, Belchertown]	42.280710	-72.425292

Bacteria Data

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

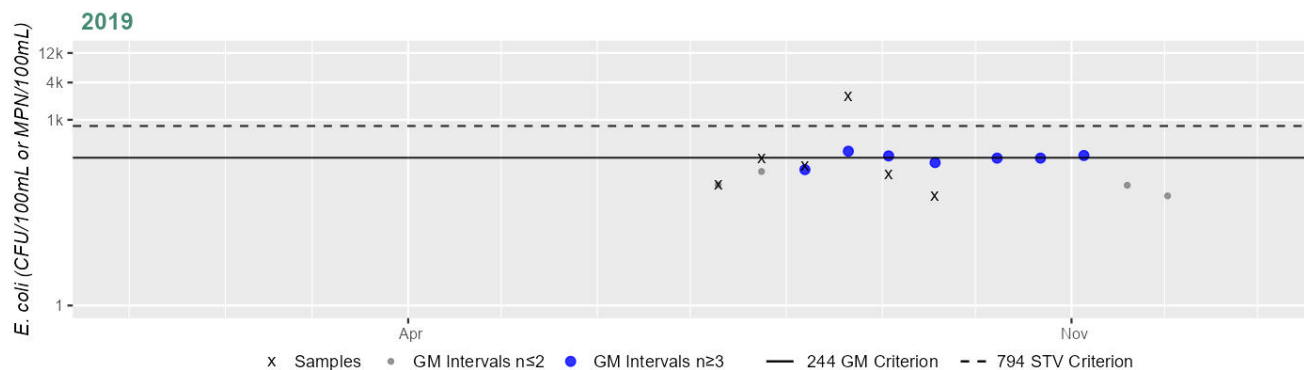
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2848	MassDEP	E. coli	07/10/19	09/18/19	6	59	2419	203

Station MASSDEP_W2848 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	203
#GMI	7
#GMI Ex	3
%GMI Ex	42%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance

Current (2011-2022)

42%

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

Leaping Well Reservoir (MA34040)

Location:	South Hadley.
AU Type:	FRESHWATER LAKE
AU Size:	9 ACRES
Classification/Qualifier:	B

No usable data were available for Leaping Well Reservoir (MA34040) 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

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

Leverett Pond (MA34042)

Location:	Leverett.
AU Type:	FRESHWATER LAKE
AU Size:	91 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	(Aquatic Plants (Macrophytes)*)	--	Added
4a	4a	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
4a	4a	(Non-Native Aquatic Plants*)	--	Unchanged
4a	4a	Nutrient/Eutrophication Biological Indicators	675	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Aquatic Plants (Macrophytes)*)	Source Unknown (N)	--	--	X	X	--
(Eurasian Water Milfoil, Myriophyllum Spicatum*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
(Non-Native Aquatic Plants*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Internal Nutrient Recycling (Y)	--	--	X	X	X

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (Y)	--	--	X	X	X
Nutrient/Eutrophication Biological Indicators	Rural (Residential Areas) (Y)	--	--	X	X	X
Nutrient/Eutrophication Biological Indicators	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 Leverett Pond (MA34042) is Not Assessed.	

Aesthetic

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

The Aesthetics Use for Leverett Pond (MA34042) continues to be assessed as Not Supporting with the Nutrient/Eutrophication Biological Indicators impairment being carried forward. Since the Eurasian Water Milfoil, *Myriophyllum Spicatum* and Non-Native Aquatic Plants impairments were redundantly duplicated across multiple uses for this waterbody, these two impairments are being removed from the Aesthetics Use but will continue to be maintained under the Aquatic Life Use. Since observations of the pond in August 1998 by WPP staff (Kennedy, Laurie E. and Mollie J. Weinstein 2000) were of “southern end of lake very densely covered with floating and encroaching emergents” and recent Google Earth (Google Earth Pro Undated) show similar cover (>25% coverage) during the summer period, an Aquatic Plants (Macrophytes) non-pollutant impairment is being added in the place of the Eurasian Water Milfoil, *Myriophyllum Spicatum* and Non-Native Aquatic Plants impairments at this time. No new data are available to evaluate the Aesthetics Use for Leverett Pond.

Aesthetic Observations

Leverett Pond (MA34042) - Google Earth Imagery from 2011, 2018, and 2024 Showing Dense/Very Dense Vegetation Covering >25% of the Pond's Surface (Google Earth Pro Undated)



Primary Contact Recreation

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

No bacteria or other indicator data for Leverett Pond (MA34042) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is being carried forward. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). Since the Eurasian Water Milfoil (*Myriophyllum spicatum*) and Non-Native Aquatic Plants impairments are being removed from the Aesthetics Use this cycle, these impairments are 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 Leverett Pond (MA34042) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. The prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is being carried forward. An Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). Since the Eurasian Water Milfoil, <i>Myriophyllum spicatum</i> and Non-Native Aquatic Plants impairments are being removed from the Aesthetics Use this cycle, these impairments are also being removed from the Secondary Contact Recreation Use.

Log Pond Cove (MA34124)

Location:	Holyoke (cove of Connecticut River upstream of Holyoke Dam (NATID: MA00973)).
AU Type:	FRESHWATER LAKE
AU Size:	19 ACRES
Classification/Qualifier:	B: WWF, CSO (cove on river designated B/WWF/CSO)

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Aquatic Plants (Macrophytes)*)	--	Added
5	5	(Water Chestnut*)	--	Unchanged
5	5	Escherichia Coli (E. Coli)	--	Added
5	5	PCBs in Fish Tissue	--	Unchanged
5	5	PFAS in Fish Tissue	--	Added

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Aquatic Plants (Macrophytes)*)	Source Unknown (N)	--	--	X	X	X
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Escherichia Coli (E. Coli)	Combined Sewer Overflows (N)	--	--	--	X	X
PCBs in Fish Tissue	Source Unknown (N)	--	X	--	--	--
PFAS 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 Log Pond Cove (MA34124) continues to be assessed as Not Supporting. The prior PCBs 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 the most downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. MA DPH issued a site-specific advisory for PFAS in Log Pond Cove (referred to by MA DPH as "Connecticut River") in their May 2024 Freshwater Fish Consumption Advisory List and retained both this advisory as well as the existing PCBs 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>

Fish Tissue Data

Summary of Fish Tissue Data and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP 2023) (MassDEP Undated 5)

Summary
<p>Fish toxics sampling was conducted in the most downstream Connecticut River AU (MA34-05) at station F0470 (PFAS Study ID 3) [south/downstream from Route 90 and the Chicopee River confluence, Chicopee/West Springfield] on 05/31/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. Because of elevated PFAS measured in fish filets, MA DPH issued site-specific fish consumption advisories for Log Pond Cove (referred to by MA DPH as Connecticut River) in their May 2024 Freshwater Fish Consumption Advisory List and retained them in the January 2025 list. Additionally, MA DPH retained the existing site-specific fish consumption advisories for PCBs associated with Log Pond Cove (referred to by MA DPH as Connecticut River) 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 PCBs in Fish Tissue for Log Pond Cove (MA34124).</p>

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Log Pond Cove (MA34124) continues to be assessed as Not Supporting. Since the Water Chestnut impairment was redundantly duplicated across multiple uses for this waterbody, the Water Chestnut impairment is being removed from the Aesthetics Use but will continue to be maintained under the Aquatic Life Use. Since MassDEP staff noted “very dense plants” during a summer 1998 synoptic survey (19 acres of water chestnut) (Kennedy, Laurie E. and Mollie J. Weinstein 2000) and Google Earth images (Google Earth Pro Undated) from June 2018 and September 2019 show dense plant coverage over >50% of the AU, an Aquatic Plants (Macrophytes) non-pollutant impairment is being added in the place of the Water Chestnut impairment at this time. No new data are available to evaluate the Aesthetics Use for this Log Pond Cove AU.

Aesthetic Observations

Log Pond Cove (MA34124) Google Earth Imagery from 2017, 2018, and 2019 Showing Dense/Very Dense Vegetation Covering >25% of the Pond’s Surface (Google Earth Pro Undated)



Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Log Pond Cove (MA34124) continues to be assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to the presence of CSOs and an Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). Since the Water Chestnut impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Primary Contact Recreation Use. There is a presumptive Escherichia Coli (E. Coli) impairment decision in place due to the presence of active CSO outfalls.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

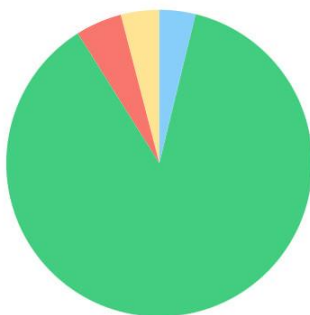
The Secondary Contact Recreation Use for Log Pond Cove (MA34124) continues to be assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to the presence of CSOs and an Aquatic Plants (Macrophytes) impairment is being added (from the Aesthetics Use). Since the Water Chestnut impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Secondary Contact Recreation Use. There is a presumptive Escherichia Coli (E. Coli) impairment decision in place due to the presence of active CSO outfalls.

Long Plain Brook (MA34-09)

Location:	Headwaters, Leveret/Sunderland town line (in Mt. Toby State Forest) to mouth at confluence with Russellville Brook at Route 116, Sunderland.
AU Type:	RIVER
AU Size:	5 MILES
Classification/Qualifier:	B

Long Plain Brook (MA34-09)

Watershed Area: 4.93 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	4.93	3.60	1.38	1.01
Agriculture	4.1%	5.6%	6.1%	8.3%
Developed	4.9%	5.9%	4.4%	4.9%
Natural	87.2%	84%	80.4%	75.7%
Wetland	3.8%	4.5%	9.1%	11.1%
Impervious	1.5%	1.8%	1.4%	1.6%

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 Long Plain Brook (MA34-09) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for this Long Plain Brook AU (MA34-09) continues to be assessed as Fully Supporting based on the lack of any objectionable conditions documented by MassDEP staff during the summer of 2014. MassDEP staff recorded aesthetics observations at one station close to the upstream end of Long Plain Brook, west of Rt. 63, ~2.5 miles upstream/north of Blue Hill Rd, Leverett (W2461) in summer 2014 (n=5). 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
W2461	MassDEP	Water Quality	Long Plain Brook	[west of Route 63, approximately 2.5 miles upstream/north of Blue Hill Road, Leverett]	42.476536	-72.518604

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
W2461	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2461 on Long Plain Brook (MA34-09) during 5 site visits between May 2014 and Aug 2014. 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
W2461	2014	5	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2461	Long Plain Brook	2014	Aesthetics Impaired?	No	5	5
W2461	Long Plain Brook	2014	Aquatic Plant Density, Overall	None	2	5
W2461	Long Plain Brook	2014	Aquatic Plant Density, Overall	Sparse	3	5
W2461	Long Plain Brook	2014	Color	None	5	5
W2461	Long Plain Brook	2014	Objectionable Deposits	No	5	5
W2461	Long Plain Brook	2014	Odor	None	5	5
W2461	Long Plain Brook	2014	Periphyton Density, Filamentous	None	4	5
W2461	Long Plain Brook	2014	Periphyton Density, Filamentous	Sparse	1	5
W2461	Long Plain Brook	2014	Periphyton Density, Film	None	5	5
W2461	Long Plain Brook	2014	Scum	No	5	5
W2461	Long Plain Brook	2014	Turbidity	None	5	5

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Long Plain Brook (MA34-09) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples close to the upstream end of Long Plain Brook at W2461 [W of Rt. 63, ~2.5 miles upstream/N of Blue Hill Rd, Leverett] from May-Aug 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2461 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 13 CFU/100ml. <i>E. coli</i> data from W2461 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2461	MassDEP	Water Quality	Long Plain Brook	[west of Route 63, approximately 2.5 miles upstream/north of Blue Hill Road, Leverett]	42.476536	-72.518604

Bacteria Data

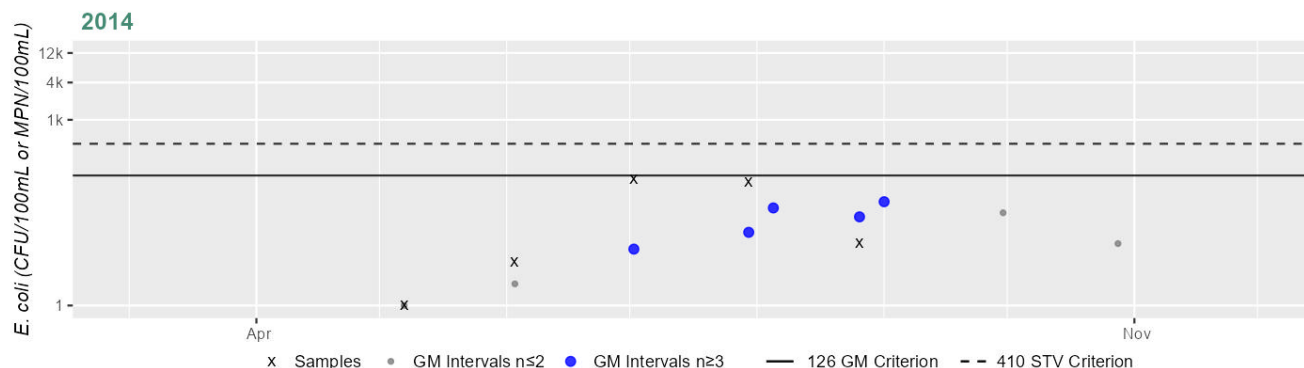
Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis)
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2461	MassDEP	E. coli	05/07/14	08/26/14	5	1	108	13

Station MASSDEP_W2461 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	13
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Long Plain Brook (MA34-09) is assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Long Plain Brook from 2008-2014 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the upstream end of the AU at W2461 [W of Rt. 63, ~2.5 miles upstream/N of Blue Hill Rd, Leverett] from May-Aug 2014 (n=5), and the downstream end of the AU at W1801 [Rt. 116, Sunderland (river name changes at bridge to Russellville Brook, SARIS# 3420325)] from May-Jun 2008 (n=2). Analysis of the single year limited frequency *E. coli* dataset (in the current IR window) from W2461 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 13 CFU/100ml. *E. coli* data from W2461 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1801	MassDEP	Water Quality	Long Plain Brook	[Route 116, Sunderland (river name changes at bridge to Russellville Brook, SARIS# 3420325)]	42.434259	-72.545654
W2461	MassDEP	Water Quality	Long Plain Brook	[west of Route 63, approximately 2.5 miles upstream/north of Blue Hill Road, Leverett]	42.476536	-72.518604

Bacteria Data

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

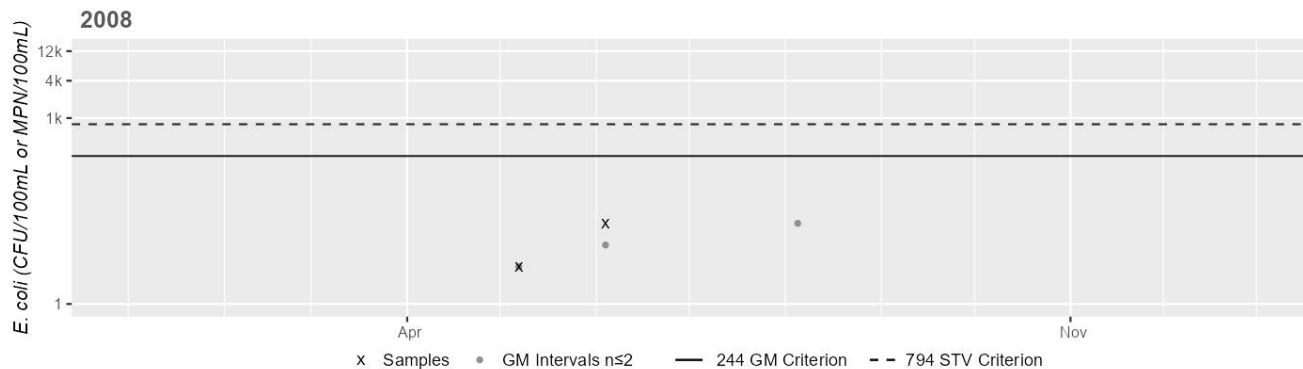
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1801	MassDEP	E. coli	05/06/08	06/03/08	2	4	20	8
W2461	MassDEP	E. coli	05/07/14	08/26/14	5	1	108	13

Station MASSDEP_W1801 - *Escherichia coli*

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



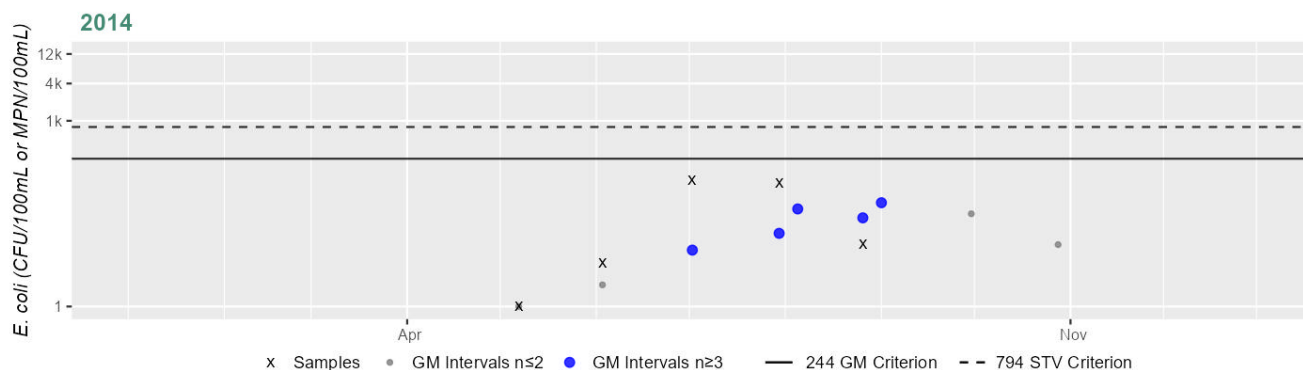
Variable*	Result
Samples	2
SeasGM	8
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W2461 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	13
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

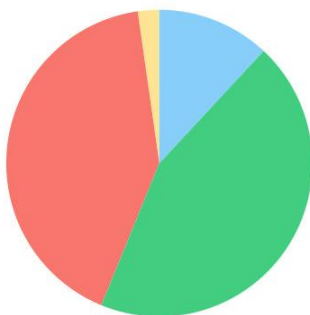
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Longmeadow Brook (MA34-21)

Location:	Headwaters, outlet Turner Park Pond, Longmeadow to mouth at confluence with Connecticut River, Longmeadow.
AU Type:	RIVER
AU Size:	4.5 MILES
Classification/Qualifier:	B

Longmeadow Brook (MA34-21)

Watershed Area: 5.03 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area* (square miles)	4.96	3.83	0.97	0.81
Agriculture	2.3%	2.9%	0.5%	0.6%
Developed	41.6%	40.4%	23.5%	21.6%
Natural	44.3%	42.7%	49.8%	48.4%
Wetland	11.9%	14%	26.1%	29.3%
Impervious	18.9%	19.4%	10.2%	10.4%

*Land cover analysis only includes watershed area within Massachusetts.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Debris*)	--	Removed
5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
5	5	Phosphorus, Total	--	Unchanged
5	5	Trash	--	Removed
5	5	Turbidity	--	Unchanged

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

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

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Trash	Applicable WQS attained; based on new data	Longmeadow Brook (MA34-21) was first listed as impaired for “Trash” in 2016 (MassDEP 2024). The Trash impairment was based on observations of Trash noted by MassDEP staff on five separate dates throughout the year of 2008, at the "slip of road" west at the Route 5 crossing, Longmeadow (W1794) (MassDEP Undated 6). Aesthetic observations were made again by MassDEP field sampling crews at Station W1794 on Longmeadow Brook during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. Trash was not observed during any of the 8 site visits. Given the apparent improvement in the aesthetic conditions at station W1794 in 2019, in particular the complete absence of any Trash, the impairment for Trash is being removed.
Debris	Applicable WQS attained; based on new data	Longmeadow Brook (MA34-21) was first listed as impaired for “Debris” in 2016 (MassDEP 2024). The Debris impairment was based on observations of Debris noted by MassDEP staff on five separate dates throughout the year of 2008, at the "slip of road" west at the Route 5 crossing, Longmeadow (W1794) (MassDEP Undated 6). Aesthetic observations were made again by MassDEP field sampling crews at Station W1794 on Longmeadow Brook during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits,

2022 Removed Impairment	Removal Reason	Removal Comment
		growths, or turbidity) recorded. Debris was not observed during any of the 8 site visits. Given the apparent improvement in the aesthetic conditions at station W1794 in 2019, in particular the complete absence of any Debris, the impairment for Debris is being removed
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)

Trash

Please see removal comment above.

Debris

Please see removal comment above.

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Longmeadow Brook (MA34-21) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Longmeadow Brook (MA34-21) continues to be assessed as Not Supporting with the Turbidity and Phosphorus impairments being carried forward. The Trash and Total Debris impairments are being removed since no trash or debris was observed on this AU in 2019. MassDEP staff recorded aesthetics observations two-thirds of the way down Longmeadow Brook at the “slip of road” west at the Rt. 5 crossing, Longmeadow (W1794) in summer 2019 (n=8). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted moderate turbidity (n=3).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1794	MassDEP	Water Quality	Longmeadow Brook	[the "slip of road" west at the Route 5 crossing, Longmeadow]	42.036300	-72.583622

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
W1794	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W1794 on Longmeadow Brook (MA34-21) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted moderate turbidity (n=3).

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
W1794	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1794	Longmeadow Brook	2019	Aesthetics Impaired?	No	8	8
W1794	Longmeadow Brook	2019	Aquatic Plant Density, Overall	Sparse	8	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1794	Longmeadow Brook	2019	Color	Brownish	1	8
W1794	Longmeadow Brook	2019	Color	Light Yellow/Tan	1	8
W1794	Longmeadow Brook	2019	Color	None	6	8
W1794	Longmeadow Brook	2019	Objectionable Deposits	No	8	8
W1794	Longmeadow Brook	2019	Odor	None	7	8
W1794	Longmeadow Brook	2019	Odor	Raw sewage	1	8
W1794	Longmeadow Brook	2019	Periphyton Density, Filamentous	None	8	8
W1794	Longmeadow Brook	2019	Periphyton Density, Film	None	7	8
W1794	Longmeadow Brook	2019	Periphyton Density, Film	Sparse	1	8
W1794	Longmeadow Brook	2019	Scum	No	8	8
W1794	Longmeadow Brook	2019	Turbidity	Moderately Turbid	3	8
W1794	Longmeadow Brook	2019	Turbidity	None	3	8
W1794	Longmeadow Brook	2019	Turbidity	Slightly Turbid	2	8

Primary Contact Recreation

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

The Primary Contact Recreation Use for Longmeadow Brook (MA34-21) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2019. The prior Total Phosphorus and Turbidity impairments (from the Aesthetics Use) are being carried forward. The prior Trash and Debris impairments were delisted from the Aesthetics Use and were consequently removed from the Primary Contact Recreation Use. MassDEP staff collected *E. coli* bacteria samples two-thirds of the way down Longmeadow Brook at W1794 [the “slip of Rd” W at the Rt. 5 crossing, Longmeadow] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency *E. coli* dataset from W1794 indicated 100% of intervals had GMs >126 CFU/100ml, 5 samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 1349 CFU/100ml. *E. coli* data from W1794 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1794	MassDEP	Water Quality	Longmeadow Brook	[the "slip of road" west at the Route 5 crossing, Longmeadow]	42.036300	-72.583622

Bacteria Data

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

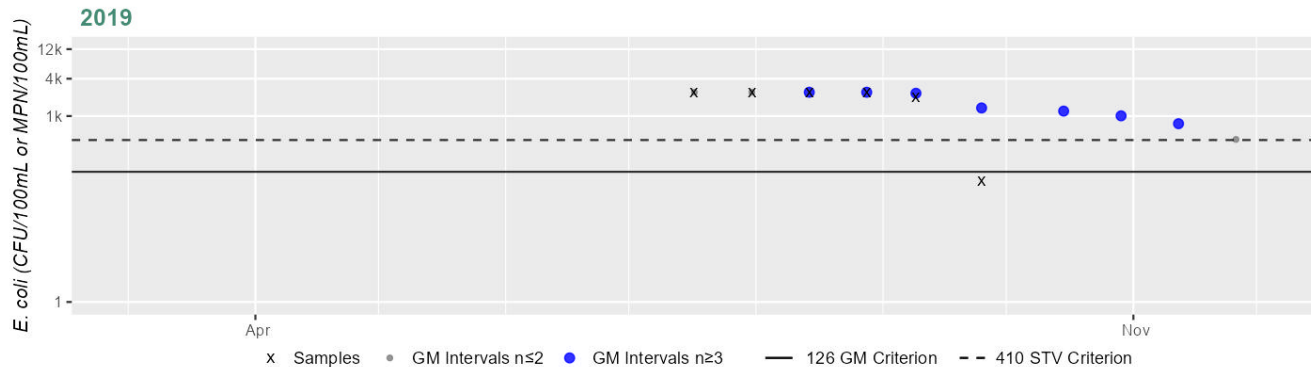
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1794	MassDEP	E. coli	07/17/19	09/25/19	6	88	2419	1349

Station MASSDEP_W1794 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	1349
#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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Longmeadow Brook (MA34-21) continues to be assessed as Not Supporting. The prior *Escherichia Coli* (*E. Coli*) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2019. The prior Total Phosphorus and Turbidity impairments (from the Aesthetics Use) are being carried forward. The prior Trash and Debris impairments were delisted from the Aesthetics Use and were consequently removed from the Primary Contact Recreation Use. MassDEP staff collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Longmeadow Brook at W1794 [the "slip of Rd" W at the Rt. 5 crossing, Longmeadow] from May-Sep 2008 (historic n=6) and Jul-Sep 2019 (current n=6). Since bacteria data from the historic IR window are indicative of good water quality conditions, only the analysis from the current IR window will be summarized here: Analysis of the single year limited frequency *E. coli* dataset from W1794 indicated 100% of intervals had GMs >244 CFU/100ml, 5 samples exceeded the 794 CFU/100ml STV, and the overall GM was 1349 CFU/100ml. *E. coli* data from W1794 are indicative of an *Escherichia Coli* (*E. Coli*) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1794	MassDEP	Water Quality	Longmeadow Brook	[the "slip of road" west at the Route 5 crossing, Longmeadow]	42.036300	-72.583622

Bacteria Data

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

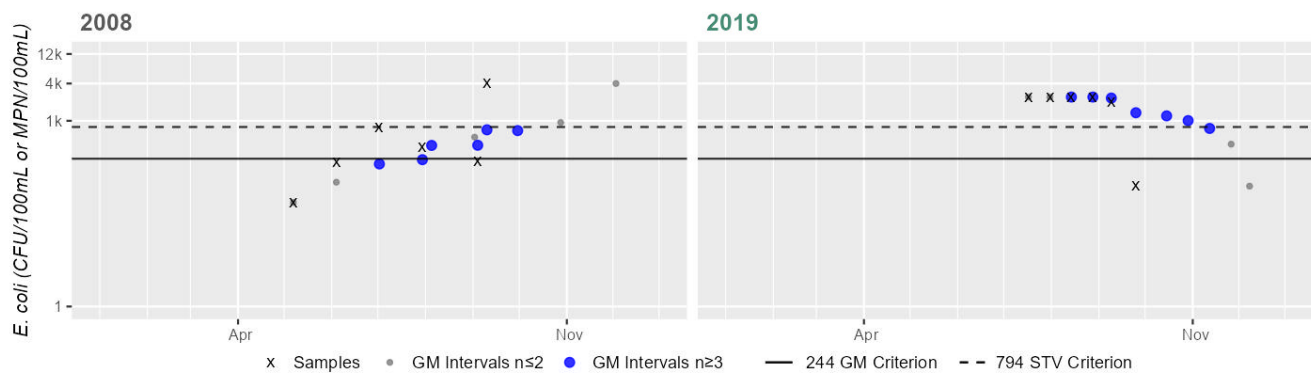
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1794	MassDEP	E. coli	05/06/08	09/09/08	6	48	4000	373
W1794	MassDEP	E. coli	07/17/19	09/25/19	6	88	2419	1349

Station MASSDEP_W1794 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	373
#GMI	6
#GMI Ex	4
%GMI Ex	66%
n>STV	1
%n>STV	16%

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

Variable*	Result
Samples	6
SeasGM	1349
#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.

Loon Pond (MA34045)

Location:	Springfield.
AU Type:	FRESHWATER LAKE
AU Size:	26 ACRES
Classification/Qualifier:	B

No usable data were available for Loon Pond (MA34045) 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

Louisiana Brook (MA34-91)

Location:	From outlet dam (NATID: MA00051) of Louisiana Brook Reservoir, Northfield to mouth at confluence with Pauchaug Brook, Northfield.
AU Type:	RIVER
AU Size:	1.5 MILES
Classification/Qualifier:	B

No usable data were available for Louisiana Brook (MA34-91) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Lower Highland Lake (MA34047)

Location:	Goshen.
AU Type:	FRESHWATER LAKE
AU Size:	91 ACRES
Classification/Qualifier:	B

No usable data were available for Lower Highland Lake (MA34047) 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

Lower Mill Pond (MA34048)

Location:	Easthampton.
AU Type:	FRESHWATER LAKE
AU Size:	30 ACRES
Classification/Qualifier:	B

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

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

Recommendations

2024/26 Recommendations
2024/2026 IR [Harmful Algal Blooms, Medium] Follow-up monitoring should be conducted in Lower Mill Pond (MA34048) 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 Lower Mill Pond (MA34048) is Not Assessed.

Aesthetic**2024/26 Use Attainment**

Insufficient Information

Alert

YES

2024/26 Use Attainment Summary

Too limited data are available to evaluate the Aesthetics Use of Lower Mill Pond (MA34048), 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 and 2020. During the period 2015 through 2022, C-HAB postings for Lower Mill Pond were reported to MDPH based on visual observations for 26 days in 2019 and 29 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 Harmful Algal Blooms and a recommendation for follow-up sampling will be made. There are no other data available to assess the status of the Aesthetics Use for Lower Mill Pond AU.

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 Lower Mill Pond (MA34048) were reported to MDPH based on visual observations for 26 days in 2019 and 29 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
Lower Mill Pond	Easthampton					26	29		

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Lower Mill Pond (MA34048) is assessed as Fully Supporting. 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 Lower Mill Pond were reported to MDPH based on visual observations for 26 days in 2019 and 29 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. Connecticut River Conservancy (CRC) staff/volunteers collected <i>E. coli</i> bacteria samples in Lower Mill Pond at CRC_LMP1 [Lower Millpond, Millside Park] from 2021-2022 (n=16-18/yr). Analysis of the multi-year high frequency <i>E. coli</i> dataset from CRC_LMP1 indicated 0 out of 2 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml, 2 yrs had >10% of samples exceed the 410 CFU/100ml STV (2021 and 2022, 11 & 12%), and cumulatively across years 1% of intervals had GMs >126 CFU/100ml. <i>E. coli</i> data from CRC_LMP1 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_LMP1	Connecticut River Conservancy	Water Quality	Lower Millpond	Lower Millpond, Millside Park	42.274435	-72.657825

Bacteria Data

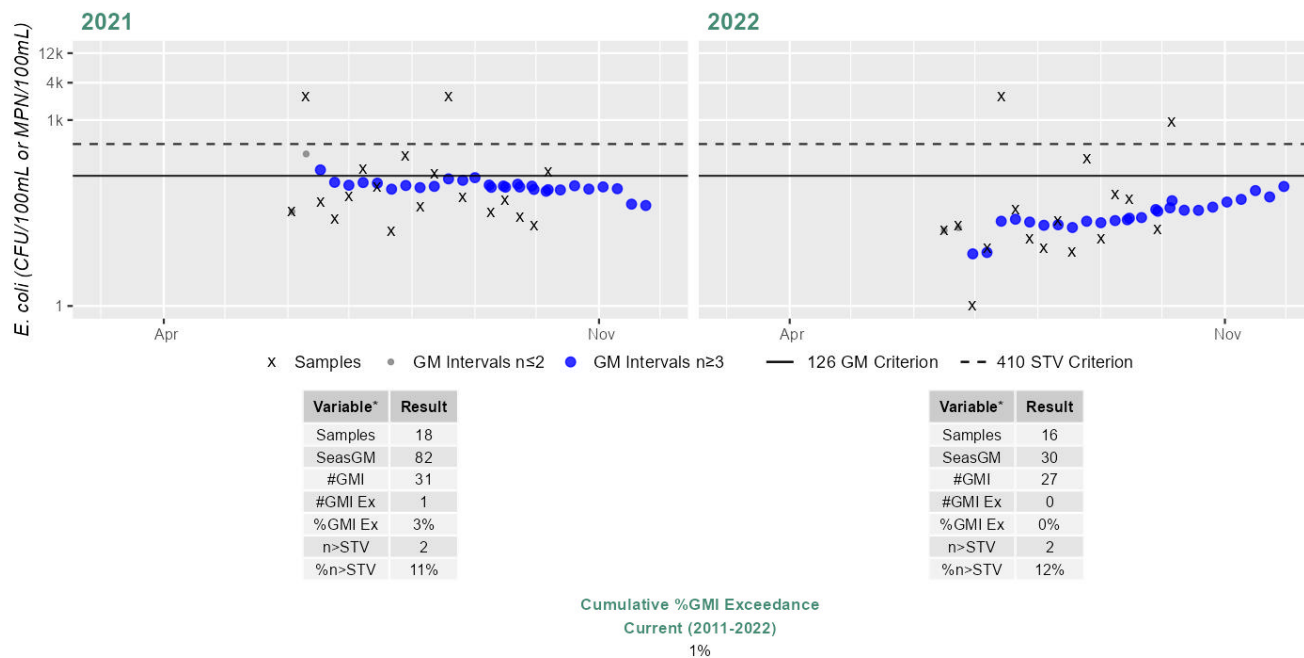
Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_LMP1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	16	2419	82
CRC_LMP1	Connecticut River Conservancy	E. coli	06/16/22	10/06/22	16	1	2419	30

Station CRC_LMP1 - *Escherichia coli*

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



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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Lower Mill Pond (MA34048) is assessed as Fully Supporting. 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 Lower Mill Pond were reported to MDPH based on visual observations for 26 days in 2019 and 29 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.</p> <p>Connecticut River Conservancy (CRC) staff/volunteers collected <i>E. coli</i> bacteria samples in Lower Mill Pond at CRC_LMP1 [Lower Millpond, Millside Park] from 2021-2022 (n=16-18/yr). Analysis of the multi-year high frequency <i>E. coli</i> dataset from CRC_LMP1 indicated 0 out of 2 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml, 2 yrs had >10% of samples exceed the 794 CFU/100ml STV (2021 and 2022, 11 & 12%), and cumulatively across years 0% of intervals had GMs >244 CFU/100ml. <i>E. coli</i> data from CRC_LMP1 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_LMP1	Connecticut River Conservancy	Water Quality	Lower Millpond	Lower Millpond, Millside Park	42.274435	-72.657825

Bacteria Data

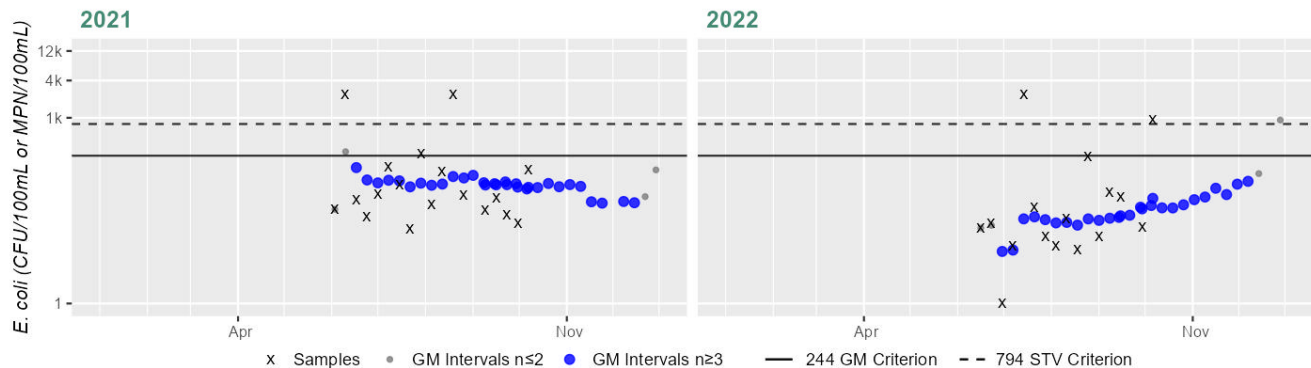
Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 1)

[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
CRC_LMP1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	16	2419	82
CRC_LMP1	Connecticut River Conservancy	E. coli	06/16/22	10/06/22	16	1	2419	30

Station CRC_LMP1 - *Escherichia coli*

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



Variable*	Result
Samples	18
SeasGM	82
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	11%

Variable*	Result
Samples	16
SeasGM	30
#GMI	27
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	12%

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.

Lower Van Horn Park Pond (MA34129)

Location:	Springfield.
AU Type:	FRESHWATER LAKE
AU Size:	11 ACRES
Classification/Qualifier:	B

No usable data were available for Lower Van Horn Park Pond (MA34129) 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	(Water Chestnut*)	--	Unchanged

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

Manhan River (MA34-10)

Location:	Headwaters, northeast of Norwich Pond, Huntington to inlet Tighe Carmody Reservoir, Southampton (through former 2006 segment: White Reservoir MA34100).
AU Type:	RIVER
AU Size:	6.6 MILES
Classification/Qualifier:	A: PWS, ORW (Tributary)

No usable data were available for Manhan River (MA34-10) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

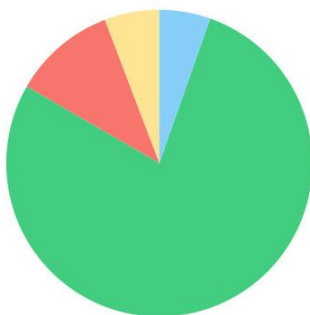
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Manhan River (MA34-11)

Location:	Outlet Tighe Carmody Reservoir, Southampton to mouth at confluence with Connecticut River, Easthampton.
AU Type:	RIVER
AU Size:	19 MILES
Classification/Qualifier:	B

Manhan River (MA34-11)

Watershed Area: 143.13 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	143.13	10.63	41.57	3.59
Agriculture	5.8%	14.3%	5.2%	11.9%
Developed	10.9%	27.4%	8.2%	19%
Natural	77.9%	46.7%	74.8%	49.1%
Wetland	5.4%	11.6%	11.9%	20%
Impervious	4.9%	15.1%	3.8%	10%

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	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)	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 Manhan River (MA34-11) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Manhan River (MA34-11) continues to be assessed as Fully Supporting. MassDEP staff recorded aesthetics observations for two stations on this Manhan River AU from up to downstream as follows: halfway down the AU off Riverdale Road, ~500 feet downstream from Gunn Road, Southampton (W2860), for the Chloride project between Oct 2018 and Jun 2019 (n=2) and close to the downstream end of the AU at Fort Hill Road, Easthampton (W1065) between Oct 2018 and Sep 2019 (n=10). 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
W1065	MassDEP	Water Quality	Manhan River	[Fort Hill Road, Easthampton]	42.283497	-72.640601
W2860	MassDEP	Water Quality	Manhan River	[off Riverdale Road, approximately 500 feet downstream from Gunn Road, Southampton]	42.242235	-72.706172

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
W1065	2019	10	Aesthetic observations were made by MassDEP field sampling crews at Station W1065 on Manhan River (MA34-11) during 10 site visits between Oct 2018 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W2860	2019	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2860 on Manhan River (MA34-11) during 2 site visits between Oct 2018 and Jun 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W1065	2019	10	7	1
W2860	2019	2	2	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1065	Manhan River	2019	Aesthetics Impaired?	No	10	10
W1065	Manhan River	2019	Aquatic Plant Density, Overall	None	5	10
W1065	Manhan River	2019	Aquatic Plant Density, Overall	NR	1	10

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1065	Manhan River	2019	Aquatic Plant Density, Overall	Sparse	1	10
W1065	Manhan River	2019	Aquatic Plant Density, Overall	Unobservable	3	10
W1065	Manhan River	2019	Color	Brownish	2	10
W1065	Manhan River	2019	Color	Light Yellow/Tan	3	10
W1065	Manhan River	2019	Color	None	5	10
W1065	Manhan River	2019	Objectionable Deposits	No	9	10
W1065	Manhan River	2019	Objectionable Deposits	Unobservable	1	10
W1065	Manhan River	2019	Odor	None	10	10
W1065	Manhan River	2019	Periphyton Density, Filamentous	Dense	1	10
W1065	Manhan River	2019	Periphyton Density, Filamentous	None	5	10
W1065	Manhan River	2019	Periphyton Density, Filamentous	Sparse	1	10
W1065	Manhan River	2019	Periphyton Density, Filamentous	Unobservable	3	10
W1065	Manhan River	2019	Periphyton Density, Film	None	7	10
W1065	Manhan River	2019	Periphyton Density, Film	Unobservable	3	10
W1065	Manhan River	2019	Scum	No	10	10
W1065	Manhan River	2019	Turbidity	Moderately Turbid	1	10
W1065	Manhan River	2019	Turbidity	None	3	10
W1065	Manhan River	2019	Turbidity	Slightly Turbid	6	10
W2860	Manhan River	2019	Aesthetics Impaired?	No	2	2
W2860	Manhan River	2019	Aquatic Plant Density, Overall	None	2	2
W2860	Manhan River	2019	Color	None	2	2
W2860	Manhan River	2019	Objectionable Deposits	No	2	2
W2860	Manhan River	2019	Odor	None	2	2
W2860	Manhan River	2019	Periphyton Density, Filamentous	None	2	2
W2860	Manhan River	2019	Periphyton Density, Film	None	2	2
W2860	Manhan River	2019	Scum	No	2	2
W2860	Manhan River	2019	Turbidity	None	2	2

Primary Contact Recreation

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

The Primary Contact Recreation Use for the Manhan River (MA34-11) continues to be assessed as Not Supporting. The prior Escherichia Coli (*E. Coli*) impairment is being carried forward based on bacteria data not meeting the threshold at 3 stations in 2018-2022. Connecticut River Conservancy (CRC) and MassDEP staff/volunteers collected *E. coli* bacteria samples in the Manhan River from 2012-2022 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: three-quarters of the way down at CRC_MHR1 [Dwyer Conservation Area] from 2021-2022 (n=16-17/yr), close to the downstream end of the AU at W1065 [Fort Hill Rd, Easthampton] from Jul-Sep 2019 (n=6), and the downstream end at CRC_OXE1 [Oxbow Boat Ramp, Easthampton] from 2012-2022 (n=17-19/yr). Analysis of the multi-year high frequency *E. coli* dataset from CRC_MHR1 indicated 2 out of 2 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2021 and 2022, 100 & 100%), 2 yrs had >10% of samples exceed the 410 CFU/100ml STV (2021 and 2022, 35 & 43%), and cumulatively across years 100% of intervals had GMs >126 CFU/100ml. Analysis of the single year limited frequency *E. coli* dataset from W1065 indicated 100% of intervals had GMs >126 CFU/100ml, 3 samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 396 CFU/100ml. Analysis of the recent five years of this multi-year high frequency *E. coli* dataset from CRC_OXE1 indicated 4 out of 5 sufficient data yrs had intervals where >10% of the GMs were >126 CFU/100ml (2018-2019 and 2021-2022, 18-68%), 4 yrs had >10% of samples exceed the 410 CFU/100ml STV (2018-2019 and 2021-2022, 11-36%), and cumulatively across years 36% of intervals had GMs >126 CFU/100ml. *E. coli* data from CRC_MHR1, W1065, and CRC_OXE1 are indicative of an Escherichia Coli (*E. Coli*) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_MHR1	Connecticut River Conservancy	Water Quality	Manhan River	Dwyer Conservation Area	42.278134	-72.660035
CRC_OXE1	Connecticut River Conservancy	Water Quality	Connecticut River; Connecticut River oxbow	Oxbow Boat Ramp, Easthampton	42.288414	-72.618353
W1065	MassDEP	Water Quality	Manhan River	[Fort Hill Road, Easthampton]	42.283497	-72.640601

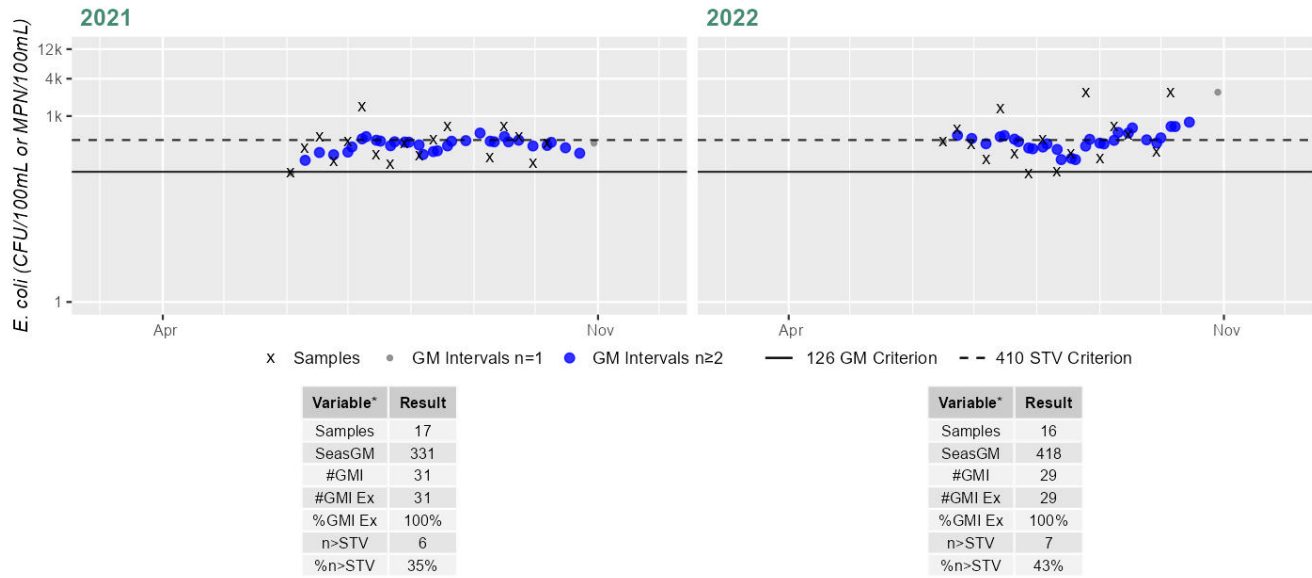
Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (30-day Interval Analysis) (CRC 2023) (MassDEP Undated 2) (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
CRC_MHR1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	17	121	1413	331
CRC_MHR1	Connecticut River Conservancy	E. coli	06/16/22	10/06/22	16	119	2419	418
CRC_OXE1	Connecticut River Conservancy	E. coli	05/31/12	10/04/12	18	14	2419	93
CRC_OXE1	Connecticut River Conservancy	E. coli	05/30/13	10/03/13	17	19	547	93
CRC_OXE1	Connecticut River Conservancy	E. coli	05/29/14	10/02/14	18	18	2419	127
CRC_OXE1	Connecticut River Conservancy	E. coli	05/28/15	10/01/15	18	20	2419	226
CRC_OXE1	Connecticut River Conservancy	E. coli	06/02/16	10/06/16	19	13	98	36
CRC_OXE1	Connecticut River Conservancy	E. coli	06/01/17	10/05/17	18	13	1203	79
CRC_OXE1	Connecticut River Conservancy	E. coli	05/31/18	10/04/18	19	26	2419	219
CRC_OXE1	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	18	24	1046	120
CRC_OXE1	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	3	1553	39
CRC_OXE1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	21	727	127
CRC_OXE1	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	18	12	2419	77
W1065	MassDEP	E. coli	07/10/19	09/18/19	6	170	2000	396

Station CRC_MHR1 - Escherichia coli

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



Cumulative %GMI Exceedance

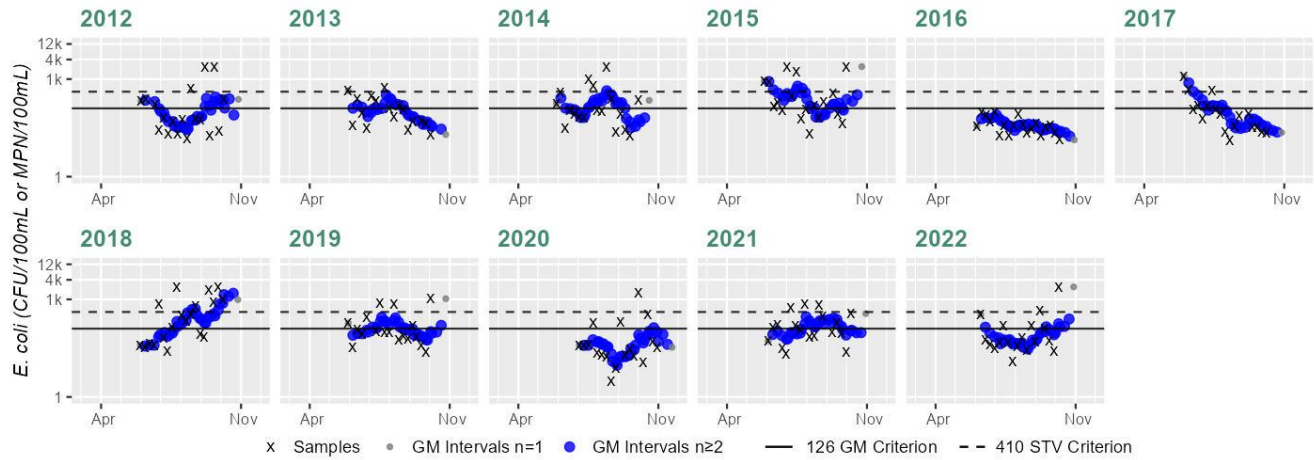
Current (2011-2022)

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 CRC_OXE1 - Escherichia coli

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



Variable*	Result
Samples	18
SeasGM	93
#GMI	33
#GMI Ex	12
%GMI Ex	36%
n>STV	3
%n>STV	16%

Variable*	Result
Samples	17
SeasGM	93
#GMI	31
#GMI Ex	12
%GMI Ex	38%
n>STV	2
%n>STV	11%

Variable*	Result
Samples	18
SeasGM	127
#GMI	33
#GMI Ex	19
%GMI Ex	57%
n>STV	3
%n>STV	16%

Variable*	Result
Samples	18
SeasGM	226
#GMI	33
#GMI Ex	26
%GMI Ex	78%
n>STV	5
%n>STV	27%

Variable*	Result
Samples	19
SeasGM	36
#GMI	35
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	79
#GMI	33
#GMI Ex	12
%GMI Ex	36%
n>STV	3
%n>STV	16%

Variable*	Result
Samples	19
SeasGM	219
#GMI	35
#GMI Ex	24
%GMI Ex	68%
n>STV	7
%n>STV	36%

Variable*	Result
Samples	18
SeasGM	120
#GMI	33
#GMI Ex	14
%GMI Ex	42%
n>STV	3
%n>STV	16%

Variable*	Result
Samples	18
SeasGM	39
#GMI	33
#GMI Ex	1
%GMI Ex	3%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	127
#GMI	33
#GMI Ex	16
%GMI Ex	48%
n>STV	3
%n>STV	16%

Variable*	Result
Samples	18
SeasGM	77
#GMI	33
#GMI Ex	6
%GMI Ex	18%
n>STV	2
%n>STV	11%

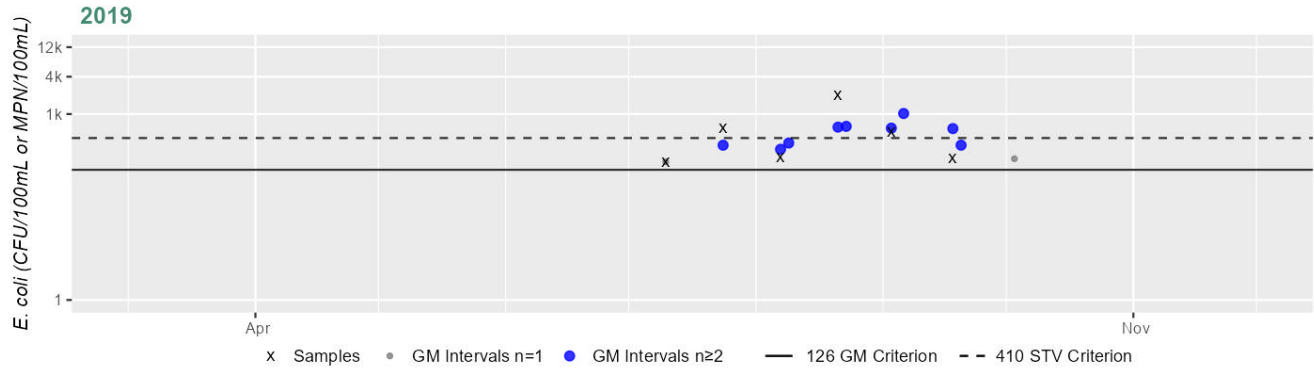
Cumulative %GMI Exceedance
Current (2011-2022)
38%

Cumulative %GMI Exceedance
Current (Recent 5 Years)
36%

*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_W1065 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	396
#GMI	9
#GMI Ex	9
%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.

Secondary Contact Recreation

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

The Secondary Contact Recreation Use for the Manhan River (MA34-11) is assessed as Not Supporting. An Escherichia Coli (*E. Coli*) impairment is being added due to bacteria data not meeting the threshold at 2 stations in 2019 & 2021-2022. Connecticut River Conservancy (CRC) and MassDEP staff/volunteers collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Manhan River from 2003-2022 at 5 stations. Samples were collected from the following stations/sample years from upstream to downstream: halfway down at W1793 [Gun Rd, Southampton] from May-Sep 2008 (n=6), two-thirds of the way down at W1064 [Loudville Rd, Easthampton] from Apr-Oct 2003 (n=6), three-quarters of the way down at CRC_MHR1 [Dwyer Conservation Area] from 2021-2022 (n=16-17/yr), close to the downstream end of the AU at W1065 [Fort Hill Rd, Easthampton] in 2003 and 2008 (historic n=6/yr) and Jul-Sep 2019 (current n=6), and the downstream end of the AU at CRC_OXE1 [Oxbow Boat Ramp, Easthampton] from 2012-2022 (n=17-19/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 multi-year high frequency *E. coli* dataset from CRC_MHR1 indicated 2 out of 2 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml (2021 and 2022, 96 & 100%), and while only 1 yr had >10% of samples exceed the 794 CFU/100ml STV (2022, 18%), cumulatively across years 98% of intervals had GMs >244 CFU/100ml. Analysis of the single year limited frequency *E. coli* dataset from W1065 indicated 100% of intervals had GMs >244 CFU/100ml, and while only 1 sample exceeded the 794 CFU/100ml STV (2000 CFU), the overall GM was 396 CFU/100ml. Analysis of the recent five years of this multi-year high frequency *E. coli* dataset from CRC_OXE1 indicated 1 out of 5 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml (2018, 48%), 1 yr had >10% of samples exceed the 794 CFU/100ml STV (2018, 26%), and cumulatively across years 10% of intervals had GMs >244 CFU/100ml. While *E. coli* data from CRC_OXE1 meet 2024 CALM guidance, *E. coli* data from CRC_MHR1 and W1065 are indicative of an Escherichia Coli (*E. Coli*) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_MHR1	Connecticut River Conservancy	Water Quality	Manhan River	Dwyer Conservation Area	42.278134	-72.660035
CRC_OXE1	Connecticut River Conservancy	Water Quality	Connecticut River; Connecticut River oxbow	Oxbow Boat Ramp, Easthampton	42.288414	-72.618353
W1064	MassDEP	Water Quality	Manhan River	[Loudville Road, Easthampton]	42.266570	-72.691566
W1065	MassDEP	Water Quality	Manhan River	[Fort Hill Road, Easthampton]	42.283497	-72.640601
W1793	MassDEP	Water Quality	Manhan River	[Gun Road, Southampton]	42.241102	-72.705360

Bacteria Data

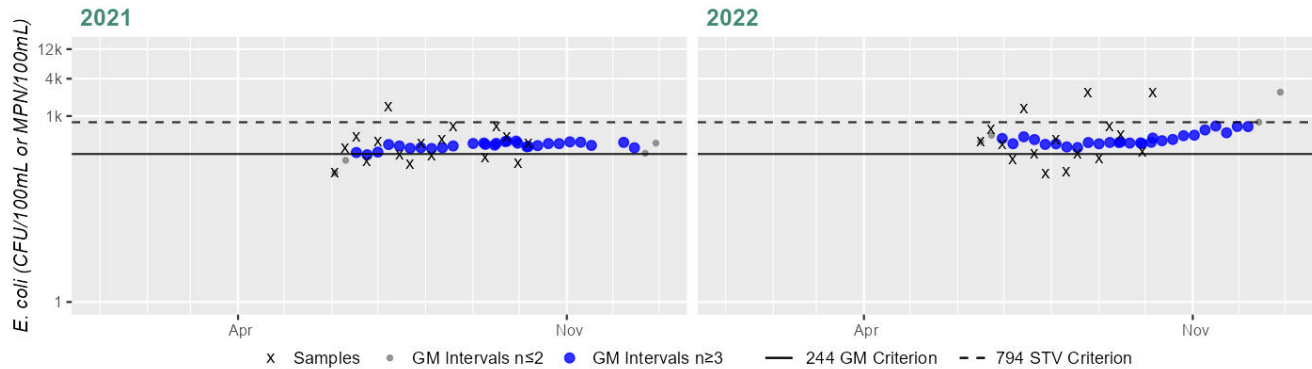
Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 1) (MassDEP Undated 7) (MassDEP Undated 3)

[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
CRC_MHR1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	17	121	1413	331
CRC_MHR1	Connecticut River Conservancy	E. coli	06/16/22	10/06/22	16	119	2419	418
CRC_OXE1	Connecticut River Conservancy	E. coli	05/31/12	10/04/12	18	14	2419	93
CRC_OXE1	Connecticut River Conservancy	E. coli	05/30/13	10/03/13	17	19	547	93
CRC_OXE1	Connecticut River Conservancy	E. coli	05/29/14	10/02/14	18	18	2419	127
CRC_OXE1	Connecticut River Conservancy	E. coli	05/28/15	10/01/15	18	20	2419	226
CRC_OXE1	Connecticut River Conservancy	E. coli	06/02/16	10/06/16	19	13	98	36
CRC_OXE1	Connecticut River Conservancy	E. coli	06/01/17	10/05/17	18	13	1203	79
CRC_OXE1	Connecticut River Conservancy	E. coli	05/31/18	10/04/18	19	26	2419	219
CRC_OXE1	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	18	24	1046	120
CRC_OXE1	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	3	1553	39
CRC_OXE1	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	21	727	127
CRC_OXE1	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	18	12	2419	77
W1064	MassDEP	E. coli	04/30/03	10/01/03	6	0	1120	99
W1065	MassDEP	E. coli	04/30/03	10/01/03	6	5	720	157
W1065	MassDEP	E. coli	05/06/08	09/09/08	6	26	940	169
W1065	MassDEP	E. coli	07/10/19	09/18/19	6	170	2000	396
W1793	MassDEP	E. coli	05/06/08	09/09/08	6	20	1200	70

Station CRC_MHR1 - *Escherichia coli*

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



Variable*	Result
Samples	17
SeasGM	331
#GMI	29
#GMI Ex	28
%GMI Ex	96%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	16
SeasGM	418
#GMI	27
#GMI Ex	27
%GMI Ex	100%
n>STV	3
%n>STV	18%

Cumulative %GMI Exceedance

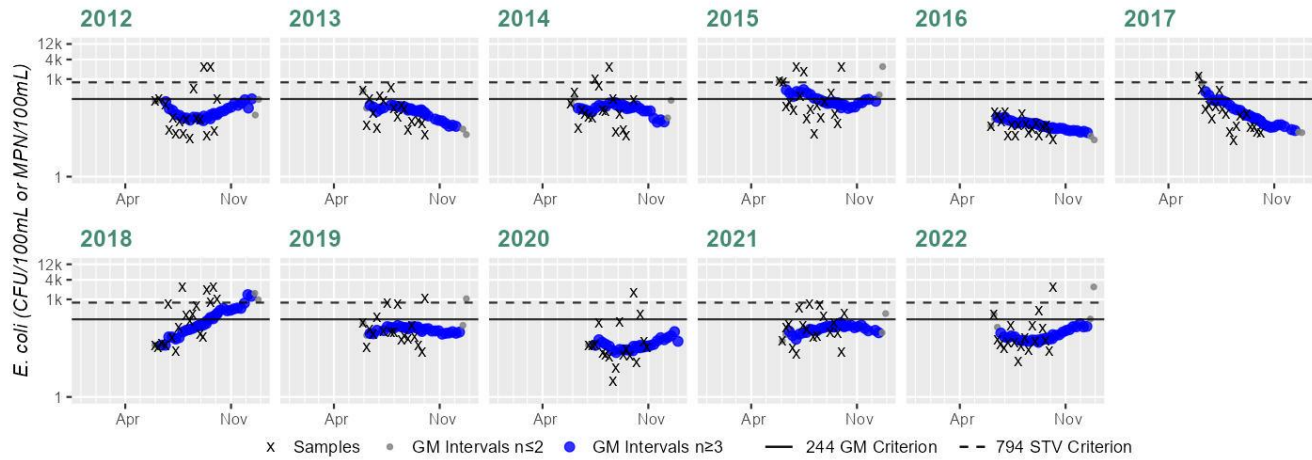
Current (2011-2022)

98%

*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 CRC_OXE1 - Escherichia coli

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



Variable*	Result
Samples	18
SeasGM	93
#GMI	31
#GMI Ex	1
%GMI Ex	3%
n>STV	2
%n>STV	11%

Variable*	Result
Samples	17
SeasGM	93
#GMI	29
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	127
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	2
%n>STV	11%

Variable*	Result
Samples	18
SeasGM	226
#GMI	31
#GMI Ex	10
%GMI Ex	32%
n>STV	5
%n>STV	27%

Variable*	Result
Samples	19
SeasGM	36
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	79
#GMI	31
#GMI Ex	2
%GMI Ex	6%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	19
SeasGM	219
#GMI	33
#GMI Ex	16
%GMI Ex	48%
n>STV	5
%n>STV	26%

Variable*	Result
Samples	18
SeasGM	120
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	39
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

Variable*	Result
Samples	18
SeasGM	127
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	18
SeasGM	77
#GMI	31
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	5%

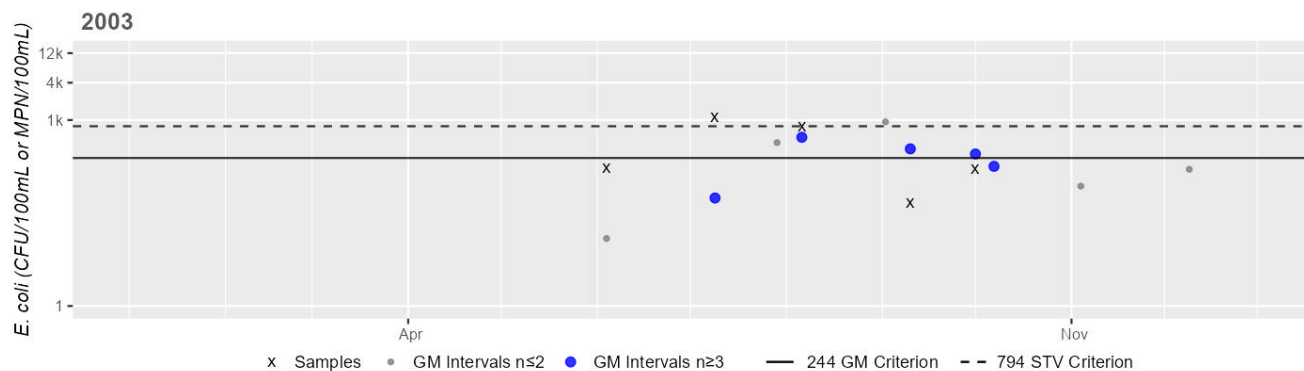
Cumulative %GMI Exceedance
Current (2011-2022)
8%

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

*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_W1064 - *Escherichia coli*

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



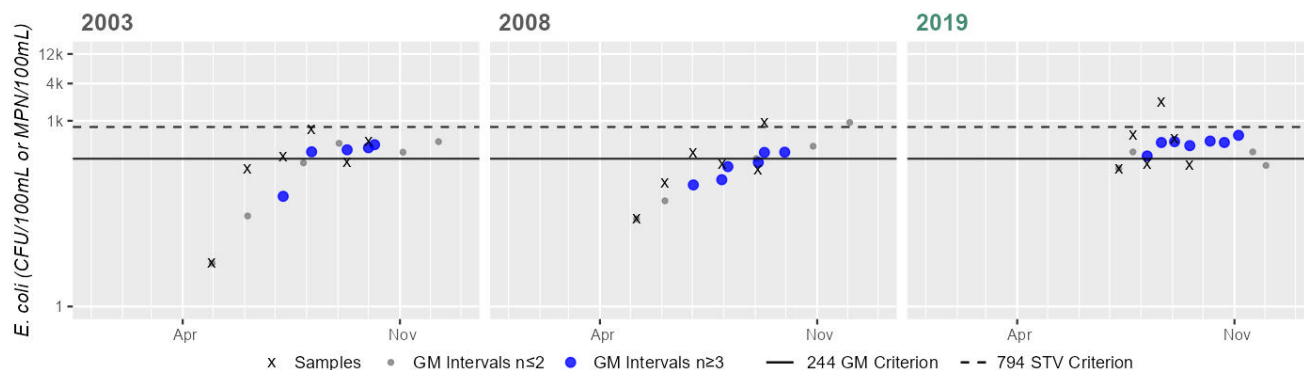
Variable*	Result
Samples	6
SeasGM	99
#GMI	5
#GMI Ex	3
%GMI Ex	60%
n>STV	1
%n>STV	16%

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

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

Station MASSDEP_W1065 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	157
#GMI	5
#GMI Ex	4
%GMI Ex	80%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Historic (1997-2010)
54%

Variable*	Result
Samples	6
SeasGM	169
#GMI	6
#GMI Ex	2
%GMI Ex	33%
n>STV	1
%n>STV	16%

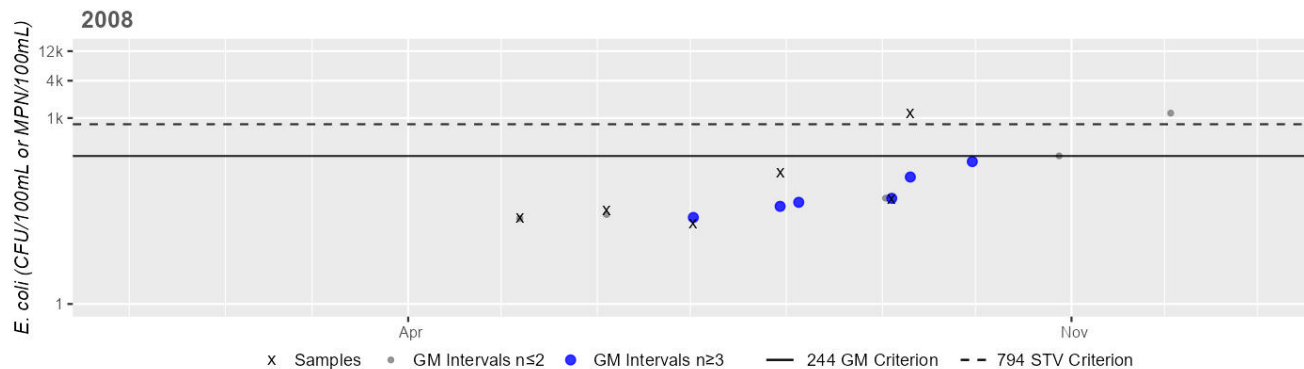
Cumulative %GMI Exceedance
Current (2011-2022)
100%

Variable*	Result
Samples	6
SeasGM	396
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	1
%n>STV	16%

*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_W1793 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	70
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

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.

Meekin Brook (MA34-72)

Location:	Headwaters north of Route 143, Chesterfield to mouth at confluence with West Branch Mill River, Williamsburg.
AU Type:	RIVER
AU Size:	2.7 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Meekin Brook (MA34-72) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Metacomet Lake (MA34051)

Location:	Belchertown.
AU Type:	FRESHWATER LAKE
AU Size:	51 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fanwort*)	--	Unchanged
5	5	(Non-Native Aquatic Plants*)	--	Unchanged
5	5	Dissolved Oxygen	--	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	--	--	--	--
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--

Recommendations

2024/26 Recommendations
2024/2026 IR [Harmful Algal Blooms, Medium] Follow-up monitoring should be conducted in Lake Metacomet (MA34051) 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 Metacomet Lake (MA34051) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary
The Aesthetics Use for Metacomet Lake (MA34051) is assessed as Fully Supporting based on the good aesthetics conditions observed at the southwestern quadrant of the lake in summer 2016. However, an Alert is being identified for Harmful Algal Blooms in this waterbody since C-HAB postings (a bloom of >15 days in duration) were reported to MDPH for 2022. MassDEP staff recorded aesthetics observations at one station for Lake Metacomet, at the deep hole, southwestern quadrant, Belchertown (W2642) in the summer of 2016 (n=3). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff once noted green water color. During the period 2015 through 2022, C-HAB postings for Lake Metacomet were reported to MDPH based on visual observations for 21 days in 2022 and no blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, an Alert is being identified for Harmful Algal Blooms and a recommendation for follow-up sampling will be made.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1068	MassDEP	Water Quality	Metacomet Lake	[deep hole, Belchertown]	42.306197	-72.431887

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
W1068	2016	3	Aesthetic observations were made by MassDEP field sampling crews at Station W1068 on Metacomet Lake (MA34051) during 3 site visits between Jun 2016 and Sep 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1068	Metacomet Lake	2016	Aesthetics Impaired?	No	3	3
W1068	Metacomet Lake	2016	Aquatic Plant Density, Overall	None	3	3
W1068	Metacomet Lake	2016	Aquatic Plant Density, Whole Lake	NR	1	1
W1068	Metacomet Lake	2016	Color	Dark Tan	1	3
W1068	Metacomet Lake	2016	Color	Light Yellow/Tan	1	3
W1068	Metacomet Lake	2016	Color	None	1	3
W1068	Metacomet Lake	2016	Duckweed Density, Whole Lake	None	1	1
W1068	Metacomet Lake	2016	Objectionable Deposits	No	3	3
W1068	Metacomet Lake	2016	Odor	None	3	3
W1068	Metacomet Lake	2016	Scum	No	3	3
W1068	Metacomet Lake	2016	Turbidity	None	3	3

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 Metacomet Lake (MA34051) were reported to MDPH based on visual observations for 21 days in 2022. No blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. 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
Metacomet Lake	Belchertown								21

Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary
<p>No bacteria data are available to assess the Primary Contact Recreation Use for Metacomet Lake (MA34051) 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 Harmful Algal Blooms and additional sampling is recommended for this AU. During the period 2015 through 2022, C-HAB postings for Metacomet Lake were reported to MDPH based on visual observations for 21 days in 2022. No blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, a Harmful Algal Blooms Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made. In Metacomet Lake, MassDEP staff collected Secchi depth data at W1068 [42.306197, -72.431887, deep hole, Belchertown] (2016). Secchi depth data indicated water clarity meeting the 1.2m (4ft) threshold at W1068 in 2016 (n=3, 3-3.7m).</p>

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
2016	In Metacomet Lake (MA34051), MassDEP collected Secchi data at W1068 [42.306197, -72.431887, deep hole, Belchertown] in 2016. At station W1068 (station depth=4.3 m) the Secchi depth measurements ranged from 3-3.7 m (n=3) indicating water clarity meeting the 1.2 m (4 ft) threshold.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	YES

2024/26 Use Attainment Summary

No bacteria data are available to assess the Secondary Contact Recreation Use for Metacomet Lake (MA34051) 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 Harmful Algal Blooms and additional sampling is recommended for this AU. During the period 2015 through 2022, C-HAB postings for Metacomet Lake were reported to MDPH based on visual observations for 21 days in 2022. No blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, a Harmful Algal Blooms Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made.

Mill Brook (MA34-55)

Location:	Headwaters, outlet Stevens Swamp, Warwick to mouth at confluence with Connecticut River, Northfield.
AU Type:	RIVER
AU Size:	7.7 MILES
Classification/Qualifier:	B: CWF

Mill Brook (MA34-55)

Watershed Area: 9.53 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	9.53	4.87	1.79	1.04
Agriculture	1.3%	2.6%	1%	1.7%
Developed	5.5%	9.6%	6.5%	10%
Natural	88.2%	85.5%	81.4%	85.2%
Wetland	5%	2.3%	11.1%	3.1%
Impervious	1.8%	2.9%	3%	4%

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

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Mill Brook (MA34-55) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Mill Brook (MA34-55) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station at the downstream end of Mill Brook ~160 feet upstream of Main Street (Route 10), Northfield (W2842) during summer 2019 (n=8). 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
W2842	MassDEP	Water Quality	Mill Brook	[approximately 160 feet upstream of Main Street (Route 10), Northfield]	42.702816	-72.451896

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
W2842	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2842 on Mill Brook (MA34-55) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W2842	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2842	Mill Brook	2019	Aesthetics Impaired?	No	8	8
W2842	Mill Brook	2019	Aquatic Plant Density, Overall	None	8	8
W2842	Mill Brook	2019	Color	Light Yellow/Tan	5	8
W2842	Mill Brook	2019	Color	None	3	8
W2842	Mill Brook	2019	Objectionable Deposits	No	7	8
W2842	Mill Brook	2019	Objectionable Deposits	Yes	1	8
W2842	Mill Brook	2019	Odor	Musty (Basement)	1	8
W2842	Mill Brook	2019	Odor	None	7	8
W2842	Mill Brook	2019	Periphyton Density, Filamentous	None	4	8
W2842	Mill Brook	2019	Periphyton Density, Filamentous	Sparse	4	8
W2842	Mill Brook	2019	Periphyton Density, Film	None	6	8
W2842	Mill Brook	2019	Periphyton Density, Film	Sparse	2	8
W2842	Mill Brook	2019	Scum	No	8	8
W2842	Mill Brook	2019	Turbidity	None	8	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Mill Brook (MA34-55) is assessed as Not Supporting. An <i>Escherichia Coli</i> (<i>E. Coli</i>) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2019. MassDEP staff collected <i>E. coli</i> bacteria samples at the downstream end of Mill Brook at W2842 [~160 ft upstream of Main St (Rt. 10), Northfield] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2842 indicated 100% of intervals had GMs >126 CFU/100ml, 2 samples exceeded the 410 CFU/100ml STV (max 730 CFU) and the seasonal GM was 200 CFU/100ml. <i>E. coli</i> data from W2842 are indicative of an <i>Escherichia Coli</i> (<i>E. Coli</i>) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2842	MassDEP	Water Quality	Mill Brook	[approximately 160 feet upstream of Main Street (Route 10), Northfield]	42.702816	-72.451896

Bacteria Data

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

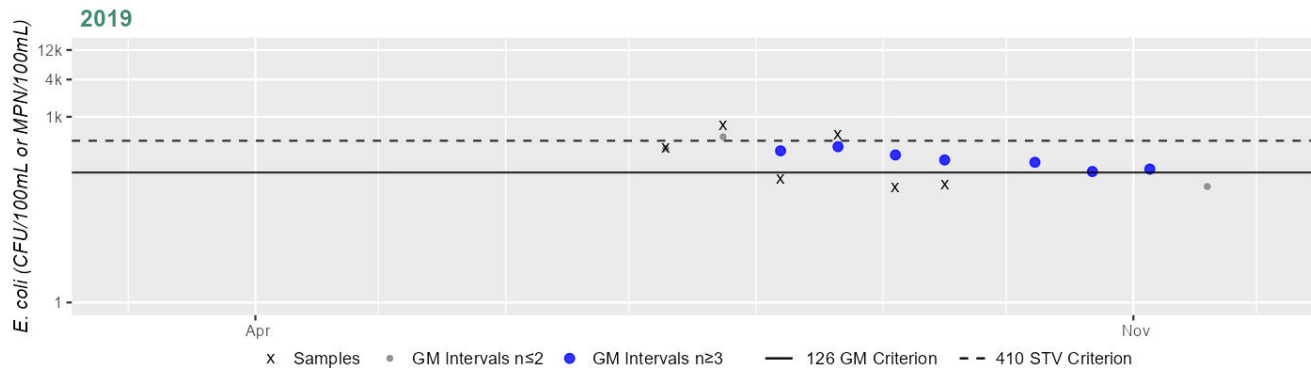
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2842	MassDEP	E. coli	07/10/19	09/16/19	6	71	730	200

Station MASSDEP_W2842 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	200
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance

Current (2011-2022)

100%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Mill Brook (MA34-55) is assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples at the downstream end of Mill Brook at W2842 [~160 ft upstream of Main St (Rt. 10), Northfield] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency *E. coli* dataset from W2842 indicated 28% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 200 CFU/100ml. *E. coli* data from W2842 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2842	MassDEP	Water Quality	Mill Brook	[approximately 160 feet upstream of Main Street (Route 10), Northfield]	42.702816	-72.451896

Bacteria Data

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

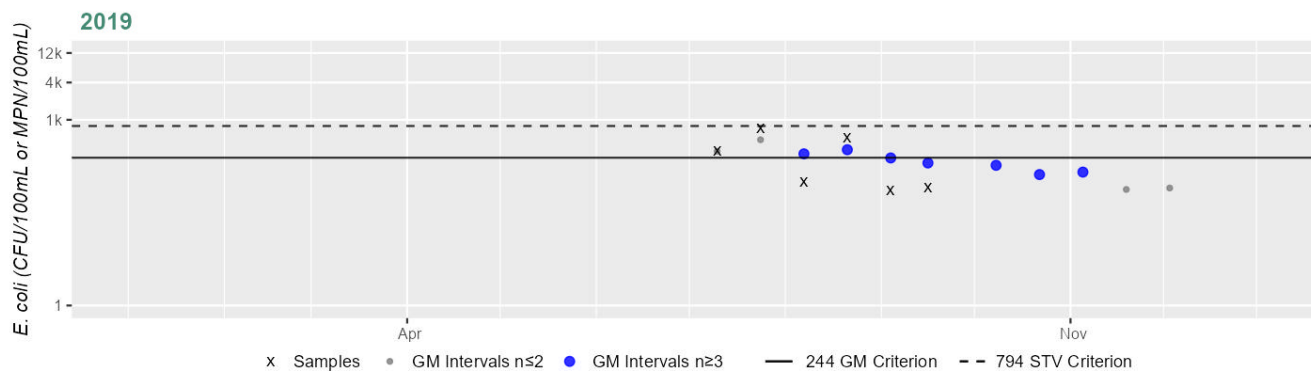
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2842	MassDEP	E. coli	07/10/19	09/16/19	6	71	730	200

Station MASSDEP_W2842 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	200
#GMI	7
#GMI Ex	2
%GMI Ex	28%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

28%

*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.

Mill Pond (MA34052)

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

No usable data were available for Mill Pond (MA34052) 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	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Odor	--	Unchanged

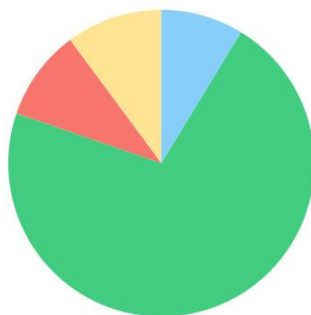
Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	--	--	X	X	X
Odor	Source Unknown (N)	--	--	X	X	X

Mill River (MA34-24)

Location:	Headwaters east of Fisher Hill, Conway to mouth at confluence with the Connecticut River, Hatfield.
AU Type:	RIVER
AU Size:	24.6 MILES
Classification/Qualifier:	B

Mill River (MA34-24)

Watershed Area: 49.02 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	49.02	8.40	16.39	2.34
Agriculture	10.2%	12.6%	9.3%	10.7%
Developed	9.6%	17.4%	7.2%	9.3%
Natural	71.5%	54.7%	70.3%	44.8%
Wetland	8.7%	15.4%	13.3%	35.3%
Impervious	4.1%	7.5%	3.2%	4.1%

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Temperature	Agriculture (N)	X	--	--	--	--

Recommendations

2024/26 Recommendations
2024/2026 IR [Bacteria, Medium] Conduct follow-up monitoring for E. coli in Mill River (MA34-24) at Station W1061 to confirm elevated bacteria levels measured at Maple Street in Hatfield in 2019. {W1061}. 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 Mill River (MA34-24) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Mill River (MA34-24) continues to be assessed as as Fully Supporting. MassDEP staff recorded aesthetics observations at four stations along this Mill River AU from up to downstream, stations (data years) as follows: ~550 feet downstream of South Deerfield Rd (first crossing east of Graves Road), Conway (W2843, 2019 n=8); ~10 feet upstream from Rt. 116 (crossing closest to Conway/Deerfield border), Conway (W2859, between Oct 2018 and Jun 2019 n=2); east of North Street, ~1000 feet upstream of the confluence of Esther Brook, Whately (W1579/MAP2-486, 2014 n=6) and at Maple Street, Hatfield (W1061 between Oct 2018 and Sep 2019 n=9). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded at any of the stations, though field staff noted objectionable deposits (slight trash) at W2843 (n=2).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1061	MassDEP	Water Quality	Mill River	[Maple Street, Hatfield]	42.366554	-72.604888
W1579	MassDEP	Water Quality	Mill River	[east of North Street, approximately 1000 feet upstream of the confluence of Esther Brook, Whately]	42.456557	-72.636993

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2843	MassDEP	Water Quality	Mill River	[approximately 550 feet downstream of South Deerfield Road (first crossing east of Graves Road), Conway]	42.509826	-72.661690
W2859	MassDEP	Water Quality	Mill River	[approximately 10 feet upstream from Route 116 (crossing closest to Conway/Deerfield border), Conway]	42.510212	-72.656568

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
W1061	2019	9	Aesthetic observations were made by MassDEP field sampling crews at Station W1061 on Mill River (MA34-24) during 9 site visits between Oct 2018 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W1579	2014	6	Aesthetic observations were made by MassDEP field sampling crews at Station W1579 on Mill River (MA34-24) during 6 site visits between May 2014 and Sep 2014. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W2843	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2843 on Mill River (MA34-24) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits (n=2).
W2859	2019	2	Aesthetic observations were made by MassDEP field sampling crews at Station W2859 on Mill River (MA34-24) during 2 site visits between Oct 2018 and Jun 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. However, aesthetic observations are limited (n<3).

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W1061	2019	10	10	0
W1579	2014	6	6	0
W2843	2019	8	8	0
W2859	2019	2	2	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1061	Mill River	2019	Aesthetics Impaired?	No	10	10
W1061	Mill River	2019	Aquatic Plant Density, Overall	None	4	10
W1061	Mill River	2019	Aquatic Plant Density, Overall	Sparse	6	10
W1061	Mill River	2019	Color	Brownish	2	10
W1061	Mill River	2019	Color	Light Yellow/Tan	4	10
W1061	Mill River	2019	Color	None	4	10
W1061	Mill River	2019	Objectionable Deposits	No	10	10
W1061	Mill River	2019	Odor	None	10	10
W1061	Mill River	2019	Periphyton Density, Filamentous	None	4	10
W1061	Mill River	2019	Periphyton Density, Filamentous	Sparse	6	10
W1061	Mill River	2019	Periphyton Density, Film	None	9	10
W1061	Mill River	2019	Periphyton Density, Film	Sparse	1	10
W1061	Mill River	2019	Scum	No	10	10
W1061	Mill River	2019	Turbidity	None	6	10
W1061	Mill River	2019	Turbidity	Slightly Turbid	4	10
W1579	Mill River	2014	Aesthetics Impaired?	No	6	6
W1579	Mill River	2014	Aquatic Plant Density, Overall	None	6	6
W1579	Mill River	2014	Color	Light Yellow/Tan	1	6
W1579	Mill River	2014	Color	None	5	6
W1579	Mill River	2014	Objectionable Deposits	No	6	6
W1579	Mill River	2014	Odor	None	6	6
W1579	Mill River	2014	Periphyton Density, Filamentous	None	6	6
W1579	Mill River	2014	Periphyton Density, Film	None	5	6
W1579	Mill River	2014	Periphyton Density, Film	Sparse	1	6
W1579	Mill River	2014	Scum	No	6	6
W1579	Mill River	2014	Turbidity	None	3	6
W1579	Mill River	2014	Turbidity	Slightly Turbid	3	6
W2843	Mill River	2019	Aesthetics Impaired?	No	8	8
W2843	Mill River	2019	Aquatic Plant Density, Overall	None	7	8
W2843	Mill River	2019	Aquatic Plant Density, Overall	NR	1	8
W2843	Mill River	2019	Color	None	8	8
W2843	Mill River	2019	Objectionable Deposits	No	6	8
W2843	Mill River	2019	Objectionable Deposits	Yes	2	8
W2843	Mill River	2019	Odor	None	8	8
W2843	Mill River	2019	Periphyton Density, Filamentous	None	8	8
W2843	Mill River	2019	Periphyton Density, Film	None	7	8
W2843	Mill River	2019	Periphyton Density, Film	Sparse	1	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2843	Mill River	2019	Scum	No	8	8
W2843	Mill River	2019	Turbidity	None	8	8
W2859	Mill River	2019	Aesthetics Impaired?	No	2	2
W2859	Mill River	2019	Aquatic Plant Density, Overall	None	2	2
W2859	Mill River	2019	Color	None	2	2
W2859	Mill River	2019	Objectionable Deposits	No	2	2
W2859	Mill River	2019	Odor	None	2	2
W2859	Mill River	2019	Periphyton Density, Filamentous	None	2	2
W2859	Mill River	2019	Periphyton Density, Film	None	2	2
W2859	Mill River	2019	Scum	No	2	2
W2859	Mill River	2019	Turbidity	None	2	2

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for the Mill River (MA34-24) continues to be assessed as Fully Supporting although an Alert is being identified for <i>E. coli</i> due to elevated concentrations at 1 station in 2019. MassDEP staff collected <i>E. coli</i> bacteria samples in the Mill River from 2014-2019 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the upstream end at W2843 [~550 ft downstream of S Deerfield Rd (first crossing E of Graves Rd), Conway] from Jul-Sep 2019 (n=6), nearly halfway down at W1579 [E of N St, ~1000 ft upstream of the confluence of Esther Brook, Whately] from May-Sep 2014 (n=5), and close to the downstream end at W1061 [Maple St, Hatfield] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2843 indicated 0% of intervals had GMs >126 CFU/100ml, 1 sample exceeded the 410 CFU/100ml STV (650 CFU), and the seasonal GM was 29 CFU/100ml. Analysis of the single year limited frequency <i>E. coli</i> dataset from W1579 indicated 66% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 108 CFU/100ml. Analysis of the single year limited frequency <i>E. coli</i> dataset from W1061 indicated 71% of intervals had GMs >126 CFU/100ml, 1 sample exceeded the 410 CFU/100ml STV (1400 CFU), and the seasonal GM was 183 CFU/100ml. <i>E. coli</i> data from W2843 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. <i>E. coli</i> data from W1579 and W1061 meet 2024 CALM guidance, however an Alert is being identified for <i>Escherichia coli</i> at W1061.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1061	MassDEP	Water Quality	Mill River	[Maple Street, Hatfield]	42.366554	-72.604888
W1579	MassDEP	Water Quality	Mill River	[east of North Street, approximately 1000 feet upstream of the confluence of Esther Brook, Whately]	42.456557	-72.636993
W2843	MassDEP	Water Quality	Mill River	[approximately 550 feet downstream of South Deerfield Road (first crossing east of Graves Road), Conway]	42.509826	-72.661690

Bacteria Data

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

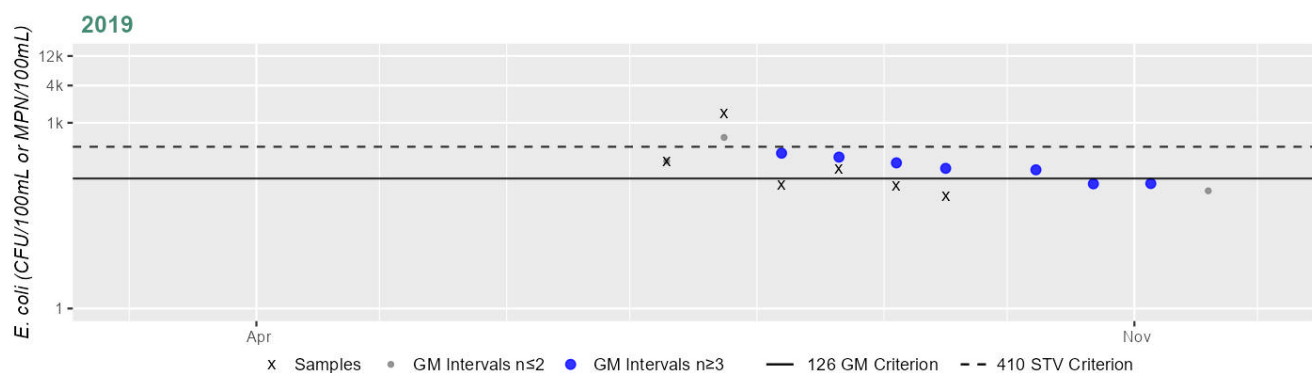
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1061	MassDEP	E. coli	07/10/19	09/16/19	6	66	1400	183
W1579	MassDEP	E. coli	05/14/14	09/25/14	5	26	248	108
W2843	MassDEP	E. coli	07/10/19	09/16/19	6	4	650	29

Station MASSDEP_W1061 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	183
#GMI	7
#GMI Ex	5
%GMI Ex	71%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance

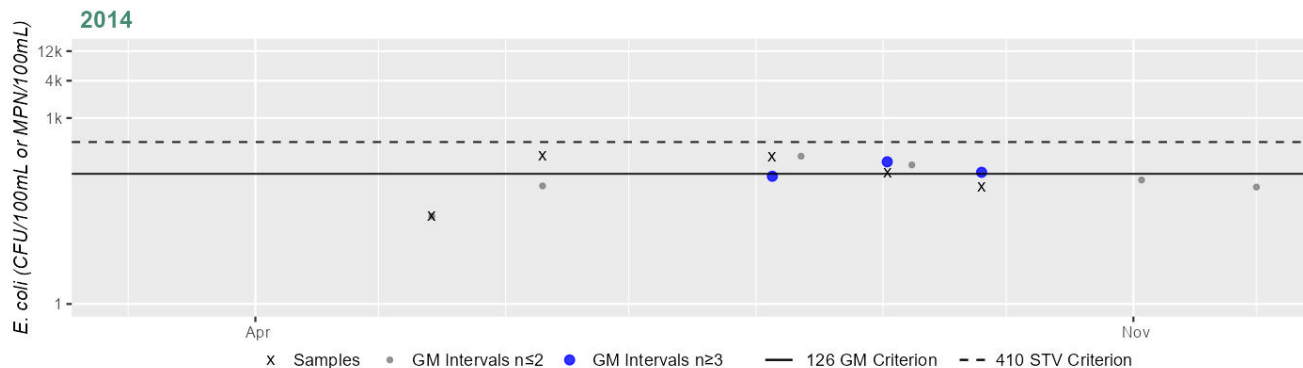
Current (2011-2022)

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_W1579 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	108
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

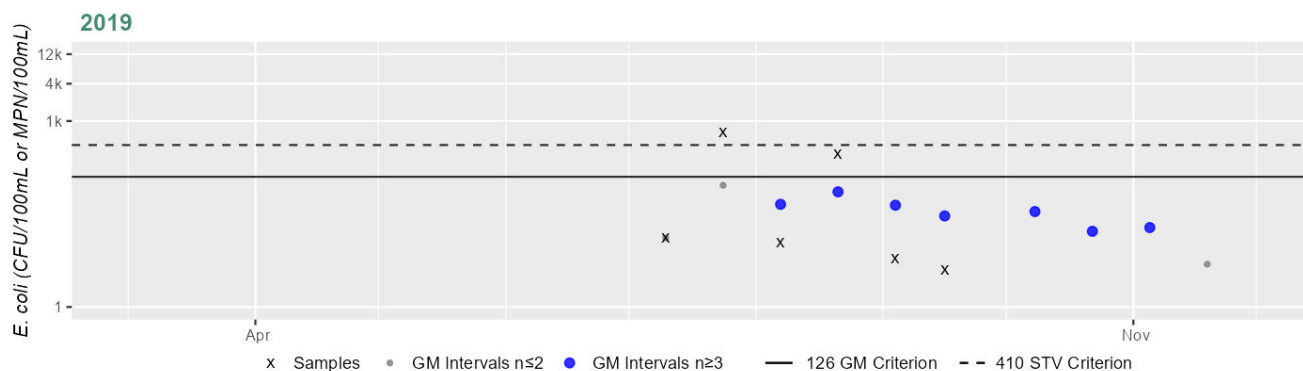
Current (2011-2022)

66%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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_W2843 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	29
#GMI	7
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for the Mill River (MA34-24) continues to be assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Mill River from 2003-2019 at 4 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to the upstream end at W2843 [~550 ft downstream of S Deerfield Rd (first crossing E of Graves Rd), Conway] from Jul-Sep 2019 (n=6), a third of the way down at W1795 [N St, Whately] from May-Sep 2008 (n=6), nearly halfway down at W1579 [E of N St, ~1000 ft upstream of the confluence of Esther Brook, Whately] from May-Sep 2014 (n=5), and close to the downstream end at W1061 [Maple St, Hatfield] in 2003 and 2008 (historic n=6/yr) and Jul-Sep 2019 (current n=6). Since bacteria data from the historic IR window are all indicative of good water quality conditions, only the analysis from the current IR window (at 3 stations) will be summarized here. <i>E. coli</i> data from W1061 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 (1400 CFU). <i>E. coli</i> data from W2843 and W1579 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1061	MassDEP	Water Quality	Mill River	[Maple Street, Hatfield]	42.366554	-72.604888
W1579	MassDEP	Water Quality	Mill River	[east of North Street, approximately 1000 feet upstream of the confluence of Esther Brook, Whately]	42.456557	-72.636993
W1795	MassDEP	Water Quality	Mill River	[North Street, Whately]	42.469080	-72.641500
W2843	MassDEP	Water Quality	Mill River	[approximately 550 feet downstream of South Deerfield Road (first crossing east of Graves Road), Conway]	42.509826	-72.661690

Bacteria Data

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

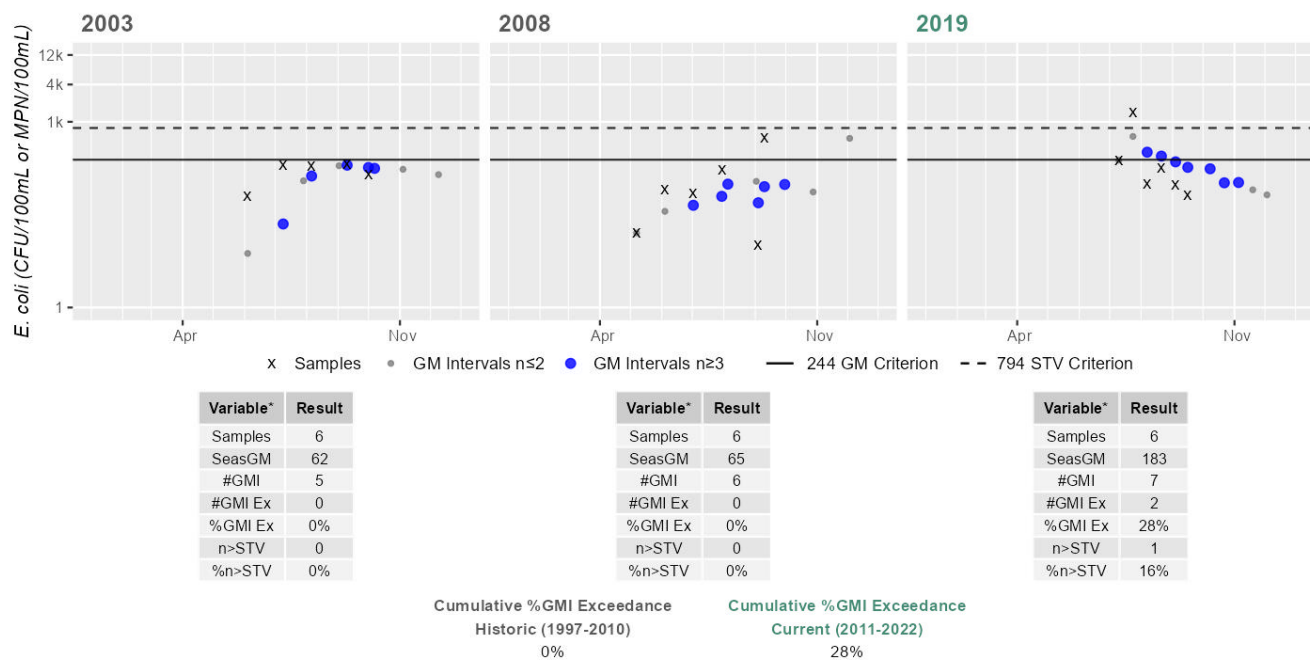
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1061	MassDEP	E. coli	04/30/03	10/01/03	6	0	208	62
W1061	MassDEP	E. coli	05/06/08	09/09/08	6	10	540	65
W1061	MassDEP	E. coli	07/10/19	09/16/19	6	66	1400	183
W1579	MassDEP	E. coli	05/14/14	09/25/14	5	26	248	108
W1795	MassDEP	E. coli	05/06/08	09/09/08	6	4	740	98
W2843	MassDEP	E. coli	07/10/19	09/16/19	6	4	650	29

Station MASSDEP_W1061 - Escherichia coli

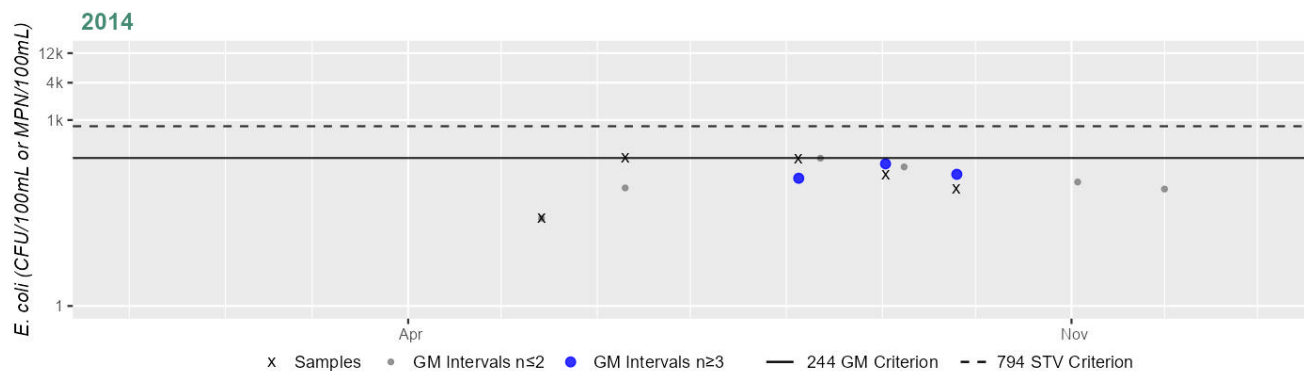
Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



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

Station MASSDEP_W1579 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	108
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

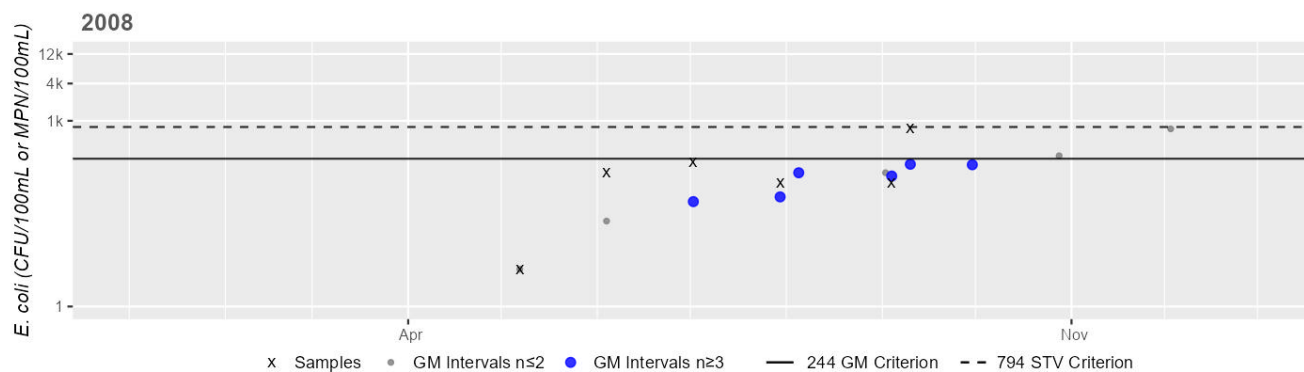
Current (2011-2022)

0%

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

Station MASSDEP_W1795 - *Escherichia coli*

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



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

Cumulative %GMI Exceedance

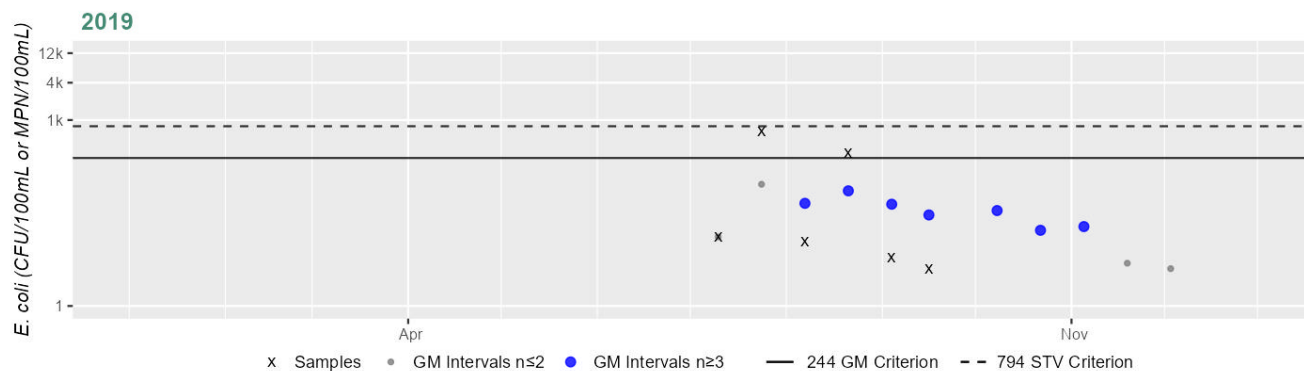
Historic (1997-2010)

0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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_W2843 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	29
#GMI	7
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

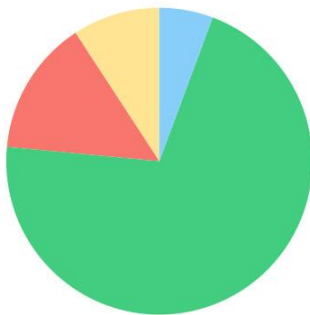
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
 %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
 "Recent 5 Years" may not be consecutive as the analysis excludes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

Mill River (MA34-25)

Location:	Headwaters, outlet Factory Hollow Pond, Amherst to mouth at inlet Lake Warner, Hadley.
AU Type:	RIVER
AU Size:	5.2 MILES
Classification/Qualifier:	B

Mill River (MA34-25)

Watershed Area: 30.04 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	30.04	11.21	9.22	2.49
Agriculture	9.2%	21.9%	6.3%	18.8%
Developed	14.3%	29.7%	7.7%	16.9%
Natural	70.8%	40.4%	75.3%	44.7%
Wetland	5.7%	7.9%	10.7%	19.6%
Impervious	7%	15.4%	3.7%	8.5%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	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 Mill River (MA34-25) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO
2024/26 Use Attainment Summary	
The Aesthetics Use for Mill River (MA34-25) continues to be assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station close to the downstream end of this Mill River AU at Mill River Lane, Hadley (W1050) in summer 2019 (n=8). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff once noted grey water color.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1050	MassDEP	Water Quality	Mill River	[Mill River Lane, Hadley]	42.386399	-72.550393

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
W1050	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W1050 on Mill River (MA34-25) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted grey water color (n=1).

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
W1050	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1050	Mill River	2019	Aesthetics Impaired?	No	8	8
W1050	Mill River	2019	Aquatic Plant Density, Overall	None	6	8
W1050	Mill River	2019	Aquatic Plant Density, Overall	Sparse	2	8
W1050	Mill River	2019	Color	Greyish	1	8
W1050	Mill River	2019	Color	Light Yellow/Tan	3	8
W1050	Mill River	2019	Color	None	4	8
W1050	Mill River	2019	Objectionable Deposits	No	8	8
W1050	Mill River	2019	Odor	None	8	8
W1050	Mill River	2019	Periphyton Density, Filamentous	None	7	8
W1050	Mill River	2019	Periphyton Density, Filamentous	Sparse	1	8
W1050	Mill River	2019	Periphyton Density, Film	None	8	8
W1050	Mill River	2019	Scum	No	8	8
W1050	Mill River	2019	Turbidity	Moderately Turbid	1	8
W1050	Mill River	2019	Turbidity	None	4	8
W1050	Mill River	2019	Turbidity	Slightly Turbid	3	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for the Mill River (MA34-25) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2019. MassDEP staff collected <i>E. coli</i> bacteria samples close to the downstream end of the Mill River at W1050 [Mill River Lane, Hadley] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W1050 indicated 100% of intervals had GMs >126 CFU/100ml, 2 samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 352 CFU/100ml. <i>E. coli</i> data from W1050 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1050	MassDEP	Water Quality	Mill River	[Mill River Lane, Hadley]	42.386399	-72.550393

Bacteria Data

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

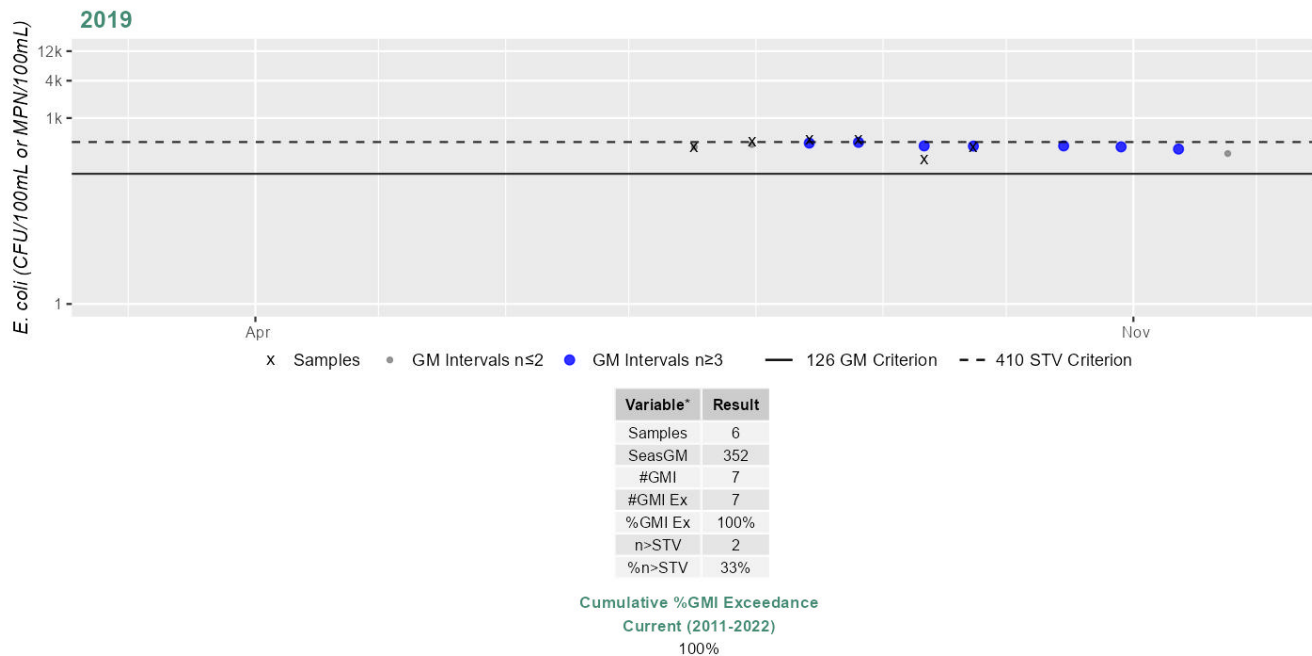
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1050	MassDEP	E. coli	07/17/19	09/23/19	6	210	440	352

Station MASSDEP_W1050 - *Escherichia coli*

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



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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for the Mill River (MA34-25) 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 1 station in 2019. MassDEP staff collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) close to the downstream end of the Mill River at W1050 [Mill River Lane, Hadley] in 2003 and 2008 (historic n=6/yr) and Jul-Sep 2019 (current n=6). Since bacteria data from the historic IR window are indicative of poor water quality conditions, only the analysis from the current IR window will be summarized here: Analysis of the single year limited frequency <i>E. coli</i> dataset from W1050 indicated 100% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 352 CFU/100ml. <i>E. coli</i> data from W1050 are indicative of an <i>Escherichia Coli</i> (<i>E. Coli</i>) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1050	MassDEP	Water Quality	Mill River	[Mill River Lane, Hadley]	42.386399	-72.550393

Bacteria Data

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

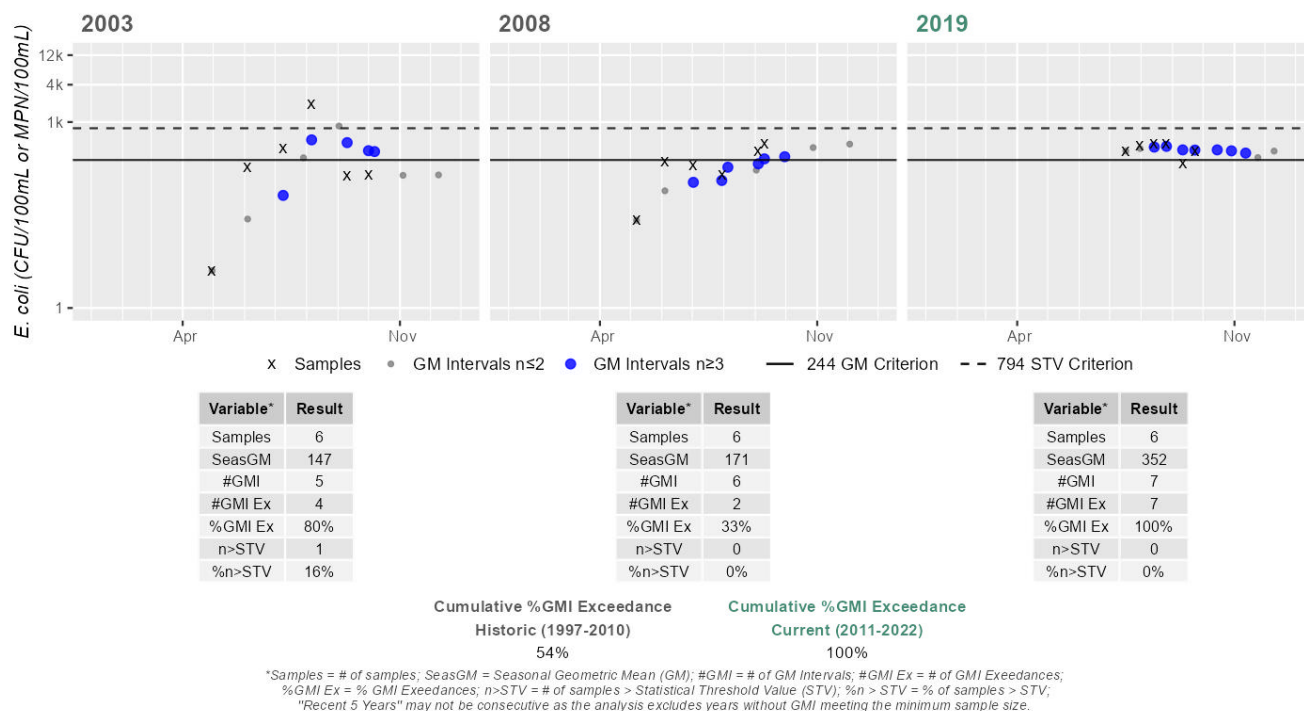
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1050	MassDEP	E. coli	04/30/03	10/01/03	6	4	1950	147
W1050	MassDEP	E. coli	05/06/08	09/09/08	6	26	440	171
W1050	MassDEP	E. coli	07/17/19	09/23/19	6	210	440	352

Station MASSDEP_W1050 - Escherichia coli

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



Location:	Headwaters (confluence of East and West Branch Mill River, Williamsburg), to outlet Paradise Pond, Northampton.
AU Type:	RIVER
AU Size:	10 MILES
Classification/Qualifier:	B

Watershed Area: 54.41 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	54.41	4.59	14.38	1.25
Agriculture	3.6%	8%	3.8%	7%
Developed	7.7%	32.3%	8.3%	22.3%
Natural	84.3%	53%	78.2%	55.1%
Wetland	4.4%	6.8%	9.7%	15.5%
Impervious	3.6%	18.2%	4.1%	11.7%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed

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

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Escherichia Coli (E. Coli)	TMDL approved or established by EPA (4a)	Impairment covered under TMDL: Massachusetts Statewide TMDL for Pathogen-Impaired Waterbodies (Report CN 515.1, approved 2/13/2024, ATTAINS Action ID: R1_MA_2024_04)

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No
2024/26 Use Attainment Summary	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Mill River (MA34-28) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO
2024/26 Use Attainment Summary	
The Aesthetics Use for Mill River (MA34-28) continues to be assessed as as Fully Supporting. MassDEP staff recorded aesthetics observations at one station about three-quarters of the way down this Mill River AU at Clement Street, Northampton (W1796) during summer 2019 (n=8). 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
W1796	MassDEP	Water Quality	Mill River	[Clement Street, Northampton]	42.318993	-72.665141

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
W1796	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W1796 on Mill River (MA34-28) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W1796	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1796	Mill River	2019	Aesthetics Impaired?	No	8	8
W1796	Mill River	2019	Aquatic Plant Density, Overall	None	8	8
W1796	Mill River	2019	Color	Light Yellow/Tan	2	8
W1796	Mill River	2019	Color	None	6	8
W1796	Mill River	2019	Objectionable Deposits	No	8	8
W1796	Mill River	2019	Odor	None	8	8
W1796	Mill River	2019	Periphyton Density, Filamentous	None	8	8
W1796	Mill River	2019	Periphyton Density, Film	Moderate	1	8
W1796	Mill River	2019	Periphyton Density, Film	None	2	8
W1796	Mill River	2019	Periphyton Density, Film	Sparse	5	8
W1796	Mill River	2019	Scum	No	8	8
W1796	Mill River	2019	Turbidity	None	7	8
W1796	Mill River	2019	Turbidity	Slightly Turbid	1	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for the Mill River (MA34-28) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 5 stations in 2018-2022. Connecticut River Conservancy (CRC) and MassDEP staff/volunteers collected *E. coli* bacteria samples in the Mill River from 2012-2022 at 5 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to halfway down at CRC_MA-MRN_09.7 [Chartpak Dam, Northampton] from Jun-Oct 2022 (n=17), and CRC_MRLD [Cooks Dam, Northampton] from 2020-2021 (n=6-18/yr), close to the downstream end of the AU at W1796 [Clement St, Northampton] from Jul-Sep 2019 (n=6), CRC_MRNH [Hinckley] from 2021-2022 (n=12-16/yr), and CRC_MRN9 [Mill River, Along Smith College path, Northampton] from 2012-2022 (n=16-19/yr). *E. coli* data from CRC_MA-MRN_09.7, CRC_MRLD, W1796, CRC_MRNH, and CRC_MRN9 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_MA-MRN_09.7	Connecticut River Conservancy	Water Quality	Mill River	Chartpak Dam, Northampton	42.355417	-72.700423
CRC_MRLD	Connecticut River Conservancy	Water Quality	Mill River	Cooks Dam, Northampton	42.347635	-72.701076
CRC_MRN9	Connecticut River Conservancy	Water Quality	Mill River	Mill River, Along Smith College path, Northampton	42.317161	-72.650227
CRC_MRNH	Connecticut River Conservancy	Water Quality	Mill River	Hinckley	42.321764	-72.660588
W1796	MassDEP	Water Quality	Mill River	[Clement Street, Northampton]	42.318993	-72.665141

Bacteria Data

Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 2) (MassDEP Undated 7) (MassDEP Undated 4)

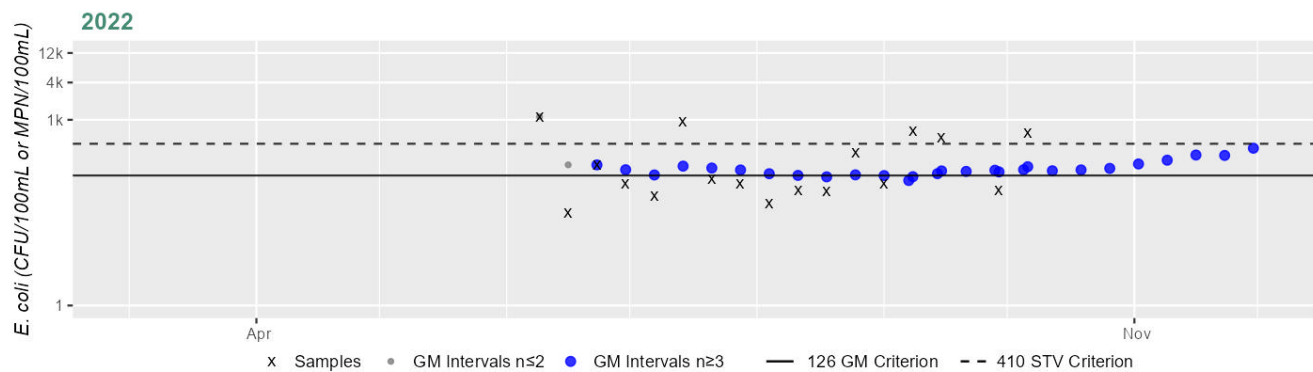
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MA-MRN_09.7	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	17	31	1119	159
CRC_MRLD	Connecticut River Conservancy	E. coli	08/06/20	09/17/20	6	47	290	134
CRC_MRLD	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	31	2419	175
CRC_MRN9	Connecticut River Conservancy	E. coli	05/31/12	10/04/12	19	90	2419	259
CRC_MRN9	Connecticut River Conservancy	E. coli	05/30/13	10/03/13	19	73	770	200
CRC_MRN9	Connecticut River Conservancy	E. coli	05/29/14	10/02/14	19	59	2419	295

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MRN9	Connecticut River Conservancy	E. coli	05/28/15	10/01/15	19	78	2419	279
CRC_MRN9	Connecticut River Conservancy	E. coli	06/02/16	10/06/16	19	98	1986	342
CRC_MRN9	Connecticut River Conservancy	E. coli	06/01/17	10/05/17	19	62	1986	249
CRC_MRN9	Connecticut River Conservancy	E. coli	05/31/18	09/27/18	18	103	2419	332
CRC_MRN9	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	19	73	2419	351
CRC_MRN9	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	69	2419	314
CRC_MRN9	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	35	2419	328
CRC_MRN9	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	16	130	2419	416
CRC_MRNH	Connecticut River Conservancy	E. coli	07/15/21	10/07/21	12	43	1553	199
CRC_MRNH	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	16	36	2419	216
W1796	MassDEP	E. coli	07/10/19	09/16/19	6	91	2419	208

Station CRC_MA-MRN_09.7 - Escherichia coli

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



Variable*	Result
Samples	17
SeasGM	159
#GMI	29
#GMI Ex	25
%GMI Ex	86%
n>STV	5
%n>STV	29%

Cumulative %GMI Exceedance

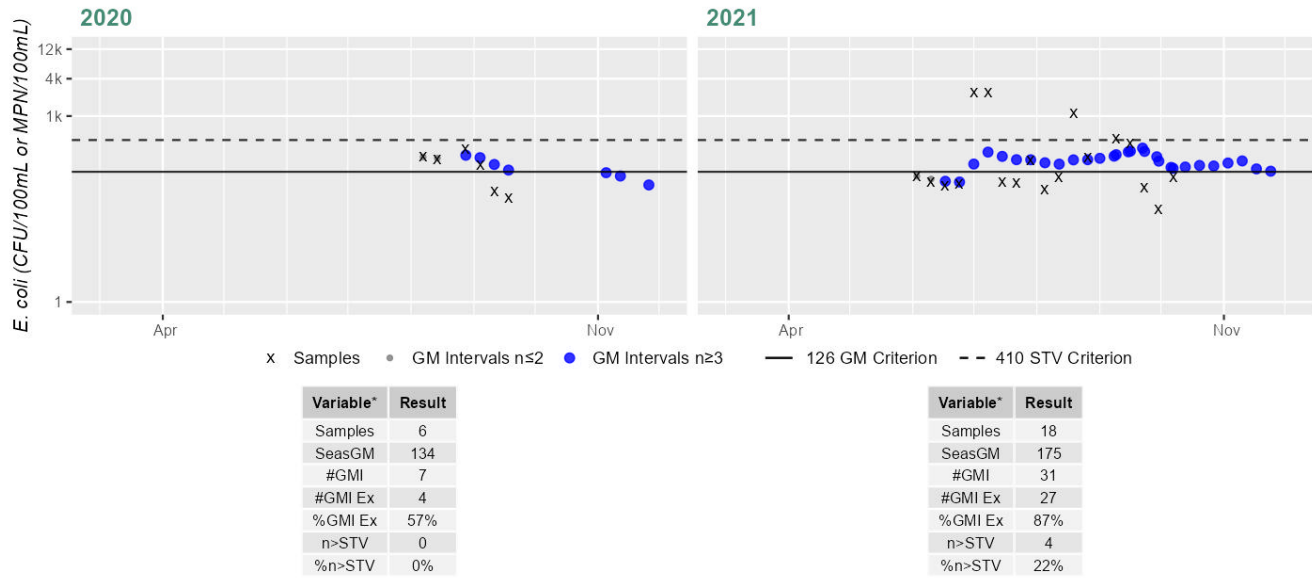
Current (2011-2022)

86%

*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 CRC_MRLD - Escherichia coli

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



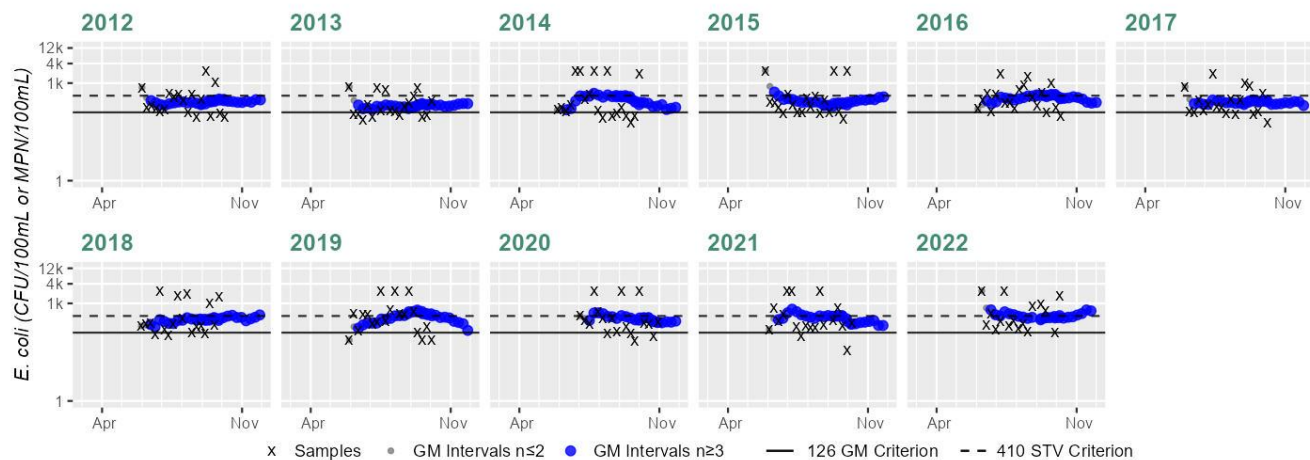
Cumulative %GMI Exceedance
Current (2011-2022)

81%

*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 CRC_MRN9 - Escherichia coli

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



Variable*	Result
Samples	19
SeasGM	259
#GMI	33
#GMI Ex	33
%GMI Ex	100%
n>STV	6
%n>STV	31%

Variable*	Result
Samples	19
SeasGM	200
#GMI	33
#GMI Ex	33
%GMI Ex	100%
n>STV	4
%n>STV	21%

Variable*	Result
Samples	19
SeasGM	295
#GMI	33
#GMI Ex	33
%GMI Ex	100%
n>STV	6
%n>STV	31%

Variable*	Result
Samples	19
SeasGM	279
#GMI	33
#GMI Ex	33
%GMI Ex	100%
n>STV	4
%n>STV	21%

Variable*	Result
Samples	19
SeasGM	342
#GMI	33
#GMI Ex	33
%GMI Ex	100%
n>STV	8
%n>STV	42%

Variable*	Result
Samples	19
SeasGM	249
#GMI	33
#GMI Ex	33
%GMI Ex	100%
n>STV	5
%n>STV	26%

Variable*	Result
Samples	18
SeasGM	332
#GMI	31
#GMI Ex	31
%GMI Ex	100%
n>STV	5
%n>STV	27%

Variable*	Result
Samples	19
SeasGM	351
#GMI	33
#GMI Ex	31
%GMI Ex	93%
n>STV	10
%n>STV	52%

Variable*	Result
Samples	18
SeasGM	314
#GMI	31
#GMI Ex	31
%GMI Ex	100%
n>STV	5
%n>STV	27%

Variable*	Result
Samples	18
SeasGM	328
#GMI	31
#GMI Ex	30
%GMI Ex	96%
n>STV	6
%n>STV	33%

Variable*	Result
Samples	16
SeasGM	416
#GMI	27
#GMI Ex	27
%GMI Ex	100%
n>STV	7
%n>STV	43%

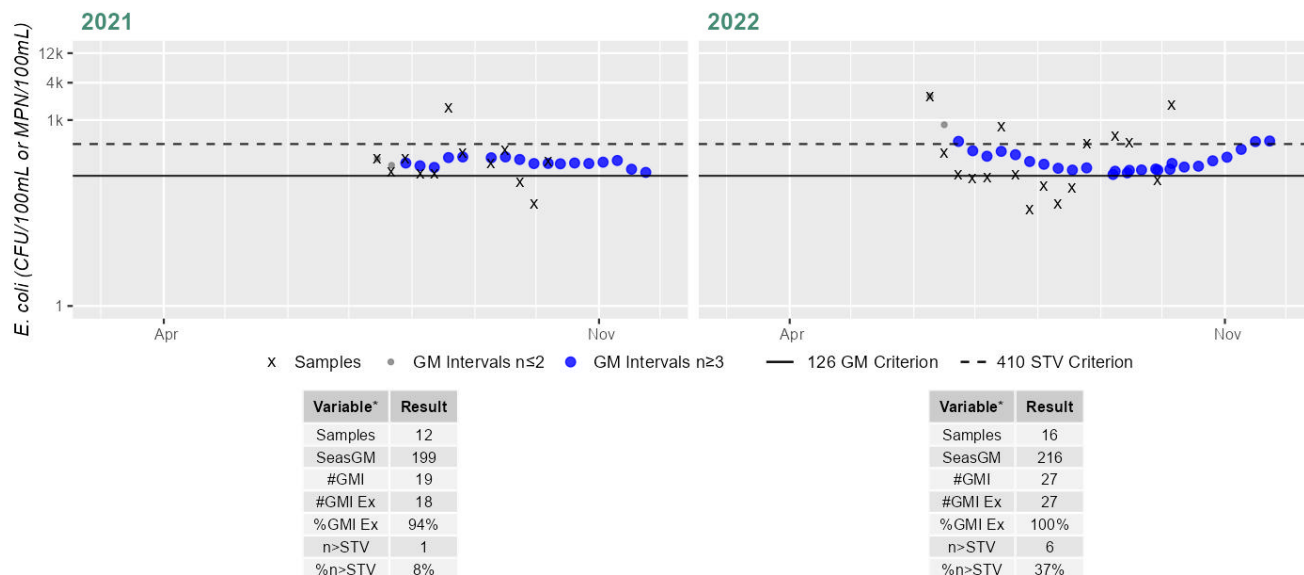
Cumulative %GMI Exceedance
 Current (2011-2022)
 99%

Cumulative %GMI Exceedance
 Current (Recent 5 Years)
 98%

*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 CRC_MRNH - *Escherichia coli*

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



Cumulative %GMI Exceedance

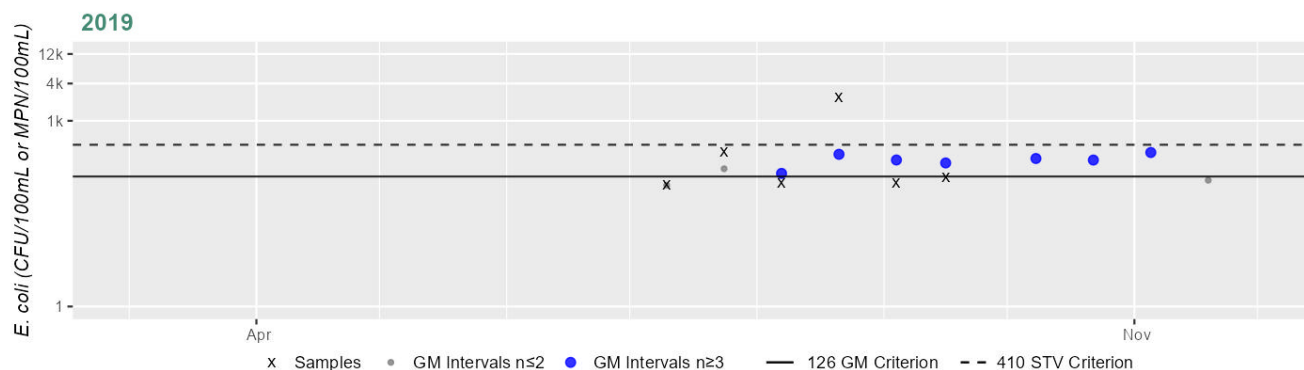
Current (2011-2022)

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.

Station MASSDEP_W1796 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	208
#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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for the Mill River (MA34-28) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 2 stations in 2018-2022. Connecticut River Conservancy (CRC) and MassDEP staff/volunteers collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Mill River from 2003-2022 at 6 stations. Samples were collected from the following stations/sample years from upstream to downstream: close to halfway down at CRC_MA-MRN_09.7 [Chartpak Dam, Northampton] from Jun-Oct 2022 (n=17), and CRC_MRLD [Cooks Dam, Northampton] from 2020-2021 (n=6-18/yr), close to the downstream end of the AU at W1796 [Clement St, Northampton] from May-Sep 2008 (historic n=6) and Jul-Sep 2019 (current n=6), CRC_MRNH [Hinckley] from 2021-2022 (n=12-16/yr), and W1059 [~1 mile downstream of Clement St (location of USGS gage 01171500 prior to October 2002), Northampton] from Apr-Oct 2003 (n=6), CRC_MRN9 [Mill River, Along Smith College path, Northampton] from 2012-2022 (n=16-19/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 high frequency <i>E. coli</i> dataset from CRC_MA-MRN_09.7 indicated 13% of intervals had GMs >244 CFU/100ml and 11% of samples exceeded the 794 CFU/100ml STV. Analysis of the multi-year high frequency <i>E. coli</i> dataset from CRC_MRLD indicated 1 out of 2 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml (2021, 16%), 1 yr had >10% of samples exceed the 794 CFU/100ml STV (2021, 16%), and cumulatively across years 13% of intervals had GMs >244 CFU/100ml. Analysis of the single year limited frequency <i>E. coli</i> dataset from W1796 indicated 42% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV (2,419 CFU) and the overall GM was 208 CFU/100ml. Analysis of the multi-year high frequency <i>E. coli</i> dataset from CRC_MRNH indicated 2 out of 2 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml (2021 and 2022, 21 & 37%), and while only 1 yr had >10% of samples exceed the 794 CFU/100ml STV (2022, 12%), cumulatively across years 30% of intervals had GMs >244 CFU/100ml. Analysis of the recent five years of this multi-year high frequency <i>E. coli</i> dataset from CRC_MRN9 indicated 5 out of 5 sufficient data yrs had intervals where >10% of the GMs were >244 CFU/100ml (2018-2022, 77-100%), 5 yrs had >10% of samples exceed the 794 CFU/100ml STV (2018-2022, 15-31%), and cumulatively across years 86% of intervals had GMs >244 CFU/100ml. <i>E. coli</i> data from W1796 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. While <i>E. coli</i> data from CRC_MA-MRN_09.7 and CRC_MRLD meet 2024 CALM guidance, <i>E. coli</i> data from CRC_MRNH and CRC_MRN9 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_MA-MRN_09.7	Connecticut River Conservancy	Water Quality	Mill River	Leeds Dam, Northampton – Chartpak Dam	42.355417	-72.700423
CRC_MRLD	Connecticut River Conservancy	Water Quality	Mill River	Leeds Dam, Northampton – Cooks Dam	42.347635	-72.701076
CRC_MRN9	Connecticut River Conservancy	Water Quality	Mill River	Mill River, Along Smith College path, Northampton	42.317161	-72.650227
CRC_MRNH	Connecticut River Conservancy	Water Quality	Mill River	Hinckley	42.321764	-72.660588
W1059	MassDEP	Water Quality	Mill River	[approximately 1 mile downstream of Clement Street (location of USGS gage 01171500 prior to October 2002), Northampton]	42.318403	-72.655571
W1796	MassDEP	Water Quality	Mill River	[Clement Street, Northampton]	42.318993	-72.665141

Bacteria Data

Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 1) (MassDEP Undated 7) (MassDEP Undated 3)

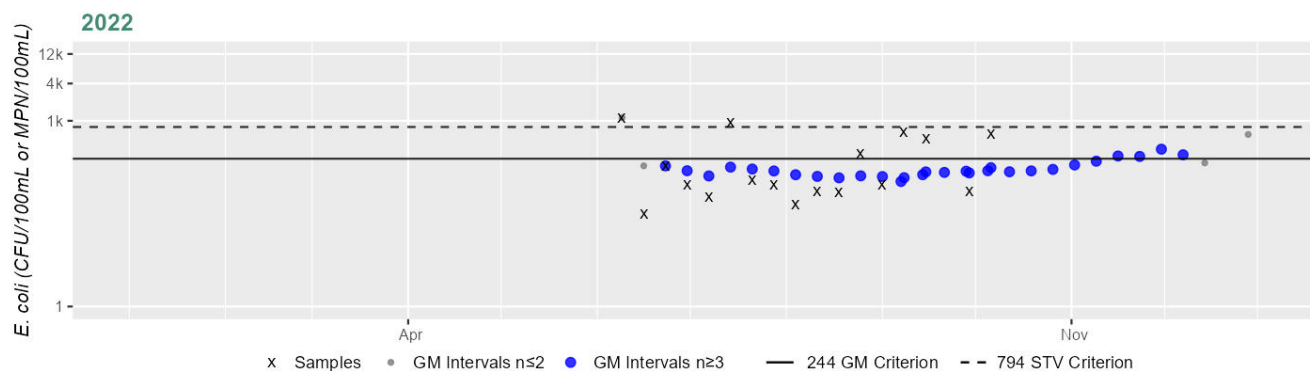
[Result units are CFU/100mL or MPN/100mL]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MA-MRN_09.7	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	17	31	1119	159
CRC_MRLD	Connecticut River Conservancy	E. coli	08/06/20	09/17/20	6	47	290	134
CRC_MRLD	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	31	2419	175
CRC_MRN9	Connecticut River Conservancy	E. coli	05/31/12	10/04/12	19	90	2419	259
CRC_MRN9	Connecticut River Conservancy	E. coli	05/30/13	10/03/13	19	73	770	200
CRC_MRN9	Connecticut River Conservancy	E. coli	05/29/14	10/02/14	19	59	2419	295
CRC_MRN9	Connecticut River Conservancy	E. coli	05/28/15	10/01/15	19	78	2419	279
CRC_MRN9	Connecticut River Conservancy	E. coli	06/02/16	10/06/16	19	98	1986	342
CRC_MRN9	Connecticut River Conservancy	E. coli	06/01/17	10/05/17	19	62	1986	249
CRC_MRN9	Connecticut River Conservancy	E. coli	05/31/18	09/27/18	18	103	2419	332

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MRN9	Connecticut River Conservancy	E. coli	05/30/19	10/03/19	19	73	2419	351
CRC_MRN9	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	18	69	2419	314
CRC_MRN9	Connecticut River Conservancy	E. coli	06/03/21	10/07/21	18	35	2419	328
CRC_MRN9	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	16	130	2419	416
CRC_MRNH	Connecticut River Conservancy	E. coli	07/15/21	10/07/21	12	43	1553	199
CRC_MRNH	Connecticut River Conservancy	E. coli	06/09/22	10/06/22	16	36	2419	216
W1059	MassDEP	E. coli	04/30/03	10/01/03	6	3	1180	133
W1796	MassDEP	E. coli	05/06/08	09/09/08	6	4	2900	71
W1796	MassDEP	E. coli	07/10/19	09/16/19	6	91	2419	208

Station CRC_MA-MRN_09.7 - Escherichia coli

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



Variable*	Result
Samples	17
SeasGM	159
#GMI	29
#GMI Ex	4
%GMI Ex	13%
n>STV	2
%n>STV	11%

Cumulative %GMI Exceedance

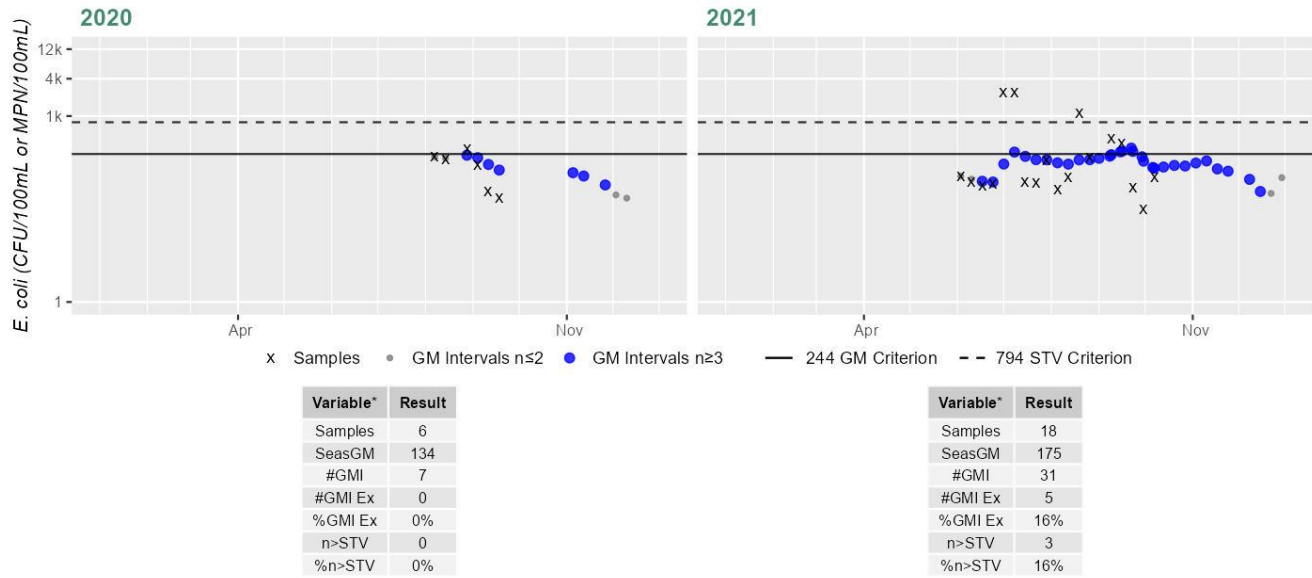
Current (2011-2022)

13%

*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 CRC_MRLD - Escherichia coli

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



Cumulative %GMI Exceedance

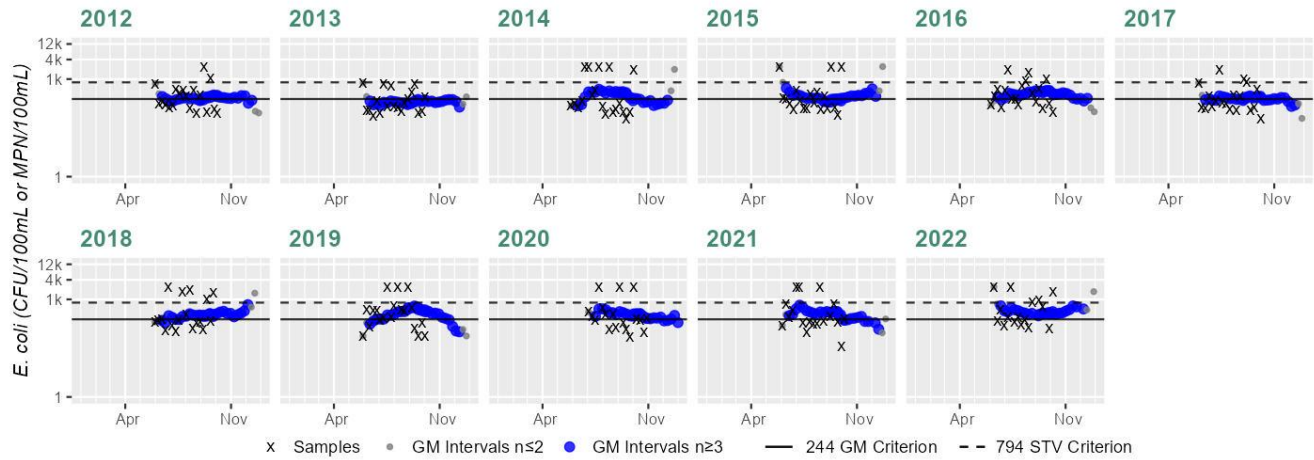
Current (2011-2022)

13%

*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 CRC_MRN9 - Escherichia coli

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



Variable*	Result
Samples	19
SeasGM	259
#GMI	33
#GMI Ex	24
%GMI Ex	72%
n>STV	2
%n>STV	10%

Variable*	Result
Samples	19
SeasGM	200
#GMI	33
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	19
SeasGM	295
#GMI	33
#GMI Ex	21
%GMI Ex	63%
n>STV	5
%n>STV	26%

Variable*	Result
Samples	19
SeasGM	279
#GMI	33
#GMI Ex	24
%GMI Ex	72%
n>STV	3
%n>STV	15%

Variable*	Result
Samples	19
SeasGM	342
#GMI	33
#GMI Ex	30
%GMI Ex	90%
n>STV	4
%n>STV	21%

Variable*	Result
Samples	19
SeasGM	249
#GMI	33
#GMI Ex	20
%GMI Ex	60%
n>STV	3
%n>STV	15%

Variable*	Result
Samples	18
SeasGM	332
#GMI	31
#GMI Ex	27
%GMI Ex	87%
n>STV	5
%n>STV	27%

Variable*	Result
Samples	19
SeasGM	351
#GMI	33
#GMI Ex	27
%GMI Ex	81%
n>STV	3
%n>STV	15%

Variable*	Result
Samples	18
SeasGM	314
#GMI	31
#GMI Ex	27
%GMI Ex	87%
n>STV	3
%n>STV	16%

Variable*	Result
Samples	18
SeasGM	328
#GMI	31
#GMI Ex	24
%GMI Ex	77%
n>STV	3
%n>STV	16%

Variable*	Result
Samples	16
SeasGM	416
#GMI	27
#GMI Ex	27
%GMI Ex	100%
n>STV	5
%n>STV	31%

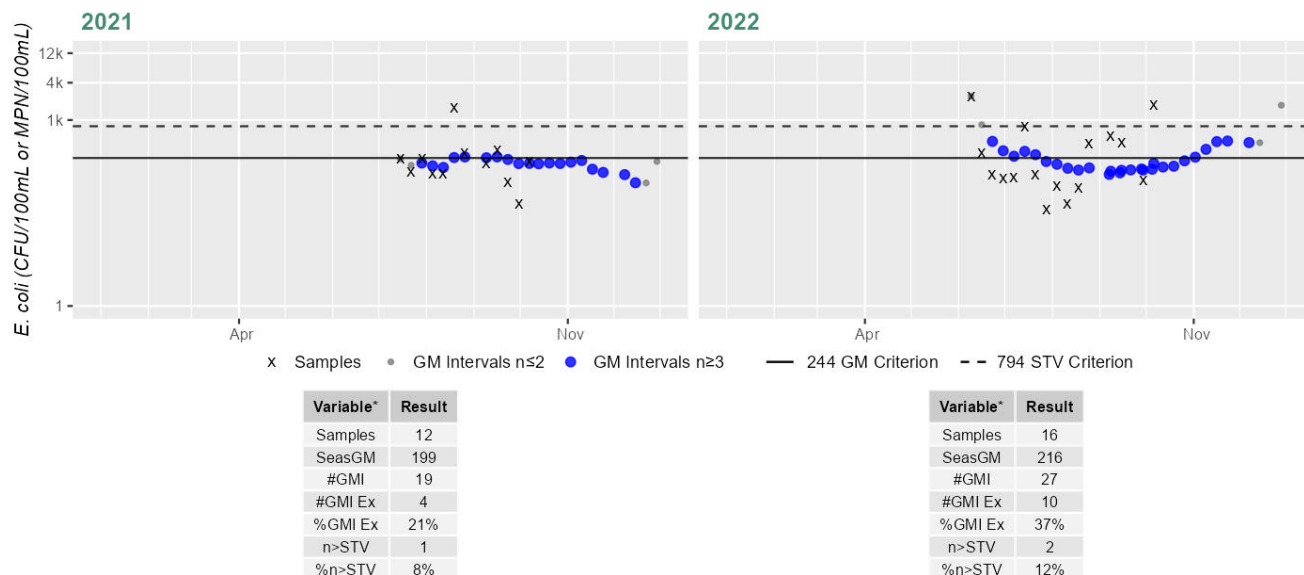
Cumulative %GMI Exceedance
Current (2011-2022)
71%

Cumulative %GMI Exceedance
Current (Recent 5 Years)
86%

*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 CRC_MRNH - *Escherichia coli*

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



Cumulative %GMI Exceedance

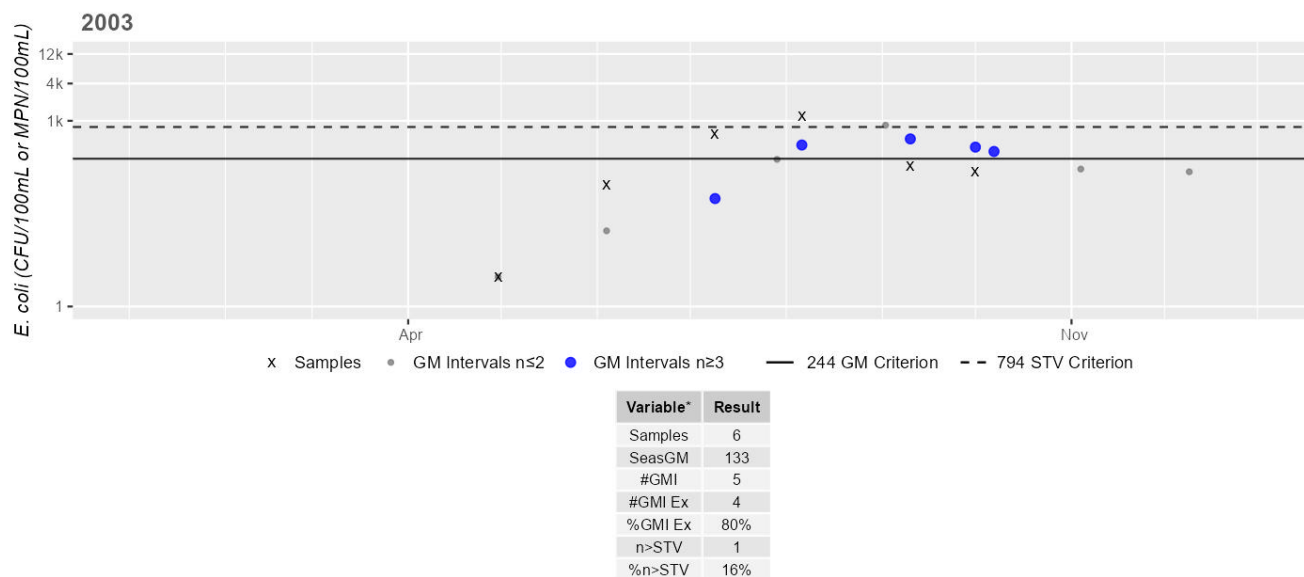
Current (2011-2022)

30%

*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_W1059 - *Escherichia coli*

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



Cumulative %GMI Exceedance

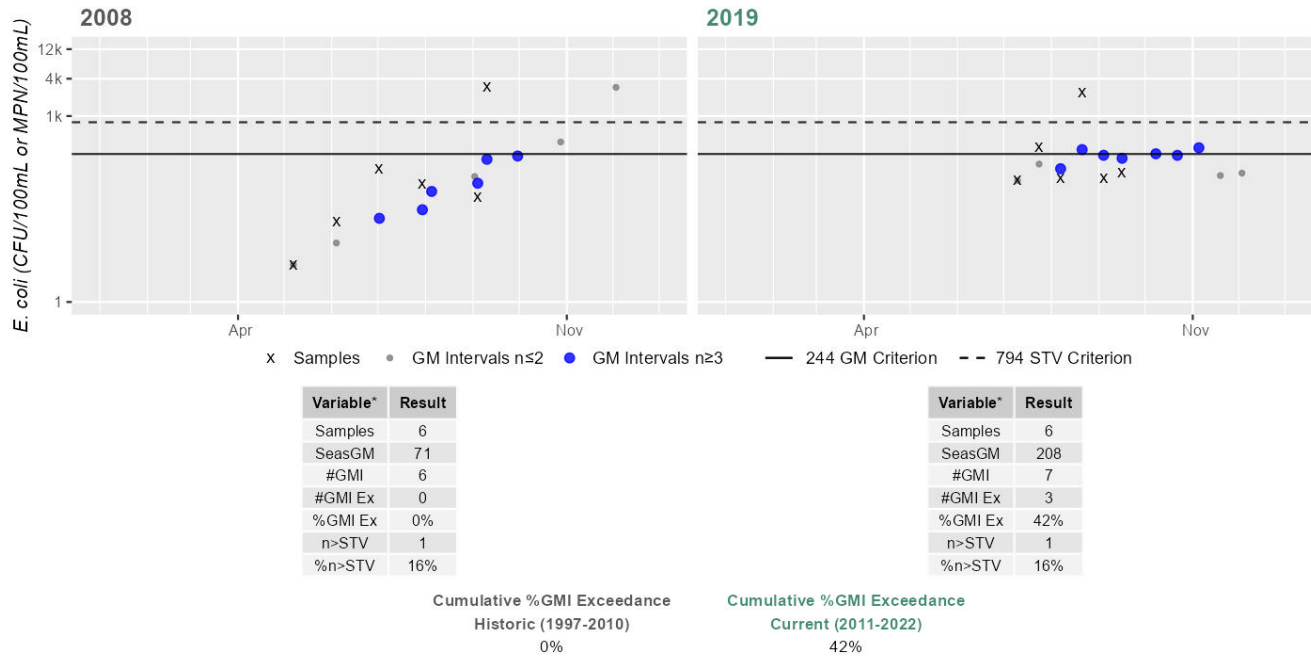
Historic (1997-2010)

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.

Station MASSDEP_W1796 - Escherichia coli

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



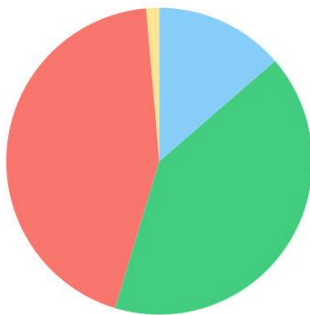
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
 %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
 "Recent 5 Years" may not be consecutive as the analysis excludes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

Mill River (MA34-29)

Location:	From Walnut Street, Springfield to mouth at confluence with Connecticut River, Springfield. (Interrupted stream).
AU Type:	RIVER
AU Size:	1.3 MILES
Classification/Qualifier:	B: CSO

Mill River (MA34-29)

Watershed Area: 33.72 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	33.72	4.79	7.55	1.10
Agriculture	1.4%	0%	1.4%	0%
Developed	44%	67.5%	27.2%	38.4%
Natural	41%	29%	43.3%	55.2%
Wetland	13.7%	3.5%	28.1%	6.5%
Impervious	22.6%	44.7%	13.6%	23.8%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Debris*)	--	Unchanged
5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
5	5	Odor	--	Unchanged
5	5	Trash	--	Unchanged

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

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

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Escherichia Coli (E. Coli)	TMDL approved or established by EPA (4a)	Impairment covered under TMDL: Massachusetts Statewide TMDL for Pathogen-Impaired Waterbodies (Report CN 515.1, approved 2/13/2024, ATTAINS Action ID: R1_MA_2024_04)

Recommendations

2024/26 Recommendations
2024/2026 IR [Turbidity, Medium] Conduct follow-up monitoring for turbidity in Mill River (MA34-29) at Station W1786 to confirm observations of moderate turbidity in 2019 approximately 225 feet upstream of Mill Street (opposite the intersection of Cherry Street and Clifton Avenue). {W1786}. 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 Mill River (MA34-29) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	YES

2024/26 Use Attainment Summary
<p>The Aesthetics Use for Mill River (MA34-29) continues to be assessed as Not Supporting with the prior impairments for Trash, Debris, and Odor carried forward. An Alert is being identified for Turbidity, since moderate turbidity was noted by field staff on five occasions at one station in 2019. MassDEP staff recorded aesthetics observations at one station in the upstream half of this Mill River AU ~225 feet upstream of Mill Street (opposite the intersection of Cherry Street and Clifton Avenue), Springfield (W1786) during summer 2019 (n=8). Field staff recorded a number of objectionable conditions at this location, including moderate turbidity (n=5), effluent odor on two occasions, sewage odor on one occasion and trash during all site visits (noted to be “heavy” on two occasions), with field staff raising an aesthetics flag due to the extent of the poor conditions they observed during four site visits.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1786	MassDEP	Water Quality	Mill River	[approximately 225 feet upstream of Mill Street (opposite the intersection of Cherry Street and Clifton Avenue), Springfield]	42.094128	-72.569115

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
W1786	2019	8	<p>Aesthetic observations were made by MassDEP field sampling crews at Station W1786 on Mill River (MA34-29) during 8 site visits between May 2019 and Sep 2019. Field staff recorded the following objectionable conditions: an aesthetics impairment flag (n=4). Other objectionable conditions included effluent or sewage odor (n=3). Field staff also noted grey water color (n=1), moderate turbidity (n=5), objectionable deposits (n=8), and abundant trash (n=2). These observations are indicative of an Aesthetics Use impairment.</p>

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
W1786	2019	8	7	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1786	Mill River	2019	Aesthetics Impaired?	No	4	8
W1786	Mill River	2019	Aesthetics Impaired?	Yes	4	8
W1786	Mill River	2019	Aquatic Plant Density, Overall	None	5	8
W1786	Mill River	2019	Aquatic Plant Density, Overall	Sparse	2	8
W1786	Mill River	2019	Aquatic Plant Density, Overall	Unobservable	1	8
W1786	Mill River	2019	Color	Brownish	1	8
W1786	Mill River	2019	Color	Greyish	1	8
W1786	Mill River	2019	Color	Light Yellow/Tan	5	8
W1786	Mill River	2019	Color	None	1	8
W1786	Mill River	2019	Objectionable Deposits	Yes	8	8
W1786	Mill River	2019	Odor	Effluent (Treated)	2	8
W1786	Mill River	2019	Odor	None	5	8
W1786	Mill River	2019	Odor	Raw sewage	1	8
W1786	Mill River	2019	Periphyton Density, Filamentous	Moderate	1	8
W1786	Mill River	2019	Periphyton Density, Filamentous	None	4	8
W1786	Mill River	2019	Periphyton Density, Filamentous	Sparse	2	8
W1786	Mill River	2019	Periphyton Density, Filamentous	Unobservable	1	8
W1786	Mill River	2019	Periphyton Density, Film	None	5	8
W1786	Mill River	2019	Periphyton Density, Film	Sparse	2	8
W1786	Mill River	2019	Periphyton Density, Film	Unobservable	1	8
W1786	Mill River	2019	Scum	No	7	8
W1786	Mill River	2019	Scum	Yes	1	8
W1786	Mill River	2019	Turbidity	Moderately Turbid	5	8
W1786	Mill River	2019	Turbidity	Slightly Turbid	3	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for the Mill River (MA34-29) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on the presence of CSOs and bacteria data not meeting the threshold at 1 station in 2019. The prior Debris, Odor, and Trash impairments (from the Aesthetics Use) are being carried forward. There is a presumptive Escherichia Coli (E. Coli) impairment decision in place due to the presence of active CSO outfalls. MassDEP staff collected <i>E. coli</i> bacteria samples a third of the way down this Mill River AU at W1786 [~225 ft upstream of Mill St (opposite the intersection of Cherry St and Clifton Avenue), Springfield] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W1786 indicated 100% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 250 CFU/100ml. <i>E. coli</i> data from W1786 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1786	MassDEP	Water Quality	Mill River	[approximately 225 feet upstream of Mill Street (opposite the intersection of Cherry Street and Clifton Avenue), Springfield]	42.094128	-72.569115

Bacteria Data

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

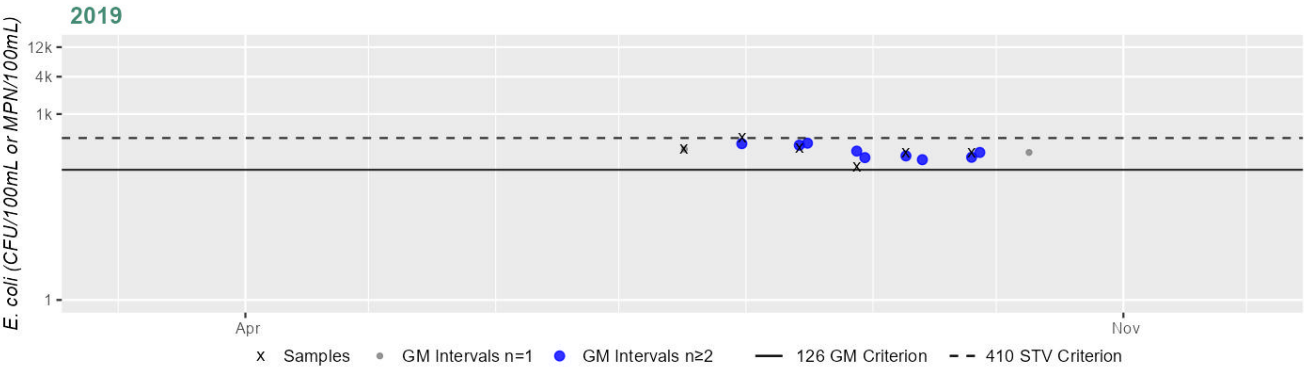
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1786	MassDEP	E. coli	07/17/19	09/25/19	6	140	410	250

Station MASSDEP_W1786 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	250
#GMI	9
#GMI Ex	9
%GMI Ex	100%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

100%

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

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 (MA34-29) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on the presence of CSOs and bacteria data not meeting the threshold at 1 station in 2010. The prior Debris, Odor, and Trash impairments (from the Aesthetics Use) are being carried forward. There is a presumptive Escherichia Coli (E. Coli) impairment decision in place due to the presence of active CSO outfalls. MassDEP and USGS staff collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Mill River (MA34-29) from 2008-2019 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: a third of the way down at the AU at USGS-01178000 [Mill River At Springfield] from Jul-Nov 2010 (historic n=4) and Mar 2011 (current n=1), and at W1786 [~225 ft upstream of Mill St (opposite the intersection of Cherry St and Clifton Avenue), Springfield] from May-Sep 2008 (historic n=6) and Jul-Sep 2019 (current n=6), the downstream end of the AU at USGS-420519072345701 [Mill River At Mouth, Springfield] from Oct-Nov 2010 (historic n=2) and Mar 2011 (current n=1). The available current *E. coli* data at USGS-01178000 are too limited to assess according to the 2024 CALM. However, analysis of the historic single year limited frequency *E. coli* dataset from USGS-01178000 indicated 100% of intervals had GMs >244 CFU/100ml, 2 samples exceeded the 794 CFU/100ml STV, and the overall GM was 486 CFU/100ml. Analysis of the current single year limited frequency *E. coli* dataset from W1786 indicated 71% of intervals had GMs >244 CFU/100ml, and while no samples exceeded the 794 CFU/100ml STV, the overall GM was 250 CFU/100ml. However, analysis of the historic single year limited frequency *E. coli* dataset from W1786 indicated 83% of intervals had GMs >244 CFU/100ml, 2 samples exceeded the 794 CFU/100ml STV, and the overall GM was 488 CFU/100ml. The available current and historic *E. coli* data at USGS-420519072345701 are both too limited to assess according to the 2024 CALM. Current *E. coli* data from USGS-01178000 and USGS-420519072345701 are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use. Current *E. coli* data from W1786 meet 2024 CALM guidance. Historic *E. coli* data from both USGS-01178000 and W1786 are indicative of an *E. coli* impairment. Overall, while recent data at W1786 indicated generally good conditions, data from station USGS-01178000 in the historic window (1997-2010) are indicative of an Escherichia Coli (E. Coli) impairment and there are no data in the current window (2011-2022) available to assess this location.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1786	MassDEP	Water Quality	Mill River	[approximately 225 feet upstream of Mill Street (opposite the intersection of Cherry Street and Clifton Avenue), Springfield]	42.094128	-72.569115
USGS-01178000	USGS Massachusetts Water Science Center	Water Quality	Mill River	Mill River At Springfield, MA	42.094261	-72.567033

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
USGS-420519072345701	USGS Massachusetts Water Science Center	Water Quality	Mill River	Mill River At Mouth, Springfield, MA	42.088822	-72.582539

Bacteria Data

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

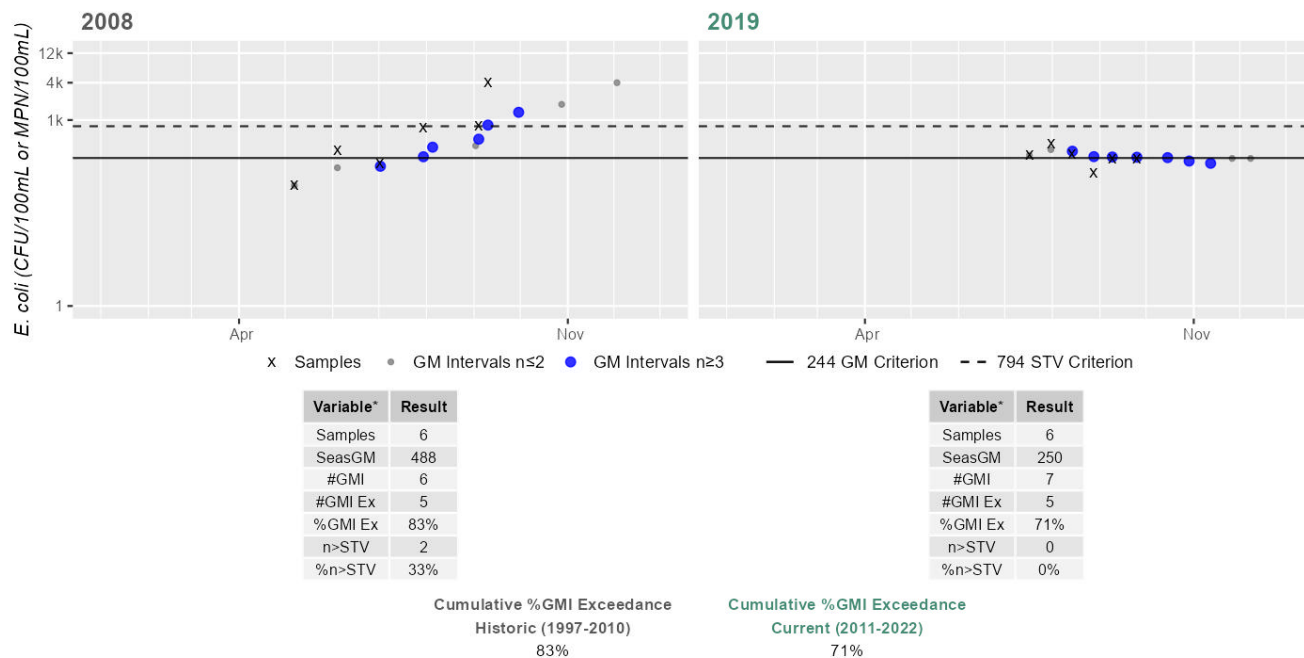
(MassDEP Undated 7) (MassDEP Undated 3) (USGS 2024) (MassDEP Undated 1)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W1786	MassDEP	E. coli	05/06/08	09/09/08	6	88	4000	488
W1786	MassDEP	E. coli	07/17/19	09/25/19	6	140	410	250
USGS-01178000	USGS Massachusetts Water Science Center	E. coli	07/28/10	11/02/10	4	78	2500	486
USGS-01178000	USGS Massachusetts Water Science Center	E. coli	03/17/11	03/17/11	1	160	160	159
USGS-420519072345701	USGS Massachusetts Water Science Center	E. coli	10/18/10	11/02/10	2	180	230	203
USGS-420519072345701	USGS Massachusetts Water Science Center	E. coli	03/17/11	03/17/11	1	160	160	159

Station MASSDEP_W1786 - Escherichia coli

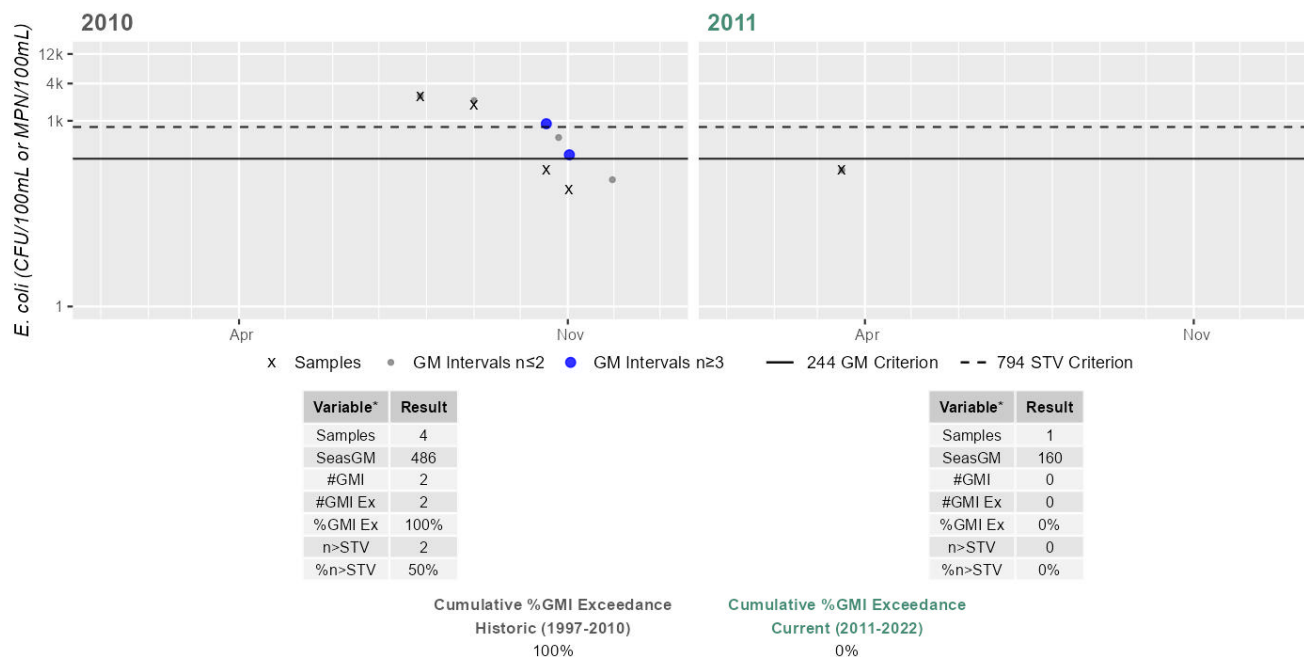
Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



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

Station USGS-01178000 - Escherichia coli

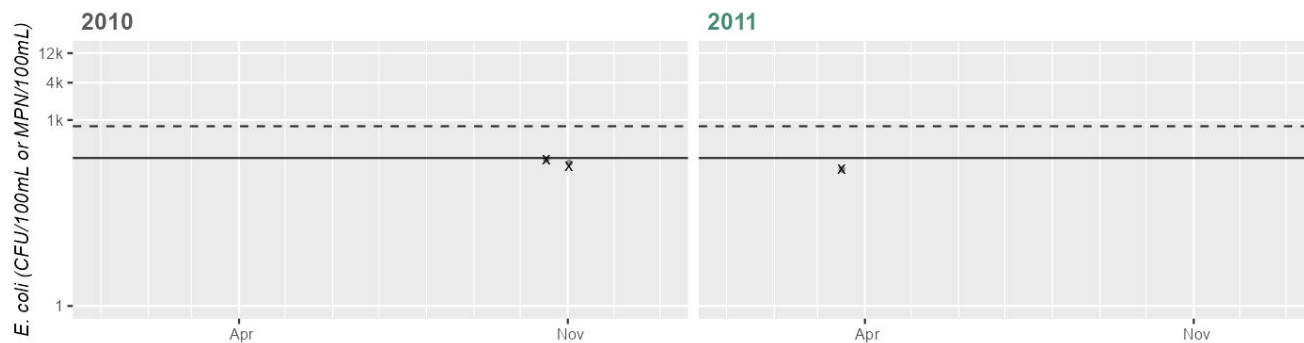
Daily Maximum Samples & 90 Day Geometric Means within the Secondary Contact Recreation Season



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

Station USGS-420519072345701 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	203
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Variable*	Result
Samples	1
SeasGM	160
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

Cumulative %GMI Exceedance
Current (2011-2022)
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.

Mill River Diversion (MA34-32)

Location:	Headwaters, outlet Paradise Pond, Northampton to mouth at confluence with Oxbow (east of Old Springfield Road), Northampton (through former 2006 segment: Hulberts Pond MA34036).
AU Type:	RIVER
AU Size:	2.5 MILES
Classification/Qualifier:	B

Mill River Diversion (MA34-32)

Watershed Area: 57.08 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	57.08	5.00	15.07	1.39
Agriculture	4.1%	11.5%	4.1%	8.6%
Developed	8.4%	27%	8.7%	20.2%
Natural	82.5%	48.1%	76.5%	47.7%
Wetland	5%	13.4%	10.7%	23.6%
Impervious	4.1%	15.5%	4.4%	11.1%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	5	(Water Chestnut*)	--	Unchanged
4c	5	Escherichia Coli (E. Coli)	--	Added

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

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 Diversion (MA34-32) 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 Mill River Diversion (MA34-32) 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 Mill River Diversion (MA34-32) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2020. Connecticut River Conservancy (CRC) staff/volunteers collected *E. coli* bacteria samples about halfway down the Mill River Diversion at CRC_MRN10 [Rt. 10 Bridge, Northampton] from Jul-Oct 2020 (n=17). Analysis of the single year high frequency *E. coli* dataset from CRC_MRN10 indicated 100% of intervals had GMs >126 CFU/100ml and 29% of samples exceeded the 410 CFU/100ml STV. *E. coli* data from CRC_MRN10 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_MRN10	Connecticut River Conservancy	Water Quality	Mill River	Route 10 Bridge, Northampton	42.305966	-72.646477

Bacteria Data

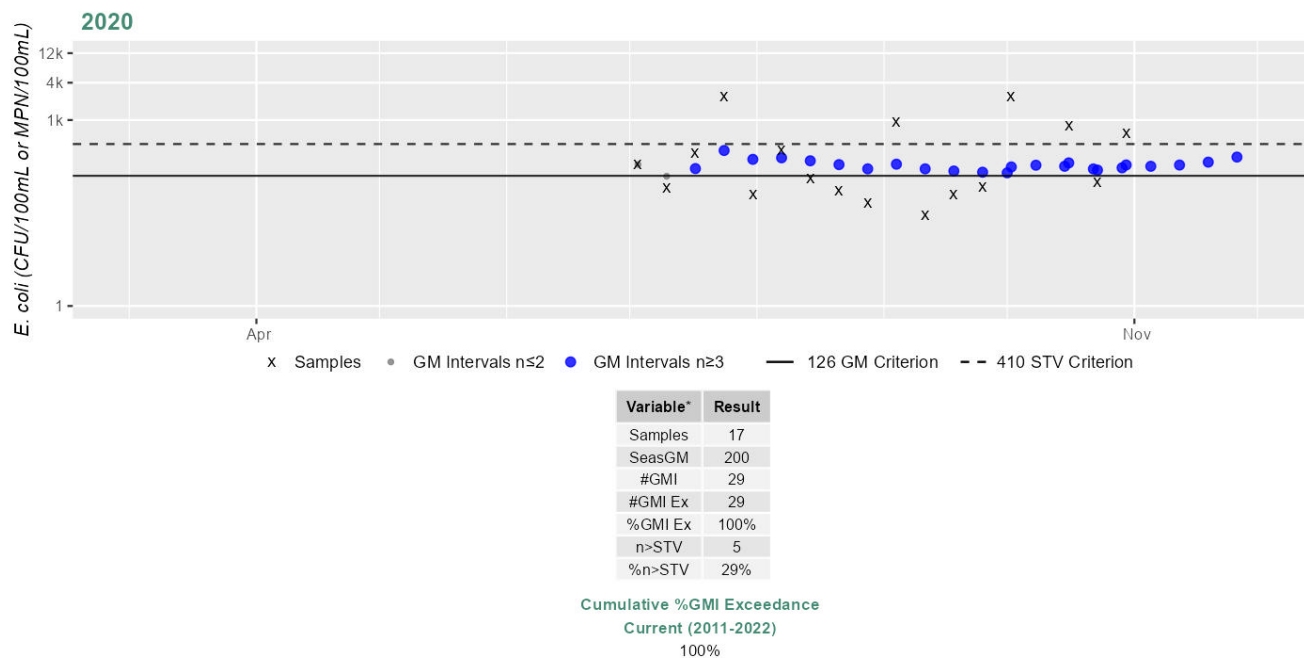
Bacteria Data Collected by MassDEP (2011-2020) and External Data Providers (2011-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 2)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
CRC_MRN10	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	17	28	2419	200

Station CRC_MRN10 - Escherichia coli

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



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

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 Diversion (MA34-32) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2020. Connecticut River Conservancy (CRC) staff/volunteers collected <i>E. coli</i> bacteria samples about halfway down the Mill River Diversion at CRC_MRN10 [Rt. 10 Bridge, Northampton] from Jul-Oct 2020 (n=17). Analysis of the single year high frequency <i>E. coli</i> dataset from CRC_MRN10 indicated 24% of intervals had GMs >244 CFU/100ml and 23% of samples exceeded the 794 CFU/100ml STV. <i>E. coli</i> data from CRC_MRN10 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
CRC_MRN10	Connecticut River Conservancy	Water Quality	Mill River	Route 10 Bridge, Northampton	42.305966	-72.646477

Bacteria Data

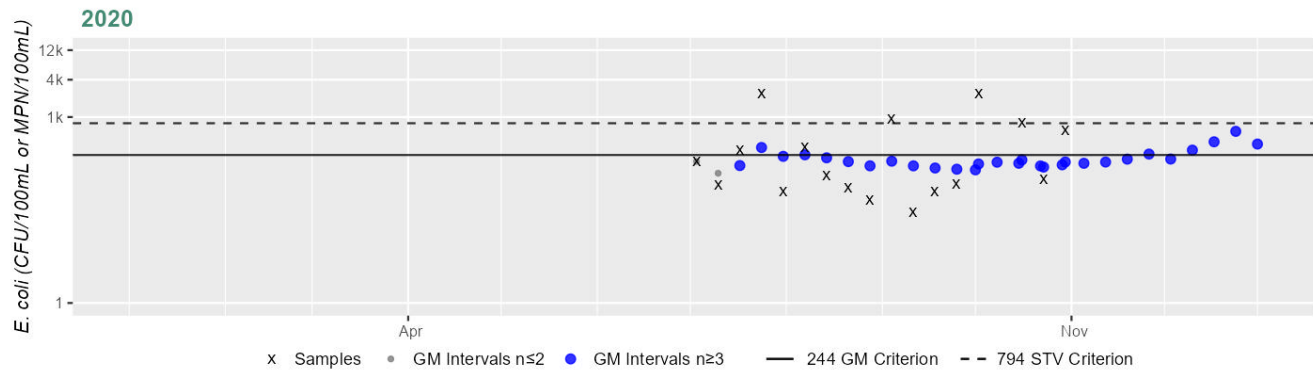
Bacteria Data Collected by MassDEP (1997-2020) and External Data Providers (1997-2022) (90-day Interval Analysis) (CRC 2023) (MassDEP Undated 1)

[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
CRC_MRN10	Connecticut River Conservancy	E. coli	07/02/20	10/29/20	17	28	2419	200

Station CRC_MRN10 - *Escherichia coli*

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



Variable*	Result
Samples	17
SeasGM	200
#GMI	29
#GMI Ex	7
%GMI Ex	24%
n>STV	4
%n>STV	23%

Cumulative %GMI Exceedance

Current (2011-2022)

24%

*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.

Millers Brook (MA34-90)

Location:	Headwaters southwest of Stratton Mountain, Northfield to mouth at confluence with the Connecticut River, Northfield.
AU Type:	RIVER
AU Size:	3.8 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Millers Brook (MA34-90) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Mohawk Brook (MA34-82)

Location:	Headwaters, outlet Greene Swamp, Sunderland to mouth at confluence with Connecticut River, Hadley.
AU Type:	RIVER
AU Size:	3.4 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Mohawk Brook (MA34-82) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

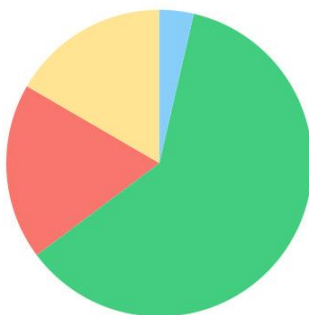
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

Moose Brook (MA34-17)

Location:	Headwaters, perennial portion, Southampton to mouth at confluence with Manhan River, Southampton.
AU Type:	RIVER
AU Size:	2.6 MILES
Classification/Qualifier:	B: CWF

Moose Brook (MA34-17)

Watershed Area: 2.69 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.69	2.69	0.53	0.53
Agriculture	16.6%	16.6%	12.6%	12.6%
Developed	18.6%	18.6%	14.1%	14.1%
Natural	61.1%	61.1%	63.7%	63.7%
Wetland	3.6%	3.6%	9.5%	9.5%
Impervious	6.1%	6.1%	2.3%	2.3%

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 Moose Brook (MA34-17) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
There are no data available to assess the status of the Aesthetics Use for this Moose Brook AU (MA34-17), so it 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 Moose Brook (MA34-17) 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 Moose Brook (MA34-17) 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 three-quarters of the way down Moose Brook at W1787 [Moose Brook Rd, Southampton] from May-Sep 2008 (n=6). Analysis of the historic single year limited frequency <i>E. coli</i> dataset from W1787 indicated 0% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV (4000 CFU) and the overall GM was 50 CFU/100ml. Historic <i>E. coli</i> data from W1787 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 a single STV exceedance of the threshold. Since these data were collected prior to the current IR window (2011-2022) the Secondary Contact Recreation Use cannot be positively assessed using bacteria data.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1787	MassDEP	Water Quality	Moose Brook	[Moose Brook Road, Southampton]	42.214457	-72.724276

Bacteria Data

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

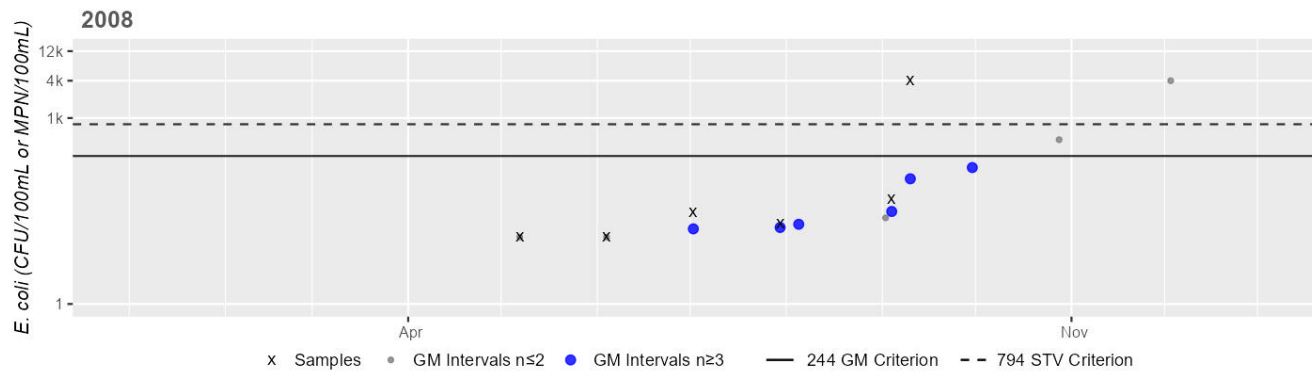
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1787	MassDEP	E. coli	05/06/08	09/09/08	6	12	4000	50

Station MASSDEP_W1787 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	50
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance

Historic (1997-2010)

0%

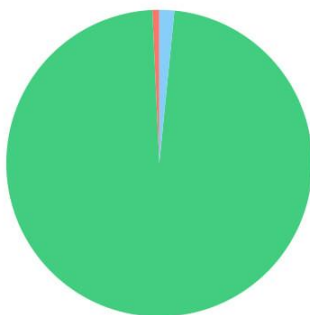
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
 %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
 "Recent 5 Years" may not be consecutive as the analysis excludes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

Mountain Brook (MA34-81)

Location:	Headwaters west of Brushy Mountain, Leverett to mouth at confluence with Doolittle Brook, Leverett.
AU Type:	RIVER
AU Size:	2.3 MILES
Classification/Qualifier:	B: CWF

Mountain Brook (MA34-81)

Watershed Area: 1.09 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.09	1.09	0.37	0.37
Agriculture	0%	0%	0%	0%
Developed	0.7%	0.7%	0.9%	0.9%
Natural	97.7%	97.7%	96%	96%
Wetland	1.6%	1.6%	3.1%	3.1%
Impervious	0.2%	0.2%	0.3%	0.3%

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 Mountain Brook (MA34-81) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Mountain Brook (MA34-81) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station close to the downstream end of this Mountain Brook AU: ~1200 feet downstream from Shutesbury Road, Leverett (W2088/MAP2-518) in the summer of 2014 (n=5). 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
W2088	MassDEP	Water Quality	Mountain Brook	[approximately 1200 feet downstream from Shutesbury Road, Leverett]	42.444317	-72.489876

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
W2088	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2088 on Mountain Brook (MA34-81) during 5 site visits between May 2014 and Aug 2014. 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
W2088	2014	5	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2088	Mountain Brook	2014	Aesthetics Impaired?	No	5	5

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2088	Mountain Brook	2014	Aquatic Plant Density, Overall	None	5	5
W2088	Mountain Brook	2014	Color	None	5	5
W2088	Mountain Brook	2014	Objectionable Deposits	No	4	5
W2088	Mountain Brook	2014	Objectionable Deposits	Yes	1	5
W2088	Mountain Brook	2014	Odor	None	5	5
W2088	Mountain Brook	2014	Periphyton Density, Filamentous	None	5	5
W2088	Mountain Brook	2014	Periphyton Density, Film	None	5	5
W2088	Mountain Brook	2014	Scum	No	5	5
W2088	Mountain Brook	2014	Turbidity	None	5	5

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Mountain Brook (MA34-81) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples close to the downstream end of Mountain Brook at W2088 [~1200 ft downstream from Shutesbury Rd, Leverett] from May-Aug 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2088 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 25 CFU/100ml. <i>E. coli</i> data from W2088 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2088	MassDEP	Water Quality	Mountain Brook	[approximately 1200 feet downstream from Shutesbury Road, Leverett]	42.444317	-72.489876

Bacteria Data

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

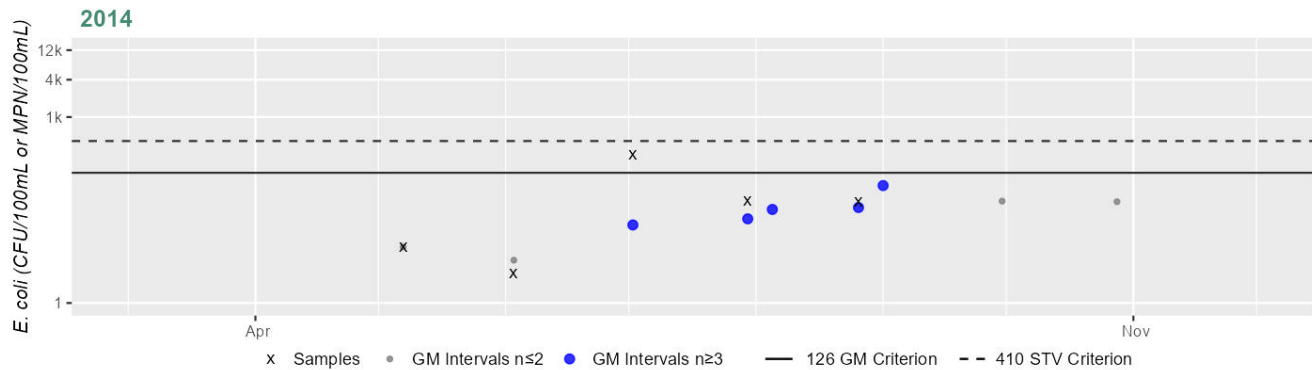
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2088	MassDEP	E. coli	05/07/14	08/26/14	5	3	249	25

Station MASSDEP_W2088 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	25
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Mountain Brook (MA34-81) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples close to the downstream end of Mountain Brook at W2088 [~1200 ft downstream from Shutesbury Rd, Leverett] from May-Aug 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2088 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 25 CFU/100ml. <i>E. coli</i> data from W2088 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2088	MassDEP	Water Quality	Mountain Brook	[approximately 1200 feet downstream from Shutesbury Road, Leverett]	42.444317	-72.489876

Bacteria Data

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

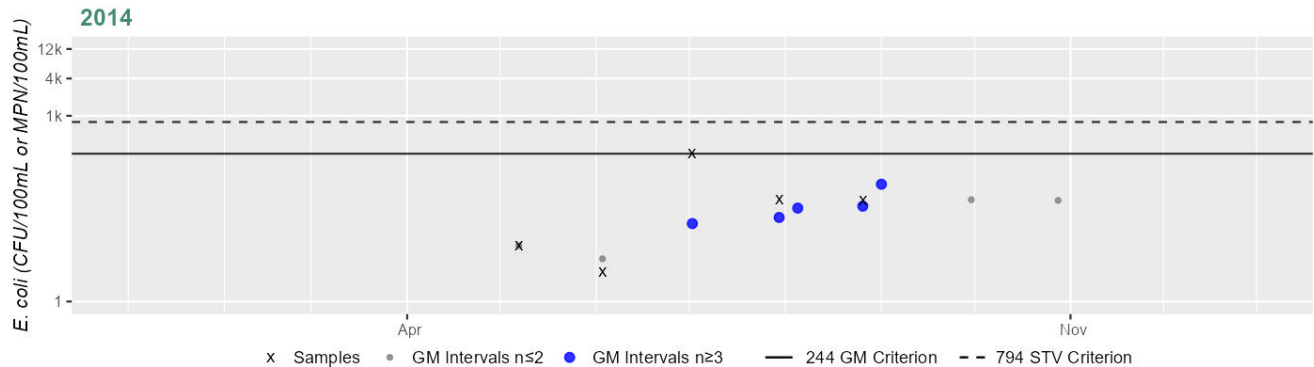
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2088	MassDEP	E. coli	05/07/14	08/26/14	5	3	249	25

Station MASSDEP_W2088 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	25
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

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

Mountain Street Reservoir (MA34056)

Location:	Williamsburg/Hatfield/Whately.
AU Type:	FRESHWATER LAKE
AU Size:	67 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Mountain Street Reservoir (MA34056) 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

Nashawannuck Pond (MA34057)

Location:	Easthampton.
AU Type:	FRESHWATER LAKE
AU Size:	30 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Water Chestnut*)	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X	--	X	X	X
Phosphorus, Total	Source Unknown (N)	X	--	--	--	--

Recommendations

2024/26 Recommendations
2024/2026 IR [Harmful Algal Blooms, Medium] Follow-up monitoring should be conducted in Nashawannuck Pond (MA34057) 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 Assessed	No
2024/26 Use Attainment Summary	
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Nashawannuck Pond (MA34057) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	YES
2024/26 Use Attainment Summary	
<p>The Aesthetics Use for Nashawannuck Pond (MA34057) continues to be assessed as as Not Supporting with the Nutrient/Eutrophication Biological Indicators impairment being carried forward. 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 and 2020. Aesthetic observations were made by MassDEP field sampling crews for one station on Nashawannuck Pond at the deep hole, northern lobe, Easthampton (W2641) during the summer of 2016 (n=3). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff once noted green water color and once noted dense algae (50-75% coverage). During the period 2015 through 2022, C-HAB postings for Nashawannuck Pond were reported to MDPH based on visual observations for 29 days in 2019 and 29 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 Harmful Algal Blooms and a recommendation for follow-up sampling will be made.</p>	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2641	MassDEP	Water Quality	Nashawannuck Pond	[deep hole, northern lobe, Easthampton]	42.264644	-72.668458

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
W2641	2016	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2641 on Nashawannuck Pond (MA34057) during 3 site visits between Jun 2016 and Sep 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted green water color (n=1).

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2641	Nashawannuck Pond	2016	Aesthetics Impaired?	No	2	3
W2641	Nashawannuck Pond	2016	Aesthetics Impaired?	NR	1	3
W2641	Nashawannuck Pond	2016	Aquatic Plant Density, Overall	Moderate	1	3
W2641	Nashawannuck Pond	2016	Aquatic Plant Density, Overall	Sparse	2	3
W2641	Nashawannuck Pond	2016	Aquatic Plant Density, Whole Lake	NR	1	1
W2641	Nashawannuck Pond	2016	Color	Greenish	1	3
W2641	Nashawannuck Pond	2016	Color	Light Yellow/Tan	2	3
W2641	Nashawannuck Pond	2016	Duckweed Density, Whole Lake	None	1	1
W2641	Nashawannuck Pond	2016	Objectionable Deposits	No	1	3
W2641	Nashawannuck Pond	2016	Objectionable Deposits	NR	1	3
W2641	Nashawannuck Pond	2016	Objectionable Deposits	Yes	1	3
W2641	Nashawannuck Pond	2016	Odor	None	3	3
W2641	Nashawannuck Pond	2016	Scum	Yes	3	3
W2641	Nashawannuck Pond	2016	Turbidity	Moderately Turbid	1	3

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2641	Nashawannuck Pond	2016	Turbidity	Slightly Turbid	2	3

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 Nashawannuck Pond (MA34057) were reported to MDPH based on visual observations for 29 days in 2019 and 29 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
Nashawannuck Pond	Easthampton					29	29		

Primary Contact Recreation

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

The Primary Contact Recreation Use for Nashawannuck Pond (MA34057) continues to be assessed as Not Supporting. The prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is being carried forward. 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 Nashawannuck Pond were reported to MDPH based on visual observations for 29 days in 2019 and 29 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. In Nashawannuck Pond MassDEP staff collected Secchi depth data at W2641 [42.264644, -72.668458, deep hole, northern lobe, Easthampton] (2016). Secchi depth data indicated water clarity meeting the 1.2m (4ft) threshold at W2641 in 2016 (n=3, 1.3-2.1m).

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
2016	In Nashawannuck Pond (MA34057), MassDEP collected Secchi data at W2641 [42.264644, -72.668458, deep hole, northern lobe, Easthampton] in 2016. At station W2641 (station depth=4.6 m) the Secchi depth measurements ranged from 1.3-2.1 m (n=3) indicating water clarity meeting the 1.2 m (4 ft) threshold.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	YES

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Nashawannuck Pond (MA34057) continues to be assessed as Not Supporting. The prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is being carried forward. 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 Nashawannuck Pond were reported to MDPH based on visual observations for 29 days in 2019 and 29 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.

Nine Mile Pond (MA34127)

Location:	Wilbraham (formerly reported as 2000 segment: Nine Mile Pond MA36107).
AU Type:	FRESHWATER LAKE
AU Size:	33 ACRES
Classification/Qualifier:	B

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Insufficient Information	No

2024/26 Use Attainment Summary
There is Insufficient Information to assess the Fish Consumption Use for Nine Mile Pond (MA34127). Fish toxics sampling for metals (mercury, arsenic, cadmium, and selenium) was performed by MassDEP WPP biologists in Nine Mile Pond (MA34127) in 2023 as part of the MassDEP WPP targeted assessment monitoring (TAM). However, no site-specific fish consumption advisory was issued by MA DPH.

Fish Consumption Advisories

Summary of Fish Toxics Sampling and Resulting Fish Consumption Advisories (MassDEP Undated 5)

Summary Statement
Fish toxics sampling for metals (mercury, arsenic, cadmium, and selenium) was performed by MassDEP WPP biologists in Nine Mile Pond (MA34127) in 2023 as part of the MassDEP WPP targeted assessment monitoring (TAM). No site-specific fish consumption advisory was issued by MA DPH.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
No data are available, so the Aesthetics Use for Nine Mile Pond (MA34127) 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 Nine Mile Pond (MA34127) 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 Nine Mile Pond (MA34127) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed.

Noonan Cove (MA34058)

Location:	Springfield.
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	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. Noonan Cove (MA34058) 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 July 1998 synoptic survey conducted by MassDEP staff in which it was noted that approximately 50% of the waterbody was covered with dense or very dense aquatic plants, including the non-rooted, floating species, <i>Ceratophyllum demersum</i>, and <i>Lemna/Spirodela</i> spp. (MassDEP 1998, MassDEP 2002). Google Earth images from September 2013, September 2017 and September 2019 show that the upper half of the pond is filled in with dense plant coverage (every available satellite image showed the upper half of the pond as mostly/fully filled in) and there are also patches of vegetation in the lower half of the pond (present periodically in multiple satellite images) (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of multiple non-rooted, floating, aquatic macrophyte species. Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since more than 25% of the AU was covered in aquatic macrophytes in recent years. As an additional note, Noonan Cove should be evaluated in a future assessment cycle to determine whether it is a lake or a wetland. Based on MassDEP Wetlands GIS dataset (MassGIS 2017), nearly the entire AU is dominated by shallow/deep marsh and wooded deciduous swamp. Only the bottom 0.5 acre of the waterbody is classified as open water.</p>

Aquatic Plant (Macrophytes)

2002 WBS Coding Sheet (MassDEP 2002):

Lake, B ok R84 EJC 36 June 0 6/11/02

WBID: MA34058 WATERSHED: Connecticut (34) (Printed 08/01/96)
NAME: Wagon Cove TYPE: Lake/Pond
CODE: 34058 SIZE: 4.0 (acres)

CLASS: B/
ORW?: Yes or No
Water Supply?: Yes or No

LATITUDE:
LONGITUDE:
Lake/Pond Name:
Ecoregion Name:
Description:

Assessment Date: 0007 Begin Sampling: 7/21/06 9807 Water Quality Limited?: YES or NO
Cycle: 02 End Sampling: 9807 303(d) List?: YES or NO

Lake Specific Information	1999
Significantly Publicly Owned:	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			2.0	2.0		
ALUS					4.0	
FISH CONSUMPTION					4.0	
PRIMARY CONTACT			2.0	2.0		
SECONDARY CONTACT			2.0	2.0		
Aesthetics			2.0	2.0		
ALUS Bio						
ALUS Chem/Phys						
ALUS Toxicity						

Nonattainment Causes			1999		
Code	Size	Magnitude	Code	Size	Magnitude
2200 - Noxious aquatic plants	2.0	M	2200	2.0	M
2500 - Turbidity	4.0	M	2500	4.0	M

Nonattainment Sources			1999		
Code	Size	Magnitude	Code	Size	Magnitude
			9000	4.0	H

Assessment Type 1999 Assessment Category = M E NA
R20, R35

Media/Pollutants Assessed 1999 Toxics Monitoring = YES or NO

Comments:

1998 Synoptic Survey Field Sheet (MassDEP 1998):

weed Ent 12/29/98

LAKE/POND: Noonan Cove SIZE (acres): 4.0 PALIS NO. 34858
TOWN/CITY: Springfield USGS TOPO. SHEET: Springfield South
DATE: 7/21/98 WATERSHED: Connecticut OBSERVERS: McVoy

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) Alden Rd at box culvert
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): ☐ _____
☐ _____
☐ _____

ACCESS -- Ownership (for multiple observation sites use numbers in boxes that apply)
Public ☐☐☐ Private ☐☐☐ Uncertain ☐☐☐
Names of Owners ☐ _____ 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.)
Diss. Organics: ☒☐☐ Slight ☐☐☐ Moderate ☐☐☐ Dark ☒☐☐ Estimated visually
Algal Bloom: ☒☐☐ Slight ☐☐☐ Moderate ☐☐☐ Dense ☐☐☐ Measured w/ Secchi Disk ☐ _____ meters
☐ _____ meters
☐ _____ meters
Bottom Type: ☒☐☐ Undecomposed matter ☒☐☐ Muck/silt ☐☐☐ Sand ☐☐☐ Gravel ☐☐☐ Cobble ☐☐☐ Boulders
☒☐☐ Vegetation Other ☐ _____ ☐ _____
Other Observations: ☒ developed around it, ~10 ducks
☐ _____
☐ _____

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: Brown turbidity 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 type="checkbox"/> <i>Typha latifolia</i>	<input type="checkbox"/> <i>Callitriche</i>	<input type="checkbox"/> <i>Ceratophyllum demersum</i>
<input type="checkbox"/>	<input type="checkbox"/> <i>Lemna</i>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/> <i>Sagittaria</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"/>
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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"/>

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 ☐ _____ % ☐ _____ % ☐ _____ %
Forms [(E)mergent, (F)loating, or (S)ubmergent] present ☐ _____ ☐ _____ ☐ _____
Percent of entire lake surface covered with dense or very dense aquatic plants 250 % Forms E, S, E
Describe locations of dense and/or very dense plant beds _____
Loss of open water habitat over entire lake (estimated): ☐ 90 - 100 % ☐ 60 - 85 % ☐ 30 - 55 % ☒ ≤ 25 %

ASSESSMENTS -

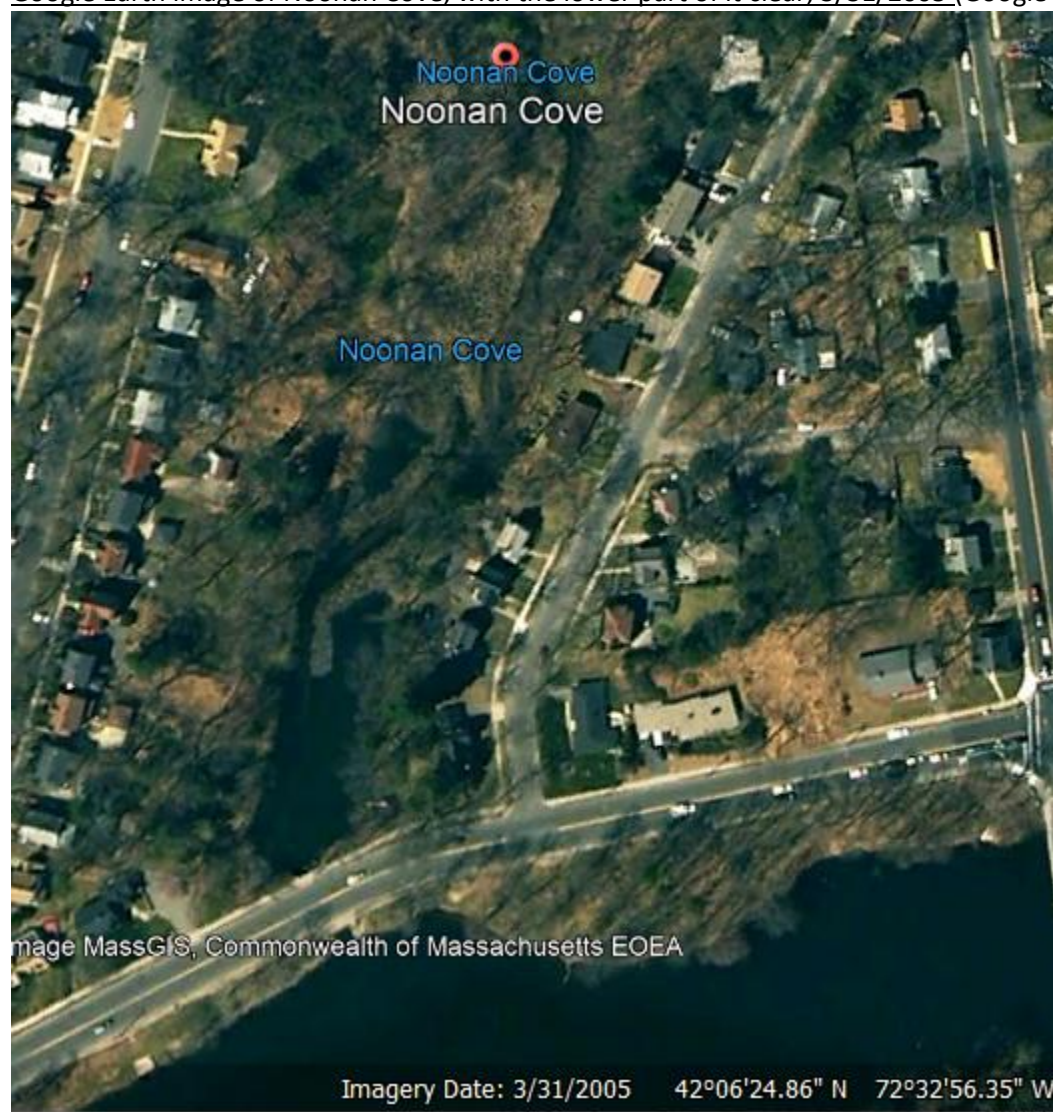
TROPHIC STATUS ESTIMATE: ☐ Oligotrophic ☐ Mesotrophic ☒ Eutrophic ☐ Hypereutrophic ☐ Dystrophic ☐ Undetermined

305(b) USE IMPAIRMENT ASSESSMENTS (Acres):

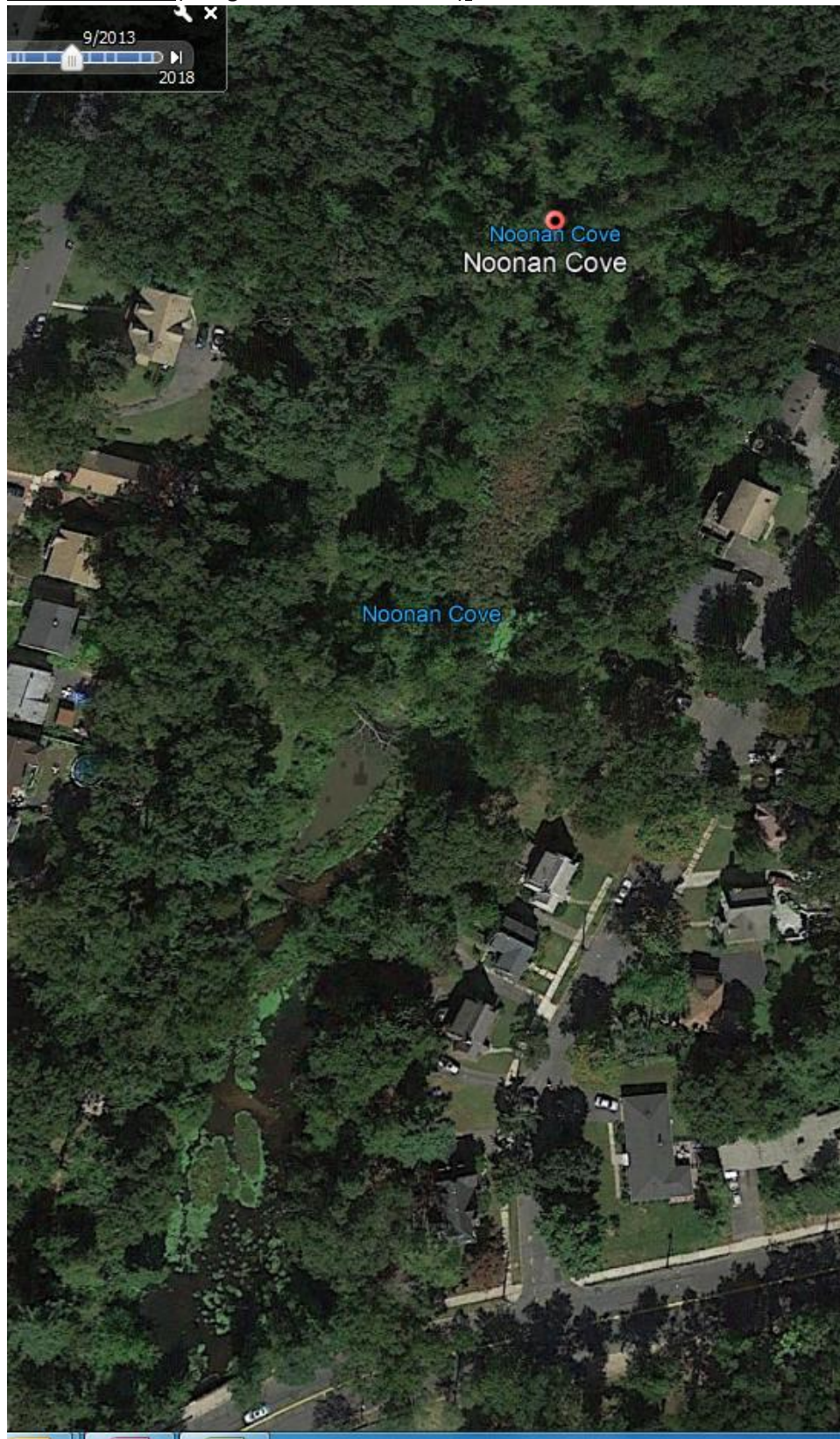
USES	Full Support	Threatened	Partial Support	Non-support	Not Assessed
Aquatic Life					4.0
Fish Consumption					4.0
Primary Contact			2.0	2.0	
Secondary Contact			2.0	2.0	
Aesthetics			2.0	2.0	

CAUSES: ☒ Noxious plants (2200) - Size 2.0 acres / Magnitude M ☐ Exotic plants (2600) - Size _____ acres / Magnitude _____
☒ Turbidity (2500) - Size 4.0 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 _____

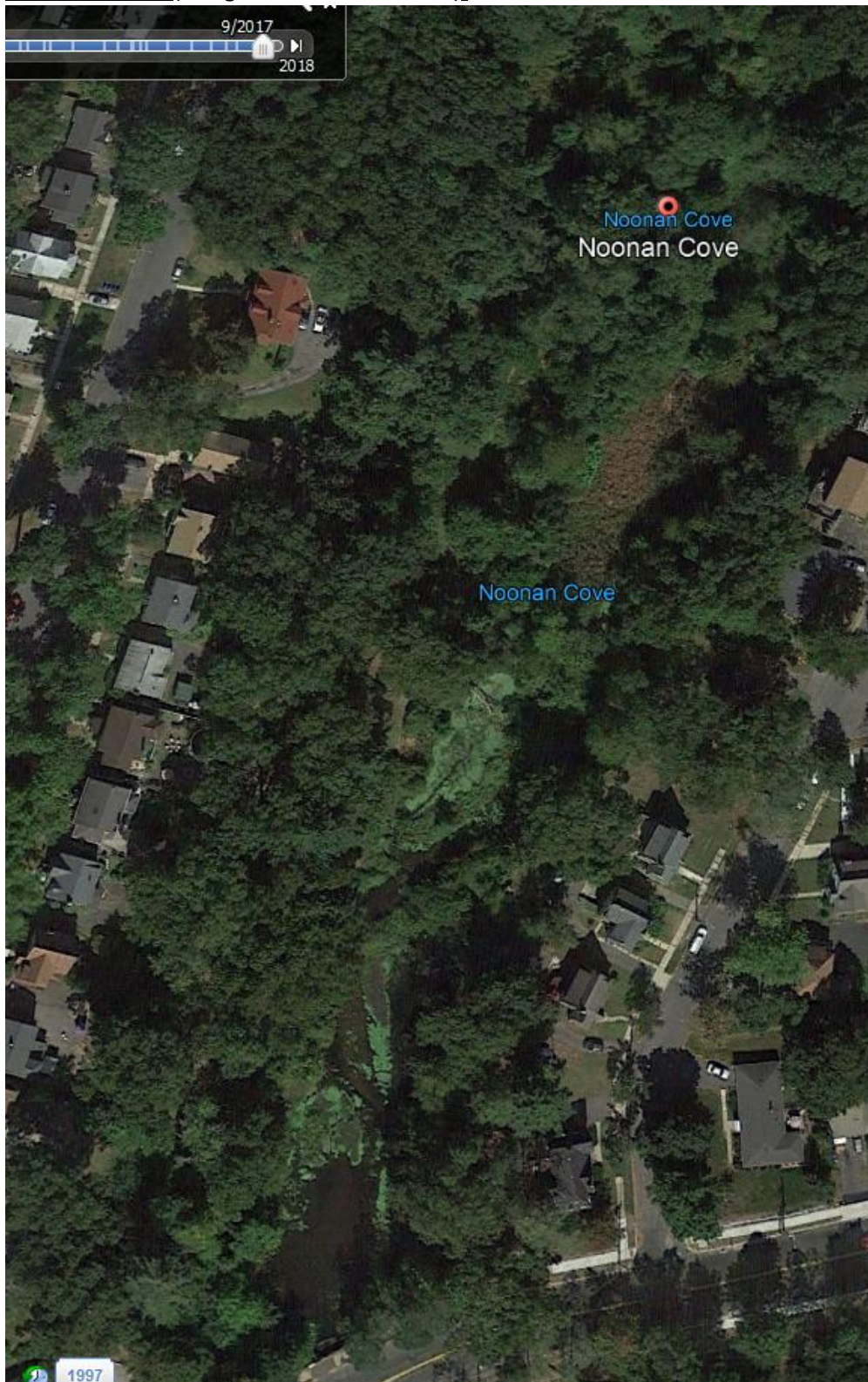
Google Earth image of Noonan Cove, with the lower part of it clear, 3/31/2005 (Google Earth Pro Undated);



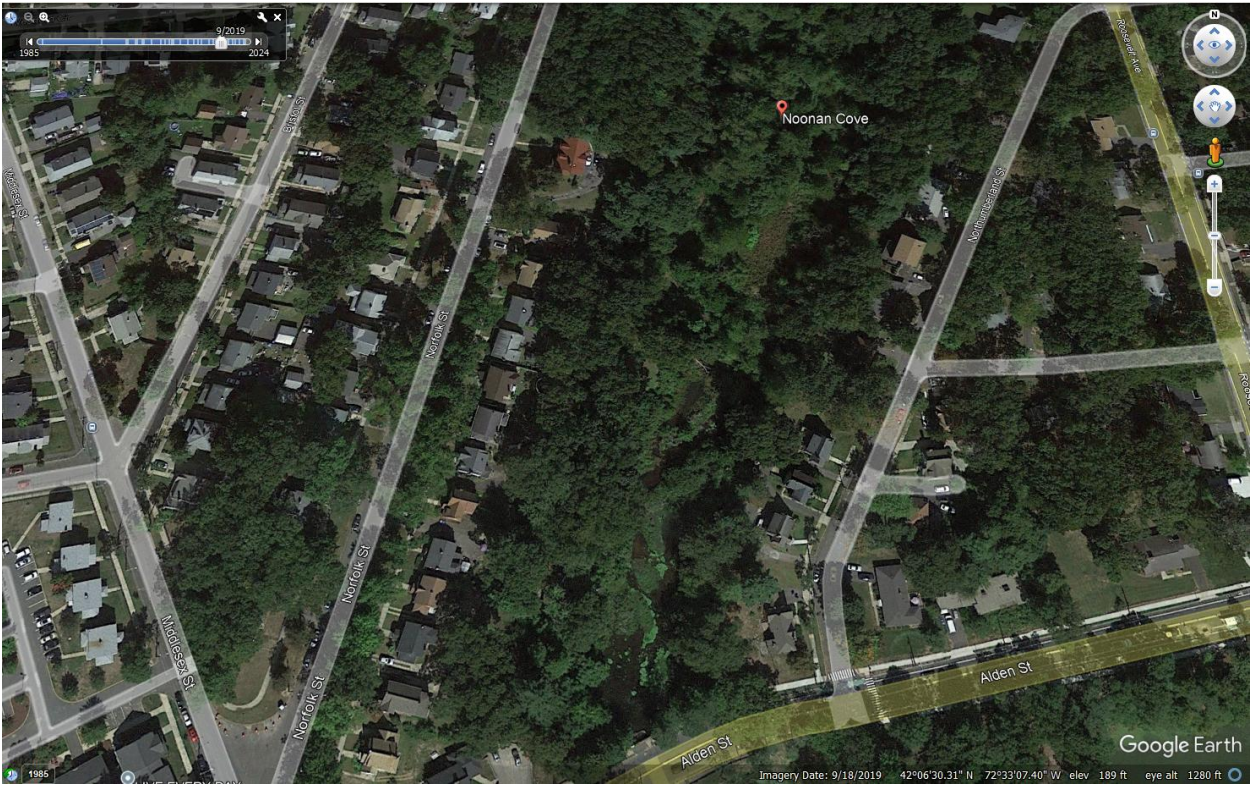
Google Earth image of Noonan Cove with the upper half filled in and some patches of vegetation in the lower half, 9/19/2013 (Google Earth Pro Undated):



Google Earth image of Noonan Cove with the upper half filled in and some patches of vegetation in the lower half, 9/23/2017 (Google Earth Pro Undated):



Google Earth image of Noonan Cove with the upper half filled in and some patches of vegetation in the lower half, 9/18/2019 (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 Noonan Cove (MA34058) is Not Assessed.	

Aesthetic

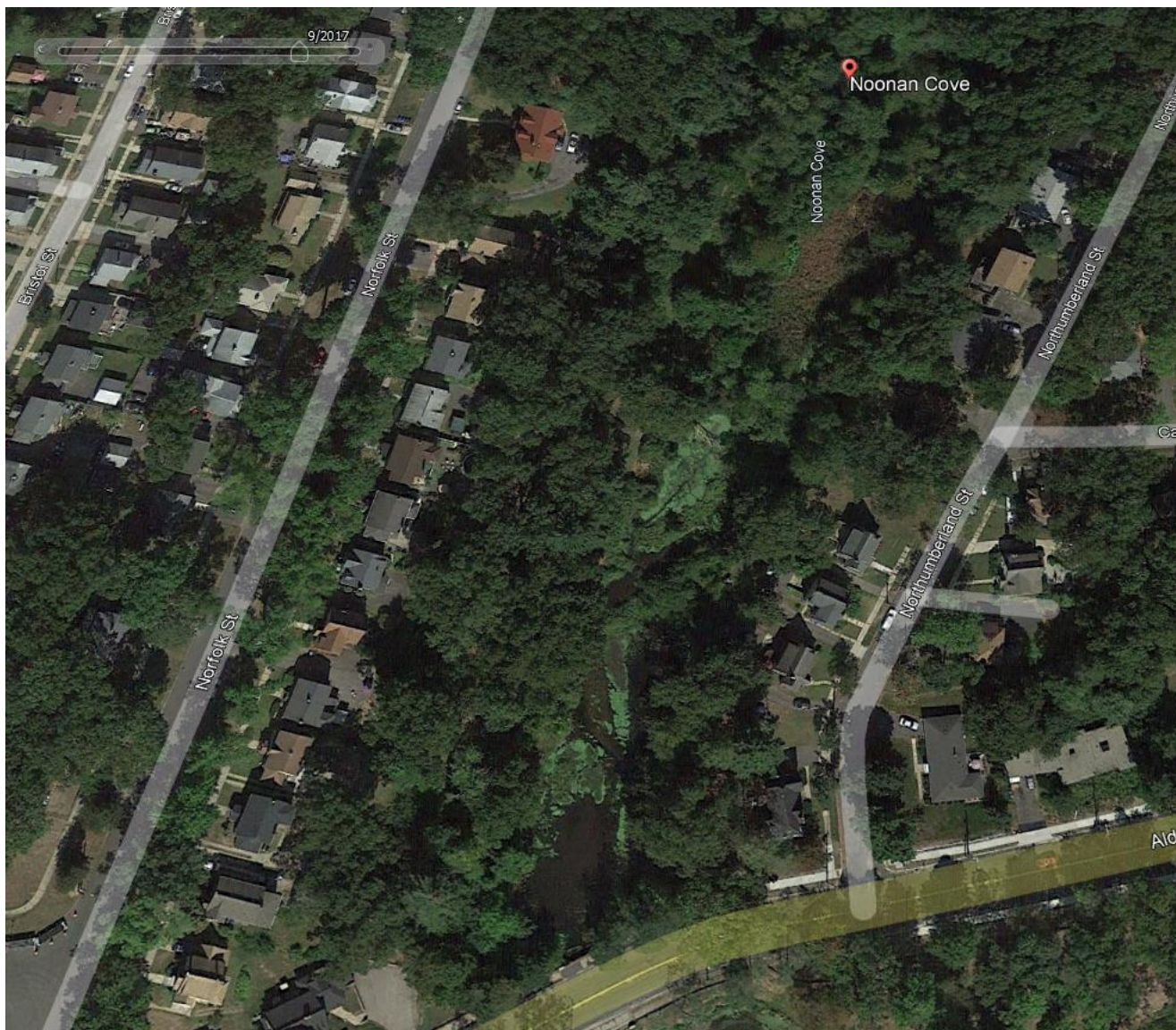
2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	

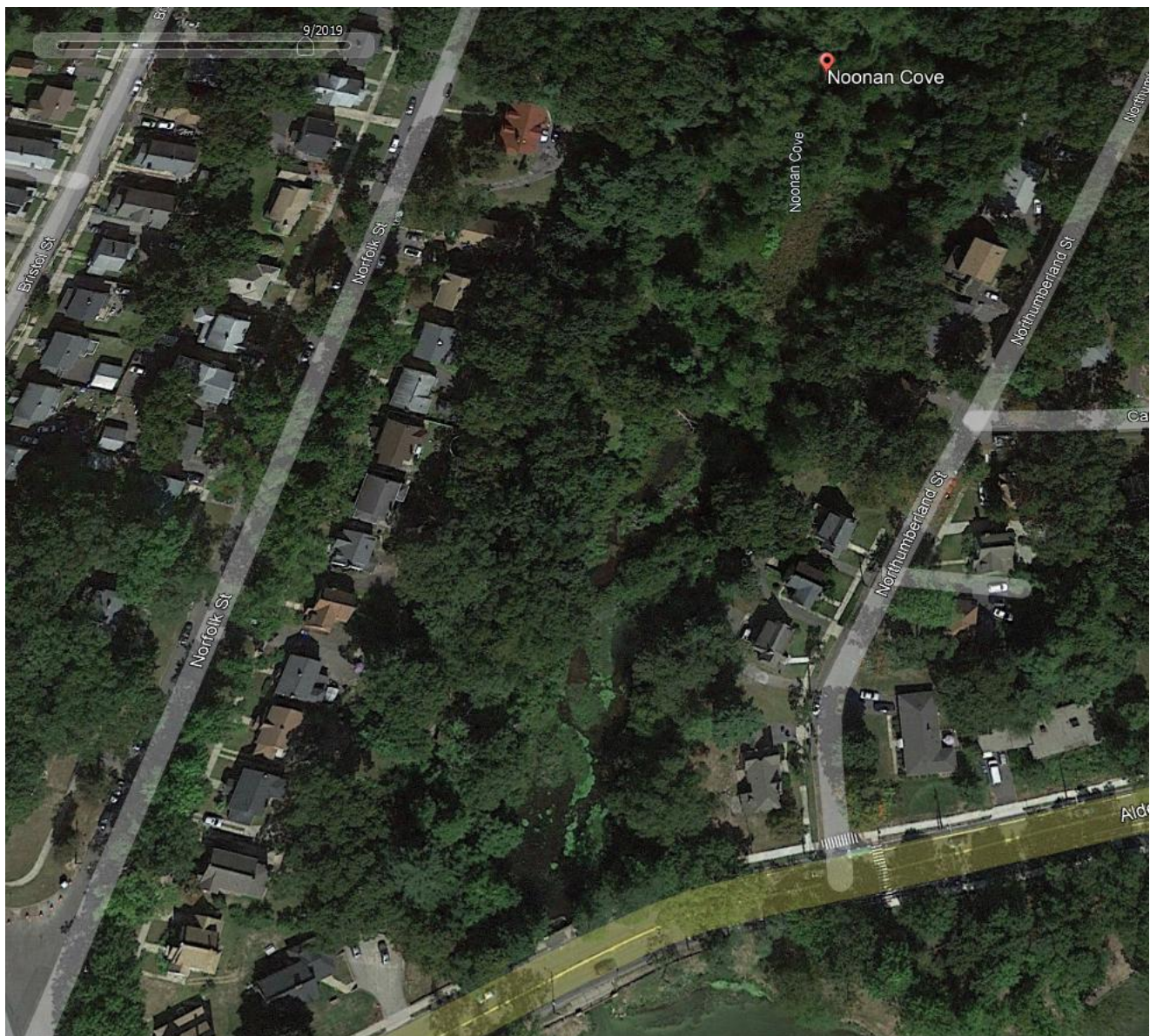
The Aesthetics Use for Noonan Cove (MA34058) continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. Additionally, the Turbidity impairment is being carried forward 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. Noonan Cove (MA34058) 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 July 1998 synoptic survey conducted by MassDEP staff in which it was noted that 50% of the pond was covered with dense or very dense aquatic plants, including the non-rooted, floating species, *Ceratophyllum demersum*, and *Lemna/Spirodela* spp. (MassDEP 1998, MassDEP 2002). Google Earth images from September 2013, September 2017 and September 2019 show that the upper half of the pond is filled in with dense plant coverage (every available satellite image showed the upper half of the pond as mostly/fully filled in) and there are also patches of vegetation in the lower half of the pond (present periodically in multiple satellite images) (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of multiple non-rooted, floating, aquatic macrophyte species. Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since more than 25% of the AU was covered in aquatic macrophytes in recent years. As an additional note, Noonan Cove (MA34058) should be further evaluated in a future assessment cycle to determine whether it is a lake or a wetland.

Aesthetic Observations

Noonan Cove (MA34058) Google Earth Imagery: Pond Outline (2002) Followed by Imagery from 2017 and 2019 Showing Dense/Very Dense Vegetation Covering >25% of the Pond's Surface (Google Earth Pro Undated)







Primary Contact Recreation

2024/26 Use Attainment		Alert
Not Supporting		NO
2024/26 Use Attainment Summary		
<p>No bacteria or other indicator data for Noonan Cove (MA34058) 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. Additionally, the Turbidity impairment (from the Aesthetics Use) is being carried forward. A Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use).</p>		

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

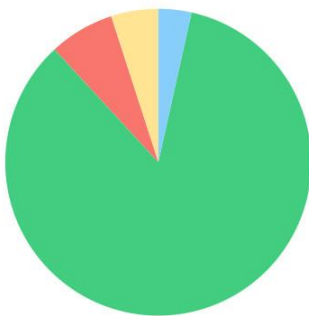
2024/26 Use Attainment Summary
No bacteria or other indicator data for Noonan Cove (MA34058) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. The prior pollutant Aquatic Plants (Macrophytes) impairment (from the Aesthetics Use) is being removed and replaced with a non-pollutant Aquatic Plants (Macrophytes) impairment. Additionally, the Turbidity impairment (from the Aesthetics Use) is being carried forward. A Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use).

North Branch Manhan River (MA34-54)

Location:	Headwaters, perennial portion, north of Northwest Road, Westhampton to mouth at confluence with Manhan River, Easthampton/Southampton.
AU Type:	RIVER
AU Size:	9.2 MILES
Classification/Qualifier:	B: CWF

North Branch Manhan River (MA34-54)

Watershed Area: 21.50 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	21.50	6.21	5.89	1.91
Agriculture	5%	5.9%	5.3%	4.8%
Developed	6.9%	8.6%	5.5%	5.8%
Natural	84.6%	79%	82.1%	78.3%
Wetland	3.5%	6.5%	7.1%	11.1%
Impervious	2.7%	3.7%	2.5%	2.7%

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for North Branch Manhan River (MA34-54) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for North Branch Manhan River (MA34-54) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station in the downstream half of this North Branch Manhan River AU: ~2500 feet downstream from Loudville Road, Easthampton (W2163/MAP2-519) during summer 2014 (n=6). 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
W2163	MassDEP	Water Quality	North Branch Manhan River	[approximately 2500 feet downstream from Loudville Road, Easthampton]	42.281354	-72.729396

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
W2163	2014	6	Aesthetic observations were made by MassDEP field sampling crews at Station W2163 on North Branch Manhan River (MA34-54) during 6 site visits between May 2014 and Sep 2014. 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
W2163	2014	6	6	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2163	North Branch Manhan River	2014	Aesthetics Impaired?	No	6	6

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2163	North Branch Manhan River	2014	Aquatic Plant Density, Overall	None	6	6
W2163	North Branch Manhan River	2014	Color	Light Yellow/Tan	1	6
W2163	North Branch Manhan River	2014	Color	None	4	6
W2163	North Branch Manhan River	2014	Color	NR	1	6
W2163	North Branch Manhan River	2014	Objectionable Deposits	No	6	6
W2163	North Branch Manhan River	2014	Odor	None	5	6
W2163	North Branch Manhan River	2014	Odor	NR	1	6
W2163	North Branch Manhan River	2014	Periphyton Density, Filamentous	Moderate	1	6
W2163	North Branch Manhan River	2014	Periphyton Density, Filamentous	None	5	6
W2163	North Branch Manhan River	2014	Periphyton Density, Film	None	3	6
W2163	North Branch Manhan River	2014	Periphyton Density, Film	Sparse	3	6
W2163	North Branch Manhan River	2014	Scum	No	4	6
W2163	North Branch Manhan River	2014	Scum	Yes	2	6
W2163	North Branch Manhan River	2014	Turbidity	None	6	6

Primary Contact Recreation

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

The Primary Contact Recreation Use for the North Branch Manhan River (MA34-54) continues to be assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples two-thirds of the way down the North Branch Manhan River at W2163 [~2500 ft downstream from Loudville Rd, Easthampton] from May-Sep 2014 (n=5). Analysis of the single year limited frequency *E. coli* dataset from W2163 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 13 CFU/100ml. *E. coli* data from W2163 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2163	MassDEP	Water Quality	North Branch Manhan River	[approximately 2500 feet downstream from Loudville Road, Easthampton]	42.281354	-72.729396

Bacteria Data

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

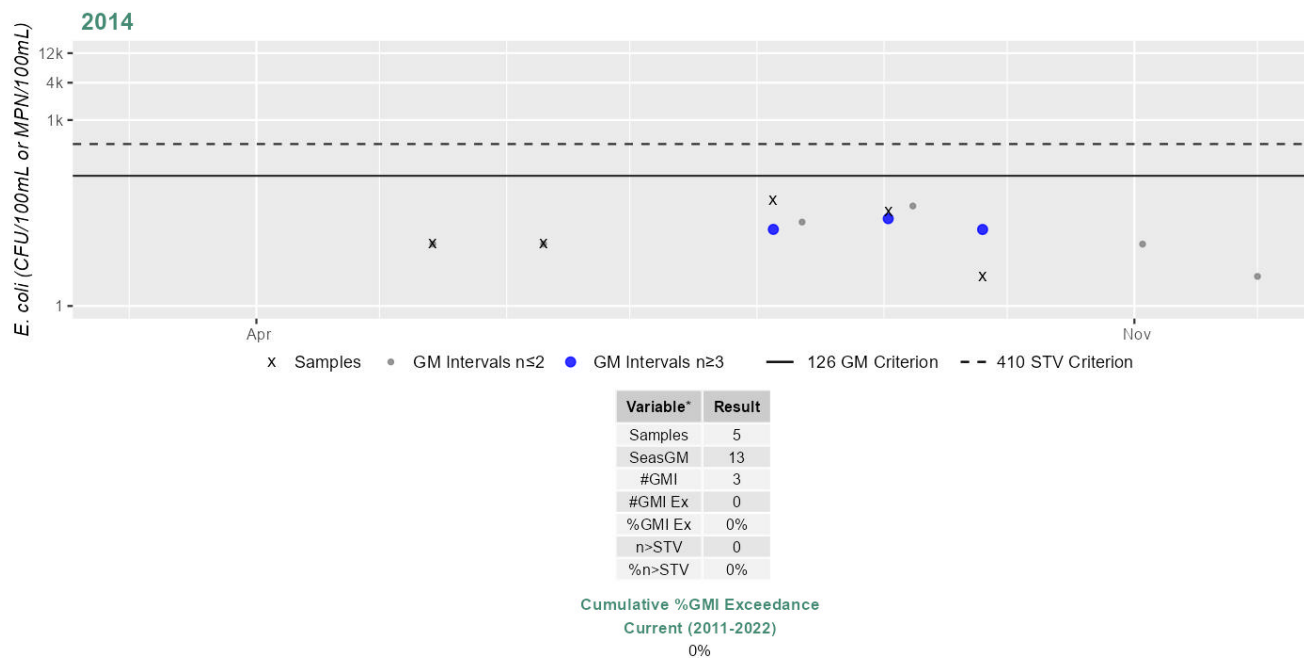
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2163	MassDEP	E. coli	05/14/14	09/25/14	5	3	51	13

Station MASSDEP_W2163 - *Escherichia coli*

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



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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for the North Branch Manhan River (MA34-54) continues to be assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the North Branch Manhan River from 2008-2014 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: two-thirds of the way down the AU at W2163 [~2500 ft downstream from Loudville Rd, Easthampton] from May-Sep 2014 (n=5), and the downstream end at W1797 [Pomeroy Meadow Rd, Easthampton/Southampton] from May-Sep 2008 (n=6). Since bacteria data from the historic IR window are indicative of good water quality conditions, only the analysis from the current IR window will be summarized here: Analysis of the single year limited frequency <i>E. coli</i> dataset from W2163 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 13 CFU/100ml. <i>E. coli</i> data from W2163 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1797	MassDEP	Water Quality	North Branch Manhan River	[Pomeroy Meadow Road, Easthampton/Southampton]	42.266825	-72.697154
W2163	MassDEP	Water Quality	North Branch Manhan River	[approximately 2500 feet downstream from Loudville Road, Easthampton]	42.281354	-72.729396

Bacteria Data

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

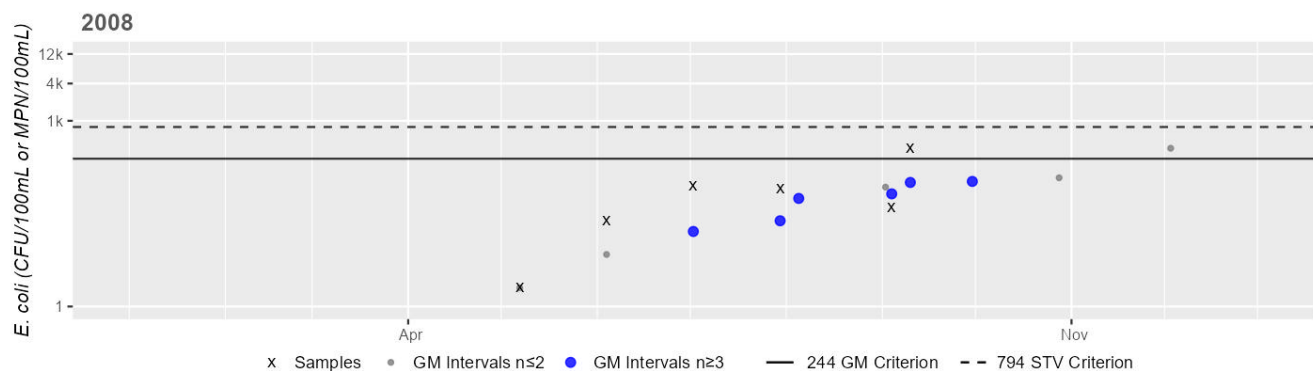
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1797	MassDEP	E. coli	05/06/08	09/09/08	6	2	360	41
W2163	MassDEP	E. coli	05/14/14	09/25/14	5	3	51	13

Station MASSDEP_W1797 - Escherichia coli

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



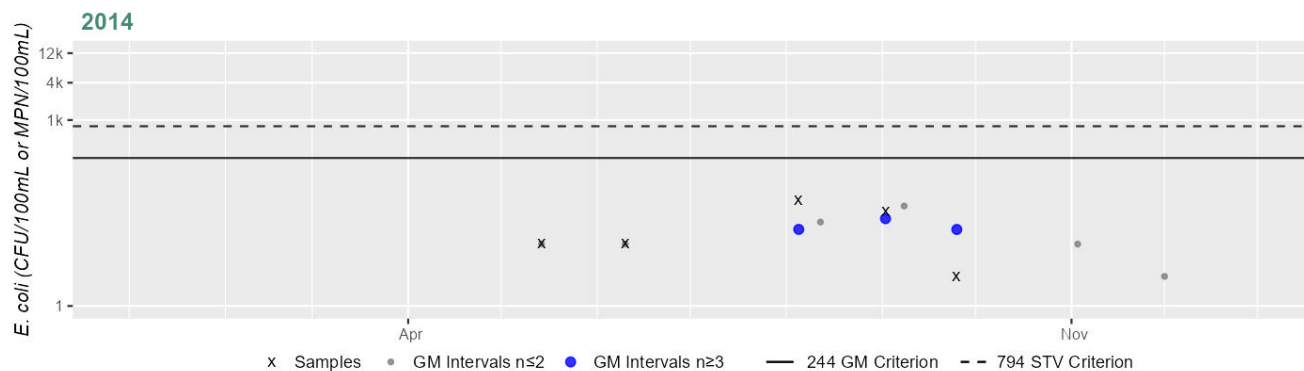
Variable*	Result
Samples	6
SeasGM	41
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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_W2163 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	13
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

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

Northampton Reservoir (MA34059)

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

No usable data were available for Northampton Reservoir (MA34059) 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

Northfield Mountain Reservoir (MA34061)

Location:	Erving.
AU Type:	FRESHWATER LAKE
AU Size:	237 ACRES
Classification/Qualifier:	B

No usable data were available for Northfield Mountain Reservoir (MA34061) 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

Nurse Brook (MA34-59)

Location:	Headwaters, west of Pratt Corner Road, Shutesbury to mouth at confluence with Adams Brook (in small "diversion pool" for Atkins Reservoir), Shutesbury.
AU Type:	RIVER
AU Size:	1.2 MILES
Classification/Qualifier:	A: PWS, ORW, CWF (Tributary)

No usable data were available for Nurse Brook (MA34-59) 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

Oxbow (MA34066)

Location:	The waterbody west of Route 91 (bounded on the northeast by Route 91, the southeast by the Manhan River, and the west by Old Springfield Road), Northampton/Easthampton (excluding the delineated segment; Danks Pond MA34019).
AU Type:	FRESHWATER LAKE
AU Size:	149 ACRES
Classification/Qualifier:	B

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Water Chestnut*)	--	Unchanged
5	5	PFAS in Fish Tissue	--	Added
5	5	Turbidity	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
PFAS in Fish Tissue	Source Unknown (N)	--	X	--	--	--
Turbidity	Source Unknown (N)	--	--	X	X	X

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Supporting	No

2024/26 Use Attainment Summary

The Fish Consumption Use for Oxbow (MA34066) is assessed as Not Supporting with a new impairment being added for PFAS in Fish Tissue. Fish toxics sampling was conducted in Oxbow (MA34066) at station F0179 (PFAS Study ID 47) on 07/29/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. MA DPH issued a site-specific advisory for PFAS in Oxbow (referred to by MA DPH as "Oxbow Pond") in their May 2024 Freshwater Fish Consumption Advisory List and retained it in the January 2025 list. The public should refer to the most recent 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.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
F0179	MassDEP	Fish Toxics	Oxbow	[Easthampton/Northampton]	42.289962	-72.638788

Fish Tissue Data

Summary of Fish Tissue Data and Resulting Fish Consumption Advisories (MA DPH 2025) (MassDEP 2023) (MassDEP Undated 5)

Summary
Fish toxics sampling was conducted in Oxbow (MA34066) at station F0179 (PFAS Study ID 47) on 07/29/2022 as part of a MassDEP-funded project evaluating 40 PFAS analytes in selected fresh waters. Because of elevated PFAS measured in fish filets, MA DPH issued site-specific fish consumption advisories for Oxbow (referred to by MA DPH as Oxbow Pond) in their May 2024 Freshwater Fish Consumption Advisory List and retained them in the January 2025 list. The site-specific DPH advisories are indicative of a Fish Consumption Use impairment for PFAS in Fish Tissue for Oxbow (MA34066).

MassDEP 2022 PFAS in Fish Tissue Data for Massachusetts Surface Waters (MassDEP 2023) (MassDEP Undated 5) (MA DPH 2023)

[ng/g = ppb. All PFBA, PFBS, and HFPO-DA (Genx) concentrations <MDL. ND indicates that the PFAS analyte was not detected in any of the composite samples (i.e., it was <MDL). Means weighted by the number of fish in the contributing composites were calculated for any PFAS analyte – waterbody – species combination where an analyte was detected in at least one sample; if a sample did not have the analyte detected, the concentration for that sample was set to ½*MDL for the purposes of calculating a mean. Data are highlighted red per the fish consumption advisory thresholds summarized in Table 4.2 of MA DPH's 2023 Technical Support Document for the evaluation of PFAS in recreational waterbodies.]

[Species List: BB = brown bullhead, P = pumpkinseed, YP = yellow perch]

Station Code	PFAS Study ID	Sample Date	Species	Mean PFHxS ng/g	Mean PFNA ng/g	Mean PFOA ng/g	Mean PFOS ng/g	Analytes with ≥ 1 Sample Qualified
F0179	47	07/29/2022	BB	ND	ND	ND	0.57	
F0179	47	07/29/2022	P	ND	ND	ND	6.30	
F0179	47	07/29/2022	YP	ND	ND	ND	4.90	

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
The Aesthetics Use for Oxbow (MA34066) 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 Oxbow.	

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for Oxbow (MA34066) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Turbidity impairment (from the Aesthetics Use) is being carried forward. Surface water sampling was conducted halfway down the Oxbow Pond-Easthampton AU (MA34066) at station W3312 (PFAS Study ID 47) on 07/29/2022 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
W3312	MassDEP	Water Quality	Oxbow	[the default location representing co-located water/fish PFAS sampling, Easthampton/Northampton]	42.289962	-72.638788

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 Oxbow Pond-Easthampton (MA34066) at station W3312 (PFAS Study ID 47) on 07/29/2022 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
W3312	47	07/29/2022	2.2	2.8	<0.47	1.8j	2j	0.93j	<1.9	9.0*

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Oxbow (MA34066) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use continues to be assessed as Not Supporting. The prior Turbidity impairment (from the Aesthetics Use) is being carried forward.

Oxbow Cutoff (MA34067)

Location:	The waterbody north of Island Road and south of Oxbow Road (between Routes 91 and 5), Northampton.
AU Type:	FRESHWATER LAKE
AU Size:	49 ACRES
Classification/Qualifier:	B

No usable data were available for Oxbow Cutoff (MA34067) 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	(Water Chestnut*)	--	Unchanged

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

Parsons Brook (MA34-66)

Location:	Headwaters west of Sylvester Road, Northampton to mouth at confluence with Bassett Brook, Northampton.
AU Type:	RIVER
AU Size:	3.1 MILES
Classification/Qualifier:	B

No usable data were available for Parsons Brook (MA34-66) 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

Pine Island Lake (MA34069)

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

No usable data were available for Pine Island Lake (MA34069) 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

Plympton Brook Pond (MA34071)

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

No usable data were available for Plympton Brook Pond (MA34071) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

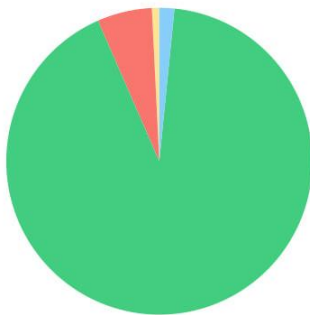
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Pond Brook (MA34-98)

Location:	Headwaters, outlet Lake Pleasant, Montague to mouth at confluence with Sawmill River, Montague.
AU Type:	RIVER
AU Size:	1.9 MILES
Classification/Qualifier:	B

Pond Brook (MA34-98)

Watershed Area: 3.12 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	3.12	2.90	0.68	0.68
Agriculture	0.8%	0.8%	0.5%	0.5%
Developed	5.8%	6.2%	7%	7%
Natural	91.9%	91.2%	88.2%	88.2%
Wetland	1.6%	1.7%	4.3%	4.3%
Impervious	2.1%	2.3%	2.6%	2.6%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
--	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 Pond Brook (MA34-98) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Pond Brook (MA34-98) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station in the upstream half of Pond Brook; ~675 feet downstream from Lake Pleasant Road, Montague (W2453) in summer 2014 (n=5). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted minor deposits of trash on 4 occasions.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2453	MassDEP	Water Quality	Pond Brook	[approximately 675 feet downstream from Lake Pleasant Road, Montague]	42.552868	-72.519503

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
W2453	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2453 on Pond Brook (MA34-98) during 5 site visits between May 2014 and Aug 2014. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits (n=4).

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
W2453	2014	5	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2453	Pond Brook	2014	Aesthetics Impaired?	No	5	5
W2453	Pond Brook	2014	Aquatic Plant Density, Overall	Moderate	3	5

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2453	Pond Brook	2014	Aquatic Plant Density, Overall	Sparse	2	5
W2453	Pond Brook	2014	Color	None	5	5
W2453	Pond Brook	2014	Objectionable Deposits	No	1	5
W2453	Pond Brook	2014	Objectionable Deposits	Yes	4	5
W2453	Pond Brook	2014	Odor	None	4	5
W2453	Pond Brook	2014	Odor	Rotting Vegetables	1	5
W2453	Pond Brook	2014	Periphyton Density, Filamentous	None	5	5
W2453	Pond Brook	2014	Periphyton Density, Film	None	5	5
W2453	Pond Brook	2014	Scum	No	5	5
W2453	Pond Brook	2014	Turbidity	None	5	5

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Pond Brook (MA34-98) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples a quarter of the way down Pond Brook at W2453 [~675 ft downstream from Lake Pleasant Rd, Montague] from May-Aug 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2453 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 56 CFU/100ml. <i>E. coli</i> data from W2453 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2453	MassDEP	Water Quality	Pond Brook	[approximately 675 feet downstream from Lake Pleasant Road, Montague]	42.552868	-72.519503

Bacteria Data

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

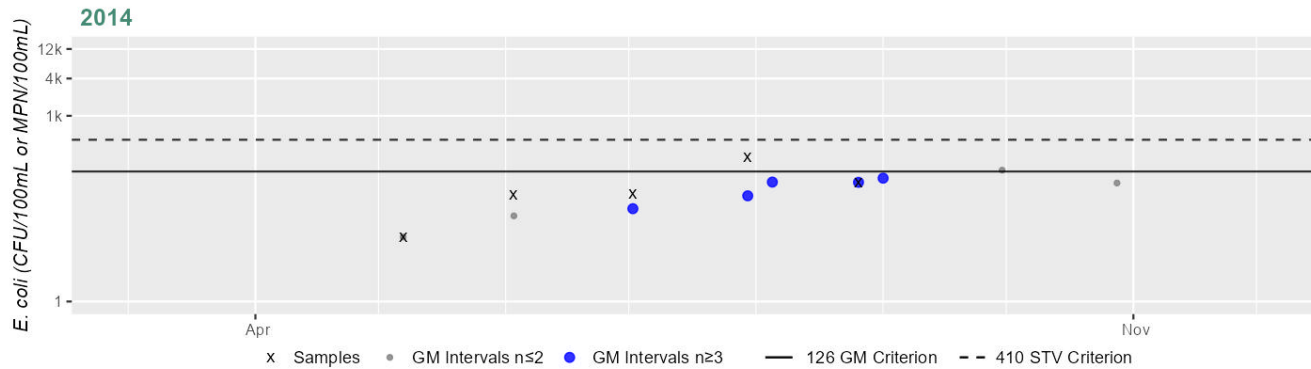
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2453	MassDEP	E. coli	05/07/14	08/26/14	5	11	214	56

Station MASSDEP_W2453 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	56
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Pond Brook (MA34-98) is assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Pond Brook from 2006-2014 at 4 stations. Samples were collected from the following stations/sample years from upstream to downstream: the upstream end of the AU at W1700 [downstream at Lake Pleasant outlet, E of Adams St, Montague] from Jul-Sep 2006 (n=2), a quarter of the way down at W1699 [Lake Pleasant Rd, Montague] from Jul-Sep 2006 (n=2), and W2453 [~675 ft downstream from Lake Pleasant Rd, Montague] from May-Aug 2014 (n=5), three-quarters of the way down at W1698 [Swamp Rd, Montague] from Jul-Sep 2006 (n=2). Analysis of the single year limited frequency *E. coli* dataset from W2453 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 56 CFU/100ml. *E. coli* data from W2453 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1698	MassDEP	Water Quality	Pond Brook	[Swamp Road, Montague]	42.542670	-72.526914
W1699	MassDEP	Water Quality	Pond Brook	[Lake Pleasant Road, Montague]	42.554214	-72.518476
W1700	MassDEP	Water Quality	Pond Brook	[downstream at Lake Pleasant outlet, east of Adams Street, Montague]	42.557632	-72.515621
W2453	MassDEP	Water Quality	Pond Brook	[approximately 675 feet downstream from Lake Pleasant Road, Montague]	42.552868	-72.519503

Bacteria Data

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

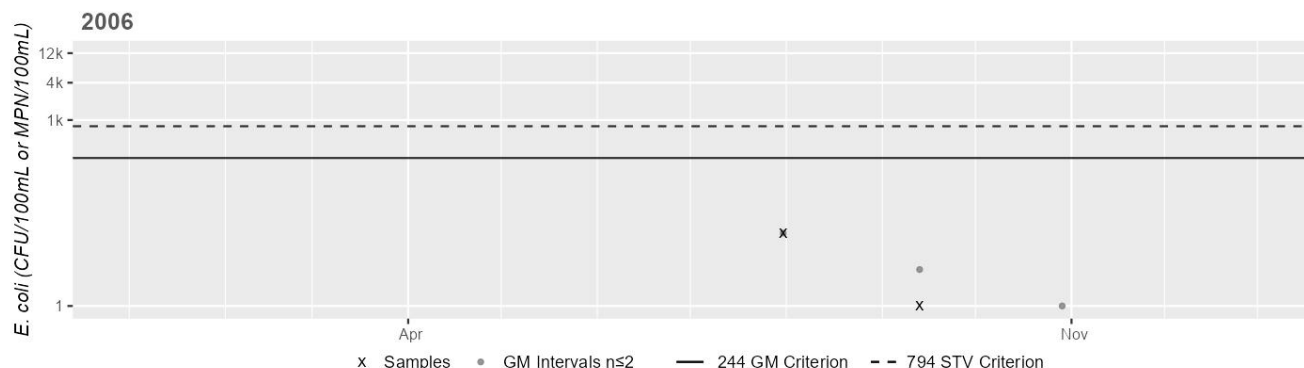
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1698	MassDEP	E. coli	07/31/06	09/13/06	2	1	15	3
W1699	MassDEP	E. coli	07/31/06	09/13/06	2	33	308	100
W1700	MassDEP	E. coli	07/31/06	09/13/06	2	1	153	12
W2453	MassDEP	E. coli	05/07/14	08/26/14	5	11	214	56

Station MASSDEP_W1698 - *Escherichia coli*

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



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

Cumulative %GMI Exceedance

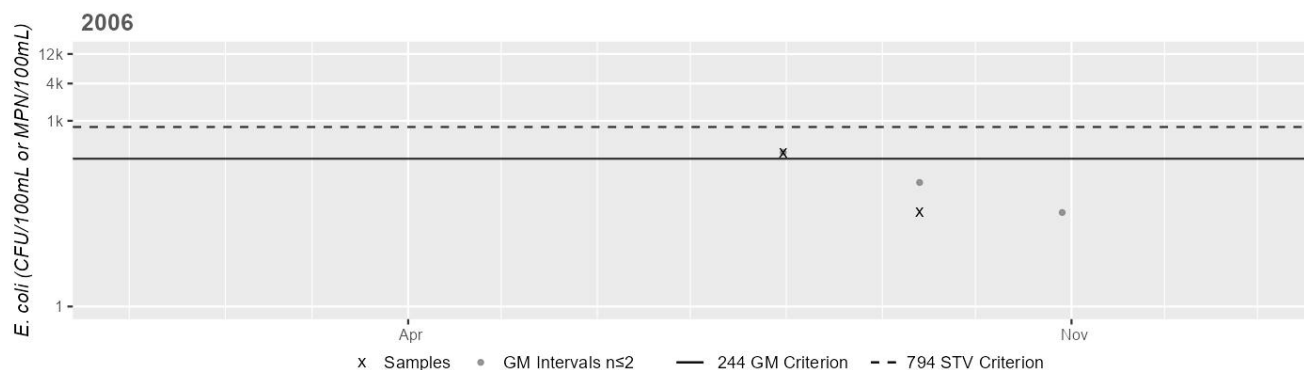
Historic (1997-2010)

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_W1699 - *Escherichia coli*

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



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

Cumulative %GMI Exceedance

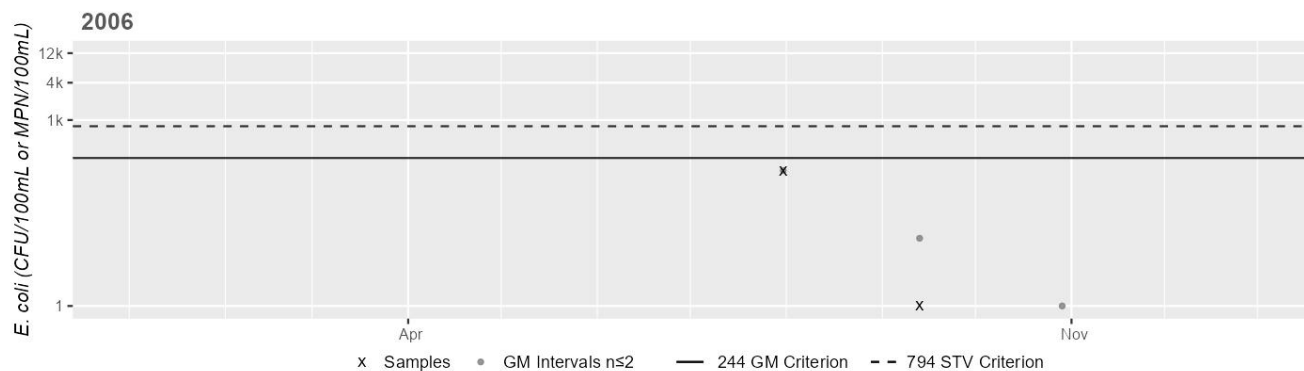
Historic (1997-2010)

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_W1700 - *Escherichia coli*

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



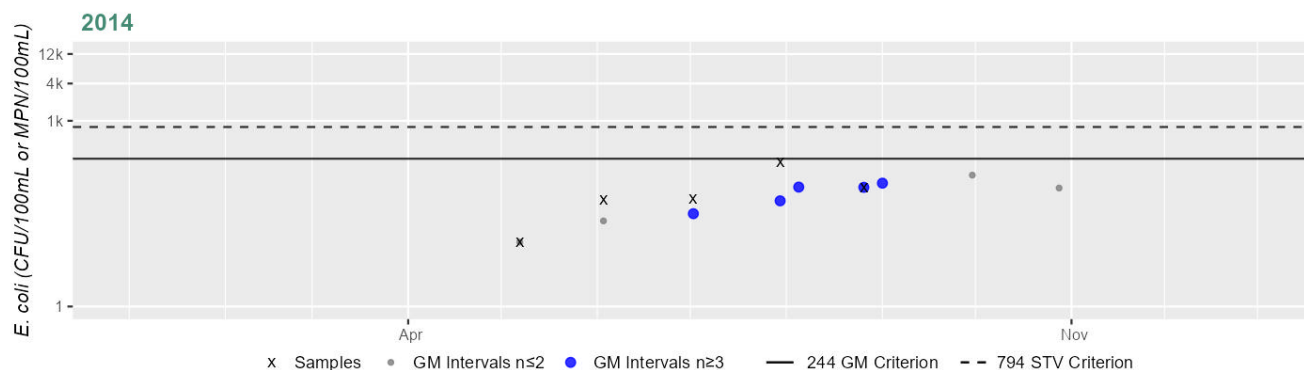
Variable*	Result
Samples	2
SeasGM	12
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W2453 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	56
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

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

Porter Lake (MA34073)

Location:	Springfield.
AU Type:	FRESHWATER LAKE
AU Size:	28 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	Algae	--	Unchanged
5	5	Aquatic Plants (Macrophytes)	--	Removed

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

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Aquatic Plants (Macrophytes)	Data and/or information lacking to determine WQ status; original basis for listing was incorrect	As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Porter Lake (MA34073) was first listed as impaired for Noxious Aquatic Plants in 2002 and this cause was remapped to Aquatic

2022 Removed Impairment	Removal Reason	Removal Comment
		<p>Plants (Macrophytes) during the 2008 IR cycle (MassDEP 2024). The original impairment was based on a July 1998 synoptic survey conducted by MassDEP staff in which it was noted that less than 10% of the open water was covered with dense or very dense aquatic plants. The wetland dominated eastern end of the waterbody and sides coves around the lake were noted with observations of dense or very dense aquatic plants, including emergent plants, as well as the non-rooted, floating species, <i>Lemna/Wolffia/Spirodela</i> spp. and <i>Ceratophyllum demersum</i> (MassDEP 1998, MassDEP 2002). In Google Earth images from September 2015 and September 2019, there is no visible vegetation on the western 2/3 of the lake and the eastern 1/3 is mostly filled in with dense vegetation (the eastern 1/3 appears mostly filled in on all available satellite images) (Google Earth Pro Undated). Based on MassDEP Wetlands GIS dataset (MassGIS 2017), the eastern portion of the lake is dominated by wetlands, specifically shallow/deep marsh and wooded deciduous swamp. The presence of aquatic plant macrophytes is evaluated as a natural background condition due to the surrounding wetland system. Aquatic Plants (Macrophytes) is being delisted as a pollutant as less than 10% of the open water was covered in aquatic macrophytes in both recent years and the 1998 synoptic survey. As an additional note, Porter Lake should be evaluated in a future assessment cycle to determine whether it is a lake or a wetland since the eastern portion is regularly filled in with vegetation (From 314 CMR 4.0 Definition for Lakes and Ponds --waterbodies having open water, situated in a topographical depression, generally with a maximum depth of greater than two meters). The topic of lake vs. wetland will require a structured evaluation</p>

2022 Removed Impairment	Removal Reason	Removal Comment
		procedure likely to be developed as part of a future CALM guidance manual.

Aquatic Plant (Macrophytes)

2002 WBS Coding Sheet (MassDEP 2002):

ON R24 6/11/02 EJC 24 June 02
 (Printed 07/19/00)

WBID: MA34073 **WATERSHED:** Connecticut (34)
NAME: Porter Lake **TYPE:** Lake/Pond
CODE: 34073 **SIZE:** 28.00(acres) **CLASS:** B

LATITUDE: 42.07361
LONGITUDE: 72.56667 (420425/723400)
Lake/Pond Name: Porter Lake (Porter Pond, Forest, Springfield)
Ecoregion Name: ()
Description:

Assessment Date: 9/12/00 ✓ **Begin Sampling:** 7/27/95 9807
Cycle: 99 02 ✓ **End Sampling:** 9807

Lake Specific Information

Lake size greater than 10 acres?: Yes ✓
 Significantly Publicly Owned: xxxx
 Trophic Status: Unknown Eutrophic ✓
 Trophic Trend: Unknown -
 Acidity/Toxics Trend: Unknown -
 Acidity Effects: Unknown -

Uses	Support	Threat	Partial	Non-Sup	Not-Asses	Not-Attain
OVERALL USE SUPPORT			22.0 ✓		28.00	6.0
ALUS			22.0 ✓		28.00	6.0
FISH CONSUMPTION				22.0	28.00	6.0
PRIMARY CONTACT				22.0	28.00	6.0
SECONDARY CONTACT	22.0 -				28.00	6.0
Aesthetics	22.0 -				28.00	6.0

F/6.0
 P. 22.0

Nonattainment Causes

Code	Size	Magnitude	"New" Code	Size	Magnitude
2200- Noxious aquatic plants	6.0	M	2200	6.0	M
2600- Exotic plants	22.0	M	2600	22.0	M

Nonattainment Sources

Code	Size	Magnitude	"New" Code	Size	Magnitude
-			9000	28.0	M ✓

Assessment Type
 (Assessment Category => Not-assessed) "New" Assessment Category = M E NA
 B05, B25, R20, R35

Media/Pollutants Assessed (Toxics Monitoring =>) "New" Toxics Monitoring => YES or NO ✓

Comments:

1998 Synoptic Survey Field Sheet (MassDEP 1998):

Weed Eut 12/29/98

LAKE/POND: Porter Lake SIZE (acres): 28 PALIS NO. 34073
TOWN/CITY: Springfield USGS TOPO. SHEET: Springfield South
DATE: 7/24/98 WATERSHED: Connecticut OBSERVERS: McVoy

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) In Forest Park at outlet
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): ☒ Horseshoe drop spillway
☐ _____
☐ _____

ACCESS - Ownership (for multiple observation sites use numbers in boxes that apply)
Public ☐☐☐ Private ☐☐☐ Uncertain ☐☐☐
Names of Owners ☒ City of Springfield ^{Park} 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
☐ _____ meters
Algal Bloom: ☒☐☐ Slight ☐☐☐ Moderate ☐☐☐ Dense
Bottom Type: ☒☐☐ Undecomposed matter ☐☐☐ Muck/silt ☐☐☐ Sand ☐☐☐ Gravel ☐☐☐ Cobble ☐☐☐ Boulders
☒☐☐ Vegetation Other ☐ _____
Other Observations: ☒ Park building at N.W. corner, no other development along shore.
over 100 ducks on lake
☐ _____

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: Floating algal mats at western
☐☐☐ Produce objectionable odor, color, taste, or turbidity ☒☐☐ Produce undesirable nuisance species of aquatic life
Describe: _____ Describe: Algae + macrophytes at

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

☐ ☐ *Typha latifolia*

☐ ☐ *Pontederia*

☐ ☐ *Nelumbo North Carolina*

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

Floating Leaf Plants

☐ ☐ *Lemna*

☐ ☐ *Spirodel*

☐ ☐ *Wolffia*

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

Submergent Plants

☐ ☐ *Ceratophyllum demersum*

☐ ☐ *Elodea*

☐ ☐ *Elamantous green algae*

☐ ☐ (*Hydrodictyon*)

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

AQUATIC PLANT DENSITY --

Percent of surface area (at observation site) with dense (50 - 75 %) aquatic plant cover ☒ *10* % ☐ _____ % ☐ _____ %

Forms [(E)mergent, (F)loating, or (S)ubmergent] present ☒ *S* ☐ _____ ☐ _____

Percent of surface area (observation site) with very dense (75 - 100 %) plant cover ☒ *100* % ☐ _____ % ☐ _____ %

Forms [(E)mergent, (F)loating, or (S)ubmergent] present ☒ *S, F* ☐ _____ ☐ _____

Percent of entire lake surface covered with dense or very dense aquatic plants *10* % *open water* Forms *FE*

Describe locations of dense and/or very dense plant beds *East end of lake filled w/ Typha + Lythrum plus dense cover of duckweed and algae; similar in side coves around lake*

Loss of open water habitat over entire lake (estimated): ☐ >90 - 100 % ☐ >60 - 90 % ☐ >25 - 60 % ☐ ≤ 25 %

ASSESSMENTS --

TROPHIC STATUS ESTIMATE: ☐ Oligotrophic ☐ Mesotrophic ☒ Eutrophic ☐ Hypernutrophic ☐ Dystrophic ☐ Undetermined

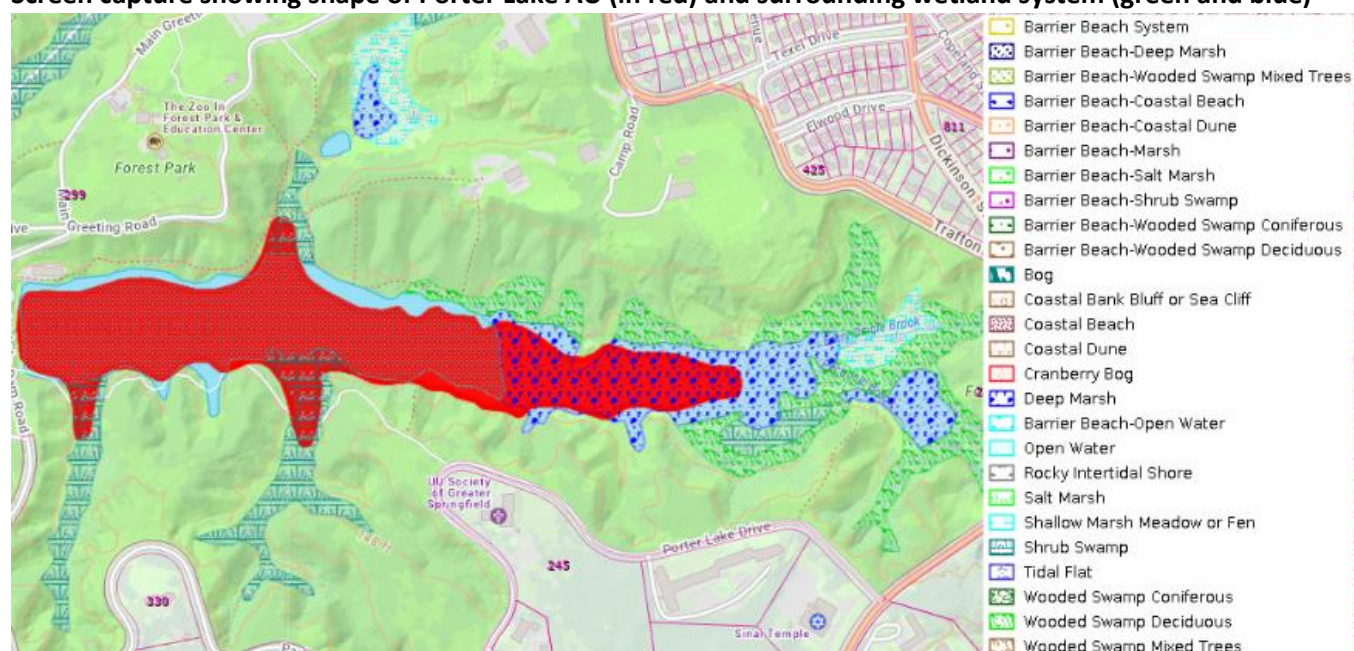
305(b) USE IMPAIRMENT ASSESSMENTS (Acres):

USES	Full Support	Threatened	Partial Support	Non-support	Not Assessed	Not Attainable
Aquatic Life			<i>22.0</i>			<i>6.0</i>
Fish Consumption					<i>22.0</i>	<i>6.0</i>
Primary Contact					<i>22.0</i>	<i>6.0</i>
Secondary Contact	<i>22.0</i>					<i>6.0</i>
Aesthetics	<i>22.0</i>					<i>6.0</i>

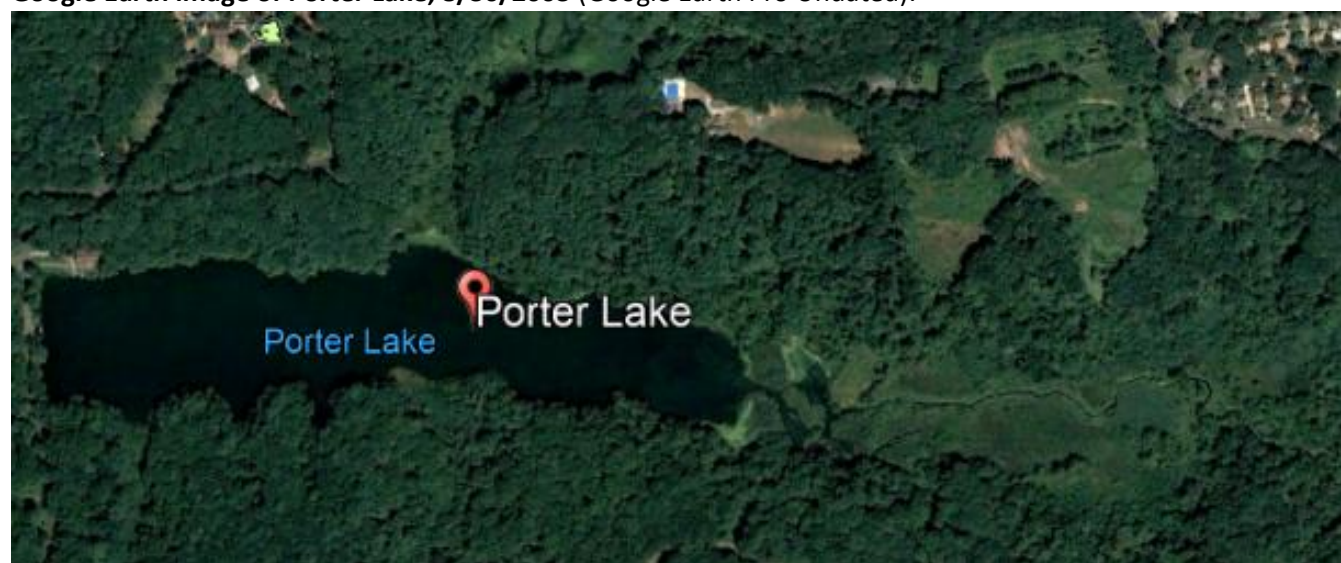
CAUSES: ☐ Noxious plants (2200) - Size *6.0* acres / Magnitude *M* ☒ Exotic plants (2600) - Size *22.0* acres / Magnitude *M*
☐ Turbidity (2500) - Size _____ acres / Magnitude _____ ☐ Flow alteration (1500) - Size _____ acres / Magnitude _____
☐ Metals (0500) ☐ Hg (0501) - Size _____ acres / Magnitude _____ ☐ Siltation (1100) - Size _____ acres / Magnitude _____
☐ _____ () - Size _____ acres / Magnitude _____ ☐ _____ () - Size _____ acres / Magnitude _____

SOURCES: Describe any obvious sources of impairment _____

Screen capture showing shape of Porter Lake AU (in red) and surrounding wetland system (green and blue)



Google Earth image of Porter Lake, 8/30/2003 (Google Earth Pro Undated):



Google Earth image of Porter Lake, 9/6/2015 (Google Earth Pro Undated):



Google Earth image of Porter Lake, 9/18/2019 (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 Porter Lake (MA34073) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Aesthetics Use for Porter Lake (MA34073) continues to be assessed as Not Supporting with the prior Algae impairment being carried forward. The Aquatic Plants (Macrophytes) impairment is being delisted as less than 10% of the waterbody was covered in aquatic macrophytes in recent years. As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Porter Lake (MA34073) 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 July 1998 synoptic survey conducted by MassDEP staff in which it was noted that less than 10% of the open water was covered with dense or very dense aquatic plants. The wetland dominated eastern end of the waterbody and sides coves around the lake were noted with observations of dense or very dense aquatic plants, including emergent plants, as well as the non-rooted, floating species, <i>Lemna/Wolffia/Spirodela</i> spp. and <i>Ceratophyllum demersum</i> (MassDEP 1998, MassDEP 2002). In Google Earth images from September 2015 and September 2019, there is no visible vegetation on the western 2/3 of the lake and the eastern 1/3 is mostly filled in with dense vegetation (the eastern 1/3 appears mostly filled in on all available satellite images) (Google Earth Pro Undated). Based on MassDEP Wetlands GIS dataset (MassGIS 2017), the eastern portion of the lake is dominated by wetlands, specifically shallow/deep marsh and wooded deciduous swamp. The presence of aquatic plant macrophytes is evaluated as a natural background condition due to the surrounding wetland system. Aquatic Plants (Macrophytes) is being delisted as a pollutant as less than 10% of the open water was covered in aquatic macrophytes in both recent years and the 1998 synoptic survey. As an additional note, Porter Lake should be evaluated in a future assessment cycle to determine whether it is a lake or a wetland since the eastern portion is regularly filled in with vegetation.</p>

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>No bacteria or other indicator data for Porter Lake (MA34073) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Algae impairment (from the Aesthetics Use) is being carried forward. Since the Aquatic Plant (Macrophyte) impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Primary Contact Recreation Use.</p>

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Porter Lake (MA34073) are available, 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 Aquatic Plant (Macrophyte) impairment is being removed from the Aesthetics Use this cycle, this impairment is also being removed from the Secondary Contact Recreation Use.

Porter Lake West (MA34072)

Location:	Springfield.
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	(Aquatic Plants (Macrophytes)*)	--	Changed
5	5	Algae	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Added

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	Source Unknown (N)	--	--	X	X	X

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Aquatic Plants (Macrophytes)	Not caused by a pollutant (4c)	As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Porter Lake West (MA34072) 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 July 1998 synoptic survey conducted by MassDEP staff in which it was noted that 50% of the lake was covered with dense or very dense aquatic plants, including the non-rooted, floating species, <i>Lemna/Wolffia/Spirodela</i> spp. (MassDEP 1998, MassDEP 2002). Google Earth images from September 2013 and September 2019 show high amounts of plant coverage (in portions of the lake in 2013 and the entire lake in 2019) and a green tint to the entire waterbody (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of multiple non-rooted, floating, aquatic macrophyte species. Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since more than 25% of the lake was covered in aquatic macrophytes in recent years.

Aquatic Plant (Macrophytes)

2002 WBS Coding Sheet (MassDEP 2002):

WBID: MA 34092
NAME: Porter Lake West
CODE: 34092

WATERSHED: Connecticut (24)
TYPE: Lake/Pond
SIZE: 5 (acres)

(Printed 08/01/96)

CLASS: B/
ORW?: Yes or No
Water Supply?: Yes or No

LATITUDE:
LONGITUDE:
Lake/Pond Name:
Ecoregion Name:
Description:

Assessment Date: 0007
Cycle: 02
Begin Sampling: 7/24/98
End Sampling: 9807
Water Quality Limited?: YES or NO
303(d) List?: YES or NO

Lake Specific Information

Significantly Publicly Owned:
Trophic Status:
Trophic Trend:
Acidity/Toxics Trend:
Acidity Effects:

1997
Significantly Publicly Owned: Y or N
Trophic Status: O M (E) H D U
Trophic Trend: 1 S D U
Acidity/Toxics Trend: 1 S D U
Acidity Effects: 1 V N U

Uses	Support	Threat	Partial	Non-Sup	Not-Asses	Not-Attain
OVERALL USE SUPPORT			5.0 3.0	2.0		
ALUS			5.0			
FISH CONSUMPTION					5.0	
PRIMARY CONTACT				2.0	3.0	
SECONDARY CONTACT	3.0			2.0		
Aesthetics	3.0			2.0		
ALUS Bio						
ALUS Chem/Phys						
ALUS Toxicity						

Nonattainment Causes

Code	Size	Magnitude	1997 Code	Size	Magnitude
2200 - Noxious aquatic plants	2.0	M	2200	2.0	M
2600 - Exotic plants	5.0	M	2600	5.0	M

Nonattainment Sources

Code	Size	Magnitude	1997 Code	Size	Magnitude
			9000	5.0	H

Assessment Type

1997 Assessment Category = M E NA

Media/Pollutants Assessed

1997 Toxics Monitoring => YES or NO

Comments:

1998 Synoptic Survey Field Sheet (MassDEP 1998):

week end 12/29/98

LAKE/POND: Porter Lake West SIZE (acres): 5 PALIS NO. 34072
TOWN/CITY: Springfield USGS TOPO. SHEET: Springfield South
DATE: 7/21/98 WATERSHED: Connecticut OBSERVERS: McVoy

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) Inlet from Porter Lake in Forest Park.
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 ☒ ☐ Inlet culvert
Other (describe): ☐ _____
☐ _____
☐ _____

ACCESS - Ownership (for multiple observation sites use numbers in boxes that apply)
Public ☒ ☐ Private ☐ ☐ Uncertain ☐ ☐
Names of Owners ☒ ☐ City of Springfield Parks 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
Algal Bloom: ☒ ☐ Slight ☐ ☐ Moderate ☐ ☐ Dense ☐ _____ meters
Bottom Type: ☒ ☐ Undecomposed matter ☒ ☐ Muck/silt ☒ ☐ Sand ☐ ☐ Gravel ☐ ☐ Cobble ☐ ☐ Boulders
☒ ☐ Vegetation Other ☐ _____
Other Observations: ☒ ☐ Park land w. + s. sides, open "pavilion" on west end
☒ ☐ 4 spray aerators (fountains) in center to west of pond
☐ _____

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: duckweed + algae
☐ ☐ Produce objectionable odor, color, taste, or turbidity ☒ ☐ Produce undesirable nuisance species of aquatic life
Describe: _____ Describe: duckweed, algae, lotus

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* ☐ *Nymphoides peltata* ☐ *Potamogeton crispus* ☐ *Trapa natans*

NATIVE SPECIES POPULATIONS:

Emergent Plants

☐ *Sagittaria*

☐ *Decodon* (S. e. corner)

☐ *Spartanum* (N. shore)

☐ *Scirpus* (N. shore)

☐

☐

☐

☐

☐

☐

☐

☐

Floating Leaf Plants

☐ *Lemna*

☐ *Spirodela*

☐ *Wolffia*

☐

☐

☐

☐

☐

☐

☐

☐

☐

Submergent Plants

☐ *Elodea*

☐ *Ceratophyllum demersum*

☐

☐ *P. sp.* (Thru leaf)

☐

☐

☒ *Bryozoans* on culvert

☐ wall

☐

☐

☐

☐

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 ☐ 30 % ☐ % ☐ %

Forms [(E)mergent, (F)loating, or (S)ubmergent] present ☐ F, S, ☐ ☐

Percent of entire lake surface covered with dense or very dense aquatic plants 50 % Forms E, F, S

Describe locations of dense and/or very dense plant beds Lower end (west), much of south shore line and along east shore, patchy along north shore

Loss of open water habitat over entire lake (estimated): ☐ >90 - 100 % ☐ >60 - 90 % ☐ >25 - 60 % ☒ ≤ 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	Not Attainable
Aquatic Life			5.0			
Fish Consumption						
Primary Contact				2.0	3.0	
Secondary Contact	3.0			2.0		
Aesthetics	3.0			2.0		

CAUSES: ☒ Noxious plants (2200) -- Size 2.0 acres / Magnitude M ☒ Exotic plants (2600) -- Size 5.0 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 _____

Google Earth image of Porter Lake West while clear, 3/31/2005 (Google Earth Pro Undated):



Google Earth image of Porter Lake West, 9/19/2013 (Google Earth Pro Undated):



Google Earth image of Porter Lake West, 9/18/2019 (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 Porter Lake West (MA34072) is Not Assessed.	

Aesthetic

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

The Aesthetics Use for Porter Lake West (MA34072) 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 Algae impairment is being carried forward and a Nutrient/Eutrophication Biological Indicators impairment added. As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Porter Lake West (MA34072) 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 July 1998 synoptic survey conducted by MassDEP staff in which it was noted that 50% of the lake was covered with dense or very dense aquatic plants, including the non-rooted, floating species, *Lemna/Wolffia/Spirodela* spp. (MassDEP 1998, MassDEP 2002). Google Earth images from September 2013 and September 2019 show high amounts of plant coverage (in portions of the lake in 2013 and the entire lake in 2019) and a green tint to the entire waterbody (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of multiple non-rooted, floating, aquatic macrophyte species. Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since more than 25% of the lake was covered in aquatic macrophytes in recent years.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for Porter Lake West (MA34072) 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. Additionally, the prior Algae 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 Porter Lake West (MA34072) 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. Additionally, the prior Algae impairment (from the Aesthetics Use) is being carried forward and a Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use).

Potash Brook (MA34-12)

Location:	Headwaters, perennial portion, Southampton to confluence with Manhan River, Southampton.
AU Type:	RIVER
AU Size:	1 MILES
Classification/Qualifier:	B

No usable data were available for Potash Brook (MA34-12) 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

Raspberry Brook (MA34-22)

Location:	From Massachusetts/Connecticut border to mouth at confluence with Connecticut River, Longmeadow.
AU Type:	RIVER
AU Size:	1.8 MILES
Classification/Qualifier:	B

No usable data were available for Raspberry Brook (MA34-22) 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

Red Brook (MA34-88)

Location:	Headwaters, perennial portion, east of Jourdan Road, Montgomery to mouth at confluence with Tucker Brook, Southampton.
AU Type:	RIVER
AU Size:	0.8 MILES
Classification/Qualifier:	A: PWS, ORW (Tributary)

No usable data were available for Red Brook (MA34-88) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Red Brook (MA34-92)

Location:	Headwaters north of Maple Street, Southampton to mouth at confluence with Manhan River impoundment (Lyman Pond) backwater, Southampton.
AU Type:	RIVER
AU Size:	2.6 MILES
Classification/Qualifier:	B

No usable data were available for Red Brook (MA34-92) 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

Red Brook (MA34-95)

Location:	Headwaters near the Wendell/Montague border to mouth at confluence with Sawmill River, Leverett.
AU Type:	RIVER
AU Size:	2.3 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Red Brook (MA34-95) 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

Rice Brook (MA34-47)

Location:	Headwaters, perennial portion, south of Burt Road, Westhampton to mouth at confluence with Sodom Brook, Westhampton.
AU Type:	RIVER
AU Size:	1.1 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Rice Brook (MA34-47) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

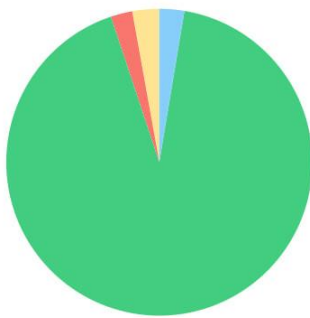
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Roaring Brook (MA34-63)

Location:	From the outlet of Whately Glen Reservoir (South Deerfield Water Supply Dam, NATID: MA00522), Whately to mouth at confluence with Mill River, Whately.
AU Type:	RIVER
AU Size:	1.4 MILES
Classification/Qualifier:	B: CWF

Roaring Brook (MA34-63)

Watershed Area: 5.80 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	5.80	4.49	2.85	2.26
Agriculture	2.8%	3.1%	1.9%	2%
Developed	2.3%	2.2%	2.2%	2%
Natural	92.2%	91.9%	91.2%	91.2%
Wetland	2.6%	2.8%	4.7%	4.8%
Impervious	0.9%	0.9%	1.1%	1%

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 Roaring Brook (MA34-63) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
There are no data available to assess the status of the Aesthetics Use for Roaring Brook (MA34-63), so it 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 Roaring Brook (MA34-63) 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 Roaring Brook (MA34-63) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected <i>E. coli</i> bacteria samples about halfway down Roaring Brook at W1788 [N St, Whately] from May-Sep 2008 (n=6). Analysis of the historic single year limited frequency <i>E. coli</i> dataset from W1788 indicated that 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 20 CFU/100ml. Historic <i>E. coli</i> data from W1788 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
W1788	MassDEP	Water Quality	Roaring Brook	[North Street, Whately]	42.460683	-72.643547

Bacteria Data

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

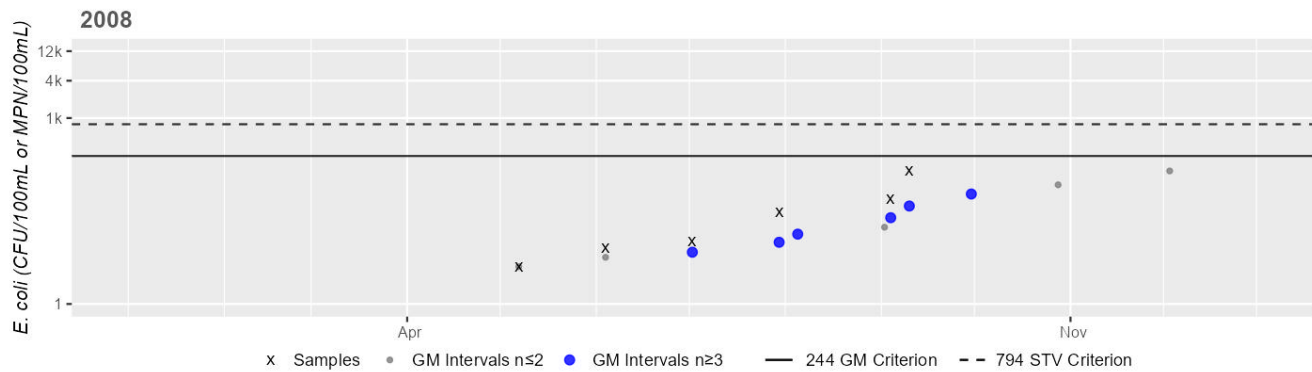
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1788	MassDEP	E. coli	05/06/08	09/09/08	6	4	140	20

Station MASSDEP_W1788 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	20
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Historic (1997-2010)

0%

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

Roaring Brook (MA34-79)

Location:	Headwaters northwest of Cricket Hill, Conway to the outlet of Whately Glen Reservoir (South Deerfield Water Supply Dam, NATID: MA00522), Whately (excluding the approximately 0.4 miles through PALIS# 34123; Roaring Brook Upper Reservoir (impounded by Roaring Brook Dam NATID: MA01056)).
AU Type:	RIVER
AU Size:	4 MILES
Classification/Qualifier:	A: PWS, ORW, CWF (Tributary)

No usable data were available for Roaring Brook (MA34-79) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

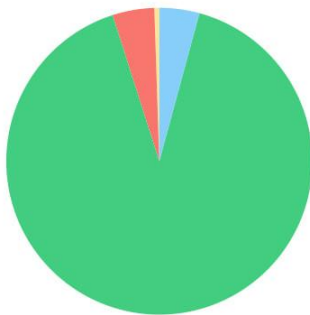
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

Roaring Brook (MA34-80)

Location:	Headwaters outlet wetland east of Montague Road, Shutesbury to mouth at confluence with Doolittle Brook, Leverett.
AU Type:	RIVER
AU Size:	4.3 MILES
Classification/Qualifier:	B

Roaring Brook (MA34-80)

Watershed Area: 7.39 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	7.39	4.36	2.82	1.90
Agriculture	0.5%	0.6%	0.9%	1%
Developed	4.4%	3.7%	3.8%	4.3%
Natural	90.8%	94.2%	89.2%	92%
Wetland	4.2%	1.5%	6.1%	2.7%
Impervious	1.7%	1.4%	1.6%	1.9%

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 Roaring Brook (MA34-80) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Roaring Brook (MA34-80) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station in the upstream half of Roaring Brook: ~250 feet downstream from the Shutesbury Road crossing nearest the Shutesbury/Leverett border, Leverett (W2898) in the summer of 2019 (n=4). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2898	MassDEP	Water Quality	Roaring Brook	[approximately 250 feet downstream from the Shutesbury Road crossing nearest the Shutesbury/Leverett border, Leverett]	42.450074	-72.452607

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
W2898	2019	4	Aesthetic observations were made by MassDEP field sampling crews at Station W2898 on Roaring Brook (MA34-80) during 4 site visits between Jun 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W2898	2019	4	4	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2898	Roaring Brook	2019	Aesthetics Impaired?	No	4	4
W2898	Roaring Brook	2019	Aquatic Plant Density, Overall	None	4	4
W2898	Roaring Brook	2019	Color	Light Yellow/Tan	1	4
W2898	Roaring Brook	2019	Color	None	3	4
W2898	Roaring Brook	2019	Objectionable Deposits	No	4	4
W2898	Roaring Brook	2019	Odor	None	4	4
W2898	Roaring Brook	2019	Periphyton Density, Filamentous	None	3	4
W2898	Roaring Brook	2019	Periphyton Density, Filamentous	Sparse	1	4
W2898	Roaring Brook	2019	Periphyton Density, Film	None	4	4
W2898	Roaring Brook	2019	Scum	No	4	4
W2898	Roaring Brook	2019	Turbidity	None	4	4

Primary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
No bacteria data are available to assess the Primary Contact Recreation Use for Roaring Brook (MA34-80) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
No bacteria data are available to assess the Secondary Contact Recreation Use for Roaring Brook (MA34-80) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information.

Roaring Brook Upper Reservoir (MA34123)

Location:	Conway (impoundment of Roaring Brook upstream of Roaring Brook Dam (NATID: MA01056)).
AU Type:	FRESHWATER LAKE
AU Size:	20 ACRES
Classification/Qualifier:	A: PWS, ORW (overlaps A/CWF/PWS/ORW Roaring Brook)

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
--	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 Roaring Brook Upper Reservoir (MA34123) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Aesthetics Use for Roaring Brook Upper Reservoir (MA34123) is assessed as Fully Supporting. MassDEP staff surveyed the Roaring Brook Upper Reservoir AU at two stations in Conway, in 2016 as part of the MAP2 lake monitoring project; at the deep hole index station in the eastern lobe of the reservoir W2639 (MAP2L-043) and a shoreline station at the south eastern end of reservoir, at the southern end of the Roaring Brook Dam (NAT ID: MA01056) W2606 (MAP2L-043S). There were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded during summer site visits to W2606 (n=5) and W2639 (n=3) or littoral zone duckweed recorded in ten shoreline plots (n=1), though field staff once noted green water color at the deep hole. During the macrophyte mapping survey at W2639 in Sep 2016, less than 25% (0.8%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2606	MassDEP	Water Quality	Roaring Brook/Roaring Brook Upper Reservoir	[south eastern end of reservoir, at the southern end of the Roaring Brook Dam (NAT ID: MA01056), reservoir is east of Roaring Brook Road, Conway]	42.469102	-72.665441
W2639	MassDEP	Water Quality	Roaring Brook/Roaring Brook Upper Reservoir	[index site, eastern lobe, Conway]	42.469652	-72.665625

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
W2606	2016	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2606 (MAP2L-043S) on Roaring Brook Upper Reservoir (MA34123) during 5 site visits between May 2016 and Sep 2016. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. During the MAP2 littoral survey (n=1), duckweed was not noted in any of the 10 shoreline plots.
W2639	2016	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2639 (MAP2L-043) on Roaring Brook Upper Reservoir (MA34123) during 3 site visits between Jun 2016 and Aug 2016. 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 2016, less than 25% (0.8%) of the waterbody was determined to have an aquatic macrophyte biovolume >50%.

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2606	Roaring Brook Upper Reservoir	2016	Aesthetics Impaired?	No	5	5
W2606	Roaring Brook Upper Reservoir	2016	Color	None	5	5
W2606	Roaring Brook Upper Reservoir	2016	Objectionable Deposits	No	5	5
W2606	Roaring Brook Upper Reservoir	2016	Odor	None	5	5
W2606	Roaring Brook Upper Reservoir	2016	Scum	No	5	5
W2606	Roaring Brook Upper Reservoir	2016	Turbidity	None	4	5
W2606	Roaring Brook Upper Reservoir	2016	Turbidity	Slightly Turbid	1	5
W2639	Roaring Brook Upper Reservoir	2016	Aesthetics Impaired?	No	3	3
W2639	Roaring Brook Upper Reservoir	2016	Aquatic Plant Density, Overall	None	2	3
W2639	Roaring Brook Upper Reservoir	2016	Aquatic Plant Density, Overall	Sparse	1	3
W2639	Roaring Brook Upper Reservoir	2016	Color	Greenish	1	3
W2639	Roaring Brook Upper Reservoir	2016	Color	None	2	3
W2639	Roaring Brook Upper Reservoir	2016	Objectionable Deposits	No	3	3
W2639	Roaring Brook Upper Reservoir	2016	Odor	None	2	3
W2639	Roaring Brook Upper Reservoir	2016	Odor	Sulfide (rotten egg)	1	3
W2639	Roaring Brook Upper Reservoir	2016	Scum	No	3	3
W2639	Roaring Brook Upper Reservoir	2016	Turbidity	None	3	3

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Roaring Brook Upper Reservoir (MA34123) is assessed as Fully Supporting. In Roaring Brook Upper Reservoir MassDEP staff collected Secchi depth and cyanobacteria cell count data at W2639 [MAP2L-043, Index-deep hole] (2016) and cyanobacteria cell count and cyanotoxin data at W2606 [MAP2L-043S, Shoreline] (2016). Secchi depth data indicated water clarity meeting the 1.2m (4ft) threshold at W2639 in 2016 (n=3, 3.4-5m). The cyanobacteria cell count did not exceed 70,000 cells/ml in any of the water samples in 2016 (n=6). Analysis of microcystins samples from W2606 in 2016 (n=3) indicated that the concentrations did not exceed the threshold of 8 µg/L. In addition, MassDEP staff collected <i>E. coli</i> bacteria samples in Roaring Brook Upper Reservoir at W2606 [S eastern end of reservoir, at the southern end of the Roaring Brook Dam (T ID: MA01056), reservoir is E of Roaring Brook Rd, Conway] from May-Sep 2016 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2606 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 4 CFU/100ml. <i>E. coli</i> data from W2606 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2606	MassDEP	Water Quality	Roaring Brook/Roaring Brook Upper Reservoir	[south eastern end of reservoir, at the southern end of the Roaring Brook Dam (NAT ID: MA01056), reservoir is east of Roaring Brook Road, Conway]	42.469102	-72.665441
W2639	MassDEP	Water Quality	Roaring Brook/Roaring Brook Upper Reservoir	[index site, eastern lobe, Conway]	42.469652	-72.665625

Bacteria Data

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

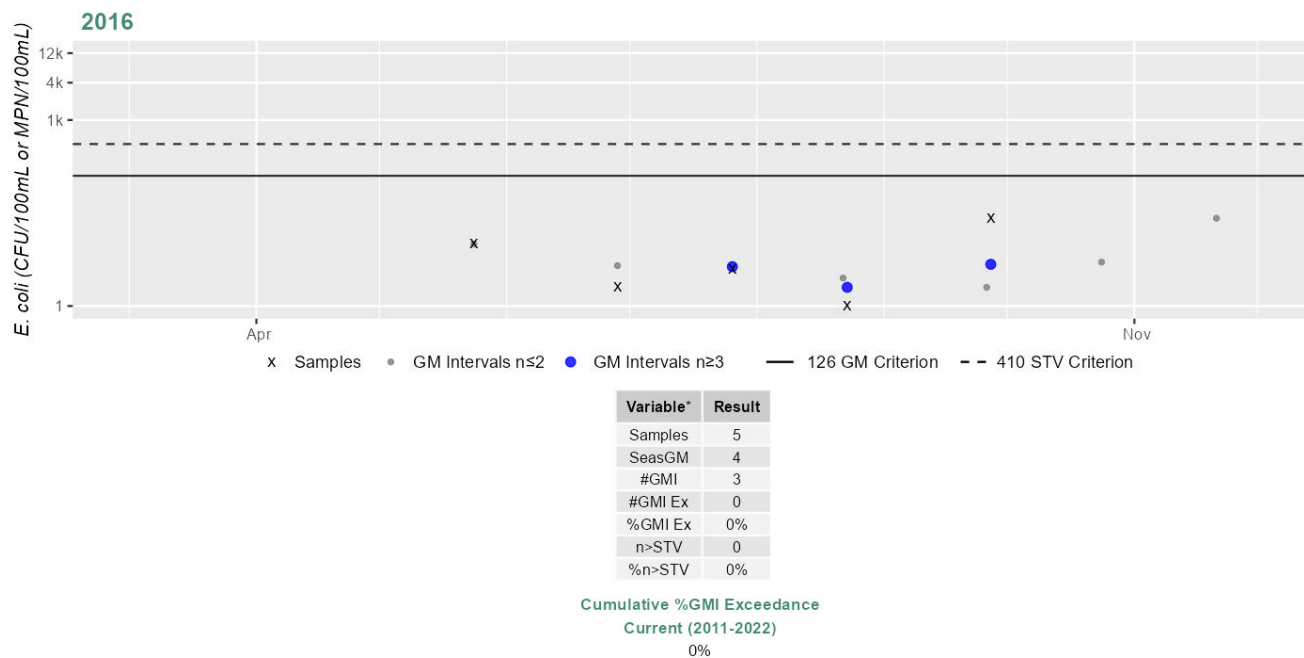
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2606	MassDEP	E. coli	05/23/16	09/26/16	5	1	26	4

Station MASSDEP_W2606 - *Escherichia coli*

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



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

Other Indicators

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

(MassDEP Undated 7) (MassDEP Undated 4)

Data Year(s)	Summary
2016	In Roaring Brook Upper Reservoir (MA34123) in 2016, MassDEP collected Secchi and cyanobacteria cell count data at W2639 [MAP2L-043, Index-deep hole], and cyanobacteria cell count and cyanotoxin data at W2606 [MAP2L-043S, Shoreline]. At station W2639 (station depth=15.2 m) the Secchi depth measurements ranged from 3.4-5 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 samples from the shoreline station W2606 (n=3) indicated that the concentrations did not exceed the threshold of 8 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)
W2606	Roaring Brook Upper Reservoir	Shoreline	2016	3	0	NA
W2639	Roaring Brook Upper Reservoir	Index	2016	3	0	NA

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Roaring Brook Upper Reservoir (MA34123) is assessed as Fully Supporting. In Roaring Brook Upper Reservoir MassDEP staff collected cyanobacteria cell count data at W2639 [MAP2L-043, Index-deep hole] (2016) and cyanobacteria cell count and cyanotoxin data at W2606 [MAP2L-043S, Shoreline] (2016). The cyanobacteria cell count did not exceed 70,000 cells/ml in any of the water samples in 2016 (n=6). Analysis of microcystins samples from W2606 in 2016 (n=3) indicated that the concentrations did not exceed the threshold of 8 µg/L. MassDEP staff collected <i>E. coli</i> bacteria samples in Roaring Brook Upper Reservoir at W2606 [S eastern end of reservoir, at the southern end of the Roaring Brook Dam (T ID: MA01056), reservoir is E of Roaring Brook Rd, Conway] from May-Sep 2016 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2606 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 4 CFU/100ml. <i>E. coli</i> data from W2606 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2606	MassDEP	Water Quality	Roaring Brook/Roaring Brook Upper Reservoir	[south eastern end of reservoir, at the southern end of the Roaring Brook Dam (NAT ID: MA01056), reservoir is east of Roaring Brook Road, Conway]	42.469102	-72.665441

Bacteria Data

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

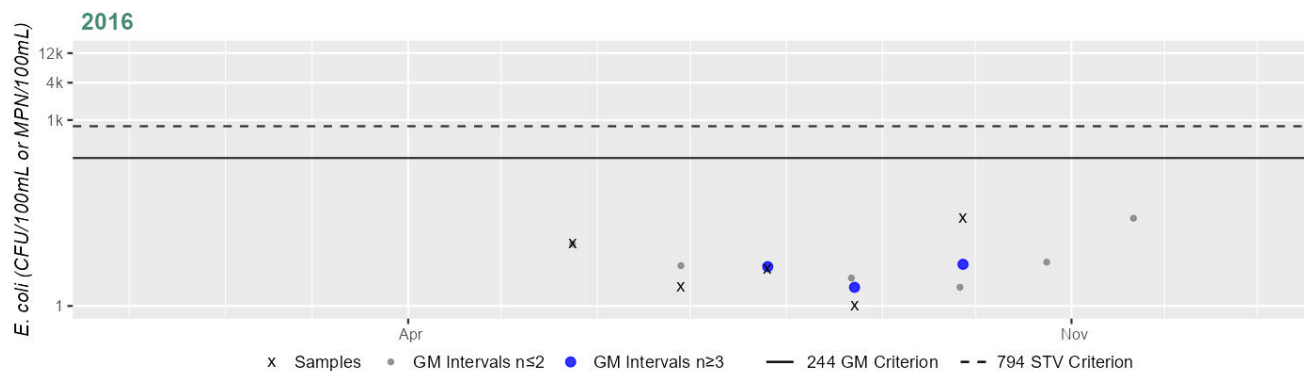
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2606	MassDEP	E. coli	05/23/16	09/26/16	5	1	26	4

Station MASSDEP_W2606 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	4
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

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

Roberts Meadow Brook (MA34-68)

Location:	Headwaters south of Old Curtis Road, Chesterfield to mouth at inlet Robers Meadow Reservoir, Northampton.
AU Type:	RIVER
AU Size:	6.2 MILES
Classification/Qualifier:	A: PWS, ORW (Tributary)

No usable data were available for Roberts Meadow Brook (MA34-68) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Roberts Meadow Reservoir (MA34076)

Location:	Northampton.
AU Type:	FRESHWATER LAKE
AU Size:	22 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Roberts Meadow Reservoir (MA34076) 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

Rogers Brook (MA34-51)

Location:	Headwaters east of Oak Hill Road near the Goshen/Ashfield border to mouth at confluence with West Branch Mill River, Goshen.
AU Type:	RIVER
AU Size:	2.6 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Rogers Brook (MA34-51) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

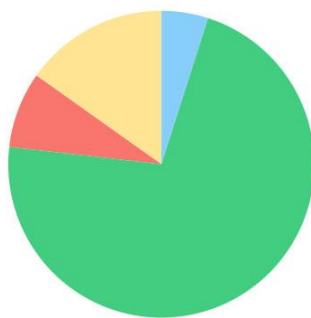
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

Russellville Brook (MA34-62)

Location:	Headwaters, Route 116, Sunderland (river name changes at bridge from Long Plain Brook SARIS# 3420350) to mouth at confluence with the Connecticut River, Hadley.
AU Type:	RIVER
AU Size:	4.4 MILES
Classification/Qualifier:	B

Russellville Brook (MA34-62)

Watershed Area: 7.27 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	7.27	1.89	1.98	0.52
Agriculture	15.2%	40%	12.1%	26.8%
Developed	8%	13.4%	5.4%	6.8%
Natural	71.9%	38.6%	70%	45.1%
Wetland	4.9%	7.9%	12.5%	21.3%
Impervious	2.7%	5.4%	1.8%	2.5%

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

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Russellville Brook (MA34-62) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Russellville Brook (MA34-62) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station about halfway down Russellville Brook: ~250 feet downstream of Rt. 47, Hadley (W2854) during summer 2019 (n=8). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted minor trash on two occasions.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2854	MassDEP	Water Quality	Russellville Brook	[approximately 250 feet downstream of Route 47, Hadley]	42.411180	-72.567464

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
W2854	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2854 on Russellville Brook (MA34-62) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits (n=2).

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
W2854	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2854	Russellville Brook	2019	Aesthetics Impaired?	No	8	8
W2854	Russellville Brook	2019	Aquatic Plant Density, Overall	None	2	8
W2854	Russellville Brook	2019	Aquatic Plant Density, Overall	Sparse	6	8
W2854	Russellville Brook	2019	Color	Brownish	1	8
W2854	Russellville Brook	2019	Color	Light Yellow/Tan	1	8
W2854	Russellville Brook	2019	Color	None	6	8
W2854	Russellville Brook	2019	Objectionable Deposits	No	6	8
W2854	Russellville Brook	2019	Objectionable Deposits	Yes	2	8
W2854	Russellville Brook	2019	Odor	None	8	8
W2854	Russellville Brook	2019	Periphyton Density, Filamentous	None	8	8
W2854	Russellville Brook	2019	Periphyton Density, Film	None	8	8
W2854	Russellville Brook	2019	Scum	No	8	8
W2854	Russellville Brook	2019	Turbidity	Moderately Turbid	2	8
W2854	Russellville Brook	2019	Turbidity	None	5	8
W2854	Russellville Brook	2019	Turbidity	Slightly Turbid	1	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Russellville Brook (MA34-62) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2019. MassDEP staff collected <i>E. coli</i> bacteria samples about halfway down Russellville Brook at W2854 [~250 ft downstream of Rt. 47, Hadley] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2854 indicated 100% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 157 CFU/100ml. <i>E. coli</i> data from W2854 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2854	MassDEP	Water Quality	Russellville Brook	[approximately 250 feet downstream of Route 47, Hadley]	42.411180	-72.567464

Bacteria Data

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

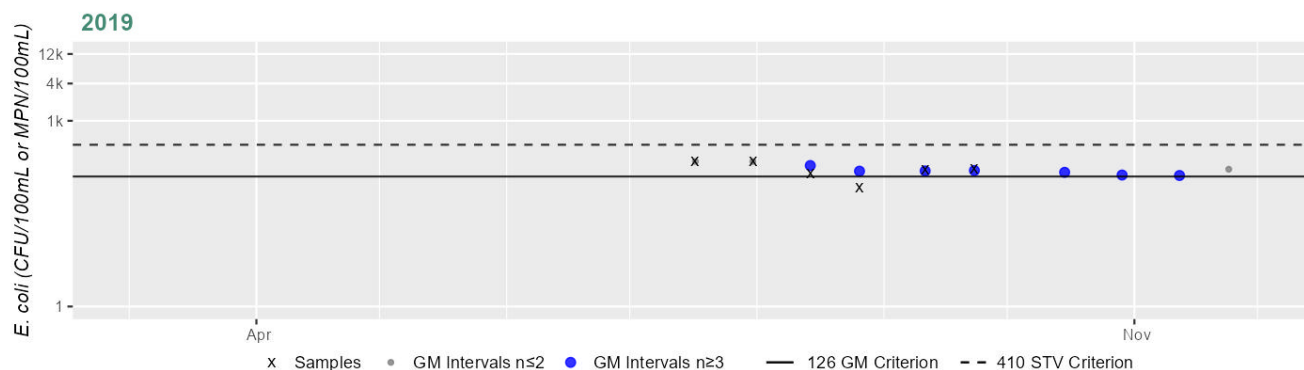
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2854	MassDEP	E. coli	07/17/19	09/23/19	6	82	220	157

Station MASSDEP_W2854 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	157
#GMI	7
#GMI Ex	7
%GMI Ex	100%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

100%

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

Secondary Contact Recreation

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

The Secondary Contact Recreation Use for Russellville Brook (MA34-62) continues to be assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Russellville Brook from 2008-2019 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: about halfway down the AU at W1802 [Rt. 47 (River Drive), Hadley] from May-Sep 2008 (n=6), and W2854 [~250 ft downstream of Rt. 47, Hadley] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency *E. coli* dataset from W2854 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 157 CFU/100ml. *E. coli* data from W2854 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1802	MassDEP	Water Quality	Russellville Brook	[Route 47 (River Drive), Hadley]	42.411808	-72.567123
W2854	MassDEP	Water Quality	Russellville Brook	[approximately 250 feet downstream of Route 47, Hadley]	42.411180	-72.567464

Bacteria Data

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

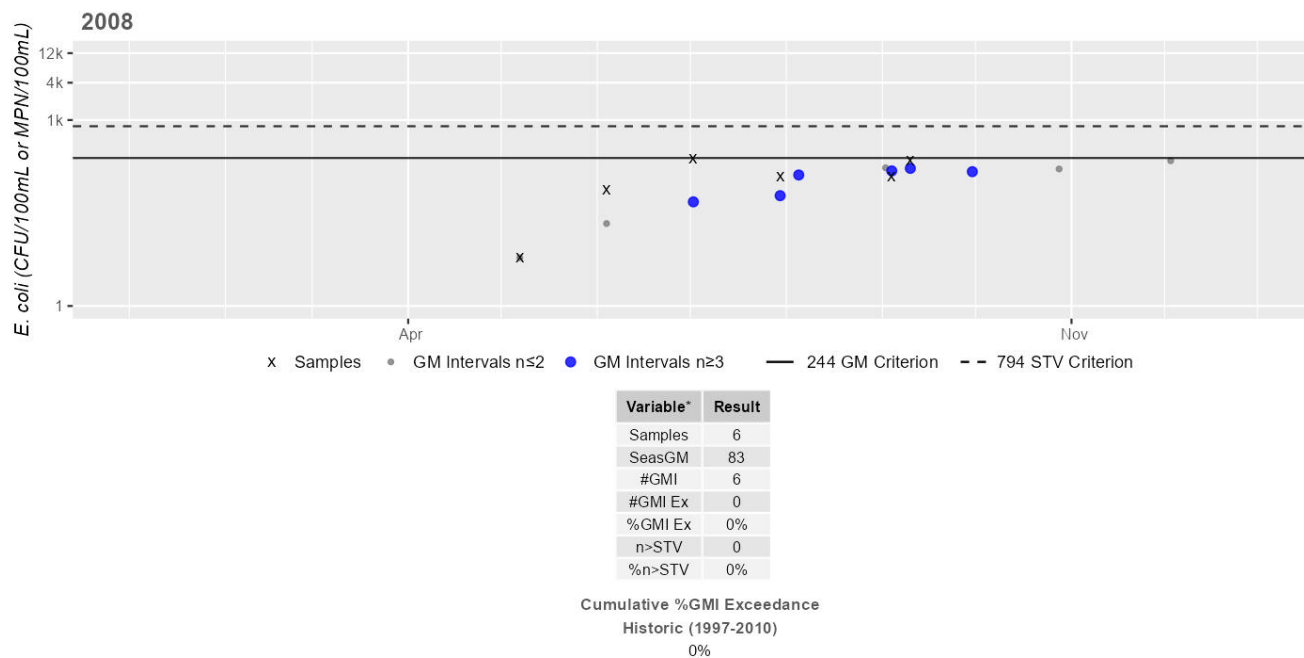
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1802	MassDEP	<i>E. coli</i>	05/06/08	09/09/08	6	6	240	83
W2854	MassDEP	<i>E. coli</i>	07/17/19	09/23/19	6	82	220	157

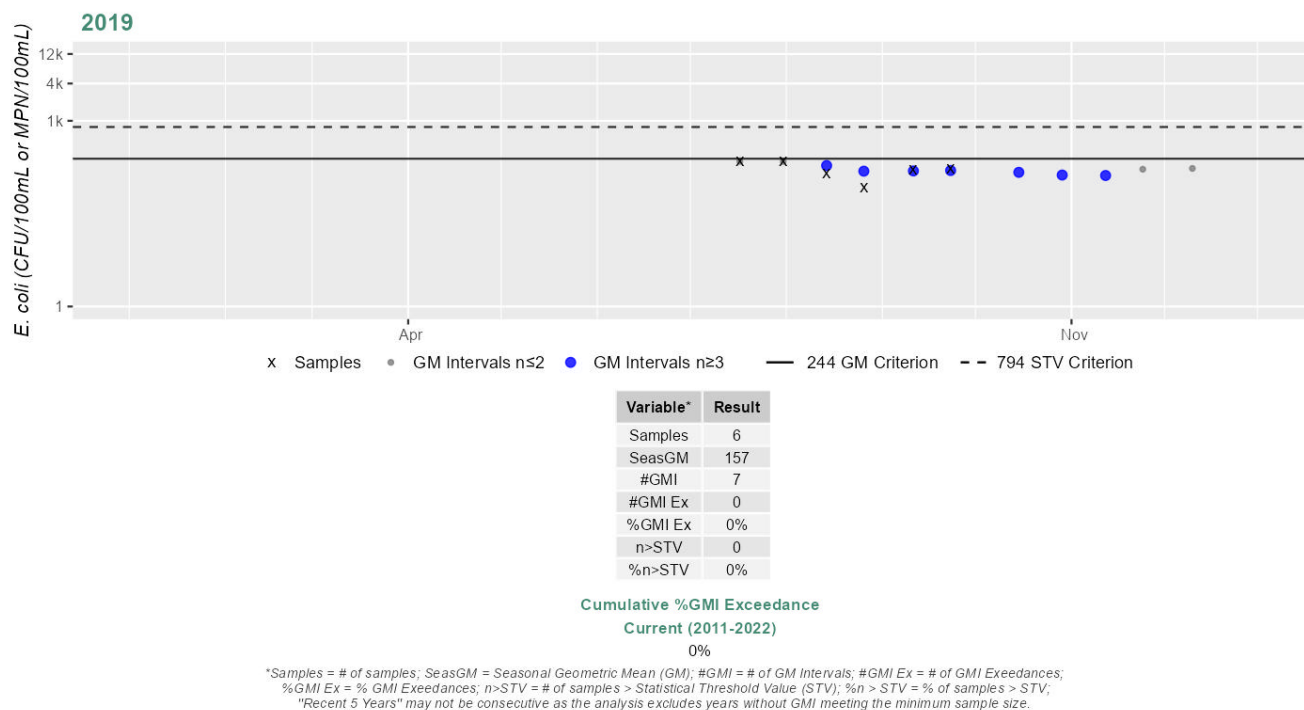
Station MASSDEP_W1802 - *Escherichia coli*

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



Station MASSDEP_W2854 - *Escherichia coli*

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



Sacket Brook (MA34-45)

Location:	Headwaters, perennial portion, north of Southampton Road, Montgomery to mouth at confluence with Manhan River, Southampton.
AU Type:	RIVER
AU Size:	2.1 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Sacket Brook (MA34-45) 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

Sawmill River (MA34-40)

Location:	Headwaters, outlet Lake Wyola, Shutesbury to Dudleyville Road, Leverett (formerly part of 2006 segment: Sawmill River MA34-26).
AU Type:	RIVER
AU Size:	2 MILES
Classification/Qualifier:	B

No usable data were available for Sawmill River (MA34-40) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Sawmill River (MA34-41)

Location:	Dudleyville Road, Leverett to mouth at confluence with Connecticut River, Montague (formerly part of 2006 segment: Sawmill River MA34-26).
AU Type:	RIVER
AU Size:	11 MILES
Classification/Qualifier:	B: CWF

Sawmill River (MA34-41)

Watershed Area: 31.99 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	31.99	6.52	8.19	2.24
Agriculture	2.9%	11.4%	3.7%	12.1%
Developed	5%	9.6%	6.9%	9.7%
Natural	88.8%	75%	81%	68.5%
Wetland	3.3%	4.1%	8.3%	9.8%
Impervious	2.1%	3.9%	3.1%	4.2%

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 Sawmill River (MA34-41) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
There are no data available to assess the status of the Aesthetics Use for Sawmill River (MA34-41), so it is Not Assessed.	

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for the Sawmill River (MA34-41) are available, so the Primary Contact Recreation Use is Not Assessed.	

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
<p>No bacteria or other indicator data for the Sawmill River (MA34-41) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected <i>E. coli</i> bacteria samples in the downstream quarter of Sawmill River from 2003-2008 at 5 stations. Samples were collected from the following stations/sample years from upstream to downstream: W1672 [Center St, Montague] from Jul-Sep 2006 (n=2), W1670 [~700 ft upstream from confluence with Pond Brook, Montague] from Jul-Sep 2006 (n=2), W1682 [Meadow Rd, Montague] from Jul-Sep 2006 (n=2), W1048 [S Ferry Rd, Montague] in 2003, 2006, and 2008 (n=2-6/yr), W1681 [at “field Rd” off the southeastern end of Lower Meadow Rd, upstream of the confluence with the Connecticut River, Montague] from Jul-Sep 2006 (n=2). The historic <i>E. coli</i> data at W1672, W1670, W1682 & W1681 are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use. Analysis of this historic multi-year limited frequency <i>E. coli</i> dataset from W1048 indicated 1 out of 2 sufficient data yrs had intervals where >20% of the GMs were >244 CFU/100ml (2003, 20%), 0 yrs had ≥2 samples exceed the 794 CFU/100ml STV, and cumulatively across years 9% of intervals had GMs >244 CFU/100ml. Historic <i>E. coli</i> data from W1048 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.</p>	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1048	MassDEP	Water Quality	Sawmill River	[South Ferry Road, Montague]	42.542563	-72.549119
W1670	MassDEP	Water Quality	Sawmill River	[approximately 700 feet upstream from confluence with Pond Brook, Montague]	42.539899	-72.531479
W1672	MassDEP	Water Quality	Sawmill River	[Center Street, Montague]	42.535622	-72.526390
W1681	MassDEP	Water Quality	Sawmill River	[at "field road" off the southeastern end of Lower Meadow Road, upstream of the confluence with the Connecticut River, Montague]	42.535621	-72.558956
W1682	MassDEP	Water Quality	Sawmill River	[Meadow Road, Montague]	42.539087	-72.539380

Bacteria Data

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

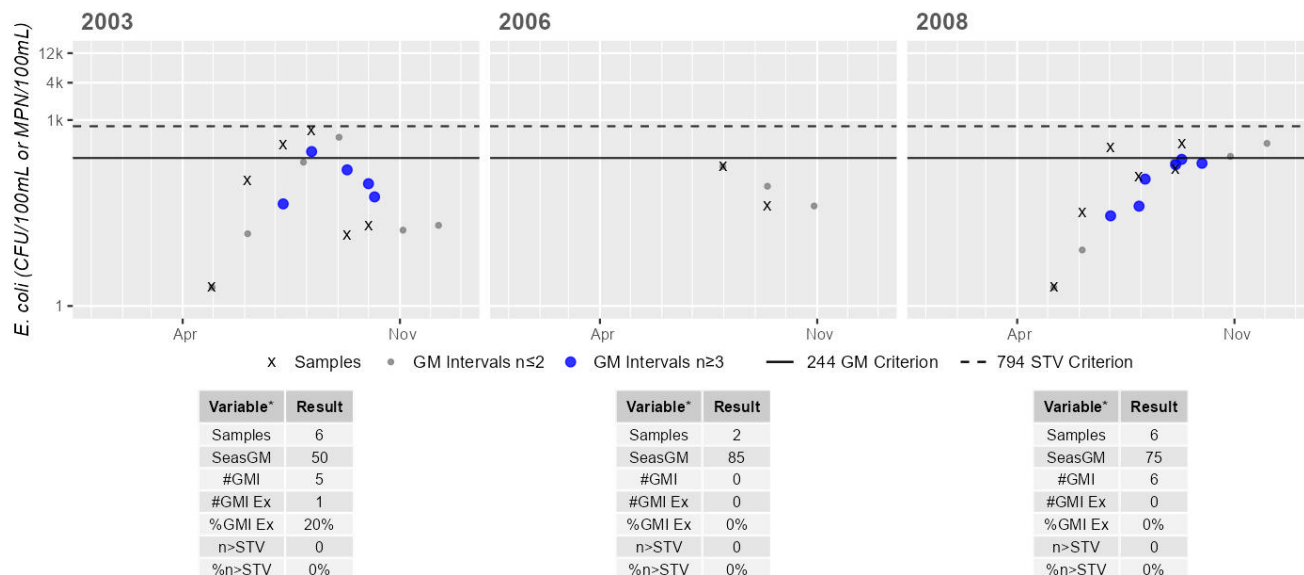
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1048	MassDEP	E. coli	04/30/03	10/01/03	6	2	680	50
W1048	MassDEP	E. coli	07/31/06	09/13/06	2	41	178	85
W1048	MassDEP	E. coli	05/06/08	09/09/08	6	2	420	75
W1670	MassDEP	E. coli	07/31/06	09/13/06	2	6	39	15
W1672	MassDEP	E. coli	07/31/06	09/13/06	2	8	45	18
W1681	MassDEP	E. coli	07/31/06	09/13/06	2	275	435	345
W1682	MassDEP	E. coli	07/31/06	09/13/06	2	36	69	49

Station MASSDEP_W1048 - *Escherichia coli*

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



Cumulative %GMI Exceedance

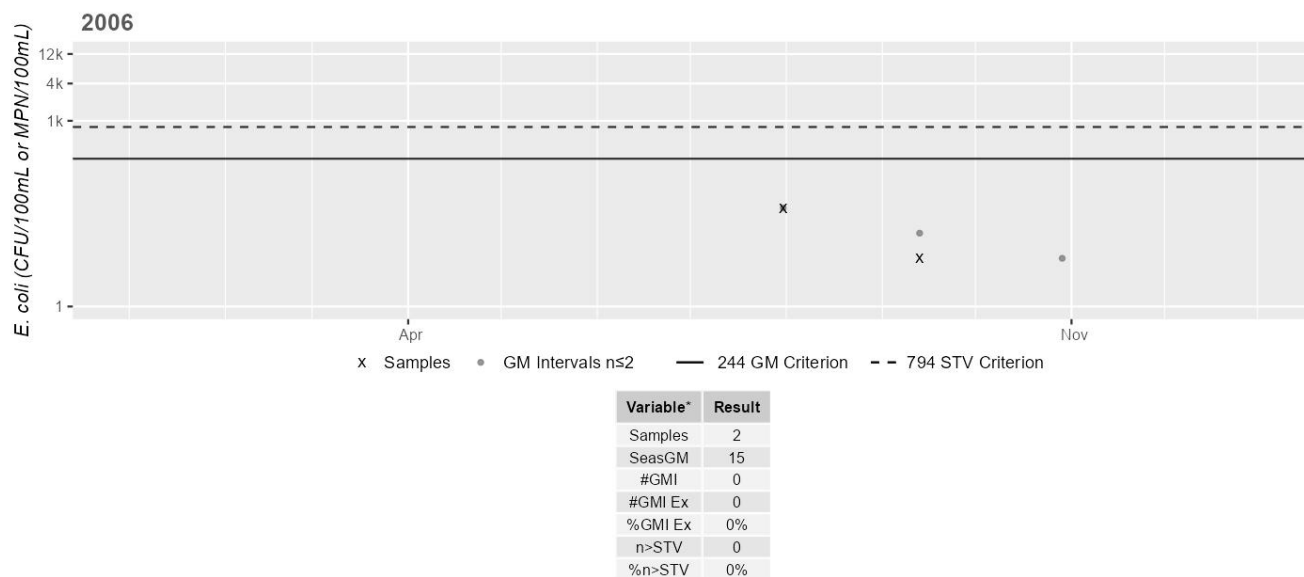
Historic (1997-2010)

9%

*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_W1670 - *Escherichia coli*

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



Cumulative %GMI Exceedance

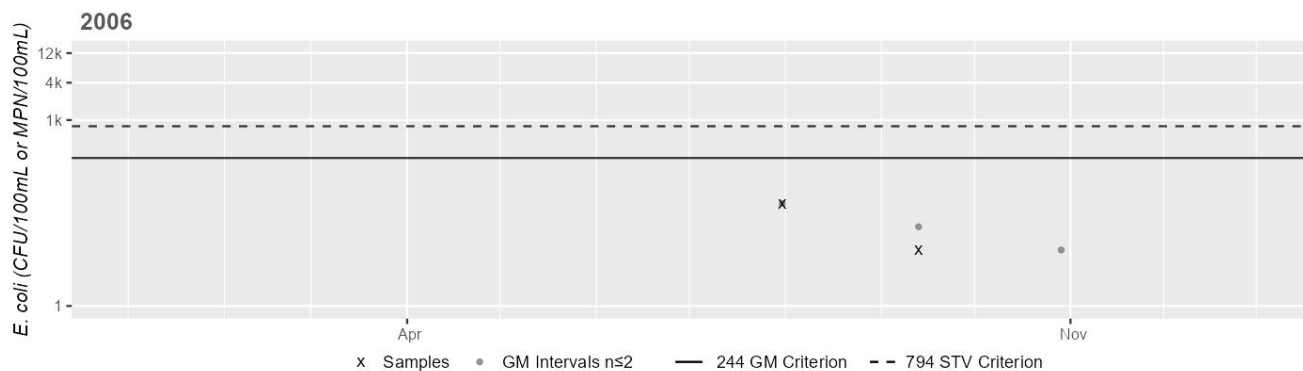
Historic (1997-2010)

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_W1672 - Escherichia coli

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



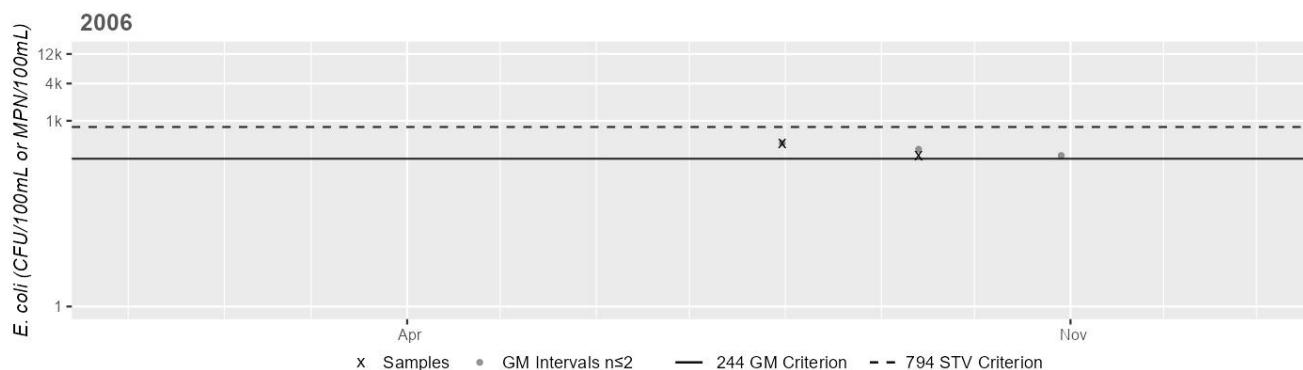
Variable*	Result
Samples	2
SeasGM	18
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W1681 - Escherichia coli

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



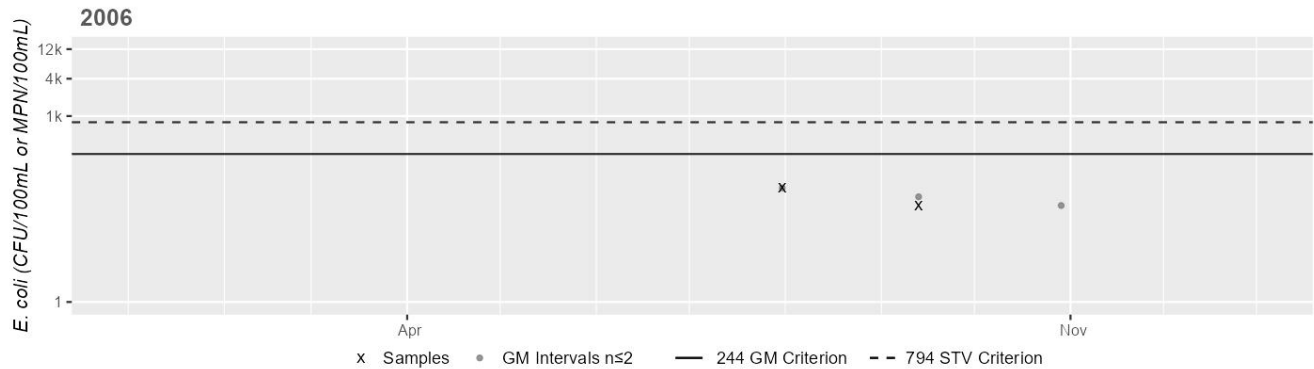
Variable*	Result
Samples	2
SeasGM	345
#GMI	0
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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_W1682 - Escherichia coli

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



Variable*	Result
Samples	2
SeasGM	49
#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.

Sawyer Ponds (MA34078)

Location:	[North Basin] Northfield.
AU Type:	FRESHWATER LAKE
AU Size:	9 ACRES
Classification/Qualifier:	B

No usable data were available for Sawyer Ponds (MA34078) 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

Sawyer Ponds (MA34079)

Location:	[South Basin] Northfield.
AU Type:	FRESHWATER LAKE
AU Size:	12 ACRES
Classification/Qualifier:	B

No usable data were available for Sawyer Ponds (MA34079) 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

Scantic River (MA34-30)

Location:	Massachusetts/Connecticut border, Monson downstream to the Massachusetts/Connecticut border, Hampden.
AU Type:	RIVER
AU Size:	9.6 MILES
Classification/Qualifier:	B

Scantic River (MA34-30)

Watershed Area: 25.03 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area* (square miles)	21.42	4.51	5.55	1.19
Agriculture	3.8%	5.9%	3.6%	6.8%
Developed	9.5%	17.2%	9.4%	20%
Natural	79.5%	64.1%	70.2%	45.8%
Wetland	7.1%	12.8%	16.8%	27.4%
Impervious	3.4%	6.1%	3.6%	7.7%

*Land cover analysis only includes watershed area within Massachusetts.

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)	--	--	--	X	--
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 Scantic River (MA34-30) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Scantic River (MA34-30) continues to be assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at two stations in Hampden on the Scantic River ~2330 feet upstream of Chapin Rd, ~40 feet upstream of the confluence of the unnamed tributary from Goodwill Pond (W2225 in 2011 n=3 and 2012, n=4) and ~2300 feet downstream/south of Mill Rd (W1880 in 2014, n=5). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits (light trash, n=2).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1880	MassDEP	Water Quality	Scantic River	[approximately 2300 feet downstream/south of Mill Road, Hampden]	42.043514	-72.456478
W2225	MassDEP	Water Quality	Scantic River	[approximately 2330 feet upstream of Chapin Road, approximately 40 feet upstream of the confluence of the unnamed tributary from Goodwill Pond), Hampden]	42.062748	-72.405591

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
W1880	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W1880 on Scantic River (MA34-30) during 5 site visits between May 2014 and Aug 2014. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits (n=2).
W2225	2011	3	Aesthetic observations were made by MassDEP field sampling crews at Station W2225 on Scantic River (MA34-30) during 3 site visits between Jun 2011 and Aug 2011. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
W2225	2012	4	Aesthetic observations were made by MassDEP field sampling crews at Station W2225 on Scantic River (MA34-30) during 4 site visits between May 2012 and Oct 2012. 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
W1880	2014	5	5	0
W2225	2011	3	1	0
W2225	2012	4	3	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1880	Scantic River	2014	Aesthetics Impaired?	No	5	5
W1880	Scantic River	2014	Aquatic Plant Density, Overall	None	1	5
W1880	Scantic River	2014	Aquatic Plant Density, Overall	Sparse	4	5
W1880	Scantic River	2014	Color	Light Yellow/Tan	1	5
W1880	Scantic River	2014	Color	None	4	5
W1880	Scantic River	2014	Objectionable Deposits	No	3	5
W1880	Scantic River	2014	Objectionable Deposits	Yes	2	5
W1880	Scantic River	2014	Odor	None	5	5

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1880	Scantic River	2014	Periphyton Density, Filamentous	None	5	5
W1880	Scantic River	2014	Periphyton Density, Film	Moderate	1	5
W1880	Scantic River	2014	Periphyton Density, Film	None	4	5
W1880	Scantic River	2014	Scum	No	5	5
W1880	Scantic River	2014	Turbidity	None	5	5
W2225	Scantic River	2011	Aquatic Plant Density, Overall	None	1	3
W2225	Scantic River	2011	Aquatic Plant Density, Overall	Sparse	1	3
W2225	Scantic River	2011	Aquatic Plant Density, Overall	Unobservable	1	3
W2225	Scantic River	2011	Color	Brownish	2	3
W2225	Scantic River	2011	Color	None	1	3
W2225	Scantic River	2011	Objectionable Deposits	No	3	3
W2225	Scantic River	2011	Odor	None	3	3
W2225	Scantic River	2011	Periphyton Density, Filamentous	None	1	3
W2225	Scantic River	2011	Periphyton Density, Filamentous	Unobservable	2	3
W2225	Scantic River	2011	Periphyton Density, Film	None	1	3
W2225	Scantic River	2011	Periphyton Density, Film	Unobservable	2	3
W2225	Scantic River	2011	Scum	No	3	3
W2225	Scantic River	2011	Turbidity	Moderately Turbid	1	3
W2225	Scantic River	2011	Turbidity	None	2	3
W2225	Scantic River	2012	Aquatic Plant Density, Overall	None	3	4
W2225	Scantic River	2012	Aquatic Plant Density, Overall	Unobservable	1	4
W2225	Scantic River	2012	Color	Light Yellow/Tan	4	4
W2225	Scantic River	2012	Objectionable Deposits	No	4	4
W2225	Scantic River	2012	Odor	None	3	4
W2225	Scantic River	2012	Odor	Rotting Vegetables	1	4
W2225	Scantic River	2012	Periphyton Density, Filamentous	None	2	4
W2225	Scantic River	2012	Periphyton Density, Filamentous	Sparse	1	4
W2225	Scantic River	2012	Periphyton Density, Filamentous	Unobservable	1	4
W2225	Scantic River	2012	Periphyton Density, Film	None	3	4
W2225	Scantic River	2012	Periphyton Density, Film	Unobservable	1	4

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2225	Scantic River	2012	Scum	No	4	4
W2225	Scantic River	2012	Turbidity	None	3	4
W2225	Scantic River	2012	Turbidity	Slightly Turbid	1	4

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for the Scantic River (MA34-30) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward. MassDEP staff collected <i>E. coli</i> bacteria samples close to the downstream end of the Scantic River at W1880 [~2300 ft downstream/S of Mill Rd, Hampden] from May-Aug 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W1880 indicated 40% of intervals had GMs >126 CFU/100ml, 1 sample exceeded the 410 CFU/100ml STV (411 CFU), and the seasonal GM was 96 CFU/100ml. <i>E. coli</i> data from W1880 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.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1880	MassDEP	Water Quality	Scantic River	[approximately 2300 feet downstream/south of Mill Road, Hampden]	42.043514	-72.456478

Bacteria Data

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

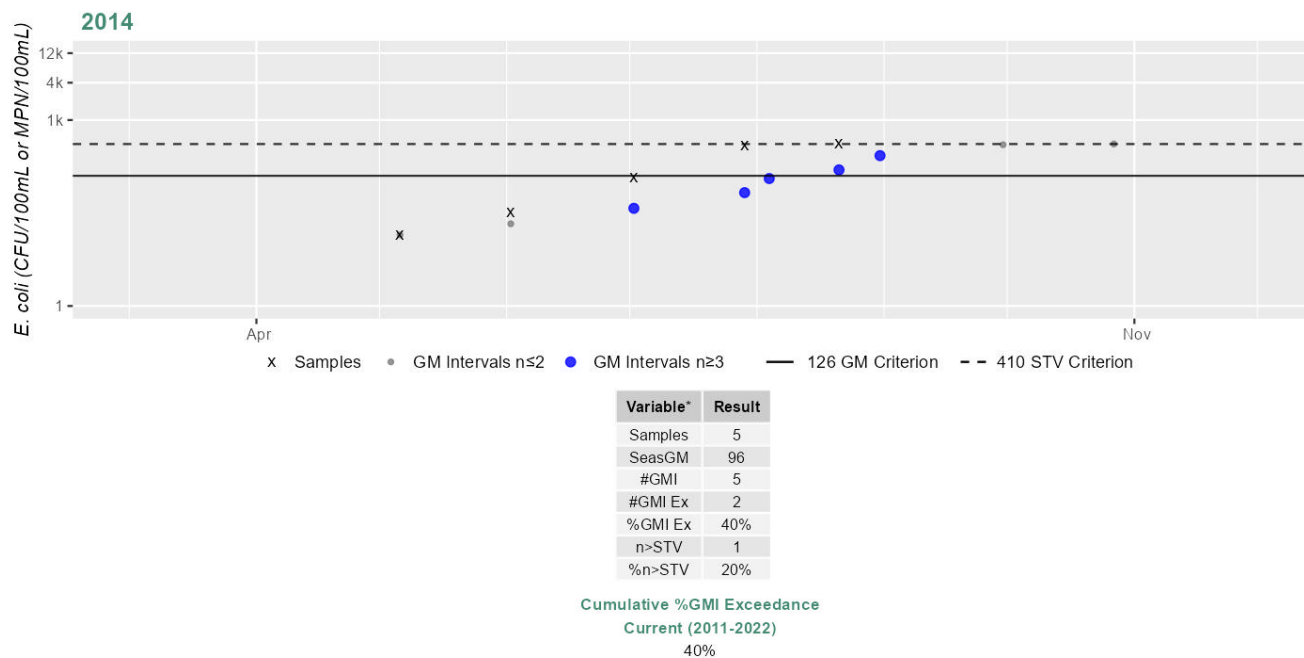
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1880	MassDEP	E. coli	05/06/14	08/21/14	5	14	411	96

Station MASSDEP_W1880 - *Escherichia coli*

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



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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for the Scantic River (MA34-30) continues to be assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in the Scantic River from 2008-2014 at 2 stations (both close to the downstream end of the AU). Samples were collected from the following stations/sample years from upstream to downstream: W1789 [Mill Rd, Hampden] from May-Sep 2008 (n=6), and W1880 [~2300 ft downstream/S of Mill Rd, Hampden] from May-Aug 2014 (n=5). Since bacteria data from the historic IR window are indicative of good water quality conditions, only the analysis from the current IR window will be summarized here. Analysis of the single year limited frequency <i>E. coli</i> dataset from W1880 indicated 20% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 96 CFU/100ml. <i>E. coli</i> data from W1880 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1789	MassDEP	Water Quality	Scantic River	[Mill Road, Hampden]	42.048316	-72.453991
W1880	MassDEP	Water Quality	Scantic River	[approximately 2300 feet downstream/south of Mill Road, Hampden]	42.043514	-72.456478

Bacteria Data

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

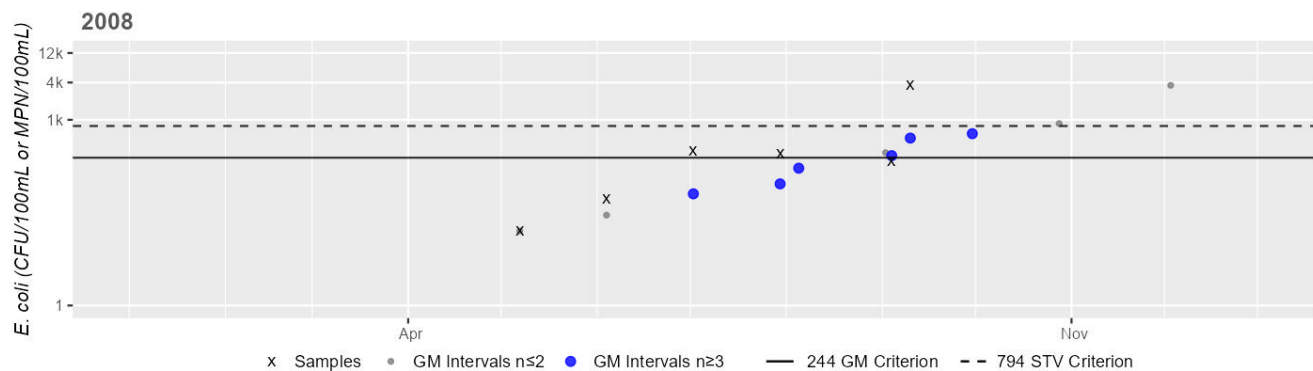
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1789	MassDEP	E. coli	05/06/08	09/09/08	6	16	3600	194
W1880	MassDEP	E. coli	05/06/14	08/21/14	5	14	411	96

Station MASSDEP_W1789 - Escherichia coli

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



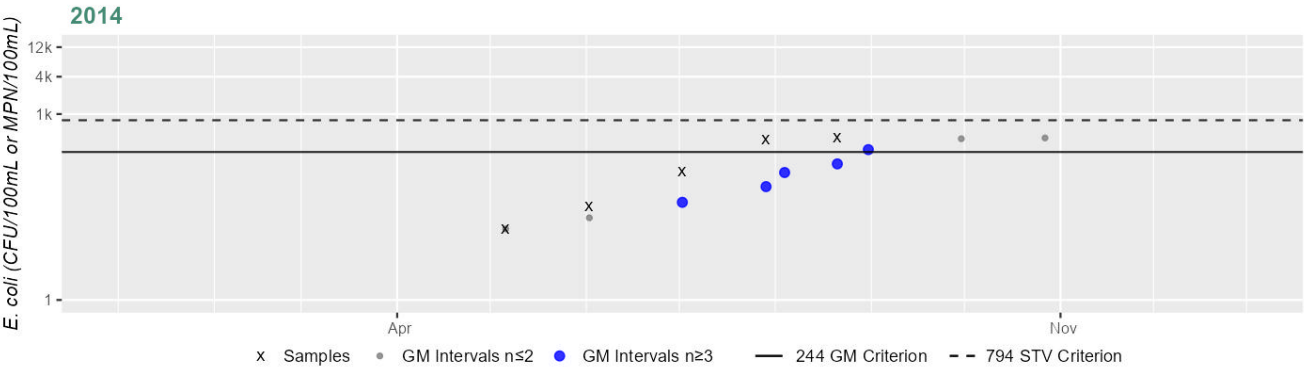
Variable*	Result
Samples	6
SeasGM	194
#GMI	6
#GMI Ex	3
%GMI Ex	50%
n>STV	1
%n>STV	16%

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_W1880 - Escherichia coli

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



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

Cumulative %GMI Exceedance

Current (2011-2022)

20%

*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.

Scarboro Brook (MA34-46)

Location:	Headwaters, outlet Scarboro Pond, Belchertown to mouth at confluence with Hop Brook, Belchertown.
AU Type:	RIVER
AU Size:	2.3 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Scarboro Brook (MA34-46) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Schneelock Brook (MA34-44)

Location:	Headwaters, west of Newhouse Street, Springfield to mouth at confluence with South Branch Mill River, Springfield.
AU Type:	RIVER
AU Size:	1.3 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Schneelock Brook (MA34-44) 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

Schoolhouse Brook (MA34-43)

Location:	Headwaters, southeast of Connor Reservoir, Holyoke to mouth at confluence with Goldine Brook, West Springfield.
AU Type:	RIVER
AU Size:	3.1 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Schoolhouse Brook (MA34-43) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

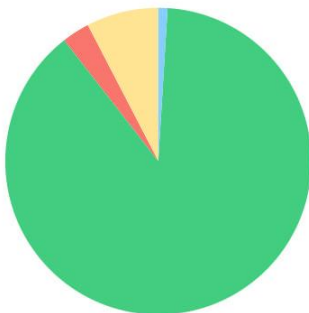
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Shattuck Brook (MA34-57)

Location:	Headwaters, confluence Keets and Beaver Meadow brooks, Leyden to mouth at confluence with Fall River, Bernardston.
AU Type:	RIVER
AU Size:	2.4 MILES
Classification/Qualifier:	B: CWF

Shattuck Brook (MA34-57)

Watershed Area: 4.91 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	4.91	4.02	1.37	1.10
Agriculture	7.6%	8.9%	13.6%	16.6%
Developed	2.9%	2.7%	4.1%	3.6%
Natural	88.5%	87.5%	79.8%	77.1%
Wetland	1%	0.9%	2.6%	2.6%
Impervious	1.3%	1.3%	2.1%	2.2%

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 Shattuck Brook (MA34-57) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Shattuck Brook (MA34-57) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station in the upstream half of Shattuck Brook; ~3/4 mile downstream from headwaters (the confluence of Keets and Beaver Meadow brooks, Leyden), south of Keets Brook Road, Bernardston (W2722) during summer 2017 (n=5). 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
W2722	MassDEP	Water Quality	Shattuck Brook	[approximately 3/4 mile downstream from headwaters (the confluence of Keets and Beaver Meadow brooks, Leyden), south of Keets Brook Road, Bernardston]	42.720884	-72.594774

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
W2722	2017	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2722 on Shattuck Brook (MA34-57) during 5 site visits between May 2017 and Sep 2017. 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
W2722	2017	5	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2722	Shattuck Brook	2017	Aesthetics Impaired?	No	5	5
W2722	Shattuck Brook	2017	Aquatic Plant Density, Overall	None	5	5
W2722	Shattuck Brook	2017	Color	None	5	5
W2722	Shattuck Brook	2017	Objectionable Deposits	No	5	5
W2722	Shattuck Brook	2017	Odor	None	5	5
W2722	Shattuck Brook	2017	Periphyton Density, Filamentous	None	5	5
W2722	Shattuck Brook	2017	Periphyton Density, Film	None	4	5
W2722	Shattuck Brook	2017	Periphyton Density, Film	Sparse	1	5
W2722	Shattuck Brook	2017	Scum	No	5	5
W2722	Shattuck Brook	2017	Turbidity	None	5	5

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 Shattuck Brook (MA34-57) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Insufficient Information	NO

2024/26 Use Attainment Summary
No bacteria data are available to assess the Secondary Contact Recreation Use for Shattuck Brook (MA34-57) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information.

Silver Lake (MA34084)

Location:	Agawam.
AU Type:	FRESHWATER LAKE
AU Size:	9 ACRES
Classification/Qualifier:	B

No usable data were available for Silver Lake (MA34084) 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

Sodom Brook (MA34-53)

Location:	Headwaters, outlet small unnamed pond north of Crowley Road, Westhampton to mouth at confluence with North Branch Manhan River, Westhampton.
AU Type:	RIVER
AU Size:	3.1 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Sodom Brook (MA34-53) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Spaulding Brook (MA34-85)

Location:	Headwaters west of Chestnut Hill, Montague to mouth at confluence with Sawmill River, Montague.
AU Type:	RIVER
AU Size:	1.5 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Spaulding Brook (MA34-85) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

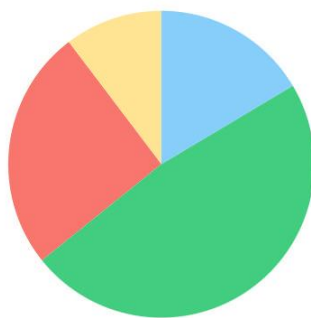
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

Stony Brook (MA34-19)

Location:	Headwaters, Granby to mouth at confluence with Connecticut River, South Hadley (through former 2006 segments: Upper Pond MA34095 and Lower Pond MA34049).
AU Type:	RIVER
AU Size:	13.3 MILES
Classification/Qualifier:	B

Stony Brook (MA34-19)

Watershed Area: 22.77 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	22.77	5.99	5.41	1.71
Agriculture	10.3%	8.9%	12.1%	7.3%
Developed	25.4%	34.7%	15.4%	24%
Natural	47.8%	46.2%	40.9%	46.4%
Wetland	16.5%	10.1%	31.6%	22.4%
Impervious	9.2%	15.2%	6.1%	12.1%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Water Chestnut*)	--	Unchanged
5	5	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed
5	5	Turbidity	--	Unchanged

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

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

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Escherichia Coli (E. Coli)	TMDL approved or established by EPA (4a)	Impairment covered under TMDL: Massachusetts Statewide TMDL for Pathogen-Impaired Waterbodies (Report CN 515.1, approved 2/13/2024, ATTAINS Action ID: R1_MA_2024_04)

Recommendations

2024/26 Recommendations
2024/2026 IR [Algae, Low] Additional monitoring should be performed on Stony Brook (MA34-19) to confirm the presence of dense filamentous Algae. The Alert was originally identified due to observations of Dense algae on two occasions at {W1790} and {W1792} in 2008. 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 Stony Brook (MA34-19) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	YES

2024/26 Use Attainment Summary

The Aesthetics Use for Stony Brook (MA34-19) continues to be assessed as Not Supporting with the prior Turbidity impairment being carried forward. The prior Alert identified for Filamentous Algae is also being carried forward. MassDEP staff recorded aesthetics observations in the downstream half of Stony Brook at the one lane bridge ~425 feet upstream from the Rt. 116 crossing, South Hadley (W1792) in summer 2019 (n=8). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded. Since aesthetics observations were not made at Morgan Street crossing closest to Edison Drive, South Hadley (W1790) in 2019 (where “moderately turbid” or “highly turbid” conditions were observed in 2008) the turbidity impairment will not be removed from the Stony Brook AU at this time.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1792	MassDEP	Water Quality	Stony Brook	[at the one lane bridge approximately 425 feet upstream from the Route 116 crossing, South Hadley]	42.247040	-72.580378

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
W1792	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W1792 on Stony Brook (MA34-19) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W1792	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1792	Stony Brook	2019	Aesthetics Impaired?	No	8	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1792	Stony Brook	2019	Aquatic Plant Density, Overall	None	8	8
W1792	Stony Brook	2019	Color	Brownish	1	8
W1792	Stony Brook	2019	Color	Light Yellow/Tan	4	8
W1792	Stony Brook	2019	Color	None	3	8
W1792	Stony Brook	2019	Objectionable Deposits	No	7	8
W1792	Stony Brook	2019	Objectionable Deposits	Yes	1	8
W1792	Stony Brook	2019	Odor	Musty (Basement)	3	8
W1792	Stony Brook	2019	Odor	None	5	8
W1792	Stony Brook	2019	Periphyton Density, Filamentous	Moderate	1	8
W1792	Stony Brook	2019	Periphyton Density, Filamentous	None	5	8
W1792	Stony Brook	2019	Periphyton Density, Filamentous	Sparse	2	8
W1792	Stony Brook	2019	Periphyton Density, Film	None	4	8
W1792	Stony Brook	2019	Periphyton Density, Film	Sparse	4	8
W1792	Stony Brook	2019	Scum	No	8	8
W1792	Stony Brook	2019	Turbidity	Moderately Turbid	1	8
W1792	Stony Brook	2019	Turbidity	None	4	8
W1792	Stony Brook	2019	Turbidity	Slightly Turbid	3	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Stony Brook (MA34-19) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2019. The prior Turbidity impairment (from the Aesthetics Use) is being carried forward. MassDEP staff collected <i>E. coli</i> bacteria samples three-quarters of the way down Stony Brook at W1792 [at the one lane bridge ~425 ft upstream from the Rt. 116 crossing, S Hadley] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W1792 indicated 100% of intervals had GMs >126 CFU/100ml, 5 samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 530 CFU/100ml. <i>E. coli</i> data from W1792 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1792	MassDEP	Water Quality	Stony Brook	[at the one lane bridge approximately 425 feet upstream from the Route 116 crossing, South Hadley]	42.247040	-72.580378

Bacteria Data

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

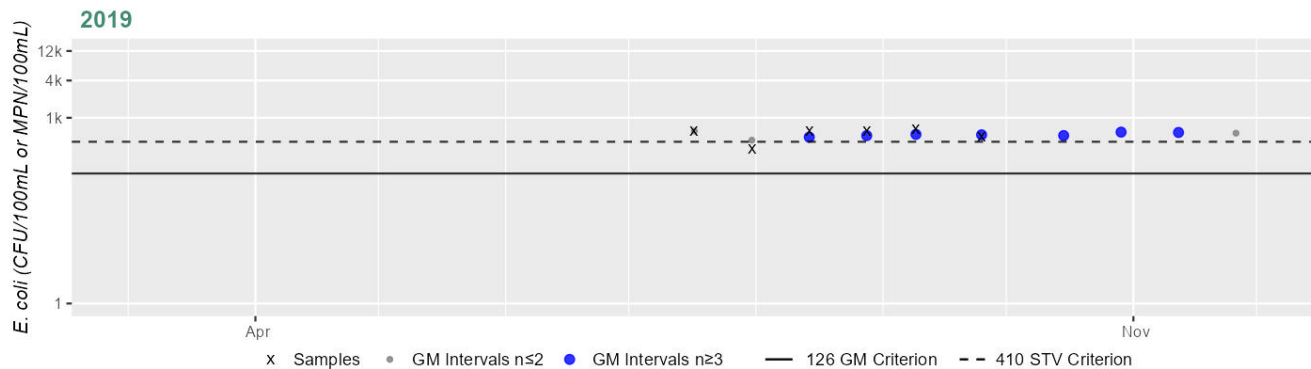
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1792	MassDEP	E. coli	07/17/19	09/25/19	6	310	650	530

Station MASSDEP_W1792 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	530
#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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Stony Brook (MA34-19) continues to be assessed as Not Supporting. The prior Turbidity impairment (from the Aesthetics Use) is being carried forward. An Escherichia Coli (E. Coli) impairment is being added based on a re-evaluation of bacteria data not meeting the threshold at 1 station in 2019. MassDEP staff collected *E. coli* bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Stony Brook from 2003-2019 at 3 stations. Samples were collected from the following stations/sample years from upstream to downstream: two-thirds of the way down the AU at W1790 [Morgan St crossing closest to Edison Drive, S Hadley] from May-Sep 2008 (n=6), and three-quarters of the way down at W1792 [at the one lane bridge ~425 ft upstream from the Rt. 116 crossing, S Hadley] from May-Sep 2008 (historic n=6) and Jul-Sep 2019 (current n=6), and W1053 [College St (Rt. 116) upstream of confluence of Leaping Well Brook, S Hadley] from Apr-Oct 2003 (n=6). 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 W1792 (in the current IR window) indicated 100% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 530 CFU/100ml. *E. coli* data from W1792 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1053	MassDEP	Water Quality	Stony Brook	[College Street (Route 116) upstream of confluence of Leaping Well Brook, South Hadley]	42.246087	-72.580817
W1790	MassDEP	Water Quality	Stony Brook	[Morgan Street crossing closest to Edison Drive, South Hadley]	42.251144	-72.559438
W1792	MassDEP	Water Quality	Stony Brook	[at the one lane bridge approximately 425 feet upstream from the Route 116 crossing, South Hadley]	42.247040	-72.580378

Bacteria Data

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

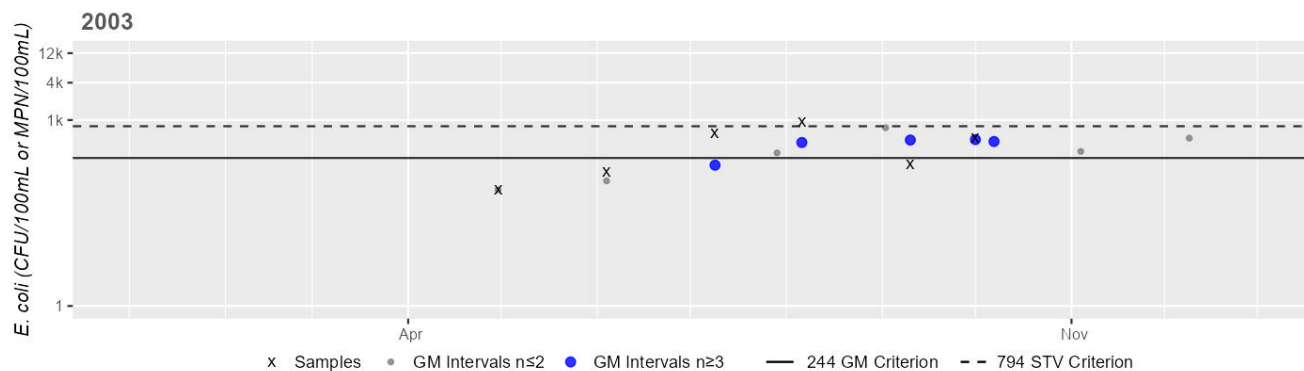
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1053	MassDEP	E. coli	04/30/03	10/01/03	6	75	940	289
W1790	MassDEP	E. coli	05/06/08	09/09/08	6	52	400	150
W1792	MassDEP	E. coli	05/06/08	09/09/08	6	52	272	137
W1792	MassDEP	E. coli	07/17/19	09/25/19	6	310	650	530

Station MASSDEP_W1053 - *Escherichia coli*

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



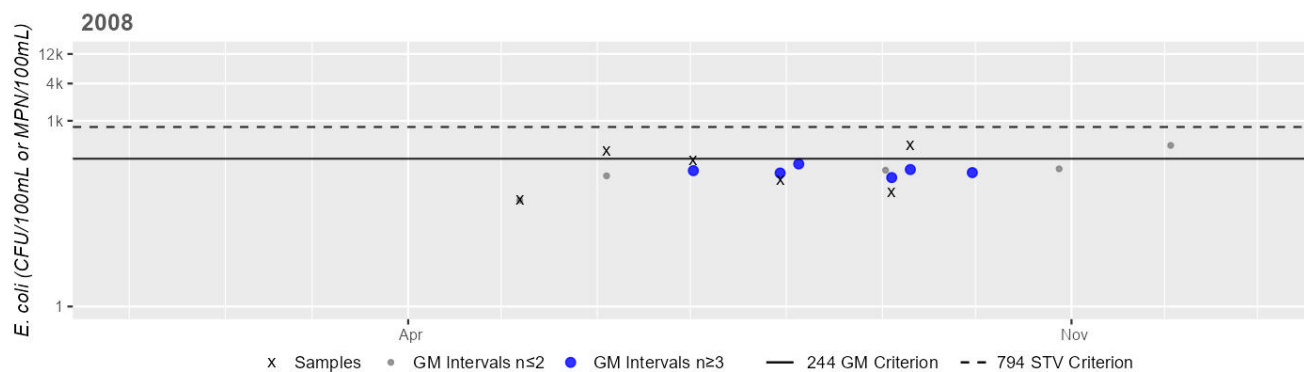
Variable*	Result
Samples	6
SeasGM	289
#GMI	5
#GMI Ex	4
%GMI Ex	80%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance
Historic (1997-2010)
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.

Station MASSDEP_W1790 - *Escherichia coli*

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



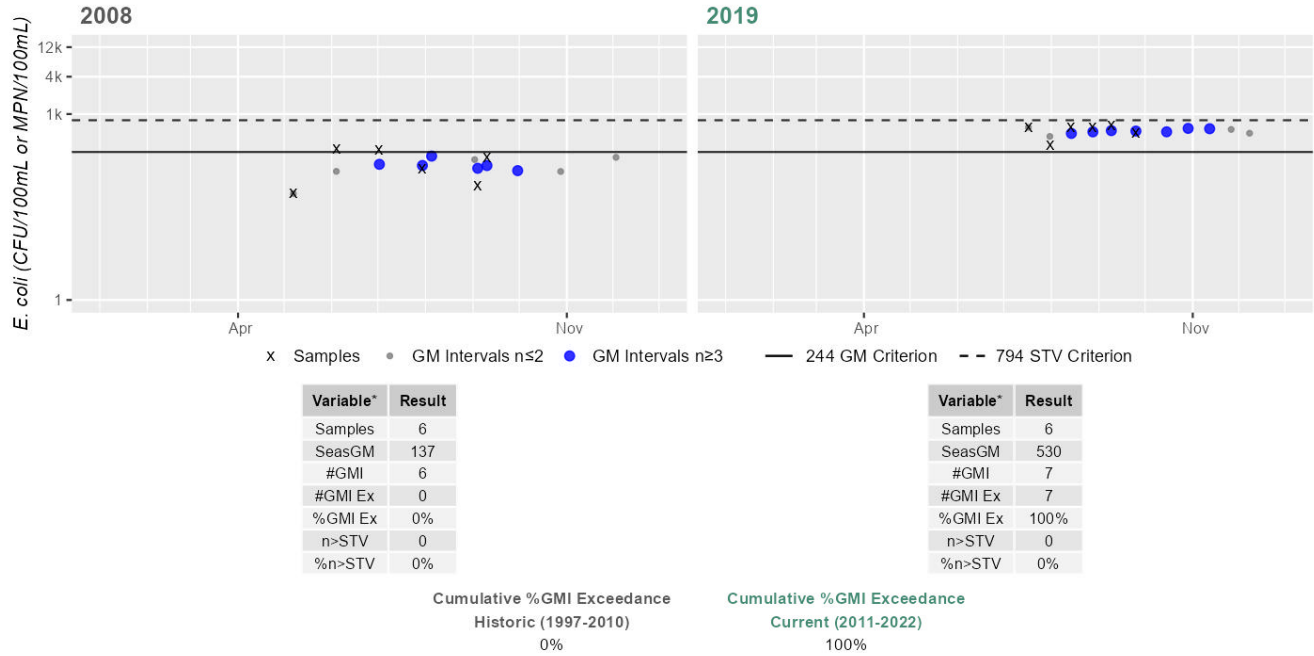
Variable*	Result
Samples	6
SeasGM	150
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

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

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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_W1792 - Escherichia coli

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



Temple Brook (MA34-08)

Location:	Headwaters, outlet Bradley Pond, Monson to mouth at confluence with Scantic River, Hampden.
AU Type:	RIVER
AU Size:	3.6 MILES
Classification/Qualifier:	B

No usable data were available for Temple Brook (MA34-08) 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

Tighe Carmody Reservoir (MA34089)

Location:	Southampton.
AU Type:	FRESHWATER LAKE
AU Size:	353 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Tighe Carmody Reservoir (MA34089) 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

Tripple Brook (MA34-16)

Location:	Headwaters, perennial portion, Southampton to mouth at confluence with Manhan River, Southampton.
AU Type:	RIVER
AU Size:	1 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Tripple Brook (MA34-16) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

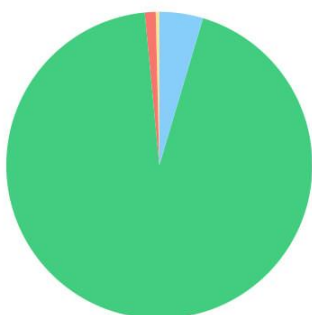
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None	--	Unchanged

Tucker Brook (MA34-99)

Location:	Headwaters, perennial portion east of Tucker Road, Huntington to mouth at inlet Tighe Carmody Reservoir, Southampton.
AU Type:	RIVER
AU Size:	3.3 MILES
Classification/Qualifier:	A: PWS, ORW (Tributary)

Tucker Brook (MA34-99)

Watershed Area: 4.90 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	4.90	4.65	2.13	2.01
Agriculture	0.4%	0.1%	0.4%	0.2%
Developed	1.1%	0.8%	0.8%	0.4%
Natural	93.9%	94.4%	88.8%	89.2%
Wetland	4.6%	4.7%	10%	10.3%
Impervious	0.5%	0.3%	0.4%	0.2%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
--	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, so the Fish Consumption Use for Tucker Brook (MA34-99) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Tucker Brook (MA34-99) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station in the upstream half of Tucker Brook; east of Sampson Road, Huntington ~2.2 miles from the mouth at the inlet of Tighe Carmody Reservoir, Southampton (W2460) in summer 2014 (n=4). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2460	MassDEP	Water Quality	Tucker Brook	[east of Sampson Road, Huntington approximately 2.2 miles from the mouth at the inlet of Tighe Carmody Reservoir, Southampton]	42.260764	-72.818036

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
W2460	2014	4	Aesthetic observations were made by MassDEP field sampling crews at Station W2460 on Tucker Brook (MA34-99) during 4 site visits between Jun 2014 and Sep 2014. 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
W2460	2014	4	4	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2460	Tucker Brook	2014	Aesthetics Impaired?	No	4	4
W2460	Tucker Brook	2014	Aquatic Plant Density, Overall	None	4	4
W2460	Tucker Brook	2014	Color	Light Yellow/Tan	3	4
W2460	Tucker Brook	2014	Color	Reddish	1	4
W2460	Tucker Brook	2014	Objectionable Deposits	No	4	4
W2460	Tucker Brook	2014	Odor	None	4	4
W2460	Tucker Brook	2014	Periphyton Density, Filamentous	None	4	4
W2460	Tucker Brook	2014	Periphyton Density, Film	None	4	4
W2460	Tucker Brook	2014	Scum	No	4	4
W2460	Tucker Brook	2014	Turbidity	None	4	4

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Tucker Brook (MA34-99) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples a third of the way down Tucker Brook at W2460 [E of Sampson Rd, Huntington ~2.2 miles from the mouth at the inlet of Tighe Carmody Reservoir, Southampton] from Jun-Sep 2014 (n=4). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2460 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 26 CFU/100ml. <i>E. coli</i> data from W2460 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2460	MassDEP	Water Quality	Tucker Brook	[east of Sampson Road, Huntington approximately 2.2 miles from the mouth at the inlet of Tighe Carmody Reservoir, Southampton]	42.260764	-72.818036

Bacteria Data

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

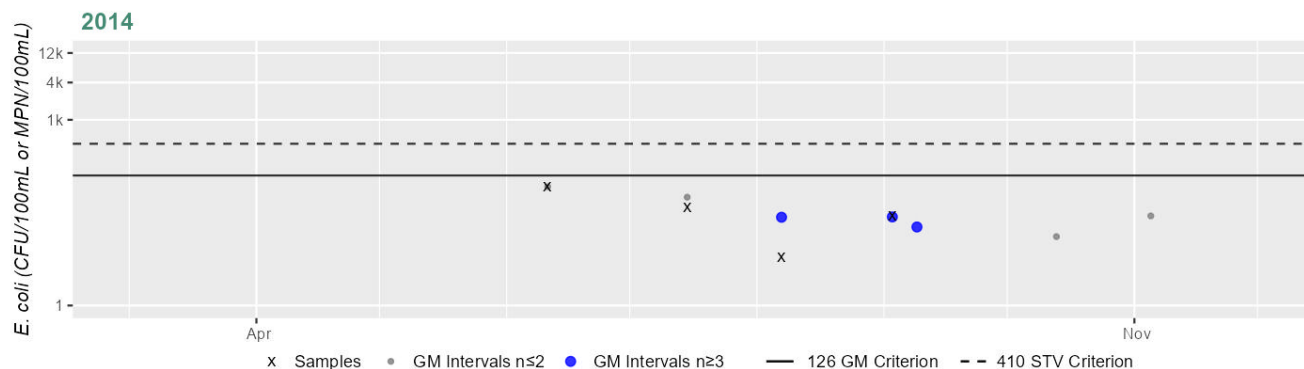
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2460	MassDEP	E. coli	06/11/14	09/03/14	4	6	83	26

Station MASSDEP_W2460 - *Escherichia coli*

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



Variable*	Result
Samples	4
SeasGM	26
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Tucker Brook (MA34-99) is assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples a third of the way down Tucker Brook at W2460 [E of Sampson Rd, Huntington ~2.2 miles from the mouth at the inlet of Tighe Carmody Reservoir, Southampton] from Jun-Sep 2014 (n=4). Analysis of the single year limited frequency *E. coli* dataset from W2460 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 26 CFU/100ml. *E. coli* data from W2460 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2460	MassDEP	Water Quality	Tucker Brook	[east of Sampson Road, Huntington approximately 2.2 miles from the mouth at the inlet of Tighe Carmody Reservoir, Southampton]	42.260764	-72.818036

Bacteria Data

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

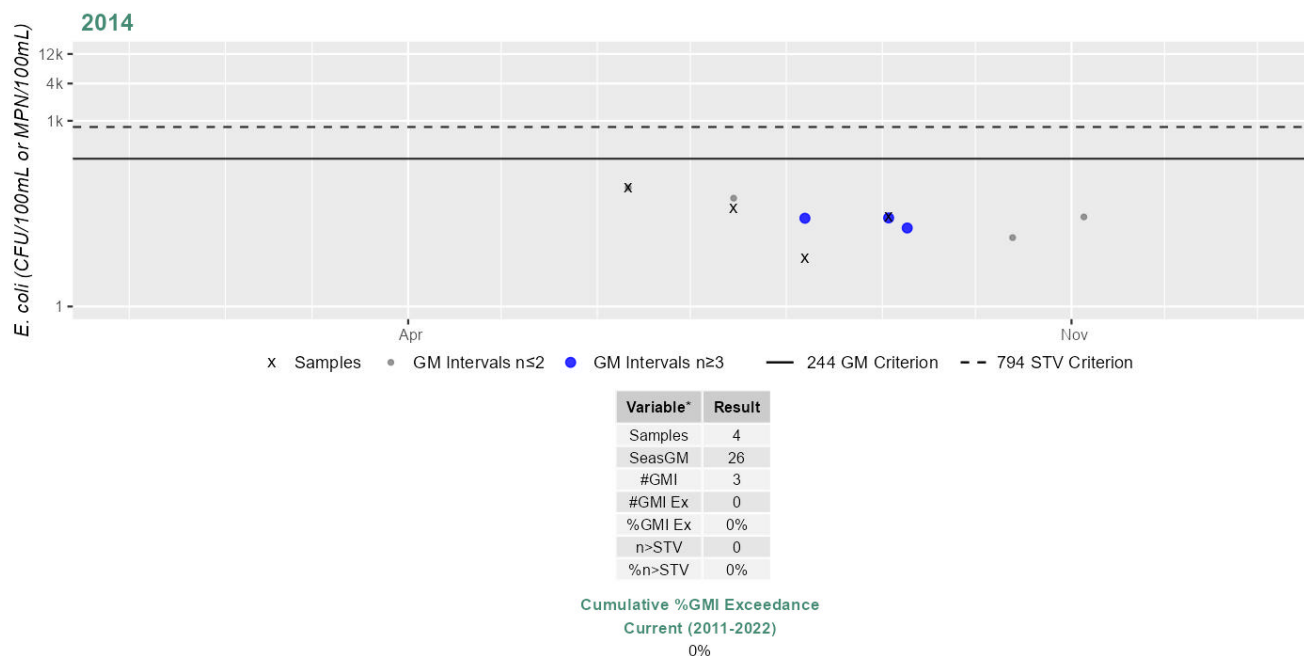
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2460	MassDEP	E. coli	06/11/14	09/03/14	4	6	83	26

Station MASSDEP_W2460 - Escherichia coli

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



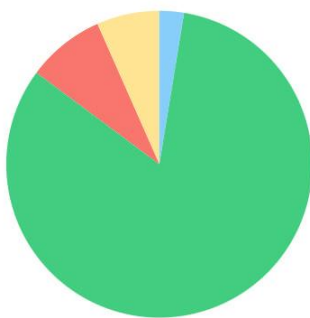
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Unnamed Tributary (MA34-101)

Location:	Unnamed tributary to the Connecticut River, perennial portion north of Rices Ferry Road, Deerfield to mouth at confluence with the Connecticut River, east of McClelland Farm Road, Deerfield.
AU Type:	RIVER
AU Size:	1.1 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA34-101)

Watershed Area: 0.65 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	0.65	0.65	0.19	0.19
Agriculture	6.6%	6.6%	9.8%	9.8%
Developed	8.2%	8.2%	7%	7%
Natural	82.6%	82.6%	79.7%	79.7%
Wetland	2.6%	2.6%	3.5%	3.5%
Impervious	2%	2%	3%	3%

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

Recommendations

2024/26 Recommendations
2024/2026 IR [Bacteria, Medium] Conduct follow-up monitoring for E. coli in Unnamed Tributary (MA34-101) at Station W2279 to confirm elevated bacteria levels measured in 2014 downstream of McClellan Farm Road in Deerfield. {W2279}. 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 Unnamed Tributary (MA34-101) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Unnamed Tributary (MA34-101) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station at the downstream end of this Unnamed Tributary AU to the Connecticut River ~450 feet downstream from McClellan Farm Rd, Deerfield (W2279) in summer 2014 (n=6). 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
W2279	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, approximately 450 feet downstream from McClellan Farm Road, Deerfield]	42.555068	-72.558257

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
W2279	2014	6	Aesthetic observations were made by MassDEP field sampling crews at Station W2279 on Unnamed Tributary (MA34-101) during 6 site visits between May 2014 and Sep 2014. 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
W2279	2014	6	6	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2279	Unnamed Tributary	2014	Aesthetics Impaired?	No	6	6
W2279	Unnamed Tributary	2014	Aquatic Plant Density, Overall	None	6	6
W2279	Unnamed Tributary	2014	Color	None	6	6
W2279	Unnamed Tributary	2014	Objectionable Deposits	No	6	6
W2279	Unnamed Tributary	2014	Odor	None	6	6
W2279	Unnamed Tributary	2014	Periphyton Density, Filamentous	None	5	6
W2279	Unnamed Tributary	2014	Periphyton Density, Filamentous	NR	1	6
W2279	Unnamed Tributary	2014	Periphyton Density, Film	None	5	6
W2279	Unnamed Tributary	2014	Periphyton Density, Film	Sparse	1	6
W2279	Unnamed Tributary	2014	Scum	No	6	6
W2279	Unnamed Tributary	2014	Turbidity	None	5	6
W2279	Unnamed Tributary	2014	Turbidity	Slightly Turbid	1	6

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Unnamed Tributary (MA34-101) is assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples at the downstream end of Unnamed Tributary at W2279 [~450 ft downstream from McClellan Farm Rd, Deerfield] from May-Sep 2014 (n=5). Analysis of the single year limited frequency *E. coli* dataset from W2279 indicated 66% of intervals had GMs >126 CFU/100ml, 1 sample exceeded the 410 CFU/100ml STV (579 CFU), and the seasonal GM was 135 CFU/100ml. *E. coli* data from W2279 meet 2024 CALM guidance, however an Alert is being identified for *Escherichia coli* at W2279 due to some elevated concentrations and additional sampling is recommended.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2279	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, approximately 450 feet downstream from McClellan Farm Road, Deerfield]	42.555068	-72.558257

Bacteria Data

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

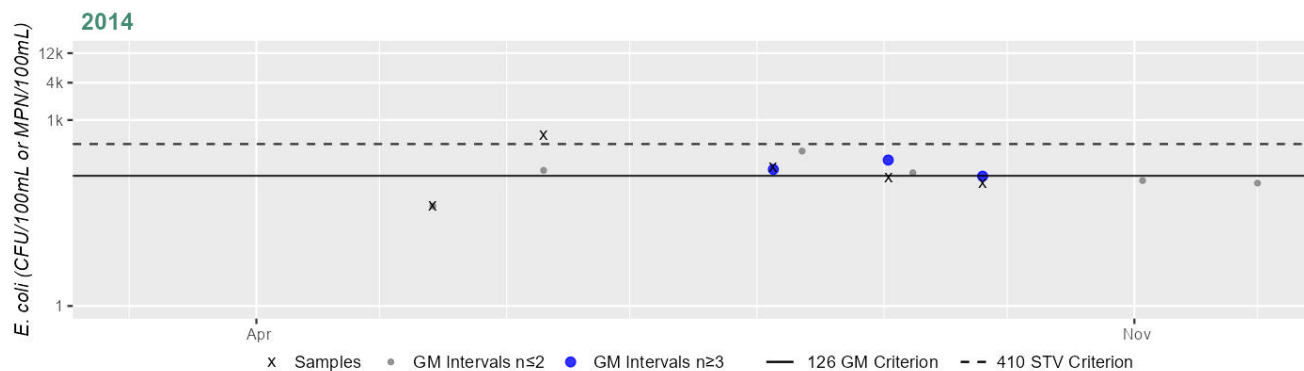
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2279	MassDEP	E. coli	05/14/14	09/25/14	5	41	579	135

Station MASSDEP_W2279 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	135
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	1
%n>STV	20%

Cumulative %GMI Exceedance

Current (2011-2022)

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.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Unnamed Tributary (MA34-101) is assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples at the downstream end of Unnamed Tributary (MA34-101) at W2279 [~450 ft downstream from McClellan Farm Rd, Deerfield] from May-Sep 2014 (n=5). Analysis of the single year limited frequency *E. coli* dataset from W2279 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 135 CFU/100ml. *E. coli* data from W2279 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2279	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, approximately 450 feet downstream from McClellan Farm Road, Deerfield]	42.555068	-72.558257

Bacteria Data

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

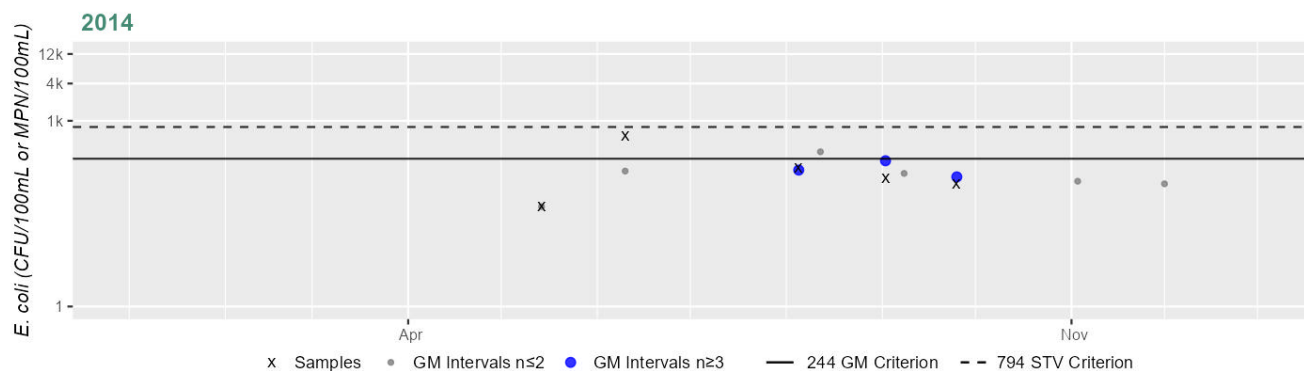
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2279	MassDEP	E. coli	05/14/14	09/25/14	5	41	579	135

Station MASSDEP_W2279 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	135
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

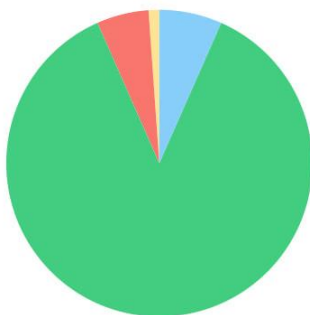
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Unnamed Tributary (MA34-102)

Location:	Unnamed tributary to Scarboro Pond, headwaters east of West Hill, Belchertown to mouth at inlet of Scarboro Pond, Belchertown.
AU Type:	RIVER
AU Size:	1.1 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA34-102)

Watershed Area: 0.83 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	0.83	0.83	0.17	0.17
Agriculture	1.1%	1.1%	1%	1%
Developed	5.5%	5.5%	5.3%	5.3%
Natural	86.8%	86.8%	81.9%	81.9%
Wetland	6.6%	6.6%	11.9%	11.9%
Impervious	2.1%	2.1%	2.6%	2.6%

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary

Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unnamed Tributary (MA34-102) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Unnamed Tributary (MA34-102) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station at the downstream end of this Unnamed Tributary to Scarboro Brook ~900 feet upstream/south of Gulf Road (W1805/MAP2-499), in summer 2014 (n=5). 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
W1805	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Scarboro Pond, approximately 900 feet upstream/south of Gulf Road, Belchertown]	42.349683	-72.431373

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
W1805	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W1805 on Unnamed Tributary (MA34-102) during 5 site visits between May 2014 and Sep 2014. 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
W1805	2014	5	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1805	Unnamed Tributary	2014	Aesthetics Impaired?	No	5	5
W1805	Unnamed Tributary	2014	Aquatic Plant Density, Overall	None	4	5
W1805	Unnamed Tributary	2014	Aquatic Plant Density, Overall	NR	1	5
W1805	Unnamed Tributary	2014	Color	Light Yellow/Tan	3	5
W1805	Unnamed Tributary	2014	Color	None	1	5
W1805	Unnamed Tributary	2014	Color	NR	1	5
W1805	Unnamed Tributary	2014	Objectionable Deposits	No	5	5
W1805	Unnamed Tributary	2014	Odor	None	5	5
W1805	Unnamed Tributary	2014	Periphyton Density, Filamentous	None	5	5
W1805	Unnamed Tributary	2014	Periphyton Density, Film	None	5	5
W1805	Unnamed Tributary	2014	Scum	No	4	5
W1805	Unnamed Tributary	2014	Scum	Yes	1	5
W1805	Unnamed Tributary	2014	Turbidity	None	4	5
W1805	Unnamed Tributary	2014	Turbidity	Slightly Turbid	1	5

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 Unnamed Tributary (MA34-102) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. MassDEP staff collected *E. coli* bacteria samples at the downstream end of Unnamed Tributary (MA34-102) at W1805 [unnamed tributary to Scarboro Pond, ~900 ft upstream/S of Gulf Rd, Belchertown] from May-Sep 2014 (n=5). Analysis of the single year limited frequency *E. coli* dataset from W1805 indicated 20% of intervals had GMs >126 CFU/100ml, 1 sample exceeded the 410 CFU/100ml STV (461 CFU), and the seasonal GM was 44 CFU/100ml. *E. coli* data from W1805 are inconclusive according to the 2024 CALM to assess the Primary Contact Recreation Use because this single year, limited frequency dataset included both GMs below the threshold and an exceedance of the STV threshold.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1805	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Scarboro Pond, approximately 900 feet upstream/south of Gulf Road, Belchertown]	42.349683	-72.431373

Bacteria Data

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

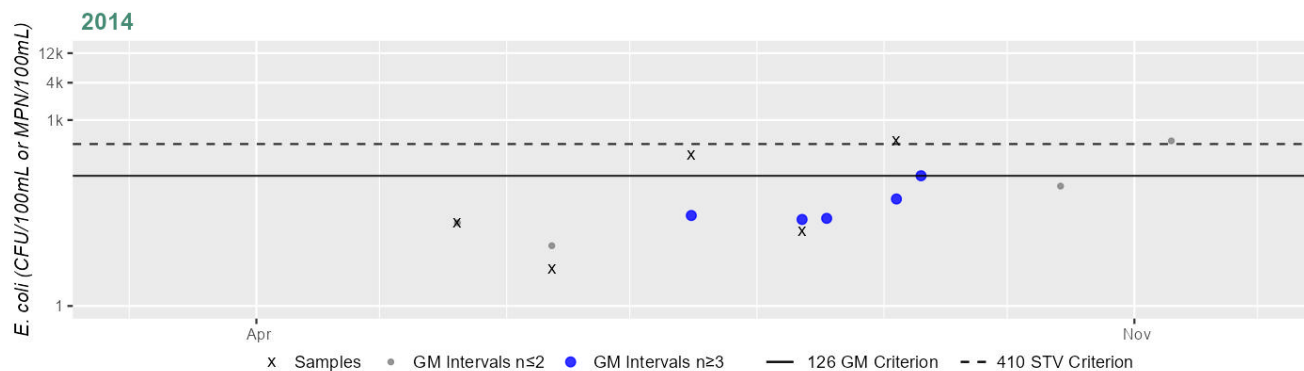
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1805	MassDEP	E. coli	05/20/14	09/04/14	5	4	461	44

Station MASSDEP_W1805 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	44
#GMI	5
#GMI Ex	1
%GMI Ex	20%
n>STV	1
%n>STV	20%

Cumulative %GMI Exceedance

Current (2011-2022)

20%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Unnamed Tributary (MA34-102) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples at the downstream end of this Unnamed Tributary at W1805 [unnamed tributary to Scarboro Pond, ~900 ft upstream/S of Gulf Rd, Belchertown] from May-Sep 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W1805 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 44 CFU/100ml. <i>E. coli</i> data from W1805 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1805	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Scarboro Pond, approximately 900 feet upstream/south of Gulf Road, Belchertown]	42.349683	-72.431373

Bacteria Data

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

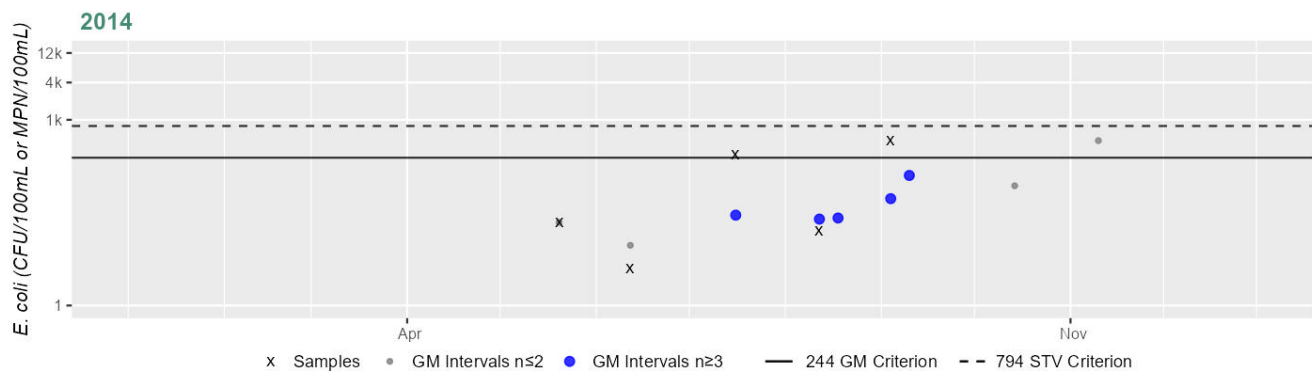
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1805	MassDEP	E. coli	05/20/14	09/04/14	5	4	461	44

Station MASSDEP_W1805 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	44
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI 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 (MA34-103)

Location:	Unnamed tributary to Fort River, headwaters, perennial porton west of South Maple Street, Hadley to mouth at confluence with Fort River, north of Moody Bridge Road, Hadley.
AU Type:	RIVER
AU Size:	1.6 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA34-103)

Watershed Area: 0.91 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	0.91	0.91	0.35	0.35
Agriculture	58.4%	58.4%	58.2%	58.2%
Developed	8.5%	8.5%	7.8%	7.8%
Natural	27.8%	27.8%	27.7%	27.7%
Wetland	5.4%	5.4%	6.2%	6.2%
Impervious	3.2%	3.2%	2.3%	2.3%

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

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

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 (MA34-103) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Unnamed Tributary (MA34-103) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations for one station at the downstream end of this Unnamed Tributary to Fort River ~850 feet upstream from Moody Bridge Road, Hadley (W2454) in summer 2014 (n=5). 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
W2454	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Fort River approximately 850 feet upstream from Moody Bridge Road, Hadley]	42.338022	-72.555368

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
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W2454	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2454 on Unnamed Tributary (MA34-103) during 5 site visits between May 2014 and Sep 2014. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.
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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
W2454	2014	5	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2454	Unnamed Tributary	2014	Aesthetics Impaired?	No	5	5
W2454	Unnamed Tributary	2014	Aquatic Plant Density, Overall	None	5	5
W2454	Unnamed Tributary	2014	Color	Light Yellow/Tan	3	5
W2454	Unnamed Tributary	2014	Color	None	1	5
W2454	Unnamed Tributary	2014	Color	Yellowish	1	5
W2454	Unnamed Tributary	2014	Objectionable Deposits	No	5	5
W2454	Unnamed Tributary	2014	Odor	None	5	5
W2454	Unnamed Tributary	2014	Periphyton Density, Filamentous	None	5	5
W2454	Unnamed Tributary	2014	Periphyton Density, Film	None	5	5
W2454	Unnamed Tributary	2014	Scum	No	5	5
W2454	Unnamed Tributary	2014	Turbidity	None	1	5
W2454	Unnamed Tributary	2014	Turbidity	Slightly Turbid	4	5

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Unnamed Tributary (MA34-103) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2014. MassDEP staff collected <i>E. coli</i> bacteria samples at the downstream end of Unnamed Tributary (MA34-103) at W2454 [unnamed tributary to Fort River ~850 ft upstream from Moody Bridge Rd, Hadley] from May-Sep 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2454 indicated 100% of intervals had GMs >126 CFU/100ml, 5 samples exceeded the 410 CFU/100ml STV (maximum 2,420 CFU), and the seasonal GM was 1,445 CFU/100ml. <i>E. coli</i> data from W2454 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2454	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Fort River approximately 850 feet upstream from Moody Bridge Road, Hadley]	42.338022	-72.555368

Bacteria Data

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

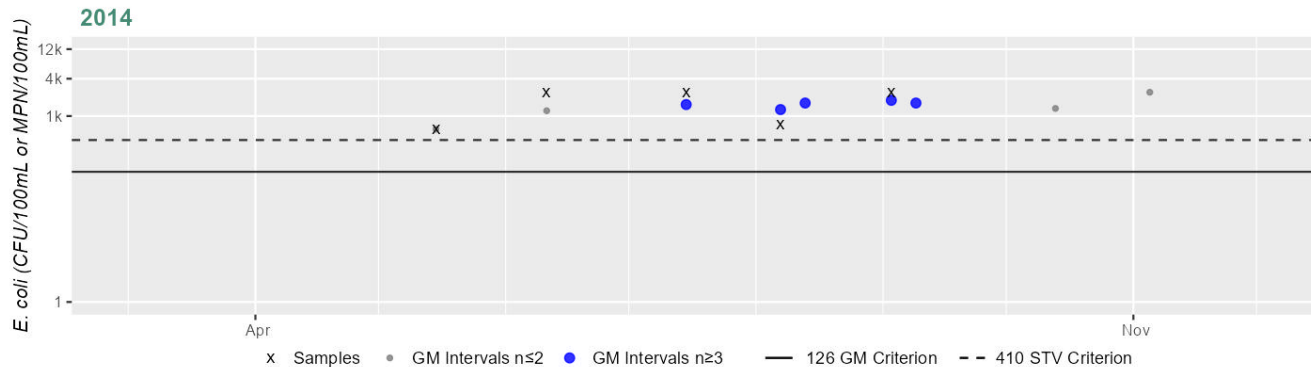
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2454	MassDEP	E. coli	05/15/14	09/03/14	5	613	2420	1445

Station MASSDEP_W2454 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	1445
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	5
%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

The Secondary Contact Recreation Use for Unnamed Tributary (MA34-103) 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 2014. MassDEP staff collected *E. coli* bacteria samples at the downstream end of Unnamed Tributary (MA34-103) at W2454 [unnamed tributary to Fort River ~850 ft upstream from Moody Bridge Rd, Hadley] from May-Sep 2014 (n=5). Analysis of the single year limited frequency *E. coli* dataset from W2454 indicated 100% of intervals had GMs >244 CFU/100ml, 3 samples exceeded the 794 CFU/100ml STV (maximum 2,420 CFU), and the overall GM was 1,445 CFU/100ml. *E. coli* data from W2454 are indicative of an *Escherichia Coli* (*E. Coli*) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2454	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Fort River approximately 850 feet upstream from Moody Bridge Road, Hadley]	42.338022	-72.555368

Bacteria Data

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

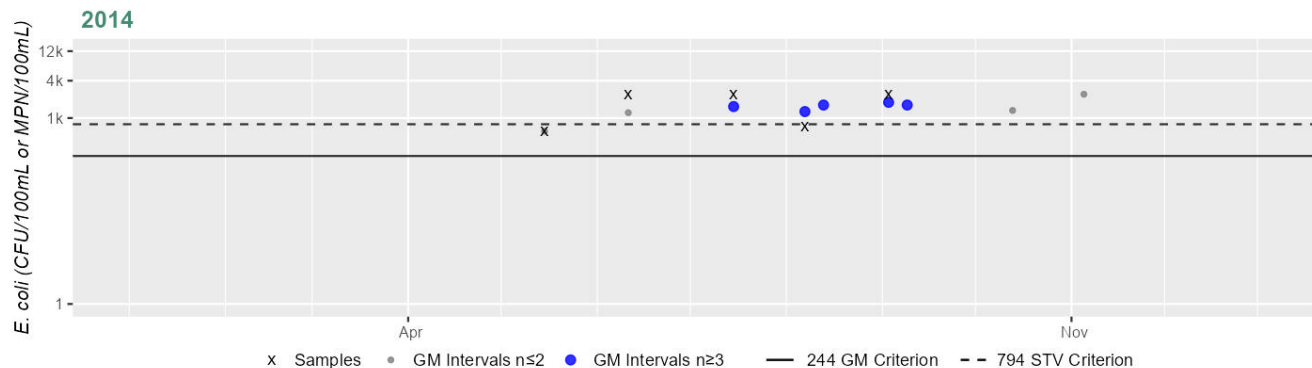
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2454	MassDEP	E. coli	05/15/14	09/03/14	5	613	2420	1445

Station MASSDEP_W2454 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	1445
#GMI	5
#GMI Ex	5
%GMI Ex	100%
n>STV	3
%n>STV	60%

Cumulative %GMI Exceedance

Current (2011-2022)

100%

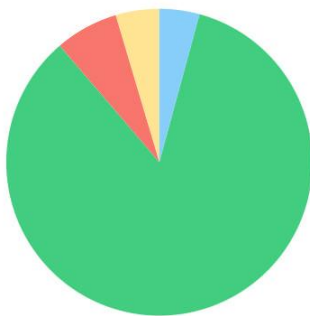
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 5 Years" may not be consecutive as the analysis excludes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

Unnamed Tributary (MA34-104)

Location:	Unnamed tributary to North Branch Manhan River, headwaters south of Laurel Hill Road, Westhampton to mouth at confluence with North Branch Manhan River, north of Pomeroy Meadow Road, Southampton.
AU Type:	RIVER
AU Size:	3.9 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA34-104)

Watershed Area: 2.94 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.94	2.94	0.80	0.80
Agriculture	4.6%	4.6%	5.3%	5.3%
Developed	6.7%	6.7%	4.4%	4.4%
Natural	84.5%	84.5%	84.7%	84.7%
Wetland	4.2%	4.2%	5.6%	5.6%
Impervious	2.8%	2.8%	2.5%	2.5%

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unnamed Tributary (MA34-104) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for this Unnamed Tributary AU (MA34-104) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations for one station towards the downstream end of this Unnamed Tributary to North Branch Manhan River, north of Pomeroy Meadow Road ~3200 feet upstream from confluence, Southampton (W1887/MAP2-503) in summer 2014 (n=6). 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
W1887	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to North Branch Manhan River north of Pomeroy Meadow Road approximately 3200 feet upstream from confluence, Southampton]	42.263606	-72.706051

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
W1887	2014	6	Aesthetic observations were made by MassDEP field sampling crews at Station W1887 on Unnamed Tributary (MA34-104) during 6 site visits between May 2014 and Sep 2014. 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
W1887	2014	6	6	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W1887	Unnamed Tributary	2014	Aesthetics Impaired?	No	6	6
W1887	Unnamed Tributary	2014	Aquatic Plant Density, Overall	None	5	6
W1887	Unnamed Tributary	2014	Aquatic Plant Density, Overall	Sparse	1	6
W1887	Unnamed Tributary	2014	Color	None	6	6
W1887	Unnamed Tributary	2014	Objectionable Deposits	No	6	6
W1887	Unnamed Tributary	2014	Odor	None	6	6
W1887	Unnamed Tributary	2014	Periphyton Density, Filamentous	None	6	6
W1887	Unnamed Tributary	2014	Periphyton Density, Film	None	5	6
W1887	Unnamed Tributary	2014	Periphyton Density, Film	Sparse	1	6
W1887	Unnamed Tributary	2014	Scum	No	5	6
W1887	Unnamed Tributary	2014	Scum	Yes	1	6
W1887	Unnamed Tributary	2014	Turbidity	None	6	6

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Unnamed Tributary (MA34-104) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples towards the downstream end of Unnamed Tributary (MA34-104) at W1887 [unnamed tributary to N Branch Manhan River N of Pomeroy Meadow Rd ~3200 ft upstream from confluence, Southampton] from May-Sep 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W1887 indicated 66% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 102 CFU/100ml. <i>E. coli</i> data from W1887 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1887	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to North Branch Manhan River north of Pomeroy Meadow Road approximately 3200 feet upstream from confluence, Southampton]	42.263606	-72.706051

Bacteria Data

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

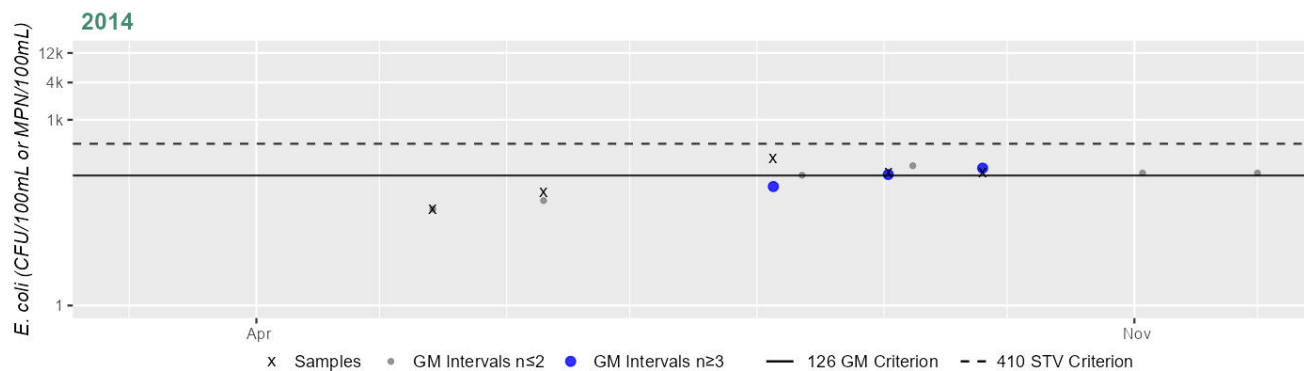
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W1887	MassDEP	E. coli	05/14/14	09/25/14	5	36	238	102

Station MASSDEP_W1887 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	102
#GMI	3
#GMI Ex	2
%GMI Ex	66%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

66%

*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances; %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV; "Recent 3 Years" may not be consecutive as the analysis excludes years without GMI meeting the minimum sample size.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Unnamed Tributary (MA34-104) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples towards the downstream end of Unnamed Tributary (MA34-104) at W1887 [unnamed tributary to N Branch Manhan River N of Pomeroy Meadow Rd ~3200 ft upstream from confluence, Southampton] from May-Sep 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W1887 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 102 CFU/100ml. <i>E. coli</i> data from W1887 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1887	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to North Branch Manhan River north of Pomeroy Meadow Road approximately 3200 feet upstream from confluence, Southampton]	42.263606	-72.706051

Bacteria Data

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

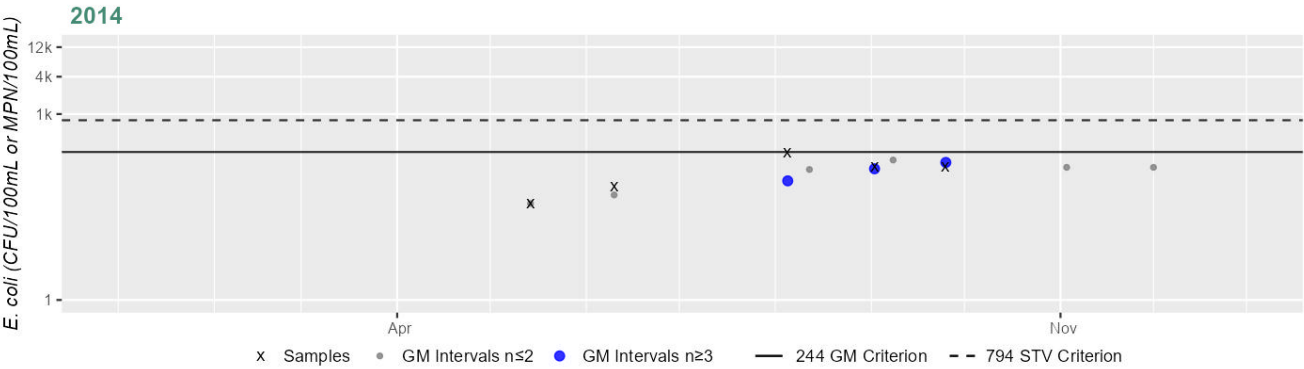
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1887	MassDEP	E. coli	05/14/14	09/25/14	5	36	238	102

Station MASSDEP_W1887 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	102
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

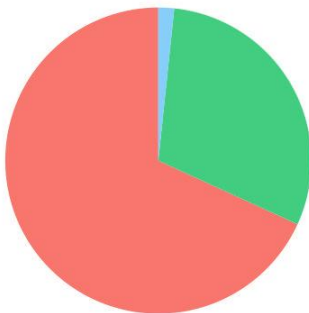
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Unnamed Tributary (MA34-105)

Location:	Unnamed tributary to unnamed pond (locally 'Barney Pond'), from culvert southwest of Main Greeting Road, Springfield to inlet of unnamed pond northeast of the Magawiska Road and Pecousic Drive intersection, Springfield.
AU Type:	RIVER
AU Size:	0.7 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA34-105)

Watershed Area: 0.95 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	0.95	0.95	0.14	0.14
Agriculture	0%	0%	0%	0%
Developed	68.2%	68.2%	15.9%	15.9%
Natural	30.2%	30.2%	73%	73%
Wetland	1.7%	1.7%	11%	11%
Impervious	55.8%	55.8%	11.6%	11.6%

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary

Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unnamed Tributary (MA34-105) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Unnamed Tributary (MA34-105) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations for one station in the middle of this Unnamed Tributary to the Connecticut River ~340 feet upstream/southeast from Bowles Fountain Rd, Springfield (W2081/MAP2-513) in summer 2014 (n=5). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits in the form of light trash (n=2).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2081	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary eventually to the Connecticut River, approximately 340 feet upstream/southeast from Bowles Fountain Road, Springfield]	42.079834	-72.565564

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
W2081	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2081 on Unnamed Tributary (MA34-105) during 5 site visits between May 2014 and Aug 2014. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits (n=2).

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
W2081	2014	5	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2081	Unnamed Tributary	2014	Aesthetics Impaired?	No	5	5
W2081	Unnamed Tributary	2014	Aquatic Plant Density, Overall	None	5	5
W2081	Unnamed Tributary	2014	Color	Light Yellow/Tan	1	5
W2081	Unnamed Tributary	2014	Color	None	4	5
W2081	Unnamed Tributary	2014	Objectionable Deposits	No	3	5
W2081	Unnamed Tributary	2014	Objectionable Deposits	Yes	2	5
W2081	Unnamed Tributary	2014	Odor	None	5	5
W2081	Unnamed Tributary	2014	Periphyton Density, Filamentous	None	5	5
W2081	Unnamed Tributary	2014	Periphyton Density, Film	None	4	5
W2081	Unnamed Tributary	2014	Periphyton Density, Film	Sparse	1	5
W2081	Unnamed Tributary	2014	Scum	No	5	5
W2081	Unnamed Tributary	2014	Turbidity	None	4	5
W2081	Unnamed Tributary	2014	Turbidity	Slightly Turbid	1	5

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Unnamed Tributary (MA34-105) is assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples in the middle of Unnamed Tributary (MA34-105) at W2081 [unnamed tributary eventually to the Connecticut River, ~340 ft upstream/SE from Bowles Fountain Rd, Springfield] from May-Aug 2014 (n=5). Analysis of the single year limited frequency *E. coli* dataset from W2081 indicated 20% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 53 CFU/100ml. *E. coli* data from W2081 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2081	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary eventually to the Connecticut River, approximately 340 feet upstream/southeast from Bowles Fountain Road, Springfield]	42.079834	-72.565564

Bacteria Data

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

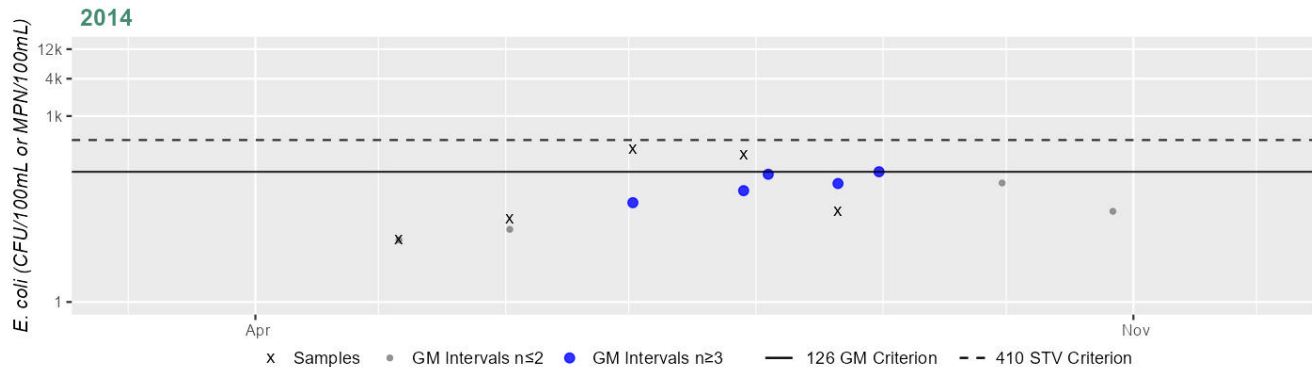
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2081	MassDEP	E. coli	05/06/14	08/21/14	5	10	291	53

Station MASSDEP_W2081 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	53
#GMI	5
#GMI Ex	1
%GMI Ex	20%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance
Current (2011-2022)
20%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Unnamed Tributary (MA34-105) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples in the middle of Unnamed Tributary (MA34-105) at W2081 [unnamed tributary eventually to the Connecticut River, ~340 ft upstream/SE from Bowles Fountain Rd, Springfield] from May-Aug 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2081 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 53 CFU/100ml. <i>E. coli</i> data from W2081 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2081	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary eventually to the Connecticut River, approximately 340 feet upstream/southeast from Bowles Fountain Road, Springfield]	42.079834	-72.565564

Bacteria Data

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

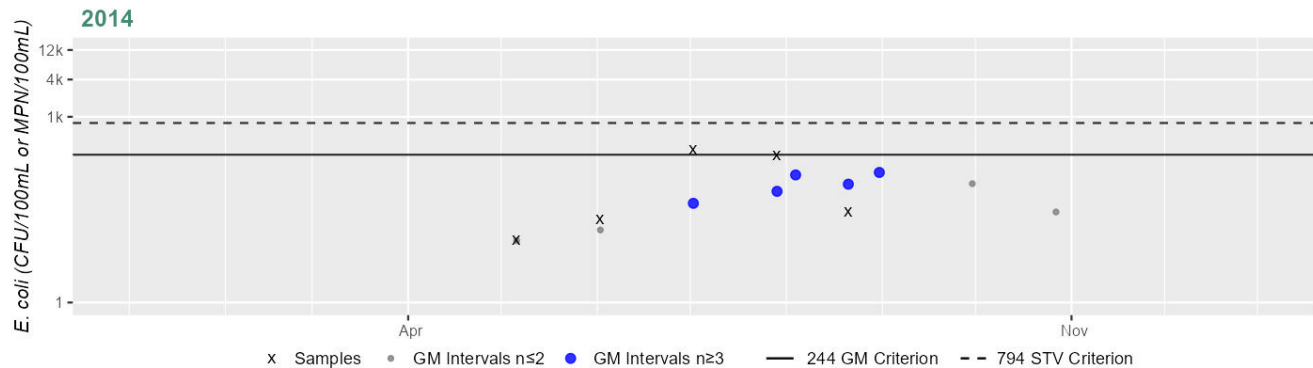
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2081	MassDEP	E. coli	05/06/14	08/21/14	5	10	291	53

Station MASSDEP_W2081 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	53
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

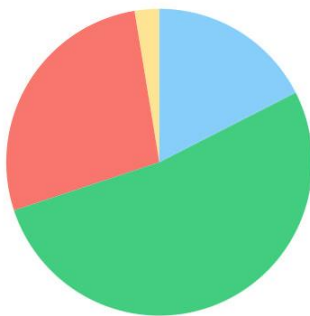
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Unnamed Tributary (MA34-106)

Location:	Unnamed tributary to Watchaug Brook, headwaters west of Kibbe Road, East Longmeadow to mouth at confluence with Watchaug Brook, northeast of Country Club Drive, East Longmeadow.
AU Type:	RIVER
AU Size:	2.1 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA34-106)

Watershed Area: 3.73 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area* (square miles)	3.39	3.26	0.86	0.83
Agriculture	2.6%	2.6%	1.7%	1.7%
Developed	27.5%	26.7%	8.7%	8.3%
Natural	52.4%	52.6%	56.1%	55.8%
Wetland	17.5%	18.1%	33.5%	34.1%
Impervious	9.4%	9.1%	3.1%	3.1%

*Land cover analysis only includes watershed area within Massachusetts.

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

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unnamed Tributary (MA34-106) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Unnamed Tributary (MA34-106) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations for one station towards the downstream end of this Unnamed Tributary to Watchaug Brook ~2400 feet downstream from Pease Road, East Longmeadow (W2290) in summer 2014 (n=5). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits in the form of light trash (n=3).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2290	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Watchaug Brook, approximately 2400 feet downstream from Pease Road, East Longmeadow]	42.040793	-72.484896

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
W2290	2014	5	Aesthetic observations were made by MassDEP field sampling crews at Station W2290 on Unnamed Tributary (MA34-106) during 5 site visits between May 2014 and Aug 2014. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits (n=3).

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
W2290	2014	5	5	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2290	Unnamed Tributary	2014	Aesthetics Impaired?	No	5	5
W2290	Unnamed Tributary	2014	Aquatic Plant Density, Overall	None	2	5
W2290	Unnamed Tributary	2014	Aquatic Plant Density, Overall	Sparse	3	5
W2290	Unnamed Tributary	2014	Color	Light Yellow/Tan	2	5
W2290	Unnamed Tributary	2014	Color	None	3	5
W2290	Unnamed Tributary	2014	Objectionable Deposits	No	2	5
W2290	Unnamed Tributary	2014	Objectionable Deposits	Yes	3	5
W2290	Unnamed Tributary	2014	Odor	None	5	5
W2290	Unnamed Tributary	2014	Periphyton Density, Filamentous	Moderate	1	5
W2290	Unnamed Tributary	2014	Periphyton Density, Filamentous	None	2	5
W2290	Unnamed Tributary	2014	Periphyton Density, Filamentous	Sparse	2	5
W2290	Unnamed Tributary	2014	Periphyton Density, Film	None	4	5

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2290	Unnamed Tributary	2014	Periphyton Density, Film	Sparse	1	5
W2290	Unnamed Tributary	2014	Scum	No	5	5
W2290	Unnamed Tributary	2014	Turbidity	None	5	5

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Unnamed Tributary (MA34-106) is assessed as Not Supporting. An Escherichia Coli (E. Coli) impairment is being added due to bacteria data not meeting the threshold at 1 station in 2014. MassDEP staff collected <i>E. coli</i> bacteria samples towards the downstream end of Unnamed Tributary (MA34-106) at W2290 [unnamed tributary to Watchaug Brook, ~2400 ft downstream from Pease Rd, E Longmeadow] from May-Aug 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2290 indicated 80% of intervals had GMs >126 CFU/100ml, 2 samples exceeded the 410 CFU/100ml STV (maximum 1,990 CFU), and the seasonal GM was 235 CFU/100ml. <i>E. coli</i> data from W2290 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2290	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Watchaug Brook, approximately 2400 feet downstream from Pease Road, East Longmeadow]	42.040793	-72.484896

Bacteria Data

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

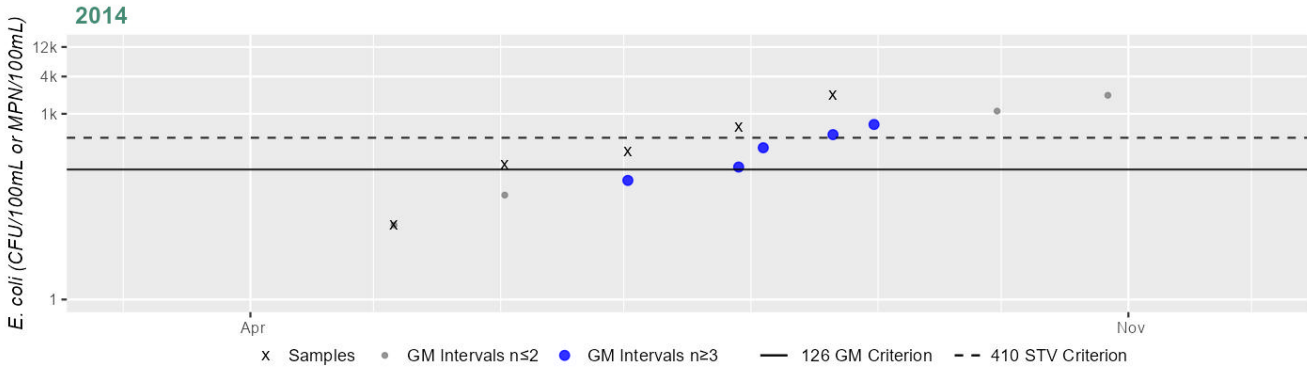
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2290	MassDEP	E. coli	05/06/14	08/21/14	5	16	1990	235

Station MASSDEP_W2290 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	235
#GMI	5
#GMI Ex	4
%GMI Ex	80%
n>STV	2
%n>STV	40%

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.

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 Unnamed Tributary (MA34-106) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. MassDEP staff collected *E. coli* bacteria samples towards the downstream end of Unnamed Tributary (MA34-106) at W2290 [unnamed tributary to Watchaug Brook, ~2400 ft downstream from Pease Rd, E Longmeadow] from May-Aug 2014 (n=5). Analysis of the single year limited frequency *E. coli* dataset from W2290 indicated 60% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV (maximum 1,990 CFU), and the overall GM was 235 CFU/100ml. *E. coli* data from W2290 are inconclusive according to the 2024 CALM to assess the Secondary Contact Recreation Use because this single year, limited frequency dataset included both GMs below the threshold and an exceedance of the STV threshold.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2290	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Watchaug Brook, approximately 2400 feet downstream from Pease Road, East Longmeadow]	42.040793	-72.484896

Bacteria Data

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

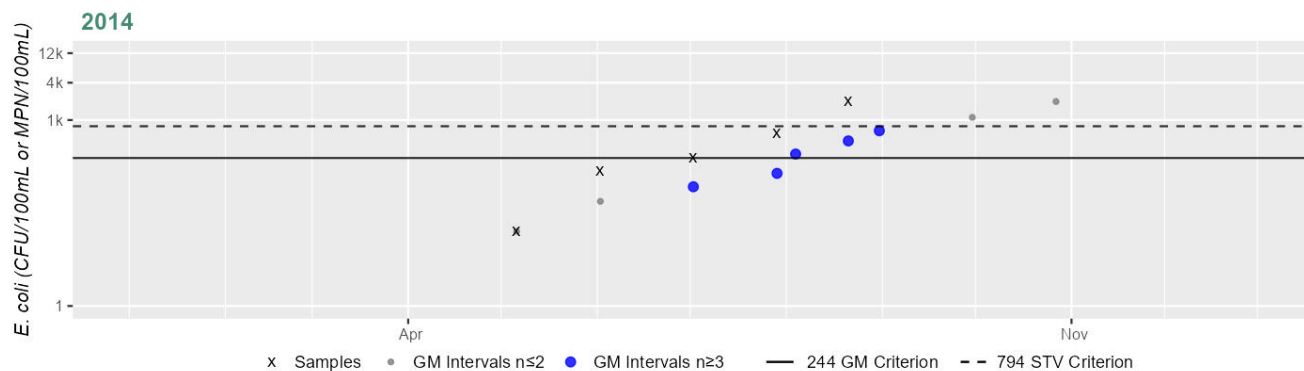
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2290	MassDEP	E. coli	05/06/14	08/21/14	5	16	1990	235

Station MASSDEP_W2290 - *Escherichia coli*

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



Variable*	Result
Samples	5
SeasGM	235
#GMI	5
#GMI Ex	3
%GMI Ex	60%
n>STV	1
%n>STV	20%

Cumulative %GMI Exceedance

Current (2011-2022)

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.

Location:	Unnamed tributary to Manhan River, outlet Lower Millpond, Easthampton to mouth at confluence with Manhan River, Easthampton.
AU Type:	RIVER
AU Size:	0.3 MILES
Classification/Qualifier:	B

Watershed Area: 11.90 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	11.90	5.52	2.75	1.46
Agriculture	5.1%	4.2%	4%	3.5%
Developed	27.6%	37.3%	21.2%	29.2%
Natural	61.2%	52%	56.8%	51.1%
Wetland	6.2%	6.5%	18%	16.2%
Impervious	12.1%	17.3%	9.8%	14.6%

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

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 (MA34-109) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Unnamed Tributary (MA34-109) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations for one station halfway down this Unnamed Tributary to Manhan River ~100 feet downstream of “bike path” north of the outlet of Lower Mill Pond, Easthampton (W2851) in summer 2019 (n=8). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted green water color (n=1).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2851	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Manhan River approximately 100 feet downstream of "bike path" north of the outlet of Lower Mill Pond, Easthampton]	42.277482	-72.654039

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
W2851	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2851 on Unnamed Tributary (MA34-109) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted green water color (n=1).

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
W2851	2019	8	7	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2851	Unnamed Tributary	2019	Aesthetics Impaired?	No	8	8
W2851	Unnamed Tributary	2019	Aquatic Plant Density, Overall	Dense	1	8
W2851	Unnamed Tributary	2019	Aquatic Plant Density, Overall	Moderate	2	8
W2851	Unnamed Tributary	2019	Aquatic Plant Density, Overall	Sparse	4	8
W2851	Unnamed Tributary	2019	Aquatic Plant Density, Overall	Unobservable	1	8
W2851	Unnamed Tributary	2019	Color	Greenish	1	8
W2851	Unnamed Tributary	2019	Color	Light Yellow/Tan	4	8
W2851	Unnamed Tributary	2019	Color	None	3	8
W2851	Unnamed Tributary	2019	Objectionable Deposits	No	7	8
W2851	Unnamed Tributary	2019	Objectionable Deposits	Unobservable	1	8
W2851	Unnamed Tributary	2019	Odor	None	6	8
W2851	Unnamed Tributary	2019	Odor	Other (Eutrophic)	1	8
W2851	Unnamed Tributary	2019	Odor	Petroleum	1	8
W2851	Unnamed Tributary	2019	Periphyton Density, Filamentous	Moderate	1	8
W2851	Unnamed Tributary	2019	Periphyton Density, Filamentous	None	4	8
W2851	Unnamed Tributary	2019	Periphyton Density, Filamentous	Sparse	2	8
W2851	Unnamed Tributary	2019	Periphyton Density, Filamentous	Unobservable	1	8
W2851	Unnamed Tributary	2019	Periphyton Density, Film	Moderate	1	8
W2851	Unnamed Tributary	2019	Periphyton Density, Film	None	6	8
W2851	Unnamed Tributary	2019	Periphyton Density, Film	Unobservable	1	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2851	Unnamed Tributary	2019	Scum	No	8	8
W2851	Unnamed Tributary	2019	Turbidity	Moderately Turbid	1	8
W2851	Unnamed Tributary	2019	Turbidity	None	1	8
W2851	Unnamed Tributary	2019	Turbidity	Slightly Turbid	6	8

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 Unnamed Tributary (MA34-109) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. An Alert is being identified for <i>Escherichia coli</i> (E. coli) due to elevated concentrations at 1 station in 2019.</p> <p>MassDEP staff collected <i>E. coli</i> bacteria samples halfway down this Unnamed Tributary (MA34-109) at W2851 [unnamed tributary to Manhan River ~100 ft downstream of “bike path” N of the outlet of Lower Mill Pond, Easthampton] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2851 indicated 71% of intervals had GMs >126 CFU/100ml, 1 sample exceeded the 410 CFU/100ml STV (920 CFU), and the seasonal GM was 175 CFU/100ml. While <i>E. coli</i> data from W2851 meet 2024 CALM guidance, there is insufficient information available to assess the Primary Contact Recreation Use. An Alert is being identified for <i>Escherichia coli</i> at W2851 and additional sampling will be recommended.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2851	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Manhan River approximately 100 feet downstream of "bike path" north of the outlet of Lower Mill Pond, Easthampton]	42.277482	-72.654039

Bacteria Data

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

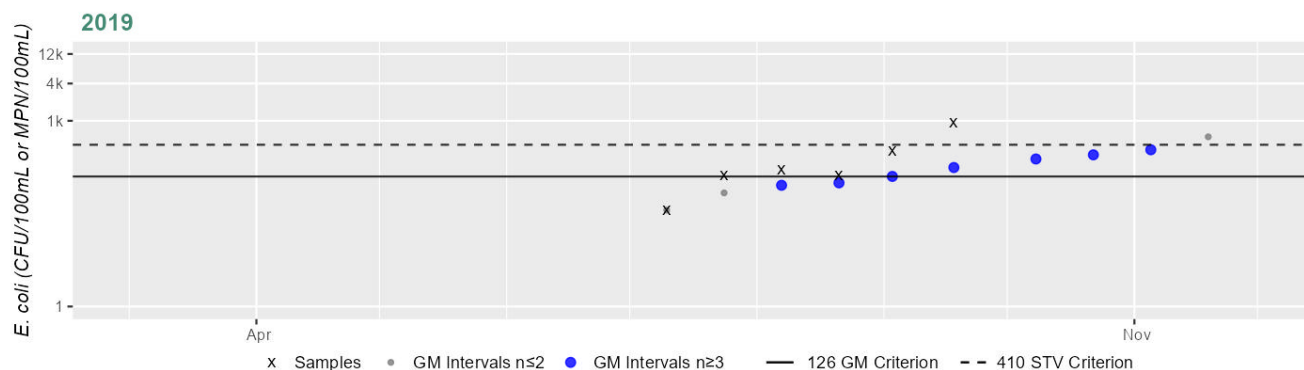
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2851	MassDEP	E. coli	07/10/19	09/18/19	6	36	920	175

Station MASSDEP_W2851 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	175
#GMI	7
#GMI Ex	5
%GMI Ex	71%
n>STV	1
%n>STV	16%

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.

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 Unnamed Tributary (MA34-109) and available aesthetics observations for this AU did not result in any impairment, so it is assessed as having Insufficient Information. MassDEP staff collected *E. coli* bacteria samples halfway down Unnamed Tributary (MA34-109) at W2851 [unnamed tributary to Manhan River ~100 ft downstream of “bike path” N of the outlet of Lower Mill Pond, Easthampton] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency *E. coli* dataset from W2851 indicated 28% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV (920 CFU), and the overall GM was 175 CFU/100ml. *E. coli* data from W2851 are indeterminate 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 a single exceedance of the STV threshold.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2851	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Manhan River approximately 100 feet downstream of "bike path" north of the outlet of Lower Mill Pond, Easthampton]	42.277482	-72.654039

Bacteria Data

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

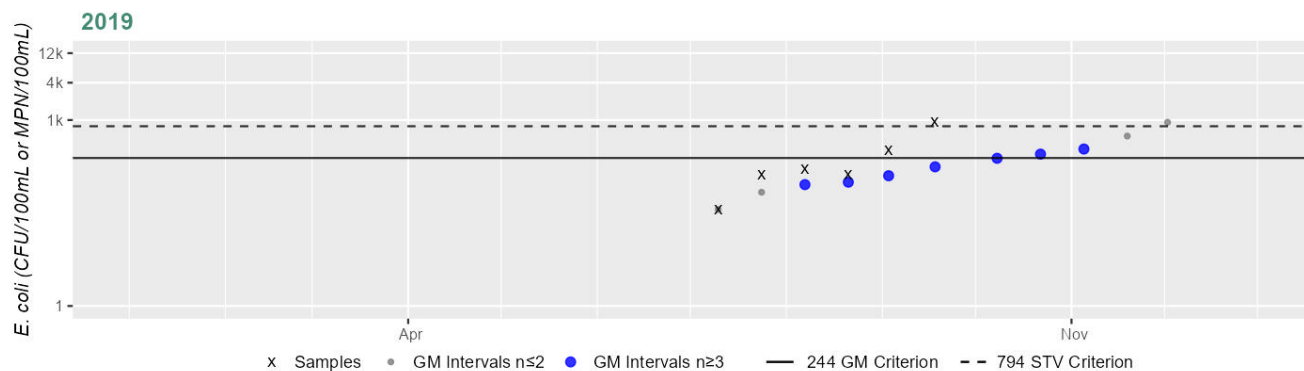
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2851	MassDEP	E. coli	07/10/19	09/18/19	6	36	920	175

Station MASSDEP_W2851 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	175
#GMI	7
#GMI Ex	2
%GMI Ex	28%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance

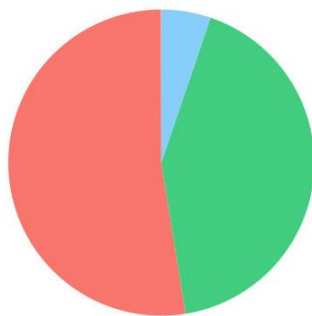
Current (2011-2022)

28%

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

Location:	Unnamed tributary to the Connecticut River, outlet Porter Lake West to confluence with Connecticut River, Springfield.
AU Type:	RIVER
AU Size:	0.7 MILES
Classification/Qualifier:	B

Watershed Area: 7.47 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	7.47	5.57	1.49	1.02
Agriculture	0%	0%	0%	0%
Developed	52.5%	53.6%	27.4%	22.1%
Natural	42.2%	41.9%	54.2%	57.8%
Wetland	5.2%	4.5%	18.5%	20.1%
Impervious	30.8%	33.5%	13.5%	10.7%

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

2024/26 Recommendations
2024/2026 IR [Aquatic Plants, Medium] Conduct follow-up monitoring for aquatic plants in Unnamed Tributary (MA34-110) at Station W2853 to confirm observations of dense/very dense aquatic plant coverage at Pecousic Drive in Springfield in 2019. {W2853}. This is of medium priority;

##

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 (MA34-110) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	YES

2024/26 Use Attainment Summary
The Aesthetics Use for Unnamed Tributary (MA34-110) is assessed as Fully Supporting with an Alert identified for dense/very dense aquatic plants. MassDEP staff recorded aesthetics observations for one station towards the downstream end of this Unnamed Tributary to the Connecticut River at Pecousic Drive, Springfield (W2853) in summer 2019 (n=8). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted dense/very dense aquatic plants (n=3) including the non-native aquatic plant, Curly-leaf Pondweed (<i>Potamogeton crispus</i>).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2853	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, Pecousic Drive, Springfield]	42.074658	-72.580700

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
W2853	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2853 on Unnamed Tributary (MA34-110) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted dense/very dense aquatic plants (n=3).

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
W2853	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2853	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, Pecousic Drive, Springfield]	42.074658	-72.580700

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Unnamed Tributary (MA34-110) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples towards the downstream end of Unnamed Tributary (MA34-110) at W2853 [unnamed tributary to the Connecticut River, Pecousic Drive, Springfield] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2853 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 21 CFU/100ml. <i>E. coli</i> data from W2853 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2853	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, Pecousic Drive, Springfield]	42.074658	-72.580700

Bacteria Data

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

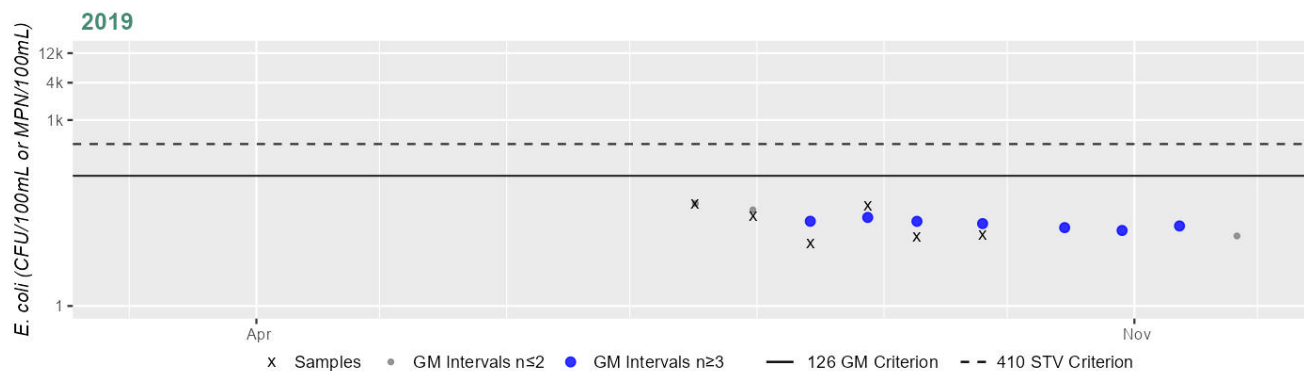
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2853	MassDEP	E. coli	07/17/19	09/25/19	6	10	45	21

Station MASSDEP_W2853 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	21
#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
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Unnamed Tributary (MA34-110) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples towards the downstream end of Unnamed Tributary (MA34-110) at W2853 [unnamed tributary to the Connecticut River, Pecousic Drive, Springfield] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2853 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 21 CFU/100ml. <i>E. coli</i> data from W2853 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2853	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, Pecousic Drive, Springfield]	42.074658	-72.580700

Bacteria Data

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

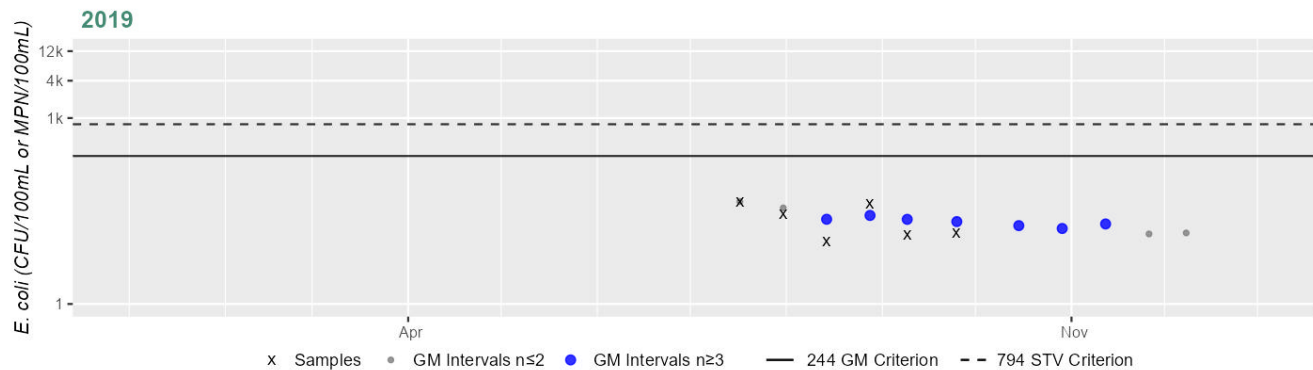
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2853	MassDEP	E. coli	07/17/19	09/25/19	6	10	45	21

Station MASSDEP_W2853 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	21
#GMI	7
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

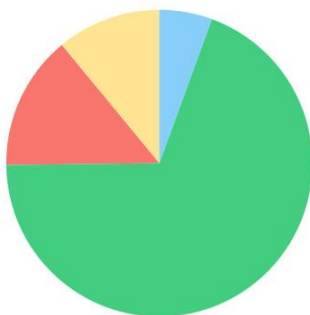
Current (2011-2022)

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.

Location:	Headwater, outlet Lake Warner, Hadley to mouth at confluence with Connecticut River, Hadley.
AU Type:	RIVER
AU Size:	0.5 MILES
Classification/Qualifier:	B

Watershed Area: 31.74 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	31.74	7.56	9.84	1.60
Agriculture	11%	31.7%	7.8%	25.9%
Developed	14.2%	24.4%	8%	13.9%
Natural	69.2%	35.4%	73.5%	38.2%
Wetland	5.6%	8.5%	10.6%	22%
Impervious	6.9%	12.9%	3.9%	7.4%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
3	2	None	--	Unchanged

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 (MA34-31) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Unnamed Tributary (MA34-31) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station halfway down this Unnamed Tributary ~450 feet downstream of River Drive (Rt. 47), Hadley (W2847) during summer 2019 (n=8). 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
W2847	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, approximately 450 feet downstream of River Drive (Route 47), Hadley]	42.383395	-72.585006

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
W2847	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2847 on Unnamed Tributary (MA34-31) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2020) (MassDEP Undated 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
W2847	2019	8	7	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2847	Unnamed Tributary	2019	Aesthetics Impaired?	No	8	8
W2847	Unnamed Tributary	2019	Aquatic Plant Density, Overall	Moderate	1	8
W2847	Unnamed Tributary	2019	Aquatic Plant Density, Overall	None	1	8
W2847	Unnamed Tributary	2019	Aquatic Plant Density, Overall	Sparse	6	8
W2847	Unnamed Tributary	2019	Color	Light Yellow/Tan	3	8
W2847	Unnamed Tributary	2019	Color	None	4	8
W2847	Unnamed Tributary	2019	Color	Reddish	1	8
W2847	Unnamed Tributary	2019	Objectionable Deposits	No	8	8
W2847	Unnamed Tributary	2019	Odor	None	8	8
W2847	Unnamed Tributary	2019	Periphyton Density, Filamentous	None	4	8
W2847	Unnamed Tributary	2019	Periphyton Density, Filamentous	Sparse	3	8
W2847	Unnamed Tributary	2019	Periphyton Density, Filamentous	Unobservable	1	8
W2847	Unnamed Tributary	2019	Periphyton Density, Film	Moderate	2	8
W2847	Unnamed Tributary	2019	Periphyton Density, Film	None	4	8
W2847	Unnamed Tributary	2019	Periphyton Density, Film	Sparse	1	8
W2847	Unnamed Tributary	2019	Periphyton Density, Film	Unobservable	1	8
W2847	Unnamed Tributary	2019	Scum	No	5	8
W2847	Unnamed Tributary	2019	Scum	Yes	3	8
W2847	Unnamed Tributary	2019	Turbidity	Moderately Turbid	1	8
W2847	Unnamed Tributary	2019	Turbidity	None	6	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2847	Unnamed Tributary	2019	Turbidity	Slightly Turbid	1	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Unnamed Tributary (MA34-31) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples halfway down this Unnamed Tributary (MA34-31) at W2847 [unnamed tributary to the Connecticut River, ~450 ft downstream of River Drive (Rt. 47), Hadley] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2847 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 17 CFU/100ml. <i>E. coli</i> data from W2847 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2847	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, approximately 450 feet downstream of River Drive (Route 47), Hadley]	42.383395	-72.585006

Bacteria Data

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

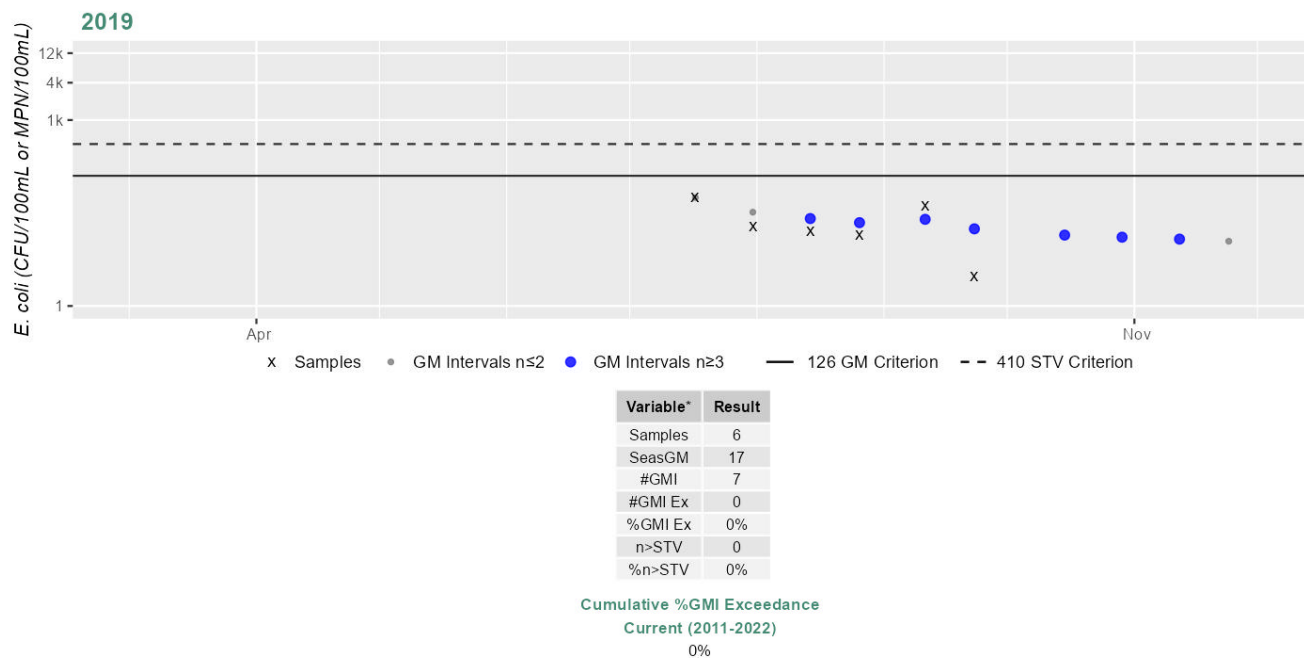
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2847	MassDEP	E. coli	07/17/19	09/23/19	6	3	56	17

Station MASSDEP_W2847 - *Escherichia coli*

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



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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Unnamed Tributary (MA34-31) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples halfway down this Unnamed Tributary (MA34-31) at W2847 [unnamed tributary to the Connecticut River, ~450 ft downstream of River Drive (Rt. 47), Hadley] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2847 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 17 CFU/100ml. <i>E. coli</i> data from W2847 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2847	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, approximately 450 feet downstream of River Drive (Route 47), Hadley]	42.383395	-72.585006

Bacteria Data

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

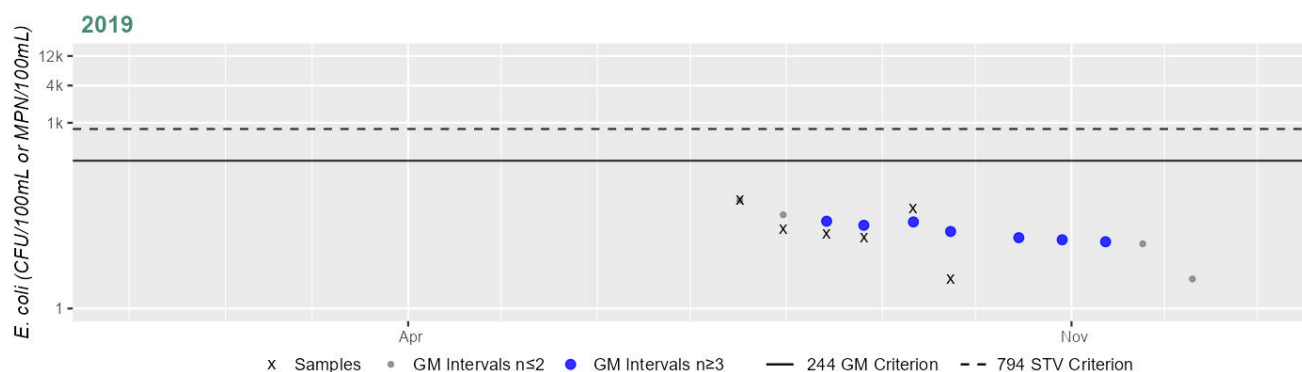
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2847	MassDEP	E. coli	07/17/19	09/23/19	6	3	56	17

Station MASSDEP_W2847 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	17
#GMI	7
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

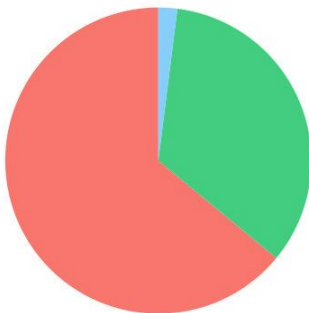
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

Unnamed Tributary (MA34-60)

Location:	Unnamed tributary to the Connecticut River, locally known as 'Willimansett Brook', headwaters, perennial portion, east of Memorial Drive (Route 33), Chicopee to mouth at confluence with Connecticut River, Chicopee (approximately 1200 feet culverted near mouth).
AU Type:	RIVER
AU Size:	2.3 MILES
Classification/Qualifier:	B

Unnamed Tributary (MA34-60)

Watershed Area: 2.91 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	2.91	2.91	0.55	0.55
Agriculture	0%	0%	0%	0%
Developed	64%	64%	37.4%	37.4%
Natural	34%	34%	54.3%	54.3%
Wetland	2%	2%	8.2%	8.2%
Impervious	36.7%	36.7%	21.9%	21.9%

AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
5	4a	Escherichia Coli (E. Coli)	R1_MA_2024_04	Changed

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

Supporting Information for Removed Impairments

2022 Removed Impairment	Removal Reason	Removal Comment
Escherichia Coli (E. Coli)	TMDL approved or established by EPA (4a)	Impairment covered under TMDL: Massachusetts Statewide TMDL for Pathogen-Impaired Waterbodies (Report CN 515.1, approved 2/13/2024, ATTAINS Action ID: R1_MA_2024_04)

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Unnamed Tributary (MA34-60) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Unnamed Tributary (MA34-60) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station at the downstream end of this Unnamed Tributary, locally known as “Willimansett Brook”; at ~340 feet upstream of Yelle Street, Chicopee (W2855) during summer 2019 (n=8). There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits in the form of trash (n=5).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2855	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, locally known as "Willimansett Brook", approximately 340 feet upstream of Yelle Street, Chicopee]	42.191579	-72.597797

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
W2855	2019	8	Aesthetic observations were made by MassDEP field sampling crews at Station W2855 on Unnamed Tributary (MA34-60) during 8 site visits between May 2019 and Sep 2019. There were generally no persistent objectionable conditions (odors, deposits, growths, or turbidity) recorded, though field staff noted objectionable deposits (n=5).

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
W2855	2019	8	8	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2855	Unnamed Tributary	2019	Aesthetics Impaired?	No	8	8
W2855	Unnamed Tributary	2019	Aquatic Plant Density, Overall	None	8	8
W2855	Unnamed Tributary	2019	Color	Light Yellow/Tan	2	8
W2855	Unnamed Tributary	2019	Color	None	6	8
W2855	Unnamed Tributary	2019	Objectionable Deposits	No	3	8
W2855	Unnamed Tributary	2019	Objectionable Deposits	Yes	5	8
W2855	Unnamed Tributary	2019	Odor	None	8	8
W2855	Unnamed Tributary	2019	Periphyton Density, Filamentous	None	8	8
W2855	Unnamed Tributary	2019	Periphyton Density, Film	None	7	8
W2855	Unnamed Tributary	2019	Periphyton Density, Film	Sparse	1	8

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2855	Unnamed Tributary	2019	Scum	No	8	8
W2855	Unnamed Tributary	2019	Turbidity	None	3	8
W2855	Unnamed Tributary	2019	Turbidity	Slightly Turbid	5	8

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for Unnamed Tributary (MA34-60) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2019. MassDEP staff collected <i>E. coli</i> bacteria samples at the downstream end of Unnamed Tributary (MA34-60) at W2855 [unnamed tributary to the Connecticut River, locally known as “Willimansett Brook”, ~340 ft upstream of Yelle St, Chicopee] from Jul-Sep 2019 (n=6). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2855 indicated 100% of intervals had GMs >126 CFU/100ml, 2 samples exceeded the 410 CFU/100ml STV (maximum 730 CFU), and the seasonal GM was 286 CFU/100ml. <i>E. coli</i> data from W2855 are indicative of an Escherichia Coli (E. Coli) impairment.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2855	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, locally known as "Willimansett Brook", approximately 340 feet upstream of Yelle Street, Chicopee]	42.191579	-72.597797

Bacteria Data

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

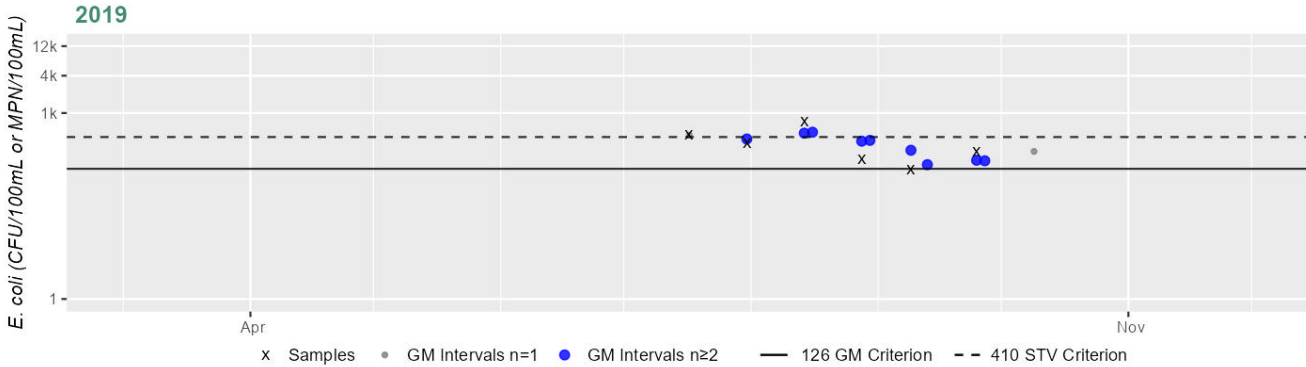
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2855	MassDEP	E. coli	07/17/19	09/25/19	6	120	730	286

Station MASSDEP_W2855 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	286
#GMI	9
#GMI Ex	9
%GMI Ex	100%
n>STV	2
%n>STV	33%

Cumulative %GMI Exceedance

Current (2011-2022)
100%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Unnamed Tributary (MA34-60) continues to be assessed as Not Supporting. The prior Escherichia Coli (E. Coli) impairment is being carried forward based on bacteria data not meeting the threshold at 1 station in 2019. MassDEP staff collected E. coli bacteria samples in both the historic (1997-2010) & the current IR window (2011-2022) in Unnamed Tributary (MA34-60) in 2008 & 2019 at 2 stations (both close to the downstream end of the AU). Samples were collected from the following stations/sample years from upstream to downstream: W2855 [unnamed tributary to the Connecticut River, locally known as “Willimansett Brook”, ~340 ft upstream of Yelle St, Chicopee] from Jul-Sep 2019 (n=6), and W1798 [unnamed tributary to Connecticut River locally known as “Willamansett Brook”, Yelle St, Chicopee] from May-Sep 2008 (n=6). Since bacteria data from the historic IR window are indicative of good water quality conditions, only the analysis from the current IR window (1 station) will be summarized here. Analysis of the single year limited frequency *E. coli* dataset from W2855 indicated 85% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 286 CFU/100ml. *E. coli* data from W2855 are indicative of an Escherichia Coli (E. Coli) impairment.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W1798	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to Connecticut River locally known as "Willamansett Brook", Yelle Street, Chicopee]	42.191174	-72.598816
W2855	MassDEP	Water Quality	Unnamed Tributary	[unnamed tributary to the Connecticut River, locally known as "Willimansett Brook", approximately 340 feet upstream of Yelle Street, Chicopee]	42.191579	-72.597797

Bacteria Data

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

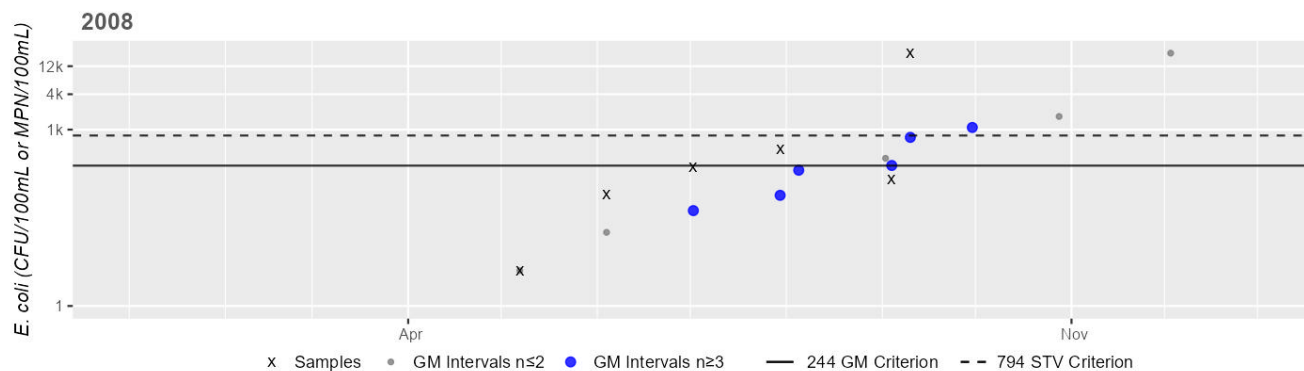
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1798	MassDEP	E. coli	05/06/08	09/09/08	6	4	20000	213
W2855	MassDEP	E. coli	07/17/19	09/25/19	6	120	730	286

Station MASSDEP_W1798 - *Escherichia coli*

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



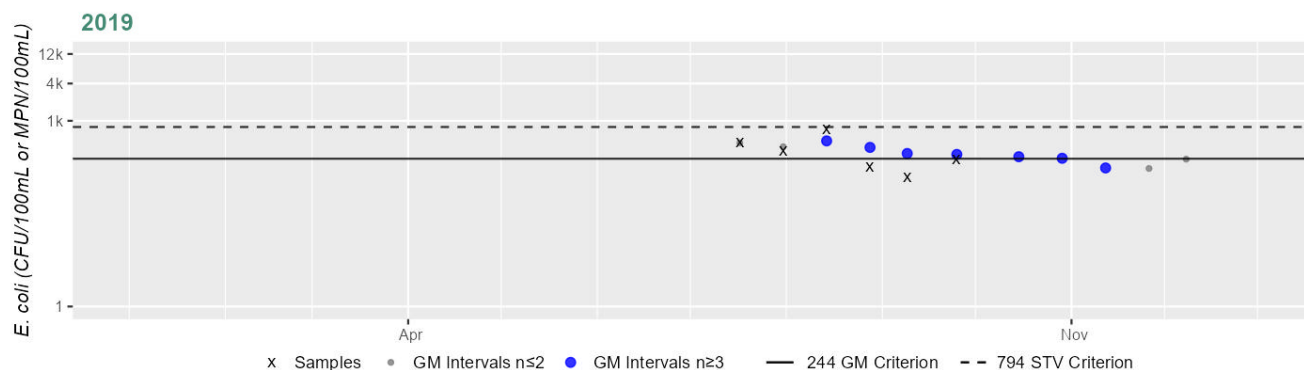
Variable*	Result
Samples	6
SeasGM	213
#GMI	6
#GMI Ex	3
%GMI Ex	50%
n>STV	1
%n>STV	16%

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_W2855 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	286
#GMI	7
#GMI Ex	6
%GMI Ex	85%
n>STV	0
%n>STV	0%

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.

Unnamed Tributary (MA34-65)

Location:	Unnamed tributary to Bachelor Brook, headwaters east of Route 116, Granby to mouth at confluence with Bachelor Brook, Granby.
AU Type:	RIVER
AU Size:	1.5 MILES
Classification/Qualifier:	B

No usable data were available for Unnamed Tributary (MA34-65) 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
2	2	None	--	Unchanged

Unnamed Tributary (MA34-73)

Location:	Unnamed tributary from the south to the western bank of Hop Brook, from perennial portion south of Bay Road, Amherst to mouth at confluence with Hop Brook, Amherst.
AU Type:	RIVER
AU Size:	2 MILES
Classification/Qualifier:	B

No usable data were available for Unnamed Tributary (MA34-73) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Unnamed Tributary (MA34-74)

Location:	Unnamed tributary from the north to the eastern bank of Hop Brook, from just north of Route 9, Belchertown to mouth at confluence with Hop Brook, Amherst.
AU Type:	RIVER
AU Size:	2.7 MILES
Classification/Qualifier:	B

No usable data were available for Unnamed Tributary (MA34-74) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Unnamed Tributary (MA34-77)

Location:	Unnamed tributary to outlet end of "old" Northampton Reservoir, perennial portion east of Hemenway Trail, Williamsburg to mouth at confluence with outlet end of "old" Northampton Reservoir, Whately.
AU Type:	RIVER
AU Size:	1.8 MILES
Classification/Qualifier:	A: PWS, ORW (Tributary)

No usable data were available for Unnamed Tributary (MA34-77) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Unnamed Tributary (MA34-87)

Location:	Unnamed tributary to Sawmill River, headwaters east of Montague Road, Shutesbury to mouth at confluence with Sawmill River, Leverett.
AU Type:	RIVER
AU Size:	1.9 MILES
Classification/Qualifier:	B

No usable data were available for Unnamed Tributary (MA34-87) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Unnamed Tributary (MA34-93)

Location:	Unnamed tributary to Hawley Reservoir, headwaters north of Tower Road in Cadwell Memorial Forest, Pelham to mouth at inlet Hawley Reservoir, Pelham.
AU Type:	RIVER
AU Size:	1 MILES
Classification/Qualifier:	A: PWS, ORW (Tributary)

No usable data were available for Unnamed Tributary (MA34-93) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Upper Highland Lake (MA34093)

Location:	Goshen.
AU Type:	FRESHWATER LAKE
AU Size:	51 ACRES
Classification/Qualifier:	B

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

Recommendations

2024/26 Recommendations
2024 IR [ENTEROCOCCUS, LOW] Follow up monitoring is recommended at Upper Highland Lake - Day use area (DCR) [Beach ID: 4663] beach in Goshen on this Upper Highland Lake AU (MA34093), since Upper Highland Lake was posted for >10% of the swimming season in 2021 (24%). 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 Highland Lake (MA34093) 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 Highland Lake (MA34093) is Not Assessed.

Primary Contact Recreation**2024/26 Use Attainment**

Fully Supporting

Alert

YES

2024/26 Use Attainment Summary

The Primary Contact Recreation Use for Upper Highland Lake (MA34093) continues to be assessed as Fully Supporting. Upper Highland Lake (MA34093) has a beach with DPH Beach Closure data: Upper Highland Lake - Day use area (DCR) [Beach ID: 4663] beach in Goshen. The beach was rarely, if at all, posted for swimming from 2018-2022. However, an Alert for Enterococcus is being identified since Upper Highland Lake - Day use area beach (DCR) was posted for >10% of the swimming season in 2021 (24%).

Beach Postings

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

Beach ID	Beach Name/ Town	Left Border (Lat., Long.)	Right Border (Lat., Long.)	2014	2015	2016	2017	2018	2019	2020	2021	2022	# years >10%
4663	Upper Highland Lake - Day use area beach (DCR)/ Goshen	42.45752, -72.79930	42.45731, -72.79860	0%	0%	0%	2%	0%	7%	5%	24%	2%	1

Secondary Contact Recreation**2024/26 Use Attainment**

Fully Supporting

Alert

NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for Upper Highland Lake (MA34093) continues to be assessed as Fully Supporting. Upper Highland Lake (MA34093) has a beach with DPH Beach Closure data: Upper Highland Lake - Day use area (DCR) [Beach ID: 4663] beach in Goshen. The beach was rarely, if at all, posted for swimming from 2018-2022.

Upper Van Horn Park Pond (MA34128)

Location:	Springfield (formerly reported as 2000 segment: Upper Van Horn Park Pond MA36158).
AU Type:	FRESHWATER LAKE
AU Size:	8 ACRES
Classification/Qualifier:	B

No usable data were available for Upper Van Horn Park Pond (MA34128) 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	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	--	--	X	X	X
Nutrient/Eutrophication Biological Indicators	Urban Runoff/Storm Sewers (N)	--	--	X	X	X
Phosphorus, Total	Source Unknown (N)	--	--	X	X	X
Phosphorus, Total	Urban Runoff/Storm Sewers (N)	--	--	X	X	X

Venture Pond (MA34096)

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

No usable data were available for Venture Pond (MA34096) 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	Dissolved Oxygen	--	Unchanged
5	5	Nutrient/Eutrophication Biological Indicators	--	Unchanged
5	5	Phosphorus, Total	--	Unchanged

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Dissolved Oxygen	Source Unknown (N)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X	--	X	X	X
Phosphorus, Total	Internal Nutrient Recycling (N)	X	--	--	--	--
Phosphorus, Total	Urban Runoff/Storm Sewers (N)	X	--	--	--	--

Watershops Pond (MA34099)

Location:	Springfield.
AU Type:	FRESHWATER LAKE
AU Size:	161 ACRES
Classification/Qualifier:	B

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
Nutrient/Eutrophication Biological Indicators	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 Watershops Pond (MA34099) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for Watershops Pond (MA34099) continues to be assessed as Not Supporting with the Nutrient/Eutrophication Biological Indicators impairment being carried forward. No new data are available to evaluate the Aesthetics Use for Watershops Pond.

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
No bacteria or other indicator data for Watershops Pond (MA34099) are available, so the Primary Contact Recreation Use continues to be assessed as Not Supporting. The prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is being carried forward.

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	NO

2024/26 Use Attainment Summary
The Secondary Contact Recreation Use for Watershops Pond (MA34099) continues to be assessed as Not Supporting. The prior Nutrient/Eutrophication Biological Indicators impairment (from the Aesthetics Use) is being carried forward. USGS staff collected <i>E. coli</i> bacteria samples in Watershops Pond (MA34099) at USGS-01177500 [Watershops Pond At Springfield] from Sep-Oct 2010 (n=2). Historic <i>E. coli</i> data from USGS-01177500 are too limited according to the 2024 CALM to assess the Secondary Contact Recreation Use. 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
USGS-01177500	USGS Massachusetts Water Science Center	Water Quality	Watershops Pond	Watershops Pond At Springfield, MA	42.097317	-72.563421

Bacteria Data

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

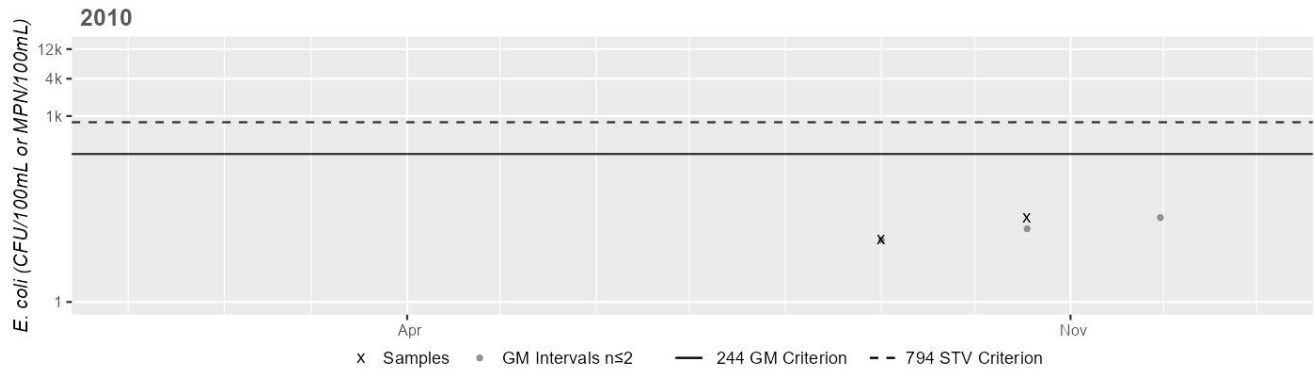
(USGS 2024) (MassDEP Undated 1)

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

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
USGS-01177500	USGS Massachusetts Water Science Center	E. coli	09/01/10	10/18/10	2	10	23	15

Station USGS-01177500 - Escherichia coli

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



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

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

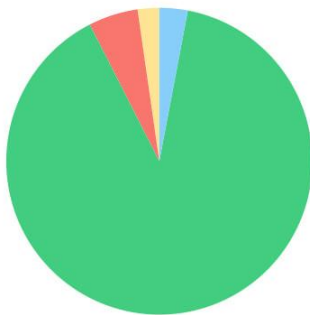
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
%GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
"Recent 5 Years" may not be consecutive as the analysis excludes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

West Branch Mill River (MA34-38)

Location:	Headwaters outlet Lower Highland Lake spillway, East Street, Goshen to the confluence of Meekin Brook, Williamsburg.
AU Type:	RIVER
AU Size:	5.9 MILES
Classification/Qualifier:	B: CWF

West Branch Mill River (MA34-38)

Watershed Area: 10.25 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	10.25	4.86	2.53	1.15
Agriculture	2.3%	3.5%	1.7%	3%
Developed	5.2%	6.9%	6.2%	9.3%
Natural	89.5%	86.7%	86%	80.9%
Wetland	3%	3%	6.1%	6.8%
Impervious	1.9%	2.4%	2.8%	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 West Branch Mill River (MA34-38) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
The Aesthetics Use for West Branch Mill River (MA34-38) is assessed as Fully Supporting. MassDEP staff recorded aesthetics observations at one station in the upstream half of this West Branch Mill River AU ~1400 feet upstream from Old Goshen Road, Williamsburg (W2083/MAP2-514) during summer 2014 (n=6). 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
W2083	MassDEP	Water Quality	West Branch Mill River	[approximately 1400 feet upstream from Old Goshen Road, Williamsburg]	42.422577	-72.769563

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
W2083	2014	6	Aesthetic observations were made by MassDEP field sampling crews at Station W2083 on West Branch Mill River (MA34-38) during 6 site visits between May 2014 and Sep 2014. 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
W2083	2014	6	6	0

MassDEP Aesthetics Observations (2011-2020) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2083	West Branch Mill River	2014	Aesthetics Impaired?	No	6	6
W2083	West Branch Mill River	2014	Aquatic Plant Density, Overall	None	5	6
W2083	West Branch Mill River	2014	Aquatic Plant Density, Overall	NR	1	6
W2083	West Branch Mill River	2014	Color	None	5	6
W2083	West Branch Mill River	2014	Color	NR	1	6
W2083	West Branch Mill River	2014	Objectionable Deposits	No	6	6
W2083	West Branch Mill River	2014	Odor	None	5	6
W2083	West Branch Mill River	2014	Odor	NR	1	6
W2083	West Branch Mill River	2014	Periphyton Density, Filamentous	None	6	6
W2083	West Branch Mill River	2014	Periphyton Density, Film	None	5	6
W2083	West Branch Mill River	2014	Periphyton Density, Film	NR	1	6
W2083	West Branch Mill River	2014	Scum	No	6	6
W2083	West Branch Mill River	2014	Turbidity	None	6	6

Primary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary
<p>The Primary Contact Recreation Use for the West Branch Mill River (MA34-38) is assessed as Fully Supporting. MassDEP staff collected <i>E. coli</i> bacteria samples in the upstream half of the West Branch Mill River at W2083 [~1400 ft upstream from Old Goshen Rd, Williamsburg] from May-Sep 2014 (n=5). Analysis of the single year limited frequency <i>E. coli</i> dataset from W2083 indicated 0% of intervals had GMs >126 CFU/100ml, no samples exceeded the 410 CFU/100ml STV, and the seasonal GM was 13 CFU/100ml. <i>E. coli</i> data from W2083 meet 2024 CALM guidance.</p>

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2083	MassDEP	Water Quality	West Branch Mill River	[approximately 1400 feet upstream from Old Goshen Road, Williamsburg]	42.422577	-72.769563

Bacteria Data

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

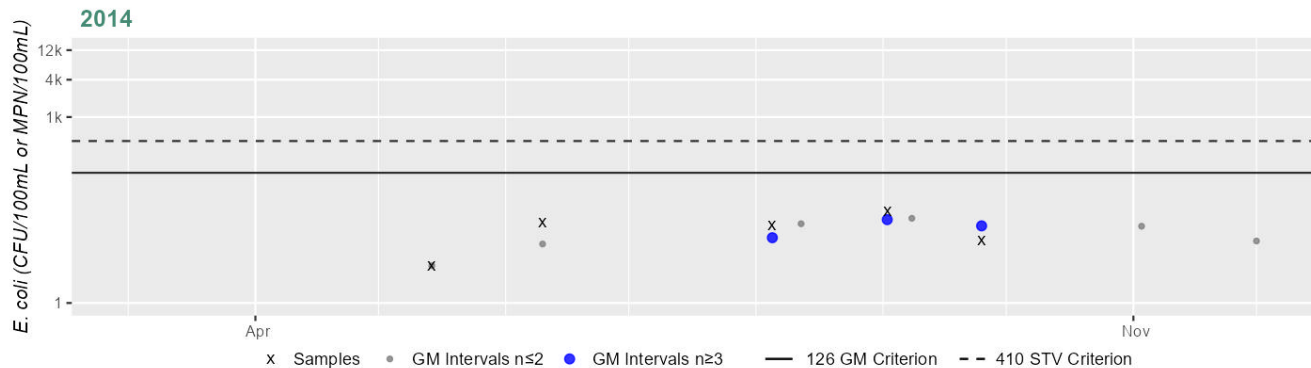
(MassDEP Undated 7) (MassDEP Undated 4)

[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
W2083	MassDEP	E. coli	05/14/14	09/25/14	5	4	30	13

Station MASSDEP_W2083 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	13
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

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

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Fully Supporting	NO

2024/26 Use Attainment Summary

The Secondary Contact Recreation Use for the West Branch Mill River (MA34-38) is assessed as Fully Supporting. MassDEP staff collected *E. coli* bacteria samples in the upstream half of the West Branch Mill River at W2083 [~1400 ft upstream from Old Goshen Rd, Williamsburg] from May-Sep 2014 (n=5). Analysis of the single year limited frequency *E. coli* dataset from W2083 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 13 CFU/100ml. *E. coli* data from W2083 meet 2024 CALM guidance.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2083	MassDEP	Water Quality	West Branch Mill River	[approximately 1400 feet upstream from Old Goshen Road, Williamsburg]	42.422577	-72.769563

Bacteria Data

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

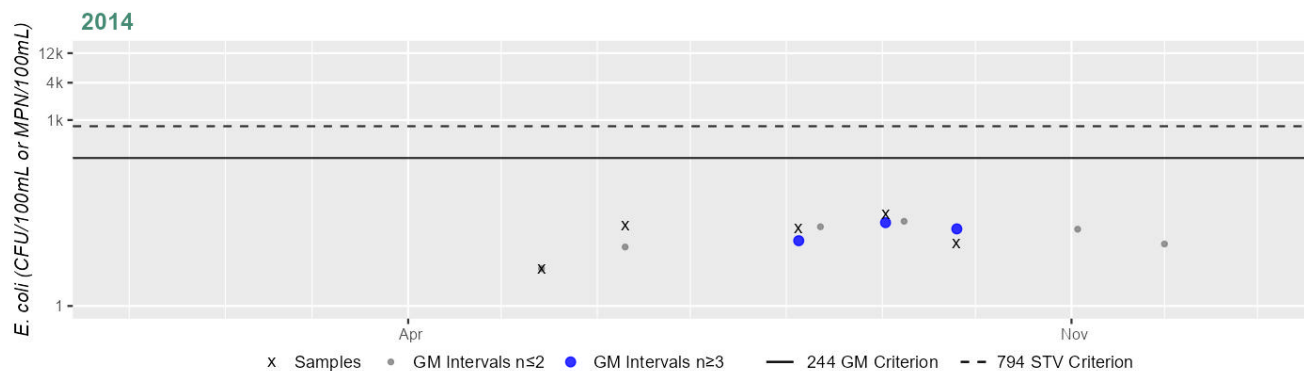
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W2083	MassDEP	E. coli	05/14/14	09/25/14	5	4	30	13

Station MASSDEP_W2083 - Escherichia coli

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



Variable*	Result
Samples	5
SeasGM	13
#GMI	3
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Current (2011-2022)

0%

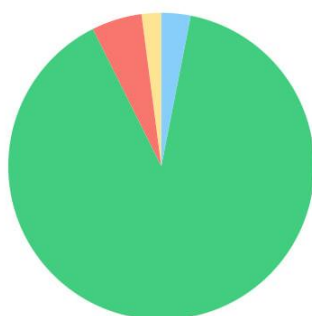
*Samples = # of samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = # of GM Intervals; #GMI Ex = # of GMI Exceedances;
 %GMI Ex = % GMI Exceedances; n>STV = # of samples > Statistical Threshold Value (STV); %n > STV = % of samples > STV;
 "Recent 5 Years" may not be consecutive as the analysis excludes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

West Branch Mill River (MA34-39)

Location:	From the confluence of Meekin Brook, Williamsburg to mouth at confluence with East Branch Mill River (forming headwaters Mill River), Williamsburg.
AU Type:	RIVER
AU Size:	0.6 MILES
Classification/Qualifier:	B

West Branch Mill River (MA34-39)

Watershed Area: 12.76 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	12.76	6.30	3.07	1.57
Agriculture	2.1%	2.8%	1.6%	2.5%
Developed	5.3%	6.3%	7%	10.2%
Natural	89.5%	87.5%	86%	82.3%
Wetland	3.1%	3.4%	5.4%	5.1%
Impervious	2.1%	2.7%	3.5%	5.4%

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 West Branch Mill River (MA34-39) is Not Assessed.	

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No data are available, so the Aesthetics Use for West Branch Mill River (MA34-39) is Not Assessed.	

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for the West Branch Mill River (MA34-39) are available, so the Primary Contact Recreation Use is Not Assessed.	

Secondary Contact Recreation

2024/26 Use Attainment	Alert
Not Assessed	NO
2024/26 Use Attainment Summary	
No bacteria or other indicator data for the West Branch Mill River (MA34-39) 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 the West Branch Mill River at W1057 [Mill St, Williamsburg] from Apr-Oct 2003 (n=6). Analysis of this historic single year limited frequency <i>E. coli</i> dataset from W1057 indicated 40% of intervals had GMs >244 CFU/100ml, 1 sample exceeded the 794 CFU/100ml STV (1,250 CFU), and the overall GM was 74 CFU/100ml. Historic <i>E. coli</i> data from W1057 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 a single exceedance of the STV threshold. 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
W1057	MassDEP	Water Quality	West Branch Mill River	[Mill Street, Williamsburg]	42.391761	-72.727225

Bacteria Data

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

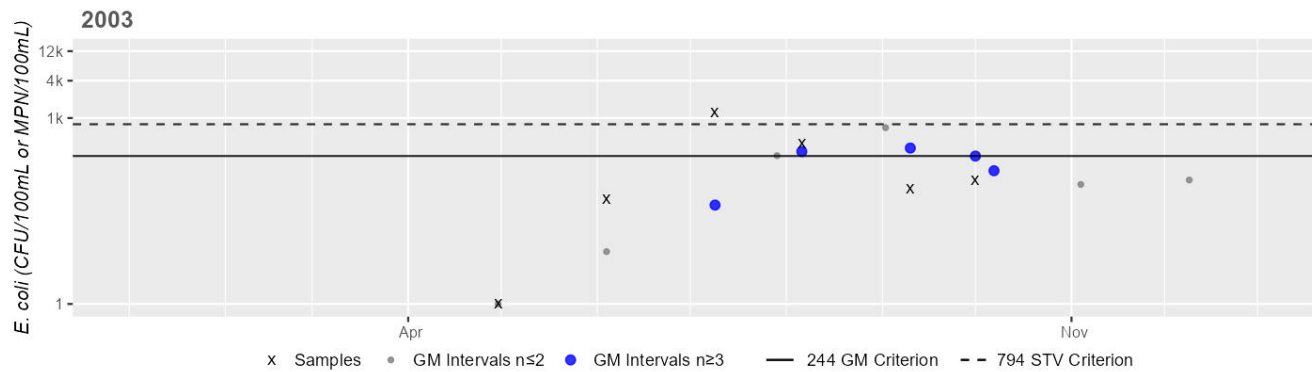
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1057	MassDEP	E. coli	04/30/03	10/01/03	6	1	1250	74

Station MASSDEP_W1057 - Escherichia coli

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



Variable*	Result
Samples	6
SeasGM	74
#GMI	5
#GMI Ex	2
%GMI Ex	40%
n>STV	1
%n>STV	16%

Cumulative %GMI Exceedance

Historic (1997-2010)
40%

*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.

West Brook (MA34-58)

Location:	Headwaters, outlet Northampton Reservoir (Old Northampton Reservoir), Whately to mouth at confluence with Mill River, Hatfield.
AU Type:	RIVER
AU Size:	4 MILES
Classification/Qualifier:	B: CWF

No usable data were available for West Brook (MA34-58) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

West Wait Brook (MA34-89)

Location:	Headwaters, perennial portion, west of Old Vernon Road, Northfield to the confluence of East Wait Brook, Northfield.
AU Type:	RIVER
AU Size:	1.7 MILES
Classification/Qualifier:	B

No usable data were available for West Wait Brook (MA34-89) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

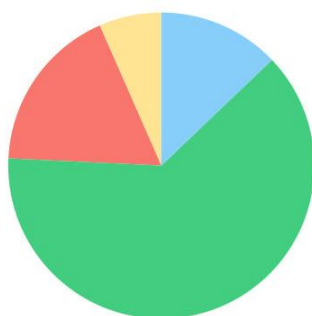
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

Weston Brook (MA34-23)

Location:	Headwaters, south of State Street (Route 202), Belchertown to mouth at inlet Forge Pond, Granby (WWF applies from the confluence of Lampson Brook in Belchertown to the mouth).
AU Type:	RIVER
AU Size:	2.7 MILES
Classification/Qualifier:	B: WWF* (*WWF applies to portion from the confluence of Lampson Brook (Belchertown) to the mouth)

Weston Brook (MA34-23)

Watershed Area: 4.09 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	4.09	4.09	1.09	1.09
Agriculture	6.6%	6.6%	9.7%	9.7%
Developed	17.7%	17.7%	11.1%	11.1%
Natural	62.9%	62.9%	57.5%	57.5%
Wetland	12.9%	12.9%	21.7%	21.7%
Impervious	7.1%	7.1%	4.2%	4.2%

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

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

Designated Use Attainment Decisions

Fish Consumption

2024/26 Use Attainment	Alert
Not Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Weston Brook (MA34-23) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Assessed	NO

2024/26 Use Attainment Summary
There are no data available to assess the status of the Aesthetics Use for Weston Brook (MA34-23), so it 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 Weston Brook (MA34-23) 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 Weston Brook (MA34-23) are available in the current IR window (2011-2022), so the Secondary Contact Recreation Use is Not Assessed. MassDEP staff collected *E. coli* bacteria samples in the downstream half of Weston Brook from 2003-2008 at 2 stations. Samples were collected from the following stations/sample years from upstream to downstream: W1791 [Boardman St, Belchertown] from May-Sep 2008 (n=6), and W1054 [Rural St, Belchertown] from Apr-Oct 2003 (n=6). Analysis of the historic single year limited frequency *E. coli* dataset from W1791 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 52 CFU/100ml. Analysis of the historic single year limited frequency *E. coli* dataset from W1054 indicated 0% of intervals had GMs >244 CFU/100ml, no samples exceeded the 794 CFU/100ml STV, and the overall GM was 46 CFU/100ml. Historic *E. coli* data from both W1791 and W1054 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
W1054	MassDEP	Water Quality	Weston Brook	[Rural Street, Belchertown]	42.271134	-72.453053
W1791	MassDEP	Water Quality	Weston Brook	[Boardman Street, Belchertown]	42.271076	-72.449864

Bacteria Data

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

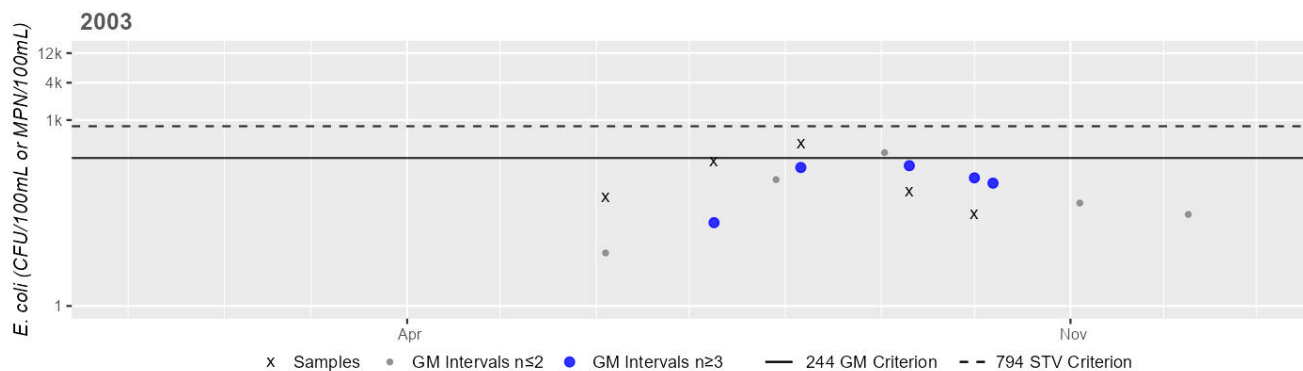
(MassDEP Undated 7) (MassDEP Undated 3)

[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
W1054	MassDEP	E. coli	04/30/03	10/01/03	6	0	420	46
W1791	MassDEP	E. coli	05/06/08	09/09/08	6	4	160	52

Station MASSDEP_W1054 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	46
#GMI	5
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

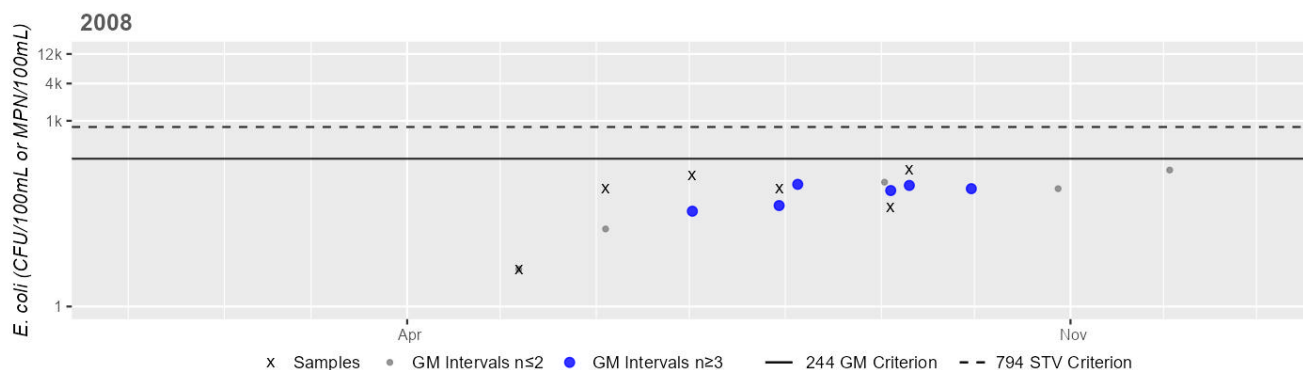
Historic (1997-2010)

0%

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

Station MASSDEP_W1791 - *Escherichia coli*

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



Variable*	Result
Samples	6
SeasGM	52
#GMI	6
#GMI Ex	0
%GMI Ex	0%
n>STV	0
%n>STV	0%

Cumulative %GMI Exceedance

Historic (1997-2010)

0%

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

White Brook (MA34-14)

Location:	Headwaters, perennial portion, Easthampton to mouth at inlet Nashawannuck Pond, Easthampton.
AU Type:	RIVER
AU Size:	1.8 MILES
Classification/Qualifier:	B

No usable data were available for White Brook (MA34-14) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

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

Whiting Street Reservoir (MA34101)

Location:	Holyoke.
AU Type:	FRESHWATER LAKE
AU Size:	102 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Whiting Street Reservoir (MA34101) 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	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	--	Unchanged
4c	4c	(Water Chestnut*)	--	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	--	--	--	--
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--

Williams Brook (MA34-86)

Location:	Headwaters, perennial portion, south of Chestnut Hill Loop, Montague to mouth at confluence with Sawmill River, Leverett.
AU Type:	RIVER
AU Size:	1.5 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Williams Brook (MA34-86) for the 2024/26 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

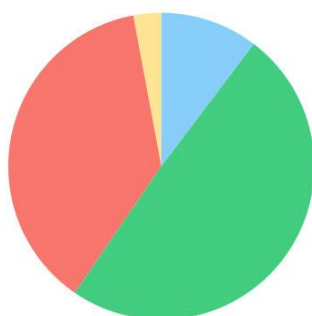
AU Category 2022	AU Category 2024/26	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None	--	Unchanged

Wilton Brook (MA34-15)

Location:	Headwaters, perennial portion, Easthampton to outlet RubberThread Pond, Easthampton (through former 2006 segment: RubberThread Pond MA34105).
AU Type:	RIVER
AU Size:	1.1 MILES
Classification/Qualifier:	B

Wilton Brook (MA34-15)

Watershed Area: 1.25 square miles



Land Cover Type	Entire Basin	Proximal Subbasin (5 km radius)	Stream Buffer (100 m)	Proximal Stream Buffer
Land Cover Area (square miles)	1.25	1.25	0.30	0.30
Agriculture	2.9%	2.9%	1.5%	1.5%
Developed	37.5%	37.5%	30.5%	30.5%
Natural	49.2%	49.2%	45.6%	45.6%
Wetland	10.3%	10.3%	22.4%	22.4%
Impervious	18.2%	18.2%	14.8%	14.8%

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

Impairment	Source (Confirmed Y/N)	ALU	FC	AES	PCR	SCR
(Aquatic Plants (Macrophytes)*)	Source Unknown (N)	--	--	X	X	X
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X	--	--	--	--
Nutrient/Eutrophication Biological Indicators	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. Wilton Brook (MA34-15) includes the run-of-river impoundment Rubber Thread Pond (formerly MA34105) at the downstream end of the AU, that was first listed as impaired for Noxious Aquatic Plants during the 2002 IR cycle (MassDEP 2024). In 2008, the impairment was remapped to Aquatic Plants (Macrophytes) and applied to the river AU when the two were merged. The original impairment was based on a July 1998 synoptic survey conducted by MassDEP staff in which it was noted that 90% of the pond was covered with dense or very dense aquatic plants, including the non-rooted, floating species, <i>Lemna/Wolffia/Spirodela</i> spp. and <i>Ceratophyllum demersum</i> (MassDEP 1998, MassDEP 2002). Google Earth images from September 2010 show a bloom or scum covering roughly 25-50% of Rubber Thread Pond (mainly in the eastern basin), and the water is faintly tinged green in September 2019 (more so in the eastern basin) (Google Earth Pro Undated). Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since Rubber Thread Pond comprises roughly 31% of the Wilton Brook (MA34-15) AU.</p>

Aquatic Plants (Macrophytes)

2002 WBS Coding Sheet (MassDEP 2002):

WBID: MA34105
NAME: Rubber Thread End
CODE: 34105

WATERSHED: Connecticut (34)
TYPE: Lake/Pond
SIZE: 5 (acres)

(Printed 08/01/96)

CLASS: B/
ORW?: Yes or No
Water Supply?: Yes or No

LATITUDE:
LONGITUDE:
Lake/Pond Name:
Ecoregion Name:
Description:

Assessment Date: 0007
Cycle: 02
Begin Sampling: 7/20/95
End Sampling: 9807
Water Quality Limited?: YES or NO
303(d) List?: YES or NO

Lake Specific Information

Significantly Publicly Owned:
Trophic Status:
Trophic Trend:
Acidity/Toxics Trend:
Acidity Effects:

1999

Significantly Publicly Owned: Y or N
Trophic Status: O M E (H) D U
Trophic Trend: 1 S D U
Acidity/Toxics Trend: 1 S D U
Acidity Effects: 1 V N U

Uses	Support	Threat	Partial	Non-Sup	Not-Asses	Not-Attain
OVERALL USE SUPPORT:				5.0 ✓		
ALUS					5.0 ✓	
FISH CONSUMPTION					5.0 ✓	
PRIMARY CONTACT				5.0 ✓		
SECONDARY CONTACT				5.0 ✓		
Aesthetics				5.0 ✓		
ALUS Bio						
ALUS Chem/Phys						
ALUS Toxicity						

Nonattainment Causes

Code	Size	Magnitude	1999 Code	Size	Magnitude
2200 - Noxious aquatic plants	5.0	H	2200	5.0	H ✓

Nonattainment Sources

Code	Size	Magnitude	1999 Code	Size	Magnitude
			9000	5.0	H ✓

Assessment Type: 1999 Assessment Category = X M E NA

Media/Pollutants Assessed

1999 Toxics Monitoring = > YES or NO

Comments:

1998 Synoptic Survey Field Sheet for run-of-river impoundment, Rubber Thread Pond (formerly MA34105)
(MassDEP 1998):

LAKE/POND: <u>Rubber Thread P.</u>	SIZE (acres): <u>6</u>	PALIS NO. <u>34105</u>
TOWN/CITY: <u>Easthampton</u>	USGS TOPO. SHEET: <u>Easthampton</u>	
DATE: <u>7/20/98</u>	WATERSHED: <u>Connecticut</u>	OBSERVERS: <u>Decesare/McVoy</u>

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) East end at John Badger Park; downstream basin only

Site (2) Park St end, of upper basin

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 ☐ ☐ ☐ School parking lot

Other (describe): ☐ _____

☒ Park next to school

☐ _____

ACCESS - Ownership (for multiple observation sites use numbers in boxes that apply)

Public ☒ ☐ ☐ Private ☐ ☐ ☐ Uncertain ☐ ☒ ☐

Names of Owners ☐ Town Com. Com 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.)

Diss. Organics: ☐ ☐ ☐ Slight ☐ ☐ ☐ Moderate ☐ ☐ ☐ Dark ☐ ☐ ☐ Estimated visually ☐ _____ meters

Algal Bloom: ☐ ☐ ☐ Slight ☐ ☐ ☐ Moderate ☐ ☐ ☐ Dense ☐ ☐ ☐ Measured w/ Secchi Disk ☐ _____ meters

Bottom Type: ☒ ☐ ☐ Undecomposed matter ☒ ☐ ☐ Muck/silt ☐ ☐ ☐ Sand ☐ ☐ ☐ Gravel ☐ ☐ ☐ Cobble ☐ ☐ ☐ Boulders

☒ ☐ ☐ Vegetation Other ☐ _____ ☐ _____

Other Observations: ☒ Couldn't see open water due to water weed cover; development

☐ around most of shore; but trees lining shore.

☐ _____

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: Green scum of water weed

☒ ☐ ☐ Produce objectionable odor, color, taste, or turbidity ☒ ☐ ☐ Produce undesirable nuisance species of aquatic life

Describe: _____ Describe: water weed

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

☐ ☐ *Sagittaria*

☐ ☐ *Sparganium*

☐ ☐ *Juncus*

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

Floating Leaf Plants

☐ ☐ *Wolffia*

☐ ☐ *Spargelia*

☐ ☐ *Lemna*

☐ ☐ *Wyerhaeuser (pink)*

☐ ☐ *Nuphar*

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

Submergent Plants

☐ ☐ *P. epiphyllus*

☐ ☐ *Caratophyllum demersum*

☐ ☐ *P. sp. (thin leaf)*

☐ ☐ *Elodea*

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

☐ ☐ _____

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 ☒ 70 % ☒ 90 % ☐ _____ %

Forms [(E)mergent, (F)loating, or (S)ubmergent] present ☒ F ☒ S, F, E ☐ _____

Percent of entire lake surface covered with dense or very dense aquatic plants 90 % Forms F, S, F

Describe locations of dense and/or very dense plant beds Entirety of both basins

Loss of open water habitat over entire lake (estimated): ☐ 90 - 100 % ☐ 60 - 65 % ☐ 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					5.0
Fish Consumption					5.0
Primary Contact				5.0	
Secondary Contact				5.0	
Aesthetics				5.0	

CAUSES: ☒ Noxious plants (2200) - Size 5.0 acres / Magnitude H ☐ Exotic plants (2600) - Size _____ acres / Magnitude _____
☐ 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

Google Earth image of Rubber Thread Pond (formerly MA34105) while clear, 3/31/2002 (Google Earth Pro Undated):



Google Earth image of Rubber Thread Pond (formerly MA34105), 8/6/2004 (Google Earth Pro Undated):



Google Earth image of Rubber Thread Pond (formerly MA34105), 9/10/2010 (Google Earth Pro Undated):



Google Earth image of Rubber Thread Pond (formerly MA34105), 9/18/2019 (Google Earth Pro Undated):



Recommendations

2024/26 Recommendations

2024/2026 IR [Harmful Algal Blooms, Medium] Follow-up monitoring should be conducted in Wilton Brook (MA34-15) 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 Assessed	No

2024/26 Use Attainment Summary
Fish toxics sampling has not been conducted recently, so the Fish Consumption Use for Wilton Brook (MA34-15) is Not Assessed.

Aesthetic

2024/26 Use Attainment	Alert
Not Supporting	YES

2024/26 Use Attainment Summary
<p>The Aesthetics Use for Wilton Brook (MA34-15) 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 and a Nutrient/Eutrophication Biological Indicators is being 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 2022.</p> <p>As described in detail in the 2024 CALM guidance document the mapping of Aquatic Plants (Macrophytes) impairments as a pollutant is being reevaluated. Wilton Brook includes the run-of-river impoundment Rubber Thread Pond (formerly MA34105) at the downstream end of the AU, that was first listed as impaired for Noxious Aquatic Plants during the 2002 IR cycle (MassDEP 2024). In 2008, the impairment was remapped to Aquatic Plants (Macrophytes) and applied to the river AU when the two were merged. The original impairment was based on a July 1998 synoptic survey conducted by MassDEP staff in which it was noted that 90% of the pond was covered with dense or very dense aquatic plants, including the non-rooted, floating species, <i>Lemna/Wolffia/Spirodela</i> spp. and <i>Ceratophyllum demersum</i> (MassDEP 1998, MassDEP 2002). Google Earth images from September 2010 show a bloom or scum covering roughly 25-50% of Rubber Thread Pond (mainly in the eastern basin), and the water is faintly tinged green in September 2019 (more so in the eastern basin) (Google Earth Pro Undated). Nutrient/Eutrophication Biological Indicators is being added as an impairment based on the presence of multiple non-rooted, floating, aquatic macrophyte species. Additionally, Aquatic Plants (Macrophytes) is being delisted as a pollutant and added again as a non-pollutant since Rubber Thread Pond comprises roughly 31% of the Wilton Brook (MA34-15) AU. During the period 2015 through 2022, C-HAB postings for Wilton Brook (MDPH name Rubber Thread Pond) were reported to MDPH based on visual observations for 222 days in 2022, though no blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, an Alert is being identified for Harmful Algal Blooms and a recommendation for follow-up sampling will be made.</p>

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 Wilton Brook (MDPH name Rubber Thread Pond) (MA34-15) were reported to MDPH based on visual observations for 222 days in 2022. No blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. 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
Wilton Brook (MDPH name Rubber Thread Pond)	Easthampton								222

Primary Contact Recreation

2024/26 Use Attainment	Alert
Not Supporting	YES

2024/26 Use Attainment Summary
The Primary Contact Recreation Use for Wilton Brook (MA34-15) 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. Also, a Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use). 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 Wilton Brook (MDPH name Rubber Thread Pond) were reported to MDPH based on visual observations for 222 days in 2022. No blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. 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
Not Supporting	YES

2024/26 Use Attainment Summary
<p>The Secondary Contact Recreation Use for Wilton Brook (MA34-15) 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. Also, a Nutrient/Eutrophication Biological Indicators impairment is being added (from the Aesthetics Use). 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 Wilton Brook (MDPH name Rubber Thread Pond) were reported to MDPH based on visual observations for 222 days in 2022. No blooms were reported in other years. Since no extended blooms (>20 days in duration) based on cell count data were reported in recent years, an impairment decision will not be made at this time based on C-HAB postings. However, a Harmful Algal Blooms Alert is being identified for this waterbody and a recommendation for follow-up sampling will be made.</p>

Data Sources

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- 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.
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- MassDEP. "Open file analysis of external water quality data (potential date range 1997-2022) using 2024 CALM guidance." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 1.
- MassDEP. "Open file analysis of external water quality data (potential date range 2011-2022) using 2024 CALM guidance." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 2.
- MassDEP. "Open file analysis of MassDEP WPP water quality data collected between 1997 and 2020 using 2024 CALM guidance." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 3.
- MassDEP. "Open file analysis of MassDEP WPP water quality data collected between 2011 and 2020 using 2024 CALM guidance." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 4.
- MassDEP. "Open files of fish toxicity testing data, metadata, and GIS datalayers in development." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 5.
- MassDEP. "Open files of repository documents for the 2016 Integrated Report cycle." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 6.
- MassDEP. "Open files of unpublished, validated water quality monitoring data, field sheet data, and GIS datalayers in development." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 7.
- . "PFAS Concentrations in Surface Water and Fish Tissue at Selected Rivers and Lakes in Massachusetts." Watershed Planning Program, Division of Watershed Management, Bureau of Water Resources, Massachusetts Department of Environmental Protection.

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