Final Massachusetts Integrated List of Waters for the Clean Water Act 2022 Reporting Cycle

Appendix 13
Hudson: Hoosic River Basin
Assessment and Listing Decision Summary

Prepared by:
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Massachusetts Department of Environmental Protection

MassDEP's mission is to protect and enhance the Commonwealth's natural resources – air, water, and land – to provide for the health, safety, and welfare of all people, and to ensure a clean and safe environment for future generations. In carrying out this mission MassDEP commits to address and advance environmental justice and equity for all people of the Commonwealth; provide meaningful, inclusive opportunities for people to participate in agency decisions that affect their lives; and ensure a diverse workforce that reflects the communities we serve.

Watershed Planning Program

The Watershed Planning Program is a statewide program in the Division of Watershed Management, Bureau of Water Resources, at MassDEP. We are stewards of the water resources of Massachusetts. Together with other state environmental agencies, we share in the duty and responsibility to protect, enhance, and restore the quality and value of the waters of the Commonwealth. We are guided by the federal Clean Water Act and work to secure the environmental, recreational, and public health benefits of clean water for the residents of Massachusetts. The Watershed Planning Program is organized into five Sections that each have a different technical focus under the Clean Water Act: (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 Pollution.

Disclaimer

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

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Notice of Availability

This report is available on the Massachusetts Department of Environmental Protection website: https://www.mass.gov/lists/integrated-lists-of-waters-related-reports.

Table of Contents

2022 Cycle Impairment Changes

Waterbody	AU_ID	2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
Bassett Brook	MA11-17	2	2	None		Unchanged
Bear Swamp Brook	MA11-29	--	3	None		Unchanged
Berkshire Pond	MA11001	4c	4c	(Eurasian Water Milfoil, Myriophyllum Spicatum*)		Unchanged
Birch Brook	MA11-30	--	3	None		Unchanged
Broad Brook	MA11-23	2	2	None		Unchanged
Buxton Brook	MA11-25	2	2	None		Unchanged
Cheshire Reservoir, Middle Basin	MA11018	4c	4c	(Brittle Naiad, Najas Minor*)		Added
Cheshire Reservoir, Middle Basin	MA11018	4c	4c	(Curly-leaf Pondweed*)		Added
Cheshire Reservoir, Middle Basin	MA11018	4c	4c	(Eurasian Water Milfoil, Myriophyllum Spicatum*)		Unchanged
Cheshire Reservoir, Middle Basin	MA11018	4c	4c	(Non-Native Aquatic Plants*)		Removed
Cheshire Reservoir, Middle Basin	MA11018	4c	4c	(Water Chestnut*)		Added
Cheshire Reservoir, North Basin	MA11002	5	5	(Brittle Naiad, Najas Minor*)		Added
Cheshire Reservoir, North Basin	MA11002	5	5	(Curly-leaf Pondweed*)		Added
Cheshire Reservoir, North Basin	MA11002	5	5	(Eurasian Water Milfoil, Myriophyllum Spicatum*)		Unchanged
Cheshire Reservoir, North Basin	MA11002	5	5	(Non-Native Aquatic Plants*)		Removed
Cheshire Reservoir, North Basin	MA11002	5	5	(Water Chestnut*)		Added
Cheshire Reservoir, North Basin	MA11002	5	5	Nutrient/Eutrophication Biological Indicators		Unchanged
Cheshire Reservoir, South Basin	MA11019	5	5	(Curly-leaf Pondweed*)		Added
Cheshire Reservoir, South Basin	MA11019	5	5	(Eurasian Water Milfoil, Myriophyllum Spicatum*)		Unchanged

Waterbody	AU_ID	2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
Cheshire Reservoir, South Basin	MA11019	5	5	(Non-Native Aquatic Plants*)		Removed
Cheshire Reservoir, South Basin	MA11019	5	5	(Water Chestnut*)		Added
Cheshire Reservoir, South Basin	MA11019	5	5	Algae		Unchanged
Dry Brook	MA11-13	2	2	None		Unchanged
East Branch Green River	MA11-21	2	2	None		Unchanged
Gore Brook	MA11-31	--	3	None		Unchanged
Green River	MA11-06	2	5	Temperature		Added
Hemlock Brook	MA11-09	3	2	None		Unchanged
Hoosic River	MA11-03	5	5	(Alteration in Stream-side or Littoral Vegetative Covers*)		Unchanged
Hoosic River	MA11-03	5	5	(Flow Regime Modification*)		Unchanged
Hoosic River	MA11-03	5	5	(Other Anthropogenic substrate Alterations*)		Unchanged
Hoosic River	MA11-03	5	5	Ambient Bioassays - Chronic Aquatic Toxicity		Unchanged
Hoosic River	MA11-03	5	5	Escherichia Coli (E. Coli)		Unchanged
Hoosic River	MA11-03	5	5	Fecal Coliform		Unchanged
Hoosic River	MA11-03	5	5	Temperature		Unchanged
Hoosic River	MA11-04	4c	5	(Alteration in Stream-side or Littoral Vegetative Covers*)		Unchanged
Hoosic River	MA11-04	4c	5	(Flow Regime Modification*)		Unchanged
Hoosic River	MA11-04	4c	5	Benthic Macroinvertebrates		Added
Hoosic River	MA11-04	4c	5	Escherichia Coli (E. Coli)		Added
Hoosic River	MA11-05	5	5	(Alteration in Stream-side or Littoral Vegetative Covers*)		Unchanged
Hoosic River	MA11-05	5	5	(Flow Regime Modification*)		Unchanged
Hoosic River	MA11-05	5	5	Escherichia Coli (E. Coli)		Unchanged
Hoosic River	MA11-05	5	5	Fecal Coliform		Unchanged
Hoosic River	MA11-05	5	5	Nutrient/Eutrophication Biological Indicators		Unchanged
Hoosic River	MA11-05	5	5	PCBs in Fish Tissue		Unchanged
Hopper Brook	MA11-28	2	2	None		Unchanged
Hoxie Brook	MA11-32	--	2	None		Unchanged
Hunterfield Brook	MA11-33	--	3	None		Unchanged
Kitchen Brook	MA11-24	2	2	None		Unchanged
Kitchen Brook	MA11-34	--	3	None		Unchanged
Mauserts Pond	MA11009	2	2	None		Unchanged
Mcdonald Brook	MA11-16	3	3	None		Unchanged
Miller Brook	MA11-27	2	2	None		Unchanged
Mitchell Brook	MA11-35	--	3	None		Unchanged
Money Brook	MA11-36	--	2	None		Unchanged
Mt. Williams Reservoir	MA11010	3	3	None		Unchanged

Waterbody	AU_ID	2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
North Branch Hoosic River	MA11-01	5	5	Temperature		Unchanged
North Branch Hoosic River	MA11-02	5	5	(Alteration in Stream-side or Littoral Vegetative Covers*)		Unchanged
North Branch Hoosic River	MA11-02	5	5	(Flow Regime Modification*)		Unchanged
North Branch Hoosic River	MA11-02	5	5	Escherichia Coli (E. Coli)		Unchanged
North Branch Hoosic River	MA11-02	5	5	Fecal Coliform		Unchanged
North Branch Hoosic River	MA11-02	5	5	Polychlorinated Biphenyls (PCBs)		Unchanged
Notch Brook	MA11-37	--	3	None		Unchanged
Notch Brook	MA11-38	--	2	None		Unchanged
Notch Reservoir	MA11011	3	3	None		Unchanged
Patton Brook	MA11-39	--	3	None		Unchanged
Paull Brook	MA11-20	4c	4c	(Dewatering*)		Unchanged
Pecks Brook	MA11-18	2	2	None		Unchanged
Penniman Brook	MA11-40	--	3	None		Unchanged
Pettibone Brook	MA11-41	--	3	None		Unchanged
Sherman Brook	MA11-42	--	3	None		Unchanged
South Brook	MA11-15	2	2	None		Unchanged
Sweet Brook	MA11-43	--	2	None		Unchanged
Thunder Brook	MA11-10	2	2	None		Unchanged
Tophet Brook	MA11-19	4c	4c	(Alteration in Stream-side or Littoral Vegetative Covers*)		Unchanged
Tophet Brook	MA11-19	4c	4c	(Flow Regime Modification*)		Unchanged
Tunnel Brook	MA11-26	3	3	None		Unchanged
West Branch Green River	MA11-22	2	2	None		Unchanged
Windsor Lake	MA11016	3	4c	(Curly-leaf Pondweed*)		Added

Bassett Brook (MA11-17)

Location:	Headwaters, perennial portion, southeast slope of Saddle Ball Mountain, Adams to mouth at inlet Bassett Reservoir, Cheshire.
AU Type:	RIVER
AU Size:	1.9 MILES
Classification/Qualifier:	A: PWS, ORW (Tributary)

No usable data were available for Bassett Brook (MA11-17) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Bear Swamp Brook (MA11-29)

Location:	Headwaters, east of the Appalachian National Scenic Trail in Clarksburg State Forest, Clarksburg to confluence with Cowan Brook forming headwaters of Hudson Brook, Clarksburg.
AU Type:	RIVER
AU Size:	2.6 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Bear Swamp Brook (MA11-29) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Berkshire Pond (MA11001)

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

No usable data were available for Berkshire Pond (MA11001) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Eurasian Water Milfoil, Myriophyllum Spicatum*)		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Eurasian Water Milfoil, Myriophyllum Spicatum*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X		X	X	X

Birch Brook (MA11-30)

Location:	Headwaters, perennial portion north of Route 2, Williamstown to mouth at confluence with Buxton Brook, Williamstown.
AU Type:	RIVER
AU Size:	1.9 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Birch Brook (MA11-30) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

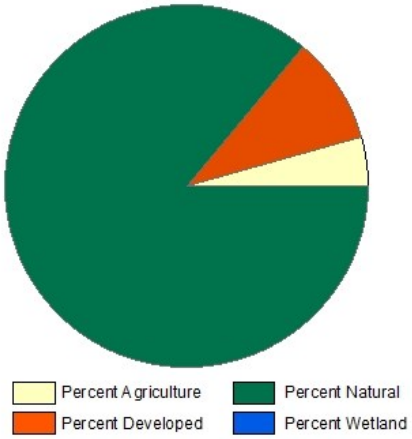
2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Broad Brook (MA11-23)

Location:	From Vermont state line, Williamstown to mouth at confluence with the Hoosic River, Williamstown (includes former 1998 segment: Broad Brook MA11-07).
AU Type:	RIVER
AU Size:	2.2 MILES
Classification/Qualifier:	A: PWS, ORW

Broad Brook - MA11-23

Watershed Area: 1.81 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.81	1.76	0.31	0.29
Agriculture	4.3%	4.4%	0.9%	1%
Developed	9.5%	9.7%	20.7%	22.2%
Natural	85.2%	84.9%	75.5%	73.7%
Wetland	0.9%	0.9%	2.9%	3.1%
Impervious Cover	3.6%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing at three sites along Broad Brook in Williamstown from up to downstream as follows: Sand Springs Pool (SampleID 6603 in July 2017), downstream of RT17 (SampleID 6035 in July 2016), and downstream of RR bridge, adjacent to some brick building (SampleID 6656 in July 2017. Multiple age classes of Eastern brook trout as well as slimy sculpin were captured at all three sites indicative of excellent habitat and water quality conditions. The samples were comprised almost entirely by fluvial species (99 to 100%). The Aquatic Life Use for Broad Brook is assessed as Fully Supporting based on the fish sample data. This stream should be protected as Cold Water habitat.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6035	MassDFG	Fish Community	Broad Brook	DS of RT17, Williamstown	42.73581	-73.20674
6603	MassDFG	Fish Community	Broad Brook	Sand Springs Pool, Williamstown	42.73430	-73.20082
6656	MassDFG	Fish Community	Broad Brook	DS of RR bridge, adjacent/near some brick building?, Williamstown	42.73508	-73.21156

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: BB = Brown Bullhead, BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, EBT = Brook Trout, LND = Longnose Dace, P = Pumpkinseed, SC = Slimy Sculpin]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
6035	07/19/16	BP	TP	5	1169	18	55	172	15	288	30%	100%	Yes	Yes	BND, BT, EBT, LND, SC,
6603	07/17/17	BP	TP	6	205	14	58	178	11	95	66%	100%	No	Yes	BB, BND, BT, EBT, LND, SC,
6656	07/05/17	BP	TP	7	237	3	115	156	2	43	28%	99%	No	Yes	BND, BT, CRC, EBT, LND, P, SC,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Broad Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	
No data are available to evaluate the Aesthetics Use for Broad Brook, so it is Not Assessed. The alerts for filamentous algae and total phosphorus in May and June 2007 (W1552) are being carried forward.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	YES

2022 Use Attainment Summary
No bacteria data are available to evaluate the Primary Contact Recreational Use for Broad Brook, so it is Not Assessed. The alerts for filamentous algae and total phosphorus in May and June 2007 (W1552) are being carried forward.

Secondary Contact Recreation

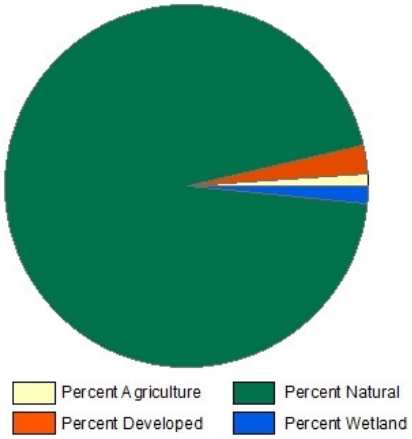
2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	
No bacteria data are available to evaluate the Secondary Contact Recreational Use for Broad Brook, so it is Not Assessed. The alerts for filamentous algae and total phosphorus in May and June 2007 (W1552) are being carried forward.	

Buxton Brook (MA11-25)

Location:	Headwaters, perennial portion, west of Petersburg Road, Williamstown to mouth at confluence with Hemlock Brook, Williamstown.
AU Type:	RIVER
AU Size:	1.3 MILES
Classification/Qualifier:	B: CWF

Buxton Brook - MA11-25

Watershed Area: 3.14 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.14	3.06	0.79	0.79
Agriculture	1.1%	1.1%	0.8%	0.8%
Developed	2.5%	2.5%	3.9%	3.9%
Natural	94.9%	94.8%	94.3%	94.3%
Wetland	1.5%	1.6%	1%	1%
Impervious Cover	0.7%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing in Buxton Brook near the Cemetery in Williamstown in July 2018. The sample included several young Eastern brook trout as well as slimy sculpin which are indicative of excellent habitat and water quality conditions. The sample was comprised entirely by fluvial species. The Aquatic Life Use for Buxton Brook is assessed as Fully Supporting based on the fish sample data.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
7550	MassDFG	Fish Community	Buxton Brook	Cemetery, Williamstown	42.71787	-73.21334

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, EBT = Brook Trout, LND = Longnose Dace, SC = Slimy Sculpin]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
7550	07/30/18	BP	TP	6	252	3	52	62	3	63	44%	100%	No	Yes	BND, BT, CRC, EBT, LND, SC,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Buxton Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent data are available to evaluate the Aesthetics Use for Buxton Brook so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to evaluate the Primary Contact Recreational Use for Buxton Brook, so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to evaluate the Secondary Contact Recreational Use for Buxton Brook, so it is Not Assessed.	

Cheshire Reservoir, Middle Basin (MA11018)

Location:	[Middle Basin] Cheshire/Lanesborough.
AU Type:	FRESHWATER LAKE
AU Size:	186 ACRES
Classification/Qualifier:	B

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Brittle Naiad, Najas Minor*)		Added
4c	4c	(Curly-leaf Pondweed*)		Added
4c	4c	(Eurasian Water Milfoil, Myriophyllum Spicatum*)		Unchanged
4c	4c	(Non-Native Aquatic Plants*)		Removed
4c	4c	(Water Chestnut*)		Added

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Brittle Naiad, Najas Minor*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X				
(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				
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X				

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Non-Native Aquatic Plants	Clarification of listing cause	The generic "Non-Native Aquatic Plants" is not needed since the specific macrophytes Curly-leaf pondweed (*Potamogeton crispus*), Brittle Naiad (*Najas minor*), and Water chestnut (*Trapa natans*) have been added.

Non-Native Aquatic Plants

This generic impairment is being removed because species-specific codes are now available for the other non-native aquatic macrophytes that are in Cheshire Reservoir, Middle Basin and they have been added as impairments.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
As was previously reported, MassDEP staff identified an infestation of the non-native aquatic macrophyte, Eurasian water milfoil (*Myriophyllum spicatum*), in the Cheshire Reservoir Middle Basin during an August 1997 synoptic survey. They also reported curly-leaf pondweed (*Potamogeton crispus*) and brittle naiad (*Najas minor*) during a September 2002 aquatic macrophyte survey. Finally, MassDCR's database of non-native species observations includes a record of water chestnut (*Trapa natans*) found in the reservoir. The Aquatic Life Use for this Cheshire Reservoir, Middle Basin will continue to be assessed as Not Supporting with the Eurasian water milfoil (*Myriophyllum spicatum*) being carried forward. The generic Non-Native Aquatic Plants impairment is being removed since the other non-native aquatic macrophyte species impairments are being added (Curly-leaf Pondweed, Brittle Naiad, and Water Chestnut).	

Biological Monitoring Information

Non-native Aquatic Species Presence

MassDEP Non-Native Aquatic Invasive Species Records as of May 2021. (MassDEP 1997) (MassDEP 2002) (MassDCR 2008)

Summary Statement
As was previously reported, MassDEP staff identified an infestation of the non-native aquatic macrophyte, Eurasian water milfoil (*Myriophyllum spicatum*), in the Cheshire Reservoir Middle Basin during an August 1997 synoptic survey. They also reported curly-leaf pondweed (*Potamogeton crispus*) and brittle naiad (*Najas minor*) during a September 2002 aquatic macrophyte survey. Finally, MassDCR's database of non-native species observations includes a record of water chestnut (*Trapa natans*) found in the reservoir.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Cheshire Reservoir, Middle Basin, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent data are available to evaluate the Aesthetics Use for Cheshire Reservoir, Middle Basin, so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Primary Contact Recreational Use for Cheshire Reservoir, Middle Basin, so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Secondary Contact Recreational Use for Cheshire Reservoir, Middle Basin, so it is Not Assessed.	

Cheshire Reservoir, North Basin (MA11002)

Location:	[North Basin] Cheshire.
AU Type:	FRESHWATER LAKE
AU Size:	284 ACRES
Classification/Qualifier:	B

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Brittle Naiad, Najas Minor*)		Added
5	5	(Curly-leaf Pondweed*)		Added
5	5	(Eurasian Water Milfoil, Myriophyllum Spicatum*)		Unchanged
5	5	(Non-Native Aquatic Plants*)		Removed
5	5	(Water Chestnut*)		Added
5	5	Nutrient/Eutrophication Biological Indicators		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Brittle Naiad, Najas Minor*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X				
(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				
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X				
Nutrient/Eutrophication Biological Indicators	Agriculture (N)	X				
Nutrient/Eutrophication Biological Indicators	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (N)	X				
Nutrient/Eutrophication Biological Indicators	Source Unknown (N)	X				

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Non-Native Aquatic Plants	Clarification of listing cause	The generic "Non-Native Aquatic Plants" is not needed since the specific macrophytes Curly-leaf pondweed (*Potamogeton crispus*), Brittle Naiad (*Najas minor*), and Water chestnut (*Trapa natans*) have been added.

Non-Native Aquatic Plants

This generic impairment is being removed because species-specific codes are now available for the other non-native aquatic macrophytes that are in Cheshire Reservoir, North Basin and they have been added as impairments.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
As was previously reported, MassDEP staff identified an infestation of the non-native aquatic macrophyte, Eurasian water milfoil (*Myriophyllum spicatum*), in the Cheshire Reservoir North Basin during an August 1997 synoptic survey. They also reported curly-leaf pondweed (*Potamogeton crispus*) and brittle naiad (*Najas minor*) during an August 2002 aquatic macrophyte survey. Finally, MassDCR's database of non-native species observations includes a record of water chestnut (*Trapa n*atans) found in the reservoir. The Aquatic Life Use for this Cheshire Reservoir, North Basin will continue to be assessed as Not Supporting with the Eurasian water milfoil (*Myriophyllum spicatum*) and Nutrient/Eutrophication Biological Indicators impairments being carried forward. The generic Non-Native Aquatic Plants impairment is being removed since the other non-native aquatic macrophyte species impairments are being added (Curly-leaf Pondweed, Brittle Naiad, and Water Chestnut).	

Biological Monitoring Information

Non-native Aquatic Species Presence

MassDEP Non-Native Aquatic Invasive Species Records as of May 2021. (MassDEP 1997) (MassDEP 2002) (MassDCR 2008)

Summary Statement
As was previously reported, MassDEP staff identified an infestation of the non-native aquatic macrophyte, Eurasian water milfoil (*Myriophyllum spicatum*), in the Cheshire Reservoir North Basin during an August 1997 synoptic survey. They also reported curly-leaf pondweed (*Potamogeton crispus*) and brittle naiad (*Najas minor*) during an August 2002 aquatic macrophyte survey. Finally, MassDCR's database of non-native species observations includes a record of water chestnut (*Trapa natans*) found in the reservoir.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
As was previously reported (O'Brien-Clayton 2006), DWM, with assistance from MA DFG conducted fish toxics monitoring in the North Basin of Cheshire Reservoir on 18 June 2002. Three fillet composites of largemouth bass, rock bass, pumpkinseed, bluegill, and brown bullhead were analyzed for heavy metals, PCBs, organochlorine pesticides, and percent lipids. MA DPH did not issue a site-specific Fish Consumption Advisory based on the results of this sampling effort. The Fish Consumption Use for Cheshire Reservoir, North Basin, is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	

No recent data are available to assess the status of the Aesthetics Use for Cheshire Reservoir, North Basin, so it is Not Assessed. The former Alert (if not managed to control non-native species (e.g., treated with herbicides) they would likely occupy a high percentage of the biovolume rendering the water aesthetically objectionable and/or unusable) is being carried forward.

Primary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	YES
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Primary Contact Recreational Use for Cheshire Reservoir, North Basin, so it is Not Assessed. The former Alert (if not managed to control non-native species (e.g., treated with herbicides) they would likely occupy a high percentage of the biovolume rendering the water aesthetically objectionable and/or unusable) is being carried forward.	

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	YES
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Secondary Contact Recreational Use for Cheshire Reservoir, North Basin, so it is Not Assessed. The former Alert (if not managed to control non-native species (e.g., treated with herbicides) they would likely occupy a high percentage of the biovolume rendering the water aesthetically objectionable and/or unusable) is being carried forward.	

Cheshire Reservoir, South Basin (MA11019)

Location:	[South Basin] Cheshire/Lanesborough.
AU Type:	FRESHWATER LAKE
AU Size:	92 ACRES
Classification/Qualifier:	B

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Curly-leaf Pondweed*)		Added
5	5	(Eurasian Water Milfoil, Myriophyllum Spicatum*)		Unchanged
5	5	(Non-Native Aquatic Plants*)		Removed
5	5	(Water Chestnut*)		Added
5	5	Algae		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Curly-leaf Pondweed*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X		X	X	X
(Eurasian Water Milfoil, Myriophyllum Spicatum*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X		X	X	X
(Water Chestnut*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X				
Algae	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) (N)	X		X	X	X
Algae	Source Unknown (N)	X		X	X	X

Supporting Information for Removed Impairments

2018/20 Removed Impairment	Removal Reason	Removal Comment
Non-Native Aquatic Plants	Clarification of listing cause	The generic “Non-Native Aquatic Plants” is not needed since the specific macrophytes “Eurasian water milfoil (Myriophyllum spicatum), Curly-leaf pondweed (Potamogeton crispus), and Water chestnut (Trapa natans) have been utilized.

Non-Native Aquatic Plants

This generic impairment is being removed because species-specific codes are now available for the other non-native aquatic macrophytes that are in Cheshire Reservoir, South Basin and they have been added as impairments.

Recommendations

2022 Recommendations
ALU: Although the Cheshire Reservoir South Basin is the most upstream of the three Cheshire Reservoir basins, a new aquatic macrophyte survey should be conducted to determine whether the non-native brittle naiad (*Najas minor*) is present in this basin, like it is in the lower two basins.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
As was previously reported, MassDEP staff identified infestations of the non-native aquatic macrophytes, Eurasian water milfoil (*Myriophyllum spicatum*) and curly-leaf pondweed (*Potamogeton crispus*), in the Cheshire Reservoir South Basin during August 1997 and September 2002 synoptic surveys. Additionally, MassDCR's database of non-native species observations includes a record of water chestnut (*Trapa natans*) found in the reservoir. The Aquatic Life Use for this Cheshire Reservoir, South Basin, will continue to be assessed as Not Supporting with the Eurasian water milfoil (*Myriophyllum spicatum*) and Algae impairments being carried forward. The generic Non-Native Aquatic Plants impairment is being removed since the other non-native aquatic macrophyte species impairments are being added (Curly-leaf Pondweed and Water Chestnut).	

Biological Monitoring Information

Non-native Aquatic Species Presence

MassDEP Non-Native Aquatic Invasive Species Records as of May 2021. (MassDEP 1997) (MassDCR 2008)

Summary Statement	Assessment Recommendation
As was previously reported, MassDEP staff identified infestations of the non-native aquatic macrophytes, Eurasian water milfoil (*Myriophyllum spicatum*) and curly-leaf pondweed (*Potamogeton crispus*), in the Cheshire Reservoir South Basin during an August 1997 synoptic survey. Additionally, MassDCR's database of non-native species observations includes a record of water chestnut (*Trapa natans*) found in the reservoir.	Although the Cheshire Reservoir South Basin is the most upstream of the 3 basins, a new aquatic macrophyte survey should be conducted to determine whether the non-native brittle naiad (*Najas minor*) is present in this basin, like it is in the lower 2 basins.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Cheshire Reservoir, South Basin, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	

As was previously reported, MassDEP staff identified extensive infestations of the non-native aquatic macrophytes, Eurasian water milfoil (Myriophyllum spicatum) and curly-leaf pondweed (Potamogeton crispus), in the Cheshire Reservoir South Basin during the August 1997 and September 2002 synoptic surveys. The Aesthetics Use for this Cheshire Reservoir, South Basin, will continue to be assessed as Not Supporting with the Eurasian water milfoil (Myriophyllum spicatum) and Algae impairments being carried forward. The generic Non-Native Aquatic Plants impairment is being removed since the other non-native aquatic macrophyte species impairment is being added (Curly-leaf Pondweed).

Primary Contact Recreation

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
As was previously reported, MassDEP staff identified extensive infestations of the non-native aquatic macrophytes, Eurasian water milfoil (Myriophyllum spicatum) and curly-leaf pondweed (Potamogeton crispus), in the Cheshire Reservoir South Basin during an August 1997 and September 2002 synoptic surveys. The Primary Contact Recreational Use for this Cheshire Reservoir, South Basin, will continue to be assessed as Not Supporting with the Eurasian water milfoil (Myriophyllum spicatum) and Algae impairments being carried forward. The generic Non-Native Aquatic Plants impairment is being removed since the other non-native aquatic macrophyte species impairment is being added (Curly-leaf Pondweed).	

Secondary Contact Recreation

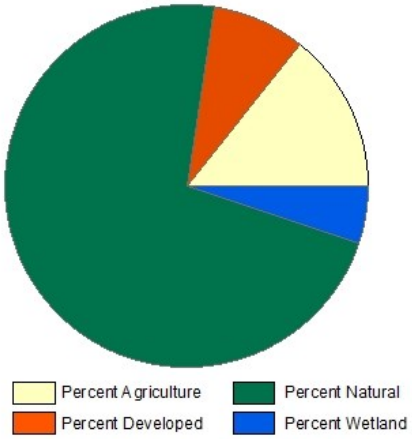
2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
As was previously reported, MassDEP staff identified extensive infestations of the non-native aquatic macrophytes, Eurasian water milfoil (Myriophyllum spicatum) and curly-leaf pondweed (Potamogeton crispus), in the Cheshire Reservoir South Basin during an August 1997 and September 2002 synoptic surveys. The Secondary Contact Recreational Use for this Cheshire Reservoir, South Basin, will continue to be assessed as Not Supporting with the Eurasian water milfoil (Myriophyllum spicatum) and Algae impairments being carried forward. The generic Non-Native Aquatic Plants impairment is being removed since the other non-native aquatic macrophyte species impairment is being added (Curly-leaf Pondweed).	

Dry Brook (MA11-13)

Location:	Headwaters, west of Jackson Road (in Savoy Wildlife Management Area), Savoy to mouth at confluence with Hoosic River, Adams.
AU Type:	RIVER
AU Size:	6.7 MILES
Classification/Qualifier:	B

Dry Brook - MA11-13

Watershed Area: 10.49 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	10.49	5.21	1.86	1.13
Agriculture	14.3%	25.5%	13.2%	21%
Developed	8.3%	13.6%	11.1%	14.3%
Natural	72.3%	58.6%	67.3%	60%
Wetland	5.1%	2.3%	8.4%	4.8%
Impervious Cover	2.5%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	YES
2022 Use Attainment Summary	
DFG biologists conducted backpack electrofishing in Dry Brook along Sawmill Hill Road in Cheshire in July 2019. The sample included multiple age classes of Eastern brook trout as well as slimy sculpin which are indicative of excellent habitat and water quality conditions. Fluvial fish dominated the sample (98%). The Aquatic Life Use for Dry Brook is assessed as Fully Supporting based on the fish sample data. The Alerts for dewatering in the lower 1.6 miles (between Route 116 and Leonard Street) and in-stream sedimentation (O'Brien-Clayton 2006) are being carried forward.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
8490	MassDFG	Fish Community	Dry Brook	Along Sawmill Hill Rd, Cheshire	42.56298	-73.09860

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, EBT = Brook Trout, GS = Golden Shiner, LND = Longnose Dace, LNS = Longnose Sucker, SC = Slimy Sculpin]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
8490	07/19/19	BP	TP	8	109	14	65	219	7	32	45%	98%	No	Yes	BND, BT, CRC, EBT, GS, LND, LNS, SC,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Dry Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetics Use for Dry Brook, so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreational Use for Dry Brook, so it is Not Assessed.	

Secondary Contact Recreation

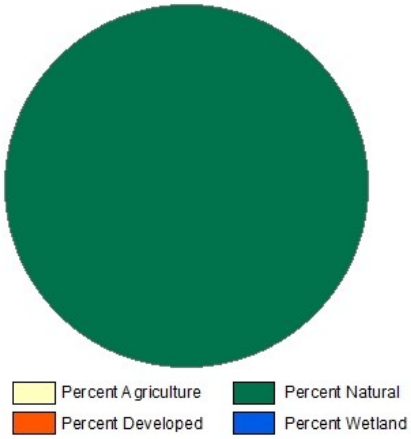
2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreational Use for Dry Brook, so it is Not Assessed.	

East Branch Green River (MA11-21)

Location:	Headwaters, perennial portion, northeast of Sugarloaf Mountain, New Ashford to mouth at confluence with Green River, New Ashford.
AU Type:	RIVER
AU Size:	2.2 MILES
Classification/Qualifier:	B: CWF

East Branch Green River - MA11-21

Watershed Area: 3.93 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.93	3.89	1.02	1.02
Agriculture	0.3%	0.4%	0.8%	0.8%
Developed	0.6%	0.6%	1.3%	1.3%
Natural	98.6%	98.7%	97.4%	97.4%
Wetland	0.4%	0.4%	0.4%	0.4%
Impervious Cover	0.4%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

MassDEP biologists sampled the East Branch Green River just upstream from the confluence with the Green River near Roys Road in New Ashford in 2012 and 2017 as part of the Reference Site Network monitoring project. Survey results of this Cold Water habitat can be briefly summarized as follows: the benthic community (Station B0035) IBI scores were both indicative of exceptional conditions (77 in April 2012 and 86 in July 2017), multiple age classes of Eastern brook trout as well as slimy sculpin were documented (backpack electrofishing in August 2012 [Sample ID 5021] and August 2017 [SampleID 7067]), and water quality sampling data during the summer 2017 including both deployed probe and discrete sampling efforts (Station W2298) were indicative of excellent conditions (minimum dissolved oxygen 8.6mg/L, maximum temperature 19.0°C with maximum 24 hour rolling average 18.2°C, pH 7.8 to 7.9SU (n=4), no indications of any nutrient enrichment problems (seasonal average total phosphorus concentrations 0.007mg/L, max diel DO shift 0.9mg/L, maximum saturation 98%, maximum pH 7.9SU), and low concentrations of total ammonia-nitrogen (0.04mg/L) and chloride (maximum 4mg/L). The maximum specific conductance was also low 148µs/cm.
The Aquatic Life Use of the East Branch Green River is assessed as Fully Supporting based on benthic macroinvertebrate, fish population, and water quality monitoring data collected by MassDEP biologists in 2012 and 2017.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
5021	MassDEP	Fish Community	East Branch Green River	E of Rt 7 (New Ashford Rd), ~340ft US of unnamed road at northern end of Roys Rd	42.62727	-73.22435
7067	MassDEP	Fish Community	East Branch Green River	, New Ashford	42.62798	-73.22503
B0035	MassDEP	Benthic	East Branch Green River/	[approximately 200 meters upstream/southeast from confluence with Green River, New Ashford, MA]	42.627311	-73.224315
W2298	MassDEP	Water Quality	East Branch Green River	[approximately 660 feet upstream from confluence with Green River, New Ashford]	42.627314	-73.224320

Biological Monitoring Information

Benthic Macroinvertebrate Data

MassDEP Benthic Macroinvertebrate Data (2011-2017). (MassDEP Undated 4)

[Index Biological Condition Class: E= Exceptional, S= Satisfactory, MD= Moderately Degraded, SD= Severely Degraded; High Gradient IBI Thresholds: E= 100-75, S= 74-55, MD= 54-35, SD= 34-0; Low Gradient IBI Thresholds: E= 100-81, S= 80-62, MD= 61-38, SD= 37-0; R qualifier = Rarefaction (100ct) <55]

Station Code	Collection Date	Collection Method	Index Type	Organism Count	Index Score	Index Biological Condition Class
B0035	04/25/12	RBP kicknet	Western_Highlands_100ct	102	77	E
B0035	07/20/17	RBP kicknet	Western_Highlands_300ct	286	86	E

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: BND = Blacknose Dace, BT = Brown Trout, EBT = Brook Trout, LND = Longnose Dace, SC = Slimy Sculpin]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
5021	08/22/12	BP	TP	4	98	11	67	174	9	63	99%	100%	No	Yes	BT, EBT, LND, SC,
7067	08/10/17	BP	TP	5	140	16	64	196	9	111	96%	100%	No	Yes	BND, BT, EBT, LND, SC,

Physico-chemical Water Quality Information

DO, pH, Temperature

MassDEP Long-term Continuous Dissolved Oxygen Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[7DADMin= 7-Day Average of the Daily Minima, 7DADA= 7-Day Average of the Daily Average, CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	Day Count	7day Count	30day Count	DO Min (mg/L)	Min 7DADMin (mg/L)	Min 7DADA (mg/L)	Delta DO Max (mg/L)	Count CW 7DADMin <6.0	Count CW 1Day Min <5.0	Count WW Early Life Stages 7DADA <6.5	Count WW Early Life Stages 1Day Min <5.0	Count WW Other Life Stages 7DADMin <5.0	Count WW Other Life Stages 1Day Min <4.0	Count CW 30DADA <8.0	Count WW Other Life Stages 30DADA <6.0
W2298	05/18/17	09/26/17	132	126	103	8.6	8.9	9.1	0.9	0	0	0	0	0	0	0	0

MassDEP Discrete Dissolved Oxygen Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	DO Count	DO Min (mg/L)	DO Avg (mg/L)	Count CW <5.0	Count WW Early Life Stages <5.0	Count WW Other Life Stages <4.0
W2298	06/28/17	09/27/17	4	8.8	9.4	0	0	0

MassDEP Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer Index is June 1 – Sept 15; Max Daily Mean= Maximum 24-Hour Average, 7DADM= 7-Day Average of the Daily Maxima, 7DADA= 7-Day Average of the Daily Average, CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Index Count	7day Count	Max Daily Mean (°C)	Max Temp (°C)	Max 7DADM (°C)	Max 7DADA (°C)	Count CWTier1 7DADM >20	Count CWTier1 Daily Mean >23.5	Count CWTier2 7DADA >21	Count CWTier2 Daily Mean >24.1	Count WW 7DADM >27.7	Count WW Daily Mean >28.3
W2298	06/01/17	09/15/17	107	107	17.8	19.0	18.0	17.1	0	0	0	0	0	0

24-hour Rolling Average Calculations for MassDEP Short- and Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Count Days Deployed	24hr Rolling Count	Max 24hr Avg Rolling Temp (°C)	Count CWTier1 24hr Avg Rolling >23.5 °C	Count CWTier2 24hr Avg Rolling >24.1 °C	Count WW 24hr Avg Rolling >28.3°C
W2298	06/01/17	09/15/17	107	5136	18.2	0	0	0

MassDEP Discrete Temperature Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count CW >20	Count CW >22	Count WW >28.3	Count WW >30.3
W2298	06/28/17	09/27/17	4	3	18.0	15.8	0	0	0	0

MassDEP Discrete pH Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Start Date	End Date	pH Count	pH Min (SU)	pH Max (SU)	pH Count <6.5 & >8.3	pH Count <6.0 & >8.8
W2298	06/28/17	09/27/17	4	7.8	7.9	0	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

MassDEP Nutrient Enrichment Indicator Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer seasonal total phosphorus data collected May-Sept]

Station Code	Data Year	Seasonal TP Count	Seasonal TP Min (mg/L)	Seasonal TP Max (mg/L)	Seasonal TP Avg (mg/L)	Delta DO Max (mg/L)	Delta DO Avg (mg/L)	DO Sat Max (%)	pH Max (SU)	Count Algal Obsv.	Dense/V. Dense Film/Fila. Algae
W2298	2017	4	0.006	0.009	0.007	0.9	0.5	97.8	7.9	5	0

Toxics and other pollutants (metals, ammonia, chloride, chlorine)

MassDEP Total Ammonia Nitrogen (TAN) Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[TAN= NH3 + NH4+]

Station Code	Data Year	TAN Count	TAN Min (mg/L)	TAN Max (mg/L)	TAN Avg (mg/L)	Count TAN >Chronic	Count TAN >Acute
W2298	2017	4	0.040	0.040	0.040	0	0

MassDEP Chloride Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Data Year	Chloride Count	Chloride Min (mg/L)	Chloride Max (mg/L)	Chloride Avg (mg/L)	Count Chloride >230	Count Chloride >860
W2298	2017	4	4	4	4	0	0

MassDEP Discrete Specific Conductance Data (2011-2018) Compared to Estimated Chloride Criteria. (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Start Date	End Date	SpCond Count	SpCond Min (µs/cm)	SpCond Max (µs/cm)	Count SpCond >904	Count SpCond >994	Count SpCond >3193	Count SpCond >3512	Consecutive sets >904	Consecutive sets >994
W2298	06/28/17	09/27/17	4	112	148	0	0	0	0	0	0

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in the East Branch Green River, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MassDEP staff surveyed the East Branch Green River ~660 feet upstream of the confluence of the Green River upstream of Roys Road in New Ashford (W2298) during the summer of 2017 as part of the Reference Site Network monitoring project. No objectionable conditions (i.e., odors, deposits, growths, or turbidity) were observed during any of the surveys. The Aesthetics Use for the East Branch Green River is assessed as Fully Supporting based on the lack of any objectionable conditions documented by MassDEP staff during surveys conducted in the summer 2017.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2298	MassDEP	Water Quality	East Branch Green River	[approximately 660 feet upstream from confluence with Green River, New Ashford]	42.627314	-73.224320

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2018) (MassDEP Undated 5)

Station Code	Waterbody	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2298	East Branch Green River	2017	5	MassDEP aesthetics observations for station W2298 on East Branch Green River can be summarized as follows: there were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by DEP field sampling crews during summer 2017.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2018) (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2298	2017	5	5	0

MassDEP Aesthetics Observations (2011-2018) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2298	East Branch Green River	2017	Color	None	5	5
W2298	East Branch Green River	2017	Objectionable Deposits	No	5	5
W2298	East Branch Green River	2017	Odor	None	5	5
W2298	East Branch Green River	2017	Scum	No	5	5
W2298	East Branch Green River	2017	Turbidity	None	5	5

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Primary Contact Recreational Use for the East Branch Green River, so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Secondary Contact Recreational Use for the East Branch Green River, so it is Not Assessed.	

Gore Brook (MA11-31)

Location:	Headwaters, perennial portion west of Gore Pond outlet, Dalton to mouth at confluence with Cheshire Reservoir, Middle Basin, Cheshire.
AU Type:	RIVER
AU Size:	1.9 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Gore Brook (MA11-31) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

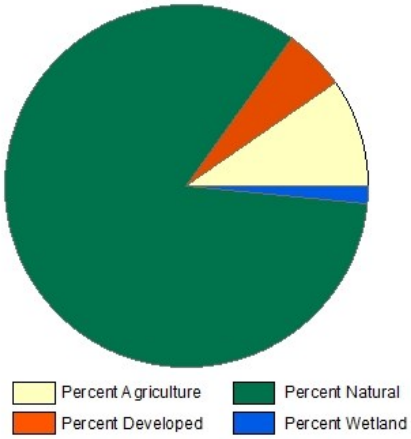
2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Green River (MA11-06)

Location:	Headwaters, perennial portion, southwest of Sugarloaf Mountain (west of Ingraham Road), New Ashford to mouth at confluence with Hoosic River, Williamstown.
AU Type:	RIVER
AU Size:	12.5 MILES
Classification/Qualifier:	B: CWF

Green River - MA11-06

Watershed Area: 42.41 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	42.41	5.02	10.14	1.32
Agriculture	9.6%	21.1%	10.4%	19.1%
Developed	5.6%	22.5%	7.6%	19.7%
Natural	83.3%	53.7%	77.8%	53.1%
Wetland	1.5%	2.6%	4.1%	8.2%
Impervious Cover	2%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	5	Temperature		Added

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Temperature	Agriculture (N)	X				
Temperature	Loss of Riparian Habitat (N)	X				
Temperature	Rural (Residential Areas) (N)	X				
Temperature	Source Unknown (N)	X				

Recommendations

2022 Recommendations
ALU: To address former benthic alert being carried forward, additional benthic macroinvertebrate sampling should be conducted in the upper reach of the Green River ~ 100 meters upstream from Roys Road, New Ashford (B0499) to determine whether there continues to be evidence of stress. Cattle may access the stream upstream of this station but more up to date information is needed before any planning actions are taken. Additionally, thermistors should be deployed in the Green River particularly along the reach bracketing and downstream from the confluence with the West Branch Green River to better evaluate thermal regime in this designated Cold Water stream and to target remediation actions as needed (e.g., education and BMPs to protect riparian zone along river to reduce thermal stress in the watershed.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing at three sites along the Green River in Williamstown in September 2017 from up to downstream as follows: upstream of Hopper Brook (SampleID 6669), along Rt 43 N of Blair Rd @ dirt pull off (SampleID 6727), and Upper/Near Park off Water St. (SampleID 6672). MassDEP biologists conducted benthic (B0802), fish (SampleID 5024), and water quality (W2265) sampling in the Green River ~2750 feet upstream of the Eastlawn Cemetery access road, east of Water Street (Route 43) during the summer of 2012 as part of the MAP2 wadeable streams monitoring project. Survey results of this Cold Water habitat can be briefly summarized as follows: the benthic community (Station B0802) IBI score was indicative of satisfactory conditions, fluvial fish, including slimy sculpin, dominated all four sampling sites, and the water quality data including both deployed probe and discrete sampling efforts (Station W2265) were, except for temperature, indicative of good conditions- minimum dissolved oxygen 7.7mg/L, pH 8.4 to 8.7SU, little indication of any nutrient enrichment problems (seasonal average total phosphorus concentrations 0.005mg/L, max diel DO shift 1.8mg/L, maximum saturation 116%, although maximum pH was slightly high at 8.7SU), low concentrations of total ammonia-nitrogen (0.02mg/L) and chloride (maximum 14mg/L), and no exceedances of any acute or chronic metals criteria (n=3 sampling events; note that aluminum exceedances cannot be ruled out since dissolved data were compared to the total recoverable aluminum criteria). The maximum temperature was 26.4°C exceeding 20°C 78 times during the 97-day probe deployment from June 1 through September 5 with a maximum 24-hour rolling average of 24.2°C (exceeded 23.5°C 47 times). While a large percentage of the watershed is natural land, there are localized human disturbances within the riparian zone along the proximal stream buffer of the river (agriculture, rural development). The Aquatic Life Use of the Green River is assessed as Not Supporting based on the acute and chronic temperature exceedances in this Cold Water resource documented during the summer of 2012 in the river ~2750 feet upstream of the Eastlawn Cemetery access road, east of Water Street (Route 43) (W2265). While most of this watershed area is undeveloped/natural land, there are localized human disturbances (agricultural activities, golf courses, residences, as well as the lower 3.6mile reach of the river in the Williamstown Water Department Zone II Wellhead Protection Area) that may exacerbate thermal stress. The other biological and water quality data were indicative of generally good conditions. The former alert related to results of benthic sampling in the upper reach of the Green River ~ 100 meters upstream from Roys Road, New Ashford (B0499) is being carried forward.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
5024	MassDEP	Fish Community	Green River (1)	0.5mi US of Eastlawn cemetary access road, Along Water ST/Rt 42, <0.5mi N of Ide Rd	42.70290	-73.20020

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6669	MassDFG	Fish Community	Green River (1)	US of Hopper Brook, Williamstown	42.67800	-73.21216
6672	MassDFG	Fish Community	Green River (1)	Upper / Near Park off Water St, Williamstown	42.70979	-73.19953
6727	MassDFG	Fish Community	Green River (1)	Along Rt 43 N of Blair Rd @ dirt pull off, Williamstown	42.68922	-73.20204
B0802	MassDEP	Benthic	Green River/	[approximately 840 meters upstream of the Eastlawn Cemetery access road, east of Water Street (Route 43), Williamstown, MA]	42.702898	-73.200198
W2265	MassDEP	Water Quality	Green River	[approximately 2750 feet upstream of the Eastlawn Cemetery access road, east of Water Street (Route 43), Williamstown]	42.702898	-73.200198

Biological Monitoring Information

Benthic Macroinvertebrate Data

MassDEP Benthic Macroinvertebrate Data (2011-2017). (MassDEP Undated 4)

[Index Biological Condition Class: E= Exceptional, S= Satisfactory, MD= Moderately Degraded, SD= Severely Degraded; High Gradient IBI Thresholds: E= 100-75, S= 74-55, MD= 54-35, SD= 34-0; Low Gradient IBI Thresholds: E= 100-81, S= 80-62, MD= 61-38, SD= 37-0; R qualifier = Rarefaction (100ct) <55]

Station Code	Collection Date	Collection Method	Index Type	Organism Count	Index Score	Index Biological Condition Class
B0802	07/25/12	RBP kicknet	Western_Highlands_100ct	101	55	S

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: B = Bluegill, BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, CS = Common Shiner, EBT = Brook Trout, LMB = Largemouth Bass, LND = Longnose Dace, LNS = Longnose Sucker, P = Pumpkinseed, SC = Slimy Sculpin, WS = White Sucker]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
5024	08/23/12	BP	TP	6	332	0	0	0	0	100	41%	100%	No	Yes	BND, BT, CRC, LND, SC, WS,
6669	09/11/17	BP	TP	7	344	1	225	225	0	211	74%	100%	No	Yes	BND, BT, CRC, EBT, LND, LNS, SC,
6672	09/14/17	BP	TP	12	1065	3	241	286	0	138	34%	98%	Yes	Yes	B, BND, BT, CRC, CS, EBT, LMB, LND, LNS, P, SC, WS,
6727	09/11/17	BP	TP	9	643	0	NA	NA	0	110	39%	99%	No	Yes	B, BND, BT, CRC, LMB, LND, LNS, P, SC,

Physico-chemical Water Quality Information

DO, pH, Temperature

MassDEP Short-term Continuous Dissolved Oxygen Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)
[Note: Most deploys 3-5 days in length; Day Count= total # of days over all deploys; XDADMin= 3-5 Day Average of the Daily Minima, XDADA= 3-5 Day Average of the Daily Average, CW= Coldwater, WW= Warmwater]

Station Code	Data Year	Deploys Count	Day Count	DO Min (mg/L)	Min XDADMin (mg/L)	Min XDADA (mg/L)	Delta DO Max (mg/L)	Count CW XDADMin <6.0	Count CW 1Day Min <5.0	Count WW Early Life Stages XDADA <6.5	Count WW Early Life Stages 1Day Min <5.0	Count WW Other Life Stages XDADMin <5.0	Count WW Other Life Stages 1Day Min <4.0
W2265	2012	3	12	7.7	7.8	8.5	1.8	0	0	0	0	0	0

MassDEP Discrete Dissolved Oxygen Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)
[CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	DO Count	DO Min (mg/L)	DO Avg (mg/L)	Count CW <5.0	Count WW Early Life Stages <5.0	Count WW Other Life Stages <4.0
W2265	05/02/12	09/06/12	3	9.6	9.8	0	0	0

MassDEP Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)
[Summer Index is June 1 – Sept 15; Max Daily Mean= Maximum 24-Hour Average, 7DADM= 7-Day Average of the Daily Maxima, 7DADA= 7-Day Average of the Daily Average, CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Index Count	7day Count	Max Daily Mean (°C)	Max Temp (°C)	Max 7DADM (°C)	Max 7DADA (°C)	Count CWTier1 7DADM >20	Count CWTier1 Daily Mean >23.5	Count CWTier2 7DADA >21	Count CWTier2 Daily Mean >24.1	Count WW 7DADM >27.7	Count WW Daily Mean >28.3
W2265	06/01/12	09/05/12	97	94	23.5	26.4	25.0	22.6	78	0	25	0	0	0

MassDEP Short-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)
[Summer Index is June 1 – Sept 15; Most Deploys 3-5 Days in Length; Day Count= total # of days over all deploys; Max Daily Mean= Maximum 24-Hour Average, XDADM= 3-5 Day Average of the Daily Maxima, XDADA= 3-5 Day Average of the Daily Average, CW= Coldwater, WW= Warmwater]

Station Code	Data Year	Deploys Count	Day Count	Max Daily Mean (°C)	Max Temp (°C)	Max XDADM (°C)	Max XDADA (°C)	Count CWTier1 XDADM >20	Count CWTier1 Daily Mean >23.5	Count CWTier2 XDADA >21	Count CWTier2 Daily Mean >24.1	Count WW XDADM >27.7	Count WW Daily Mean >28.3
W2265	2012	3	12	23.1	25.5	24.6	22.4	2	0	1	0	0	0

24-hour Rolling Average Calculations for MassDEP Short- and Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)
[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Count Days Deployed	24hr Rolling Count	Max 24hr Avg Rolling Temp (°C)	Count CWTier1 24hr Avg Rolling >23.5 °C	Count CWTier2 24hr Avg Rolling >24.1 °C	Count WW 24hr Avg Rolling >28.3°C
W2265	06/01/12	09/06/12	97	4679	24.2	47	8	0
W2265	06/06/12	08/14/12	69	580	23.1	0	0	0

MassDEP Discrete Temperature Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)
[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count CW >20	Count CW >22	Count WW >28.3	Count WW >30.3
W2265	05/02/12	09/06/12	5	4	21.9	17.5	1	0	0	0

MassDEP Discrete pH Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Start Date	End Date	pH Count	pH Min (SU)	pH Max (SU)	pH Count <6.5 & >8.3	pH Count <6.0 & >8.8
W2265	05/02/12	09/06/12	3	8.4	8.7	3	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

MassDEP Nutrient Enrichment Indicator Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)
[Summer seasonal total phosphorus data collected May-Sept]

Station Code	Data Year	Seasonal TP Count	Seasonal TP Min (mg/L)	Seasonal TP Max (mg/L)	Seasonal TP Avg (mg/L)	Delta DO Max (mg/L)	Delta DO Avg (mg/L)	DO Sat Max (%)	pH Max (SU)	Count Algal Obsv.	Dense/V. Dense Film/Fila. Algae
W2265	2012	5	0.005	0.005	0.005	1.8	1.3	115.8	8.7	6	1

Toxics and other pollutants (metals, ammonia, chloride, chlorine)

MassDEP Clean Metals Water Column Data (2011-2018), Acute Criteria Violations. (MassDEP Undated 7) (MassDEP Undated 5)
[CMC= Criterion Maximum Concentration, TU= Toxic Unit]

Station Code	Data Year	Metals Count	As CMC TU >1	Cd CMC TU >1	Cr III CMC TU >1	Cu CMC TU >1	Pb CMC TU >1	Ni CMC TU >1	Ag CMC TU >1	Zn CMC TU >1
W2265	2012	3	0	0	0	0	0	0	0	0

MassDEP Clean Metals Water Column Data (2011-2018), Chronic Criteria Violations. (MassDEP Undated 7) (MassDEP Undated 5)
[CCC= Criterion Continuous Concentration, TU= Toxic Unit]

Station Code	Data Year	Metals Count	As CCC TU >1	Cd CCC TU >1	Cr III CCC TU >1	Cu CCC TU >1	Pb CCC TU >1	Ni CCC TU >1	Se CCC TU >1	Zn CCC TU >1
W2265	2012	3	0	0	0	0	0	0	0	0

MassDEP Dissolved Aluminum Water Column Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)
[Since only dissolved aluminum data were available, these data were compared to the default freshwater criteria for total recoverable aluminum (TRA), presented in Appendix E of MassDEP's 2022 CALM. As dissolved Al is a fraction of TRA, an exceedance count of 0 does not rule out violations of the TRA criteria. CMC= Criterion Maximum Concentration, CCC= Criterion Continuous Concentration, TU= Toxic Unit]

Station Code	Data Year	Dissolved Al Count	Al Min (mg/L)	Al Max (mg/L)	Al Avg (mg/L)	Al CMC TU Max	Al CCC TU Max	Al CMC TU >1	Al CCC TU >1
W2265	2012	3	0.005	0.01	0.007	0.0	0.0	0	0

MassDEP Total Ammonia Nitrogen (TAN) Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)
[TAN= NH3 + NH4+]

Station Code	Data Year	TAN Count	TAN Min (mg/L)	TAN Max (mg/L)	TAN Avg (mg/L)	Count TAN >Chronic	Count TAN >Acute
W2265	2012	5	0.020	0.020	0.020	0	0

MassDEP Chloride Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Data Year	Chloride Count	Chloride Min (mg/L)	Chloride Max (mg/L)	Chloride Avg (mg/L)	Count Chloride >230	Count Chloride >860
W2265	2012	5	9	14	11	0	0

MassDEP Discrete Specific Conductance Data (2011-2018) Compared to Estimated Chloride Criteria. (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Start Date	End Date	SpCond Count	SpCond Min (µs/cm)	SpCond Max (µs/cm)	Count SpCond >904	Count SpCond >994	Count SpCond >3193	Count SpCond >3512	Consecutive sets >904	Consecutive sets >994
W2265	05/02/12	09/06/12	3	182	243	0	0	0	0	0	0

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in the Green River, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

MassDEP staff surveyed the Green River ~ 2750 feet upstream of the Eastlawn Cemetery access road, east of Water Street (Route 43), Williamstown (W2280) during the summer of 2012as part of the MAP2 Wadeable Stream monitoring project. There were generally no objectionable conditions (i.e., odors, deposits, growths, or turbidity) observed during the surveys.
The Aesthetics Use for the Green River is assessed as Fully Supporting based on the general lack of objectionable conditions documented by MassDEP staff during the summer of 2012.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2265	MassDEP	Water Quality	Green River	[approximately 2750 feet upstream of the Eastlawn Cemetery access road, east of Water Street (Route 43), Williamstown]	42.702898	-73.200198

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2018) (MassDEP Undated 5)

Station Code	Waterbody	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2265	Green River	2012	6	MassDEP aesthetics observations for station W2265/MAP2-202 on Green River can be summarized as follows: there were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by DEP field sampling crews during summer 2012.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2018) (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2265	2012	6	6	1

MassDEP Aesthetics Observations (2011-2018) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2265	Green River	2012	Color	Greyish	1	6
W2265	Green River	2012	Color	None	5	6
W2265	Green River	2012	Objectionable Deposits	No	6	6
W2265	Green River	2012	Odor	None	6	6
W2265	Green River	2012	Scum	No	5	6
W2265	Green River	2012	Scum	Yes	1	6
W2265	Green River	2012	Turbidity	None	6	6

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

E. coli bacteria sampling was conducted at seven sites along the Green River by Housatonic Valley Association staff/volunteers in Williamstown unless otherwise noted between June and October 2017 (n=6 surveys) from up to downstream as follows: westside of New Ashford Road, 1/4 mile north of Roys Road in New Ashford (HVA_GR 07.0), southeast side of New Ashford Rd, downstream of overpass (HVA_GR 06.0), eastside of Green River Rd, intersection Mt Hope Farm Rd (HVA_GR05.0), southside of Green River Rd. @ Rest Area (HVA_GR04.0), downstream of Blair Rd overpass (HVA_GR03.0), east side of Riverside Park, Water Street (HVA_GR02.0), and 25' downstream of Walley St Bridge (HVA_GR01.0). MassDEP also conducted *E. coli* bacteria sampling in the river ~2750 feet upstream of the Eastlawn Cemetery access road, east of Water Street (Route 43) (W2265) between May and September 2012 (essentially the same site as HVA_GR02.0) (n=6 surveys). Data analysis of these low frequency single-year datasets indicate all seven sites sampled between June and October 2017 had no GM exceedances except for one site (HVA_GR04.0) which had only a 33% exceedance and no samples exceeded the STV of 410cfu/100mls. The site sampled during the summer of 2012 by MassDEP staff did have 86% GMI exceedances but no samples exceeded the STV of 410cfu/100mls. The seasonal GMs in 2017 ranged from 17 to 95 cfu/100mls while the 2012 seasonal GM was 141 cfu/100mls. Since the *E. coli* concentrations throughout the Green River were below the use attainment impairment thresholds during the more recent (2017) survey single year limited frequency datasets, the Primary Contact Recreational Use is assessed as Fully Supporting.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
HVA_GR 01.0	Housatonic Valley Association	Water Quality	Green River	25' downstream of Walley St Bridge. Williamstown	42.70975	-73.194837
HVA_GR 02.0	Housatonic Valley Association	Water Quality	Green River	East side of Riverside Park, Water Street. Williamstown	42.702057	-73.199715
HVA_GR 03.0	Housatonic Valley Association	Water Quality	Green River	Downstream of Blair Rd overpass. Williamstown	42.683518	-73.204507
HVA_GR 04.0	Housatonic Valley Association	Water Quality	Green River	Southside of Green River Rd. @ Rest Area. Williamstown	42.677273	-73.224982
HVA_GR 05.0	Housatonic Valley Association	Water Quality	Green River	Eastside of Green River Rd, intersection Mt Hope Farm Rd. Williamstown	42.670455	-73.224311
HVA_GR 06.0	Housatonic Valley Association	Water Quality	Green River	SE side of New Ashford Rd, downstream of overpass. Williamstown	42.643332	-73.233329
HVA_GR 07.0	Housatonic Valley Association	Water Quality	Green River	Westside of New Ashford Road, 1/4 mile north of Roys Road. New Ashford	42.615055	-73.230926
W2265	MassDEP	Water Quality	Green River	[approximately 2750 feet upstream of the Eastlawn Cemetery access road, east of Water Street (Route 43), Williamstown]	42.702898	-73.200198

Bacteria Data

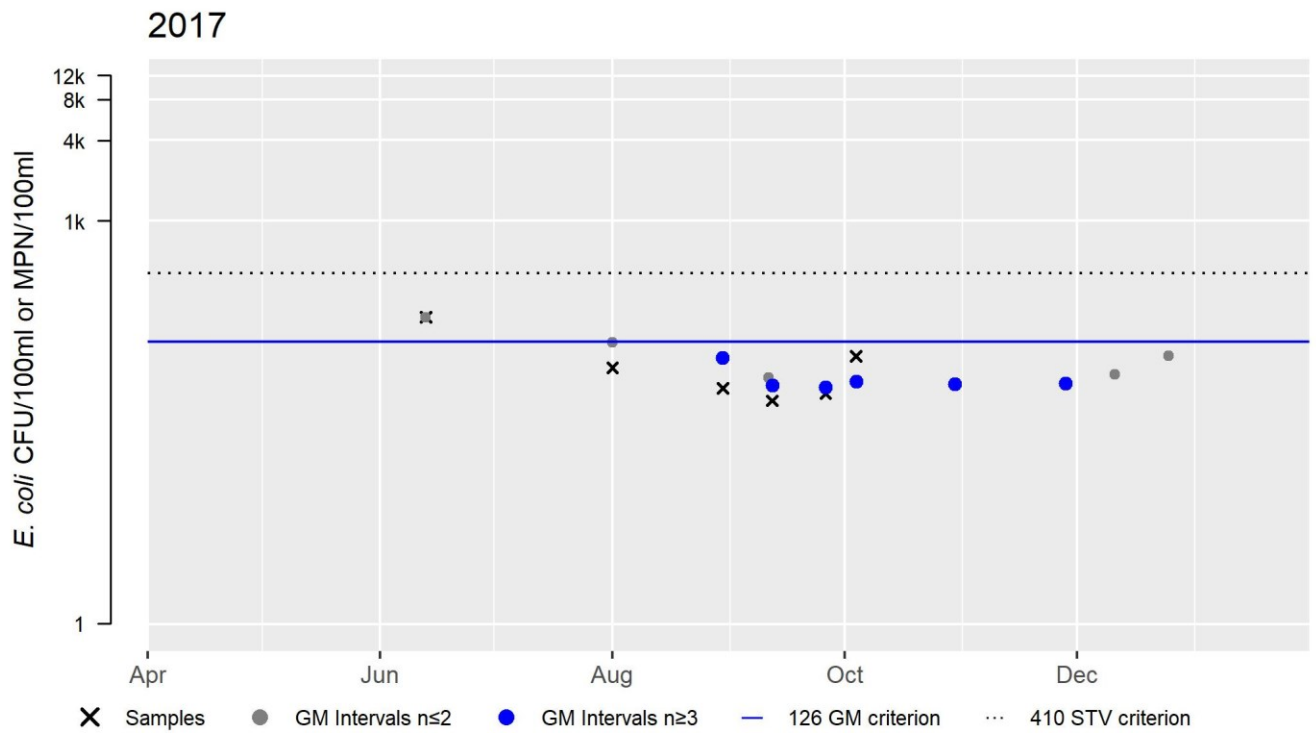
Bacteria Data Collected by MassDEP and External Data Providers 2011-2020 (90-day Interval Analysis) (HVA 2020) (MassDEP Undated 3) (MassDEP Undated 7) (MassDEP Undated 5)
[Result units are CFU/100ml or MPN/100ml]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
HVA_GR 01.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	46.5	191.8	77
HVA_GR 02.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	46.4	235.9	92
HVA_GR 03.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	42.6	178.5	95
HVA_GR 04.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	27.9	206.4	86
HVA_GR 05.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	35.9	214.2	62
HVA_GR 06.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	9.8	90.8	28
HVA_GR 07.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	3	55.6	17
W2265	MassDEP	E. coli	05/02/12	09/06/12	6	32	326	141

HVA_GR 01.0 *E. coli* (90-day Interval), Primary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	77
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

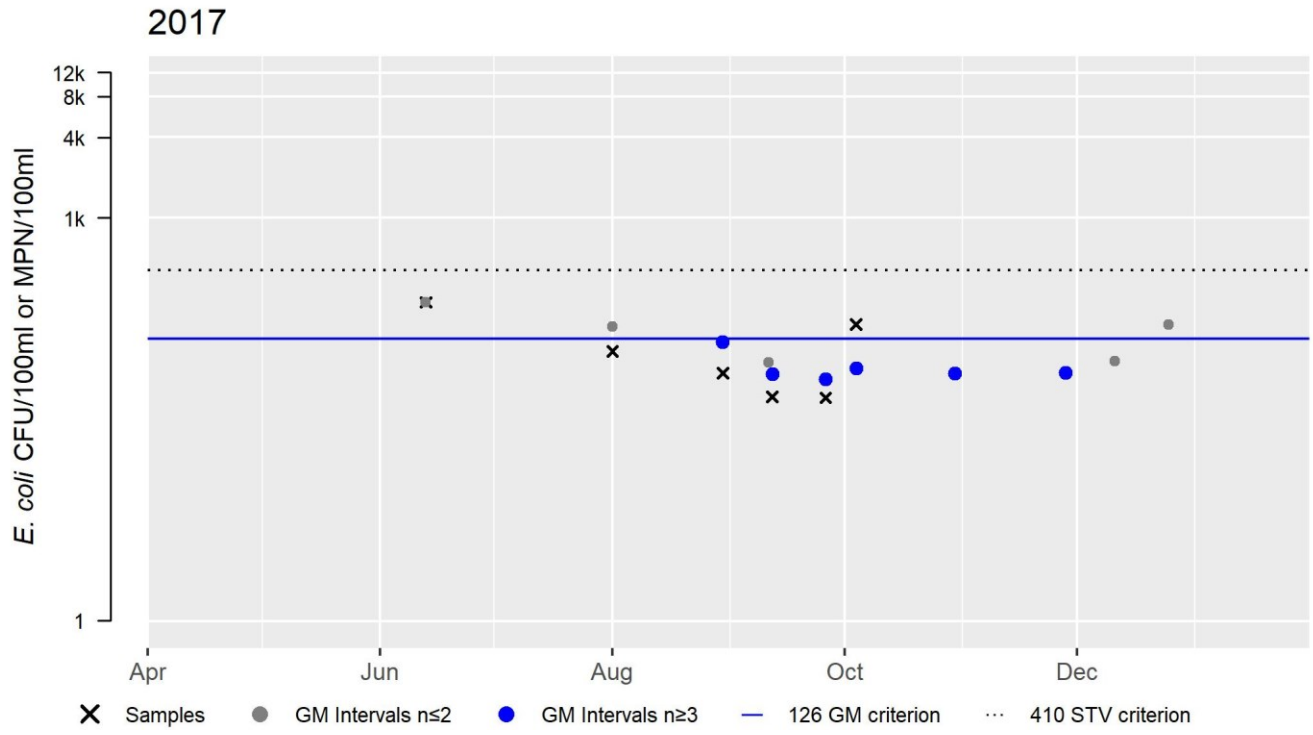
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 02.0 *E. coli* (90-day Interval), Primary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	92
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

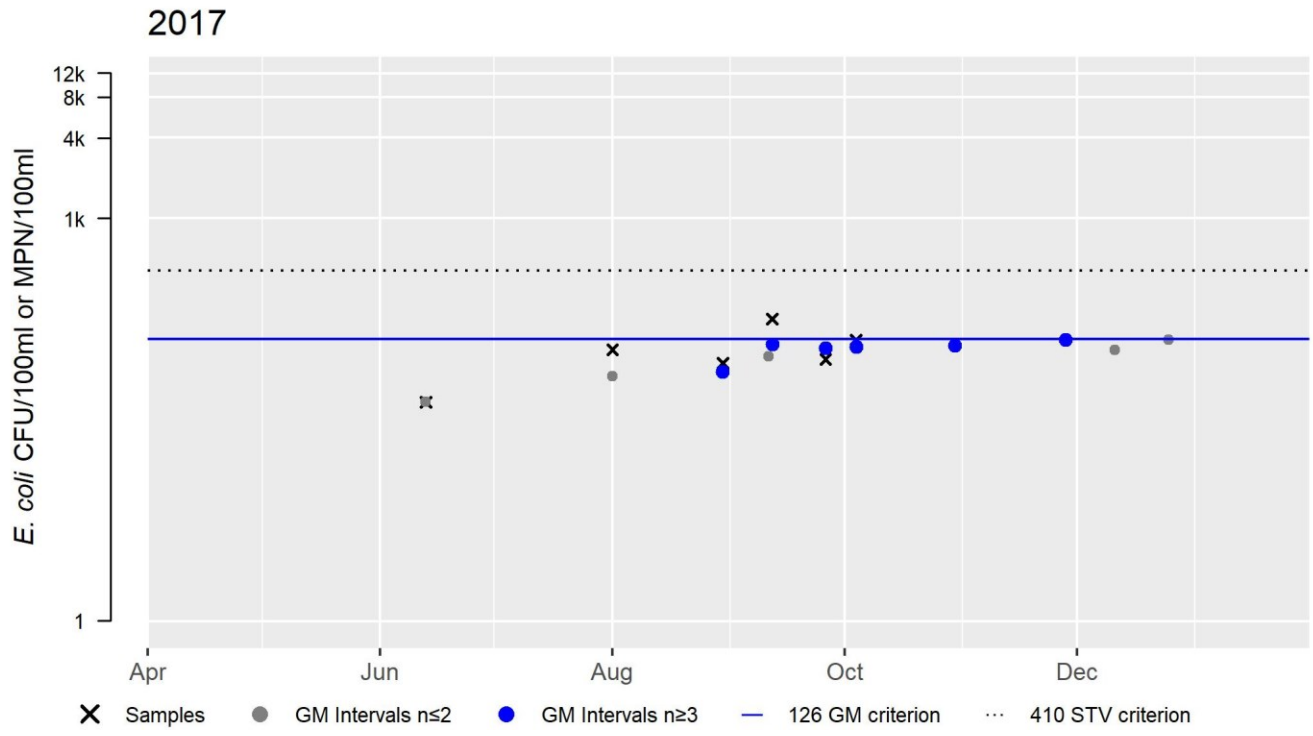
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 03.0 *E. coli* (90-day Interval), Primary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	95
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

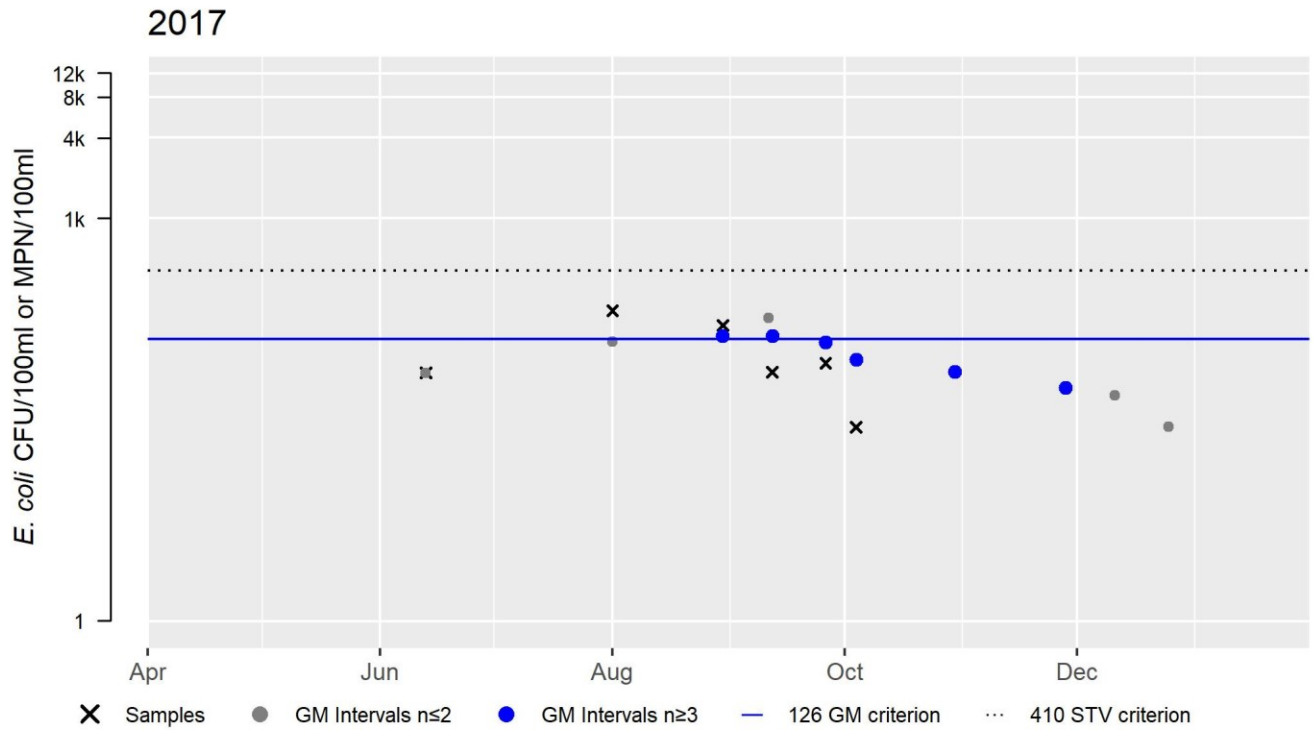
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 04.0 *E. coli* (90-day Interval), Primary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	86
#GMI	6
#GMI Ex	2
%GMI Ex	33
n>STV	0
%n>STV	0

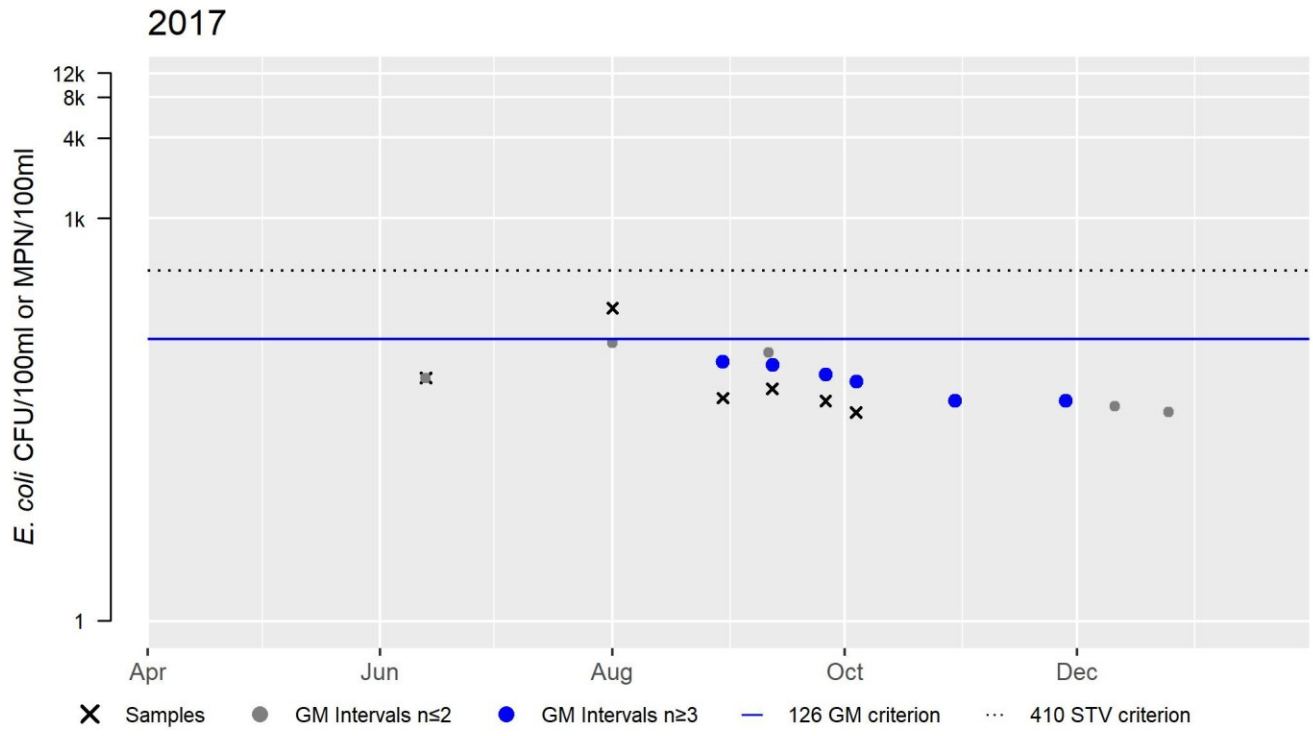
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 05.0 *E. coli* (90-day Interval), Primary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	62
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

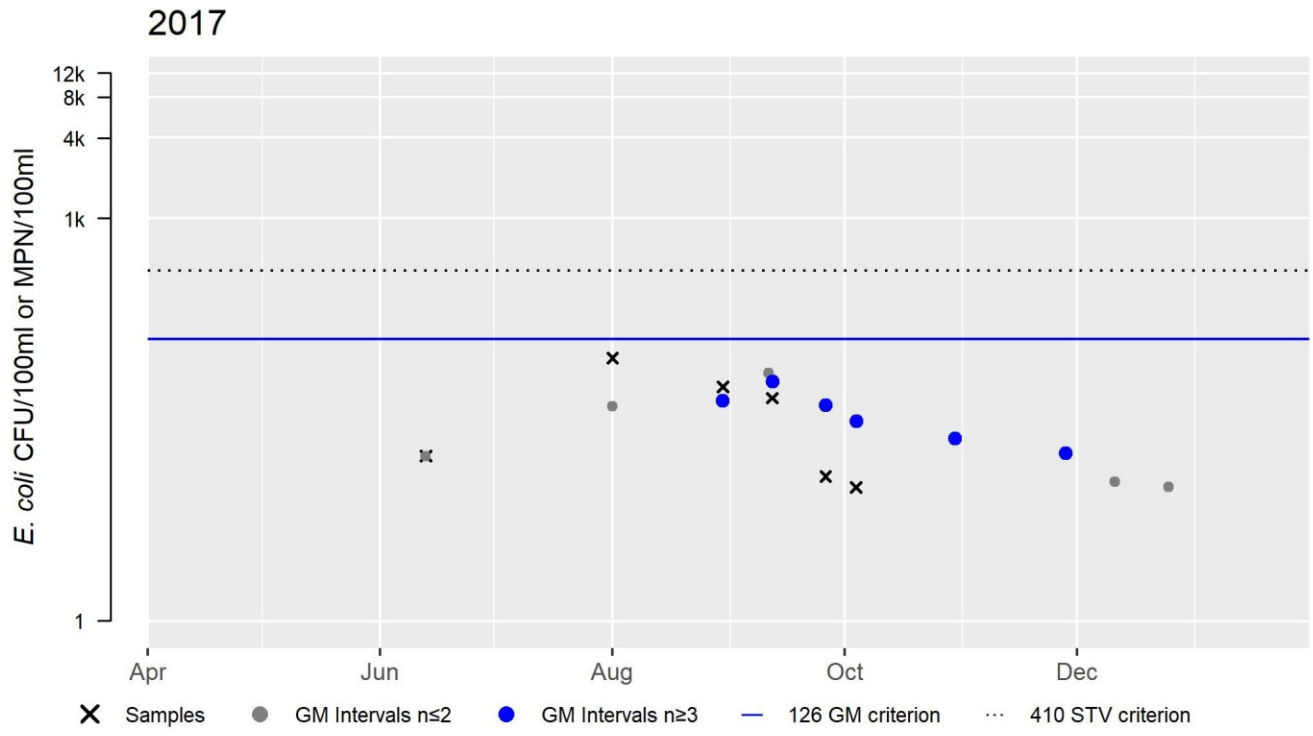
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 06.0 *E. coli* (90-day Interval), Primary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	28
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

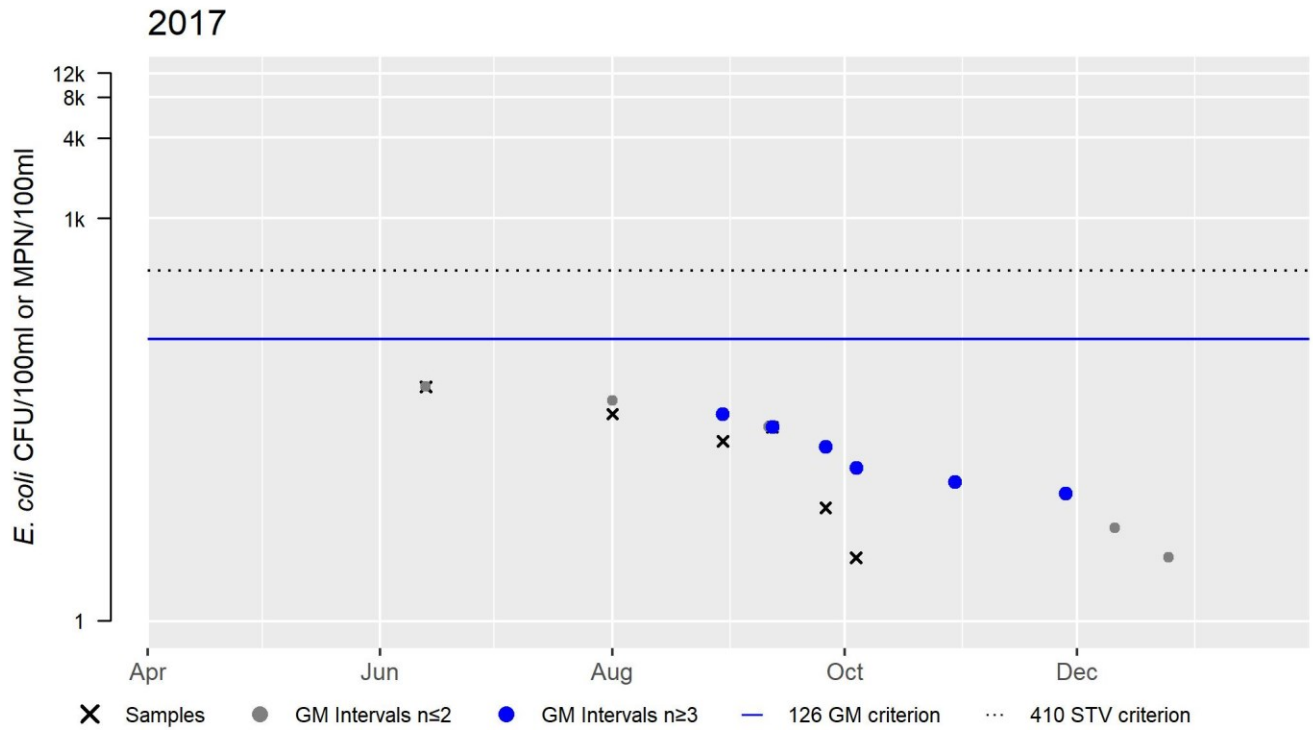
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 07.0 *E. coli* (90-day Interval), Primary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	17
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

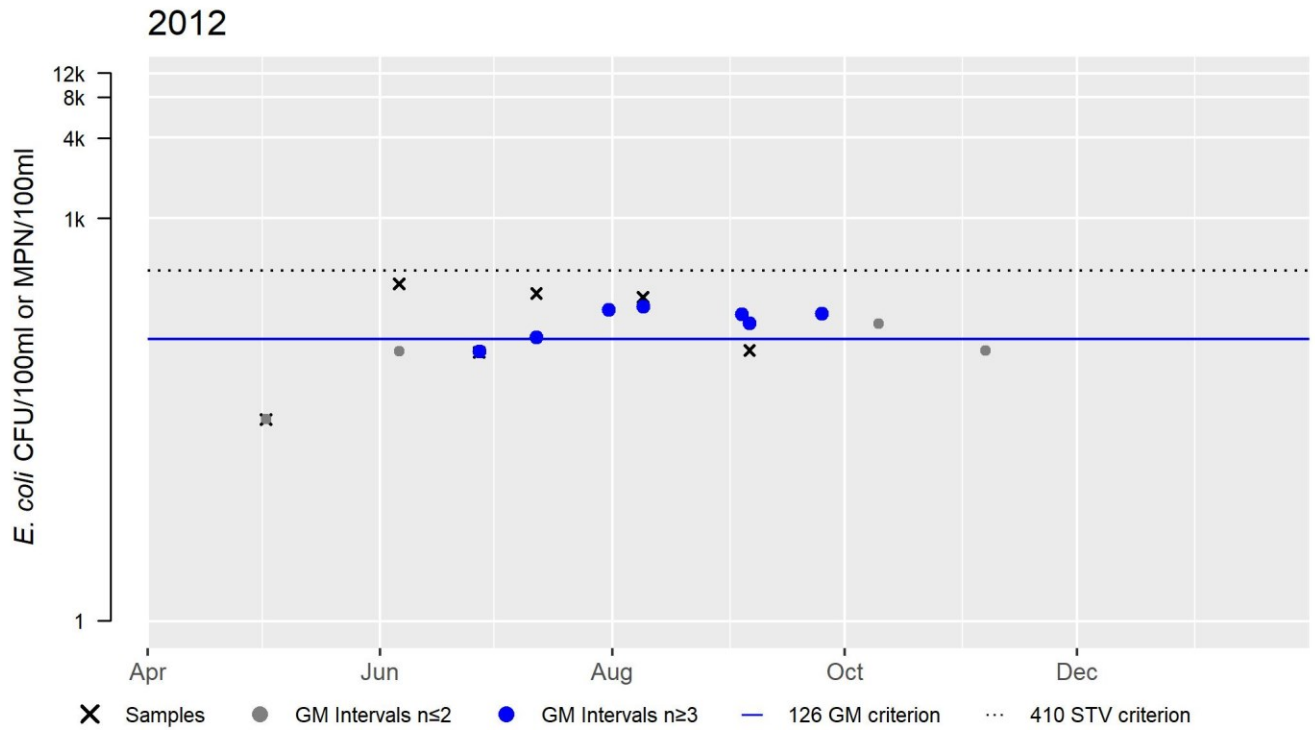
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



W2265 *E. coli* (90-day Interval), Primary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	141
#GMI	7
#GMI Ex	6
%GMI Ex	86
n>STV	0
%n>STV	0

Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



Secondary Contact Recreation

2022 Use Attainment	**Alert**
Fully Supporting	NO
2022 Use Attainment Summary	

E. coli bacteria sampling was conducted at seven sites along the Green River by Housatonic Valley Association staff/volunteers in Williamstown unless otherwise noted between June and October 2017 (n=6 surveys) from up to downstream as follows: westside of New Ashford Road, 1/4 mile north of Roys Road in New Ashford (HVA_GR 07.0), southeast side of New Ashford Rd, downstream of overpass (HVA_GR 06.0), eastside of Green River Rd, intersection Mt Hope Farm Rd (HVA_GR05.0), southside of Green River Rd. @ Rest Area (HVA_GR04.0), downstream of Blair Rd overpass (HVA_GR03.0), east side of Riverside Park, Water Street (HVA_GR02.0), and 25' downstream of Walley St Bridge (HVA_GR01.0). MassDEP also conducted E. coli bacteria sampling in the river ~2750 feet upstream of the Eastlawn Cemetery access road, east of Water Street (Route 43) (W2265) between May and September 2012 (essentially the same site as HVA_GR02.0) (n=6 surveys). Data analysis of these low frequency single-year datasets indicate all sites sampled in 2012 and 2017 had 0% GM exceedances and no samples exceeded the STV of 1260 cfu/100mls. The seasonal GMs ranged from 17 to 141 cfu/100mls.
Since the *E. coli* concentrations throughout the Green River were below the use attainment impairment thresholds during both the 2012 and 2017 single-year, limited frequency datasets, the Secondary Contact Recreational Use is assessed as Fully Supporting.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
HVA_GR 01.0	Housatonic Valley Association	Water Quality	Green River	25' downstream of Walley St Bridge. Williamstown	42.70975	-73.194837
HVA_GR 02.0	Housatonic Valley Association	Water Quality	Green River	East side of Riverside Park, Water Street. Williamstown	42.702057	-73.199715
HVA_GR 03.0	Housatonic Valley Association	Water Quality	Green River	Downstream of Blair Rd overpass. Williamstown	42.683518	-73.204507
HVA_GR 04.0	Housatonic Valley Association	Water Quality	Green River	Southside of Green River Rd. @ Rest Area. Williamstown	42.677273	-73.224982
HVA_GR 05.0	Housatonic Valley Association	Water Quality	Green River	Eastside of Green River Rd, intersection Mt Hope Farm Rd. Williamstown	42.670455	-73.224311
HVA_GR 06.0	Housatonic Valley Association	Water Quality	Green River	SE side of New Ashford Rd, downstream of overpass. Williamstown	42.643332	-73.233329
HVA_GR 07.0	Housatonic Valley Association	Water Quality	Green River	Westside of New Ashford Road, 1/4 mile north of Roys Road. New Ashford	42.615055	-73.230926
W2265	MassDEP	Water Quality	Green River	[approximately 2750 feet upstream of the Eastlawn Cemetery access road, east of Water Street (Route 43), Williamstown]	42.702898	-73.200198

Bacteria Data

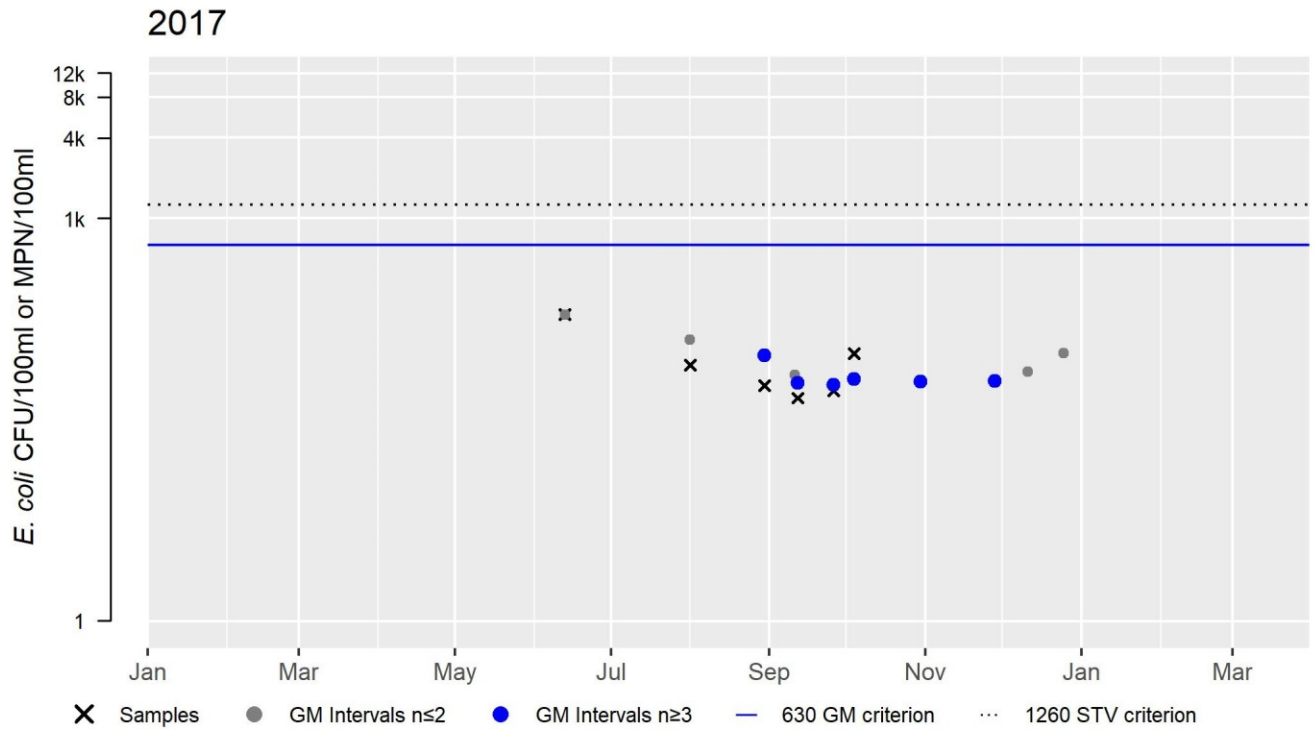
Bacteria Data Collected by MassDEP and External Data Providers 2011-2020 (90-day Interval Analysis) (HVA 2020) (MassDEP Undated 3) (MassDEP Undated 7) (MassDEP Undated 5)
[Result units are CFU/100ml or MPN/100ml]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result (CFU/100ml or MPN/100ml)	Maximum Sample Result (CFU/100ml or MPN/100ml)	Seasonal Geometric Mean (CFU/100ml or MPN/100ml)
HVA_GR 01.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	46.5	191.8	77
HVA_GR 02.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	46.4	235.9	92
HVA_GR 03.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	42.6	178.5	95
HVA_GR 04.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	27.9	206.4	86
HVA_GR 05.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	35.9	214.2	62
HVA_GR 06.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	9.8	90.8	28
HVA_GR 07.0	Housatonic Valley Association	E. coli	06/13/17	10/04/17	6	3	55.6	17
W2265	MassDEP	E. coli	05/02/12	09/06/12	6	32	326	141

HVA_GR 01.0 *E. coli* (90-day Interval), Secondary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	77
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

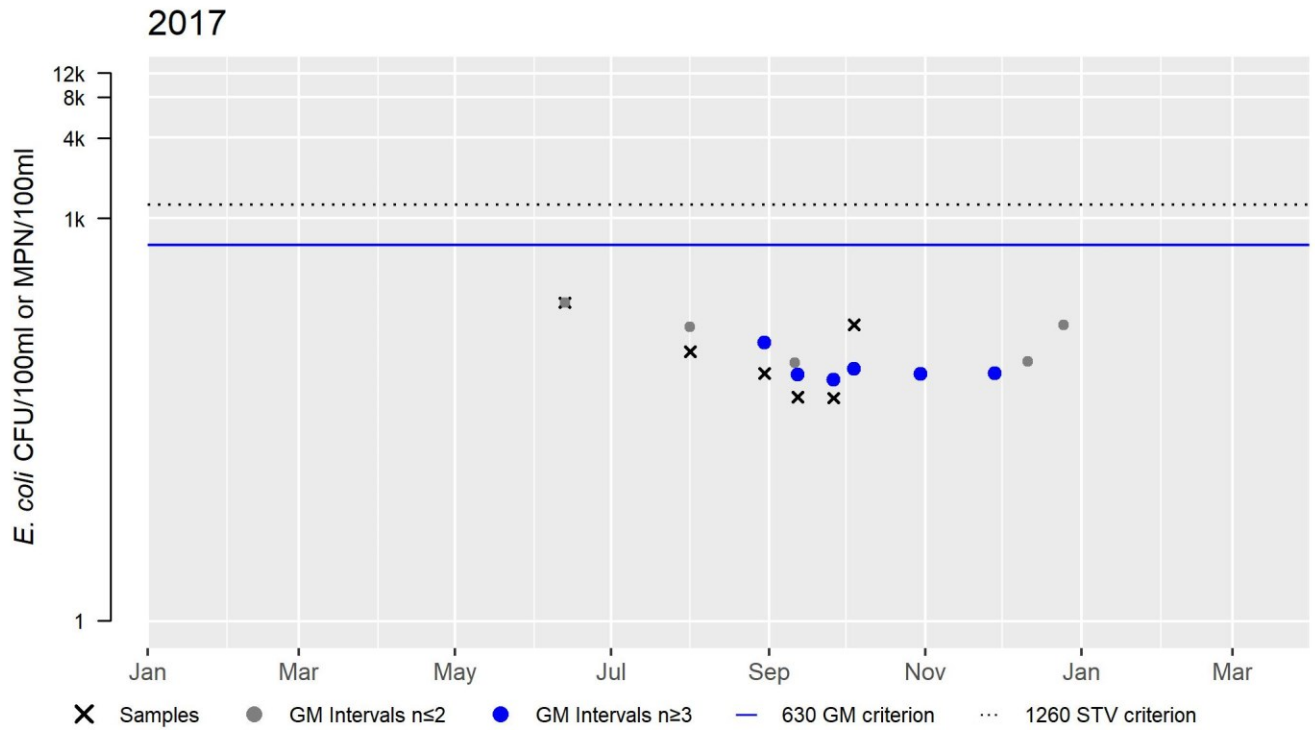
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 02.0 *E. coli* (90-day Interval), Secondary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	92
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

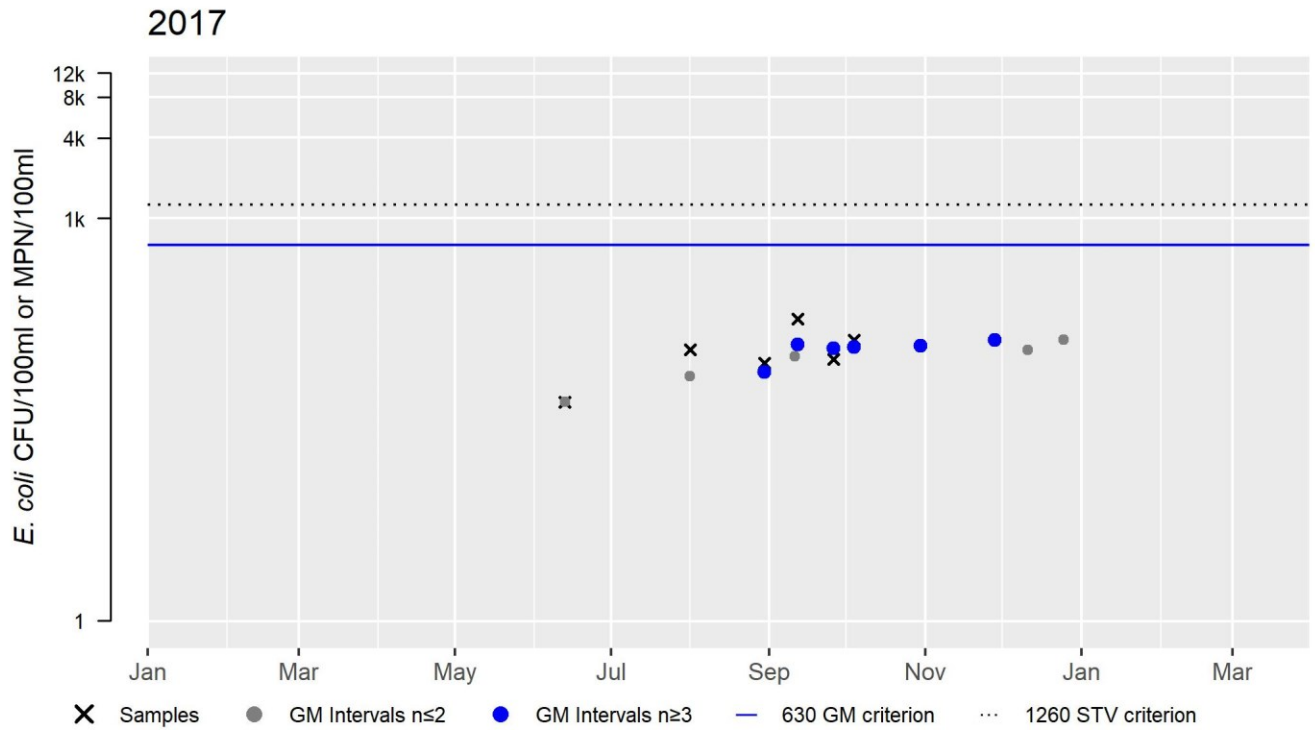
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 03.0 *E. coli* (90-day Interval), Secondary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	95
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

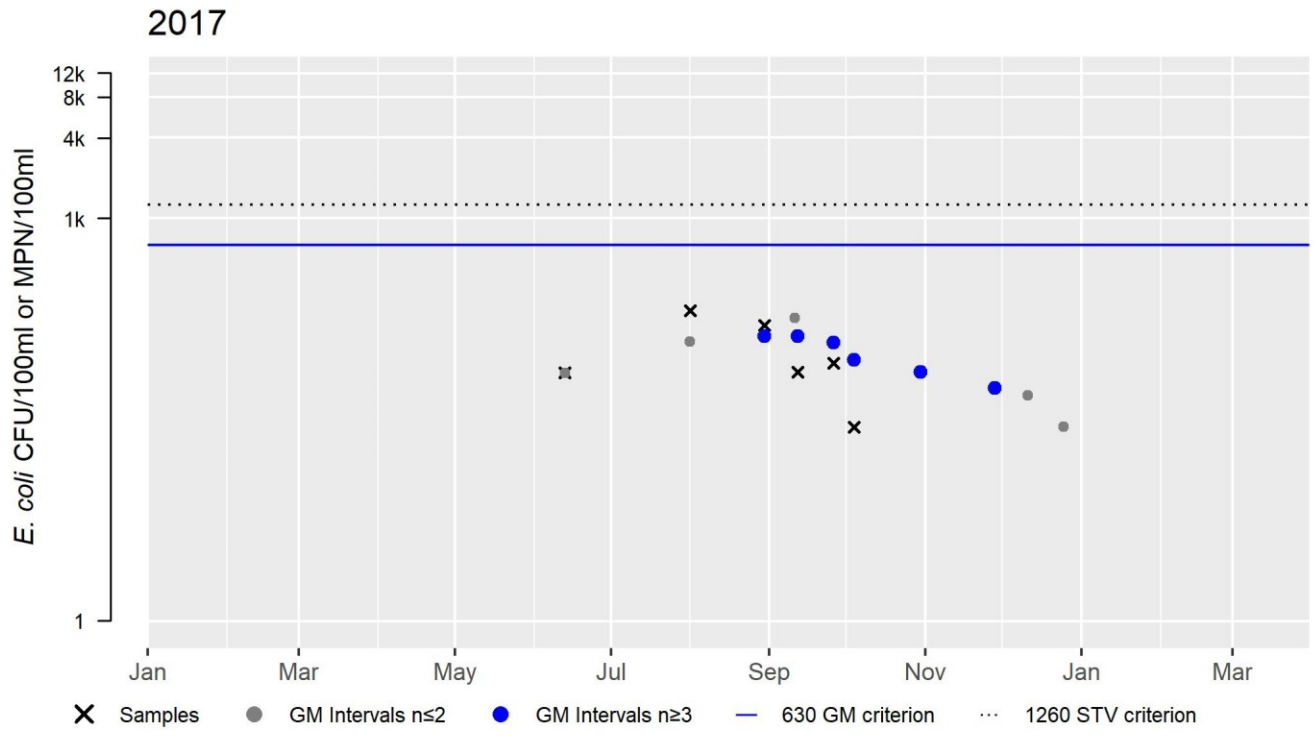
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 04.0 *E. coli* (90-day Interval), Secondary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	86
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

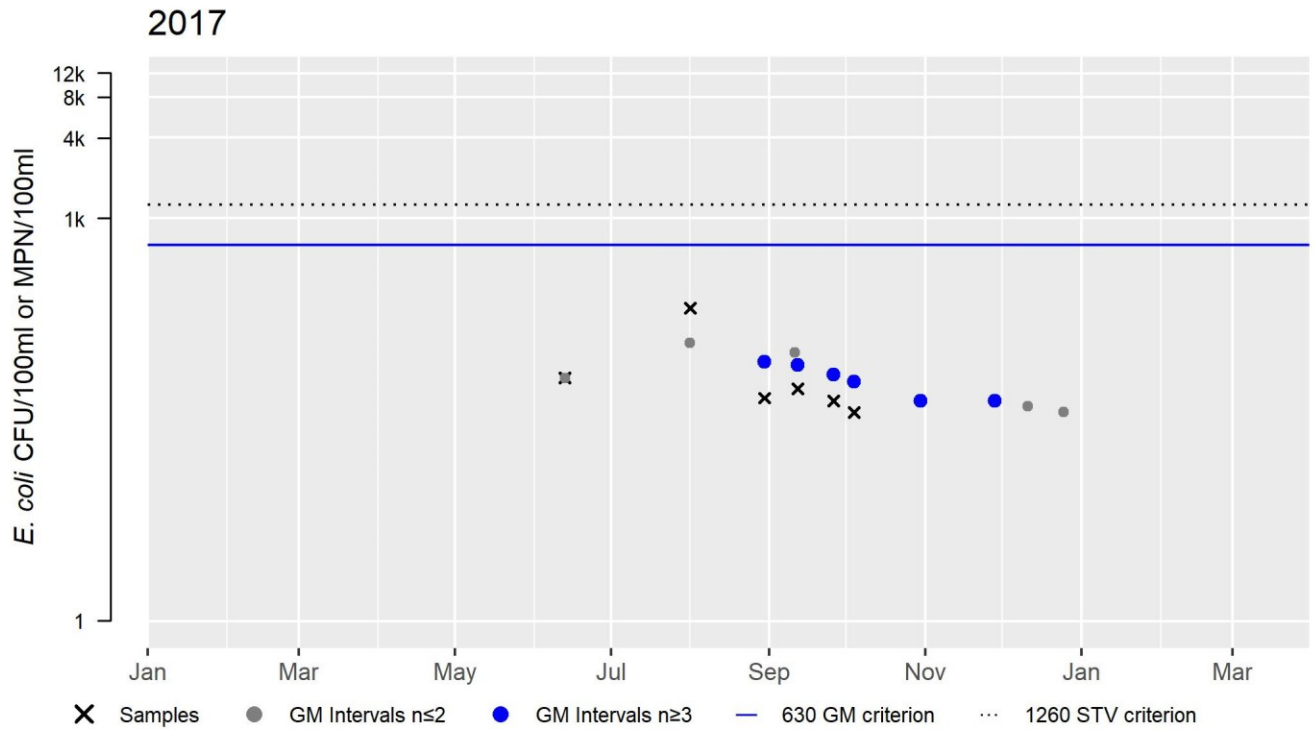
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 05.0 *E. coli* (90-day Interval), Secondary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	62
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

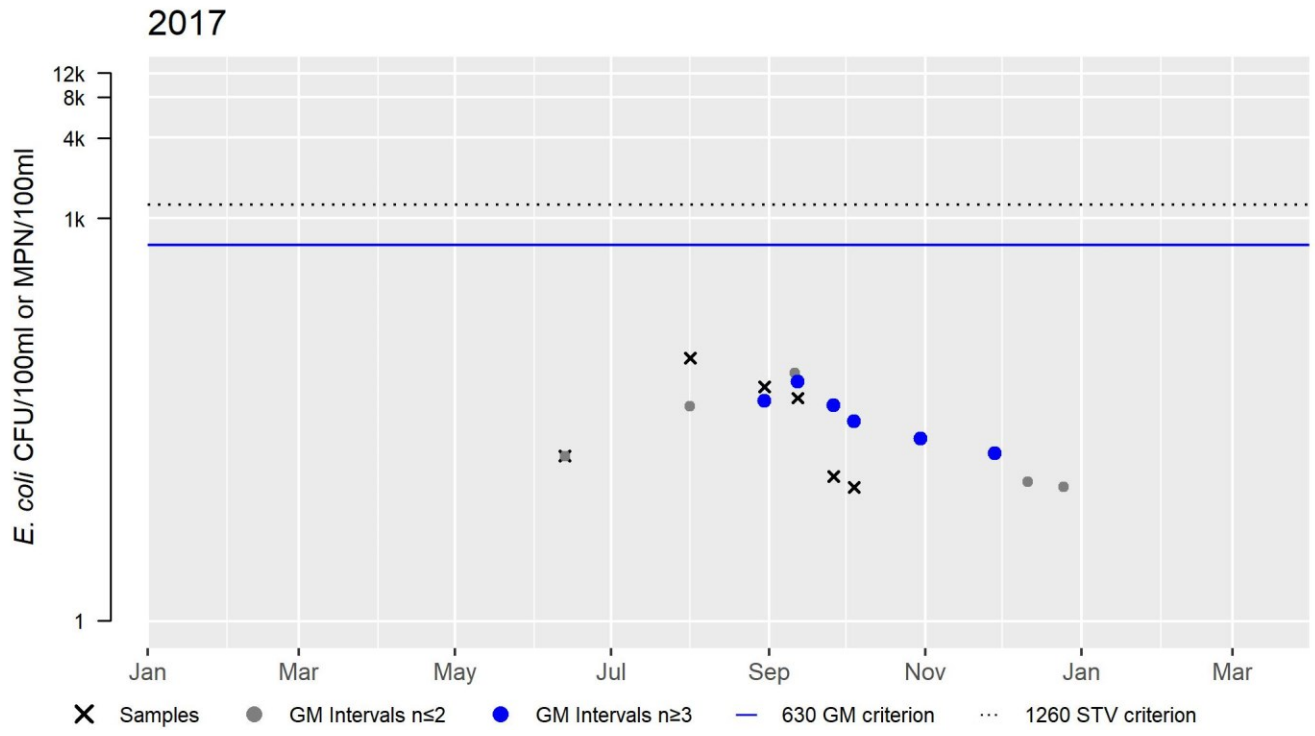
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 06.0 *E. coli* (90-day Interval), Secondary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	28
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

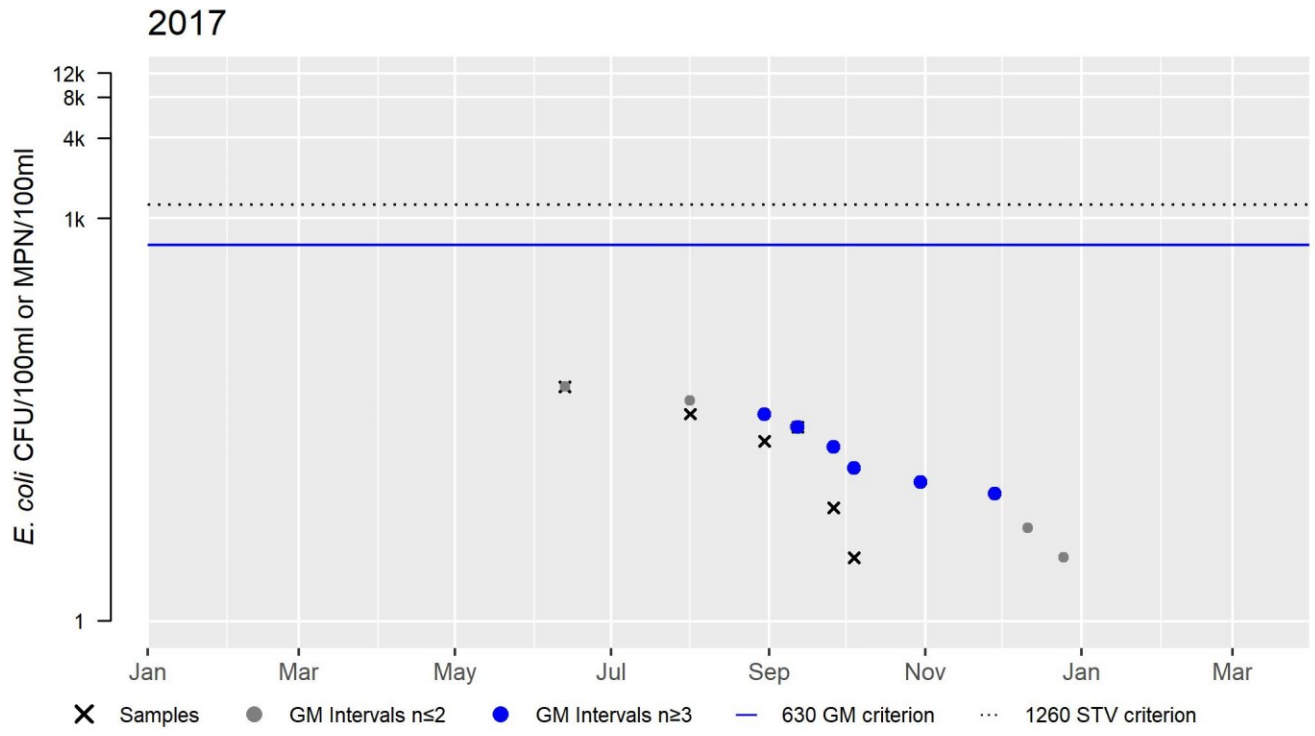
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



HVA_GR 07.0 *E. coli* (90-day Interval), Secondary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	17
#GMI	6
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

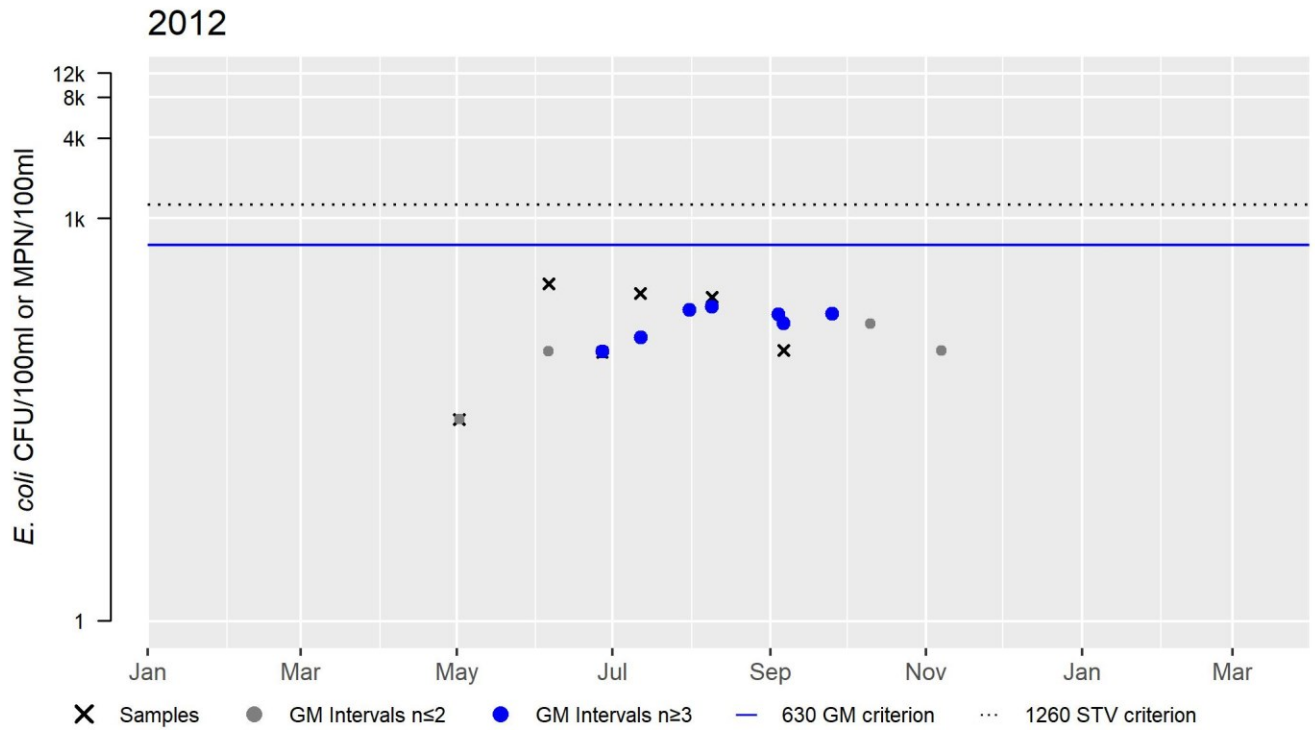
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



W2265 *E. coli* (90-day Interval), Secondary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	141
#GMI	7
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV

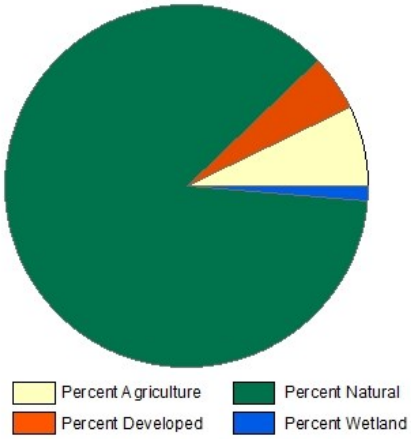


Hemlock Brook (MA11-09)

Location:	Headwaters, perennial portion, south of Route 2 in the Taconic Trail State Park, Williamstown to mouth at confluence with the Hoosic River, Wiliamstown.
AU Type:	RIVER
AU Size:	7.1 MILES
Classification/Qualifier:	B: CWF

Hemlock Brook - MA11-09

Watershed Area: 13.11 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	13.11	8.75	3.32	2.18
Agriculture	7.1%	6.5%	5.5%	2.9%
Developed	5.1%	5.7%	6.7%	8%
Natural	86.5%	86.5%	86.7%	88.3%
Wetland	1.3%	1.3%	1.2%	0.7%
Impervious Cover	1.9%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
3	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	YES
2022 Use Attainment Summary	
MassDFG biologists conducted backpack electrofishing at three sites along Hemlock Brook in Williamstown in July 2017 from up to downstream as follows: upstream of 1896 B&B (SampleID 6655), across the street from Alignment ship (SampleID 6654), and near the mouth (just a few bends upstream). While only three Eastern brook trout were in the samples (two including one <140mm at the most upstream site), there were plenty of slimy sculpin at all three sampling locations. Fluvial fishes dominated the samples, but notes/concerns were made by fisheries biologists at the most downstream sampling site (water temps were warm, tout were found in only a few spots (likely groundwater influence nearby?), and sediment issues. The Aquatic Life Use for Hemlock Brook is assessed as Fully Supporting. Alerts are being added for temperature and sedimentation concerns.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6604	MassDFG	Fish Community	Hemlock Brook	near mouth, just a few bends upstream, Williamstown	42.72707	-73.21343
6654	MassDFG	Fish Community	Hemlock Brook	Across the street from Alignment ship, Williamstown	42.72316	-73.20665
6655	MassDFG	Fish Community	Hemlock Brook	US of 1896 B&B, Williamstown	42.69337	-73.22691

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: BND = Blacknose Dace, BT = Brown Trout, CC = Channel Catfish, CRC = Creek Chub, CS = Common Shiner, EBT = Brook Trout, GS = Golden Shiner, LND = Longnose Dace, P = Pumpkinseed, SC = Slimy Sculpin, WS = White Sucker]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
6604	07/17/17	BP	TP	11	533	1	159	159	0	29	13%	93%	Yes	Yes	BND, BT, CC, CRC, CS, EBT, GS, LND, P, SC, WS,
6654	07/07/17	BP	TP	4	434	0	NA	NA	0	159	49%	100%	No	Yes	BND, BT, LND, SC,
6655	07/06/17	BP	TP	6	289	2	69	203	1	143	65%	100%	No	Yes	BND, BT, CRC, EBT, LND, SC,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Hemlock Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetics Use for Hemlock Brook, so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	

No bacteria data are available to assess the status of the Primary Contact Recreational Use for Hemlock Brook, so it is Not Assessed.

Secondary Contact Recreation

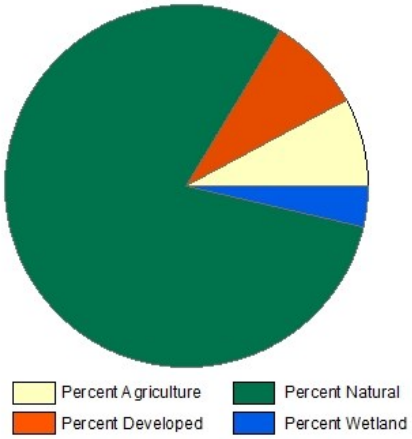
2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreational Use for Hemlock Brook, so it is Not Assessed.	

Hoosic River (MA11-03)

Location:	Headwaters, outlet Cheshire Reservoir, Cheshire to Adams WWTP discharge (NPDES: MA0100315), Adams.
AU Type:	RIVER
AU Size:	8.8 MILES
Classification/Qualifier:	B: CWF, HQW

Hoosic River - MA11-03

Watershed Area: 63.9 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	63.9	14.28	14.4	3.78
Agriculture	7.8%	8.1%	5.4%	5.1%
Developed	8.6%	17.1%	10.9%	20.3%
Natural	79.9%	73.1%	76.2%	72%
Wetland	3.6%	1.7%	7.6%	2.6%
Impervious Cover	3.2%			

2018/20 AU Category	2022 AU Category	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	(Other Anthropogenic substrate Alterations*)		Unchanged
5	5	Ambient Bioassays - Chronic Aquatic Toxicity		Unchanged
5	5	Escherichia Coli (E. Coli)		Unchanged
5	5	Fecal Coliform		Unchanged
5	5	Temperature		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Alteration in Stream-side or Littoral Vegetative Covers*)	Channelization (Y)	X				
(Alteration in Stream-side or Littoral Vegetative Covers*)	Streambank Modifications/Destabilization (Y)	X				

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Flow Regime Modification*)	Channelization (Y)	X				
(Flow Regime Modification*)	Streambank Modifications/Destabilization (Y)	X				
(Other Anthropogenic substrate Alterations*)	Channelization (Y)	X				
(Other Anthropogenic substrate Alterations*)	Streambank Modifications/Destabilization (Y)	X				
Ambient Bioassays - Chronic Aquatic Toxicity	Source Unknown (N)	X				
Escherichia Coli (E. Coli)	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)				X	
Escherichia Coli (E. Coli)	Illicit Connections/Hook-ups to Storm Sewers (N)				X	
Escherichia Coli (E. Coli)	Source Unknown (N)				X	
Escherichia Coli (E. Coli)	Waterfowl (N)				X	
Fecal Coliform	Discharges from Municipal Separate Storm Sewer Systems (MS4) (N)				X	
Fecal Coliform	Illicit Connections/Hook-ups to Storm Sewers (N)				X	
Fecal Coliform	Source Unknown (N)				X	
Fecal Coliform	Waterfowl (N)				X	
Temperature	Dam or Impoundment (Y)	X				

Recommendations

2022 Recommendations
ALU: The presence of Asian clam in the river upstream of Maine St bridge, Cheshire was noted by MA DFG biologists during their backpack electrofishing effort in July 2017. Additional monitoring is needed to confirm the presence of this non-native aquatic organism (live specimens, not just empty shells) in the river prior to making impairment.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	

MA DFG biologists conducted backpack electrofishing at five sites along this Hoosic River AU (MA11-03) in July 2017 from up to downstream as follows: Upstream of Maine St bridge, Cheshire (SampleID 6475), across from Rt 8 self storage, Adams (SampleID 6476), Rt 8 @ Lenoard St, Adams (SampleID 6477), near the corner of Warden Drive, Adams (SampleID 6478), and upstream of Lime St, parallel to Rail Trail, Adams (SampleID 6479). All samples were comprised almost entirely by fluvial fishes including slimy sculpin at all five of these sites, while multiple age classes of Eastern brook trout were present in two samples. Regarding comparison with the Target Fish Community model, thirteen fish community samples (Sample IDs: 5041, 5042, 5428, 6475, 6476, 6477, 6478, 6479, 6480, 6481, 6482, 6773, and 6774) were collected in the Hoosic River (AUs MA11-03, MA11-04, MA11-05) from 2012-2017. The percent similarity with the Hoosic Target Fish Community was 69.64% (an indicator of good conditions) (MassDEP Undated 1). This upstream AU (MA11-03) is a Cold Water Fishery and both Tier 1 cold water fish species (slimy sculpin and Eastern brook trout [multiple age classes]) were collected in this AU. MA DFG biologists also made a note about the presence of Asian clam in the river upstream of Maine St bridge, Cheshire (MassDFG 2020).

The Aquatic Life Use for this Hoosic River AU (MA11-03) continues to be assessed as Not Supporting with the Temperature, Alteration in Stream-side or Littoral Vegetative Covers, Other Anthropogenic substrate Alterations, Flow Regime Modification, and Ambient Bioassays – Chronic Aquatic Toxicity impairments being carried forward. As was previously summarized (MassDEP Undated 6) elevated temperatures in this Hoosic Riiver AU exceeded cold water standards at one station (W1549) (chronic CWF criteria not met 72 times out of 95 days during the thermistor deployment beginning on 27 June 2007), the presence of the 2.3 mile reach of the river enclosed in the concrete flood control chutes, and the frequently poor survival of *P. promelas* exposed to river water collected at Lime Street bridge. Diel changes in DO (ranging between 3 and 3.5 mg/L) at the downstream sampling location were noted as a concern however not considered an impairment at this time. An Alert is also being identified for the note about the presence of the non-native aquatic species Asian clam (*Corbicula fluminea*).

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6475	MassDFG	Fish Community	Hoosic River	US of maine St bridge, Cheshire	42.56196	-73.15601
6476	MassDFG	Fish Community	Hoosic River	Across Rt 8 of self storage in Adams, Adams	42.60583	-73.13371
6477	MassDFG	Fish Community	Hoosic River	Old Factory on Rt 8 @ Lenoard St, Adams	42.61069	-73.12664
6478	MassDFG	Fish Community	Hoosic River	near corner of warden drive, Adams	42.63201	-73.11266
6479	MassDFG	Fish Community	Hoosic River	US of Lime St, parallel to Rail trail, Adams	42.63918	-73.10846

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: B = Bluegill, BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, EBT = Brook Trout, K = Banded Killifish, LND = Longnose Dace, LNS = Longnose Sucker, RB = Rock Bass, RT = Rainbow Trout, SC = Slimy Sculpin, WS = White Sucker]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
6476	07/10/17	BP	TP	7	166	0	NA	NA	0	9	11%	99%	Yes	Yes	BND, BT, LND, LNS, RB, RT, SC,
6477	07/10/17	BP	TP	10	199	3	180	303	0	12	18%	98%	Yes	Yes	BND, BT, CRC, EBT, K, LND, LNS, RT, SC, WS,
6478	07/11/17	BP	TP	6	133	4	59	87	4	4	14%	99%	No	Yes	B, BND, BT, EBT, LND, SC,
6479	07/11/17	BP	TP	8	411	0	NA	NA	0	30	13%	99%	Yes	Yes	BND, BT, CRC, K, LND, LNS, SC, WS,

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net, Gradient: H = High, L = Low; I/MT MG= Intolerant/Moderately Tolerant Macrohabitat Generalist]

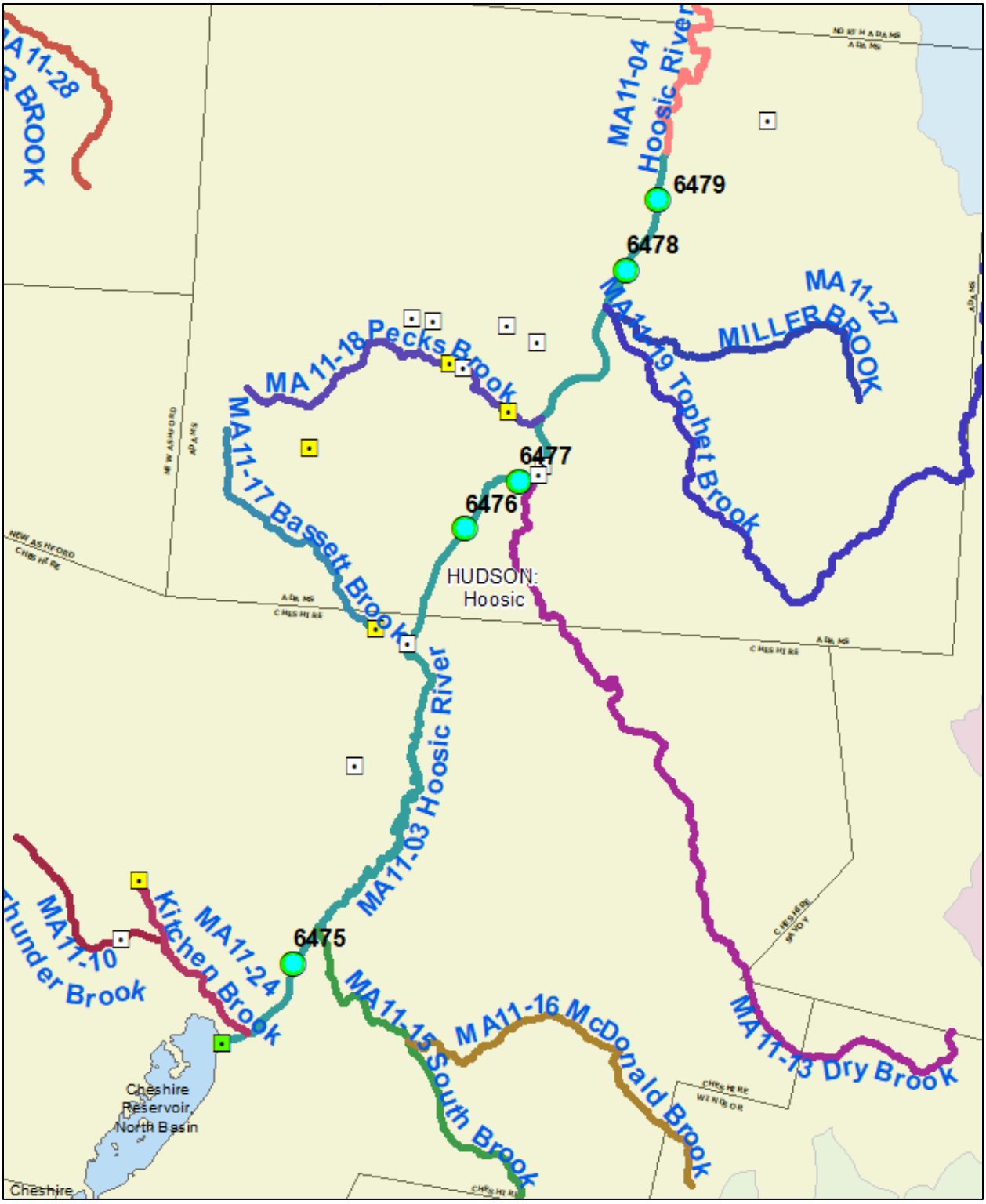
[Species List: B = Bluegill, BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, GS = Golden Shiner, P = Pumpkinseed, RB = Rock Bass, RT = Rainbow Trout, WS = White Sucker]

Sample ID	Sample Date	Method	Sample Type	Gradient	Total Taxa	Total Ind	Cold Ind %	Fluvial Taxa	Fluvial Ind %	Intol Ind %	I/MT MG Taxa	I/MT MG Ind %	Notables	CFR	Species List
6475	07/10/17	BP	TP	L	9	250	1%	5	92%	1%	2	5%	No	Yes	B, BND, BT, CRC, GS, P, RB, RT, WS,

Comparison of fish community samples (2005-2017) to the Hoosic Target Fish Community (TFC) Model. (MassDFG 2018, MassDEP Undated 1, Kashiwagi and Richards 2009)

Thirteen fish community samples (Sample IDs: 5041, 5042, 5428, 6475, 6476, 6477, 6478, 6479, 6480, 6481, 6482, 6773, and 6774) were collected in the Hoosic River (AUs MA11-03, MA11-04, MA11-05) from 2012-2017. The percent similarity with the Hoosic Target Fish Community was 69.64%. Of the 5 most common species in the TFC, 4 of these fluvial specialist/dependent species (blacknose dace, longnose dace, white sucker, common shiner) were in the top 5 among the study samples, although with slightly different ranks. The coldwater species, slimy sculpin, was #3 in the TFC but less common in the study samples. The upstream AU, MA11-03, is a designated coldwater fishery- 55 of 57 slimy sculpin and all 7 brook trout (multiple age classes) were collected in this AU. This comparison of fish community data with the Hoosic TFC model is an indicator of good water quality in these Hoosic River AUs (MA11-03, MA11-04, MA11-05).

Fish Community Samples in the Hoosic River (AUs MA11-03, MA11-04, MA11-05); screen capture of upstream/southern AU, and then 2 downstream/northern AUs:


MA11-28
R BROOK
MA11-04 Hoosic River
6479
6478
MA11-27
MILLER BROOK
MA11-19 Tophet Brook
MA11-18 Pecks Brook
MA11-17 Bassett Brook
6477
6476
HUDSON:
Hoosic
MA11-03 Hoosic River
MA11-10
hunder Brook
MA11-24
Kitchen Brook
6475
MA11-15 South Brook
MA11-16 McDonald Brook
MA11-13 Dry Brook
Cheshire
Reservoir,
North Basin
Cheshire


MA11-23 Broad Brook
6481
6482
6773
6774
5428
MA11-05 Hoosic River
MA11-04 Hoosic River
HUDSON:
Hoosic
MA11-20
Paull Brook
Mt.
Williams
Reservoir
MA11-06 Green River
MA11-28 HOPPER BROOK
5042
6480
5041

Hoosic TFC Model:

Table A7. Species percent composition for reference rivers used to develop the Hoosic River target fish community model. Species are ordered by mean rank. Non-native, stocked, and out-of-range species were deleted from the ranking and calculation of expected proportion in the target fish model. The ranks were converted to expected proportions (as a percent) using a rank-weighting technique as outlined by Bain and Meixler (2008).

Species	Third Branch White River	Batten Kill	Little Hoosic River	Kinderhook River	Black Creek	Hollenbeck River	WB Westfield River	Sum	Rank	Expected Proportion
Blacknose dace	36.7	31.3	30.0	11.5	8.4	42.1	32.4	192.4	1	34.1
Longnose dace	28.4	11.6	11.1	5.7	23.6	34.1	31.4	145.9	2	17.1
Slimy sculpin	21.2	13.7	24.7	21.6	4.1	0.0	0.2	85.5	3	11.4
White sucker	0.9	0.4	19.3	7.9	16.5	1.2	3.3	49.5	4	8.5
Common shiner	0.0	0.0	1.0	11.1	12.1	2.2	10.4	36.8	5	6.8
Brown trout	4.0	15.5	2.1	10.1	1.7	0.0	0.5	33.9		
Brook trout	0.1	25.3	0.6	0.1	0.0	3.5	0.1	29.7	7	4.5
Fallfish	0.0	0.0	0.0	16.0	0.0	4.8	0.0	20.8	8	4.3
Tessellated darter	0.3	0.0	0.0	1.2	11.0	2.3	3.1	17.9		
Cutlips minnow	0.0	0.0	0.0	9.4	4.9	0.0	0.0	14.3		
Bluntnose minnow	0.0	0.0	0.0	0.0	13.8	0.0	0.0	13.8		
Creek chub	1.1	0.0	2.8	0.5	3.5	2.9	0.3	11.1	12	2.8
Longnose sucker	4.7	2.1	0.4	0.9	0.0	0.0	0.0	8.1	13	2.6
Rainbow trout	2.6	0.0	3.9	0.0	0.0	0.0	0.4	6.9		
Rock bass	0.0	0.0	0.0	0.1	0.2	5.0	0.1	5.4		
Trout-perch	0.0	0.0	3.8	0.0	0.0	0.0	0.0	3.8	16	2.1
Pumpkinseed	0.0	0.0	0.0	1.7	0.1	1.4	0.0	3.2	17	2.0
Smallmouth bass	0.0	0.0	0.0	1.2	0.0	0.4	1.1	2.7		
Golden shiner	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	19	1.8
Yellow perch	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	20	1.7
American eel	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.4		
Bluegill	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3		
Spottail shiner	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2		

Fish Community Analysis:

Watershed	Common Name	Values # of Fish	% of catch	Applicable TFC	TFC Difference	% Sim to TFC
Hoosic	American Brook Lamprey		0.00%	-	-	
Hoosic	American Eel		0.00%	-	-	
Hoosic	Atlantic Salmon		0.00%	-	-	
Hoosic	Banded Killifish	8	0.28%	-	0.3	
Hoosic	Banded Sunfish		0.00%	-	-	
Hoosic	Black Crappie		0.00%	-	-	
Hoosic	Blacknose Dace	1271	44.55%	34.1	10.4	
Hoosic	Bluegill	29	1.02%	-	1.0	
Hoosic	Bluntnose Minnow		0.00%	-	-	
Hoosic	Bridle Shiner		0.00%	-	-	
Hoosic	Brook Trout	7	0.25%	4.5	4.3	
Hoosic	Brown Bullhead	1	0.04%	-	0.0	
Hoosic	Brown Trout	77	2.70%	-	2.7	
Hoosic	Central Mudminnow		0.00%	-	-	
Hoosic	Chain Pickerel		0.00%	-	-	
Hoosic	Channel Catfish		0.00%	-	-	
Hoosic	Common Carp		0.00%	-	-	
Hoosic	Common Shiner	108	3.79%	6.8	3.0	
Hoosic	Creek Chub	155	5.43%	2.8	2.6	
Hoosic	Creek Chubsucker		0.00%	-	-	
Hoosic	Cutlips Minnow		0.00%	-	-	
Hoosic	Fallfish		0.00%	4.3	4.3	
Hoosic	Fathead Minnow	24	0.84%	-	0.8	
Hoosic	Golden Shiner	1	0.04%	1.8	1.8	
Hoosic	Green Sunfish		0.00%	-	-	
Hoosic	Lake Chub		0.00%	-	-	
Hoosic	Largemouth Bass	3	0.11%	-	0.1	
Hoosic	Longnose Dace	863	30.25%	17.1	13.1	
Hoosic	Longnose Sucker	38	1.33%	2.6	1.3	
Hoosic	Northern Pike		0.00%	-	-	
Hoosic	Pumpkinseed	21	0.74%	2.0	1.3	
Hoosic	Rainbow Trout	3	0.11%	-	0.1	
Hoosic	Redbreast Sunfish		0.00%	-	-	
Hoosic	Redfin Pickerel		0.00%	-	-	
Hoosic	Rock Bass	7	0.25%	-	0.2	
Hoosic	Sea Lamprey		0.00%	-	-	
Hoosic	Slimy Sculpin	57	2.00%	11.4	9.4	
Hoosic	Smallmouth Bass		0.00%	-	-	
Hoosic	Spottail Shiner		0.00%	-	-	
Hoosic	Swamp Darter		0.00%	-	-	
Hoosic	Tadpole Madtom		0.00%	-	-	
Hoosic	Tesselated Darter		0.00%	-	-	
Hoosic	White Catfish		0.00%	-	-	
Hoosic	White Perch		0.00%	-	-	
Hoosic	White Sucker	180	6.31%	8.5	2.2	
Hoosic	Yellow Bullhead		0.00%	-	-	
Hoosic	Yellow Perch		0.00%	1.7	1.7	
Hoosic	(blank)		0.00%	-	-	69.64
Grand Total		2853	######	-	100.0	

Row Labels
Hoosic
5041
5042
5428
6475
6476
6477
6478
6479
6480
6481
6482
6773
6774
Grand Total

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent fish toxics sampling has been conducted in this Hoosic River AU (MA11-03), and since no site-specific advisory has been issued the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	

No recent data are available to assess the status of the Aesthetics Use for this Hoosic River AU (MA11-03), so it is Not Assessed.

Primary Contact Recreation

2022 Use Attainment	**Alert**
Not Supporting	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Primary Contact Recreational Use for this Hoosic River AU (MA11-03), so it will continue to be assessed as Not Supporting with the *E. coli* and Fecal Coliform impairments being carried forward.	

Secondary Contact Recreation

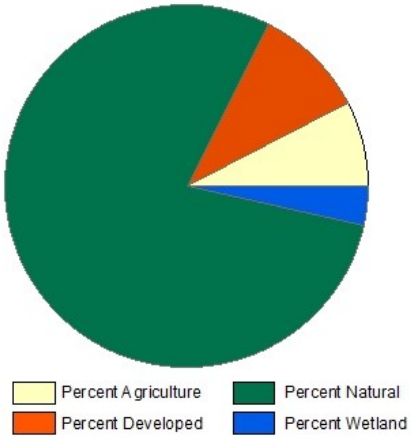
2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Secondary Contact Recreational Use for this Hoosic River AU (MA11-03), so it is Not Assessed.	

Hoosic River (MA11-04)

Location:	Adams WWTP discharge (NPDES: MA0100315), Adams to confluence with North Branch Hoosic River, North Adams.
AU Type:	RIVER
AU Size:	5.4 MILES
Classification/Qualifier:	B: WWF

Hoosic River - MA11-04

Watershed Area: 74.57 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	74.57	7.2	17.19	2
Agriculture	7.6%	3.2%	6.2%	5.7%
Developed	9.9%	20.8%	11.2%	16.7%
Natural	78.9%	72.5%	75.2%	69.5%
Wetland	3.5%	3.5%	7.4%	8.1%
Impervious Cover	4%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	5	(Alteration in Stream-side or Littoral Vegetative Covers*)		Unchanged
4c	5	(Flow Regime Modification*)		Unchanged
4c	5	Benthic Macroinvertebrates		Added
4c	5	Escherichia Coli (E. Coli)		Added

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Alteration in Stream-side or Littoral Vegetative Covers*)	Channelization (Y)	X				
(Alteration in Stream-side or Littoral Vegetative Covers*)	Streambank Modifications/Destabilization (Y)	X				
(Flow Regime Modification*)	Channelization (Y)	X				
(Flow Regime Modification*)	Streambank Modifications/Destabilization (Y)	X				

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Benthic Macroinvertebrates	Source Unknown (N)	X				
Escherichia Coli (E. Coli)	Source Unknown (N)				X	

Recommendations

2022 Recommendations
ALU: Additional benthic macroinvertebrate sampling should be conducted in this Hoosic River AU (MA11-04) to better evaluate biological condition given habitat in this section of the river is moderate (~30% riffle habitat) which falls in between the high and low gradient site sampling procedures (kick vs. multihabitat) and will affect the IBI analysis.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	YES

2022 Use Attainment Summary

MassDEP biologists sampled two sites along this Hoosic River AU (MA11-04) in North Adams during the summer of 2012 as part of the MAP2 wadeable streams monitoring project; ~1625 feet upstream of Hodges Cross Road (Route 8A) [benthic (B0805), fish (SampleID 5041), and water quality (W2268)] and ~1900 feet downstream of Hodges Cross Road (Route 8A) [benthic (B0798), fish (SampleID 5042), and water quality (W2261)]. MA DFG biologists also conducted backpack electrofishing in the river between the two MAP2 survey sites downstream of Hodges Cross Road in July 2017. Survey results of can be briefly summarized as follows: the benthic community (Stations B0805 and B0798) IBI scores were 38 and 46, respectively, indicative of moderately degraded conditions, the fish samples were all dominated by fluvial species (≥96%), and water quality sampling data including both deployed probe and discrete sampling efforts (Stations W2268 and W2261) indicative of generally good conditions (minimum dissolved oxygen 6.5mg/L, maximum temperature 26.1°C with maximum 24 hour rolling average 24.1°C, pH 7.8 to 8.2SU, low seasonal average total phosphorus concentrations (0.04mg/L), low concentrations of total ammonia-nitrogen (0.03mg/L), chloride (maximum 42mg/L), and no exceedances of any acute or chronic metals criteria (n=three rounds of samples; note that aluminum exceedances cannot be ruled out since dissolved data were compared to the total recoverable aluminum criteria). While there were no notes of any dense or very dense algae present there were a few indicators of enrichment (max diel DO shift 3.6mg/L, and maximum saturation and pH both very close to the CALM guidance thresholds (MassDEP 2022) at 124% and 8.2SU, respectively). Regarding comparison with the Target Fish Community model, thirteen fish community samples (Sample IDs: 5041, 5042, 5428, 6475, 6476, 6477, 6478, 6479, 6480, 6481, 6482, 6773, and 6774) were collected in the Hoosic River (AUs MA11-03, MA11-04, MA11-05) from 2012-2017. The percent similarity with the Hoosic Target Fish Community was 69.64% (an indicator of good conditions) (MassDEP Undated).

The Aquatic Life Use for this Hoosic River AU (MA11-04) is assessed as Not Supporting based on the moderately degraded benthic community (Benthic Macroinvertebrates impairment added). Because of the concrete flood control chutes in the lower 0.6-mile reach of this AU that impair the aquatic habitat, the Alteration in Stream-side or Littoral Vegetative Covers and Flow Regime Modification impairments are being carried forward. Diel changes in DO (as high as 3.6mg/L) and saturations as high as 124% are being identified as Alerts.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
5041	MassDEP	Fish Community	Hoosic River	0.3mi US of Hodges Cross Rd (Rt 8A)	42.66113	-73.10381
5042	MassDEP	Fish Community	Hoosic River	0.3mi DS of Hodges Cross Rd (Rt 8A), behind Southview Cemetary	42.66954	-73.10371
6480	MassDFG	Fish Community	Hoosic River	Hodges Cross Rd, DS of bridge, Adams	42.66532	-73.10400
B0798	MassDEP	Benthic	Hoosic River/	[approximately 580 meters downstream of Hodges Cross Road (Route 8A), North Adams, MA]	42.669542	-73.103711
B0805	MassDEP	Benthic	Hoosic River/	[approximately 495 meters upstream of Hodges Cross Road (Route 8A), North Adams, MA]	42.661126	-73.103811
W2261	MassDEP	Water Quality	Hoosic River	[approximately 1900 feet downstream of Hodges Cross Road (Route 8A), North Adams]	42.669542	-73.103711
W2268	MassDEP	Water Quality	Hoosic River	[approximately 1625 feet upstream of Hodges Cross Road (Route 8A), North Adams]	42.661126	-73.103811

Biological Monitoring Information

Benthic Macroinvertebrate Data

MassDEP Benthic Macroinvertebrate Data (2011-2017). (MassDEP Undated 4)

[Index Biological Condition Class: E= Exceptional, S= Satisfactory, MD= Moderately Degraded, SD= Severely Degraded; High Gradient IBI Thresholds: E= 100-75, S= 74-55, MD= 54-35, SD= 34-0; Low Gradient IBI Thresholds: E= 100-81, S= 80-62, MD= 61-38, SD= 37-0; R qualifier = Rarefaction (100ct) <55]

Station Code	Collection Date	Collection Method	Index Type	Organism Count	Index Score	Index Biological Condition Class
B0798	07/25/12	RBP kicknet	Western_Highlands_100ct	103	46	MD
B0805	07/26/12	RBP kicknet	Western_Highlands_100ct	106	38	MD

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net; Trout= any combination of brook trout, brown trout, rainbow trout, tiger trout; Other Tier2 Species= any size and any combination of American brook lamprey, Atlantic salmon, lake chub, lake trout, longnose sucker, slimy sculpin]

[Species List: BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, FM = Fathead Minnow, K = Banded Killifish, LND = Longnose Dace, WS = White Sucker]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	Trout ≤140mm Ind	LLS<200mm Ind	Other Tier2 Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
6480	07/11/17	BP	TP	7	158	2	0	0	1%	98%	No	Yes	BND, BT, CRC, FM, K, LND, WS,

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)
[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net, Gradient: H = High, L = Low; I/MT MG= Intolerant/Moderately Tolerant Macrohabitat Generalist]
[Species List: BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, CS = Common Shiner, FM = Fathead Minnow, LND = Longnose Dace, WS = White Sucker]

Sample ID	Sample Date	Method	Sample Type	Gradient	Total Taxa	Total Ind	Cold Ind %	Fluvial Taxa	Fluvial Ind %	Intol Ind %	I/MT MG Taxa	I/MT MG Ind %	Notables	CFR	Species List
5041	09/26/12	BG	TP	H	7	172	1%	6	97%	1%	0	0%	No	Yes	BND, BT, CRC, CS, FM, LND, WS,
5042	09/26/12	BG	TP	H	6	179	1%	5	96%	1%	0	0%	No	Yes	BND, BT, CRC, CS, FM, WS,

Comparison of fish community samples (2005-2017) to the Hoosic Target Fish Community (TFC) Model. (MassDFG 2018, MassDEP Undated 1, Kashiwagi and Richards 2009)

Thirteen fish community samples (Sample IDs: 5041, 5042, 5428, 6475, 6476, 6477, 6478, 6479, 6480, 6481, 6482, 6773, and 6774) were collected in the Hoosic River (AUs MA11-03, MA11-04, MA11-05) from 2012-2017. The percent similarity with the Hoosic Target Fish Community was 69.64%. Of the 5 most common species in the TFC, 4 of these fluvial specialist/dependent species (blacknose dace, longnose dace, white sucker, common shiner) were in the top 5 among the study samples, although with slightly different ranks. The coldwater species, slimy sculpin, was #3 in the TFC but less common in the study samples. The upstream AU, MA11-03, is a designated coldwater fishery- 55 of 57 slimy sculpin and all 7 brook trout (multiple age classes) were collected in this AU. This comparison of fish community data with the Hoosic TFC model is an indicator of good water quality in these Hoosic River AUs (MA11-03, MA11-04, MA11-05).

Fish Community Samples in the Hoosic River (AUs MA11-03, MA11-04, MA11-05); screen capture of upstream/southern AU, and then 2 downstream/northern AUs:


MA11-23 Broad Brook
6481
6482
6773
6774
5428
MA11-05 Hoosic River
MA11-04 Hoosic River
HUDSON:
Hoosic
MA11-20
Paull Brook
Mt.
Williams
Reservoir
MA11-06 Green River
MA11-28 HOPPER BROOK
5042
6480
5041

Hoosic TFC Model:

Table A7. Species percent composition for reference rivers used to develop the Hoosic River target fish community model. Species are ordered by mean rank. Non-native, stocked, and out-of-range species were deleted from the ranking and calculation of expected proportion in the target fish model. The ranks were converted to expected proportions (as a percent) using a rank-weighting technique as outlined by Bain and Meixler (2008).

Species	Third Branch White River	Batten Kill	Little Hoosic River	Kinderhook River	Black Creek	Hollenbeck River	WB Westfield River	Sum	Rank	Expected Proportion
Blacknose dace	36.7	31.3	30.0	11.5	8.4	42.1	32.4	192.4	1	34.1
Longnose dace	28.4	11.6	11.1	5.7	23.6	34.1	31.4	145.9	2	17.1
Slimy sculpin	21.2	13.7	24.7	21.6	4.1	0.0	0.2	85.5	3	11.4
White sucker	0.9	0.4	19.3	7.9	16.5	1.2	3.3	49.5	4	8.5
Common shiner	0.0	0.0	1.0	11.1	12.1	2.2	10.4	36.8	5	6.8
Brown trout	4.0	15.5	2.1	10.1	1.7	0.0	0.5	33.9		
Brook trout	0.1	25.3	0.6	0.1	0.0	3.5	0.1	29.7	7	4.5
Fallfish	0.0	0.0	0.0	16.0	0.0	4.8	0.0	20.8	8	4.3
Tessellated darter	0.3	0.0	0.0	1.2	11.0	2.3	3.1	17.9		
Cutlips minnow	0.0	0.0	0.0	9.4	4.9	0.0	0.0	14.3		
Bluntnose minnow	0.0	0.0	0.0	0.0	13.8	0.0	0.0	13.8		
Creek chub	1.1	0.0	2.8	0.5	3.5	2.9	0.3	11.1	12	2.8
Longnose sucker	4.7	2.1	0.4	0.9	0.0	0.0	0.0	8.1	13	2.6
Rainbow trout	2.6	0.0	3.9	0.0	0.0	0.0	0.4	6.9		
Rock bass	0.0	0.0	0.0	0.1	0.2	5.0	0.1	5.4		
Trout-perch	0.0	0.0	3.8	0.0	0.0	0.0	0.0	3.8	16	2.1
Pumpkinseed	0.0	0.0	0.0	1.7	0.1	1.4	0.0	3.2	17	2.0
Smallmouth bass	0.0	0.0	0.0	1.2	0.0	0.4	1.1	2.7		
Golden shiner	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	19	1.8
Yellow perch	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	20	1.7
American eel	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.4		
Bluegill	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3		
Spottail shiner	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2		

Fish Community Analysis:

Watershed	Common Name	Values # of Fish	% of catch	Applicable TFC	TFC Difference	% Sim to TFC
Hoosic	American Brook Lamprey		0.00%	-	-	
Hoosic	American Eel		0.00%	-	-	
Hoosic	Atlantic Salmon		0.00%	-	-	
Hoosic	Banded Killifish	8	0.28%	-	0.3	
Hoosic	Banded Sunfish		0.00%	-	-	
Hoosic	Black Crappie		0.00%	-	-	
Hoosic	Blacknose Dace	1271	44.55%	34.1	10.4	
Hoosic	Bluegill	29	1.02%	-	1.0	
Hoosic	Bluntnose Minnow		0.00%	-	-	
Hoosic	Bridle Shiner		0.00%	-	-	
Hoosic	Brook Trout	7	0.25%	4.5	4.3	
Hoosic	Brown Bullhead	1	0.04%	-	0.0	
Hoosic	Brown Trout	77	2.70%	-	2.7	
Hoosic	Central Mudminnow		0.00%	-	-	
Hoosic	Chain Pickerel		0.00%	-	-	
Hoosic	Channel Catfish		0.00%	-	-	
Hoosic	Common Carp		0.00%	-	-	
Hoosic	Common Shiner	108	3.79%	6.8	3.0	
Hoosic	Creek Chub	155	5.43%	2.8	2.6	
Hoosic	Creek Chubsucker		0.00%	-	-	
Hoosic	Cutlips Minnow		0.00%	-	-	
Hoosic	Fallfish		0.00%	4.3	4.3	
Hoosic	Fathead Minnow	24	0.84%	-	0.8	
Hoosic	Golden Shiner	1	0.04%	1.8	1.8	
Hoosic	Green Sunfish		0.00%	-	-	
Hoosic	Lake Chub		0.00%	-	-	
Hoosic	Largemouth Bass	3	0.11%	-	0.1	
Hoosic	Longnose Dace	863	30.25%	17.1	13.1	
Hoosic	Longnose Sucker	38	1.33%	2.6	1.3	
Hoosic	Northern Pike		0.00%	-	-	
Hoosic	Pumpkinseed	21	0.74%	2.0	1.3	
Hoosic	Rainbow Trout	3	0.11%	-	0.1	
Hoosic	Redbreast Sunfish		0.00%	-	-	
Hoosic	Redfin Pickerel		0.00%	-	-	
Hoosic	Rock Bass	7	0.25%	-	0.2	
Hoosic	Sea Lamprey		0.00%	-	-	
Hoosic	Slimy Sculpin	57	2.00%	11.4	9.4	
Hoosic	Smallmouth Bass		0.00%	-	-	
Hoosic	Spottail Shiner		0.00%	-	-	
Hoosic	Swamp Darter		0.00%	-	-	
Hoosic	Tadpole Madtom		0.00%	-	-	
Hoosic	Tesselated Darter		0.00%	-	-	
Hoosic	White Catfish		0.00%	-	-	
Hoosic	White Perch		0.00%	-	-	
Hoosic	White Sucker	180	6.31%	8.5	2.2	
Hoosic	Yellow Bullhead		0.00%	-	-	
Hoosic	Yellow Perch		0.00%	1.7	1.7	
Hoosic	(blank)		0.00%	-	-	69.64
Grand Total		2853	######	-	100.0	

Row Labels
Hoosic
5041
5042
5428
6475
6476
6477
6478
6479
6480
6481
6482
6773
6774
Grand Total

Physico-chemical Water Quality Information

DO, pH, Temperature

MassDEP Short-term Continuous Dissolved Oxygen Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)
[Note: Most deploys 3-5 days in length; Day Count= total # of days over all deploys; XDADMin= 3-5 Day Average of the Daily Minima, XDADA= 3-5 Day Average of the Daily Average, CW= Coldwater, WW= Warmwater]

Station Code	Data Year	Deploys Count	Day Count	DO Min (mg/L)	Min XDADMin (mg/L)	Min XDADA (mg/L)	Delta DO Max (mg/L)	Count CW XDADMin <6.0	Count CW 1Day Min <5.0	Count WW Early Life Stages XDADA <6.5	Count WW Early Life Stages 1Day Min <5.0	Count WW Other Life Stages XDADMin <5.0	Count WW Other Life Stages 1Day Min <4.0
W2261	2012	3	9	6.5	6.6	7.6	3.6	0	0	0	0	0	0
W2268	2012	3	12	6.7	6.8	8	3.6	0	0	0	0	0	0

MassDEP Discrete Dissolved Oxygen Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	DO Count	DO Min (mg/L)	DO Avg (mg/L)	Count CW <5.0	Count WW Early Life Stages <5.0	Count WW Other Life Stages <4.0
W2261	05/02/12	09/06/12	3	8.4	9	0	0	0
W2268	05/02/12	09/06/12	3	8.4	9.1	0	0	0

MassDEP Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer Index is June 1 – Sept 15; Max Daily Mean= Maximum 24-Hour Average, 7DADM= 7-Day Average of the Daily Maxima, 7DADA= 7-Day Average of the Daily Average, CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Index Count	7day Count	Max Daily Mean (°C)	Max Temp (°C)	Max 7DADM (°C)	Max 7DADA (°C)	Count CWTier1 7DADM >20	Count CWTier1 Daily Mean >23.5	Count CWTier2 7DADA >21	Count CWTier2 Daily Mean >24.1	Count WW 7DADM >27.7	Count WW Daily Mean >28.3
W2261	06/12/12	09/05/12	86	80	24.0	25.5	24.6	22.8	79	1	34	0	0	0
W2268	06/01/12	09/05/12	97	94	24.0	26.1	25.1	22.8	82	1	39	0	0	0

MassDEP Short-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer Index is June 1 – Sept 15; Most Deploys 3-5 Days in Length; Day Count= total # of days over all deploys; Max Daily Mean= Maximum 24-Hour Average, XDADM= 3-5 Day Average of the Daily Maxima, XDADA= 3-5 Day Average of the Daily Average, CW= Coldwater, WW= Warmwater]

Station Code	Data Year	Deploys Count	Day Count	Max Daily Mean (°C)	Max Temp (°C)	Max XDADM (°C)	Max XDADA (°C)	Count CWTier1 XDADM >20	Count CWTier1 Daily Mean >23.5	Count CWTier2 XDADA >21	Count CWTier2 Daily Mean >24.1	Count WW XDADM >27.7	Count WW Daily Mean >28.3
W2261	2012	3	12	22.5	24.2	24.1	22.2	2	0	1	0	0	0
W2268	2012	3	12	22.7	25.1	24.6	22.4	2	0	1	0	0	0

24-hour Rolling Average Calculations for MassDEP Short- and Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Count Days Deployed	24hr Rolling Count	Max 24hr Avg Rolling Temp (°C)	Count CWTier1 24hr Avg Rolling >23.5 °C	Count CWTier2 24hr Avg Rolling >24.1 °C	Count WW 24hr Avg Rolling >28.3°C
W2261	06/12/12	09/06/12	86	4104	24.0	65	0	0
W2261	06/06/12	08/14/12	69	579	22.6	0	0	0
W2268	06/01/12	09/06/12	98	4682	24.1	72	0	0
W2268	06/06/12	08/14/12	69	578	22.8	0	0	0

MassDEP Discrete Temperature Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count CW >20	Count CW >22	Count WW >28.3	Count WW >30.3
W2261	05/02/12	09/06/12	5	4	22.2	17.6	1	1	0	0
W2268	05/02/12	09/06/12	5	4	22.0	17.4	1	0	0	0

MassDEP Discrete pH Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Start Date	End Date	pH Count	pH Min (SU)	pH Max (SU)	pH Count <6.5 & >8.3	pH Count <6.0 & >8.8
W2261	05/02/12	09/06/12	3	7.8	8.2	0	0
W2268	05/02/12	09/06/12	3	7.8	7.9	0	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

MassDEP Nutrient Enrichment Indicator Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer seasonal total phosphorus data collected May-Sept]

Station Code	Data Year	Seasonal TP Count	Seasonal TP Min (mg/L)	Seasonal TP Max (mg/L)	Seasonal TP Avg (mg/L)	Delta DO Max (mg/L)	Delta DO Avg (mg/L)	DO Sat Max (%)	pH Max (SU)	Count Algal Obsv.	Dense/V. Dense Film/Fila. Algae
W2261	2012	5	0.028	0.044	0.036	3.6	2.2	121.6	8.2	6	0
W2268	2012	5	0.029	0.051	0.040	3.6	2.1	124.0	7.9	6	0

Toxics and other pollutants (metals, ammonia, chloride, chlorine)

MassDEP Clean Metals Water Column Data (2011-2018), Acute Criteria Violations. (MassDEP Undated 7) (MassDEP Undated 5)

[CMC= Criterion Maximum Concentration, TU= Toxic Unit]

Station Code	Data Year	Metals Count	As CMC TU >1	Cd CMC TU >1	Cr III CMC TU >1	Cu CMC TU >1	Pb CMC TU >1	Ni CMC TU >1	Ag CMC TU >1	Zn CMC TU >1
W2261	2012	3	0	0	0	0	0	0	0	0
W2268	2012	3	0	0	0	0	0	0	0	0

MassDEP Clean Metals Water Column Data (2011-2018), Chronic Criteria Violations. (MassDEP Undated 7) (MassDEP Undated 5)

[CCC= Criterion Continuous Concentration, TU= Toxic Unit]

Station Code	Data Year	Metals Count	As CCC TU >1	Cd CCC TU >1	Cr III CCC TU >1	Cu CCC TU >1	Pb CCC TU >1	Ni CCC TU >1	Se CCC TU >1	Zn CCC TU >1
W2261	2012	3	0	0	0	0	0	0	0	0
W2268	2012	3	0	0	0	0	0	0	0	0

MassDEP Dissolved Aluminum Water Column Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Since only dissolved aluminum data were available, these data were compared to the default freshwater criteria for total recoverable aluminum (TRA), presented in Appendix E of MassDEP's 2022 CALM. As dissolved Al is a fraction of TRA, an exceedance count of 0 does not rule out violations of the TRA criteria. CMC= Criterion Maximum Concentration, CCC= Criterion Continuous Concentration, TU= Toxic Unit]

Station Code	Data Year	Dissolved Al Count	Al Min (mg/L)	Al Max (mg/L)	Al Avg (mg/L)	Al CMC TU Max	Al CCC TU Max	Al CMC TU >1	Al CCC TU >1
W2261	2012	3	0.005	0.01	0.007	0.0	0.0	0	0
W2268	2012	3	0.005	0.01	0.007	0.0	0.0	0	0

MassDEP Total Ammonia Nitrogen (TAN) Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[TAN= NH3 + NH4+]

Station Code	Data Year	TAN Count	TAN Min (mg/L)	TAN Max (mg/L)	TAN Avg (mg/L)	Count TAN >Chronic	Count TAN >Acute
W2261	2012	5	0.020	0.030	0.028	0	0
W2268	2012	5	0.020	0.030	0.028	0	0

MassDEP Chloride Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Data Year	Chloride Count	Chloride Min (mg/L)	Chloride Max (mg/L)	Chloride Avg (mg/L)	Count Chloride >230	Count Chloride >860
W2261	2012	5	22	42	34	0	0
W2268	2012	5	21	41	33	0	0

MassDEP Discrete Specific Conductance Data (2011-2018) Compared to Estimated Chloride Criteria. (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Start Date	End Date	SpCond Count	SpCond Min (µs/cm)	SpCond Max (µs/cm)	Count SpCond >904	Count SpCond >994	Count SpCond >3193	Count SpCond >3512	Consecutive sets >904	Consecutive sets >994
W2261	05/02/12	09/06/12	3	356	439	0	0	0	0	0	0
W2268	05/02/12	09/06/12	3	351	432	0	0	0	0	0	0

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	

No recent fish toxics sampling has been conducted in this Hoosic River AU (MA11-04), and since no site-specific advisory has been issued the Fish Consumption Use is Not Assessed.

Aesthetic

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MassDEP staff surveyed two sites along this Hoosic River AU (MA11-04) in North Adams during the summer of 2012 as part of the MAP2 wadeable streams monitoring project; ~1625 feet upstream of Hodges Cross Road (Route 8A) (W2268) and ~1900 feet downstream of Hodges Cross Road (Route 8A) (W2261). There were generally no objectionable conditions (i.e., odors, deposits, growths, or turbidity) were observed during the surveys at either sampling location. The Aesthetics Use for this Hoosic River AU (MA11-04) is assessed as Fully Supporting based on the general lack of any objectionable conditions documented by MassDEP staff during the summer of 2012.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2261	MassDEP	Water Quality	Hoosic River	[approximately 1900 feet downstream of Hodges Cross Road (Route 8A), North Adams]	42.669542	-73.103711
W2268	MassDEP	Water Quality	Hoosic River	[approximately 1625 feet upstream of Hodges Cross Road (Route 8A), North Adams]	42.661126	-73.103811

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2018) (MassDEP Undated 5)

Station Code	Waterbody	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2261	Hoosic River	2012	6	MassDEP aesthetics observations for station W2261/MAP2-194 on Hoosic River can be summarized as follows: there were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by DEP field sampling crews during summer 2012.
W2268	Hoosic River	2012	6	MassDEP aesthetics observations for station W2268/MAP2-205 on Hoosic River can be summarized as follows: there were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by DEP field sampling crews during summer 2012.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2018) (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2261	2012	6	6	0
W2268	2012	6	6	0

MassDEP Aesthetics Observations (2011-2018) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2261	Hoosic River	2012	Color	Light Yellow/Tan	2	6
W2261	Hoosic River	2012	Color	None	4	6
W2261	Hoosic River	2012	Objectionable Deposits	No	6	6
W2261	Hoosic River	2012	Odor	Effluent (Treated)	1	6
W2261	Hoosic River	2012	Odor	None	5	6
W2261	Hoosic River	2012	Scum	No	6	6
W2261	Hoosic River	2012	Turbidity	Moderately Turbid	1	6
W2261	Hoosic River	2012	Turbidity	None	5	6
W2268	Hoosic River	2012	Color	Light Yellow/Tan	3	6
W2268	Hoosic River	2012	Color	None	3	6
W2268	Hoosic River	2012	Objectionable Deposits	No	4	6
W2268	Hoosic River	2012	Objectionable Deposits	Yes	2	6
W2268	Hoosic River	2012	Odor	Effluent (Treated)	1	6
W2268	Hoosic River	2012	Odor	Musty (Basement)	1	6
W2268	Hoosic River	2012	Odor	None	4	6
W2268	Hoosic River	2012	Scum	No	5	6
W2268	Hoosic River	2012	Scum	Yes	1	6
W2268	Hoosic River	2012	Turbidity	Moderately Turbid	1	6
W2268	Hoosic River	2012	Turbidity	None	4	6
W2268	Hoosic River	2012	Turbidity	Slightly Turbid	1	6

Primary Contact Recreation

2022 Use Attainment	Alert
Not Supporting	NO

2022 Use Attainment Summary

MassDEP staff collected *E. coli* bacteria samples from two sites along this Hoosic River AU (MA11-04) in North Adams between May and September 2012 (n=6) as part of the MAP2 wadeable streams monitoring project; ~1625 feet upstream of Hodges Cross Road (Route 8A) (W2268) and ~1900 feet downstream of Hodges Cross Road (Route 8A) (W2261). Data analysis of these limited frequency single year datasets indicated 100% of the intervals had GMs >126 cfu/100ml, and three samples at each site exceeded the 410 cfu/100ml STV. The seasonal GMs were 395 and 406 cfu/100mls at the up and downstream sites, respectively.

The Primary Contact Recreational Use for this Hoosic River AU (MA11-04) is assessed as Not Supporting based on the elevated *E. coli* bacteria concentrations.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2261	MassDEP	Water Quality	Hoosic River	[approximately 1900 feet downstream of Hodges Cross Road (Route 8A), North Adams]	42.669542	-73.103711
W2268	MassDEP	Water Quality	Hoosic River	[approximately 1625 feet upstream of Hodges Cross Road (Route 8A), North Adams]	42.661126	-73.103811

Bacteria Data

Bacteria Data Collected by MassDEP and External Data Providers 2011-2020 (30-day Interval Analysis) (MassDEP Undated 7) (MassDEP Undated 5)

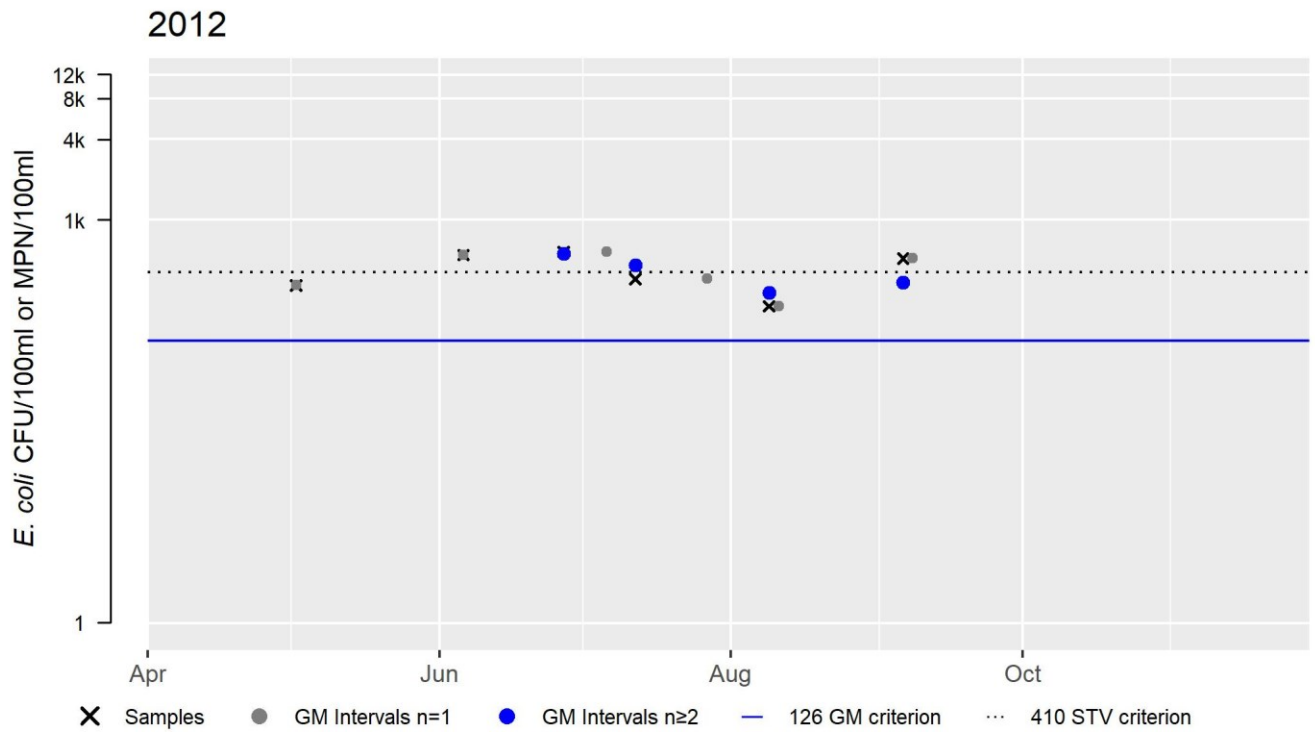
[Result units are CFU/100ml or MPN/100ml]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W2261	MassDEP	E. coli	05/02/12	09/06/12	6	228	579	406
W2268	MassDEP	E. coli	05/02/12	09/06/12	6	173	613	395

W2261 *E. coli* (30-day Interval), Primary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	406
#GMI	4
#GMI Ex	4
%GMI Ex	100
n>STV	3
%n>STV	50

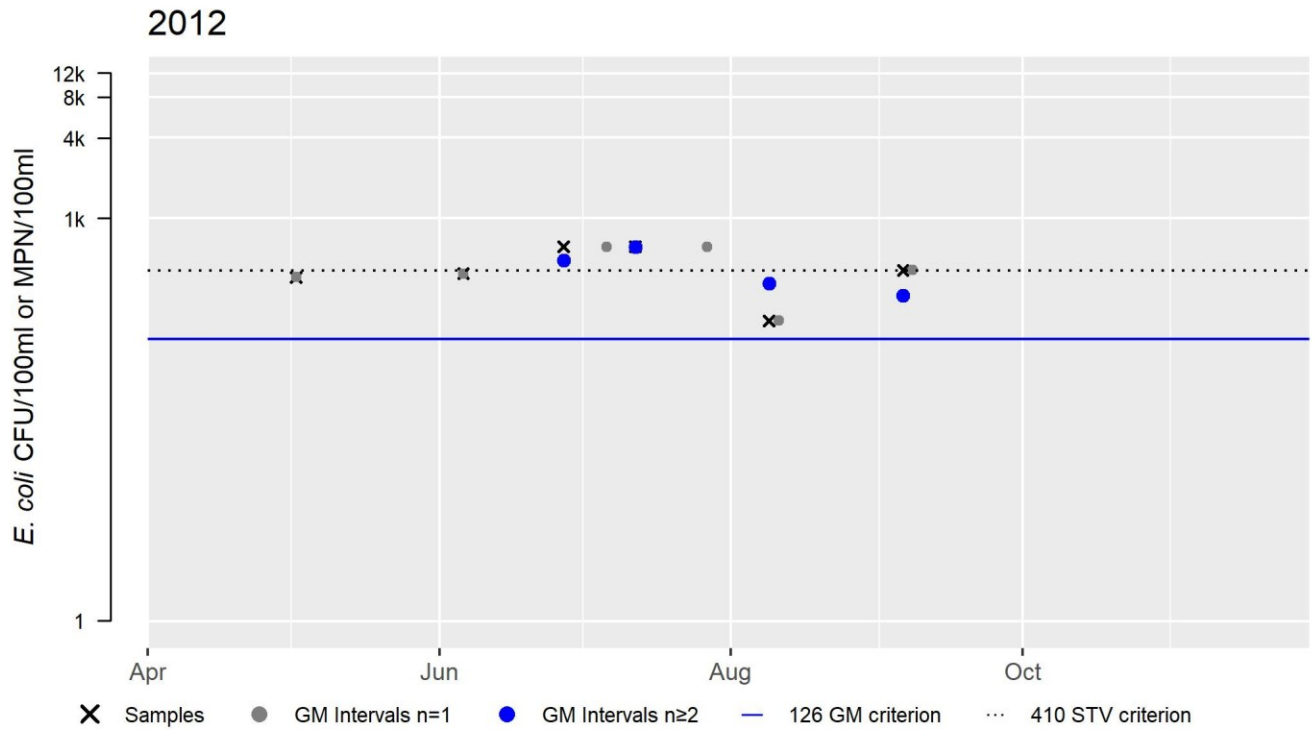
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



W2268 *E. coli* (30-day Interval), Primary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	395
#GMI	4
#GMI Ex	4
%GMI Ex	100
n>STV	3
%n>STV	50

Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO

2022 Use Attainment Summary

MassDEP staff collected *E. coli* bacteria samples from two sites along this Hoosic River AU (MA11-04) in North Adams between May and September 2012 (n=6) as part of the MAP2 wadeable streams monitoring project; ~1625 feet upstream of Hodges Cross Road (Route 8A) (W2268) and ~1900 feet downstream of Hodges Cross Road (Route 8A) (W2261). Data analysis of these limited frequency single year datasets indicated 0% of the intervals had GMs >126 cfu/100ml, and no samples at either site exceeded the 410 cfu/100ml STV. The seasonal GMs were 395 and 406 cfu/100mls at the up and downstream sites, respectively.

Since the *E. coli* concentrations were below the use attainment impairment thresholds for these single year moderate frequency datasets, the Secondary Contact Recreational Use for this Hoosic River AU (MA11-04) is assessed as Fully Supporting.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2261	MassDEP	Water Quality	Hoosic River	[approximately 1900 feet downstream of Hodges Cross Road (Route 8A), North Adams]	42.669542	-73.103711
W2268	MassDEP	Water Quality	Hoosic River	[approximately 1625 feet upstream of Hodges Cross Road (Route 8A), North Adams]	42.661126	-73.103811

Bacteria Data

Bacteria Data Collected by MassDEP and External Data Providers 2011-2020 (90-day Interval Analysis) (MassDEP Undated 7) (MassDEP Undated 5)

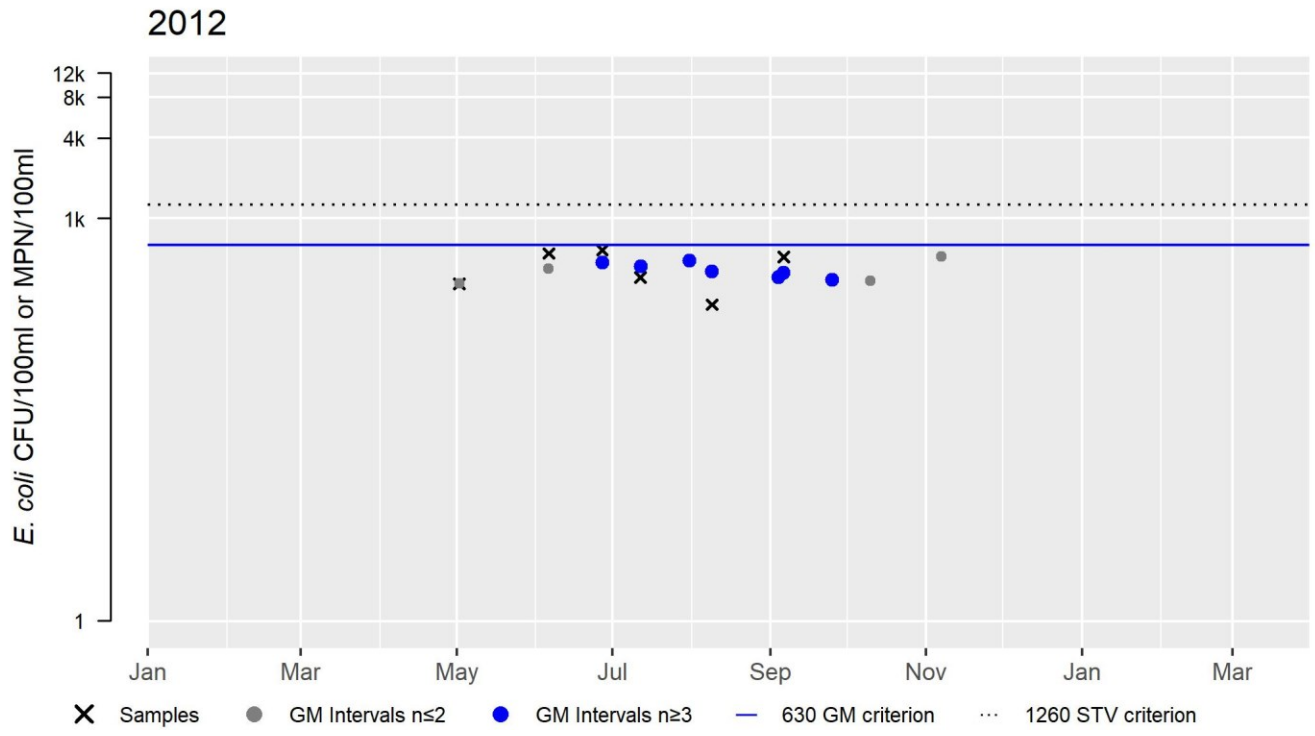
[Result units are CFU/100ml or MPN/100ml]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result (CFU/100ml or MPN/100ml)	Maximum Sample Result (CFU/100ml or MPN/100ml)	Seasonal Geometric Mean (CFU/100ml or MPN/100ml)
W2261	MassDEP	E. coli	05/02/12	09/06/12	6	228	579	406
W2268	MassDEP	E. coli	05/02/12	09/06/12	6	173	613	395

W2261 *E. coli* (90-day Interval), Secondary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	406
#GMI	7
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

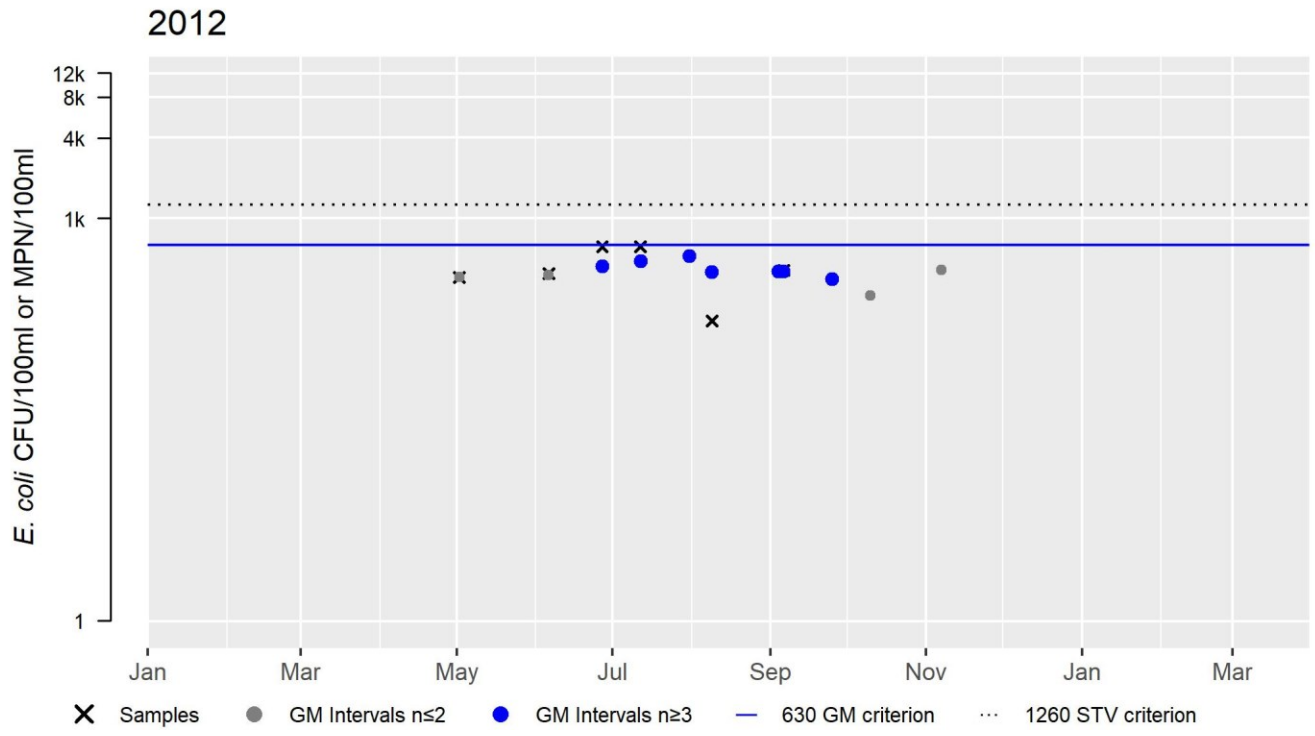
Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



W2268 *E. coli* (90-day Interval), Secondary Contact Recreational Use Season

Var	Res
Samples	6
SeasGM	395
#GMI	7
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV

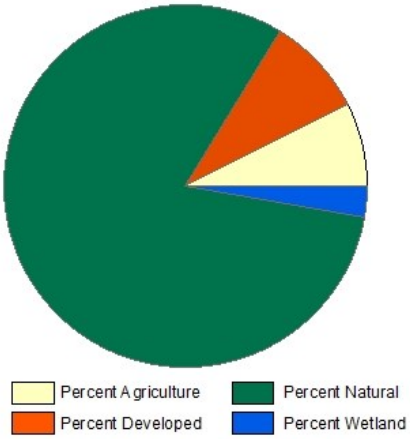


Hoosic River (MA11-05)

Location:	Confluence with North Branch Hoosic River, North Adams to the Vermont State line, Williamstown.
AU Type:	RIVER
AU Size:	8.2 MILES
Classification/Qualifier:	B: WWF

Hoosic River - MA11-05

Watershed Area: 163.92 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	163.92	13.38	37.95	2.74
Agriculture	7.4%	4.6%	7%	3.5%
Developed	8.9%	15.4%	10.6%	16.3%
Natural	81%	77.5%	76.8%	74.2%
Wetland	2.7%	2.5%	5.6%	6%
Impervious Cover	3.5%			

2018/20 AU Category	2022 AU Category	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	Escherichia Coli (E. Coli)		Unchanged
5	5	Fecal Coliform		Unchanged
5	5	Nutrient/Eutrophication Biological Indicators		Unchanged
5	5	PCBs in Fish Tissue		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Alteration in Stream-side or Littoral Vegetative Covers*)	Channelization (Y)	X				
(Alteration in Stream-side or Littoral Vegetative Covers*)	Streambank Modifications/Destabilization (Y)	X				
(Flow Regime Modification*)	Channelization (Y)	X				

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Flow Regime Modification*)	Streambank Modifications/Destabilization (Y)	X				
Escherichia Coli (E. Coli)	Source Unknown (N)				X	
Escherichia Coli (E. Coli)	Urban Runoff/Storm Sewers (N)				X	
Fecal Coliform	Source Unknown (N)				X	
Fecal Coliform	Urban Runoff/Storm Sewers (N)				X	
Nutrient/Eutrophication Biological Indicators	Agriculture (N)	X				
Nutrient/Eutrophication Biological Indicators	Municipal Point Source Discharges (Y)	X				
PCBs in Fish Tissue	Brownfield (Non-NPL) Sites (Y)		X			

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO

2022 Use Attainment Summary

MA DFG biologists conducted barge and/or backpack electrofishing at five sites along this Hoosic River AU (MA11-05) from up to downstream as follows: upstream of Ashton Ave, North Adams in August 2014 (SampleID 5428), and these sites in July 2017 in Williamstown --behind the old trailer park w/white lions (Riverside Dr.) off Rt 2 (SampleID 6774), upstream of Green River confluence (SampleID 6773), along the fields near Stetson Rd. and Cole Ave. (SampleID 6482), and behind Cole Field off Stetson St., near the west end of fields behind soccer fields (SampleID 6481). The fish samples were all dominated by fluvial fishes (range 83 to 100%) with all five samples containing young-of-year brown trout. Regarding comparison with the Target Fish Community model, thirteen fish community samples (Sample IDs: 5041, 5042, 5428, 6475, 6476, 6477, 6478, 6479, 6480, 6481, 6482, 6773, and 6774) were collected in the Hoosic River (AUs MA11-03, MA11-04, MA11-05) from 2012-2017. The percent similarity with the Hoosic Target Fish Community was 69.64% (an indicator of good conditions) (MassDEP Undated).

The Aquatic Life Use for this Hoosic River AU (MA11-05) will continue to be assessed as Not Supporting because of the presence of the concrete flood control chutes that impair aquatic habitat in the upper 1.2mile reach of the river with the Alteration in Stream-side or Littoral Vegetative Covers and Flow Regime Modification impairments being carried forward. While fisheries data collected by MA DFG biologists in the summers of 2014 and 2017 that were indicative of good conditions, the Nutrient/Eutrophication Biological Indicators impairment as documented in the 2016 IR reporting cycle (MassDEP Undated 6) is also being carried forward.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
5428	MassDFG	Fish Community	Hoosic River	US of Ashton Ave, North Adams	42.70155	-73.16539
6481	MassDFG	Fish Community	Hoosic River	Behind Cole field off Stetson St, West end of fields behind soccer fields., Williamstown	42.72288	-73.19369
6482	MassDFG	Fish Community	Hoosic River	Fields near Stetson Rd and Cole Ave, Williamstown	42.71946	-73.19042

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6773	MassDFG	Fish Community	Hoosic River	US of Green River confluence, Williamstown	42.71342	-73.18758
6774	MassDFG	Fish Community	Hoosic River	Behind old trailer park w/ white lions (Riverside Dr.) off Rt 2, Williamstown	42.70589	-73.17980

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: B = Bluegill, BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, LND = Longnose Dace, SC = Slimy Sculpin]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
6773	07/13/17	BP	TP	6	212	0	NA	NA	0	2	8%	99%	Yes	Yes	B, BND, BT, CRC, LND, SC,

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net; Trout= any combination of brook trout, brown trout, rainbow trout, tiger trout; Other Tier2 Species= any size and any combination of American brook lamprey, Atlantic salmon, lake chub, lake trout, longnose sucker, slimy sculpin]

[Species List: B = Bluegill, BB = Brown Bullhead, BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, CS = Common Shiner, FM = Fathead Minnow, LMB = Largemouth Bass, LND = Longnose Dace, P = Pumpkinseed, WS = White Sucker]

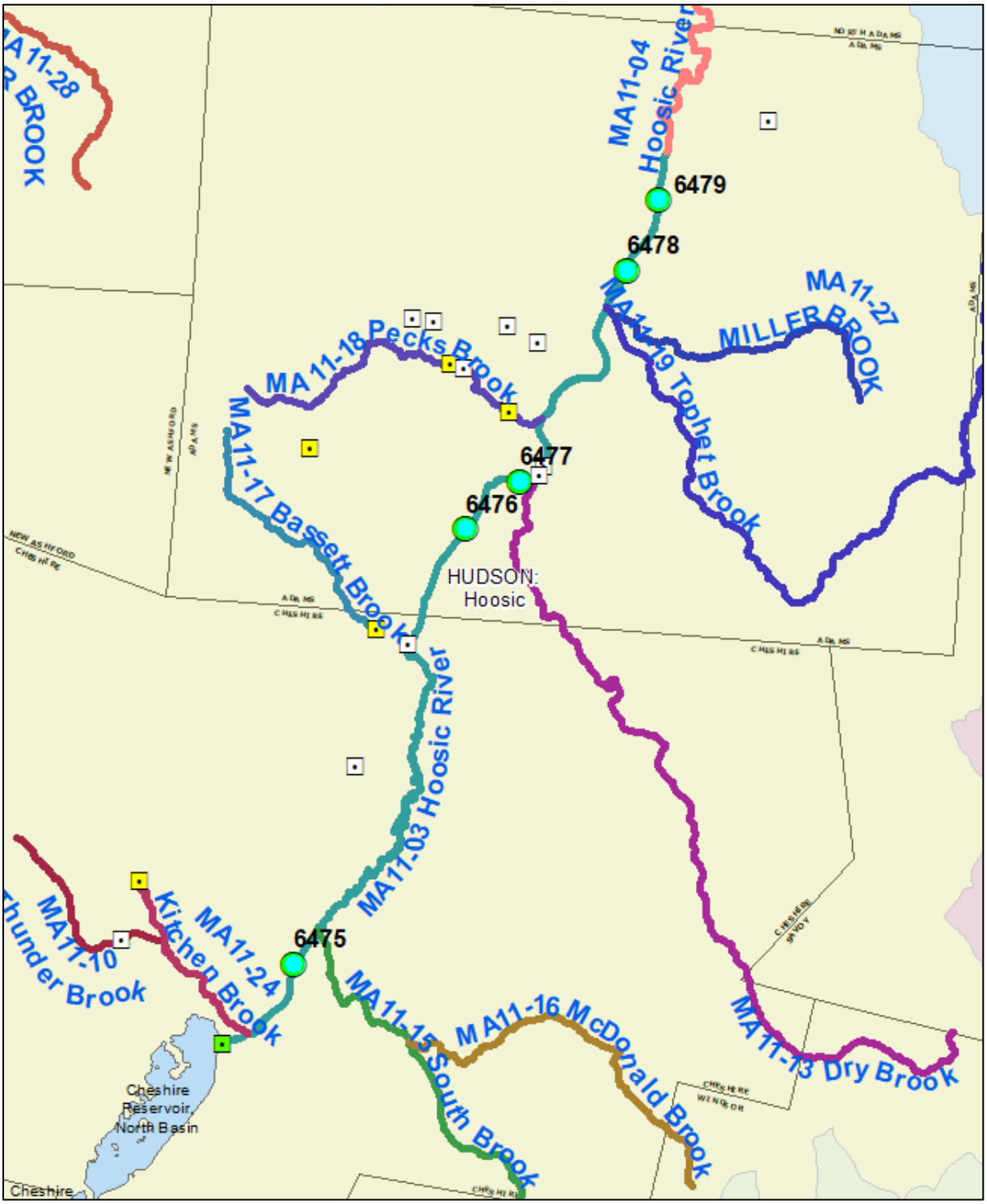
Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	Trout ≤140mm Ind	LLS<200mm Ind	Other Tier2 Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
5428	08/04/14	BG	TP	4	387	16	0	0	6%	100%	Yes	Yes	BND, BT, LND, WS,
6481	07/12/17	BG	TP	9	280	3	0	0	1%	97%	No	Yes	B, BB, BND, BT, CRC, CS, LND, P, WS,
6482	07/12/17	BG	TP	10	213	7	0	0	3%	83%	No	Yes	B, BND, BT, CRC, CS, FM, LMB, LND, P, WS,
6774	07/13/17	BP	TP	7	93	3	0	0	3%	95%	Yes	Yes	B, BND, BT, CRC, FM, LND, WS,

Comparison of fish community samples (2005-2017) to the Hoosic Target Fish Community (TFC) Model. (MassDFG 2018, MassDEP Undated 1, Kashiwagi and Richards 2009)

Thirteen fish community samples (Sample IDs: 5041, 5042, 5428, 6475, 6476, 6477, 6478, 6479, 6480, 6481, 6482, 6773, and 6774) were collected in the Hoosic River (AUs MA11-03, MA11-04, MA11-05) from 2012-2017. The percent similarity with the Hoosic Target Fish Community was 69.64%. Of the 5 most common species in the TFC, 4 of these fluvial specialist/dependent species (blacknose dace, longnose dace, white sucker, common shiner) were in the top 5 among the study samples, although with slightly different ranks. The coldwater species, slimy sculpin, was #3 in the TFC but less common in the study samples. The upstream AU, MA11-03, is a designated coldwater fishery- 55 of 57 slimy sculpin and all

7 brook trout (multiple age classes) were collected in this AU. This comparison of fish community data with the Hoosic TFC model is an indicator of good water quality in these Hoosic River AUs (MA11-03, MA11-04, MA11-05).

Fish Community Samples in the Hoosic River (AUs MA11-03, MA11-04, MA11-05); screen capture of upstream/southern AU, and then 2 downstream/northern AUs:




MA11-23 Broad Brook
6481
6482
6773
6774
5428
MA11-05 Hoosic River
MA11-09 Hemlock Brook
MA11-06 Green River
MA11-20 Paull Brook
MA11-28 HOPPER BROOK
MA11-04 Hoosic River
HUDSON: Hoosic
Mt. Williams Reservoir
Reservoir
Windsor
5042
6480
5041

Hoosic TFC Model:

Table A7. Species percent composition for reference rivers used to develop the Hoosic River target fish community model. Species are ordered by mean rank. Non-native, stocked, and out-of-range species were deleted from the ranking and calculation of expected proportion in the target fish model. The ranks were converted to expected proportions (as a percent) using a rank-weighting technique as outlined by Bain and Meixler (2008).

Species	Third Branch White River	Batten Kill	Little Hoosic River	Kinderhook River	Black Creek	Hollenbeck River	WB Westfield River	Sum	Rank	Expected Proportion
Blacknose dace	36.7	31.3	30.0	11.5	8.4	42.1	32.4	192.4	1	34.1
Longnose dace	28.4	11.6	11.1	5.7	23.6	34.1	31.4	145.9	2	17.1
Slimy sculpin	21.2	13.7	24.7	21.6	4.1	0.0	0.2	85.5	3	11.4
White sucker	0.9	0.4	19.3	7.9	16.5	1.2	3.3	49.5	4	8.5
Common shiner	0.0	0.0	1.0	11.1	12.1	2.2	10.4	36.8	5	6.8
Brown trout	4.0	15.5	2.1	10.1	1.7	0.0	0.5	33.9		
Brook trout	0.1	25.3	0.6	0.1	0.0	3.5	0.1	29.7	7	4.5
Fallfish	0.0	0.0	0.0	16.0	0.0	4.8	0.0	20.8	8	4.3
Tessellated darter	0.3	0.0	0.0	1.2	11.0	2.3	3.1	17.9		
Cutlips minnow	0.0	0.0	0.0	9.4	4.9	0.0	0.0	14.3		
Bluntnose minnow	0.0	0.0	0.0	0.0	13.8	0.0	0.0	13.8		
Creek chub	1.1	0.0	2.8	0.5	3.5	2.9	0.3	11.1	12	2.8
Longnose sucker	4.7	2.1	0.4	0.9	0.0	0.0	0.0	8.1	13	2.6
Rainbow trout	2.6	0.0	3.9	0.0	0.0	0.0	0.4	6.9		
Rock bass	0.0	0.0	0.0	0.1	0.2	5.0	0.1	5.4		
Trout-perch	0.0	0.0	3.8	0.0	0.0	0.0	0.0	3.8	16	2.1
Pumpkinseed	0.0	0.0	0.0	1.7	0.1	1.4	0.0	3.2	17	2.0
Smallmouth bass	0.0	0.0	0.0	1.2	0.0	0.4	1.1	2.7		
Golden shiner	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	19	1.8
Yellow perch	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	20	1.7
American eel	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.4		
Bluegill	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3		
Spottail shiner	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2		

Fish Community Analysis:

Watershed	Common Name	Values # of Fish	% of catch	Applicable TFC	TFC Difference	% Sim to TFC
Hoosic	American Brook Lamprey		0.00%	-	-	
Hoosic	American Eel		0.00%	-	-	
Hoosic	Atlantic Salmon		0.00%	-	-	
Hoosic	Banded Killifish	8	0.28%	-	0.3	
Hoosic	Banded Sunfish		0.00%	-	-	
Hoosic	Black Crappie		0.00%	-	-	
Hoosic	Blacknose Dace	1271	44.55%	34.1	10.4	
Hoosic	Bluegill	29	1.02%	-	1.0	
Hoosic	Bluntnose Minnow		0.00%	-	-	
Hoosic	Bridle Shiner		0.00%	-	-	
Hoosic	Brook Trout	7	0.25%	4.5	4.3	
Hoosic	Brown Bullhead	1	0.04%	-	0.0	
Hoosic	Brown Trout	77	2.70%	-	2.7	
Hoosic	Central Mudminnow		0.00%	-	-	
Hoosic	Chain Pickerel		0.00%	-	-	
Hoosic	Channel Catfish		0.00%	-	-	
Hoosic	Common Carp		0.00%	-	-	
Hoosic	Common Shiner	108	3.79%	6.8	3.0	
Hoosic	Creek Chub	155	5.43%	2.8	2.6	
Hoosic	Creek Chubsucker		0.00%	-	-	
Hoosic	Cutlips Minnow		0.00%	-	-	
Hoosic	Fallfish		0.00%	4.3	4.3	
Hoosic	Fathead Minnow	24	0.84%	-	0.8	
Hoosic	Golden Shiner	1	0.04%	1.8	1.8	
Hoosic	Green Sunfish		0.00%	-	-	
Hoosic	Lake Chub		0.00%	-	-	
Hoosic	Largemouth Bass	3	0.11%	-	0.1	
Hoosic	Longnose Dace	863	30.25%	17.1	13.1	
Hoosic	Longnose Sucker	38	1.33%	2.6	1.3	
Hoosic	Northern Pike		0.00%	-	-	
Hoosic	Pumpkinseed	21	0.74%	2.0	1.3	
Hoosic	Rainbow Trout	3	0.11%	-	0.1	
Hoosic	Redbreast Sunfish		0.00%	-	-	
Hoosic	Redfin Pickerel		0.00%	-	-	
Hoosic	Rock Bass	7	0.25%	-	0.2	
Hoosic	Sea Lamprey		0.00%	-	-	
Hoosic	Slimy Sculpin	57	2.00%	11.4	9.4	
Hoosic	Smallmouth Bass		0.00%	-	-	
Hoosic	Spottail Shiner		0.00%	-	-	
Hoosic	Swamp Darter		0.00%	-	-	
Hoosic	Tadpole Madtom		0.00%	-	-	
Hoosic	Tesselated Darter		0.00%	-	-	
Hoosic	White Catfish		0.00%	-	-	
Hoosic	White Perch		0.00%	-	-	
Hoosic	White Sucker	180	6.31%	8.5	2.2	
Hoosic	Yellow Bullhead		0.00%	-	-	
Hoosic	Yellow Perch		0.00%	1.7	1.7	
Hoosic	(blank)		0.00%	-	-	69.64
Grand Total		2853	######	-	100.0	

Row Labels
Hoosic
5041
5042
5428
6475
6476
6477
6478
6479
6480
6481
6482
6773
6774
Grand Total

Fish Consumption

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
Because of the site-specific fish consumption advisory for the Hoosic River (from the channelized section in North Adams to the MA/VT state line) that recommends the public not eat any fish because of PCBs, the Fish Consumption Use for this Hoosic River AU (MA11-05) will continue to be assessed as Not Supporting with the PCBs in Fish Tissue impairment being carried forward.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent data are available to assess the status of the Aesthetics Use for this Hoosic River AU (MA11-05), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Primary Contact Recreational Use for this Hoosic River AU (MA11-05) so it will continue to be assessed as Not Supporting with the *E. coli* and Fecal Coliform bacteria impairments being carried forward.	

Secondary Contact Recreation

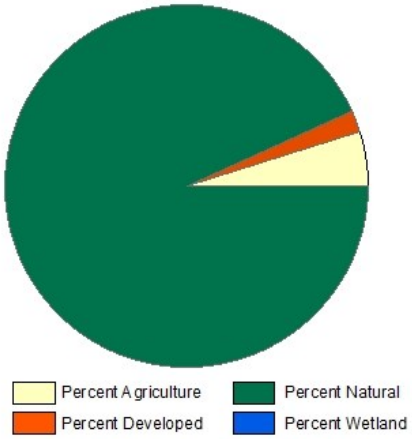
2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Secondary Contact Recreational Use for this Hoosic River AU (MA11-05), so it is Not Assessed.	

Hopper Brook (MA11-28)

Location:	Headwaters, perennial portion, east of Sperry Road, Williamstown to mouth at confluence with the Green River, Williamstown.
AU Type:	RIVER
AU Size:	4 MILES
Classification/Qualifier:	B: CWF

HOPPER BROOK - MA11-28

Watershed Area: 6.71 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	6.71	5.93	1	0.95
Agriculture	4.8%	5.4%	1.9%	2%
Developed	1.9%	1.9%	5%	5.2%
Natural	92.5%	91.7%	91.7%	91.3%
Wetland	0.8%	0.9%	1.4%	1.5%
Impervious Cover	0.8%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

MA DFG biologists conduced backpack electrofishing at two sites in Hopper Brook @ end of Bressett Road (SampleID 6587) and near the first meadow up the trail from Bressette Road (SampleID 6605) in July 2017. MassDEP biologists sampled Hopper Brook slightly further downstream ~6025 feet upstream of the Hopper Road crossing nearest Bressett Road during the summer of 2012 as part of the MAP2 wadeable streams monitoring project including biological and water quality sampling. Survey results of this Cold Water habitat can be briefly summarized as follows: the benthic community (Station B0815) IBI score was indicative of satisfactory conditions (57), the fish samples were all comprised by 100% cold water fluvial species including multiple age classes of Easter brook trout as well as slimy sculpin (backpack electrofishing in July 2017 [Sample IDs 6587 and 6605] and August 2012 [SampleID 5020]), and water quality sampling data including both deployed probe and discrete sampling efforts (Station W2278) were indicative of excellent conditions (maximum temperature 17.8°C with maximum 24 hour rolling average 17.4°C, low seasonal average total phosphorus concentration (0.005mg/L, n=4), and low concentrations of ammonia-nitrogen (0.02mg/L, n=5) and chloride (maximum 2mg/L), and no exceedances of any acute or chronic metals criteria (n=3 sampling events; note that aluminum exceedances cannot be ruled out since dissolved data were compared to the total recoverable aluminum criteria).
The Aquatic Life Use of Hopper Brook is assessed as Fully Supporting based on benthic macroinvertebrate, fish population, and water quality monitoring data collected by MassDEP and MA DFG biologists in the summers of 2012 and 2017.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
5020	MassDEP	Fish Community	Hopper Brook	1.1mi US of Hopper Rd xing nearest Bressett Rd, at end of Bressett Rd	42.65789	-73.20167
6587	MassDFG	Fish Community	Hopper Brook	@ end of Bressett Rd., Williamstown	42.65331	-73.19084
6605	MassDFG	Fish Community	Hopper Brook	1st meadow up trail from Bressette Rd, Williamstown	42.65492	-73.19525
B0815	MassDEP	Benthic	Hopper Brook/	[approximately 1835 meters upstream of the Hopper Road crossing nearest Bressett Road, Williamstown, MA]	42.657895	-73.201668
W2278	MassDEP	Water Quality	Hopper Brook	[approximately 6025 feet upstream of the Hopper Road crossing nearest Bressett Road, Williamstown]	42.657895	-73.201668

Biological Monitoring Information

Benthic Macroinvertebrate Data

MassDEP Benthic Macroinvertebrate Data (2011-2017). (MassDEP Undated 4)

[Index Biological Condition Class: E= Exceptional, S= Satisfactory, MD= Moderately Degraded, SD= Severely Degraded; High Gradient IBI Thresholds: E= 100-75, S= 74-55, MD= 54-35, SD= 34-0; Low Gradient IBI Thresholds: E= 100-81, S= 80-62, MD= 61-38, SD= 37-0; R qualifier = Rarefaction (100ct) <55]

Station Code	Collection Date	Collection Method	Index Type	Organism Count	Index Score	Index Biological Condition Class
B0815	07/25/12	RBP kicknet	Western_Highlands_100ct	96	57	S

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]
[Species List: BT = Brown Trout, EBT = Brook Trout, LND = Longnose Dace, SC = Slimy Sculpin]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
5020	08/22/12	BP	TP	4	213	40	49	164	39	138	100%	100%	Yes	Yes	BT, EBT, LND, SC,
6587	07/19/17	BP	TP	3	159	91	49	222	62	59	100%	100%	No	Yes	BT, EBT, SC,
6605	07/18/17	BP	TP	3	218	70	43	201	48	143	100%	100%	Yes	Yes	BT, EBT, SC,

Physico-chemical Water Quality Information

DO, pH, Temperature

MassDEP Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer Index is June 1 – Sept 15; Max Daily Mean= Maximum 24-Hour Average, 7DADM= 7-Day Average of the Daily Maxima, 7DADA= 7-Day Average of the Daily Average, CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Index Count	7day Count	Max Daily Mean (°C)	Max Temp (°C)	Max 7DADM (°C)	Max 7DADA (°C)	Count CWTier1 7DADM >20	Count CWTier1 Daily Mean >23.5	Count CWTier2 7DADA >21	Count CWTier2 Daily Mean >24.1	Count WW 7DADM >27.7	Count WW Daily Mean >28.3
W2278	06/01/12	09/15/12	107	107	17.2	17.8	17.1	16.4	0	0	0	0	0	0

24-hour Rolling Average Calculations for MassDEP Short- and Long-term Continuous Temperature Data (Summer Index 2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater; NOTE: In the case of more than one row of data in the same year for a site, different types of temperature probes were deployed.]

Station Code	Start Date	End Date	Count Days Deployed	24hr Rolling Count	Max 24hr Avg Rolling Temp (°C)	Count CWTier1 24hr Avg Rolling >23.5 °C	Count CWTier2 24hr Avg Rolling >24.1 °C	Count WW 24hr Avg Rolling >28.3°C
W2278	06/01/12	09/15/12	107	5136	17.4	0	0	0

MassDEP Discrete Temperature Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer Index is June 1 – Sept 15; CW= Coldwater, WW= Warmwater]

Station Code	Start Date	End Date	Temp Count	Index Count	Temp Max (°C)	Temp Avg (°C)	Count CW >20	Count CW >22	Count WW >28.3	Count WW >30.3
W2278	05/02/12	10/03/12	2	0	12.5	9.8	0	0	0	0

Nutrients (Primary Producer Screening, Physico-chemical Screening)

MassDEP Nutrient Enrichment Indicator Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Summer seasonal total phosphorus data collected May-Sept]

Station Code	Data Year	Seasonal TP Count	Seasonal TP Min (mg/L)	Seasonal TP Max (mg/L)	Seasonal TP Avg (mg/L)	Delta DO Max (mg/L)	Delta DO Avg (mg/L)	DO Sat Max (%)	pH Max (SU)	Count Algal Obsv.	Dense/V. Dense Film/Fila. Algae
W2278	2012	4	0.005	0.005	0.005	--	--	--	--	5	0

Toxics and other pollutants (metals, ammonia, chloride, chlorine)

MassDEP Clean Metals Water Column Data (2011-2018), Acute Criteria Violations. (MassDEP Undated 7) (MassDEP Undated 5)

[CMC= Criterion Maximum Concentration, TU= Toxic Unit]

Station Code	Data Year	Metals Count	As CMC TU >1	Cd CMC TU >1	Cr III CMC TU >1	Cu CMC TU >1	Pb CMC TU >1	Ni CMC TU >1	Ag CMC TU >1	Zn CMC TU >1
W2278	2012	3	0	0	0	0	0	0	0	0

MassDEP Clean Metals Water Column Data (2011-2018), Chronic Criteria Violations. (MassDEP Undated 7) (MassDEP Undated 5)

[CCC= Criterion Continuous Concentration, TU= Toxic Unit]

Station Code	Data Year	Metals Count	As CCC TU >1	Cd CCC TU >1	Cr III CCC TU >1	Cu CCC TU >1	Pb CCC TU >1	Ni CCC TU >1	Se CCC TU >1	Zn CCC TU >1
W2278	2012	3	0	0	0	0	0	0	0	0

MassDEP Dissolved Aluminum Water Column Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[Since only dissolved aluminum data were available, these data were compared to the default freshwater criteria for total recoverable aluminum (TRA), presented in Appendix E of MassDEP's 2022 CALM. As dissolved Al is a fraction of TRA, an exceedance count of 0 does not rule out violations of the TRA criteria. CMC= Criterion Maximum Concentration, CCC= Criterion Continuous Concentration, TU= Toxic Unit]

Station Code	Data Year	Dissolved Al Count	Al Min (mg/L)	Al Max (mg/L)	Al Avg (mg/L)	Al CMC TU Max	Al CCC TU Max	Al CMC TU >1	Al CCC TU >1
W2278	2012	3	0.005	0.01	0.007	0.0	0.0	0	0

MassDEP Total Ammonia Nitrogen (TAN) Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

[TAN= NH3 + NH4+]

Station Code	Data Year	TAN Count	TAN Min (mg/L)	TAN Max (mg/L)	TAN Avg (mg/L)	Count TAN >Chronic	Count TAN >Acute
W2278	2012	5	0.020	0.020	0.020	0	0

MassDEP Chloride Data (2011-2018). (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Data Year	Chloride Count	Chloride Min (mg/L)	Chloride Max (mg/L)	Chloride Avg (mg/L)	Count Chloride >230	Count Chloride >860
W2278	2012	5	2	2	2	0	0

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Hopper Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MassDEP staff surveyed Hopper Brook ~6025 feet upstream of the Hopper Road crossing nearest Bressett Road, Williamstown (W2278) during the summer of 2012 as part of the MAP2 wadeable streams monitoring project. No objectionable conditions (i.e., odors, deposits, growths, or turbidity) were observed during any of the surveys. The Aesthetics Use for Hopper Brook is assessed as Fully Supporting based on the lack of any objectionable conditions documented by MassDEP staff during the summer of 2012. The alert for any prior aesthetic issue is being removed.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2278	MassDEP	Water Quality	Hopper Brook	[approximately 6025 feet upstream of the Hopper Road crossing nearest Bressett Road, Williamstown]	42.657895	-73.201668

Aesthetic Observations

Aesthetics Summary Statements for MassDEP Stations (2011-2018) (MassDEP Undated 5)

Station Code	Waterbody	Data Year	Field Sheet Count	Aesthetics Summary Statement
W2278	Hopper Brook	2012	5	MassDEP aesthetics observations for station W2278/MAP2-218 on Hopper Brook can be summarized as follows: there were generally no noted objectionable conditions (odors, deposits, growths, or turbidity) recorded by DEP field sampling crews during summer 2012.

Observations of Filamentous/Film Algae at MassDEP Stations (2011-2018) (MassDEP Undated 7) (MassDEP Undated 5)

Station Code	Data Year	Field Sheet Count	Field Sheet Count w/ Film & Filamentous Algae Observations	Dense/ Very Dense Film/ Filamentous Algae
W2278	2012	5	5	0

MassDEP Aesthetics Observations (2011-2018) (MassDEP Undated 7)

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2278	Hopper Brook	2012	Color	None	4	5
W2278	Hopper Brook	2012	Color	NR	1	5
W2278	Hopper Brook	2012	Objectionable Deposits	No	5	5
W2278	Hopper Brook	2012	Odor	None	5	5
W2278	Hopper Brook	2012	Scum	No	5	5

Station Code	Waterbody	Data Year	Parameter	Result	Result Count	Total Field Sheet Count
W2278	Hopper Brook	2012	Turbidity	None	4	5
W2278	Hopper Brook	2012	Turbidity	Slightly Turbid	1	5

Primary Contact Recreation

2022 Use Attainment	Alert
Insufficient Information	NO

2022 Use Attainment Summary

MassDEP staff collected one *E. coli* bacteria sample from Hopper Brook ~6025 feet upstream of the Hopper Road crossing nearest Bressett Road, Williamstown in May 2012. Although the bacteria count was extremely low (9 CFU/100ml) too limited data are available to assess the Primary Contact Recreational Use for Hopper Brook so it is assessed as Insufficient Information. The Alert for any prior aesthetic issue is being removed.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2278	MassDEP	Water Quality	Hopper Brook	[approximately 6025 feet upstream of the Hopper Road crossing nearest Bressett Road, Williamstown]	42.657895	-73.201668

Bacteria Data

Bacteria Data Collected by MassDEP and External Data Providers 2011-2020 (90-day Interval Analysis) (MassDEP Undated 7) (MassDEP Undated 5)

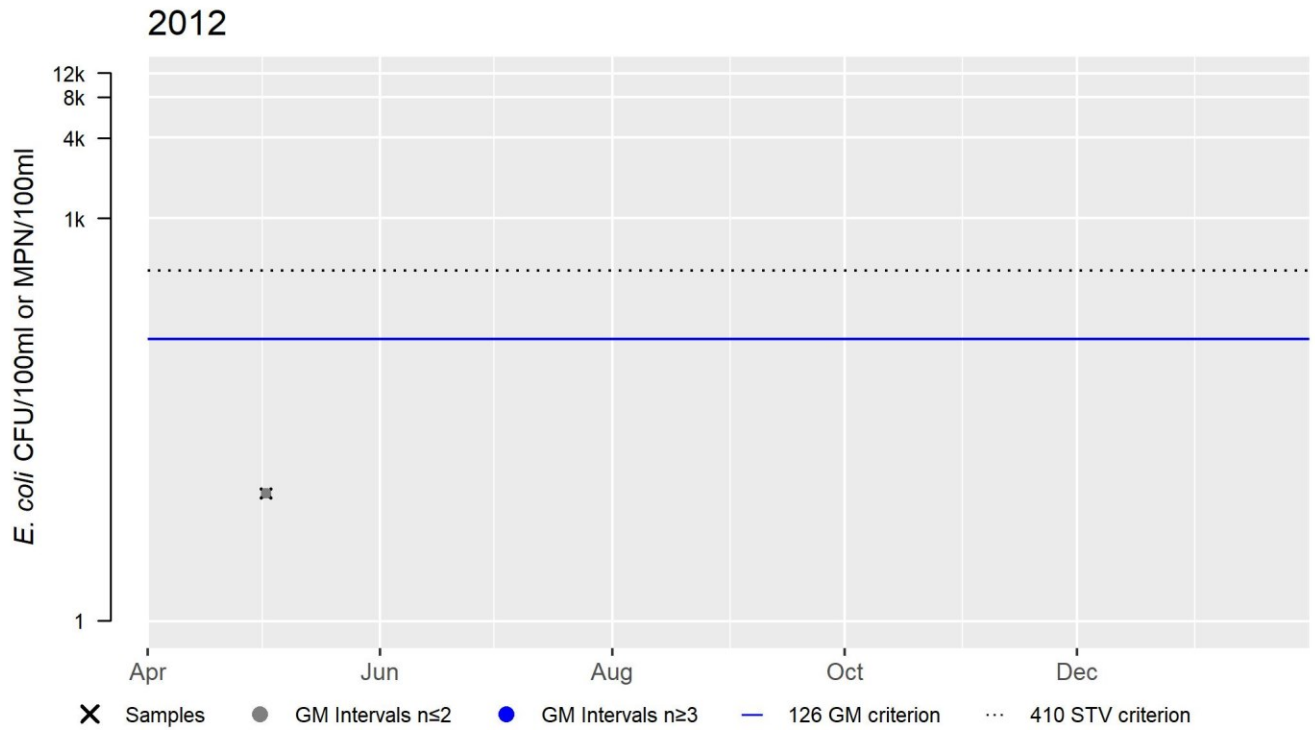
[Result units are CFU/100ml or MPN/100ml]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result	Maximum Sample Result	Seasonal Geometric Mean
W2278	MassDEP	E. coli	05/02/12	05/02/12	1	9	9	9

W2278 *E. coli* (90-day Interval), Primary Contact Recreational Use Season

Var	Res
Samples	1
SeasGM	9
#GMI	0
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV



Secondary Contact Recreation

2022 Use Attainment	**Alert**
Insufficient Information	NO
2022 Use Attainment Summary	
MassDEP staff collected one *E. coli* bacteria sample from Hopper Brook ~6025 feet upstream of the Hopper Road crossing nearest Bressett Road, Williamstown in May 2012. Although the bacteria count was extremely low (9 CFU/100ml) too limited data are available to assess the Secondary Contact Recreational Use for Hopper Brook so it is assessed as Insufficient Information. The Alert for any prior aesthetic issue is being removed.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
W2278	MassDEP	Water Quality	Hopper Brook	[approximately 6025 feet upstream of the Hopper Road crossing nearest Bressett Road, Williamstown]	42.657895	-73.201668

Bacteria Data

Bacteria Data Collected by MassDEP and External Data Providers 2011-2020 (90-day Interval Analysis) (MassDEP Undated 7) (MassDEP Undated 5)

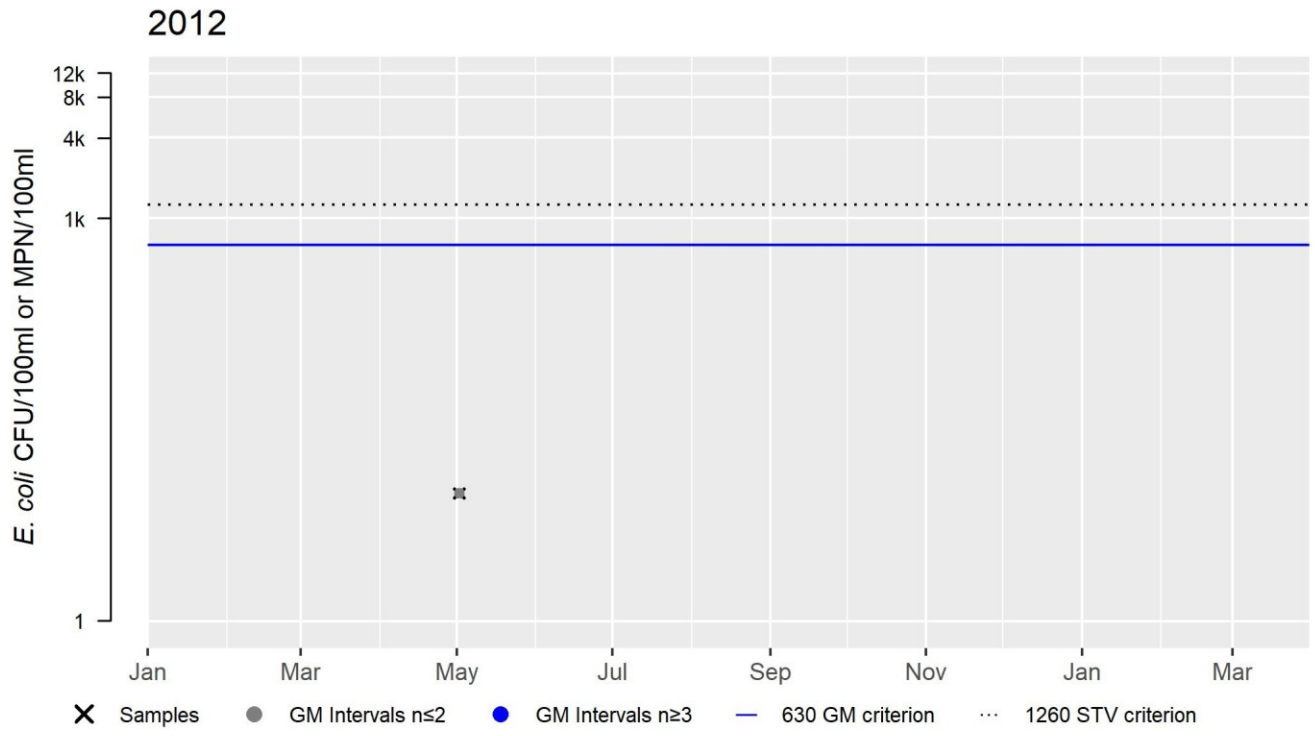
[Result units are CFU/100ml or MPN/100ml]

Station Code	Organization	Indicator	Start Date	End Date	Sample Count	Minimum Sample Result (CFU/100ml or MPN/100ml)	Maximum Sample Result (CFU/100ml or MPN/100ml)	Seasonal Geometric Mean (CFU/100ml or MPN/100ml)
W2278	MassDEP	E. coli	05/02/12	05/02/12	1	9	9	9

W2278 *E. coli* (90-day Interval), Secondary Contact Recreational Use Season

Var	Res
Samples	1
SeasGM	9
#GMI	0
#GMI Ex	0
%GMI Ex	0
n>STV	0
%n>STV	0

Abbreviations: Samples = #samples; SeasGM = Seasonal Geometric Mean (GM); #GMI = number GM Intervals; #GMI Ex = number GMI Exeedances; %GMI Ex = percent GMI Exeedances; n>STV = #samples>Statistical Threshold Value (STV); %n>STV = percent samples>STV

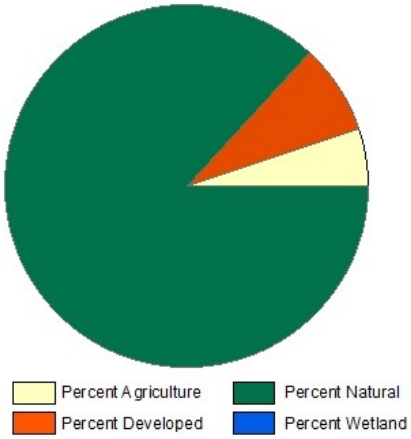


Hoxie Brook (MA11-32)

Location:	Headwaters, perennial portion of this isolated urban stream, southeast of Thiel Road, Adams to northwest of Forest Park Avenue, Adams.
AU Type:	RIVER
AU Size:	1.2 MILES
Classification/Qualifier:	B: CWF

HOXIE BROOK - MA11-32

Watershed Area: 1.52 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.52	1.52	0.37	0.37
Agriculture	5.1%	5.1%	5.1%	5.1%
Developed	8%	8%	8.1%	8.1%
Natural	86.5%	86.5%	85.2%	85.2%
Wetland	0.5%	0.5%	1.6%	1.6%
Impervious Cover	3.2%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	YES
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing at four sites along Hoxie Brook in Adams from up to downstream as follows: off of Hoxie Brook Rd (SampleID 5419 July 2014), downstream of Simon Ave. access (SampleID 7578 July 2018), upstream of dam off Gilead Rd. (SampleID 5418 July 2014), and off Gilead St (downstream) upstream of Forest Park Ave (SampleID 5417 July 2014). Multiple age classes of Eastern brook trout were collected at all the sites which is indicative of excellent habitat and water quality although concerns were noted for erosion and sedimentation issues at two of the sites. The Aquatic Life Use for Hoxie Brook is assessed as Fully Supporting. Alerts are also being identified for the erosion and sedimentation concerns.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
5417	MassDFG	Fish Community	Hoxie Brook	Off Gilead St (downstream). US of Forest Park Ave, Adams	42.62443	-73.12305
5418	MassDFG	Fish Community	Hoxie Brook	Off Gilead Rd, US of dam, Adams	42.62443	-73.12424
5419	MassDFG	Fish Community	Hoxie Brook	Off of Hoxie Brook Rd, Adams	42.62882	-73.13271
7578	MassDFG	Fish Community	Hoxie Brook	Downstream of Simon Ave. access, Adams	42.62474	-73.12566

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: EBT = Brook Trout]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
5417	07/14/14	BP	TP	1	170	170	46	179	162	0	100%	100%	Yes	Yes	EBT,
5418	07/14/14	BP	TP	1	91	91	49	218	77	0	100%	100%	Yes	Yes	EBT,
5419	07/15/14	BP	TP	1	88	88	38	191	82	0	100%	100%	No	Yes	EBT,
7578	08/07/18	BP	TP	1	52	52	62	210	42	0	100%	100%	Yes	Yes	EBT,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Hoxie Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetics Use for Hoxie Brook, so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	

No bacteria data are available to assess the status of the Primary Contact Recreational Use for Hoxie Brook, so it is Not Assessed.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreational Use for Hoxie Brook, so it is Not Assessed.	

Hunterfield Brook (MA11-33)

Location:	Headwaters, perennial portion of this isolated urban stream, south of Welch Road, Clarksburg to south of Owens Avenue, North Adams.
AU Type:	RIVER
AU Size:	0.6 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Hunterfield Brook (MA11-33) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

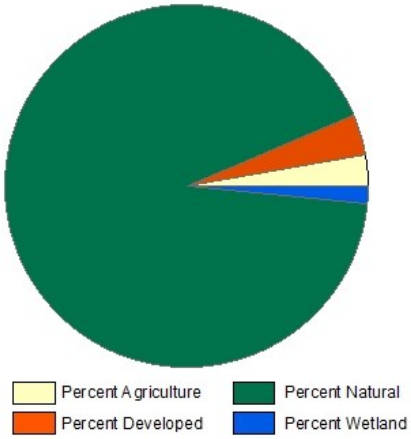
2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Kitchen Brook (MA11-24)

Location:	From the outlet of the unnamed reservoir (Kitchen Brook Reservoir), Cheshire to mouth at confluence with the Hoosic River, Cheshire.
AU Type:	RIVER
AU Size:	1.4 MILES
Classification/Qualifier:	B: CWF

Kitchen Brook - MA11-24

Watershed Area: 4.94 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	4.94	3.95	1.18	0.98
Agriculture	2.8%	3.5%	3.1%	3.8%
Developed	3.6%	4.4%	5.3%	6.4%
Natural	92.1%	90.4%	87.8%	85.3%
Wetland	1.5%	1.8%	3.7%	4.5%
Impervious Cover	1.1%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing at four sites along Kitchen Brook in Cheshire from up to downstream as follows: upstream of W. Mountain Rd. (SampleID 6761 August 2017), ~ 50m upstream of W. Mountain Rd crossing (SampleID 6762 August 2017), next to the cemetery (SampleID 7579 August 2018), and behind cemetery off W. Mountain Rd (SampleID 5417 August 2017). Multiple age classes of Eastern brook trout were collected at all the sites which is indicative of excellent habitat and water quality. Slimy sculpin were also collected at all but most upstream site. The Aquatic Life Use for Kitchen Brook (MA11-24) is assessed as Fully Supporting.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6761	MassDFG	Fish Community	Kitchen Brook	US of W. Mountain Rd, few hundred meters, Cheshire	42.56620	-73.17509
6762	MassDFG	Fish Community	Kitchen Brook	US of W. mountain Rd xing ~ 50m, Cheshire	42.56498	-73.17369
6763	MassDFG	Fish Community	Kitchen Brook	Behind cemetary off W. mountain Rd, Cheshire	42.56142	-73.17133
7579	MassDFG	Fish Community	Kitchen Brook	Next to cemetery , Cheshire	42.56149	-73.17143

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: B = Bluegill, BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, EBT = Brook Trout, LND = Longnose Dace, SC = Slimy Sculpin]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
6761	08/01/17	BP	TP	3	14	12	64	191	7	0	93%	93%	No	Yes	B, BT, EBT,
6762	08/01/17	BP	TP	2	201	24	58	185	19	177	100%	100%	Yes	Yes	EBT, SC,
6763	08/01/17	BP	TP	6	134	42	62	228	23	32	56%	100%	No	Yes	BND, BT, CRC, EBT, LND, SC,
7579	08/13/18	BP	TP	5	25	7	67	172	6	7	56%	100%	Yes	Yes	BND, CRC, EBT, LND, SC,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Kitchen Brook (MA11-24), therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent data are available to assess the status of the Aesthetics Use for Kitchen Brook (MA11-24), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	

No bacteria data are available to assess the status of the Primary Contact Recreational Use for Kitchen Brook (MA11-24), so it is Not Assessed.

Secondary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreational Use for Kitchen Brook (MA11-24), so it is Not Assessed.	

Kitchen Brook (MA11-34)

Location:	Headwaters, perennial portion east of Greylock Road, Cheshire to inlet of unnamed reservoir (Kitchen Brook Reservoir), Cheshire.
AU Type:	RIVER
AU Size:	2.4 MILES
Classification/Qualifier:	A: PWS, ORW, CWF (Tributary)

No usable data were available for Kitchen Brook (MA11-34) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Mauserts Pond (MA11009)

Location:	Clarksburg.
AU Type:	FRESHWATER LAKE
AU Size:	51 ACRES
Classification/Qualifier:	B

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aquatic Life Use for Mauserts Pond, so it is Not Assessed.	

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Mauserts Pond, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetics Use for Mauserts Pond, so it is Not Assessed	

Primary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	YES
2022 Use Attainment Summary	
The Mausert Pond DCR Beach in Clarksburg was not posted for any swimming advisories between 2014 and 2019 except during the summer of 2017 when posting exceeded 10% (was 32%). The Primary Contact Recreational Use for Mauserts Pond is assessed as Fully Supporting based on the typical lack of any swimming advisory postings at the Mausert Pond DCR Beach but an Alert is being identified since there was one year that postings exceeded 10% of the swimming season.	

Beach Postings

MassDPH Beach Posting Data Summary (% Bathing Season Posted 2014-2019) (Bailey, Logan Feb. 2, 2021) (MassDEP Undated 3)

Beach ID	Beach Name/Town	Left Boundary (Latitude)	Left Boundary (Longitude)	Right Boundary (Latitude)	Right Boundary (Longitude)	2014	2015	2016	2017	2018	2019	# years> 10%
4600	Mausert Pond (DCR)/Clarksburg	42.73588	-73.07480	42.73630	-73.07490	0%	0%	0%	32%	0%	0%	1

Secondary Contact Recreation

2022 Use Attainment	Alert
Fully Supporting	NO

2022 Use Attainment Summary

The Mausert Pond DCR Beach in Clarksburg was not posted for any swimming advisories between 2014 and 2019 except during the summer of 2017 when posting exceeded 10% (was 32%).
The Secondary Contact Recreational Use for Mauserts Pond is assessed as Fully Supporting based on the typical lack of any swimming advisory postings at the Mausert Pond DCR Beach.

Mcdonald Brook (MA11-16)

Location:	Source, southeast of Woodchuck Hill, Windsor to mouth at confluence with South Brook, Cheshire (includes former 1998 segment: McDonald Brook MA11-12).
AU Type:	RIVER
AU Size:	3 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Mcdonald Brook (MA11-16) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None		Unchanged

Miller Brook (MA11-27)

Location:	Headwaters, west and south of East Hoosac Street, Adams to mouth at confluence with Tophet Brook, Adams.
AU Type:	RIVER
AU Size:	2.4 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Miller Brook (MA11-27) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Mitchell Brook (MA11-35)

Location:	Headwaters, west of Greylock Road, New Ashford to mouth at confluence with East Branch Green River, New Ashford.
AU Type:	RIVER
AU Size:	1.1 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Mitchell Brook (MA11-35) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

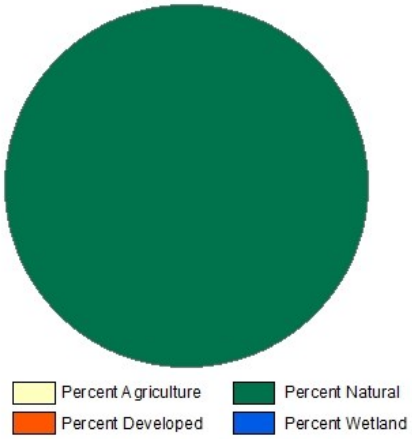
2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Money Brook (MA11-36)

Location:	Headwaters, east of Mt. Prospect, Williamstown to mouth at confluence with Hopper Brook, Williamstown.
AU Type:	RIVER
AU Size:	1.1 MILES
Classification/Qualifier:	B: CWF

MONEY BROOK - MA11-36

Watershed Area: 2.35 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.35	2.35	0.32	0.32
Agriculture	0%	0%	0%	0%
Developed	0.8%	0.8%	0%	0%
Natural	99.1%	99.1%	100%	100%
Wetland	0.1%	0.1%	0%	0%
Impervious Cover	0.7%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing in Money Brook just upstream of its confluence with Hopper Brook in Williamstown in July 2017 (SampleID 6588). The sample was comprised of multiple age classes of Eastern brook trout, as well as slimy sculpin and a brown trout. The Aquatic Life Use for Money Brook is assessed as Fully Supporting based on the presence of cold water fish species which are indicate of excellent habitat and water quality conditions.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6588	MassDFG	Fish Community	Money Brook	US of confluence/mouth, Williamstown	42.64957	-73.18480

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: BT = Brown Trout, EBT = Brook Trout, SC = Slimy Sculpin]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
6588	07/19/17	BP	TP	3	86	65	47	221	50	20	100%	100%	No	Yes	BT, EBT, SC,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Money Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetics Use for Money Brook, so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreational Use for Money Brook, so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreational Use for Money Brook, so it is Not Assessed.	

Mt. Williams Reservoir (MA11010)

Location:	North Adams.
AU Type:	FRESHWATER LAKE
AU Size:	46 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Mt. Williams Reservoir (MA11010) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None		Unchanged

North Branch Hoosic River (MA11-01)

Location:	Vermont State line, Clarksburg to USGS Gage (# 01332000), North Adams.
AU Type:	RIVER
AU Size:	4.3 MILES
Classification/Qualifier:	B: CWF, HQW

No usable data were available for North Branch Hoosic River (MA11-01) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Temperature		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
Temperature	Loss of Riparian Habitat (N)	X				
Temperature	Source Unknown (N)	X				

North Branch Hoosic River (MA11-02)

Location:	From USGS Gage (# 01332000), North Adams to mouth at confluence with Hoosic River, North Adams.
AU Type:	RIVER
AU Size:	1.5 MILES
Classification/Qualifier:	B: CWF, HQW

No usable data were available for North Branch Hoosic River (MA11-02) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	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	Escherichia Coli (E. Coli)		Unchanged
5	5	Fecal Coliform		Unchanged
5	5	Polychlorinated Biphenyls (PCBs)		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Alteration in Stream-side or Littoral Vegetative Covers*)	Channelization (Y)	X				
(Alteration in Stream-side or Littoral Vegetative Covers*)	Streambank Modifications/Destabilization (Y)	X				
(Flow Regime Modification*)	Channelization (Y)	X				
(Flow Regime Modification*)	Streambank Modifications/Destabilization (Y)	X				
Escherichia Coli (E. Coli)	Commercial Districts (Shopping/Office Complexes) (N)				X	
Escherichia Coli (E. Coli)	Illicit Connections/Hook-ups to Storm Sewers (N)				X	
Escherichia Coli (E. Coli)	Municipal (Urbanized High Density Area) (N)				X	
Escherichia Coli (E. Coli)	Source Unknown (N)				X	
Escherichia Coli (E. Coli)	Urban Runoff/Storm Sewers (N)				X	
Fecal Coliform	Commercial Districts (Shopping/Office Complexes) (N)				X	
Fecal Coliform	Illicit Connections/Hook-ups to Storm Sewers (N)				X	
Fecal Coliform	Municipal (Urbanized High Density Area) (N)				X	
Fecal Coliform	Source Unknown (N)				X	
Fecal Coliform	Urban Runoff/Storm Sewers (N)				X	
Polychlorinated Biphenyls (PCBs)	Source Unknown (N)	X				

Notch Brook (MA11-37)

Location:	Headwaters, perennial portion west of Ragged Mountain, Adams to inlet of Notch Reservoir, North Adams.
AU Type:	RIVER
AU Size:	1.2 MILES
Classification/Qualifier:	A: PWS, ORW, CWF (Tributary)

No usable data were available for Notch Brook (MA11-37) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

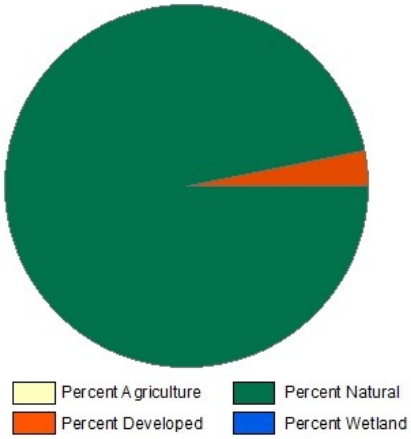
2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Notch Brook (MA11-38)

Location:	From outlet of Notch Reservoir, North Adams to mouth at confluence with the Hoosic River, North Adams.
AU Type:	RIVER
AU Size:	2.1 MILES
Classification/Qualifier:	B: CWF

NOTCH BROOK - MA11-38

Watershed Area: 3.61 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.61	2.93	0.53	0.45
Agriculture	0.3%	0.4%	0%	0%
Developed	3.1%	3.8%	6.9%	8.2%
Natural	95.9%	95.1%	91.3%	89.5%
Wetland	0.7%	0.7%	1.9%	2.3%
Impervious Cover	1.1%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing in Notch Brook at the end of Marion Road in North Adams in July 2017 (SampleID 6590). The sample was comprised of fluvial fishes including multiple age classes of Eastern brook trout and blacknose dace. The Aquatic Life Use for this Notch Brook AU (MA11-38) is assessed as Fully Supporting based on the presence of presence of reproducing brook trout which are indicate of excellent habitat and water quality conditions.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6590	MassDFG	Fish Community	Notch Brook	End of Marion Rd, North Adams	42.69420	-73.13570

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: BND = Blacknose Dace, EBT = Brook Trout]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
6590	07/20/17	BP	TP	2	143	134	52	209	105	0	94%	100%	No	Yes	BND, EBT,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in this Notch Brook AU (MA11-38), therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetics Use for this Notch Brook AU (MA11-38), so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreational Use for this Notch Brook AU (MA11-38), so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreational Use for this Notch Brook AU (MA11-38), so it is Not Assessed.	

Notch Reservoir (MA11011)

Location:	North Adams.
AU Type:	FRESHWATER LAKE
AU Size:	12 ACRES
Classification/Qualifier:	A: PWS, ORW

No usable data were available for Notch Reservoir (MA11011) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None		Unchanged

Patton Brook (MA11-39)

Location:	Headwaters, north of Main Road, Savoy to mouth at confluence with Tophet Brook, Adams.
AU Type:	RIVER
AU Size:	1.4 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Patton Brook (MA11-39) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

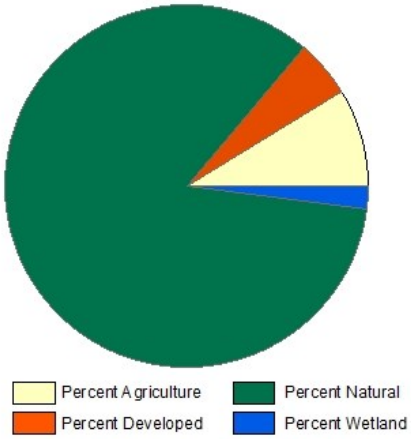
2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Paull Brook (MA11-20)

Location:	Headwaters, outlet of Mt. Williams Reservoir, North Adams to mouth at confluence with unnamed tributary, Williamstown (includes former 1998 segment: Paull Brook MA11-14).
AU Type:	RIVER
AU Size:	2.1 MILES
Classification/Qualifier:	B

Paull Brook - MA11-20

Watershed Area: 2.17 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.17	2.17	0.49	0.49
Agriculture	8.7%	8.7%	12.3%	12.3%
Developed	5.1%	5.1%	11%	11%
Natural	84.2%	84.2%	72.6%	72.6%
Wetland	2%	2%	4%	4%
Impervious Cover	2%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Dewatering*)		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Dewatering*)	Baseflow Depletion from Groundwater Withdrawals (N)	X				
(Dewatering*)	Dam or Impoundment (Y)	X				

Recommendations

2022 Recommendations
OTHER: Encourage minimum streamflow releases from Mt. Williams Reservoir, North Adams to help protect/restore habitat in Paull Brook for aquatic life.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing in Paull Brook upstream of Pattison Road crossing in North Adams in August 2016 (SampleID 6058). The sample was comprised of two fluvial species and notes were made that the sampling flows were low (<50% bankful) but water was clear. The Aquatic Life Use for Paull Brook will continue to be assessed as Not Supporting with the dewatering impairment being carried forward. This impairment was first identified in the 2016 IR reporting cycle based on the lack of flow in Paull Brook documented during the August and September 2007 MassDEP DWM surveys when streamflow conditions in the northwest part of the state at the time were reported to be normal. The practice of no release of water from the Mt Williams Reservoir dam, North Adams is the primary reason. Whether or not streamflow depletion from the Williamstown Water Department wellfield further reduces streamflow is undetermined at this time but may exacerbate the problem.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6058	MassDFG	Fish Community	Paull Brook	US of Pattison Rd Xing, North Adams	42.68676	-73.16111

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net, Gradient: H = High, L = Low; I/MT MG= Intolerant/Moderately Tolerant Macrohabitat Generalist]

[Species List: BND = Blacknose Dace, WS = White Sucker]

Sample ID	Sample Date	Method	Sample Type	Gradient	Total Taxa	Total Ind	Cold Ind %	Fluvial Taxa	Fluvial Ind %	Intol Ind %	I/MT MG Taxa	I/MT MG Ind %	Notables	CFR	Species List
6058	08/03/16	BP	TP	L	2	287	0%	2	100%	0%	0	0%	Yes	No	BND, WS,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Paull Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert

Not Assessed	NO
2022 Use Attainment Summary	
No recent data are available to assess the status of the Aesthetics Use for Paull Brook, so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Primary Contact Recreational Use for Paull Brook, so it is Not Assessed.	

Secondary Contact Recreation

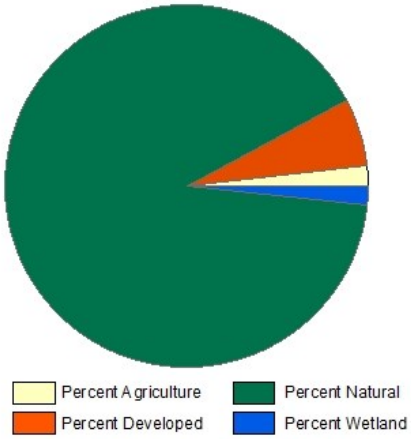
2022 Use Attainment	**Alert**
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Secondary Contact Recreational Use for Paull Brook, so it is Not Assessed.	

Pecks Brook (MA11-18)

Location:	Headwaters, perennial portion, west of West Mountatin Road, Adams to mouth at confluence with the Hoosic River, Adams.
AU Type:	RIVER
AU Size:	2.7 MILES
Classification/Qualifier:	B

Pecks Brook - MA11-18

Watershed Area: 3.3 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.3	3.3	1.12	1.12
Agriculture	1.8%	1.8%	1.1%	1.1%
Developed	6.1%	6.1%	7.8%	7.8%
Natural	90.5%	90.5%	88.5%	88.5%
Wetland	1.7%	1.7%	2.6%	2.6%
Impervious Cover	2.2%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing at three sites along Pecks Brook in Adams from up to downstream as follows: downstream of West Street at end of Tramway Drive (SampleID 6760 in August 2017), downstream of West Road (SampleID 7577 in August 2018), and upstream of Fisk/Forest Park junction (SampleID 7549 in July 2018). The fish samples all included multiple age classes of Eastern brook trout, as well as slimy sculpin and other fluvial species. The Aquatic Life Use of Pecks Brook will continue to be assessed as Fully Supporting based on the presence of cold water fish species which are indicate of excellent habitat and water quality conditions.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6760	MassDFG	Fish Community	Pecks Brook	DS of West St, @ end of Tramway Dr, Adams	42.62145	-73.13305
7549	MassDFG	Fish Community	Pecks Brook	Upstream of Fisk/Forest Park junction, Adams	42.61719	-73.12734
7577	MassDFG	Fish Community	Pecks Brook	Downstream of W Rd. , Adams	42.62128	-73.13307

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: B = Bluegill, BND = Blacknose Dace, BT = Brown Trout, EBT = Brook Trout, P = Pumpkinseed, SC = Slimy Sculpin]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
6760	08/01/17	BP	TP	4	189	34	56	222	25	127	90%	90%	No	Yes	B, BT, EBT, SC,
7549	07/30/18	BP	TP	4	131	10	58	243	4	106	99%	100%	Yes	Yes	BND, BT, EBT, SC,
7577	08/13/18	BP	TP	4	64	27	56	176	19	24	98%	98%	Yes	Yes	BT, EBT, P, SC,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Pecks Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetics Use for Pecks Brook, so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreational Use for Pecks Brook, so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreational Use for Pecks Brook, so it is Not Assessed.	

Penniman Brook (MA11-40)

Location:	Headwaters, perennial portion west of Route 8 (North State Road), Cheshire to mouth at confluence with the Hoosic River, Cheshire.
AU Type:	RIVER
AU Size:	0.7 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Penniman Brook (MA11-40) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Pettibone Brook (MA11-41)

Location:	Headwaters, perennial portion west of Curran Road, Cheshire to mouth at inlet Cheshire Reservoir, Middle Basin, Cheshire.
AU Type:	RIVER
AU Size:	2.4 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Pettibone Brook (MA11-41) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

Sherman Brook (MA11-42)

Location:	Headwaters, perennial portion north of Massachusetts Avenue, North Adams to mouth at confluence with the Hoosic River, North Adams.
AU Type:	RIVER
AU Size:	0.9 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Sherman Brook (MA11-42) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

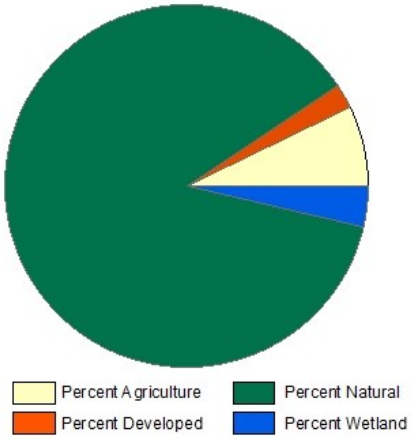
2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	3	None		Unchanged

South Brook (MA11-15)

Location:	Headwaters, west of Weston Mountain, Dalton to mouth at confluence with the Hoosic River, Cheshire (includes former 1998 segment: South Brook MA11-11).
AU Type:	RIVER
AU Size:	4.1 MILES
Classification/Qualifier:	B: CWF

South Brook - MA11-15

Watershed Area: 7.14 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	7.14	5.79	1.62	1.46
Agriculture	7.1%	8.7%	6.4%	7.1%
Developed	2.2%	2.4%	4.2%	4.7%
Natural	87.1%	86.2%	85.7%	85.5%
Wetland	3.6%	2.6%	3.6%	2.7%
Impervious Cover	0.7%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing in South Brook upstream of Notch Road in Cheshire in July 2019 (SampleID 8491). The fish sample was comprised entirely by fluvial fish including young of year Eastern brook trout as well as slimy sculpin. The Aquatic Life Use for South Brook will continue to be assessed as Fully Supporting based on the presence of cold water fish species that are indicative of excellent habitat and water quality.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
8491	MassDFG	Fish Community	South Brook	US of Notch Rd, Cheshire	42.55648	-73.14428

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: BND = Blacknose Dace, EBT = Brook Trout, LND = Longnose Dace, SC = Slimy Sculpin]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
8491	07/19/19	BP	TP	4	297	18	50	86	18	79	33%	100%	No	Yes	BND, EBT, LND, SC,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in South Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	
No recent data are available to assess the status of the Aesthetics Use for South Brook, so it is Not Assessed. The former alert for filamentous algae noted by MassDEP biologists in the brook near Wells Road, Cheshire (W1118) in May and October 2007 is being carried forward.	

Primary Contact Recreation

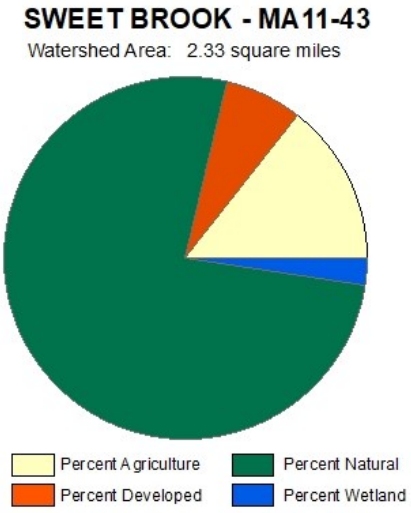
2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Primary Contact Recreational Use for South Brook, so it is Not Assessed. The former alert for filamentous algae noted by MassDEP biologists in the brook near Wells Road, Cheshire (W1118) in May and October 2007 is being carried forward.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	YES
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Secondary Contact Recreational Use for South Brook, so it is Not Assessed. The former alert for filamentous algae noted by MassDEP biologists in the brook near Wells Road, Cheshire (W1118) in May and October 2007 is being carried forward.	

Sweet Brook (MA11-43)

Location:	Headwaters, perennial portion west of Oblong Road, Williamstown to mouth at confluence with Hemlock Brook, Williamstown.
AU Type:	RIVER
AU Size:	2.9 MILES
Classification/Qualifier:	B: CWF



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.33	2.33	0.59	0.59
Agriculture	14.4%	14.4%	19.1%	19.1%
Developed	6.9%	6.9%	7.5%	7.5%
Natural	76.3%	76.3%	69.2%	69.2%
Wetland	2.4%	2.4%	4.2%	4.2%
Impervious Cover	2.1%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing in Sweet Brook north of Oblong Road in Williamstown in September 2014 (SampleID 5446). The sample was comprised entirely by multiple age classes of Eastern brook trout. The Aquatic Life Use for Sweet Brook is assessed as Fully Supporting based on the presence of cold water fish species which are indicate of excellent habitat and water quality conditions.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
5446	MassDFG	Fish Community	Sweet Brook	N of Oblong Rd, Williamstown	42.67768	-73.26418

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: EBT = Brook Trout]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
5446	09/19/14	BP	TP	1	78	78	44	169	75	0	100%	100%	No	Yes	EBT,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Sweet Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetics Use for Sweet Brook, so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreational Use for Sweet Brook, so it is Not Assessed.	

Secondary Contact Recreation

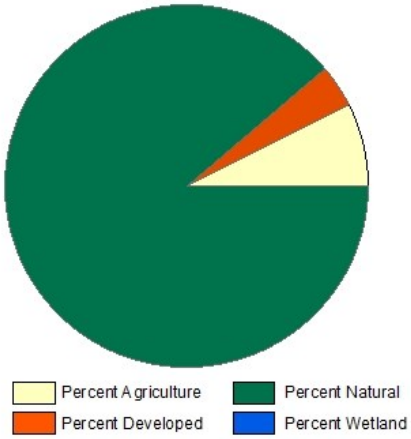
2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreational Use for Sweet Brook, so it is Not Assessed.	

Thunder Brook (MA11-10)

Location:	Headwaters, perennial portion, Cheshire to mouth at confluence with Kitchen Brook, Cheshire.
AU Type:	RIVER
AU Size:	1.5 MILES
Classification/Qualifier:	A: PWS, ORW

Thunder Brook - MA11-10

Watershed Area: 1.34 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.34	1.34	0.31	0.31
Agriculture	7.3%	7.3%	4.8%	4.8%
Developed	3.8%	3.8%	3.7%	3.7%
Natural	88%	88%	90.7%	90.7%
Wetland	1%	1%	0.7%	0.7%
Impervious Cover	1.4%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing at three sites along Thunder Brook in Cheshire from up to downstream as follows: most upstream West Mountain Road crossing (SampleID 7576 in August 2018), along West Mountain Road (SampleID 8492 in July 2019), and Old West Mountain Road crossing (SampleID 7575 in August 2018—a large black bear was lying in a pool at the 100m mark at this site so sampling ended at 85m). All three samples contained multiple age classes of Eastern brook trout with slimy sculpin at the two more downstream sites. The Aquatic Life Use for Thunder Brook will continue to be assessed as Fully Supporting based on the presence of cold water fish species which are indicate of excellent habitat and water quality conditions.	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
7575	MassDFG	Fish Community	Thunder Brook	None , Chesire	42.56433	-73.17500
7576	MassDFG	Fish Community	Thunder Brook	None , Chesire	42.56392	-73.18500
8492	MassDFG	Fish Community	Thunder Brook	Along W. Mountain Rd, Cheshire	42.56458	-73.17597

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: EBT = Brook Trout, SC = Slimy Sculpin]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
7575	08/09/18	BP	TP	2	22	7	67	207	3	15	100%	100%	Yes	Yes	EBT, SC,
7576	08/09/18	BP	TP	1	18	18	62	180	8	0	100%	100%	No	Yes	EBT,
8492	07/19/19	BP	TP	2	52	31	44	175	30	21	100%	100%	Yes	Yes	EBT, SC,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Thunder Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetics Use for Thunder Brook, so it is Not Assessed.	

Primary Contact Recreation

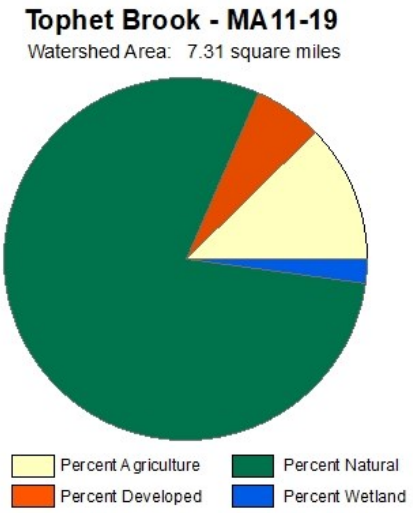
2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreational Use for Thunder Brook, so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreational Use for Thunder Brook, so it is Not Assessed.	

Tophet Brook (MA11-19)

Location:	Source west of Burnett Road, Savoy (in the Savoy Mountain State Forest) to mouth at confluence with the Hoosic River, Adams (includes former 1998 segment: Tophet Brook MA11-08).
AU Type:	RIVER
AU Size:	6.2 MILES
Classification/Qualifier:	B



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	7.31	6.2	2.01	1.85
Agriculture	12.3%	13.8%	6.7%	7%
Developed	6.1%	7.1%	9.6%	10.4%
Natural	79.4%	77%	80.6%	79.5%
Wetland	2.2%	2.1%	3.2%	3.1%
Impervious Cover	2.3%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Alteration in Stream-side or Littoral Vegetative Covers*)		Unchanged
4c	4c	(Flow Regime Modification*)		Unchanged

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Alteration in Stream-side or Littoral Vegetative Covers*)	Channelization (Y)	X				
(Alteration in Stream-side or Littoral Vegetative Covers*)	Streambank Modifications/Destabilization (Y)	X				
(Flow Regime Modification*)	Channelization (Y)	X				
(Flow Regime Modification*)	Streambank Modifications/Destabilization (Y)	X				

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	NO
2022 Use Attainment Summary	
MA DFG biologists conducted backpack electrofishing at two sites along Tophet Brook in Adams in July 2017; Off of East Mountain Road upstream of the confluence with an unnamed tributary (SampleID 6608) and downstream of Walling Road crossing (SampleID 6609). Both sites contained multiple age classes of Eastern brook trout and at least one other fluvial species. The lower 0.3mile reach of the brook (Summer Street to the Mill Street bridge in Adams), however, remains encased in a concrete-sided flood control chute. The Aquatic Life Use for Tophet Brook will continue to be assessed as Not Supporting with the Alteration in Stream-side or Littoral Vegetative Covers and Flow Regime Modification impairments being carried forward because of the habitat degradation (concrete sided flood control chute).	

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6608	MassDFG	Fish Community	Tophet Brook	Off E. Mountain Rd US of Confluence w/ UNT?, Adams	42.60650	-73.07750
6609	MassDFG	Fish Community	Tophet Brook	DS of Walling Rd xing, Adams	42.60672	-73.09789

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)

[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]

[Species List: BND = Blacknose Dace, EBT = Brook Trout, LND = Longnose Dace]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
6608	07/27/17	BP	TP	2	17	16	64	152	14	0	94%	100%	Yes	Yes	BND, EBT,
6609	07/27/17	BP	TP	3	138	104	52	230	82	0	75%	100%	Yes	Yes	BND, EBT, LND,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in Tophet Brook, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent data are available to assess the status of the Aesthetics Use for Tophet Brook, so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Primary Contact Recreational Use for Tophet Brook, so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No recent bacteria data are available to assess the status of the Secondary Contact Recreational Use for Tophet Brook, so it is Not Assessed.	

Tunnel Brook (MA11-26)

Location:	Headwaters, outlet small unnamed pond east of West Shaft Road, North Adams to mouth at confluence with Phillips Creek, North Adams.
AU Type:	RIVER
AU Size:	1.7 MILES
Classification/Qualifier:	B: CWF

No usable data were available for Tunnel Brook (MA11-26) for the 2022 Integrated Reporting cycle, therefore its category, use attainments, impairments, associated actions, and sources remain unchanged from the previous cycle.

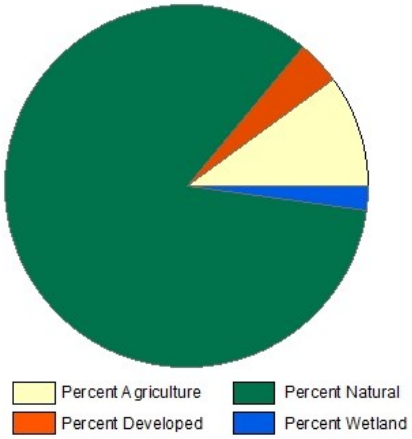
2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
3	3	None		Unchanged

West Branch Green River (MA11-22)

Location:	Headwaters, perennial portion, west of Route 43, Hancock (near New York border) to mouth at confluence with Green River, Williamstown.
AU Type:	RIVER
AU Size:	7.9 MILES
Classification/Qualifier:	B

West Branch Green River - MA11-22

Watershed Area: 14.2 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	14.2	7.97	4.22	2.54
Agriculture	10%	14%	12.3%	13.4%
Developed	3.9%	5.4%	6.4%	8.6%
Natural	84%	77.7%	76.1%	71.2%
Wetland	2.1%	2.9%	5.2%	6.8%
Impervious Cover	1.1%			

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	2	None		Unchanged

Recommendations

2022 Recommendations
ALU: Conduct temperature monitoring (deploy long-term thermistors) in the West Branch Green River to better evaluate Cold Water habitat conditions at several locations throughout the river bracketing potential areas of thermal stress.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Fully Supporting	NO
2022 Use Attainment Summary	

MA DFG biologists conducted backpack electrofishing at two sites along the West Branch Green River across from marked WMA parking off Rt 43, Hancock (SampleID 6661 in August 2017) and upstream of Old Mill Road crossing in Williamstown (SampleID 6589 in July 2017). Both samples were dominated by fluvial fishes including multiple age classes of Eastern brook trout, as well as slimy sculpin and brown trout.
The Aquatic Life Use for the West Branch Green River will continue to be assessed as Fully Supporting based on the presence of cold water fish species which are indicate of excellent habitat and water quality conditions.

Monitoring Stations

Station Code	Organization	Type	Water Body	Station Description	Latitude	Longitude
6589	MassDFG	Fish Community	West Branch Green River	US of Old Mill Rd xing, Williamstown	42.65131	-73.25329
6661	MassDFG	Fish Community	West Branch Green River	Across from marked WMA parking off Rt 43, Hancock	42.62518	-73.27719

Biological Monitoring Information

Fish Community Data and DELTS

Fish Community Data (2012-2019) Provided by MassDFG. (MassDFG 2020) (MassDEP Undated 2)
[Sample Type: TP= Total Pickup, SP= Selective Pickup, Method: BT=Boat Shocking, BP= Backpack Shocking, BG= Barge Shocking, SE= Seine, SL= Snorkel, NS= Not Stated, MT= Minnow Trap, GN= Gillnet, FY= Fyke Net]
[Species List: B = Bluegill, BND = Blacknose Dace, BT = Brown Trout, CRC = Creek Chub, EBT = Brook Trout, LND = Longnose Dace, P = Pumpkinseed, SC = Slimy Sculpin, WS = White Sucker]

Sample ID	Sample Date	Method	Sample Type	Total Taxa	Total Ind	EBT Ind	EBT Min Length (mm)	EBT Max Length (mm)	EBT ≤140mm Ind	SC Ind	Cold Ind %	Fluvial Ind %	Notables	CFR	Species List
6589	07/20/17	BP	TP	9	257	7	70	243	3	47	40%	98%	No	Yes	B, BND, BT, CRC, EBT, LND, P, SC, WS,
6661	08/14/17	BP	TP	5	441	85	62	242	73	208	69%	100%	No	Yes	BND, BT, CRC, EBT, SC,

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No fish toxics sampling has been conducted in the West Branch Green River, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetics Use for the West Branch Green River, so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreational Use for the West Branch Green River, so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreational Use for the West Branch Green River, so it is Not Assessed.	

Windsor Lake (MA11016)

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

2018/20 AU Category	2022 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
3	4c	(Curly-leaf Pondweed*)		Added

Impairment	Source (Confirmed Y/N)	Fish, other Aquatic Life and Wildlife	Fish Consumption	Aesthetic	Primary Contact Recreation	Secondary Contact Recreation
(Curly-leaf Pondweed*)	Introduction of Non-native Organisms (Accidental or Intentional) (Y)	X				

Recommendations

2022 Recommendations
ALU: Conduct an aquatic macrophyte survey in Windsor Lake to confirm the presence of any non-native species of *Myriophyllum* (confirmation of any non-native species should be made by a qualified state agency/taxonomist) as *M. spicatum* was identified in one herbicide permit application.

Designated Use Attainment Decisions

Fish, other Aquatic Life and Wildlife

2022 Use Attainment	Alert
Not Supporting	YES
2022 Use Attainment Summary	
According to MassDEP's Herbicide Database, herbicide permit applications were completed by the City of North Adams to allow treatment of infestations of the non-native aquatic macrophyte, curly-leaf pondweed (*Potamogeton crispus*), in Windsor Lake in 2006, 2007, and 2016. The Aquatic Life Use for Windsor Lake is assessed as Not Supporting based on the presence of the non-native aquatic macrophyte *P. crispus.* The 2007 application also listed Eurasian water milfoil (*Myriophyllum spicatum*), but the presence of this species needs confirmation, so it is being identified with an Alert.	

Biological Monitoring Information

Non-native Aquatic Species Presence

MassDEP Non-Native Aquatic Invasive Species Records as of May 2021. (MassDEP 2017)

Summary Statement	Assessment Recommendation
According to MassDEP's Herbicide Database, herbicide permit applications were completed by the City of North Adams to allow treatment of infestations of the non-native aquatic macrophyte, curly-leaf pondweed (*Potamogeton crispus*), in Windsor Lake in 2006, 2007, and 2016. The 2007 application also listed Eurasian water milfoil (*Myriophyllum spicatum*), but the presence of this species should be confirmed by DEP biologists and an Alert should be issued.	Conduct an aquatic macrophyte survey in Windsor Lake to confirm whether the non-native *Myriophyllum spicatum* is present in the lake.

Fish Consumption

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No site-specific fish consumption advisory has been issued by MA DPH for Windsor Lake in North Adams, therefore the Fish Consumption Use is Not Assessed.	

Aesthetic

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No data are available to assess the status of the Aesthetics Use for Windsor Lake, so it is Not Assessed.	

Primary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Primary Contact Recreational Use for Windsor Lake, so it is Not Assessed.	

Secondary Contact Recreation

2022 Use Attainment	Alert
Not Assessed	NO
2022 Use Attainment Summary	
No bacteria data are available to assess the status of the Secondary Contact Recreational Use for Windsor Lake, so it is Not Assessed.	

Data Sources

Bailey, Logan. "RE: Beaches Bill reporting data." Email to Dan Davis (MassDEP Watershed Planning Program) providing an Excel file (DEP_BeachDataRequest) with data for marine and DCR freshwater beaches, Environmental Toxicology Program, Bureau of Environmental Health, Massachusetts Department of Public Health, Boston, MA, MA, Feb. 2, 2021.

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Kashiwagi, M., and T. Richards. "Development of Target Fish Community Models for Massachusetts Mainstem Rivers Technical Report." Division of Fisheries and Wildlife, Massachusetts Department of Fish and Game, Westborough, Massachusetts, 2009.

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MassDEP. "2015 Scanned Project Files, "Hudson watershed lake survey data, 1997," D01-19.pdf." Division of Watershed Management, Massachusetts Department of Environmental Protection, Worcester, MA, 1997.

MassDEP. "2015 Scanned Project Files, "Macrophyte survey project data, 2002," D04-13.pdf." Division of Watershed Management, Massachusetts Department of Environmental Protection, Worcester, MA, 2002.

MassDEP. "Herbicide permit applications database, as of January 2017." Division of Watershed Management, Massachusetts Department of Environmental Protection, Worcester, MA, 2017.

MassDEP. "Massachusetts Consolidated Assessment and Listing Methodology (CALM) Guidance Manual for the 2022 Reporting Cycle." CN 564.0, Watershed Planning Program, Division of Watershed Management, Massachusetts Department of Environmental Protection, Worcester, MA, 2022.

MassDEP. "Open file analysis of 2005-2017 fish community data in comparison with the Target Fish Community model." Division of Watershed Management, Massachusetts Department of Environmental Protection, Worcester, Massachusetts, Undated 1.

MassDEP. "Open file analysis of DFG 2012-2019 fish community data using 2022 CALM guidance." Division of Watershed Management, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 2.

MassDEP. "Open file analysis of external water quality data (potential date range 2011-2020) using 2022 CALM guidance." Division of Watershed Management, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 3.

MassDEP. "Open file analysis of MassDEP WPP benthic survey data (2011-2018) using 2022 CALM guidance." Watershed Planning Program, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 4.

MassDEP. "Open file analysis of MassDEP WPP water quality data collected between 2011 and 2018 using 2022 CALM guidance." Division of Watershed Management, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 5.

MassDEP. "Open files of repository documents for the 2016 Integrated Report cycle." Division of Watershed Management, 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." Division of Watershed Management, Massachusetts Department of Environmental Protection, Worcester, MA, Undated 7.

MassDFG. *Fish Community Data 1964-2019.* Database submitted to MassDEP on 24 November 2020. Division of Fisheries and Wildlife, Massachusetts Department of Fish and Game. Westborough, MA, November 24, 2020.

MassDFG. *Fish Community Data 1998-2017.* Database. Prod. Division of Fisheries and Wildlife, Massachusetts Department of Fish and Game. Westborough, Massachusetts, 2018.

O'Brien-Clayton, Katie A. "Hudson River Watershed 2002 Water Quality Assessment Report." CN 139.5, Division of Watershed Management, Massachusetts Department of Environmental Protection, Worcester, MA, 2006.