Appendix 16
Housatonic River Watershed
Assessment and Listing Decision Summary

Final Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 Reporting Cycle

CN: 505.1

November 2021

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2018/20 Cycle Impairment Changes

Waterbody	AU_ID	2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
Ashley Lake	MA21003	3	5	Mercury in Fish Tissue		Added
East Branch Housatonic River	MA21-01	5	2	PCBs in Fish Tissue		Removed
Goose Pond	MA21043	4c	5	Dissolved Oxygen		Added
Goose Pond	MA21043	4c	5	(Non-Native Aquatic Plants*)		Removed
Housatonic River	MA21-04	5	5	(Non-Native Aquatic Plants*)		Removed
Housatonic River	MA21-04	5	5	PCBs in Sediment		Added
Housatonic River	MA21-04	5	5	(Water Chestnut*)		Added
Housatonic River	MA21-19	5	5	Ambient Bioassays - Chronic Aquatic Toxicity		Added
Housatonic River	MA21-19	5	5	Fish Bioassessments		Added
Housatonic River	MA21-19	5	5	PCBs in Sediment		Added
Housatonic River	MA21-19	5	5	Polychlorinated Biphenyls (PCBs)		Removed
Housatonic River	MA21-20	5	5	(Zebra Mussel, Dreissena Polymorph*)		Added
Hubbard Brook	MA21-15	4c	5	(Curly-leaf Pondweed*)		Added
Hubbard Brook	MA21-15	4c	5	Lack of a coldwater assemblage		Added
Hubbard Brook	MA21-15	4c	5	(Non-Native Aquatic Plants*)		Removed
Hubbard Brook	MA21-15	4c	5	Temperature		Added
Hubbard Brook	MA21-15	4c	5	(Water Chestnut*)		Added
Karner Brook	MA21-38	4c	2	(Dewatering*)		Removed
Lake Buel	MA21014	5	5	(Brittle Naiad, Najas Minor*)		Added
Lake Buel	MA21014	5	5	(Curly-leaf Pondweed*)		Added
Lake Garfield	MA21040	5	5	(Fanwort*)		Added
Lake Garfield	MA21040	5	5	(Non-Native Aquatic Plants*)		Removed
Laurel Lake	MA21057	5	5	(Brittle Naiad, Najas Minor*)		Added
Laurel Lake	MA21057	5	5	(Curly-leaf Pondweed*)		Added
Laurel Lake	MA21057	5	5	(Non-Native Aquatic Plants*)		Removed
Laurel Lake	MA21057	5	5	(Water Chestnut*)		Added
Mansfield Pond	MA21065	4c	4c	(Curly-leaf Pondweed*)		Added
Mansfield Pond	MA21065	4c	4c	(Non-Native Aquatic Plants*)		Removed
Onota Brook	MA21-80	--	4c	(Habitat Assessment*)		Added
Onota Lake	MA21078	4c	5	(Brittle Naiad, Najas Minor*)		Added
Onota Lake	MA21078	4c	5	(Curly-leaf Pondweed*)		Added
Onota Lake	MA21078	4c	5	Dissolved Oxygen		Added
Onota Lake	MA21078	4c	5	(Non-Native Aquatic Plants*)		Removed
Onota Lake	MA21078	4c	5	(Water Chestnut*)		Added
Plunkett Reservoir	MA21082	4c	4c	(Brittle Naiad, Najas Minor*)		Added
Plunkett Reservoir	MA21082	4c	4c	(Non-Native Aquatic Plants*)		Removed
Pontoosuc Lake	MA21083	4a	4a	(Brittle Naiad, Najas Minor*)		Added
Pontoosuc Lake	MA21083	4a	4a	(Curly-leaf Pondweed*)		Added
Pontoosuc Lake	MA21083	4a	4a	(Non-Native Aquatic Plants*)		Removed
Pontoosuc Lake	MA21083	4a	4a	(Water Chestnut*)		Added
Prospect Lake	MA21084	4c	4c	(Curly-leaf Pondweed*)		Added

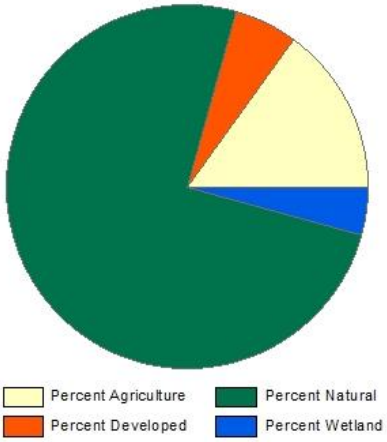
Waterbody	AU_ID	2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
Richmond Pond	MA21088	4c	4c	(Brittle Naiad, Najas Minor*)		Added
Richmond Pond	MA21088	4c	4c	(Curly-leaf Pondweed*)		Added
Richmond Pond	MA21088	4c	4c	(Non-Native Aquatic Plants*)		Removed
Shaker Mill Pond	MA21094	4c	4c	(Curly-leaf Pondweed*)		Added
Shaker Mill Pond	MA21094	4c	4c	(Non-Native Aquatic Plants*)		Removed
Shaker Mill Pond	MA21094	4c	4c	(Water Chestnut*)		Added
Silver Lake	MA21097	--	5	PCBs in Fish Tissue		Added
Southwest Branch Housatonic River	MA21-17	5	5	Temperature		Added
Stevens Pond	MA21104	4c	4c	(Curly-leaf Pondweed*)		Added
Stevens Pond	MA21104	4c	4c	(Non-Native Aquatic Plants*)		Removed
Stockbridge Bowl	MA21105	4a	5	Dissolved Oxygen		Added
Upper Goose Pond	MA21110	4c	3	(Eurasian Water Milfoil, Myriophyllum Spicatum*)		Removed
West Branch Housatonic River	MA21-18	5	5	Combined Biota/Habitat Bioassessments		Removed
West Branch Housatonic River	MA21-18	5	5	(Habitat Assessment*)		Added
West Branch Housatonic River	MA21-18	5	5	Lack of a coldwater assemblage		Added
West Branch Housatonic River	MA21-18	5	5	PCBs in Sediment		Added
West Branch Housatonic River	MA21-18	5	5	Polychlorinated Biphenyls (PCBs)		Removed
West Branch Housatonic River	MA21-18	5	5	Temperature		Added
West Branch Housatonic River	MA21-18	5	5	Trash		Changed
Williams River	MA21-06	2	5	Temperature		Added

ALFORD BROOK (MA21-44)

Location:	Headwaters, outlet small unnamed pond north of Wilson Road, West Stockbridge to mouth at confluence with Seekonk Brook, Alford.
AU Type:	RIVER
AU Size:	6.3 MILES
Classification/Qualifier:	B

ALFORD BROOK - MA21-44

Watershed Area: 12.99 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	10.51	5.51	1.96	1.07
Agriculture	15.0%	16.8%	15%	19.6%
Developed	5.6%	5.2%	6%	6.3%
Natural	75.1%	74.2%	68.1%	63%
Wetland	4.3%	3.7%	10.9%	11.1%
Impervious Cover	2.1%			

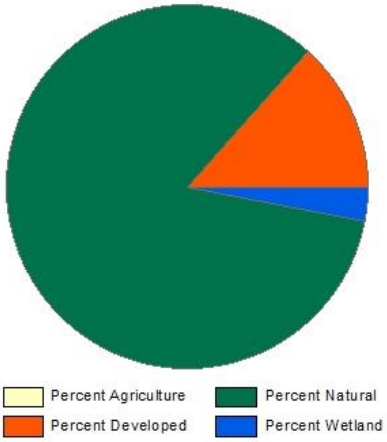
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Alford Brook is assessed as support based on the presence of a reproducing brook trout population documented in August 2007 by MA DFG.

Anthony Brook (MA21-10)

Location:	From Anthony Pond Reservoir intake, Dalton to mouth at confluence with Wahconah Falls Brook, Dalton.
AU Type:	RIVER
AU Size:	1.6 MILES
Classification/Qualifier:	B

Anthony Brook - MA21-10

Watershed Area: 2.27 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.27	2.27	0.71	0.71
Agriculture	0.3%	0.3%	0.7%	0.7%
Developed	13.3%	13.3%	14.9%	14.9%
Natural	83.3%	83.3%	80.3%	80.3%
Wetland	3.1%	3.1%	4%	4%
Impervious Cover	2%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting (Alert)
The Aquatic Life Use for Anthony Brook is assessed as support based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG. Dissolved metal samples were collected on three occasions (July, August, and September 2007). Two of the three dissolved lead samples slightly exceeded the chronic criterion (TU 1.13 and 2.55) so lead is being identified with an alert status.

Ashley Lake (MA21003)

Location:	Washington.
AU Type:	FRESHWATER LAKE
AU Size:	94 ACRES
Classification/Qualifier:	A: PWS, ORW

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
3	5	Mercury in Fish Tissue		Added

Fish, other Aquatic Life and Wildlife Use: Not Assessed

No recent data are available so the Aquatic Life Use is not assessed for Ashley Lake.

Fish Consumption Use: Not Supporting

MassDEP biologists conducted fish toxics sampling at Ashley Lake in June 2016 as part of the probabilistic lake surveys (MAP2). Because of elevated mercury measured in yellow perch filets, MassDPH issued the following fish consumption advisories:

- *"Children younger than 12 years of age, pregnant women, women of childbearing age who may become pregnant, and nursing mothers should not eat any of the affected fish species (yellow perch) from this water body."*
- *"The general public should limit consumption of affected fish species (yellow perch) to two meals per month."*

Since there is a site specific DPH advisory for elevated mercury in fish tissue, the Fish Consumption Use for Ashley Lake (MA21003) is assessed as Not Supporting. The likely source, although not confirmed, is atmospheric deposition. Data Source: (MassDPH, 2019)

Ashmere Lake (MA21005)

Location:	Hinsdale/Peru.
AU Type:	FRESHWATER LAKE
AU Size:	294 ACRES
Classification/Qualifier:	B

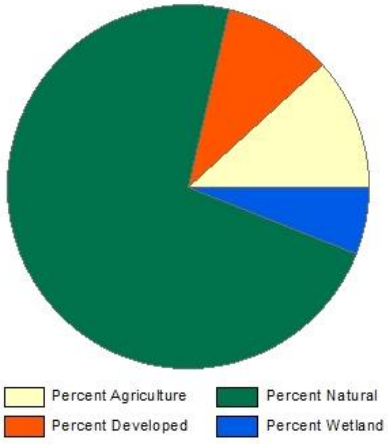
Fish, other Aquatic Life and Wildlife Use: Not Supporting
The presence of the aquatic non-native species *Myriophyllum spicatum* (Eurasian milfoil) was noted in Ashmere Lake during an August 1997 DWM synoptic survey and more recently in 2009 as part of the zebra mussel Phase I Assessment in Berkshire County. The Aquatic Life Use is assessed as not supporting based on this infestation.

BALDWIN BROOK (MA21-48)

Location:	From the NY/MA border in West Stockbridge to mouth at confluence with Flat Brook, West Stockbridge.
AU Type:	RIVER
AU Size:	1.9 MILES
Classification/Qualifier:	B

BALDWIN BROOK - MA21-48

Watershed Area: 5.56 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.33	3.33	0.80	0.80
Agriculture	11.7%	11.7%	12.9%	12.9%
Developed	9.7%	9.7%	9.8%	9.8%
Natural	72.4%	72.4%	59.8%	59.8%
Wetland	6.1%	6.1%	17.5%	17.5%
Impervious Cover	3.4%			

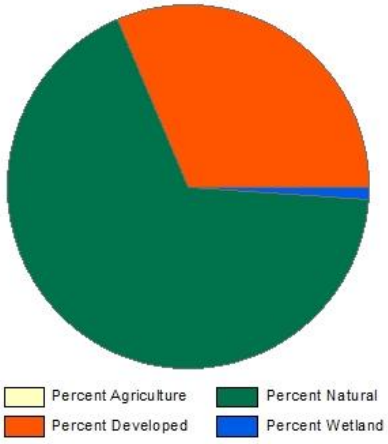
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Baldwin Brook is assessed as support based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG.

BARTON BROOK (MA21-60)

Location:	Headwaters, south of Grange Hall Road, Dalton to mouth at confluence with East Branch Housatonic River, Pittsfield.
AU Type:	RIVER
AU Size:	3.2 MILES
Classification/Qualifier:	B

BARTON BROOK - MA21-60

Watershed Area: 1.96 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.96	1.96	0.49	0.49
Agriculture	0.4%	0.4%	0%	0%
Developed	31.3%	31.3%	30.3%	30.3%
Natural	67.2%	67.2%	68.3%	68.3%
Wetland	1.1%	1.1%	1.5%	1.5%
Impervious Cover	12.3%			

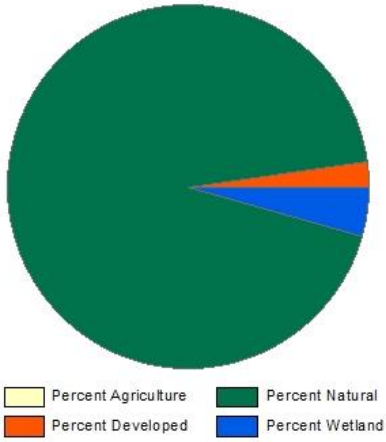
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Barton Brook is assessed as support based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG.

BEAR ROCK STREAM (MA21-43)

Location:	Headwaters, outlet Plantain Pond, Mount Washington to mouth at confluence with Schenob Brook, Sheffield.
AU Type:	RIVER
AU Size:	2 MILES
Classification/Qualifier:	B

BEAR ROCK STREAM - MA21-43

Watershed Area: 1.69 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.69	1.69	0.43	0.43
Agriculture	0.6%	0.6%	0.4%	0.4%
Developed	2.2%	2.2%	2.8%	2.8%
Natural	92.8%	92.8%	84.7%	84.7%
Wetland	4.4%	4.4%	12.2%	12.2%
Impervious Cover	6.4%			

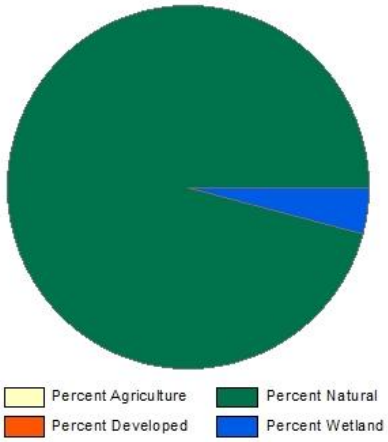
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Bear Rock Stream is assessed as support based on the presence of a reproducing brook trout population documented in August 2008 by MA DFG

BEARTOWN BROOK (MA21-74)

Location:	Headwaters, confluence of West and East brooks (east of Beartown Mountain Road), Lee to mouth at confluence with Housatonic River, Lee.
AU Type:	RIVER
AU Size:	0.8 MILES
Classification/Qualifier:	B

BEAR TOWN BROOK - MA21-74

Watershed Area: 8.83 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	8.83	5.61	1.77	1.17
Agriculture	0.1%	0.1%	0.4%	0.6%
Developed	0.7%	0.7%	1.4%	1.9%
Natural	95.1%	95.9%	87.6%	90.8%
Wetland	4.1%	3.2%	10.6%	6.7%
Impervious Cover	1.7%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Beartown Brook is assessed as supporting based on the presence of multiple age classes of brook trout found in July 2013 at the MA DFG sampling site on this segment as well as the water quality data collected during the summer of 2007 that were all indicative of good conditions (minimum DO 7.4mg/L, maximum temperature 18.6°C, good pH, low ammonia and total phosphorus concentrations – average and maximum total phosphorus 0.005 and 0.006mg/L, respectively). There were no observations of any dense or very dense filamentous algae noted.

Benedict Pond (MA21011)

Location:	Great Barrington/Monterey.
AU Type:	FRESHWATER LAKE
AU Size:	37 ACRES
Classification/Qualifier:	B

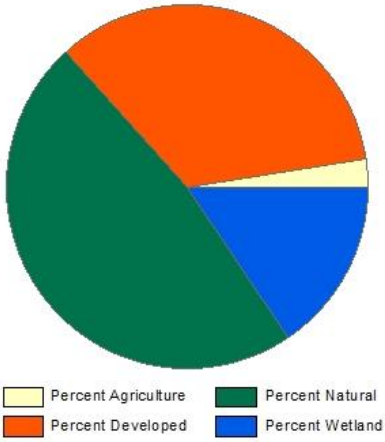
Fish, other Aquatic Life and Wildlife Use: Not Assessed
No recent data are available so the Aquatic Life Use is not assessed for Benedict Pond.

BRATTLE BROOK (MA21-59)

Location:	Headwaters, northwest of Tully Mountain, Dalton to mouth at confluence with East Branch Housatonic River, Pittsfield.
AU Type:	RIVER
AU Size:	2.9 MILES
Classification/Qualifier:	B

BRATTLE BROOK - MA21-59

Watershed Area: 3.54 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.54	3.54	0.69	0.69
Agriculture	2.5%	2.5%	0%	0%
Developed	34.2%	34.2%	18.9%	18.9%
Natural	47.7%	47.7%	38.9%	38.9%
Wetland	15.6%	15.6%	42.2%	42.2%
Impervious Cover	4%			

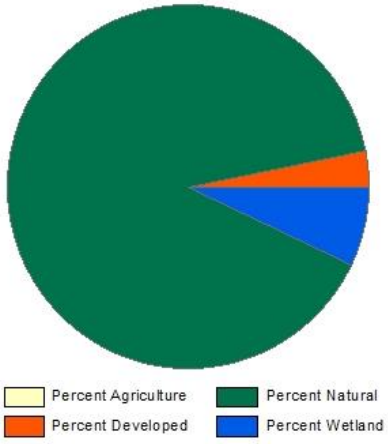
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Brattle Brook is assessed as support based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG.

Cady Brook (MA21-12)

Location:	Headwaters, northwest corner Peru, to mouth at inlet of Windsor Reservoir, Hinsdale.
AU Type:	RIVER
AU Size:	3.5 MILES
Classification/Qualifier:	A: PWS, ORW

Cady Brook - MA21-12

Watershed Area: 3.81 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.80	3.79	0.42	0.42
Agriculture	0.0%	0%	0%	0%
Developed	3.2%	3.2%	2.8%	2.8%
Natural	89.8%	89.8%	83.6%	83.6%
Wetland	7.1%	7.1%	13.6%	13.6%
Impervious Cover	9%			

Fish, other Aquatic Life and Wildlife Use: Not Assessed
No recent data are available so the Aquatic Life Use is not assessed for Cady Brook.

Card Pond (MA21015)

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

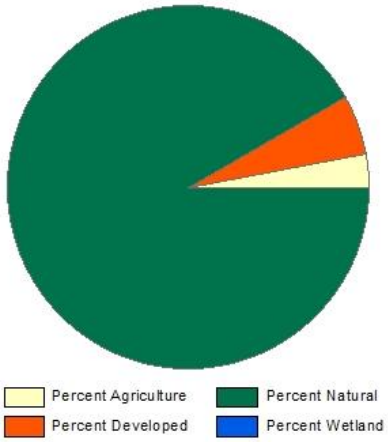
Fish, other Aquatic Life and Wildlife Use: Not Assessed (Alert)
In the USGS Non-Indigenous Aquatic Species database, there is a report of an infestation of the non-native aquatic macrophyte, *Potamogeton crispus*, in Card Pond. This needs confirmation. No other recent data are available with which to make an assessment. Card Pond is not assessed, but an Alert is being issued for a potential infestation of a non-native species.

CHURCHILL BROOK (MA21-34)

Location:	Headwaters, perennial portion in the Pittsfield State Forest, Hancock (north of Honwee Mountain, Lanesborough) to mouth at inlet Onota Lake, Pittsfield.
AU Type:	RIVER
AU Size:	2.8 MILES
Classification/Qualifier:	B: CWF

CHURCHILL BROOK - MA21-34

Watershed Area: 1.26 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.26	1.26	0.37	0.37
Agriculture	2.9%	2.9%	3.1%	3.1%
Developed	5.3%	5.3%	9.3%	9.3%
Natural	90.9%	90.9%	85%	85%
Wetland	0.9%	0.9%	2.5%	2.5%
Impervious Cover	1.6%			

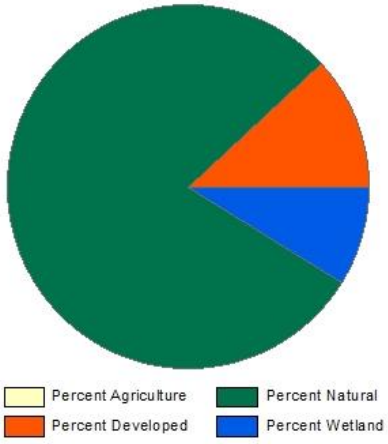
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Churchill Brook is assessed as supporting based on the presence of multiple age classes of brook trout found in August 2002, August 2006 and July 2013 at the MA DFG fish population sampling sites on this segment. In addition benthic macroinvertebrate sampling by the Housatonic Valley Association (HVA 2017) using RBPIII analysis of found a"not impacted" or "slightly impacted" benthic community at each of the their three sampling station when compared to their reference sampling station (KP11, Konkapot River).

Cleveland Brook (MA21-08)

Location:	Headwaters, outlet Cleveland Brook Reservoir, Hinsdale to mouth at confluence with East Branch Housatonic River, Dalton.
AU Type:	RIVER
AU Size:	1.9 MILES
Classification/Qualifier:	B

Cleveland Brook - MA21-08

Watershed Area: 2.97 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.97	2.97	0.58	0.58
Agriculture	0.9%	0.9%	0.3%	0.3%
Developed	11.7%	11.7%	21.8%	21.8%
Natural	78.6%	78.6%	65.8%	65.8%
Wetland	8.8%	8.8%	12%	12%
Impervious Cover	2.6%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Cleveland Brook is assessed as support based on the presence of a reproducing brook trout population documented in August 2005 by MA DFG.

Cleveland Brook Reservoir (MA21019)

Location:	Hinsdale.
AU Type:	FRESHWATER LAKE
AU Size:	155 ACRES
Classification/Qualifier:	A: PWS, ORW

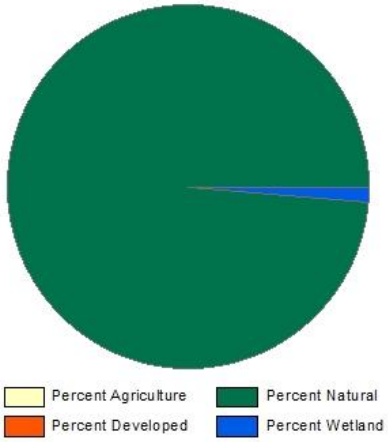
Fish, other Aquatic Life and Wildlife Use: Not Assessed
No recent data are available so the Aquatic Life Use is not assessed for Cleveland Brook Reservoir.

COMMONS BROOK (MA21-52)

Location:	Headwaters, south of Upper Reservoir, Lee to mouth at confluence with Codding Brook, Lee.
AU Type:	RIVER
AU Size:	0.9 MILES
Classification/Qualifier:	A: PWS, ORW

COMMONS BROOK - MA21-52

Watershed Area: 1.00 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.00	1.00	0.12	0.12
Agriculture	0.0%	0%	0%	0%
Developed	0.0%	0%	0%	0%
Natural	98.6%	98.6%	99.6%	99.6%
Wetland	1.4%	1.4%	0.4%	0.4%
Impervious Cover	0%			

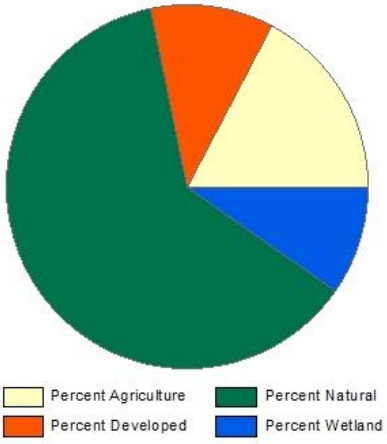
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Commons Brook is assessed as support based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG

CONE BROOK (MA21-76)

Location:	Headwaters, confluence of Sleepy Hollow and Fairfield brooks, Richmond to mouth at inlet Shaker Mill Pond, West Stockbridge.
AU Type:	RIVER
AU Size:	4.6 MILES
Classification/Qualifier:	B

CONE BROOK - MA21-76

Watershed Area: 9.57 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	9.57	4.87	2.35	1.04
Agriculture	17.3%	18.2%	9.7%	10%
Developed	11.0%	13%	10%	11.4%
Natural	62.1%	59.6%	58.8%	54.7%
Wetland	9.7%	9.1%	21.5%	23.9%
Impervious Cover	3.8%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
Backpack electrofishing in Cone Brook was conducted by MA DFG biologists in July 2008 upstream from an unnamed tributary near the intersection of Swamp and Stevens Glen roads (SampleID: 2731). A total of 133 individuals were collected representing nine species with 89% of the sample compristed of fluvial specialists/dependents and 16% intolerant or moderately tolerant. The Aquatic Life Use is assessed as fully supporting for Cone Brook based on the July 2008 fish sample data.

Cookson Pond (MA21021)

Location:	New Marlborough.
AU Type:	FRESHWATER LAKE
AU Size:	67 ACRES
Classification/Qualifier:	B

Fish, other Aquatic Life and Wildlife Use: Not Assessed
No recent data are available so the Aquatic Life Use is not assessed for Cookson Pond.

Crane Lake (MA21025)

Location:	West Stockbridge.
AU Type:	FRESHWATER LAKE
AU Size:	27 ACRES
Classification/Qualifier:	B

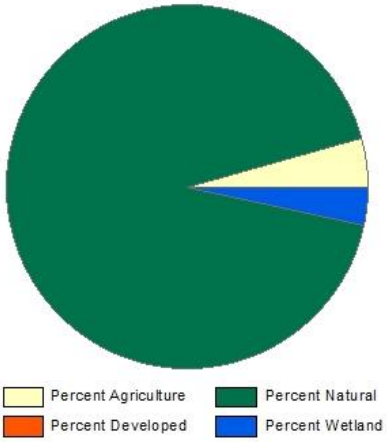
Fish, other Aquatic Life and Wildlife Use: Not Assessed
Data are not available to assess the Aquatic Life Use for Crane Lake.

CRYSTAL BROOK (MA21-51)

Location:	Headwaters, east of Main Road, Tyringham to mouth at confluence with Hop Brook, Tyringham.
AU Type:	RIVER
AU Size:	0.6 MILES
Classification/Qualifier:	B

CRYSTAL BROOK - MA21-51

Watershed Area: 0.97 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	0.97	0.97	0.07	0.07
Agriculture	4.3%	4.3%	46.9%	46.9%
Developed	0.7%	0.7%	6.9%	6.9%
Natural	91.7%	91.7%	46%	46%
Wetland	3.4%	3.4%	0.2%	0.2%
Impervious Cover	0.4%			

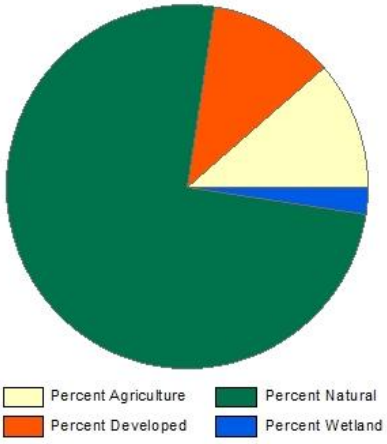
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Crystal Brook is assessed as support based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG.

DANIELS BROOK (MA21-65)

Location:	Headwaters, perennial portion, west of Potter Mountain Road, Lanesborough to mouth at inlet Onota Lake, Pittsfield.
AU Type:	RIVER
AU Size:	3.1 MILES
Classification/Qualifier:	B

DANIELS BROOK - MA21-65

Watershed Area: 2.74 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.74	2.72	0.81	0.81
Agriculture	11.4%	11.5%	9%	9%
Developed	11.2%	11.3%	4.7%	4.7%
Natural	74.9%	74.7%	81.5%	81.5%
Wetland	2.5%	2.5%	4.8%	4.8%
Impervious Cover	5.1%			

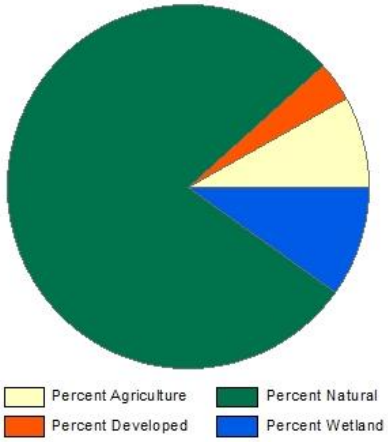
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Daniels Brook is assessed as support based on the presence of a reproducing brook trout population documented in August 2005 and August 2006 by MA DFG

DRY BROOK (MA21-41)

Location:	Headwaters, perennial portion, west of Route 41 (South Undermountain Road), Sheffield to mouth at confluence with Schenob Brook, Sheffield.
AU Type:	RIVER
AU Size:	2.7 MILES
Classification/Qualifier:	B

DRY BROOK - MA21-41

Watershed Area: 3.89 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.89	3.89	0.80	0.80
Agriculture	8.1%	8.1%	6.5%	6.5%
Developed	3.5%	3.5%	3.5%	3.5%
Natural	78.5%	78.5%	60.8%	60.8%
Wetland	9.9%	9.9%	29.3%	29.3%
Impervious Cover	6.1%			

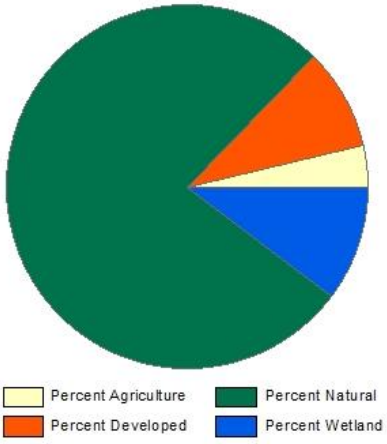
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Dry Brook is assessed as support based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG

East Branch Housatonic River (MA21-01)

Location:	Headwaters, outlet Muddy Pond, Washington to the outlet of Center Pond, Dalton (through former 2006 segment: Center Pond MA21016).
AU Type:	RIVER
AU Size:	11.2 MILES
Classification/Qualifier:	B: CWF, HQW

East Branch Housatonic River - MA21-01

Watershed Area: 53.14 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	53.11	15.27	10.58	4.09
Agriculture	3.7%	4.8%	3.6%	5.1%
Developed	9.0%	14.8%	11.7%	17.4%
Natural	76.9%	75.8%	67.9%	71.4%
Wetland	10.3%	4.6%	16.9%	6.1%
Impervious Cover	5.9%			

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	2	PCBs in Fish Tissue		Removed

Fish, other Aquatic Life and Wildlife Use: Fully Supporting (Alert)
Benthic macroinvertebrate (B0632) and water quality sampling (W1574) were conducted in the East Branch Housatonic River at the Route 8 crossing in Dalton nearest the Hinsdale border during the summer of 2007. The RBPIII analysis of the benthic community was “not impacted” when compared to the reference. Water quality data (ammonia, nutrients), and the attended measurements of dissolved oxygen and temperature data were indicative of good conditions and met their respective criterion. Attended pH readings were elevated on two occasions but that is considered natural given the limestone geology of the watershed. An unattended temperature probe was deployed on 06/25/07 for 97 days. Analysis of these data found the following: the maximum 7 DADM was 24°C, the maximum 7 DADA was 21.6 °C. The chronic Tier 1 CWF criterion was violated on 48 days while the Tier 2 chronic criterion was violated on 11 days. Review of land use information for this watershed indicates 87% “natural” landuse. It is best professional judgment that although the impervious cover (5.9%) is slightly above 4%, the elevated temperatures measured in this segment are considered to be natural resulting from the upstream wetlands. Further downstream survival of C. dubia exposed (~7-day)to East Branch Housatonic River water collected for use as diluent for GE Pittsfield WET testing at the Old Dalton Road bridge between March 2009 and December 2016 (n=31), was ≥80% in all tests. And finally, although only one station

was sampled, the fish community compared favorably to the MassWildlife target fish community (TFC) model at 62% similarity. Given the healthy benthic community, the favorable TFC similarity score, the good survival of C. dubia exposed to the river, and water quality data that almost all met their respective criteria the Aquatic Life Use is assessed as fully supporting for this segment of the East Branch Housatonic River. This use is identified with an alert status, however, because of the temperatures exceeding cold water criteria.
Fish Consumption Use: Insufficient Information
The current (2019) MA DPH advisory for the Housatonic River from Dalton to Sheffield is to eat no fish, frogs, turtles from this waterbody because of PCB contamination. Since a portion of this East Branch Housatonic River AU (MA21-01) flows through Dalton the PCB in fish tissue impairment was applied to this AU. However, the MA DPH also provides additional guidance/advice for eating fish and waterfowl from the Housatonic River Area in Massachusetts, which clearly states the advisory is for the Housatonic River, includes the East Branch Housatonic River downstream from Center Pond Dam in Dalton. Given this clarification, the PCB in Fish Tissue impairment for the Fish Consumption Use is being removed (see removal comments). Because there is no site-specific advisory that applies to this East Branch Housatonic River AU (MA21-01) and the existing PCBs in Fish Tissue is being delisted, there is insufficient information to assess the Fish Consumption Use.

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
PCBs in Fish Tissue	Applicable WQS attained; original basis for listing was incorrect	MA DPH provides additional guidance/advice for eating fish and waterfowl from the Housatonic River Area in Massachusetts on their website. In this brochure the Housatonic River advisory is clearly marked as starting at the Center Pond Dam in Dalton. Since the advisory does not apply upstream from the Dam, this East Branch Housatonic River AU (MA21-01) does not have a site-specific fish consumption advisory, therefore the PCBs in Fish Tissue impairment is being removed.

Supporting Information for Delisted Impairments

PCBs in Fish Tissue

The current (2019) MA DPH advisory for the Housatonic River from Dalton to Sheffield is to eat no fish, frogs, turtles from this waterbody (MassDPH, 2019).

Freshwater Fish Consumption Advisory List

Massachusetts Department of Public Health
Bureau of Environmental Health
(617) 624-5757
July 2019

WATER BODY	TOWN(s)	FISH ADVISORY*	HAZARD*
Grove Pond	Ft. Devens, Ayer	P6	Mercury
Haggetts Pond	Andover	P1 (all species), P2 (LMB), P4	Mercury
Halfway Pond	Plymouth	P1 (all species), P5	Mercury
Hamblin Pond	Barnstable	P1 (SMB), P3 (SMB)	Mercury
Hardwick Pond	Hardwick	P1 (LMB), P3 (LMB)	Mercury
Heard Pond	Wayland	P6	Mercury
Heart Pond	Chelmsford, Westford	P1 (LMB), P3 (LMB)	Mercury
Hickory Hills Lake	Lunenburg	P1 (all species), P5	Mercury
Hocomonco Pond	Westborough	P6	PAHs
Holland Pond	Brimfield, Holland, Sturbridge	P1 (all species), P5	Mercury
Hood (or Hoods) Pond	Topsfield, Ipswich	P1 (all species), P2 (LMB, YP), P4	Mercury
Hoosic River (from the channelized section in North Adams to the MA/VT state line)	N. Adams, Williamstown	P6	PCBs
Horn Pond	Woburn	P1 (LMB), P3 (LMB)	DDT
Horseleech Pond	Truro	P1 (LMB), P3 (LMB)	Mercury
Hovey's Pond	Boxford	P1 (all species), P5	Mercury
Housatonic River (See footnote 1)	All towns from Dalton through Sheffield	P6 (also includes frogs and turtles)	PCBs

1 Fish taken from feeder streams to the Housatonic River should be trimmed of fatty tissue prior to cooking.

Advice Codes	
P1 (all species)	Children younger than 12 years or age, pregnant women, women of childbearing age who may become pregnant, and nursing mothers should not eat any fish from this water body.
P1 (species)	Children younger than 12 years or age, pregnant women, women of childbearing age who may become pregnant, and nursing mothers should not eat any of the affected fish species (in parenthesis) from this water body.
P2 (species)	The general public should not consume any of the affected fish species (in parenthesis) from this water body.
P3 (species)	The general public should limit consumption of affected fish species (in parenthesis) to two meals per month.
P4	The general public should limit consumption of non-affected fish from this water body to two meals per month.
P5	The general public should limit consumption of all fish from this water body to two meals per month.
P6	No one should consume any fish from this water body.

MA DPH has also provided additional guidance/advice for eating fish and waterfowl from the Housatonic River Area in Massachusetts which was updated most recently in September 2019 (MassDPH, Bureau of Environmental Health, 2019). In this brochure the Housatonic River advisory is clearly marked as starting at the Center Pond Dam in Dalton. **Since the advisory does not apply upstream from the Dam, this East Branch Housatonic River AU (MA21-01) does not have a site-specific fish consumption advisory therefore the PCB in Fish Tissue impairment should be removed.**

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH | BUREAU OF ENVIRONMENTAL HEALTH

Advice for Eating Fish and Waterfowl from the Housatonic River Area in Massachusetts

MDPH advises that NO ONE eat the following from the Housatonic River Area

Do NOT eat: Fish, frogs, and turtles from the Housatonic River and tributaries that feed into the main river from Center Pond Dam in Dalton to the Connecticut border.

Do NOT eat: Mallards and wood ducks from the Housatonic River and its impoundments from Pittsfield south to Rising Pond in Great Barrington.

Information about the Housatonic River area

The Housatonic River area is made up of eight communities in Berkshire County: Lanesborough, Dalton, Pittsfield, Lenox, Stockbridge, Lee, Great Barrington, and Sheffield. There are three main branches of the Housatonic River—the East Branch, West Branch, and Southwest Branch—that combine to make up the main stem of the Housatonic River. The Housatonic River flows south from Pittsfield into Connecticut.

Due to releases of chemicals by the General Electric Company from the early 1930s through the late 1970s, polychlorinated biphenyls (PCBs) are present in soils, sediment, fish, and certain waterfowl in and around the Housatonic River area. PCBs do not break down easily in the environment.

While portions of the Housatonic River area have been cleaned up, PCBs may be present in fish and waterfowl at levels that could be harmful if eaten. For more information on the Housatonic River clean-up, visit www.epa.gov/ge-housatonic.

Effects of PCBs on health

- PCBs are suspected of causing liver problems, skin lesions or irritations, and some types of cancer.
- Children are especially sensitive to PCBs, especially during fetal development, nursing, and early growth. Exposure to small amounts of these chemicals may interfere with brain development even before birth.

Fish and waterfowl in the Housatonic River

Fish and waterfowl in the area may be exposed to PCBs. PCBs are a group of man-made organic chemicals banned in the 1970s. PCBs can still be found in our environment and can get into our food due to their widespread use. PCBs can enter fish's bodies and concentrate in their skin, fat, internal organs and sometimes muscles. Larger species feed on smaller species. This causes PCB concentrations to be higher in larger, older fish. PCBs in sediments are also a concern for other aquatic species (e.g., ducks, frogs, turtles).

How plants and animals are exposed to contaminants

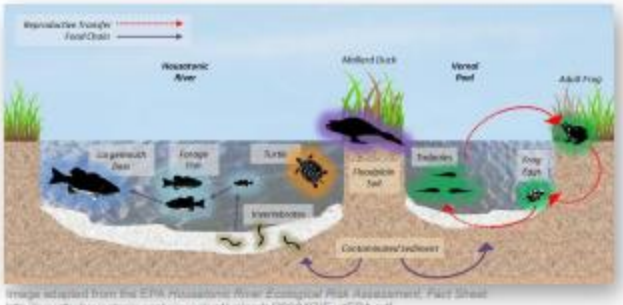


Image adapted from the EPA Housatonic River Ecological Risk Assessment: Fact Sheet http://savethehousatonic.org/wp-content/uploads/2008/07/FactERA.pdf

Tips for fishing in the Housatonic River and its tributaries

- Observe posted warning signs and follow their advice.
- Do not eat fish from the Housatonic River and its tributaries.
- When fishing, release fish unharmed back into the river.
- Follow the State-wide Fish Consumption Advisory for other lakes, rivers, and ponds in the Housatonic River area in Massachusetts. More specific consumption advice is available for certain bodies of water that have been tested at www.mass.gov/dph/fishadvisories.

General State-wide Advice for eating fish caught in Massachusetts

The following is advised for pregnant women, women who may become pregnant, nursing mothers, and children under 12 years old:

- **Do Not Eat:** Freshwater fish caught in streams, rivers, lakes, and ponds in Massachusetts
- **Safe to Eat:** Fish that are stocked in streams, rivers, lakes, and ponds in Massachusetts

General State-wide Advice for eating waterfowl caught in Massachusetts

Safe Guidelines for Eating Wild Waterfowl from areas other than the Housatonic River area:

- Skin and remove all fat before cooking
- Discard stuffing after cooking
- Drippings should not be used for gravy
- Eat waterfowl in moderation (no more than 2 meals per month)

For more information

- To choose fish and waterfowl that are safe to eat, please contact the MDPH Bureau of Environmental Health at 617-624-5757 or 800-240-4266: www.mass.gov/dph/environmental_health
- To learn more about stocked fish, please contact the MassWildlife Western District office, Dalton. Tel: (413) 684-1646 or visit www.mass.gov/trout. For fishing regulations visit www.masswildlife.com.
- To learn more about the federal government's additional advice for safe fish consumption, please visit www.fda.gov/fishadvice and www.epa.gov/fishadvice.

Fish is good for you!

Continue to eat a variety of fish from safe sources. Fish is low in saturated fat, high in protein, and helps to prevent heart disease.

Bureau of Environmental Health
MA Department of Public Health
250 Washington Street, 7th Floor, Boston, MA 02108
Phone: 617-624-5757 | Fax: 617-624-5777 | TTY: 617-624-5286
www.mass.gov/dph/fishadvisories

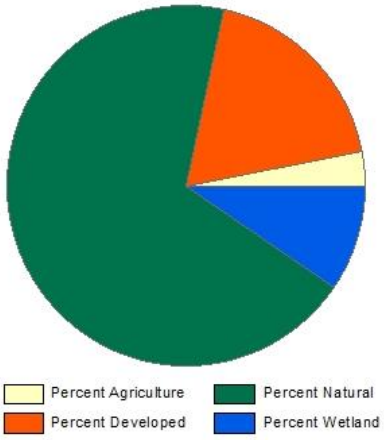
Revised September 2019

East Branch Housatonic River (MA21-02)

Location:	Outlet of Center Pond, Dalton to mouth at confluence with the Housatonic River, Pittsfield.
AU Type:	RIVER
AU Size:	8 MILES
Classification/Qualifier:	B: WWF

East Branch Housatonic River - MA21-02

Watershed Area: 70.85 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	70.83	7.03	14.26	1.36
Agriculture	3.1%	1.9%	2.8%	0%
Developed	18.5%	68.8%	18.9%	51.2%
Natural	68.8%	18.2%	61.4%	21.6%
Wetland	9.5%	11.1%	16.9%	27.1%
Impervious Cover	38.7%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting (Alert)

The Aquatic Life Use for this East Branch Housatonic River AU (MA21-02) is assessed as support based on the 2007 RBPIII analysis of slightly impacted benthic community for the sampling station (B0503). The use is also supported based on data collected in 2007 including, dissolved oxygen data that met the warmwater criterion, attended data that met relevant temperature, pH and dissolved oxygen criterion, and temperature probe data at two stations that met the WWF criterion. Water quality sampling was conducted at one station (W1107) on 5 occasions during the 2007 sampling season. The average total phosphorus was 0.02 mg/L while the maximum total phosphorus was 0.028 mg/L. There were no observations of dense or very dense filamentous algae noted. While the maximum daily DO shift was 3.8 the maximum DO saturation was only 106%. Elevated total phosphorus or evidence of nutrient enrichment was not found in the form of dense of very dense filamentous algae at station W1107. Therefore the previous "alert status" for elevated total phosphorus downstream from the Crane and Company discharge identified in the prior assessment report is being removed. The more recent benthic macroinvertebrate sampling by the Housatonic Valley Association in 2014 (HVA 2017) using RBPIII analysis indicated a "slightly impacted" benthic community at their sampling station (EB02A) when compared to their reference sampling station (HR19E, Housatonic River). Water from the East Branch Housatonic River was collected at the South Street bridge near the intersection of Crane Avenue and Old South Street in Dalton for use as dilution water in Crane and Company's whole effluent toxicity tests. Survival of C. dubia exposed (~7-day) to the river water samples was $\geq$83% in all tests between April 2006 and October 2016 (n=28), however, suvival of P. promelas exposed (~7-day) to the river water samples, between July 2008 and July 2016 ranged from 28 to 100% (n=20) and was less than 75% in 8 of the 20 tests (40% tests) which is of concern so identified with an Alert.

East Indies Pond (MA21029)

Location:	New Marlborough.
AU Type:	FRESHWATER LAKE
AU Size:	72 ACRES
Classification/Qualifier:	B

Fish, other Aquatic Life and Wildlife Use: Not Assessed
No data are available so the Aquatic Life Use is not assessed for East Indies Pond.

Farnham Reservoir (MA21033)

Location:	Washington.
AU Type:	FRESHWATER LAKE
AU Size:	41 ACRES
Classification/Qualifier:	A: PWS, ORW

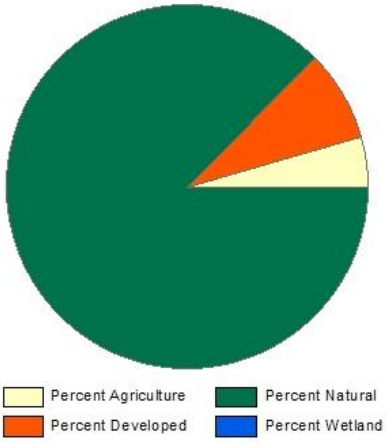
Fish, other Aquatic Life and Wildlife Use: Not Assessed
No data are available so the Aquatic Life Use is not assessed for Farnham Reservoir.

FENTON BROOK (MA21-35)

Location:	Headwaters south of Jug End Road, Egremont (west of Mt. Bushnell, Sheffield), to mouth at confluence with Karner Brook, Egremont.
AU Type:	RIVER
AU Size:	2.4 MILES
Classification/Qualifier:	B: CWF, HQW

FENTON BROOK - MA21-35

Watershed Area: 2.96 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.96	2.96	0.43	0.43
Agriculture	4.4%	4.4%	5.8%	5.8%
Developed	8.1%	8.1%	12.5%	12.5%
Natural	86.6%	86.6%	78.4%	78.4%
Wetland	0.9%	0.9%	3.2%	3.2%
Impervious Cover	7.8%			

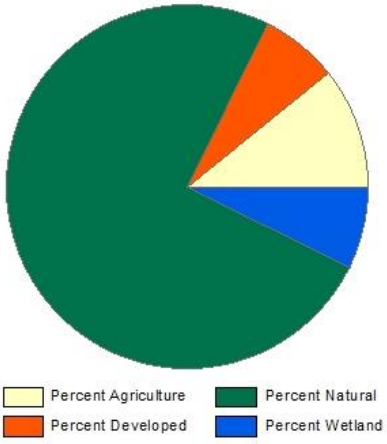
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Fenton Brook is assessed as support based on the presence of a reproducing brook trout population documented in September 2006 by MA DFG (SampleID 1532).

Furnace Brook (MA21-21)

Location:	Headwaters, perennial portion, south of Route 295 (Canaan Road), Richmond to mouth at inlet Mud Ponds, West Stockbridge.
AU Type:	RIVER
AU Size:	3.7 MILES
Classification/Qualifier:	B

Furnace Brook - MA21-21

Watershed Area: 5.77 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	5.32	4.46	1.43	1.26
Agriculture	10.8%	10.3%	7.6%	7.2%
Developed	6.9%	7.1%	7.3%	7.4%
Natural	74.9%	74.5%	68.6%	67.7%
Wetland	7.3%	8.1%	16.5%	17.8%
Impervious Cover	7.7%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Furnace Brook is assessed as support based on the presence of a reproducing brook trout population documented in August 2006 by MA DFG.

Goodrich Pond (MA21042)

Location:	Pittsfield.
AU Type:	FRESHWATER LAKE
AU Size:	15 ACRES
Classification/Qualifier:	B

Fish, other Aquatic Life and Wildlife Use: Not Assessed
No data are available so the Aquatic Life Use is not assessed for Goodrich Pond.

Goose Pond (MA21043)

Location:	Lee/Tyringham.
AU Type:	FRESHWATER LAKE
AU Size:	238 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	5	Dissolved Oxygen		Added
4c	5	(Non-Native Aquatic Plants*)		Removed

Fish, other Aquatic Life and Wildlife Use: Not Supporting

Water quality sampling was conducted in Goose Pond by MassDEP on 24 August 2005. The pond was well oxygenated to a depth of 8.0m (DO ≥5.1 mg/L) but dropped below 5.0 mg/L at 8.5m (3.5 mg/L). The lake was anoxic at depths ≥11m (~92 acres of the 238 acres) representing ~39% of the pond's surface area. The integrated depth chlorophyll a sample was low (2.2 mg/m^3) and Secchi disk depth was good (5.0m). The total phosphorus was also low (0.008mg/L) near the surface as well as near the anoxic bottom (0.035mg/L). An infestation of the aquatic non-native species *Myriophyllum spicatum* (Eurasian milfoil) is present in Goose Pond. This infestation was documented by MassDEP biologists in August 1997 and the lake is treated with herbicides, lake drawdown, and hand pulling to combat this infestation. It was more recently, 2009, identified in the pond as part of the zebra mussel Phase I Assessment in Berkshire County. The Aquatic Life Use for Goose Pond is assessed as not supporting because of the oxygen depletion at depth comprising more than 10% of the lake surface area as well as the infestation of the non-native aquatic macrophyte *M. spicatum*.

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Non-Native Aquatic Plants	Clarification of listing cause	The generic "Non-Native Aquatic Plants" is not needed since the specific macrophyte "Eurasian water milfoil (Myriophyllum spicatum) has been utilized.

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

Herbicide Database Info: (MassDEP 2016)

Name	Received Date	Company Name	VEG1
GOOSE POND	4/15/2004	AQUATIC CONTROL TECHNOLOGY, INC.	EURASIAN MILFOIL
GOOSE POND	3/29/2006	AQUATIC CONTROL TECHNOLOGY, INC.	M. SPICATUM
GOOSE POND	4/9/2007	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU

GOOSE POND	6/5/2008	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU
GOOSE POND	4/8/2009	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU
GOOSE POND	3/23/2010	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU
GOOSE POND	4/29/2013	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU
GOOSE PONDS	9/26/2016	SOLITUDE LAKE MANAGEMENT, LLC	COMMON REED

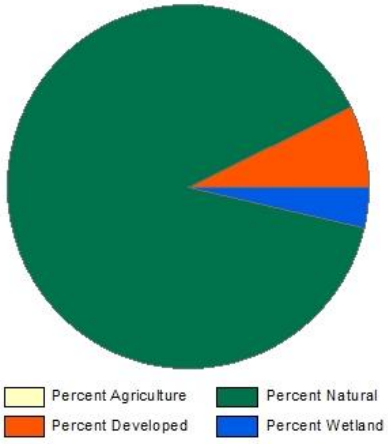
In 2009, M. spicatum was also identified in the pond as part of the zebra mussel Phase I Assessment in Berkshire County (Biodrawersity LLC 2009). The generic impairment “Non-Native Aquatic Plants” is not needed since the specific macrophyte “Eurasian water milfoil (Myriophyllum spicatum) has been utilized.

Goose Pond Brook (MA21-07)

Location:	Headwaters, wetland north of George Cannan Road, Tyringham to mouth at confluence with the Housatonic River, Lee.
AU Type:	RIVER
AU Size:	3.2 MILES
Classification/Qualifier:	B: CWF, HQW

Goose Pond Brook - MA21-07

Watershed Area: 14.40 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	14.39	6.81	2.53	1.44
Agriculture	0.6%	0.7%	1.4%	0.9%
Developed	7.2%	11.6%	15.4%	18.8%
Natural	88.5%	86%	72.4%	76.3%
Wetland	3.7%	1.8%	10.8%	4.1%
Impervious Cover	7.1%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

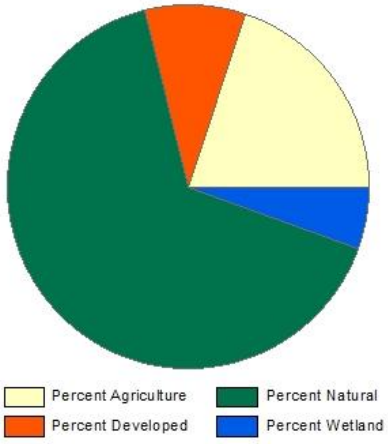
Water quality data in Goose Pond Brook were collected at Tyringham Road in Lee during the summer of 2007. Water quality data were indicative of good conditions (minimum DO 9.6mg/L, maximum temperature 20.2°, good pH, average and maximum total phosphorus 0.006 and 0.008mg/L, respectively). There were no observations of dense or very dense filamentous algae noted. The single attended temperature measurement of 20.2°C in July was just slightly above its coldwater temperature criterion. In addition more recent benthic macroinvertebrate sampling by the Housatonic Valley Association in 2013 (HVA 2017) using RBPIII analysis of found a "slightly impacted" benthic community at their sampling station (GPB07) when compared to their reference sampling station (KP11, Konkapot River). The Aquatic Life Use for Goose Pond Brook is assessed as fully supporting based on the 2013 benthic sample data and the 2007 water quality data.

Green River (MA21-23)

Location:	MA/NY border, Alford, southwest of Route 71, to mouth at confluence with the Housatonic River, Great Barrington.
AU Type:	RIVER
AU Size:	10.3 MILES
Classification/Qualifier:	B: CWF, HQW

Green River - MA21-23

Watershed Area: 53.28 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	29.65	4.27	5.34	0.76
Agriculture	19.9%	34.7%	19.5%	33.9%
Developed	8.9%	14.8%	8.2%	7.4%
Natural	65.7%	39.8%	60.6%	36.5%
Wetland	5.5%	10.8%	11.8%	22.2%
Impervious Cover	6.3%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

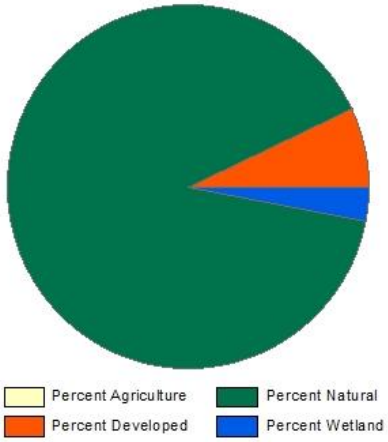
Water quality sampling in the Green River was collected at Route 23/41 in Great Barrington (W1112) during the summer of 2007. The water quality data were all indicative of good conditions (minimum DO 8.6mg/L, maximum temperature 17.3°C, good pH, low average and maximum total phosphorus concentrations --0.005 mg/L). There were no observations of dense or very dense filamentous algae noted. In addition more recent benthic macroinvertebrate sampling just upstream from this bridgeby the Housatonic Valley Association in 2014 (HVA 2017) using RBPIII analysis found a “not impacted” benthic community at their sampling station (GR23A) when compared to the reference station (Station ID: HR19E, Housatonic River). The benthic sample had high taxa richness and good EPT richness. A confirmed occurrence of the potentially nuisance algae, *Didymosphenia geminata*, was detected in this AU in May, 2013. The Aquatic Life Use for the Green River is assessed as fully supporting based on water quality data collected during the summer of 2007 which were indicative of good conditions and the benthic data collected by HVA in 2014.

Greenwater Brook (MA21-27)

Location:	Headwaters, outlet Greenwater Pond, Becket to mouth at confluence with Goose Pond Brook, Lee.
AU Type:	RIVER
AU Size:	4.4 MILES
Classification/Qualifier:	B

Greenwater Brook - MA21-27

Watershed Area: 7.96 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	7.96	5.01	1.24	0.98
Agriculture	0.4%	0.6%	1.4%	1.7%
Developed	7.0%	8.4%	19.5%	17.5%
Natural	89.4%	88.2%	69.7%	73.9%
Wetland	3.1%	2.8%	9.5%	7%
Impervious Cover	3.4%			

Fish, other Aquatic Life and Wildlife Use: Not Assessed
No recent data are available so the Aquatic Life Use is not assessed for Greenwater Brook.

Greenwater Pond (MA21044)

Location:	Becket.
AU Type:	FRESHWATER LAKE
AU Size:	89 ACRES
Classification/Qualifier:	B

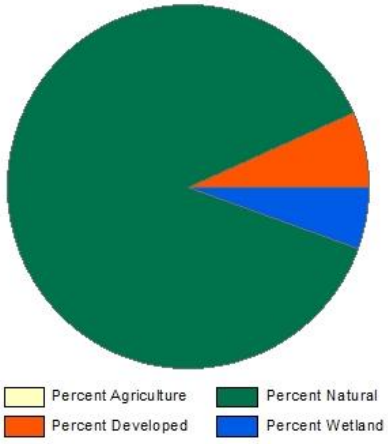
Fish, other Aquatic Life and Wildlife Use: Not Supporting
The non-native aquatic macrophyte *Myriophyllum spicatum* was documented in Greenwater Pond during the 1997 DWM synoptic survey (Kennedy and Weinstein 2000). The Aquatic Life Use is assessed as impaired because of the presence of the non-native aquatic macrophyte.

HATHAWAY BROOK (MA21-58)

Location:	Headwaters, east of Washington Mountain Road, Washington to mouth at confluence with Sackett Brook, Dalton.
AU Type:	RIVER
AU Size:	2.2 MILES
Classification/Qualifier:	B

HATHAWAY BROOK - MA21-58

Watershed Area: 1.41 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.41	1.41	0.32	0.32
Agriculture	1.0%	1%	0.7%	0.7%
Developed	6.6%	6.6%	7.4%	7.4%
Natural	86.9%	86.9%	82.6%	82.6%
Wetland	5.5%	5.5%	9.3%	9.3%
Impervious Cover	1.9%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Hathaway Brook is assessed as support based on the presence of a reproducing brook trout population documented in July of the following years: 2009, 2010, 2011, 2012, 2013 by MA DFG. The Upper and Lower Hathaway Brook Dams were removed in 2010 (MMA 2011).

Hayes Pond (MA21051)

Location:	Otis.
AU Type:	FRESHWATER LAKE
AU Size:	46 ACRES
Classification/Qualifier:	B

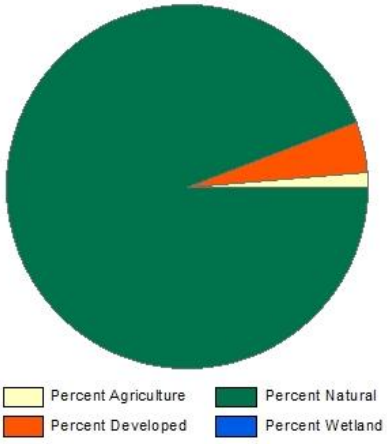
Fish, other Aquatic Life and Wildlife Use: Not Assessed
No data are available to assess the Aquatic Life Use for Hayes Pond.

HOLLOW BROOK (MA21-67)

Location:	Headwaters, perennial portion, west of Silver Street, Lanesborough to mouth at confluence with Secum Brook, Lanesborough.
AU Type:	RIVER
AU Size:	1.5 MILES
Classification/Qualifier:	B

HOLLOW BROOK - MA21-67

Watershed Area: 2.11 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.11	2.11	0.68	0.68
Agriculture	1.3%	1.3%	2.9%	2.9%
Developed	4.5%	4.5%	4.2%	4.2%
Natural	93.8%	93.8%	92.5%	92.5%
Wetland	0.4%	0.4%	0.4%	0.4%
Impervious Cover	6.8%			

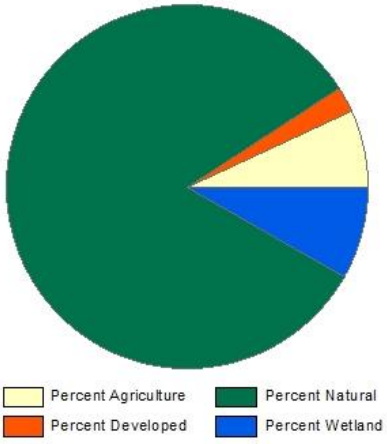
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Hollow Brook is assessed as support based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG.

Hop Brook (MA21-28)

Location:	Headwaters, outlet Curtin Pond, Otis to mouth at confluence with the Housatonic River, Lee.
AU Type:	RIVER
AU Size:	12 MILES
Classification/Qualifier:	B

Hop Brook - MA21-28

Watershed Area: 22.22 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	22.21	7.61	3.31	0.93
Agriculture	6.8%	9.5%	12.6%	20.3%
Developed	2.4%	3%	4.7%	5.1%
Natural	82.5%	76.3%	58.8%	41%
Wetland	8.3%	11.2%	23.9%	33.7%
Impervious Cover	1.7%			

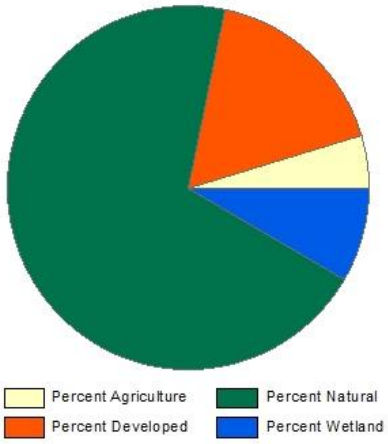
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Hop Brook is assessed as fully supporting based on data collected at Meadow Street in Lee (W1115) during the summer of 2007. The water quality data were indicative of good conditions (minimum DO 5.7mg/L, maximum temperature 21.8°C, good pH, average and maximum total phosphorus concentrations 0.02mg/L and 0.023 mg/L, respectively). There were no observations of dense or very dense filamentous algae noted. In addition more recent benthic macroinvertebrate sampling by the Housatonic Valley Association in 2013 (HVA 2017) using RBPIII analysis of found a “not impacted” benthic community at their sampling station (HOP01) when compared to their reference sampling station (KP11, Konkapot River).

Housatonic River (MA21-04)

Location:	Headwaters, confluence of Southwest Branch Housatonic River and West Branch Housatonic River, Pittsfield to Woods Pond dam (NATID: MA00731), Lee/Lenox (through former 2006 segment: Woods Pond MA21120) (approximately one mile at headwaters formerly part of 1998 segment: West Branch Housatonic River MA21-03).
AU Type:	RIVER
AU Size:	12.3 MILES
Classification/Qualifier:	B: WWF

Housatonic River - MA21-04

Watershed Area: 170.34 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	170.28	11.19	38.78	2.29
Agriculture	4.7%	2.5%	4.9%	0.7%
Developed	17.1%	13.4%	15.6%	6.7%
Natural	69.8%	72.1%	62.5%	62.4%
Wetland	8.4%	12.1%	17%	30.3%
Impervious Cover	46.7%			

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Non-Native Aquatic Plants*)		Removed
5	5	PCBs in Sediment		Added
5	5	(Water Chestnut*)		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting

Whole Body Concentrations of Total PCB (ug/kg) in select Adult fish species collected in 2008 and 2011 at sampling sites in this segment as part of ongoing PCB monitoring studies in the Housatonic River ranged from 5,750 to 108,374 tPCB ug/kg wet weights (Campell 2017). With the exception of one large mouth bass young of year composite at reach 5B in 2006, all composite samples for all young of year fish species composites collected as part of continued monitoring of PCBs in the Housatonic River since 2004 exceeded theNAS/NAE guideline for the protection of fish eating wildlife (500 ug/kw wet weight) (Campell 2017). Surficial sediments are also contaminated with PCBs in this reach. Furthermore the "rest of the river" cleanup has not yet occurred to remediate this problem.

Water quality monitoring was conducted at one station (W1105) upstream from the Pittsfield WWTP discharge near Holmes Road, Pittsfield during the summer of 2007. Here all water quality sampling data (DO, pH, temperature, specific conductivity, total phosphorus and ammonia nitrogen concentrations) were indicative of good conditions. The average total phosphorus was 0.02 mg/L while the maximum concentration was 0.03 mg/L. There were no observations of dense or very

dense filamentous algae noted. The maximum daily DO shift was 2.93 and the maximum DO saturation was 106.6%. Survival of C. dubia exposed to Housatonic River water collected at either the Pomeroy Avenue Bridge or the northern property boundary of the Pittsfield WWTP has also been excellent (~7-day survival was 100% in all 28 tests conducted between June 2006 and July 2017).
Water quality monitoring was also conducted downstream from the Pittsfield WWTP) near New Lenox Road, Lenox during the summer of 2007 (W1104). Here all water quality data were also indicative of good conditions although the total phosphorus concentrations were higher (average 0.16 mg/L, maximum 0.33 mg/L). There were no observations of dense or very dense filamentous algae noted but very dense thin film periphyton was noted during the July and August sampling at this station (W1104). The maximum daily DO shift was 2.26 and the maximum DO saturation was 99.4%. The Pittsfield WWTP NPDES permit was reissued in August 2008 with a reduction in total phosphorus from a summer limit of 1.0mg/L monthly average to 0.1mg/L monthly average. Although fish population surveys in the river conducted by MA DFG in 2008, 2010 and 2011 show fish populations dominated by macrohabitat generalists, the majority of MA DFG sampling sites were located within Woods Pond. In addition the river is generally wide and meandering in this segment and the presence of macrohabitat generalists is logical based on the habitat in this segment. The invasive aquatic macrophyte *Trapa natans* has been observed in the 0.8 mile Woods Pond section of the river.
The Aquatic Life Use is assessed as Not Supporting based upon high levels of PCB in whole fish and sediments in this Housatonic River AU (MA21-04) as well as the presence of the non-native aquatic macrophyte *Trapa natans* in the Woods Pond impoundment.

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Non-Native Aquatic Plants	Clarification of listing cause	Impairment changed from the generic “Non-Native Aquatic Plants” to the specific macrophyte Water chestnut (Trapa natans).

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

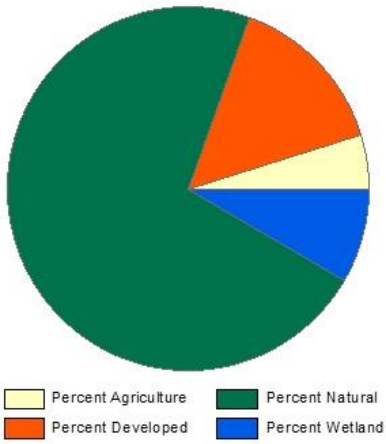
Woods Pond is infested with the non-native aquatic macrophyte *Trapa natans* (MA DFG 2005). The impairment was changed from the generic “Non-Native Aquatic Plants” to the specific macrophyte Water chestnut (Trapa natans).

Housatonic River (MA21-19)

Location:	Outlet of Woods Pond dam (NATID: MA00731), Lee/Lenox to the Risingdale Impoundment dam (NATID: MA00250), Great Barrington [through former 2006 segment: Risingdale Impoundment MA21121) (formerly part of 1998 segment: Housatonic River MA21-05).
AU Type:	RIVER
AU Size:	19.9 MILES
Classification/Qualifier:	B: WWF

Housatonic River - MA21-19

Watershed Area: 281.06 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	280.94	12.15	58.07	2.18
Agriculture	4.8%	5.7%	4.9%	5.2%
Developed	14.7%	9.2%	14.6%	7.4%
Natural	72.0%	67.8%	62.4%	45.8%
Wetland	8.4%	17.4%	18.1%	41.6%
Impervious Cover	44.4%			

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Ambient Bioassays - Chronic Aquatic Toxicity		Added
5	5	Fish Bioassessments		Added
5	5	PCBs in Sediment		Added
5	5	Polychlorinated Biphenyls (PCBs)		Removed

Fish, other Aquatic Life and Wildlife Use: Not Supporting
Whole Body Concentrations of Total PCB in largemouth bass collected in 2011 at the Risingdale Impoundment in this Housatonic River AU (MA21-19) ranged from 310 to 97,700 tPCB ug/kg wet weight, all YOY composites since 2004 exceeded NAS/NAE guidelines (500 ug/kw wet weight). Surficial sediments also known to be contaminated with PCBs and "rest of the river" cleanup not done. Water quality and benthic sampling was conducted during the summer of 2007 downstream from Woods Pond Dam/Lenox WWTP discharge along Valley Street in Lenox. The RPBIII analysis (Station HR19A, B0504) was "moderately impacted" compared to the reference station (HR19E, B0496). Limited data ~360' upstream of Valley Street, Lenox] (W1103) indicated good DO (minimum 7.6 mg/L) but supersaturation/pH during early May survey both high (127%, 8.6SU). Average total phosphorus was 0.1 mg/L (maximum 0.19 mg/L). Four observations dense/very dense filamentous algae noted. Further downstream limited water quality and benthic sampling was conducted in summer 2007 downstream

from Lee WWTP discharge. The RPBIII analysis (Station HR19C, B0505) was "slightly impacted" compared to the reference (HR19E, B0496). Total phosphorus concentrations here averaged 0.069 mg/L (maximum 0.13 mg/L) with two dense/very dense filamentous algae observations (100% coverage in reach with filamentous the dominant type). HVA staff conducted benthic sampling downstream from Lee WWTP discharge in September 2014. The RBPIII analysis was "slightly impacted" compared to the reference station in the river downstream RR Tracks near Rte.183, Stockbridge (Station HR19E). Water quality and benthic sampling also conducted in summer 2007 by the RR crossing near Route 183 in Stockbridge MA (downstream from the Glendale Hydroelectric Project /confluence of Mohawk Brook). The benthic sample used as reference station (HR19E, B0496) so considered not impacted. Water quality sampling during summer 2007 also conducted here (W1101). While DO, temperature, pH, specific conductance were indicative of good conditions (minimum DO 6.37mg/L), evidence of enriched conditions during August/September when probes were deployed (maximum daily DO shift 3.6mg/L, maximum DO saturation 128%). The average total phosphorus was 0.05mg/L (maximum 0.068 mg/L) with one observation of dense/very dense filamentous algae. Survival of C. dubia exposed to river water collected from several locations along river AU as part of WET testing requirements of NPDES discharges (Lenox, Schweitzer-Maduit, Lee, Mead Laurel, Onyx-Willow, and Stockbridge) was excellent in all tests conducted between 200 and 2017. Survival of *P. promelas*, however, exposed to the river water collected just upstream from the Mead Laurel and Onyx Willow mills was often poor. Between May 2006 and October 2016 (n=39), survival of *P. promelas* exposed (7-day) to river water ranged from 3 to 100% and survival was <75% in 24 of 40 (60%) tests. In July 2009 an infestation of adult and veliger zebra mussels (*Dreissena polymorpha*) was documented downstream from Laurel Lake/Laurel Brook. Lastly, seven fish samples in this AU did not compare favorably to the TFC model with a similarity score of 33% (higher percentage of macrohabitat generalist than the target likely indicative of flow alterations and/or presence of dams/impoundments).
The Aquatic Life Use for this Housatonic River AU (MA21-19) is assessed as not supporting based on high levels of PCB in whole fish and sediments as well as the moderately impacted benthic community, poor similarity (33%) of the fish community to the target, frequently poor survival of *P. promelas* exposed to Housatonic River water, zebra mussel infestion, and evidence of nutrient enriched conditions. Note since 2007 surveys total phosphorus limits and/or reductions have been imposed in NPDES permittees (Lee and Stockbridge) that discharge to this AU and Schweitzer-Mauduit permit was terminated.

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Polychlorinated Biphenyls (PCBs)	Clarification of listing cause	The Polychlorinated Biphenyls (PCBs) cause code was originally used as the impairment prior to the addition of the more appropriate cause code of PCBs in Sediment to the ATTAINS database. Therefore Polychlorinated Biphenyls (PCBs) is being delisted and the PCBs in Sediment cause will be added. The PCBs data were from sediment not water column.

Supporting Information for Delisted Impairments

Polychlorinated Biphenyls (PCBs)

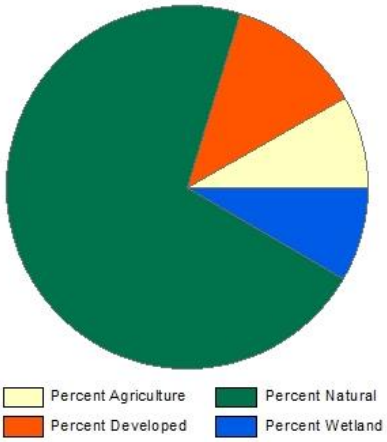
"Polychlorinated Biphenyls (PCBs)" is being replaced by the more accurate "PCB in sediment" impairment cause (a clarification).

Housatonic River (MA21-20)

Location:	Outlet of Risingdale Impoundment dam (NATID: MA00250), Great Barrington to the MA/CT border, Sheffield (formerly part of 1998 segment: Housatonic River MA21-05).
AU Type:	RIVER
AU Size:	23.1 MILES
Classification/Qualifier:	B: WWF

Housatonic River - MA21-20

Watershed Area: 535.67 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	487.88	15.12	99.70	2.53
Agriculture	8.1%	28.7%	7.9%	34.4%
Developed	12.1%	11%	12.1%	5%
Natural	71.2%	47.4%	62%	38.7%
Wetland	8.5%	13%	18.1%	21.9%
Impervious Cover	48.2%			

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Zebra Mussel, Dreissena Polymorph*)		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting (Alert)
Except for one yellow perch YOY composite at HR9 Reach 9 in 2006, all composite YOY fish composites collected in this Housatonic River AU (MA21-20) since 2004 exceeded NAS/NAE guidelines (500 ug/kw wet weight). Water quality monitoring was conducted by MassDEP staff at three locations during summer 2007: W1100 near Division Street at USGS flow gauging station #01197500 in Great Barrington; W1099 near Kellogg Road in Sheffield; and W1566 near Rannapo Road in Sheffield. HVA also had benthic sampling done at two locations in November 2014: upstream of Cottage Bridge in Great Barrington (Station GBC01) (upstream Great Barrington WWTP discharge) and near Maple Ave Bridge in Sheffield (Station SHM01) downstream from confluence of Hubbard Brook. A brief summary of these data are as follows as well as information for the Great Barrington WWTP discharge: At the most upstream site (W1100) the minimum DO was 8.9 mg/L with max temperature 28.4°C. During the 97-day probe deployment starting 25 June 2007, the maximum 24-hour average temperature was 26.2°C. The average total phosphorus was 0.049 mg/L (maximum 0.061 mg/L) with no observations of dense/very dense filamentous algae. The RPBIII analysis of the HVA benthic sample collected 625m upstream from Great Barrington POTW discharge was “not impacted” compared to the reference station

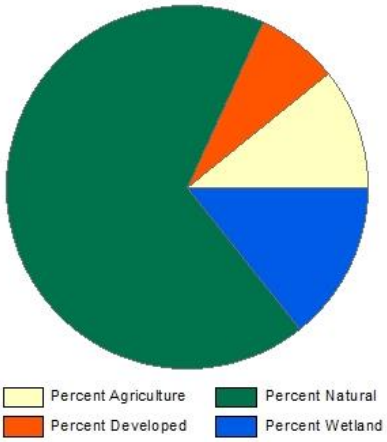
(Station ID: HR19E, Housatonic River). Survival of *C. dubia* exposed (7-day) to Housatonic River water collected ~500 feet upstream from Great Barrington WWTP Outfall # 001 between June 2006 and October 2016 (n=41) was ≥80%. Between June 2006 and October 2016, 41 modified acute and chronic WET tests were conducted on the Great Barrington WWTP effluent using the test organism *C. dubia.* The LC_{50}s were all ≥100% effluent. Of the 39 valid chronic tests, the C-NOEC results ranged from 12.5 to 100% effluent although it should be noted that all CNOEC tests results since July 2011 up through October 2016 have had CNOECs >50% effluent indicative of improved effluent quality. Downstream from the Great Barrington WWTP discharge water quality (W1099) in summer 2007 was indicative of generally good conditions (minimum DO 6.8 mg/L, maximum temperature 23.2°C, and average total phosphorus concentration 0.06 mg/L). While there was evidence of nutrient enrichment during the September survey (DO saturation was 131.5% and the diel DO change was 4.29 mg/L, and total phosphorus was 0.11 mg/L) no dense or very dense filamentous algae were noted. The RPBIII analysis of the HVA benthic sample collected at Maple Avenue Bridge in Sheffield (Station SHM01) in November 2014 found "slightly impacted" conditions when compared to the reference station (Station ID: HR19E, Housatonic River). At the most downstream sampling station W1566, water quality conditions during summer 2007 were indicative of good conditions (minimum DO was 6.2mg/L, maximum temperature 23.9°C, maximum saturation and diel DO shift of 104.4% and 1.72 mg/L, respectively, average total phosphorus concentration 0.044 mg/L with a maximum concentration of 0.054 mg/L, no dense or very dense filamentous algae noted).
USGS reports non-native Zebra mussel (*Dreissena polymorph*) collected in river near confluence with Green River in 2011.
The Aquatic Life Use for this Housatonic River AU (MA21-20) is assessed as not supporting based upon high levels of PCB contamination in whole fish tissue and presence of the non-native zebra mussel. Note since 2007 surveys total phosphorus limits and/or reductions were imposed in NPDES permits discharging to this and upstream AUs. An alert is being identified for some evidence of nutrient enrichment.

Hubbard Brook (MA21-15)

Location:	Headwaters, northwest of Townhouse Hill Road, Egremont to mouth at confluence with the Housatonic River, Sheffield (through former 2006 segment: Mill Pond MA21068).
AU Type:	RIVER
AU Size:	9.4 MILES
Classification/Qualifier:	B: CWF, HQW

Hubbard Brook - MA21-15

Watershed Area: 50.14 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	41.73	8.36	8.55	2.21
Agriculture	10.8%	11.1%	7.2%	7.9%
Developed	7.3%	9.2%	7.9%	7.8%
Natural	67.5%	53.7%	57%	49.6%
Wetland	14.3%	25.9%	27.9%	34.7%
Impervious Cover	11.8%			

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	5	(Curly-leaf Pondweed*)		Added
4c	5	Lack of a coldwater assemblage		Added
4c	5	(Non-Native Aquatic Plants*)		Removed
4c	5	Temperature		Added
4c	5	(Water Chestnut*)		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting

A temperature probe was deployed in Hubbard Brook upstream of the Mill Pond impoundment (Station W1571, [South Egremont Road, Sheffield]) beginning on 06/25/07 for 97 days. The maximum 7 DADM was 25.7°C and the maximum 7 DADA was 24°C. The chronic Tier 1 CWF criterion was violated on 70 days while the Tier 2 Chronic criterion was violated on 38 days. The maximum 24-hour average was 25.6°C. The Mill Pond impoundment of Hubbard Brook is reported to be infested with *Myriophyllum spicatum*, as well as *Trapa natans* and *Potamegeton crispus* and is treated almost annually with herbicide applications. Water quality sampling was also conducted in Hubbard Brook downstream of the Mill Pound impoundment (W1113, [Route 7, Sheffield]) by MassDEP during the summer of 2007. With the exception of temperatures exceeding cold water criteria, water quality at this sampling location was indicative of good conditions (min DO 5.14mg/L and daily

averages 6.4 mg/L and higher, good pH, low ammonia-nitrogen and average total phosphorus 0.021 mg/L with maximum 0.024 mg/L). There were no observations of dense or very dense filamentous algae noted. A temperature probe at was deployed at this station on 06/25/07 for 97 days. The maximum 7 DADM was 26.9°C and the maximum 7 DADA was 25.7°C. The chronic Tier 1 CWF criterion was violated on 76 days while the Tier 2 chronic criterion was violated on 63 days. The maximum 24-hour average was 26.4°C. Backpack electrofishing was conducted in Hubbard Brook near Route 7 by MassDEP biologists in September 2007. The fish sample was comprised of six species (three of which were fluvial specialists/dependants) however no cold water species were collected.
The Aquatic Life Use is assessed as impaired for Hubbard Brook based on the infestation of non-native aquatic macrophytes including *M. spicatum*, *T. natans*, and *P. crispus* in the Mill Pond impoundment. Instream temperatures in Hubbard Brook both upstream and downstream from the Mill Pond impoundment exceed the cold water criteria, and no cold water fish species were documented. Because this AU is classified cold water, temperature and lack of a cold water assemblage will also be identified as impairments.

2018/20 Delisted Impairment	Delisting Reason	Delisting 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.

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

From Herbicide database (MassDEP 2016):

Name	Received Date	Company Name	VEG1	VEG2	VEG3	VEG4	VEG5
MILL POND	4/14/2003	AQUATIC CONTROL TECHNOLOGY, INC.	EURASIAN MILFOIL	WATER CHESTNUT	COMMON REED		
MILL POND	4/15/2004	AQUATIC CONTROL TECHNOLOGY, INC.	EURASIAN MILFOIL	WATER CHESTNUT	PHRAGMITES		
MILL POND	4/6/2005	AQUATIC CONTROL TECHNOLOGY, INC.	M. SPICATUM	TRAPA	PHRAGMITES		
MILL POND	3/20/2006	AQUATIC CONTROL TECHNOLOGY, INC.	M. SPICATUM	TRAPA	PHRAGMITES		
MILL POND	4/9/2007	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU	TRAPA	PHRAGMITES	ALGAE	
MILL POND	4/7/2008	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU	ALGAE	POTAMOGETON CRISPUS	TRAPA	PHRAGMITES
MILL POND	3/12/2009	AQUATIC CONTROL TECHNOLOGY, INC.	ALGAE	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	TRAPA	PHRAGMITES

MILL POND	4/9/2010	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	TRAPA	PHRAGMITES	ALGAE
MILL POND	4/20/2011	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	TRAPA	PHRAGMITES	ALGAE
MILL POND	3/22/2012	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	TRAPA	PHRAGMITES	ALGAE
MILL POND	5/28/2013	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	TRAPA	PHRAGMITES	ALGAE
MILL POND	4/23/2014	AQUATIC CONTROL TECHNOLOGY, INC.	EURASIAN WATERMILFOI	WATER CHESTNUT	ALGAE	CURLYLEAF PONDWEED	COMMON REED
MILL POND	5/8/2015	AQUATIC CONTROL TECHNOLOGY, INC.	EURASIAN WATERMILFOI	WATER CHESTNUT	ALGAE	CURLYLEAF PONDWEED	COMMON REED
MILL POND	4/1/2016	SOLITUDE LAKE MANAGEMENT, LLC	EURASIAN WATERMILFOI	WATER CHESTNUT	ALGAE	CURLYLEAF PONDWEED	COMMON REED

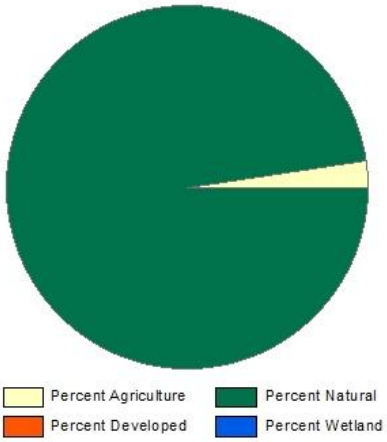
The generic “Non-Native Aquatic Plants” impairment is not needed since the specific macrophytes“Eurasian water milfoil (Myriophyllum spicatum), Curly-leaf pondweed (Potamogeton crispus), and Water chestnut (Trapa natans) have been utilized.

KARNER BROOK (MA21-38)

Location:	Headwaters, perennial portion east of East Street, Mount Washington to the Karner Brook Reservoir intake, Egremont (formerly part of 2014 segment: Karner Brook MA21-16).
AU Type:	RIVER
AU Size:	2.3 MILES
Classification/Qualifier:	A: PWS, ORW

KARNER BROOK - MA21-38

Watershed Area: 2.01 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.94	1.94	0.45	0.45
Agriculture	2.3%	2.3%	2.5%	2.5%
Developed	0.8%	0.8%	1.4%	1.4%
Natural	96.3%	96.3%	94.1%	94.1%
Wetland	0.7%	0.7%	2%	2%
Impervious Cover	3%			

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	2	(Dewatering*)		Removed

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
MA DFG biologists conducted backpack electrofishing in Karner Brook off of Mt Washington Road in September 2006. The sample was comprised of multiple age classes of eastern brook trout indicative of a good habitat and water quality conditions. Based on these data the Aquatic Life Use is assessed as fully supporting for this Karner Brook AU (MA21-38).

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Dewatering	Applicable WQS attained; original basis for listing was incorrect	The original Karner Brook AU (MA21-16) was split into two in the 2016 reporting cycle because of the classification difference (Class A PWS only applies to this upper portion of the brook now MA21-38). The low flow conditions associated with the water withdrawals do not

		apply to this upper segment but rather impacts the downstream Karner Brook AU MA21-39 so the dewatering impairment is being removed.

Supporting Information for Delisted Impairments

Dewatering

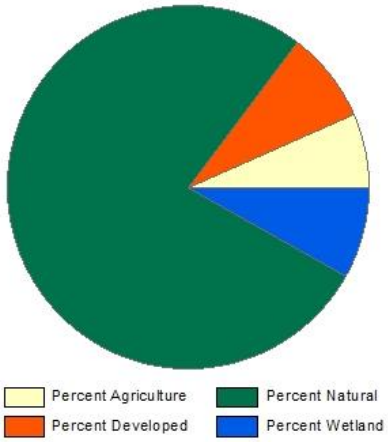
Because of the classification difference (Class A PWS and Class B), the original Karner Brook AU (MA21-16) was split into two in the 2016 reporting cycle. The Class A PWS only applies to this upper portion of the brook (this Karner Brook AU MA21-38). The low flow conditions associated with the water withdrawals do not apply to this upper AU MA21-38 but rather impact the downstream Karner Brook AU MA21-39 so the dewatering impairment is being removed.

KARNER BROOK (MA21-39)

Location:	From the Karner Brook Reservoir intake, Egremont to mouth at inlet Mill Pond, Egremont (formerly part of 2014 segment: Karner Brook MA21-16).
AU Type:	RIVER
AU Size:	2.3 MILES
Classification/Qualifier:	B: ORW

KARNER BROOK - MA21-39

Watershed Area: 10.09 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	9.86	9.53	1.63	1.59
Agriculture	6.5%	6.8%	4.6%	4.7%
Developed	8.3%	8.5%	10.4%	10.4%
Natural	77.0%	76.4%	66.1%	65.7%
Wetland	8.1%	8.3%	18.9%	19.2%
Impervious Cover	7.2%			

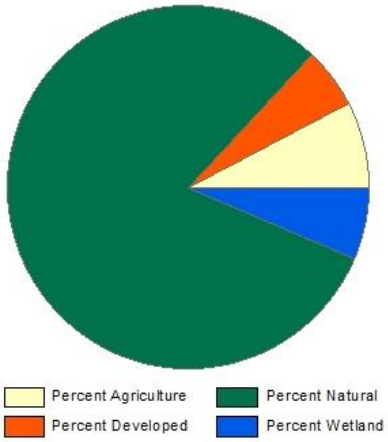
Fish, other Aquatic Life and Wildlife Use: Not Supporting
Although MA DFG backpack electrofishing (station 1788) in July 2006 documented evidence of a reproducing eastern brook trout population and a healthy cold water fishery, recent Water Management Act withdrawal data indicate that the South Egremont Water Company is estimated to reduce the August median flow in Karner Brook by approximately one half. Therefore the Aquatic Life Use is assessed as not supporting for this Karner Brook AU (MA21-39) because of the dewatering associated with the water withdrawal.

Konkapot River (MA21-25)

Location:	Headwaters, outlet Brewer Lake, Monterey to the MA/CT border, New Marlborough (formerly part of 1998 segment: Konkapot River MA21-13).
AU Type:	RIVER
AU Size:	16.5 MILES
Classification/Qualifier:	B

Konkapot River - MA21-25

Watershed Area: 56.72 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	56.57	5.58	11.55	1.20
Agriculture	7.6%	21.2%	7.6%	30.5%
Developed	5.4%	6.2%	6.4%	7%
Natural	80.5%	67.4%	71.8%	53.1%
Wetland	6.5%	5.2%	14.2%	9.4%
Impervious Cover	3.7%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

The Aquatic Life Use for Konkapot River MA21-25 is assessed as fully supporting based on the 2007 RBPIII analysis of a healthy benthic community that was only considered "slightly impacted" when compared to the reference station. The use is also supported based on data collected in 2007 including water quality data (ammonia, nutrients) that met the respective criterion, dissolved oxygen data that met the warmwater criterion and attended data that met relevant temperature, pH and dissolved oxygen criterion. Water quality sampling was conducted at two stations (W0375 and W0377) on 5 occasions during the 2007 sampling season. The average total phosphorus was 0.007 mg/L and 0.009 mg/L respectively. No observations of dense or very dense filamentous algae were noted at either sampling station.

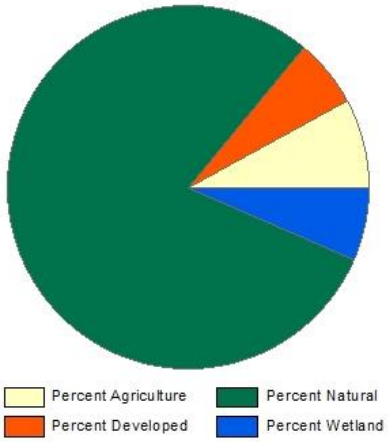
MA DFG sampling in 2008 found a fish community dominated by fluvial specialists/dependents and 2 species which comprised 28% of the fish counted considered intolerant to pollution. Based on the excellent water quality documented by MassDEP sampling in 2007 this use is assessed as fully supporting. In addition more recent benthic macroinvertebrate sampling by the Housatonic Valley Association in 2013 (HVA 2017) using RBPIII analysis of found a healthy benthic community at their sampling station (KP11) and this station was used as a reference sampling station.

Konkapot River (MA21-26)

Location:	From the MA/CT border, Sheffield, to mouth at confluence with the Housatonic River, Sheffield (formerly part of 1998 segment: Konkapot River MA21-13).
AU Type:	RIVER
AU Size:	2.9 MILES
Classification/Qualifier:	B

Konkapot River - MA21-26

Watershed Area: 62.25 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	58.41	3.31	11.92	0.49
Agriculture	7.9%	19.5%	8.3%	32.3%
Developed	6.1%	20.2%	6.5%	9.1%
Natural	79.5%	52.9%	70.4%	31%
Wetland	6.6%	7.3%	14.8%	27.7%
Impervious Cover	1.4%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for the Konkapot River MA21-26 is assessed as fully supporting based on data collected in the summer of 2007 by MassDEP in the river at the Route 7A bridge in Sheffield (W0371). Although there some evidence evidence of slight enrichment (supersaturation as high as 117% and diel DO swings up 2.68mg/L) the water quality data were indicative of good conditions (minimum DO 6.59mg/L, maximum temperature 20.4°C, good pH, average and maximum total phosphorus concentrations were 0.014 and 0.01 mg/L, respectively. No observations of dense or very dense filamentous algae were noted.

Lake Averic (MA21006)

Location:	Stockbridge.
AU Type:	FRESHWATER LAKE
AU Size:	38 ACRES
Classification/Qualifier:	A: PWS, ORW

Fish, other Aquatic Life and Wildlife Use: Not Supporting
The Aquatic Life Use for Lake Averic is assessed as not supporting because of the infestation of Eurasian Water Milfoil, *Myriophyllum spicatum* identified in the lake in August 1997.

Lake Buel (MA21014)

Location:	Monterey/New Marlborough.
AU Type:	FRESHWATER LAKE
AU Size:	191 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Brittle Naiad, Najas Minor*)		Added
5	5	(Curly-leaf Pondweed*)		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting

In 2009 as part of the zebra mussel Phase I Assessment in Berkshire County, *M. spicatum* was observed in the lake. Other non-native aquatic macrophyte species previously noted include *N. minor* and *P. crispus.* The Aquatic Life Use for Lake Buel is assessed as not supporting based on these and the other impairments previously identified.

Lake Garfield (MA21040)

Location:	Monterey.
AU Type:	FRESHWATER LAKE
AU Size:	255 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Fanwort*)		Added
5	5	(Non-Native Aquatic Plants*)		Removed

Fish, other Aquatic Life and Wildlife Use: Not Supporting
M. spicatum and *C. caroliniana* were identified in Lake Garfield in 2009 as part of the zebra mussel Phase I Assessment in Berkshire County. Based on the infestations (as well as other non-native species including *P. crispus*) and the other impairments previously identified, the Aquatic Life Use for Lake Garfield is assessed as not supporting.

2018/20 Delisted Impairment	Delisting Reason	Delisting 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) and Fanwort (Cabomba caroliniana) have been utilized.

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

From Kennedy and Carr 2007: Two non-native macrophytes, *Myriophyllum spicatum* and *Potamogeton crispus*, were found in the lake in 2004 (MA DCR 2004). *M. spicatum* and *C. caroliniana* were identified in the lake in 2009 as part of the zebra mussel Phase I Assessment in Berkshire County (Biodrawersity LLC 2009).

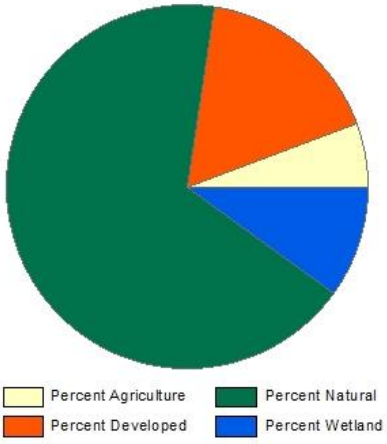
The generic "Non-Native Aquatic Plants" impairment is not needed since the specific macrophytes "Eurasian water milfoil (Myriophyllum spicatum) and Fanwort (Cabomba caroliniana) have been utilized.

Larrywaug Brook (MA21-29)

Location:	Headwaters, outlet Stockbridge Bowl, Stockbridge to mouth at confluence with Housatonic River, Stockbridge.
AU Type:	RIVER
AU Size:	2.9 MILES
Classification/Qualifier:	B

Larrywaug Brook - MA21-29

Watershed Area: 15.10 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	15.10	7.93	2.30	1.06
Agriculture	5.7%	9.1%	2.5%	1.7%
Developed	16.9%	12.3%	15.8%	18.5%
Natural	67.3%	67.4%	54.8%	49%
Wetland	10.0%	11.2%	26.9%	30.8%
Impervious Cover	4.3%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Larrywaug Brook is assessed as support based on the 2007 RBPIII analysis of a healthy benthic community that was only considered "slightly impacted" when compared to the reference station. The water quality data collected at station W1561 during the summer of 2007 were also indicative of good conditions (DO, pH, temperature, ammonia, nutrients. The average total phosphorus was 0.011mg/L while the maximum total phosphorus was 0.016mg/L. There were no observations of dense or very dense filamentous algae noted. The maximum daily DO shift was 2.1 and the maximum DO saturation was 107%.

Laurel Lake (MA21057)

Location:	Lee/Lenox.
AU Type:	FRESHWATER LAKE
AU Size:	174 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	(Brittle Naiad, Najas Minor*)		Added
5	5	(Curly-leaf Pondweed*)		Added
5	5	(Non-Native Aquatic Plants*)		Removed
5	5	(Water Chestnut*)		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting
In July 2009 an infestation of adult and veliger zebra mussels (*Dreissena polymorpha*) was documented in Laurel Lake. In 2015, water chestnut (*Trapa natans*) was observed in the lake. Based on these infestations (as well as other non-native species including *M. spicatum*, *N. minor*, and *P. crispus*) and the other impairments previously identified, the Aquatic Life Use for Laurel Lake is assessed as not supporting.

2018/20 Delisted Impairment	Delisting Reason	Delisting 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), Brittle naiad (Najas minor), Curly-leaf pondweed (Potamogeton crispus), and Water chestnut (Trapa natans) have been utilized.

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

From Kennedy and Carr (2007): The non-native aquatic macrophytes *Myriophyllum spicatum, Potamogeton crispus,* and *Najas minor* were documented in Laurel Lake during the 1997 DWM synoptic survey (Kennedy and Weinstein 2000, MassDEP 1997). There is a 2015 report of an infestation of the non-native *Trapa natans* in the USGS Non-Indigenous Aquatic Species database (USGS 2017b). In July 2009 an infestation of adult and veliger zebra mussels (*Dreissena polymorpha*) was documented in Laurel Lake, Laurel Brook, and the Housatonic River (Biodrawersity LLC 2009). Adult zebra mussels were found in the Housatonic River along a nearly one-mile reach downstream of Laurel Brook, and a single mature adult was found in Stockbridge, 6.95 miles downstream of the Laurel Brook confluence. Veligers were reaching the Housatonic River from Laurel Brook and the broken water pipe that runs from Laurel Lake to the Eagle Mill Building (Laurel Lake Water Power, LLC) alongside the Housatonic River in Lee. The discovery of zebra mussels in Laurel Lake and the Housatonic River prompted a series of actions by state agencies that are summarized in the *Massachusetts Interim Zebra Mussel Action Plan* (MA DCR and MA DFG 2009).

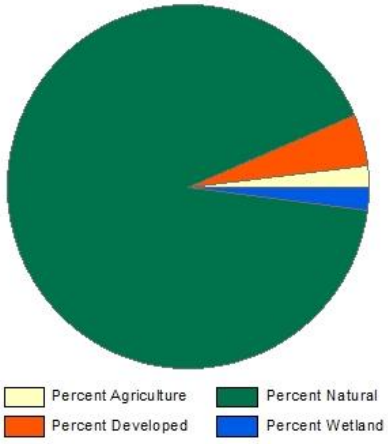
The generic "Non-Native Aquatic Plants" impairment is not needed since the specific macrophytes "Eurasian water milfoil (Myriophyllum spicatum), Brittle naiad (Najas minor), Curly-leaf pondweed (Potamogeton crispus), and Water chestnut (Trapa natans) have been utilized.

LENOX MOUNTAIN BROOK (MA21-47)

Location:	Outlet Lenox Reservoir, Lenox to mouth at confluence with Cone Brook, Richmond.
AU Type:	RIVER
AU Size:	2.1 MILES
Classification/Qualifier:	B

LENOX MOUNTAIN BROOK - MA21-47

Watershed Area: 2.04 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.04	1.90	0.59	0.59
Agriculture	1.9%	2%	2.7%	2.7%
Developed	4.6%	4.9%	6.6%	6.6%
Natural	91.4%	90.8%	87.8%	87.7%
Wetland	2.1%	2.2%	3%	3%
Impervious Cover	1.1%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Lenox Mountain Brook is assessed as support based on the presence of a reproducing brook trout population documented in July 2008 by MA DFG.

Long Pond (MA21062)

Location:	Great Barrington.
AU Type:	FRESHWATER LAKE
AU Size:	114 ACRES
Classification/Qualifier:	A: PWS, ORW

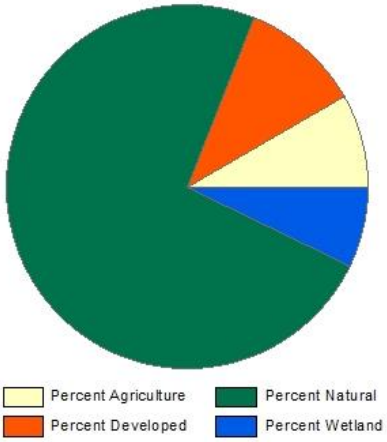
Fish, other Aquatic Life and Wildlife Use: Not Supporting
The Aquatic Life Use for Long Pond is assessed as not supporting based on the historic *Myriophyllum spicatum* infestation identified in the pond in August 1997.

Long Pond Brook (MA21-14)

Location:	Headwaters, outlet Long Pond, Great Barrington to mouth at confluence with Seekonk Brook, Great Barrington.
AU Type:	RIVER
AU Size:	2 MILES
Classification/Qualifier:	B

Long Pond Brook - MA21-14

Watershed Area: 2.20 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.20	2.20	0.42	0.42
Agriculture	8.3%	8.3%	6.9%	6.9%
Developed	10.7%	10.7%	11.9%	11.9%
Natural	73.8%	73.8%	70%	70%
Wetland	7.2%	7.2%	11.2%	11.2%
Impervious Cover	5.2%			

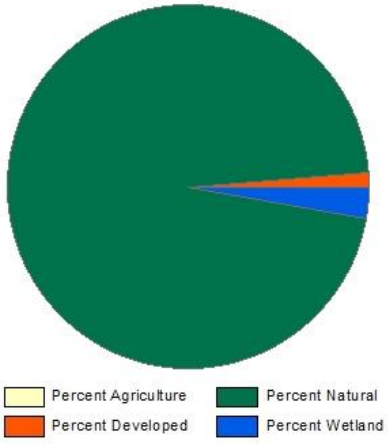
Fish, other Aquatic Life and Wildlife Use: Not Supporting
Although MA DFG sampling conducted in July 2009 showed a fish community dominated by fluvial specialist/dependents there is insufficient information to refute the previous impairment due to dewatering. Therefore the Aquatic Life Use for Long Pond Brook is assessed as not supporting as a result of the historic impairment related to dewatering associated with water withdrawals from Long Pond.

LULU BROOK (MA21-64)

Location:	Headwaters, perennial portion, northeast of Berry Pond Circuit Road, Hancock to mouth at confluence with Parker Brook, Pittsfield.
AU Type:	RIVER
AU Size:	2.7 MILES
Classification/Qualifier:	B

LULU BROOK - MA21-64

Watershed Area: 1.21 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.21	1.21	0.37	0.37
Agriculture	0.0%	0%	0%	0%
Developed	1.2%	1.2%	2.2%	2.2%
Natural	95.9%	95.9%	89.3%	89.3%
Wetland	2.8%	2.8%	8.5%	8.5%
Impervious Cover	4.6%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Lulu Brook is assessed as support based on the presence of a reproducing brook trout population documented in August 2005 by MA DFG.

Mansfield Pond (MA21065)

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

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Curly-leaf Pondweed*)		Added
4c	4c	(Non-Native Aquatic Plants*)		Removed

Fish, other Aquatic Life and Wildlife Use: Not Supporting (Alert)
The Aquatic Life Use for Mansfield Pond is assessed as not supporting based on the historic records of the non-native macrophytes, *Myriophyllum spicatum* and *Potamegeton crispus* documented in the pond in August 1997. An alert is being added for the *Eichhornia crassipes* (water hyacinth) infestation since this species is not winter hardy.

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Non-Native Aquatic Plants	Clarification of listing cause	The generic "Non-Native Aquatic Plants" is not needed since the non-native aquatic macrophytes in Mansfield Pond are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Curly-leaf pondweed (Potamogeton crispus) impairment is being added.

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

From Kennedy and Carr (2007): The non-native aquatic macrophytes *Myriophyllum spicatum* and *Potamogeton crispus* were documented in Mansfield Pond during the 1997 DWM synoptic survey (Kennedy and Weinstein 2000). According to the DCR database of non-native species, there is a report from the lake association of an infestation of Eichhornia crassipes (water hyacinth) in Mansfield Pond (MA DCR 2008).

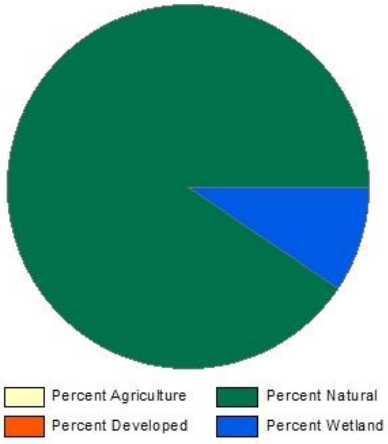
The generic "Non-Native Aquatic Plants" impairment is not needed since the non-native aquatic macrophytes in Mansfield Pond are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Curly-leaf pondweed (Potamogeton crispus) impairment is being added.

MILL BROOK (MA21-55)

Location:	Headwaters, outlet Mill Brook Reservoir, Washington to mouth at confluence with Housatonic River, Lenox.
AU Type:	RIVER
AU Size:	1.8 MILES
Classification/Qualifier:	B

MILL BROOK - MA21-55

Watershed Area: 8.36 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	8.36	5.26	1.84	1.26
Agriculture	0.4%	0.2%	0.4%	0.5%
Developed	0.5%	0.5%	1%	1%
Natural	89.7%	95%	79.4%	90.1%
Wetland	9.4%	4.2%	19.3%	8.3%
Impervious Cover	1.1%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Mill Brook is assessed as support based on the presence of a reproducing brook trout population documented in August 2008 by MA DFG.

Mill Pond (MA21069)

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

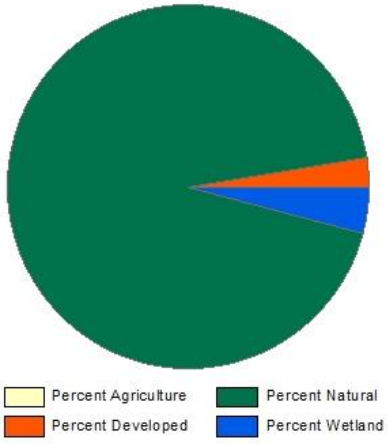
Fish, other Aquatic Life and Wildlife Use: Not Assessed
In the USGS Non-Indigenous Aquatic Species database, there is a report of an infestation of the non-native aquatic macrophyte, *Potamogeton crispus*, in Mill Pond AU MA21069. This needs confirmation. No other recent data are available with which to make an assessment. Mill Pond is not assessed, but an Alert is being issued for a potential infestation of a non-native species.

MOHAWK BROOK (MA21-78)

Location:	Headwaters, outlet Mohawk Lake, Stockbridge to mouth at confluence with Housatonic River, Stockbridge.
AU Type:	RIVER
AU Size:	1.4 MILES
Classification/Qualifier:	B

MOHAWK BROOK - MA21-78

Watershed Area: 1.33 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.33	1.33	0.21	0.21
Agriculture	0.6%	0.6%	0.3%	0.3%
Developed	2.6%	2.6%	5.5%	5.5%
Natural	92.6%	92.6%	79.7%	79.7%
Wetland	4.2%	4.2%	14.5%	14.5%
Impervious Cover	1%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
In 2013 benthic community sampling was conducted by the Housatonic Valley Association at their sampling station (MHB01) (HVA 2017). The RBPIII analysis documented "slightly impacted" conditions when compared to their reference sampling station (KP11, Konkapot River). The benthic community was largely dominated by Coleoptera including *Oulimnius latiusculus* and *Promerisia tardella* but had good taxa richness (27), moderate EPT richness (10) and low/moderate HBI (3.91). The Aquatic Life Use for Mohawk Brook is assessed as fully supporting based on the 2013 HVA sampling and RBPIII analysis of a healthy benthic community that was only considered "slightly impacted" when compared to the reference station.

Morewood Lake (MA21071)

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

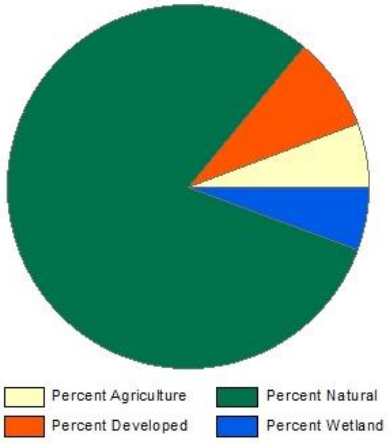
Fish, other Aquatic Life and Wildlife Use: Not Assessed
No recent data are available so the Aquatic Life Use is not assessed for Morewood Lake.

MOUNT LEBANON BROOK (MA21-70)

Location:	Headwaters, north of Lebanon Mountain Road (Route 20), Hancock to mouth at inlet Richmond Pond, Richmond.
AU Type:	RIVER
AU Size:	3 MILES
Classification/Qualifier:	B

MOUNT LEBANON BROOK - MA21-70

Watershed Area: 3.34 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.33	3.33	1.15	1.15
Agriculture	5.7%	5.7%	5.8%	5.8%
Developed	8.3%	8.3%	8.5%	8.5%
Natural	80.4%	80.4%	72.5%	72.5%
Wetland	5.7%	5.7%	13.1%	13.1%
Impervious Cover	4.3%			

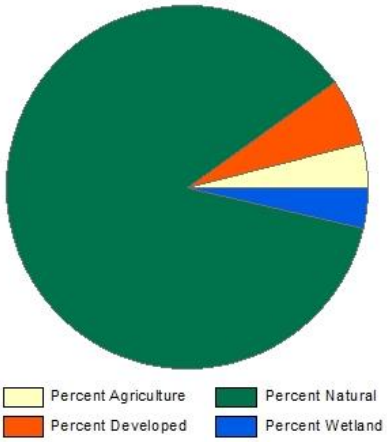
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Mount Lebanon Brook is assessed as fully supporting based on the presence of a reproducing brook trout population documented in August 2008 by MA DFG.

MUDDY BROOK (MA21-50)

Location:	East of Monument Valley Road, Great Barrington from outlet small unnamed impoundment to inlet of unnamed impoundment upstream of Barbieri Dam (NAT ID# MA00039), Great Barrington.
AU Type:	RIVER
AU Size:	0.8 MILES
Classification/Qualifier:	B

MUDDY BROOK - MA21-50

Watershed Area: 0.77 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	0.77	0.77	0.15	0.15
Agriculture	3.9%	3.9%	7.9%	7.9%
Developed	5.9%	5.9%	12.1%	12.1%
Natural	86.5%	86.5%	68.5%	68.5%
Wetland	3.7%	3.7%	11.4%	11.4%
Impervious Cover	1.2%			

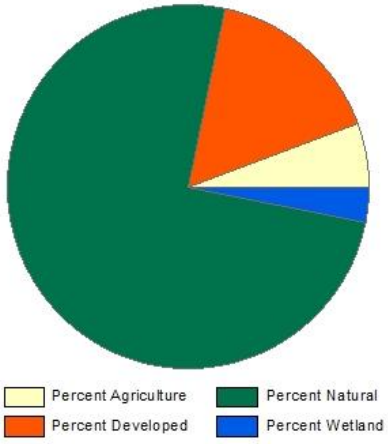
Fish, other Aquatic Life and Wildlife Use: Insufficient Information
Although MA DFG found eastern brook trout at their July 2009 sampling station, only five individuals were counted and they noted a thick understory which may have limited sampling efficiency. There is insufficient information available to assess the Aquatic Life Use for Muddy Brook.

ONOTA BROOK (MA21-80)

Location:	Headwaters outlet Onota Lake, Pittsfield to mouth at confluence with West Branch Housatonic River, Pittsfield.
AU Type:	RIVER
AU Size:	1.4 MILES
Classification/Qualifier:	B

Onota Brook - MA21-80

Watershed Area: 11.30 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	11.30	6.40	1.60	0.80
Agriculture	5.7%	9.4%	6%	12%
Developed	16.1%	27.2%	16%	25.2%
Natural	75.0%	59.3%	76%	57%
Wetland	3.2%	5%	6%	10%
Impervious Cover	0%			

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	4c	(Habitat Assessment*)		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting

Benthic macroinvertebrate (B0627) and water quality sampling (W1570) was conducted in Onota Brook near the Pecks Road crossing nearest Robert Street in Pittsfield during the summer of 2007. The RBPIII analysis of the benthic community was "slightly impacted"when compared to the reference. Habitat quality was compromised (scores in the poor category for bank vegetative protection, bank stability and riparian vegetative zone width as well as score in the marginal category for instream cover for fish and velocity depth combinations). The water quality sampling was indicative of good conditions (minimum DO 7.17mg/L, maximum diel shift and percent saturation 1.0 mg/L and 96%, respectively, good pH, and highest temperature 24.5°C, average total phosphorus concentration 0.015 and maximum concentration 0.02mg/L). There was one observation of dense or very dense filamentous algae noted.

The Aquatic Life Use for Onota Brook is assessed as not supporting based on the degraded habitat quality conditions documented during the biological sampling in the summer of 2007.

Onota Lake (MA21078)

Location:	Pittsfield.
AU Type:	FRESHWATER LAKE
AU Size:	664 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	5	(Brittle Naiad, Najas Minor*)		Added
4c	5	(Curly-leaf Pondweed*)		Added
4c	5	Dissolved Oxygen		Added
4c	5	(Non-Native Aquatic Plants*)		Removed
4c	5	(Water Chestnut*)		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting

Water quality sampling was conducted in Onota Lake by MassDEP on 23 August 2005. The lake was well oxygenated to a depth of 8.2m (DO ≥6.6 mg/L) but dropped below 5.0 mg/L at 9.2m (4.3 mg/L). The lake was assumed to be anoxic at depths ≥ 9.5m (222 of the 664 acres) representing ~33% of the lake surface area (DO 0.7mg/L at 10.7m depth). The integrated depth chlorophyll a sample was low (2.2 mg/m^3) and Secchi disk depth was good (4.4m). The total phosphorus was also low (0.009mg/L) near the surface but was higher (0.14 mg/L) near the anoxic bottom. Infestations of *M. spicatum*, *N. minor,* and *P.crispus* were identified in Onota Lake in 2009 as part of the zebra mussel Phase I Assessment in Berkshire County. *Trapa natans* has also been reported. Based on the presence of the non-native aquatic macrophyte species, as well as the oxygen depletion at depth comprising more than 10% of the lake surface area Onota Lake is assessed as not supporting the Aquatic Life Use.

2018/20 Delisted Impairment	Delisting Reason	Delisting 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), Brittle naiad (Najas minor), Curly-leaf pondweed (Potamogeton crispus), and Water chestnut (Trapa natans) have been utilized.

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

From Kennedy and Carr (2007): Three non-native aquatic macrophytes *Myriophyllum spicatum*, *Najas minor,* and *Potamogeton crispus* were documented in Onota Lake during the 1997-1998 DWM synoptic survey (Kennedy and Weinstein 2000). Two of these species (*Myriophyllum spicatum* and/or *Potamogeton crispus*, were also identified in a recent applications submitted to the Department to apply herbicides to the lake (MassDEP 2003b and MassDEP 2005b). A fourth non-native aquatic macrophyte, *Trapas natans,* was also recently reported to be in this waterbody (MA DFG 2005). The infestations of

M. spicatum, *N. minor,* and *P.crispus* were also identified in the lake more recently (2009) as part of the zebra mussel Phase I Assessment in Berkshire County (Biodrawersity LLC 2009).

From Herbicide Database (MassDEP 2016):

Name	Received Date	Company Name	VEG1	VEG2	VEG3	VEG4
ONOTA LAKE	5/5/2008	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU			
ONOTA LAKE	5/24/2010	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU			
ONOTA LAKE	5/24/2011	AQUATIC CONTROL TECHNOLOGY, INC.	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	NAJAS	NAIAD
ONOTA LAKE	3/26/2012	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU			
ONOTA LAKE	3/18/2013	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU			
ONOTA LAKE	5/20/2016	SOLITUDE LAKE MANAGEMENT, LLC	EURASIAN WATERMILFOI	NAIAD	CURLYLEAF PONDWEED	
ONOTA LAKE	4/8/1999	AQUATIC CONTROL TECHNOLOGY, INC.	M. SPICATUM	P. CRISPUS		
ONOTA LAKE	5/23/2000	AQUATIC CONTROL TECHNOLOGY, INC.	M. SPICATUM			
ONOTA LAKE	7/10/2001	AQUATIC CONTROL TECHNOLOGY, INC.	M. SPICATUM			
ONOTA LAKE	7/9/2002	AQUATIC CONTROL TECHNOLOGY, INC.	M. SPICATUM			
ONOTA LAKE	5/14/2003	AQUATIC CONTROL TECHNOLOGY, INC.	EURASIAN MILFOIL			
ONOTA LAKE	6/22/2005	AQUATIC CONTROL TECHNOLOGY, INC.	M. SPICATUM	P. CRISPUS	NAIAD	
ONOTA LAKE	3/11/2009	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU			
ONOTA LAKE	5/12/2014	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU			
ONOTA LAKE	4/28/2015	AQUATIC CONTROL TECHNOLOGY, INC.	EURASIAN WATERMILFOI	CURLYLEAF PONDWEED	NAIAD	

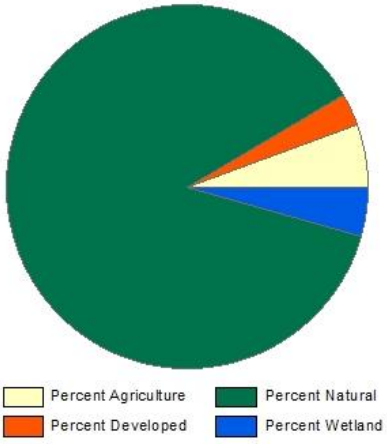
The generic “Non-Native Aquatic Plants” impairment is not needed since the specific macrophytes “Eurasian water milfoil (Myriophyllum spicatum), Brittle naiad (Najas minor), Curly-leaf pondweed (Potamogeton crispus), and Water chestnut (Trapa natans) have been utilized.

PARKER BROOK (MA21-63)

Location:	Headwaters, outlet Tilden Swamp, Hancock to mouth at inlet Onota Lake, Pittsfield.
AU Type:	RIVER
AU Size:	3.2 MILES
Classification/Qualifier:	B

PARKER BROOK - MA21-63

Watershed Area: 3.34 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.34	3.21	1.16	1.14
Agriculture	5.6%	5.9%	5.9%	6%
Developed	2.9%	3%	5%	5.1%
Natural	87.1%	86.7%	83.4%	83.4%
Wetland	4.4%	4.4%	5.7%	5.5%
Impervious Cover	2.1%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Parker Brook is assessed as support based on the presence of a reproducing brook trout population documented in August 2005 by MA DFG.

Plunkett Reservoir (MA21082)

Location:	Hinsdale.
AU Type:	FRESHWATER LAKE
AU Size:	73 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Brittle Naiad, Najas Minor*)		Added
4c	4c	(Non-Native Aquatic Plants*)		Removed

Fish, other Aquatic Life and Wildlife Use: Not Supporting (Alert)
Infestations of *M. spicatum* and *N. minor* were identified in Plunkett Reservoir in 2009 as part of the zebra mussel Phase I Assessment in Berkshire County. Based on the presence of the non-native aquatic macrophyte species, Plunkett Reservoir is assessed as not supporting the Aquatic Life Use. An infestation of *Potamogeton crispus* has also been reported but needs to be confirmed so is being identified as an Alert.

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Non-Native Aquatic Plants	Clarification of listing cause	The generic "Non-Native Aquatic Plants" is not needed since the non-native aquatic macrophytes in Plunkett Reservoir are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Brittle naiad (Najas minor) impairment is being added.

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

From Carr and Kennedy 2007: The non-native aquatic macrophytes *Myriophyllum spicatum* and *Najas minor* were documented in Plunkett Reservoir during the 1997 DWM synoptic survey (Kennedy and Weinstein 2000). *Myriophyllum spicatum, Najas minor and Potamogeton crispus* have also identified in recent applications submitted to the Department to apply herbicides to the lake (MassDEP 2016). The infestations of *M. spicatum* and *N. minor* were also identified in the reservoir more recently (2009) as part of the zebra mussel Phase I Assessment in Berkshire County (Biodrawersity LLC 2009).

From Herbicide Database:

Name	Received Date	Company Name	VEG1	VEG2	VEG3	VEG4
PLUNKETT LAKE	5/4/1999	LYCOTT ENVIRONMENTAL RESEARCH INC	MILFOIL	ELODEA	POTAMOGETON SP	BLADDERWORT

PLUNKETT RESERVOIR	6/4/2002	LYCOTT ENVIRONMENTAL RESEARCH INC	EURASIAN MILFOIL	POTAMOGETON SP	SMARTWEED	
PLUNKETT RESERVOIR	6/1/2004	LYCOTT ENVIRONMENTAL RESEARCH INC	EURASIAN MILFOIL	POTAMOGETON NATANS	P. RICHARDSONII	
PLUNKETT RESERVOIR	3/27/2006	LYCOTT ENVIRONMENTAL RESEARCH INC	M. SPICATUM			
PLUNKETT RESERVOIR	3/5/2007	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS		
PLUNKETT RESERVOIR	2/27/2008	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS		
PLUNKETT RESERVOIR	2/5/2009	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS		
PLUNKETT RESERVOIR	1/28/2010	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS		
PLUNKETT RESERVOIR	3/11/2011	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS		
PLUNKETT RESERVOIR	3/29/2012	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS		
PLUNKETT RESERVOIR	2/22/2013	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS		
PLUNKETT RESERVOIR	2/25/2014	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	NAJAS MINOR	POTAMOGETON CRISPUS	
PLUNKETT RESERVOIR	4/28/2015	AQUATIC CONTROL TECHNOLOGY, INC.	EURASIAN WATERMILFOI	NAIAD	CURLYLEAF PONDWEED	
PLUNKETT RESERVOIR	4/27/2016	SOLITUDE LAKE MANAGEMENT, LLC	EURASIAN WATERMILFOI	NAIAD	CURLYLEAF PONDWEED	

The generic “Non-Native Aquatic Plants” impairment is not needed since the non-native aquatic macrophytes in Plunkett Reservoir are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Brittle naiad (Najas minor) impairment is being added.

Pontoosuc Lake (MA21083)

Location:	Lanesborough/Pittsfield.
AU Type:	FRESHWATER LAKE
AU Size:	500 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	4a	(Brittle Naiad, Najas Minor*)		Added
4a	4a	(Curly-leaf Pondweed*)		Added
4a	4a	(Non-Native Aquatic Plants*)		Removed
4a	4a	(Water Chestnut*)		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting
Infestations of *M. spicatum* and *N. minor* were identified in Pontoosuc Lake in 2009 as part of the zebra mussel Phase I Assessment in Berkshire County. *Potamogeton crispus* and *Trapa natans* have also been reported. Based on the presence of the non-native aquatic macrophyte species, Pontoosuc Lake is assessed as not supporting the Aquatic Life Use.

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Non-Native Aquatic Plants	Clarification of listing cause	The generic "Non-Native Aquatic Plants" is not needed since the non-native aquatic macrophytes in Pontoosuc Lake are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Brittle naiad (Najas minor), Curly-leaf pondweed (Potamogeton crispus), and Water chestnut (Trapa natans) impairments are being added.

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

From Carr and Kennedy 2007: Four non-native aquatic macrophytes (*Myriophyllum spicatum*, *Najas minor*, *Potamogeton crispus*, and *Trapas natans)* were documented in Pontoosuc Lake (Kennedy and Weinstein 2000 and Robinson 2006b). The infestations of *M. spicatum* and *N. minor* were also identified in the lake more recently (2009) as part of the zebra mussel Phase I Assessment in Berkshire County (Biodrawersity LLC 2009

From Herbicide database (MassDEP 2016):

Name	Received Date	Company Name	VEG1	VEG2
PONTOOSUC LAKE	2/27/2008	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS

PONTOOSUC LAKE	3/16/2009	AQUATIC CONTROL TECHNOLOGY, INC.	POTAMOGETON CRISPUS	MYRIOPHYLLUM SPICATU
PONTOOSUC LAKE	3/23/2010	AQUATIC CONTROL TECHNOLOGY, INC.	POTAMOGETON CRISPUS	MYRIOPHYLLUM SPICATU
PONTOOSUC LAKE	5/5/2011	AQUATIC CONTROL TECHNOLOGY, INC.	POTAMOGETON CRISPUS	MYRIOPHYLLUM SPICATU
PONTOOSUC LAKE	2/28/2012	AQUATIC CONTROL TECHNOLOGY, INC.	POTAMOGETON CRISPUS	MYRIOPHYLLUM SPICATU
PONTOOSUC LAKE	4/11/2013	AQUATIC CONTROL TECHNOLOGY, INC.	POTAMOGETON CRISPUS	MYRIOPHYLLUM SPICATU
PONTOOSUC LAKE	3/25/2014	AQUATIC CONTROL TECHNOLOGY, INC.		
PONTOOSUC LAKE	4/28/2015	AQUATIC CONTROL TECHNOLOGY, INC.	CURLYLEAF PONDWEED	EURASIAN WATERMILFOI
PONTOOSUC LAKE	4/1/2016	SOLITUDE LAKE MANAGEMENT, LLC	CURLYLEAF PONDWEED	EURASIAN WATERMILFOI

The generic “Non-Native Aquatic Plants” impairment is not needed since the non-native aquatic macrophytes in Pontoosuc Lake are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Brittle naiad (Najas minor), Curly-leaf pondweed (Potamogeton crispus), and Water chestnut (Trapa natans) impairments are being added.

Prospect Lake (MA21084)

Location:	Egremont.
AU Type:	FRESHWATER LAKE
AU Size:	59 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Curly-leaf Pondweed*)		Added

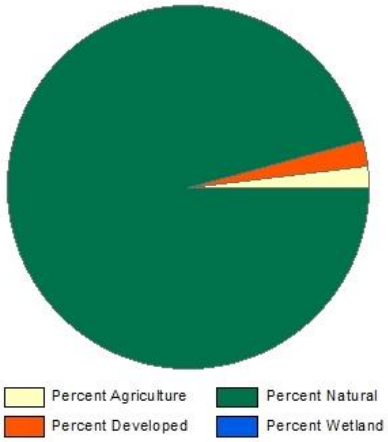
Fish, other Aquatic Life and Wildlife Use: Not Supporting (Alert)
Marsilea quadrifolia and *Potamogeton crispus* were previously identified during a 2003 MassDEP survey of Prospect Lake. The infestation of *Potamogeton crispus* was again reported in the lake more recently (2009) as part of the zebra mussel Phase I Assessment in Berkshire County. *Myriophyllum spicatum* was also reported but needs confirmation. Based on the presence of the non-native aquatic macrophyte species, Prospect Lake is assessed as not supporting the Aquatic Life Use. A new Alert is being issued for the potential *M. spicatum* infestation.

RACE BROOK (MA21-42)

Location:	Headwaters, east of the Appalachian National Scenic Trail in the Mount Washington State Forest, Mount Washington to mouth at confluence with Dry Brook, Sheffield.
AU Type:	RIVER
AU Size:	1.6 MILES
Classification/Qualifier:	B

RACE BROOK - MA21-42

Watershed Area: 1.07 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.07	1.07	0.19	0.19
Agriculture	1.8%	1.8%	0.3%	0.3%
Developed	2.3%	2.3%	5.1%	5.1%
Natural	95.2%	95.2%	92.4%	92.4%
Wetland	0.7%	0.7%	2.2%	2.2%
Impervious Cover	3.5%			

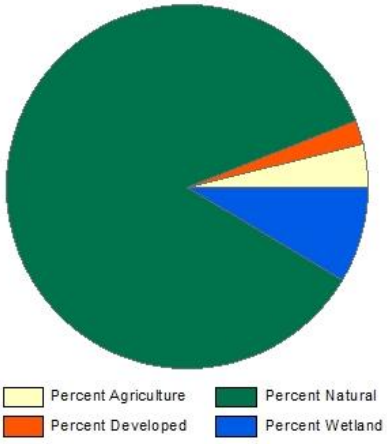
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Race Brook is assessed as support based on the presence of a reproducing brook trout population documented in July 2008 by MA DFG.

RAWSON BROOK (MA21-37)

Location:	Headwaters, north of Cronk Road, Monterey to mouth at confluence with Konkapot River, Monterey.
AU Type:	RIVER
AU Size:	5.9 MILES
Classification/Qualifier:	B

RAWSON BROOK - MA21-37

Watershed Area: 9.19 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	9.10	4.89	1.78	0.89
Agriculture	3.8%	5.5%	3.3%	4.5%
Developed	2.1%	2.6%	1.5%	2.1%
Natural	85.4%	83.2%	71.9%	69.9%
Wetland	8.6%	8.6%	23.4%	23.5%
Impervious Cover	1.1%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

MA DFG biologists conducted backpack electrofishing at one station (1520) in Rawson Brook near Gould Road in August 2006. The sample was comprised entirely of fluvial specialist/dependent species. Further downstream water from the brook was collected just upstream from the Gould Farm Outfall # 001 discharge for use as dilution water in the facility's WET tests. Between October 2008 and July 2015 survival of *C. dubia* (n=7) exposed (7-day) to the river water was excellent (100%), although survival of P. promelas (n=8) exposed (7-day) to the river water ranged from 48 to 100%. Survival was <75% in half (50%) of the P. promelas tests. Benthic macroinvertebrate (B0629) and water quality sampling (W1569) were conducted by MassDEP biologists in Rawson Brook upstream from Wellman Road and downstream from the former Gould Farm NPDES discharge during the summer of 2007. The benthic community was considered "not impacted" since it was the reference station and community attributes were excellent (taxa richness =36, EPT index 17, % dominant taxon 11%). Water quality data (DO, temperature, pH, specific conductivity, total phosphorus) were all indicative of good conditions. The average total phosphorus was 0.009 mg/L while the maximum total phosphorus was 0.014 mg/L. There were no observations of dense or very dense filamentous algae noted. The Gould Farm facility ceased their surface water discharge in June 2016 and the NPDES permit was terminated. Based on biological and water quality monitoring data the Aquatic Life Use for Rawson Brook is assessed as fully supporting.

Richmond Pond (MA21088)

Location:	Richmond/Pittsfield.
AU Type:	FRESHWATER LAKE
AU Size:	228 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Brittle Naiad, Najas Minor*)		Added
4c	4c	(Curly-leaf Pondweed*)		Added
4c	4c	(Non-Native Aquatic Plants*)		Removed

Fish, other Aquatic Life and Wildlife Use: Not Supporting
The infestations of *M. spicatum*, *N. minor, a*nd *P. crispus* were identified in Richmond Pond more recently (2009) as part of the zebra mussel Phase I Assessment in Berkshire County (Biodrawersity LLC 2009). Based on the presence of the non-native aquatic macrophyte species, Richmond Pond is assessed as not supporting the Aquatic Life Use.

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Non-Native Aquatic Plants	Clarification of listing cause	The generic "Non-Native Aquatic Plants" is not needed since the non-native aquatic macrophytes in Richmond Pond are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Brittle naiad (Najas minor) and Curly-leaf pondweed (Potamogeton crispus) impairments are being added.

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

From Carr and Kennedy 2007: The non-native aquatic macrophytes *Myriophyllum spicatum* and *Najas minor* were documented in Richmond Pond during the 1997 DWM synoptic survey (Kennedy and Weinstein 2000). *Myriophyllum spicatum* and *Potamogeton crispus* were also identified in a recent application submitted to MassDEP to apply herbicides to the pond (MassDEP 2005b). The infestations of *M. spicatum*, *N. minor,* and *P. crispus* were also identified in the reservoir more recently (2009) as part of the zebra mussel Phase I Assessment in Berkshire County (Biodrawersity LLC 2009).

From Herbicide Database (MassDEP 2016):

Name	Received Date	Company Name	VEG1	VEG2	VEG3
RICHMOND POND	6/4/2002	LYCOTT ENVIRONMENTAL RESEARCH INC	EURASIAN MILFOIL		

RICHMOND POND	4/12/2005	LYCOTT ENVIRONMENTAL RESEARCH INC	M. SPICATUM	P. CRISPUS	
RICHMOND POND	4/27/2006	LYCOTT ENVIRONMENTAL RESEARCH INC	M. SPICATUM	P. CRISPUS	
RICHMOND POND	4/4/2007	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	
RICHMOND POND	5/5/2008	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	
RICHMOND POND	1/5/2009	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	
RICHMOND POND	3/3/2010	LYCOTT ENVIRONMENTAL RESEARCH INC	POTAMOGETON CRISPUS	MYRIOPHYLLUM SPICATU	
RICHMOND POND	3/11/2011	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	
RICHMOND POND	5/2/2012	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	
RICHMOND POND	6/7/2013	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	
RICHMOND POND	3/11/2014	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	
RICHMOND POND	6/8/2015	AQUATIC CONTROL TECHNOLOGY, INC.	CURLYLEAF PONDWEED	EURASIAN WATERMILFOI	FILAMENTOUS ALGAE
RICHMOND POND	4/1/2016	SOLITUDE LAKE MANAGEMENT, LLC	CURLYLEAF PONDWEED	EURASIAN WATERMILFOI	FILAMENTOUS ALGAE

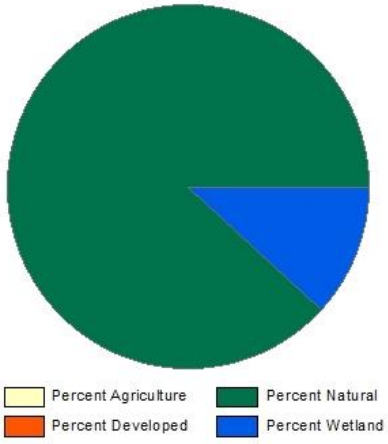
The generic “Non-Native Aquatic Plants” impairment is not needed since the non-native aquatic macrophytes in Richmond Pond are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Brittle naiad (Najas minor) and Curly-leaf pondweed (Potamogeton crispus) impairments are being added.

ROARING BROOK (MA21-56)

Location:	From Pittsfield water supply aqueduct diversion to Farnham Reservoir, Washington to mouth at confluence with Mill Brook, Lenox..
AU Type:	RIVER
AU Size:	2.3 MILES
Classification/Qualifier:	B

ROARING BROOK - MA21-56

Watershed Area: 6.05 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	6.04	3.09	1.21	0.64
Agriculture	0.4%	0%	0%	0%
Developed	0.2%	0%	0.5%	0.2%
Natural	87.6%	94.2%	73.1%	87.5%
Wetland	11.8%	5.8%	26.3%	12.3%
Impervious Cover	6.2%			

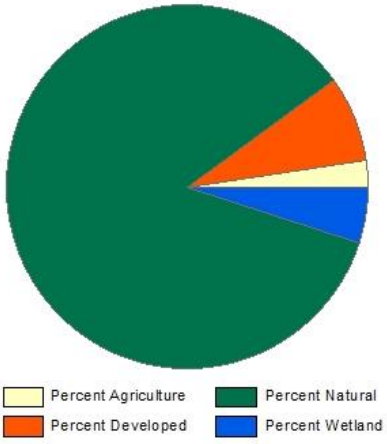
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Roaring Brook is assessed as fully supporting based on the presence of a reproducing brook trout population documented in August 2008 by MA DFG.

SACKETT BROOK (MA21-81)

Location:	Outlet Upper Sackett Reservoir, Hinsdale to mouth at confluence with Housatonic River, Pittsfield.
AU Type:	RIVER
AU Size:	5 MILES
Classification/Qualifier:	B

Sackett Brook - MA21-81

Watershed Area: 9.20 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	9.20	4.50	0.80	0.70
Agriculture	2.6%	5%	5.7%	6.6%
Developed	8.3%	16%	19.4%	21.6%
Natural	93.0%	76%	63.5%	55.8%
Wetland	5.5%	5%	16.9%	17.4%
Impervious Cover	8%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

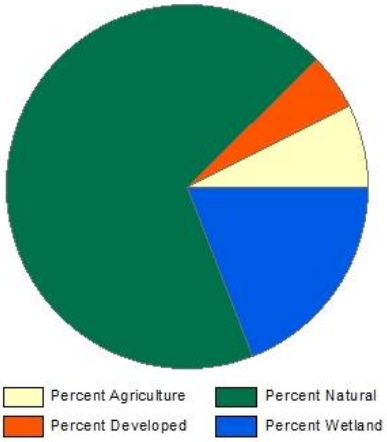
The Aquatic Life Use for Sackett Brook is assessed as fully supporting based on the 2007 RBPIII analysis of a healthy benthic community (B0630) sampled in August 2007 near East New Lenox Road in Pittsfield that was considered “not impacted/slightly impacted” when compared to the reference station. Water quality data also collected here (W1563) during the summer of 2007 including DO, pH, temperature, total phosphorus were also indicative of good conditions (maximum total phosphorus 0.006mg/L). An unattended temperature probe was deployed in June for 97 days. The maximum 7 DADM was 19.7°C. Historic MA DFG fish population sampling in 1998 and 2002 indicate the presence of a reproducing population of brook trout.

SCHENOB BROOK (MA21-79)

Location:	From the CN/MA border, Sheffield to mouth at confluence with Hubbard Brook, Sheffield.
AU Type:	RIVER
AU Size:	10 MILES
Classification/Qualifier:	B

SCHENOB BROOK - MA21-79

Watershed Area: 23.98 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	15.80	3.80	3.29	0.77
Agriculture	7.4%	4.3%	4.4%	2.2%
Developed	5.0%	12.8%	3.5%	8%
Natural	68.4%	50%	58.4%	42.2%
Wetland	19.1%	32.9%	33.7%	47.6%
Impervious Cover	6.8%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

The RPBIII analysis of the benthic macroinvertebrate sample collected from Schenob Brook in August 2013 near Kelsey Road in Sheffield (SCHB) was "slightly impacted" when compared to their reference sampling station (KP11, Konkapot River) (HVA 2017). The moderate taxa richness (24), low EPT richness (6), and the elevated HBI (5.98) likely reflect the low gradient nature of this stream. The watershed for this segment is characterized as ~90 natural and wetland landuse. The sample included a number of taxa often characteristic of low gradient streams including *Gammarus.sp*, *Pisidiidae* and *Tubificidae*. It is best professional judgement the benthic community found at station SCHB represents a healthy benthic community for a low gradient stream. Slightly further downstream MA DFG sampling near the Salisbury Road crossing in Sheffield was conducted in July 2007 (station 5008) using a backpack shocker and again in July 2010 (station 5010) using a barge shocker. Both samples were almost exclusively macrohabitat generalists and the majority of individuals collected are considered moderately tolerant to pollution. Lastly water quality data (DO, pH, temperature, specific conductivity, ammonia, total phosphorus) collected by MassDEP in the summer of 2007 in Schenob Brook near Miller Avenue in Sheffield (station W1559) were indicative of generally good conditions (minimum DO 5.76 mg/L, maximum temperature 22.3°C, average and total phosphorus 0.019 and 0.021 mg/L, respectively). There were no observations of dense or very dense filamentous algae noted.

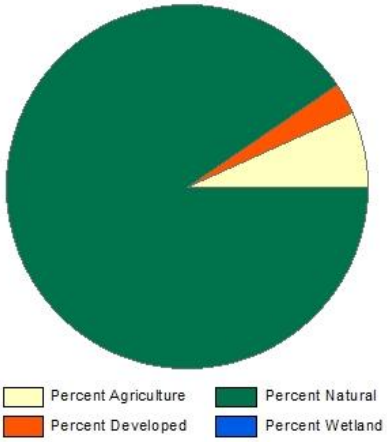
The Aquatic Life Brook for Schenob Brook is assessed as fully supporting based on the benthic macroinvertebrate, fish, and water quality data collected between 2007 and 2013.

SCRIBNER BROOK (MA21-45)

Location:	From NY/MA border in Alford to mouth at confluence with Alford Brook, Alford.
AU Type:	RIVER
AU Size:	0.9 MILES
Classification/Qualifier:	B

SCRIBNER BROOK - MA21-45

Watershed Area: 2.02 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	0.28	0.28	0.11	0.11
Agriculture	6.7%	6.7%	17.8%	17.8%
Developed	2.8%	2.8%	7.3%	7.3%
Natural	90.5%	90.5%	74.8%	74.8%
Wetland	0.0%	0%	0.1%	0.1%
Impervious Cover	1.3%			

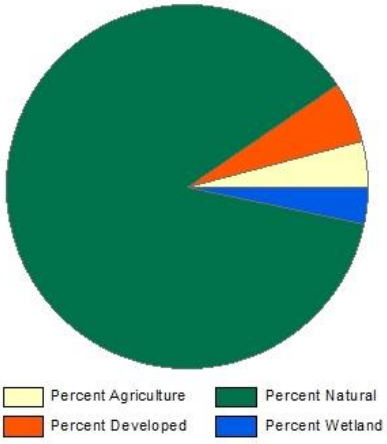
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Scribner Brook is assessed as fully supporting based on the presence of a reproducing brook trout population documented in August 2007 by MA DFG.

SEACE BROOK (MA21-71)

Location:	Headwaters, perennial portion, north of East Slope Road, Richmond to mouth at confluence with Mount Lebanon Brook, Hancock.
AU Type:	RIVER
AU Size:	1.5 MILES
Classification/Qualifier:	B

SEACE BROOK - MA21-71

Watershed Area: 1.33 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.33	1.33	0.47	0.47
Agriculture	4.0%	4%	5.5%	5.5%
Developed	5.5%	5.5%	5.4%	5.4%
Natural	87.2%	87.2%	84%	84%
Wetland	3.3%	3.3%	5.2%	5.2%
Impervious Cover	1.1%			

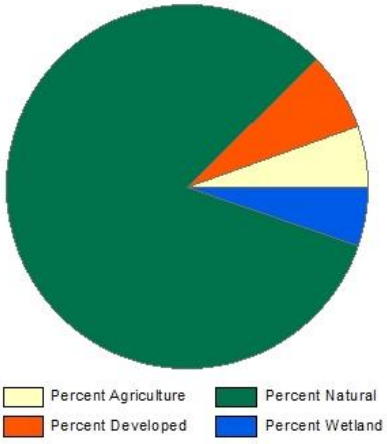
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Seace Brook is assessed as fully supporting based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG.

SECUM BROOK (MA21-66)

Location:	Headwaters, perennial portion, west of Bailey Road, Lanesborough to mouth at inlet Pontoosuc Lake, Lanesborough.
AU Type:	RIVER
AU Size:	4.7 MILES
Classification/Qualifier:	B

SECUM BROOK - MA21-66

Watershed Area: 6.31 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	6.30	5.75	1.64	1.56
Agriculture	5.4%	4.9%	6.4%	6.7%
Developed	7.0%	7.4%	5.7%	6%
Natural	82.3%	82.1%	79.8%	79.2%
Wetland	5.3%	5.6%	8.1%	8.1%
Impervious Cover	8.5%			

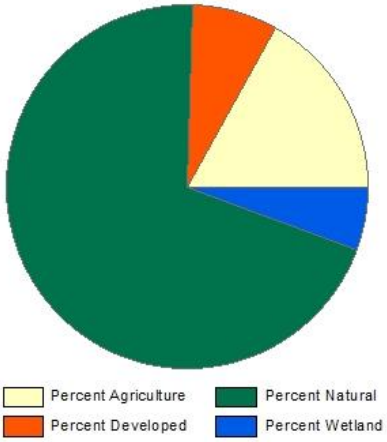
Fish, other Aquatic Life and Wildlife Use: Insufficient Information
Although MA DFG sampling conducted in July 1998 documented a reproducing brook trout population, these data are too old to assess the Aquatic Life Use for Secum Brook so this use is identied as having insufficient information for assessment.

Seekonk Brook (MA21-22)

Location:	Headwaters, outlet of small impoundment east of West Road, Alford to mouth at confluence with the Green River, Great Barrington.
AU Type:	RIVER
AU Size:	4.8 MILES
Classification/Qualifier:	B

Seekonk Brook - MA21-22

Watershed Area: 18.60 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	16.13	6.38	3.03	1.22
Agriculture	16.9%	20.1%	16.9%	19.3%
Developed	7.6%	11.5%	7.7%	12.9%
Natural	69.8%	60.7%	63%	52.7%
Wetland	5.7%	7.6%	12.4%	15.1%
Impervious Cover	4.5%			

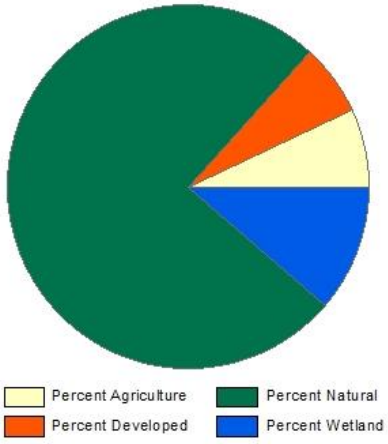
Fish, other Aquatic Life and Wildlife Use: Not Assessed
No recent data are available so the Aquatic Life Use is not assessed for Seekonk Brook.

SHAKER BROOK (MA21-69)

Location:	Headwaters, north of Route 20, Hancock to mouth at confluence with Southwest Branch Housatonic River, Pittsfield.
AU Type:	RIVER
AU Size:	2.2 MILES
Classification/Qualifier:	B

SHAKER BROOK - MA21-69

Watershed Area: 3.01 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.01	2.93	0.81	0.81
Agriculture	7.0%	7.3%	6.1%	6.1%
Developed	6.3%	6.5%	6.8%	6.8%
Natural	75.3%	74.7%	62.3%	62.3%
Wetland	11.4%	11.5%	24.9%	24.9%
Impervious Cover	2.9%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Shaker Brook is assessed as fully supporting based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG.

Shaker Mill Pond (MA21094)

Location:	West Stockbridge.
AU Type:	FRESHWATER LAKE
AU Size:	27 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Curly-leaf Pondweed*)		Added
4c	4c	(Non-Native Aquatic Plants*)		Removed
4c	4c	(Water Chestnut*)		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting
Shaker Mill Pond is infested with three non-native aquatic macrophytes *Myriophyllum spicatum, Potamogeton crispus* and *Trapas natans*. Information from more recent herbicide applications permits indicate the continued presence of *Myriophyllum spicatum* and *Potamogeton crispus.*

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Non-Native Aquatic Plants	Clarification of listing cause	The generic "Non-Native Aquatic Plants" is not needed since the non-native aquatic macrophytes in Shaker Mill Pond are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Curly-leaf pondweed (Potamogeton crispus), and Water chestnut (Trapa natans) impairments are being added.

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

From Carr and Kennedy (2007): Shaker Mill Pond is infested with three non-native aquatic macrophytes *Myriophyllum spicatum, Potamogeton crispus* and *Trapas natans* (MA DFG 2005 and Robinson 2006a).

From Herbicide Database (MassDEP 2016):

Name	Received Date	Company Name	VEG1	VEG2	VEG3	VEG4	VEG5	VEG6
SHAKER MILL POND	4/26/2007	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU	CABOMBA CAROLINIANA	POTAMOGETON SP.	POTAMOGETON CRISPUS	ELODEA CANADENSIS	
SHAKER MILL	4/3/2008	LYCOTT ENVIRONMENTAL	MYRIOPHYLLUM SPICATU	POTAMOGETON AMPLIFOL	POTAMOGETON CRISPUS	CERATOPHYLLUM DEMERSUM		

POND		RESEARCH INC						
SHAKER MILL POND	1/5/2009	LYCOTT ENVIRONMENTAL RESEARCH INC	MYRIOPHYLLUM SPICATU	CERATOPHYLLUM DEMERSUM	POTAMOGETON CRISPUS	NUPHAR	NYMPHAEA	POTAMOGETON AMPLIFOL
SHAKER MILL POND	5/17/2010	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	NYMPHAEA	POTAMOGETON AMPLIFOL	CERATOPHYLLUM DEMERSUM	
SHAKER MILL POND	3/11/2011	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	NYMPHAEA	POTAMOGETON AMPLIFOL	CERATOPHYLLUM DEMERS	
SHAKER MILL POND	3/29/2012	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	NYMPHAEA	POTAMOGETON AMPLIFOL	CERATOPHYLLUM DEMERS	
SHAKER MILL POND	2/22/2013	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGEON CRISPUS	NYMPHAEA	POTAMOGETON AMPLIFOL	CERATOPHYLLUM DEMERS	
SHAKER MILL POND	5/27/2014	LYCOTT ENVIRONMENTAL INCORPORATED	MYRIOPHYLLUM SPICATU	POTAMOGETON CRISPUS	NYMPHAEA	POTAMOGETON AMPLIFOL	CERATOPHYLLUM DEMERS	
SHAKER MILL POND	4/28/2015	AQUATIC CONTROL TECHNOLOGY, INC.	COONTAIL	EURASIAN WATERMILFOI	WHITE WATERLILY	CURLYLEAF PONDWEED	LARGELEAF PONDWEED	
SHAKER MILL POND	4/1/2016	SOLITUDE LAKE MANAGEMENT, LLC	COONTAIL	EURASIAN WATERMILFOI	WHITE WATERLILY	CURLYLEAF PONDWEED	LARGELEAF PONDWEED	

The generic “Non-Native Aquatic Plants” impairment is not needed since the non-native aquatic macrophytes in Shaker Mill Pond are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Curly-leaf pondweed (Potamogeton crispus), and Water chestnut (Trapa natans) impairments are being added.

Silver Lake (MA21097)

Location:	Pittsfield.
AU Type:	FRESHWATER LAKE
AU Size:	27 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
--	5	PCBs in Fish Tissue		Added

Fish, other Aquatic Life and Wildlife Use: Not Assessed

No data are available to assess the Aquatic Life Use of Silver Lake

Fish Consumption Use: Not Supporting

Because of elevated PCBs measured in fish filets from Silver Lake, MassDPH issued the following fish consumption advisories:

- *"No one should consume any fish from this water body."*

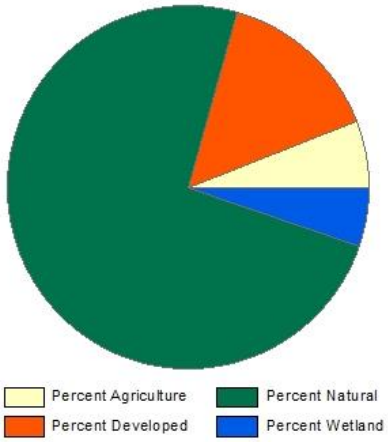
Since there is a site specific DPH advisory for elevated PCBs in fish tissue, the Fish Consumption Use for Silver Lake (MA21097) is assessed as Not Supporting. The source is Illegal Dumps or Other Inappropriate Waste Disposal. Data Source: (MassDPH, 2019)

SMITH BROOK (MA21-72)

Location:	Headwaters, perennial portion north of Brickhouse Mountain Road, Pittsfield to mouth at confluence with Southwest Branch Housatonic River, Pittsfield.
AU Type:	RIVER
AU Size:	2.8 MILES
Classification/Qualifier:	B

SMITH BROOK - MA21-72

Watershed Area: 3.41 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.41	2.57	0.60	0.53
Agriculture	5.9%	7.9%	5.8%	6.6%
Developed	14.8%	19.6%	10%	11.3%
Natural	74.0%	66.2%	67.8%	63.7%
Wetland	5.3%	6.3%	16.3%	18.4%
Impervious Cover	7.7%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

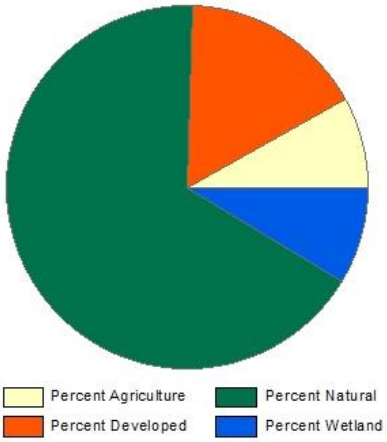
MA DFG sampling was conducted at two sampling locations along this Smith Brook AU in August 2005. MA DFG found a fish community at both sampling sites that was dominated by fluvial specialists/dependents and at least two species moderately tolerant to pollution at each location. The fish population at each station though was largely dominated by individuals considered tolerant to pollution. Based on the dominance of fluvial specialists found by MA DFG the aquatic life use for Smith Brook is assessed as fully supporting.

Southwest Branch Housatonic River (MA21-17)

Location:	Headwaters, outlet Richmond Pond, Pittsfield to mouth at confluence with West Branch Housatonic River (forming headwaters Housatonic River), Pittsfield.
AU Type:	RIVER
AU Size:	5.8 MILES
Classification/Qualifier:	B: CWF, HQW

Southwest Branch Housatonic River - MA21-17

Watershed Area: 23.56 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	23.55	7.74	5.70	1.87
Agriculture	8.1%	10.6%	8.3%	10.9%
Developed	16.4%	32.6%	14.1%	23.9%
Natural	66.9%	45.5%	57.1%	39.8%
Wetland	8.7%	11.2%	20.5%	25.4%
Impervious Cover	4.3%			

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Temperature		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting (Alert)
The Housatonic Valley Association (HVA 2017) sampled benthic macroinvertebrates at one location along Southwest Branch Housatonic River (Station SW01) in September 2014. The HVA station was located at the historic MassDEP benthic sampling location (B0022, slightly downstream of Barker Road, Pittsfield, MA). The RBPIII analysis was "moderately impacted" when compared to the reference station (Station ID: HR19E, Housatonic River) however HVA's RBPIII analysis was not used directly in the assessment decision based on MassDEP BPJ that despite supporting habitat comparability scores there is too large drainage area difference between the two sites, as well as a delay in almost a month time between sample collections. Just a bit further downstream water quality sampling was conducted by MassDEP staff at one station (W1573) on 5 occasions during the summer of 2007. With the exception of temperature, the water quality data (i.e., DO, pH, ammonia, nutrients) were indicative of good conditions. There were no observations of dense or very dense filamentous algae noted. The maximum daily DO shift was 1.5 mg/L and the maximum DO saturation was 94%. The average total phosphorus was 0.011 mg/L while the maximum was 0.018 mg/L. A temperature probe was deployed beginning on 06/26/07 for 96 days. The maximum 7 DADM was 23.6°C and the maximum 7 DADA was 22.2°C.

The chronic Tier 1 CWF criterion was violated on 50 days while the Tier 2 Chronic criterion was violated on 17 days. The maximum 24-hour rolling average temperature was 23.5°C.
The Aquatic Life Use is assessed as not supporting for the Southwest Branch Housatonic River based on the instream temperatures that violate cold water criteria. Too limited data are available to delist the historical habitat quality degradation (sedimentation/siltation) so this cause of impairment is being retained. An alert status is being identified because of HVA's most recent benthic macroinvertebrate community analysis indicating moderate impacts however additional data would need to be obtained to corroborate these findings.

Stevens Pond (MA21104)

Location:	Monterey.
AU Type:	FRESHWATER LAKE
AU Size:	39 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	4c	(Curly-leaf Pondweed*)		Added
4c	4c	(Non-Native Aquatic Plants*)		Removed

Fish, other Aquatic Life and Wildlife Use: Not Supporting
The Aquatic Life Use for Stevens Pond is assessed as not supporting based on the historic records of *Myriophyllum spicatum* and *Potamogeton crispus* infestations. Both of these species continue to be identified in the pond in recent herbicide applications.

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Non-Native Aquatic Plants	Clarification of listing cause	The generic "Non-Native Aquatic Plants" is not needed since the non-native aquatic macrophytes in Stevens Pond are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Curly-leaf pondweed (Potamogeton crispus) impairment is being added.

Supporting Information for Delisted Impairments

Non-Native Aquatic Plants

From Carr and Kennedy (2007): In recent applications submitted to MassDEP to apply herbicides to the pond, Stevens Pond was reported to be infested with *Myriophyllum spicatum* and *Potamogeton crispus* (MassDEP 2004 and MassDEP 2005b).

From Herbicide Database (MassDEP 2016):

Name	Received Date	Company Name	VEG1	VEG2	VEG3	VEG4	VEG5	VEG6	VEG 7
STEVENS LAKE	4/17/1997	LYCOTT ENVIRONMENTAL RESEARCH INC	MILFOIL	ELODEA	POTAMOGETON SP.				
STEVENS LAKE	4/17/2002	LYCOTT ENVIRONMENTAL	EURASIAN MILFOIL	POTAMOGETON SP	ELODEA				

		RESEARCH INC							
STEVENS LAKE	4/28/2015	AQUATIC CONTROL TECHNOLOGY, INC.	CURLYLEAF PONDWEED	EURASIAN WATERMILFOI	COMMON REED	TAPEGRASS	ELODEA	FILAMENTOUS ALGAE	MUSK GRASS
STEVENS LAKE	5/17/2016	SOLITUDE LAKE MANAGEMENT, LLC	CURLYLEAF PONDWEED	EURASIAN WATERMILFOI	COMMON REED	TAPEGRASS	ELODEA	FILAMENTOUS ALGAE	MUSK GRASS
STEVEN'S LAKE	5/21/2001	LYCOTT ENVIRONMENTAL RESEARCH INC	EURASIAN MILFOIL	POTAMOGETON SP	ELODEA				
STEVEN'S LAKE	4/15/2004	LYCOTT ENVIRONMENTAL RESEARCH INC	EURASIAN MILFOIL	COONTAIL	CURLY PONDWWEED				
STEVEN'S LAKE	3/14/2005	LYCOTT ENVIRONMENTAL RESEARCH INC	P. CRISPUS	M. SPICATUM	C. DEMERSUM				
STEVEN'S LAKE	5/9/2006	LYCOTT ENVIRONMENTAL RESEARCH INC	P. CRISPUS	M. SPICATUM	FILAMENTOUS ALGAE				
STEVEN'S LAKE	1/11/2007	LYCOTT ENVIRONMENTAL RESEARCH INC	FILAMENTOUS ALGAE	POTAMOGETON CRISPUS	MYRIOPHYLLUM SPICATU	CHARA			
STEVEN'S LAKE	1/9/2008	LYCOTT ENVIRONMENTAL RESEARCH INC	POTAMOGETON CRISPUS	FILAMENTOUS ALGAE	MYRIOPHYLLUM SPICATU	CHARA			
STEVEN'S LAKE	2/12/2009	LYCOTT ENVIRONMENTAL RESEARCH INC	POTAMOGETON CRISPUS	FILAMENTOUS ALGAE	MYRIOPHYLLUM SPICATU	CHARA			

STEVEN'S LAKE	1/20/2010	LYCOTT ENVIRONMENTAL RESEARCH INC	POTAMOGETON CRISPUS	FILAMENTOUS ALGAE	MYRIOPHYLLUM SPICATU	CHARA			
STEVEN'S LAKE	3/11/2011	LYCOTT ENVIRONMENTAL INCORPORATED	POTAMOGETON CRISPUS	MYRIOPHYLLUM SPICATU	FILAMENTOUS ALGAE	CHARA			
STEVEN'S LAKE	3/30/2012	LYCOTT ENVIRONMENTAL INCORPORATED	POTAMOGETON CRISPUS	FILAMENTOUS ALGAE	MYRIOPHYLLUM SPICATU	CHARA			
STEVEN'S LAKE	2/26/2013	LYCOTT ENVIRONMENTAL INCORPORATED	POTAMOGETON CRISPUS	FILAMENTOUS ALGAE	MYRIOPHYLLUM SPICATU	CHARA			
STEVEN'S LAKE	2/24/2014	LYCOTT ENVIRONMENTAL INCORPORATED	POTAMOGETON CRISPUS	FILAMENTOUS ALGAE	ELODEA	MYRIOPHYLLUM SPICATU	CHARA	PHRAGMITES AUSTRALIS	

The generic “Non-Native Aquatic Plants” impairment is not needed since the non-native aquatic macrophytes in Stevens Pond are being specificially identified: Eurasian water milfoil (Myriophyllum spicatum) impairment is being retained, and Curly-leaf pondweed (Potamogeton crispus) impairment is being added.

Stockbridge Bowl (MA21105)

Location:	Stockbridge.
AU Type:	FRESHWATER LAKE
AU Size:	384 ACRES
Classification/Qualifier:	B

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4a	5	Dissolved Oxygen		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting

Water quality sampling was conducted in Stockbridge Bowl by MassDEP on 24 August 2005. The lake was well oxygenated to a depth of 8.5m (DO ≥7.6 mg/L) but dropped below 5.0 mg/L at 8.7m. The lake was anoxic at depth > 9m (194 of the 384 acres) representing ~51% of the lake surface area. The integrated depth chlorophyll a sample was low (2.8 mg/m^3) as was total phosphorus (0.008 mg/L) near the surface. The total phosphorus concentration near the anoxic bottom was higher (0.14 mg/L). Infestation of *M. spicatum* was originally identified by DWM biologists in Stockbridge Bowl during the summer of 1997 during a synoptic field survey and again in 2009 as part of the zebra mussel Phase I Assessment in Berkshire County. *N. minor* was also reported in the 2009 survey. Additionally, there is a report of *P. crispus* in the USGS USGS Non-Indigenous Aquatic Species database, but this needs confirmation.

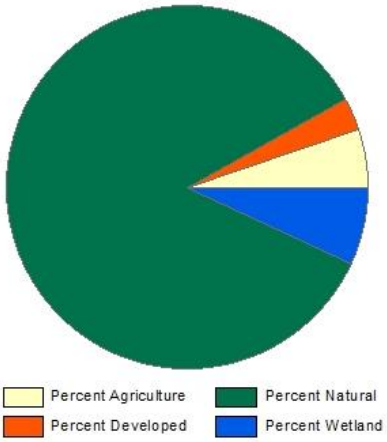
The Aquatic Life Use for Stockbridge Bowl is assessed as Not Supporting. The *M. spicatum* impairment is being carried forward and because of the oxygen depletion at depth comprising more than 10% of the lake surface area a dissolved oxygen impairment is being added. An Alert is being identified due to a potential new infestation of *P. crispus*.

STONY BROOK (MA21-49)

Location:	Headwaters, outlet Benedict Pond, Great Barrington to mouth at confluence with Konkapot Brook, at Berle Pond Dam (NAT ID# MA01046), Great Barrington.
AU Type:	RIVER
AU Size:	2.9 MILES
Classification/Qualifier:	B

STONY BROOK - MA21-49

Watershed Area: 5.08 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	5.08	5.08	1.16	1.16
Agriculture	5.2%	5.2%	8.3%	8.3%
Developed	2.9%	2.9%	3.8%	3.8%
Natural	85.0%	85%	68.4%	68.4%
Wetland	6.9%	6.9%	19.5%	19.5%
Impervious Cover	3.3%			

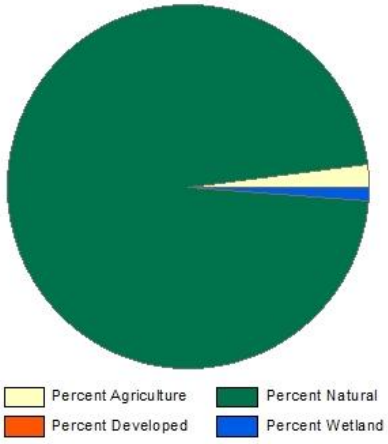
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Stony Brook is assessed as fully supporting based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG.

SWANN BROOK (MA21-40)

Location:	Headwaters, east of Mount Wilcox Road, in the Beartown State Forest, Monterey to mouth at confluence with the Konkapot River, Monterey.
AU Type:	RIVER
AU Size:	3.2 MILES
Classification/Qualifier:	B

SWANN BROOK - MA21-40

Watershed Area: 1.64 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.64	1.64	0.41	0.41
Agriculture	2.0%	2%	3.1%	3.1%
Developed	0.7%	0.7%	1.9%	1.9%
Natural	96.1%	96.1%	92.9%	92.9%
Wetland	1.3%	1.3%	2.1%	2.1%
Impervious Cover	3.5%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

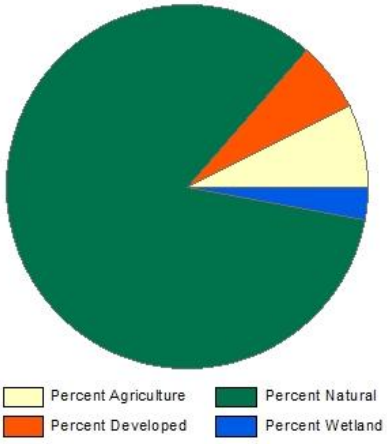
The Aquatic Life Use for Swann Brook is assessed as fully supporting based on the presence of a reproducing brook trout population documented in August 2006 by MA DFG.

SYKES BROOK (MA21-57)

Location:	Headwaters, perennial portion north of Sykes Mountain, Pittsfield to mouth at confluence with Housatonic River, Pittsfield.
AU Type:	RIVER
AU Size:	1.6 MILES
Classification/Qualifier:	B

SYKES BROOK - MA21-57

Watershed Area: 0.94 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	0.94	0.94	0.28	0.28
Agriculture	7.3%	7.3%	14.9%	14.9%
Developed	6.3%	6.3%	8.5%	8.5%
Natural	83.5%	83.5%	68.5%	68.5%
Wetland	2.9%	2.9%	8%	8%
Impervious Cover	1.6%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Sykes Brook is assessed as fully supporting based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG.

Thousand Acre Pond (MA21106)

Location:	New Marlborough.
AU Type:	FRESHWATER LAKE
AU Size:	145 ACRES
Classification/Qualifier:	B

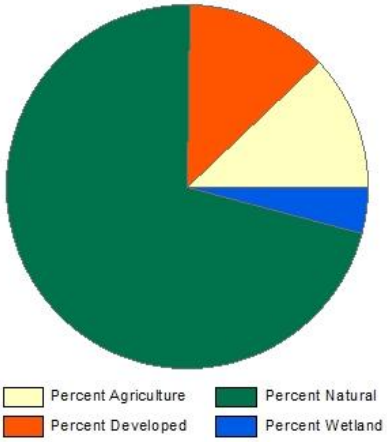
Fish, other Aquatic Life and Wildlife Use: Not Supporting
The Aquatic Life Use for Thousand Acre Pond is assessed as not supporting based on the historic record of *Myriophyllum spicatum* documented in the pond in August 1997. An Alert is being issued because *Myriophyllum* sp. was also reported during the 1997 survey- a macrophyte survey should be conducted to determine whether *M. heterophyllum* is present in the pond.

TOWN BROOK (MA21-36)

Location:	Headwaters, perennial portion, Lanesborough to mouth at inlet Pontoosuc Lake, Lanesborough.
AU Type:	RIVER
AU Size:	7.9 MILES
Classification/Qualifier:	B

TOWN BROOK - MA21-36

Watershed Area: 12.18 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	12.17	4.11	3.12	0.98
Agriculture	12.0%	15.4%	11%	13.5%
Developed	12.8%	21.2%	13%	18.6%
Natural	71.0%	55%	66%	44.5%
Wetland	4.2%	8.4%	10%	23.4%
Impervious Cover	2.7%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

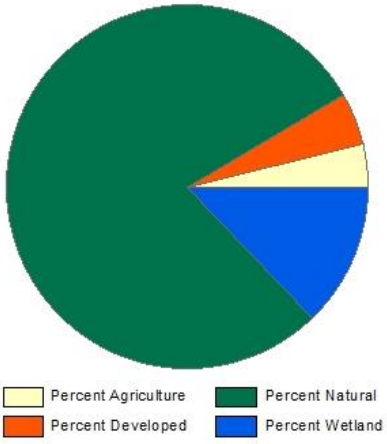
MA DFG conducted backpack electrofishing in Town Brook at two locations in Lanesborough in 2006: near the headwaters (SampleID: 1738) sampling in August documented the presence of a reproducing population of eastern brook trout and further downstream near Bridge Street (SampleID: 1738) sampling in July documented a eight species and was dominated by multiple age classes of trout. Water quality monitoring data collected by MassDEP biologists during the summer of 2007 from the brook at Miner Road (W1562 and W1723) were indicative of good conditions (mean deployed DO data ≥6.26mg/L, good pH, max temperature 17.6°C, low total phosphorus maximum was 0.006 mg/L, and no observations of dense or very dense filamentous algae).
The Aquatic Life Use is assessed as fully supporting for Town Brook based on fish and water quality sampling data collected MA DFG and MassDEP in the summers of 2006 and 2007.

TYLER BROOK (MA21-32)

Location:	Headwaters, north of Monahan Road, Windsor to mouth at confluence with Windsor Brook, Windsor.
AU Type:	RIVER
AU Size:	2.5 MILES
Classification/Qualifier:	A: PWS, ORW, CWF

TYLER BROOK - MA21-32

Watershed Area: 2.04 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	2.04	2.04	0.62	0.62
Agriculture	3.8%	3.8%	2.1%	2.1%
Developed	4.6%	4.6%	2.6%	2.6%
Natural	78.7%	78.7%	72.3%	72.3%
Wetland	12.9%	12.9%	23%	23%
Impervious Cover	5.5%			

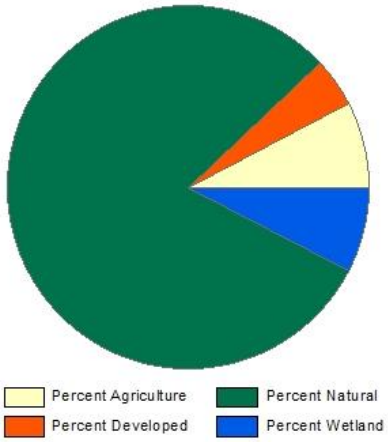
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for Tyler Brook is assessed as fully supporting based on the presence of a reproducing brook trout population documented in August 2002 by MA DFG.

UMPACHENE RIVER (MA21-75)

Location:	Headwaters, perennial portion west of Idle Hour Road, New Marlborough to mouth at confluence with Konkapot River, New Marlborough.
AU Type:	RIVER
AU Size:	7.8 MILES
Classification/Qualifier:	B

UMPACHENE RIVER - MA21-75

Watershed Area: 10.41 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	10.39	6.98	2.92	1.99
Agriculture	7.7%	7.6%	6.2%	7.1%
Developed	4.4%	5.3%	4.5%	5.7%
Natural	80.4%	81.9%	77.4%	79.4%
Wetland	7.6%	5.2%	11.9%	7.9%
Impervious Cover	1.6%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

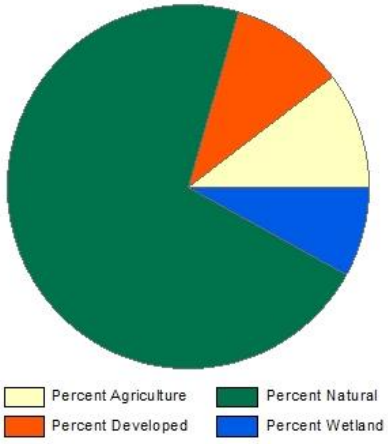
The Aquatic Life Use for Umpachene River is assessed as fully supporting based on MA DFG sampling in August 2006 which found a fish community that was composed of 100 % fluvial specialists/dependents. 14 % of the individuals collected were considered intolerant/moderately intolerant to pollution while 86 % were considered tolerant to pollution. In addition more recent benthic macroinvertebrate sampling by the Housatonic Valley Association in 2013 (HVA 2017) using RBPIII analysis of found a “not impacted” benthic community at their sampling station (UMPR) when compared to their reference sampling station (KP11, Konkapot River).
The benthic sample had high taxa and EPT richness, a low HBI and well balanced community.

Unnamed Tributary (MA21-24)

Location:	Headwaters, outlet Mill Pond, Egremont to mouth at confluence with Hubbard Brook, Egremont.
AU Type:	RIVER
AU Size:	1.5 MILES
Classification/Qualifier:	B

Unnamed Tributary - MA21-24

Watershed Area: 11.86 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	11.64	6.90	1.83	1.19
Agriculture	10.3%	15.4%	4.5%	5.8%
Developed	10.2%	15.7%	13.4%	19.3%
Natural	71.4%	56.8%	62.7%	47.9%
Wetland	8.1%	12.1%	19.4%	26.9%
Impervious Cover	1%			

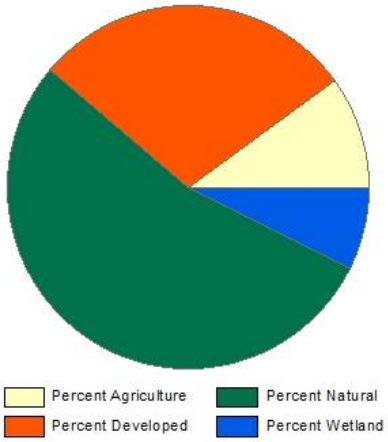
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for unnamed tributary MA21-24 is assessed as fully supporting based on MA DFG sampling in July 2009 which found a fish community that was composed of 100 % fluvial specialists/dependents. 12 % of the individuals collected were considered moderately intolerant to pollution while 88 % were considered tolerant to pollution. In addition more recent benthic macroinvertebrate sampling by the Housatonic Valley Association in 2013 (HVA 2017) using RBPIII analysis of found a “slightly impacted” benthic community at their sampling station (KAB01) when compared to their reference sampling station (KP11, Konkapot River).

Unnamed Tributary (MA21-31)

Location:	Unnamed tributary to the Housatonic River, locally known as "Laurel Brook", headwaters, outlet Laurel Lake, Lee to mouth at confluence with the Housatonic River, Lee.
AU Type:	RIVER
AU Size:	0.8 MILES
Classification/Qualifier:	B

Unnamed Tributary - MA21-31

Watershed Area: 3.36 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.36	3.36	0.48	0.48
Agriculture	10.0%	10%	2.7%	2.7%
Developed	28.8%	28.8%	26.8%	26.8%
Natural	53.8%	53.7%	59.1%	59.1%
Wetland	7.4%	7.5%	11.4%	11.4%
Impervious Cover	7.7%			

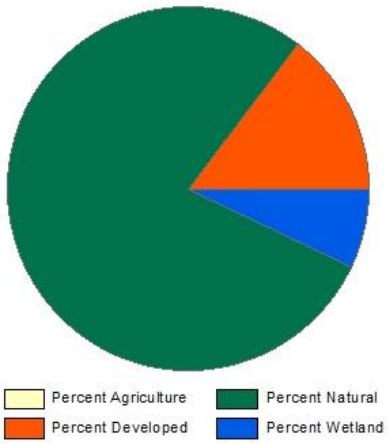
Fish, other Aquatic Life and Wildlife Use: Not Supporting
In July 2009 an infestation of zebra mussels (*Dreissena polymorpha*) was documented in Laurel Lake, Laurel Brook, and the Housatonic River. The Aquatic Life Use is assessed as not supporting for this unnamed tributary locally known as Laurel Brook based on the presence of this non-native organism.

Unnamed Tributary (MA21-46)

Location:	Unnamed tributary to Housatonic River, headwaters (perennial portion) northwest of the Butternut Ski Area (south of Route 23), Great Barrington to mouth at confluence with Housatonic River, Great Barrington.
AU Type:	RIVER
AU Size:	2.6 MILES
Classification/Qualifier:	B

Unnamed Tributary - MA21-46

Watershed Area: 3.59 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	3.59	3.50	0.55	0.55
Agriculture	1.0%	1%	3.2%	3.2%
Developed	14.5%	14.9%	24.6%	24.6%
Natural	77.6%	77.4%	51.2%	51.2%
Wetland	7.0%	6.7%	21.1%	21.1%
Impervious Cover	3.3%			

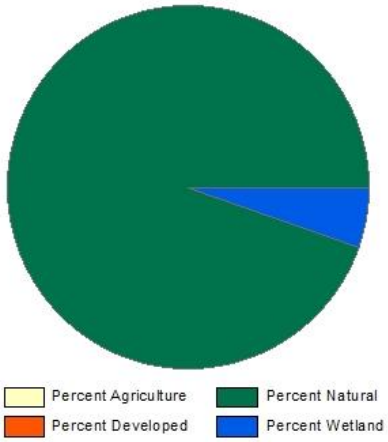
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for unnamed tributary (AU MA21-46) is assessed as fully supporting based on the presence of a reproducing brook trout population documented in August 2008 by MA DFG.

Unnamed Tributary (MA21-54)

Location:	Unnamed tributary to Housatonic River, from outlet of Felton Lake (north of Felton Pond Road), Washington to mouth at confluence with Housatonic River, Lee.
AU Type:	RIVER
AU Size:	1 MILES
Classification/Qualifier:	B

Unnamed Tributary - MA21-54

Watershed Area: 1.09 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.09	1.09	0.29	0.29
Agriculture	0.0%	0%	0%	0%
Developed	0.0%	0%	0%	0%
Natural	94.6%	94.6%	88.7%	88.7%
Wetland	5.4%	5.4%	11.3%	11.3%
Impervious Cover	5.1%			

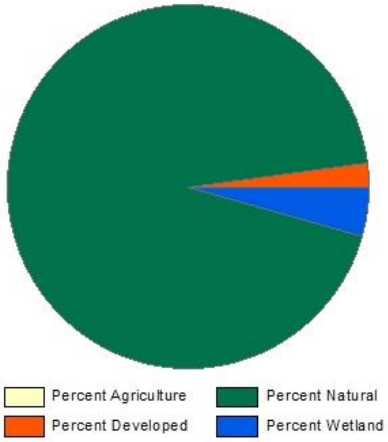
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for unnamed tributary MA21-54 is assessed as fully supporting based on the presence of a reproducing brook trout population documented in August 2008 by MA DFG.

Unnamed Tributary (MA21-62)

Location:	Unnamed tributary to Plunkett Reservoir, headwaters, outlet Belmont Reservoir, Hinsdale to mouth at inlet Plunkett Reservoir, Hinsdale.
AU Type:	RIVER
AU Size:	0.9 MILES
Classification/Qualifier:	B

Unnamed Tributary - MA21-62

Watershed Area: 1.58 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.58	1.58	0.55	0.55
Agriculture	0.4%	0.4%	0.6%	0.6%
Developed	2.1%	2.1%	3.1%	3.1%
Natural	93.0%	93%	90.6%	90.6%
Wetland	4.4%	4.4%	5.7%	5.7%
Impervious Cover	1.2%			

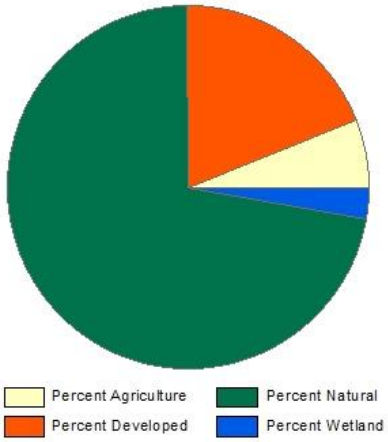
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for unnamed tributary MA21-62 is assessed as fully supporting based on the presence of a reproducing brook trout population documented in July 2009 by MA DFG.

Unnamed Tributary (MA21-68)

Location:	Unnamed tributary to Town Brook, headwaters, perennial portion north of Brodie Mountain Ski Area, New Ashford to mouth at confluence with Town Brook, Lanesborough.
AU Type:	RIVER
AU Size:	1.6 MILES
Classification/Qualifier:	B

Unnamed Tributary - MA21-68

Watershed Area: 1.27 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.26	1.26	0.33	0.33
Agriculture	6.1%	6.1%	12.1%	12.1%
Developed	19.0%	19%	23.1%	23.1%
Natural	72.1%	72.1%	57.8%	57.8%
Wetland	2.8%	2.8%	6.9%	6.9%
Impervious Cover	7.9%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting
MA DFG documented reproducing brook trout in this Unnamed Tributary during sampling in August 2006 (SampleID: 1720). Although few fish were collected, the Aquatic Life Use for this unnamed tributary MA21-68 is assessed as fully supporting.

Upper Goose Pond (MA21110)

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

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
4c	3	(Eurasian Water Milfoil, Myriophyllum Spicatum*)		Removed

Fish, other Aquatic Life and Wildlife Use: Insufficient Information
No data are available to assess the Aquatic Life Use for Upper Goose Pond. Because "Eurasian Water Milfoil, Myriophyllum Spicatum" is being delisted the Aquatic Life Use attainment decision is insufficient information.

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Eurasian Water Milfoil, Myriophyllum Spicatum	Data and/or information lacking to determine WQ status; original basis for listing was incorrect	Upper Goose Pond was mistakenly identified as being impaired for the Aquatic Life Use in the 2002 reporting cycle based on the results of a synoptic survey in the summer of 1997. Upon further review of the Housatonic synoptic lake survey fieldsheets, this listing was found to be in error as Upper Goose Pond was specifically noted as being inaccessible and no fieldsheet records for this waterbody were found in the file. The report of the M. spicatum infestion in Upper Goose Pond was an error in the Housatonic River Basin 1997/1998 Water Quality Assessment Report.

Supporting Information for Delisted Impairments

Eurasian Water Milfoil, Myriophyllum Spicatum

From Carr and Kennedy (2007): The non-native aquatic macrophyte *Myriophyllum spicatum* was documented in Upper Goose Pond during the 1997 DWM synoptic survey (Kennedy and Weinstein 2000). There were notes found in the 1997 Housatonic Lake synoptic survey fieldsheet file that Upper Goose Pond was inaccessible and no field sheet was found for Upper Goose Pond (see screen capture below) (MassDEP 1997). Goose Pond (not Upper Goose Pond) was surveyed and found to have *M. spicatum*. Based on this information the identification of *M. spicatum* in Upper Goose Pond has been determined to be in error and is therefore being delisted.

HOUSATONIC RIVER BASIN (21) (CONTINUED)

WATERBODY NAME(S)	MUNICIPALITY(IES)	PALIS NUMBER	LAT/LONG	ACRES	MAP NUMBER(S)	SURVEY YEAR(S)
Shaker Reservoir	Hancock	21096	422600/732025	6	7	--
Silver Lake	Pittsfield	21097*	422703/731428	24	13	--
Sodem Pond	Tyringham	21098	421253/730955	2	15	--
South Faun Lake	Sheffield	21099	------/------	18	4	--
Southwest Branch Pond	Pittsfield	21100	------/------	5	7	--
Spurr Lake (Spurr Pond)	Sheffield	21101*	420717/732430	10	4	--
Steadman Pond	Monterey	21102	421240/731200	13	15	--
Stedman Pond	Monterey	21103	420945/731025	15	15	--
Stevens Pond (Switzers Pond)	Monterey	21104	421045/731615	30	9	--
Stockbridge Bowl (Lake Mahkeenac)	Stockbridge	21105*	422000/731900	374	8	74/76
Thousand Acre Swamp Pond	New Marlborough	21106	------/------	155	9	--
Threemile Pond (Brush Hill Pond)	Sheffield	21107*	420820/731830	20	9	--
Tracy Pond	Peru	21108	422458/730433	3	19	--
Trout Pond Dam	Sheffield	21109	------/------	12	4	--
Upper Goose Pond (Long P., Lower Lake May)	Lee/Tyringham	21110*	421712/731035	45	14	74/76
Upper Lenox Reservoir (Upper Root Res.)	Lenox	21111	------/------	16	8	--
Upper Reservoir (Codding Brook Upper Res., Lehey Res.)	Lee	21112	421945/731250	26	14	--
Upper Sackett Reservoir	Hinsdale	21113	422509/730958	20	13	--
Wahly Pond	New Marlborough	21114	------/------	18	9	--
Warner Mountain Pond	Great Barrington	21115	------/------	20	9	--
Washington Brook Res	Washington					
Wilsons Pond	Lenox	21116	------/------	9	7	--
Windsor Reservoir (Cady Brook Res.)	Hinsdale/Windsor	21119*	422910/730625	62	19	--
Woods Pond	Lee/Lenox	21120	422115/731420	122	14	74/76/78/81

2, 3, 4, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 19.

2 - State Line
3 - Egremont - Prospect L, Long P
4 - Bashbish Falls
12 - Cheshire - Pontoosuc
13 - Pittsfield, East - Pontoosuc L, Ashley Res, Plunkett Res, Farnham Res, Upper Sackett, Silver L
14 - East Lee - Goose P

Upper Sackett Reservoir (MA21113)

Location:	Hinsdale.
AU Type:	FRESHWATER LAKE
AU Size:	19 ACRES
Classification/Qualifier:	A: PWS, ORW

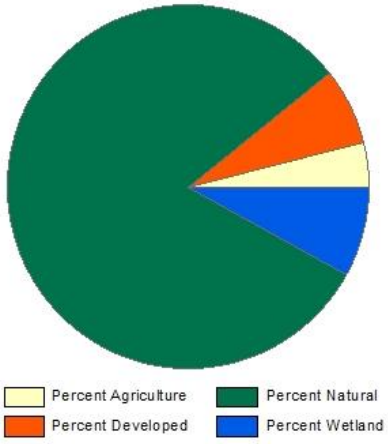
Fish, other Aquatic Life and Wildlife Use: Not Assessed
No recent data are available for Upper Sackett Reservoir so the Aquatic Life Use is not assessed.

Wahconah Falls Brook (MA21-11)

Location:	Headwaters, outlet Windsor Reservoir, Windsor to mouth at confluence with East Branch Housatonic River, Dalton.
AU Type:	RIVER
AU Size:	3.4 MILES
Classification/Qualifier:	B

Wahconah Falls Brook - MA21-11

Watershed Area: 21.46 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	21.45	7.99	4.30	2.21
Agriculture	3.9%	5.9%	5.7%	8.6%
Developed	6.8%	8.9%	6.4%	9.9%
Natural	81.2%	82.4%	76.4%	76.9%
Wetland	8.1%	2.8%	11.6%	4.5%
Impervious Cover	1.5%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

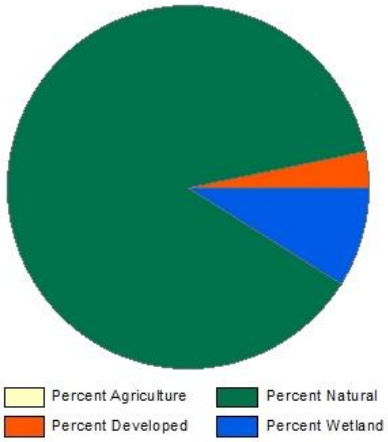
A benthic sample was collected from Wahconah Falls Brook upstream from the Route 9/8A crossing nearest Anthony Road in Dalton (B0633) in August 2007. The RBPIII analysis was "non/slightly impacted" when compared to the reference station. Water quality data (DO, pH, temperature, specific conductivity, ammonia, and total phosphorus) collected during the summer of 2007 were also indicative of good conditions (e.g., minimum DO 9.2 mg/L, maximum temperature 17.2°C, average total phosphorus 0.006mg/L, maximum total phosphorus 0.011mg/L). There were no observations of dense or very dense filamentous algae noted. In addition a more recent benthic macroinvertebrate sample collected by HVA at this same location in August in August 2013 (WF1A) was found to be "slightly impacted" using RBPIII analysis when compared to their reference sampling station (KP11, Konkapot River) (HVA 2017). Given the healthy benthic community and good water quality conditions, the Aquatic Life Use is assessed as fully supporting for Wahconah Falls Brook and the former alert issue related to a slight shift in the fish community structure is being removed.

WASHINGTON MOUNTAIN BROOK (MA21-53)

Location:	From outlet of impoundment at Schoolhouse Lake Dam (NAT ID# MA02588), Washington to mouth at confluence with Housatonic River, Lee.
AU Type:	RIVER
AU Size:	3.4 MILES
Classification/Qualifier:	B

WASHINGTON MOUNTAIN BROOK - MA21-53

Watershed Area: 8.76 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	8.71	3.88	1.67	0.96
Agriculture	0.8%	1.5%	0.5%	0.8%
Developed	3.1%	4.9%	5.3%	8.4%
Natural	87.1%	90.4%	82.7%	86.6%
Wetland	8.9%	3.2%	11.6%	4.2%
Impervious Cover	1.4%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

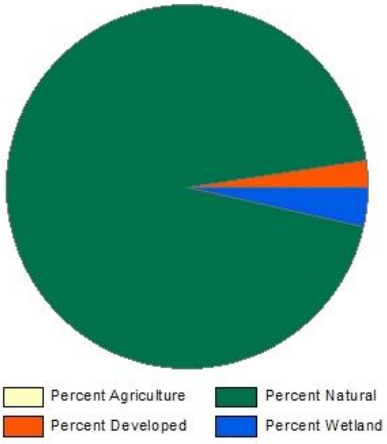
Backpack electrofishing in Washington Mountain Brook upstream from the Washington Mountain Road bridge) was conducted by DFG biologists in July 2006 (Sample 1783). The sample was comprised almost entirely by fluvial specialist species and was dominated by slimy sculpin although multiple age classes of brown trout were present. A benthic sample was collected upstream from Mill Street and downstream from Washington Mountain Road in Lee (B0628) in August 2007. The RBPIII analysis was "slightly impacted" when compared to the reference station. Water quality data (DO, pH, temperature, specific conductivity, ammonia, and total phosphorus) collected during the summer of 2007 were also indicative of good conditions (e.g., minimum DO 9.0 mg/L, maximum temperature 16.6°C, average total phosphorus 0.006mg/L, maximum total phosphorus 0.01mg/L). There were two observations of dense or very dense filamentous algae noted. Given the healthy benthic and fish communities and good water quality conditions, the Aquatic Life Use is assessed as fully supporting for Washington Mountain Brook.

WELCH BROOK (MA21-33)

Location:	Headwaters, northeast of Tully Mountain, Hinsdale to mouth at confluence with unnamed tributary to Plunkett Reservoir, Hinsdale.
AU Type:	RIVER
AU Size:	1.7 MILES
Classification/Qualifier:	B: CWF

WELCH BROOK - MA21-33

Watershed Area: 0.84 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	0.84	0.84	0.28	0.28
Agriculture	0.3%	0.3%	0.9%	0.9%
Developed	2.3%	2.3%	1.9%	1.9%
Natural	93.8%	93.8%	92.9%	92.9%
Wetland	3.6%	3.6%	4.2%	4.2%
Impervious Cover	4.3%			

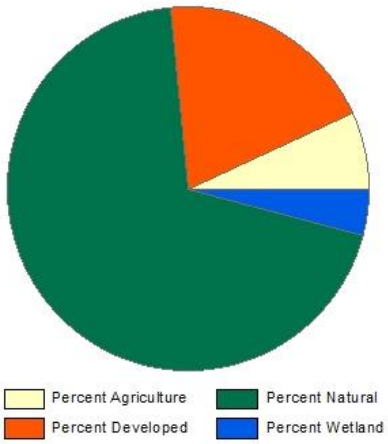
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
MA DFG documented reproducing brook trout in Welch Brook during sampling in July 2009 (SampleID: 2887). Based on these data the Aquatic Life Use is assessed as fully supporting for Welch Brook.

West Branch Housatonic River (MA21-18)

Location:	Headwaters, outlet Pontoosuc Lake, Pittsfield to mouth at confluence with Southwest Branch Housatonic River (forming headwaters Housatonic River), Pittsfield (formerly part of 1998 segment: West Branch Housatonic River MA21-03).
AU Type:	RIVER
AU Size:	4.1 MILES
Classification/Qualifier:	B: CWF, HQW

West Branch Housatonic River - MA21-18

Watershed Area: 36.68 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	36.66	6.43	9.63	1.51
Agriculture	6.8%	1%	6.5%	0.8%
Developed	19.8%	52.7%	18.3%	47.6%
Natural	69.2%	41.8%	66.6%	41.5%
Wetland	4.2%	4.4%	8.6%	10.1%
Impervious Cover	21.5%			

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
5	5	Combined Biota/Habitat Bioassessments		Removed
5	5	(Habitat Assessment*)		Added
5	5	Lack of a coldwater assemblage		Added
5	5	PCBs in Sediment		Added
5	5	Polychlorinated Biphenyls (PCBs)		Removed
5	5	Temperature		Added
5	5	Trash		Changed

Fish, other Aquatic Life and Wildlife Use: Not Supporting
Barge electrofishing in the West Branch Housatonic River was conducted in August 2007 behind Wahconnah Park & baseball field (SampleID: 2241) which is downstream from the confluence with Onota Brook. The sample was comprised of 13 species (631 individuals) with 21% of the sample represented by fluvial specialists/dependents and 22% intolerant/moderately intolerant. Cold water species were absent. Further downstream benthic macroinvertebrate (B0021) and water quality sampling (W1575) was conducted by

MassDEP biologists in the West Branch Housatonic River downstream from the Route 20 bridge in Pittsfield during the summer of 2007. The RBPIII analysis of the benthic community was "slightly impacted" when compared to the Rawson Brook reference (B0629). Habitat quality was compromised (scores in the poor category for bank vegetative protection, bank stability and riparian vegetative zone width as well as score in the marginal category for instream cover for fish and velocity depth combinations). HVA also conducted benthic sampling at this location in September 2014. Because of the use of a mainstem Housatonic River reference station, HVA's RBPIII analysis was not used directly in the assessment decision. The sample metrics and the taxonomic data however suggest that the benthic community is generally improved over the conditions documented during the 2002 survey. At that time pollution tolerant worms dominated the sample (34%) and the biotic index was the highest (worst) of any site monitored in the watershed (6.84). In the 2007 and 2014 samples, no tolerant worms were present and the biotic index was somewhat better (4.83 and 5.22, respectively as compared to 6.84 in 2002). Lastly, with the exception of instream temperature, the water quality sampling was indicative of generally good conditions (DO typically >6.0mg/L, maximum diel DO shift and percent saturation 1.9 mg/L and 100%, respectively, good pH, ammonia-nitrogen concentrations ≤0.07mg/L, and average and maximum total phosphorus concentrations 0.027 and 0.034mg/L, respectively). There was one observation of dense or very dense filamentous algae noted. DO did drop below 6.0 mg/L during the last day of the 13 July probe deploy (minimum 5.43mg/L) with the daily mean minimum of 5.7 mg/L. The average DO during this deployment however was 6.2mg/L. Instream temperature, however, did not meet the Cold Water criteria based on the data collected during the thermistor deployment beginning on 26 June 2007 for 96 days. The maximum 7 DADM was 26.7°C and violations of both the chronic Tier 1 and Tier 2 thresholds were documented on most days (78 and 51 days, respectively). The maximum 24 hour average temperature was 26.1°C.

The Aquatic Life Use for the West Branch Housatonic River is assessed as not supporting based on the degraded habitat quality conditions, the elevated instream temperatures, and the lack of any cold water fish. PCB contamination in sediment is also being carried forward as an impairment.

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
Combined Biota/Habitat Bioassessments	Applicable WQS attained; reason for recovery unspecified	This cause code was first utilized in the 2008 reporting cycle based on the documentation of the degraded habitat and the 2002 benthic community sample dominated by pollution tolerant worms. The benthic data collected by MassDEP in 2007 and HVA in 2014 indicated improved conditions. The RBPIII analysis of the 2007 benthic community was "slightly impacted" when compared to the Rawson Brook reference (B0629). HVA also conducted benthic sampling at this location in September 2014. Because of the use of a mainstem Housatonic River reference station, HVA's RBPIII analysis was not used directly in the assessment decision (MassDEP BPJ too large drainage area difference between the two sites, delay in almost a month time between sample collections, and the habitat comparability limitations between the two sites). The sample metrics and the taxonomic data however suggest that the benthic community is generally improved over the conditions documented during the 2002 survey. At that time of the original listing pollution tolerant worms dominated the sample (34%) and the biotic index was the highest (worst) of any site monitored in the watershed (6.84). In subsequent surveys, 2007 and 2014, no

2018/20 Delisted Impairment	Delisting Reason	Delisting Comment
		pollution tolerant worms were present and the biotic index was somewhat better (4.83 and 5.22, respectively as compared to 6.84 in 2002). Habitat quality remains compromised (scores in the poor category for bank vegetative protection, bank stability and riparian vegetative zone width as well as score in the marginal category for instream cover for fish and velocity depth combinations) so Habitat Assessment (Streams) will be identified as a cause of impairment.
Polychlorinated Biphenyls (PCBs)	Clarification of listing cause	This is not actually a delisting. "Polychlorinated Biphenyls (PCBs)" is being replaced by the more accurate "PCB in sediment" impairment cause.

Supporting Information for Delisted Impairments

Combined Biota/Habitat Bioassessments

Station B0021 (WEST BRANCH HOUSATONIC RIVER, approx. 300 meters downstream/south from Route 20 bridge, Pittsfield, MA) was sampled by MassDEP biologists on 8/29/2007. The RBPIII status was determined to be "slightly impacted" (62% comparability) when compared to the Rawson Brook reference site (UniqueID: B0629). From Mitchell (2013):

Table 3. Summary of habitat analysis (i.e. comparability to the reference habitat condition) and RBP III analysis of macroinvertebrate communities sampled in the Small Watersheds during the Housatonic River Watershed survey on 28, 29, and 30 August 2007. Shown are the calculated metric values, metric scores (in italics) based on comparability to the reference station (RA01), and the corresponding assessment designation for each biomonitoring station. Complete habitat evaluations are presented in Appendix 1. Refer to Table 1 for a listing and description of sampling stations.

SAMPLING STATION	RA01		SA01		WM01		OB01		LW01		WF02		EB01C		WR06B		HW01		KR07		EB02A	
STREAM	Rawson Brook		Sacket Brook		Washington Mountain Brook		Onota Brook		Larrywaug Brook		Wahconah Falls Brook		East Branch Housatonic River		Williams River		West Branch Housatonic River		Konkapot River		East Branch Housatonic River	
HABITAT SCORE	171		139		152		102		133		131		170		144		101		150		145	
HABITAT % REFERENCE	--		81%		89%		60%		78%		77%		99%		84%		59%		88%		85%	
HABITAT COMPARABILITY	--		Support		Support		Non - Support		Support		Support		Comparable		Support		Non - Support		Support		Support	
TAXA RICHNESS	35	*6*	32	*6*	32	*6*	19	*2*	22	*4*	33	*6*	34	*6*	30	*6*	20	*2*	31	*6*	33	*6*
BIOTIC INDEX	3.78	*6*	4.29	*6*	4.44	*6*	4.52	*4*	4.32	*6*	4.40	*6*	3.87	*6*	4.45	*4*	4.83	*4*	4.15	*6*	5.26	*4*
EPT INDEX	17	*6*	14	*4*	13	*2*	11	*0*	9	*0*	15	*4*	16	*6*	13	*2*	8	*0*	10	*0*	9	*0*
EPT/CHIRONOMIDAE	6.45	*6*	0.93	*0*	1.21	*0*	17.8	*6*	18.8	*6*	2.13	*2*	2.10	*2*	2.30	*2*	3.93	*4*	2.58	*2*	0.65	*0*
SCRAPER/FILTERER	0.50	*6*	0.72	*6*	0.06	*0*	0.27	*6*	0.52	*6*	0.19	*4*	0.22	*4*	1.24	*6*	0.67	*6*	1.13	*6*	1.00	*6*
REFERENCE AFFINITY	100%	*6*	67%	*6*	68%	*6*	64%	*4*	71%	*6*	83%	*6*	76%	*6*	71%	*6*	74%	*6*	76%	*6*	55%	*4*
% DOMINANT TAXON	11%	*6*	8%	*6*	17%	*6*	19%	*6*	35%	*2*	16%	*6*	11%	*6*	14%	*6*	21%	*4*	14%	*6*	10%	*6*
TOTAL METRIC SCORE	*42*		*34*		*26*		*28*		*30*		*34*		*36*		*32*		*26*		*32*		*26*	
% COMPARABILITY TO REFERENCE	--		81%		62%		67%		71%		81%		86%		76%		62%		76%		62%	
BIOLOGICAL CONDITION -DEGREE IMPACTED	REFERENCE		NON/ SLIGHTLY IMPAIRED		SLIGHTLY IMPAIRED		SLIGHTLY IMPAIRED		SLIGHTLY IMPAIRED		NON/ SLIGHTLY IMPAIRED		NON-IMPAIRED		SLIGHTLY IMPAIRED		SLIGHTLY IMPAIRED		SLIGHTLY IMPAIRED		SLIGHTLY IMPAIRED	

Table 5. Selected macroinvertebrate RBPIII community metrics and impairment status for six sampling stations in the Housatonic River Watershed sampled by MassDEP/DWM in 2007 and on at least one previous occasion. See text for a description of the metrics.

Water Body	Year	Community Metrics				Impairment Status
		Total Richness	EPT Richness	Biotic Index	% Dominant Taxon	
West Branch Housatonic, Pittsfield	1997	19	5	5.64	23	Slight - Moderate
	2002	23	5	6.84	34	Slight
	2007	20	8	4.83	21	Slight

(HVA 2017) September 2014 sample: Total richness 23, EPT richness 5, biotic index 5.22, % dominant taxon 24.27.

Reference stations for West Branch benthic sample comparisons varied by survey year as follows:

1997 Konkapot River (KR11) survey 26 August 1997
2002 East Branch Housatonic River (EB01B) 10 September 2002
2007 Rawson Brook (RA01) 28 August 2007
2014 Housatonic River (HT19E) 14 October 2014* MassDEP biologisits BPJ not best reference (too large drainage area difference as well as delay in almost a month time between sample collections)

Segment 21-18, Site HW01, West Branch Housatonic River, Downstream of Route 20, Pittsfield, At Cedar Street, August 29, 2007

August 29, 2007

Segment 21-18, HW01 West Branch Housatonic River	
Category	Score
1. Instream cover (fish)	7
2. Epifaunal habitat	10

3. Embeddedness	9
4. Channel Alteration	7
5. Sediment Deposition	15
6. Velocity-Depth Combinations	9
7. Channel Flow Status	17
8A. Bank Vegetative Protection (left bank)	4
8B. Bank Vegetative Protection (right bank)	3
9A. Bank Stability (left bank)	8
9B. Bank Stability (right bank)	7
10A. Riparian Vegetation (left bank)	2
10B. Riparian Vegetation (right bank)	3
Total	101

HVA Benthic Data (HVA 2017)

The Housatonic Valley Association (HVA 2017) sampled on benthic macroinvertebrates at one location along West Branch Housatonic River (Station HW01) on September 17, 2014. The HVA station was located at the historic MassDEP benthic sampling location (B0021, approx. 300 meters downstream/south from Route 20 bridge, Pittsfield, MA). The station sampled by HVA had a habitat score of 83 which did not compare well to the reference station. The RBPIII analysis was "moderately impacted" compared to the downstream Housatonic River reference station (HT19E). Benthic sample metrics from the HVA September 2014 are as follows: taxa richness = 23, EPT taxa = 5, HBI (modified) = 5.22, % dominant taxon = 24.27. It should be noted that pollution tolerant worms that had dominated the 2002 sample were not present suggesting improvements in water quality conditions.

CE Sample Number	Sample ID	Coll Date	Richness	EPT Richness	EPT/Chironomidae	HBI modified	Scraper/Filterer Ratio	% Contribution Dominant Taxon	% Reference Affinity	Habitat Score	Tota Individuals
14-133-02	**HW01**	9/17/2014	23	5	1.53	5.22	0.77	24.27	62.42	83	103

The 2002 benthic community sample of the West Branch Housatonic River was dominated by pollution tolerant worms. Since then however the benthic data collected by MassDEP in 2007 and HVA in 2014 indicated improved conditions. The RBPIII analysis of the 2007 benthic community was "slightly impacted" when compared to the Rawson Brook reference (B0629). HVA also conducted benthic sampling at this location in September 2014. Because of the use of a mainstem Housatonic River reference station, HVA's RBPIII analysis was not used directly in the assessment decision (MassDEP BPJ too large drainage area difference between the two sites, delay in almost a month time between sample collections, and the habitat comparability limitations between the two sites). The sample metrics and the taxonomic data however suggest that the benthic community is generally improved over the

conditions documented during the 2002 survey. At that time of the original listing pollution tolerant worms dominated the sample (34%) and the biotic index was the highest (worst) of any site monitored in the watershed (6.84). In subsequent surveys, 2007 and 2014, no pollution tolerant worms were present and the biotic index was somewhat better (4.83 and 5.22, respectively as compared to 6.84 in 2002). Based on these data the "Combined Biota/Habitat Bioassessment" impairment is being delisted but since habitat quality remains compromised (scores in the poor category for bank vegetative protection, bank stability and riparian vegetative zone width as well as score in the marginal category for instream cover for fish and velocity depth combinations) a "Habitat Assessment (Streams)" impairment will be identified as a cause of impairment.

Polychlorinated Biphenyls (PCBs)

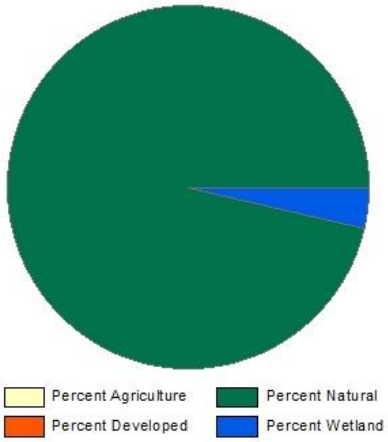
"Polychlorinated Biphenyls (PCBs)" is being replaced by the more accurate "PCB in sediment" impairment cause.

WEST BROOK (MA21-73)

Location:	Headwaters in Beartown State Forest, Great Barrington to mouth at confluence with East Brook (creating headwaters of Beartown Brook), Lee.
AU Type:	RIVER
AU Size:	3.3 MILES
Classification/Qualifier:	B

WEST BROOK - MA21-73

Watershed Area: 5.07 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	5.07	3.75	0.95	0.75
Agriculture	0.2%	0.2%	0.7%	0.9%
Developed	0.2%	0.2%	0.4%	0.5%
Natural	96.0%	96.6%	89.1%	92.7%
Wetland	3.6%	3%	9.8%	5.9%
Impervious Cover	0.7%			

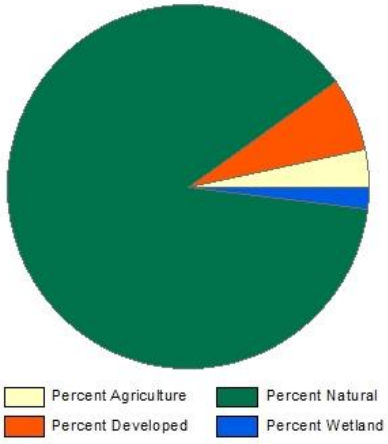
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
The Aquatic Life Use for West Brook is assessed as fully supporting based on the presence of a reproducing brook trout population and fish community dominated by fluvial specialists that was found by MA DFG in July 2006 at one sampling location on this segment. (SampleID: 1784)

WESTON BROOK (MA21-61)

Location:	Headwaters, west of Route 9, Windsor to mouth at confluence with Wahconah Falls Brook, Dalton.
AU Type:	RIVER
AU Size:	1.8 MILES
Classification/Qualifier:	B

WESTON BROOK - MA21-61

Watershed Area: 1.45 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	1.45	1.45	0.23	0.23
Agriculture	3.3%	3.3%	5.5%	5.5%
Developed	6.5%	6.5%	8.1%	8.1%
Natural	88.2%	88.2%	85.1%	85.1%
Wetland	2.0%	2%	1.3%	1.3%
Impervious Cover	1.5%			

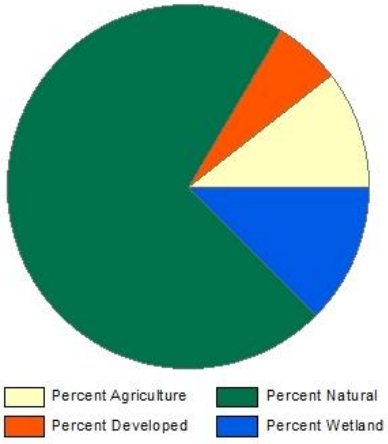
Fish, other Aquatic Life and Wildlife Use: Fully Supporting
MA DFG conducted fish population sampling at 12 locations along Weston Brook in July between 2009 and 2013 which documented the presence of a reproducing population of brook trout in this stream. The Aquatic Life Use for Weston Brook is assessed as support based on the presence of a reproducing brook trout population documented by MA DFG.

Willard Brook (MA21-30)

Location:	Headwaters north of Salisbury Road, Sheffield to mouth at confluence with Hubbard Brook, Sheffield.
AU Type:	RIVER
AU Size:	4 MILES
Classification/Qualifier:	B

Willard Brook - MA21-30

Watershed Area: 7.02 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	7.02	6.65	1.59	1.58
Agriculture	10.5%	10.8%	10.6%	10.6%
Developed	6.0%	6.1%	9.9%	9.9%
Natural	71.0%	70.6%	49.8%	49.6%
Wetland	12.5%	12.5%	29.7%	29.8%
Impervious Cover	5.5%			

Fish, other Aquatic Life and Wildlife Use: Not Supporting

MA DFG biologists conducted fish population sampling at one site on this low gradient brook in July 2009 using the barge shocking method (SampleID: 2899). With the exception of a single white sucker the sample contained six other macrohabitat generalist species and 72% of the fish were moderately tolerant to pollution. The Fawn Lake impoundment of Willard Brook is reported to be infested with *Myriophyllum spicatum* and this impoundment has had herbicide treatments almost annually since 1995 to control this infestation as well as other aquatic macrophytes.

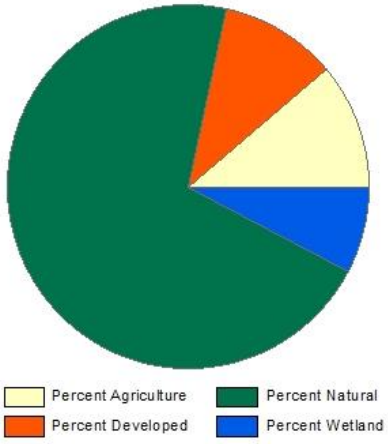
The Aquatic Life Use for Willard Brook is assessed as not supporting because of the *M. spicatum* infestation.

Williams River (MA21-06)

Location:	Headwaters, outlet Shaker Mill Pond, West Stockbridge to mouth at confluence with Housatonic River, Great Barrington.
AU Type:	RIVER
AU Size:	11 MILES
Classification/Qualifier:	B: CWF, HQW

Williams River - MA21-06

Watershed Area: 43.95 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	32.81	3.65	7.38	0.91
Agriculture	11.2%	10.4%	8.2%	10.2%
Developed	10.4%	14.5%	11.1%	13.4%
Natural	70.7%	71.8%	60.5%	69%
Wetland	7.7%	3.2%	20.2%	7.4%
Impervious Cover	7.8%			

2016 AU Category	2018/20 AU Category	Impairment	ATTAINS Action ID	Impairment Change Summary
2	5	Temperature		Added

Fish, other Aquatic Life and Wildlife Use: Not Supporting

Water was collected from the Williams River ~ 100 feet upstream from the West Stockbridge WWTP outfall #001 for use as dilution water in WET tests. Between July 2006 and July 2017, survival of *C. dubia* exposed (48 hours) to the river water was > 85% in all but one of 29 test events. Survival was 0% in the July 2015 test event which is of concern although an outlier from all of the other C. dubia survival data. The RBPIII analysis of a benthic sample collected from the Williams River (station B0625) downstream from East Alford Road in West Stockbridge indcated a generally healthy benthic community ("slightly impacted") when compared to the reference station. Water quality sampling was also conducted by MassDEP biologists at this station (W1560) during the summer of 2007. Backpack electrofishing conducted in September 2007 documented five species and was dominated by fluvial specialist species. Only one large cold water fish (a brown trout) was collected. While DO at this station was good (minimum 6.37 mg/L) there were indications of enrichment (in August the maximum daily shift was 3.31 mg/L DO with superstation of 131.9%). A thermistor was deployed here 06/25/07 for 97 days. The maximum 7 DADM was 27°C and violations of both the chronic Tier 1 and Tier 2 thresholds were documented on most days (80 and 52 days, respectively). The maximum 24 hour average temperature was 26.4°C. The average total phosphorus concentration was 0.011 mg/L while a maximum concentration of 0.014 mg/L. Dense or very dense filamentous algae were noted twice. Further downstream the river was also

sampled near Division Street, Great Barrington by MassDEP biologists during the summer of 2007. Backpack electrofishing conducted in September 2007 (sample ID 2764) documented eight species. The sample was dominated by fluvial specialist/dependant species including multiple age classes of brown trout. Water quality sampling in the river here (station W1098) documented good DO (minimum 7.08 mg/L) and there were no exceedances of enrichment thresholds (maximum daily shift was 2.65 mg/L DO with superstation of 120.8%). A thermistor was deployed here 06/25/07 for 97 days. The maximum 7 DADM was 26.5°C and violations of both the chronic Tier 1 and Tier 2 thresholds were documented on most days (78 and 39 days, respectively). The maximum 24 hour average temperature was 25°C. The average total phosphorus concentration was 0.007 mg/L with a maximum concentration of 0.01 mg/L. There were no observations of dense or very dense filamentous algae noted. Just a little further downstream, the Housatonic Valley Association reported the RPBIII analysis of a 2013 benthic sample collected from the Williams River between Route 41 and Division Street in Village of Van Duesenville, Great Barrington, (their station WR01) was "not impacted" when compared to their reference sampling station (HR19E, Housatonic River) (HVA 2017).

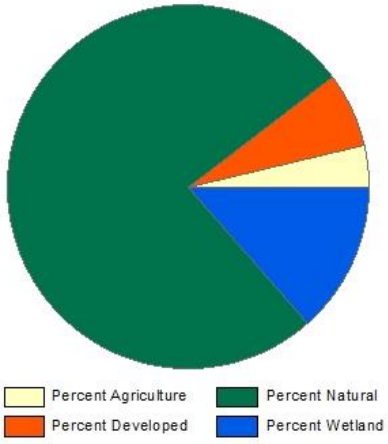
The Aquatic Life Use is assessed as not supporting for the Williams River based on elevated temperatures that do not meet Cold Water standards. Two temperature probes deployed in the WIilliams River for 97 days in the summer of 2007 failed the chronic Tier 1 Tier 2 thresholds for most of the summer and the maximum 24 hour average temperatures were well in excess of 20°C. While there was some indication of enriched conditions at the upstream sampling location, total phosphorus concentrations were low and all of the other sampling data were indicative of good conditions.

Windsor Brook (MA21-09)

Location:	Headwaters, southeast of Fobes Hill (west of Savoy Hollow Road), Windsor to mouth at inlet Windsor Reservoir, Hinsdale.
AU Type:	RIVER
AU Size:	6.1 MILES
Classification/Qualifier:	A: PWS, ORW

Windsor Brook - MA21-09

Watershed Area: 9.10 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	9.09	4.90	1.77	1.22
Agriculture	3.7%	3.1%	3%	3.4%
Developed	6.6%	5.8%	2.5%	3.1%
Natural	76.1%	82.1%	74.2%	80.9%
Wetland	13.6%	9%	20.3%	12.6%
Impervious Cover	1.1%			

Fish, other Aquatic Life and Wildlife Use: Not Supporting

The RBP III analysis of the benthic macroinvertebrate sample collected in August 2013 from Windsor Brook ~150 meters upstream from the Cleveland Brook Reservoir Aqueduct (WB01B) was "slightly impacted" when compared to the Konkapot River reference station (KP11) (HVA 2017). The HVA WB01B sample had both high taxa richness (35) and EPT tax richness (17). These and prior data collected from the brook upstream from the Cleveland Brook Reservoir Aqueduct were all indicative of excellent conditions however downstream from the Cleveland Brook Reservoir Aqueduct Windsor Brook is dewatered (MassDEP sampling in both 1992 and again in 2002 documented dewatered conditions in the brook below the aqueduct (the lower 0.2 mile reach).
The Aquatic Life Use is assessed as not supporting for Windsor Brook as a result of dewatering downstream from the water supply aqueduct withdrawal.

Windsor Reservoir (MA21119)

Location:	Hinsdale/Windsor.
AU Type:	FRESHWATER LAKE
AU Size:	74 ACRES
Classification/Qualifier:	A: PWS, ORW

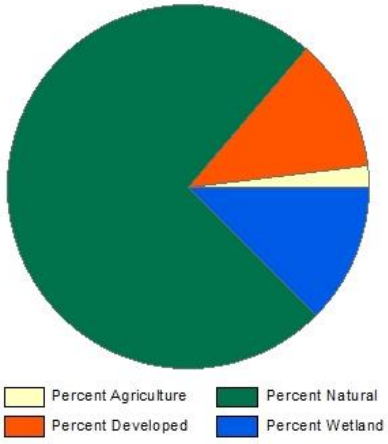
Fish, other Aquatic Life and Wildlife Use: Not Assessed (Alert)
A major reconstruction project was undertaken at Windsor Reservoir Dam. Google Earth images between September 2006 through September 2011 capture some of the changes. Images captured since May 2014 show the reservoir back at capacity. According to the MEPA project description approximately 2,100 cubic yards of impounded sediment were dredged. The Aquatic Life Use for Windsor Reservoir is not assessed but the former alert status identified because of sedimentation/siltation due to erosion from roads/runoff is being carried forward.

YOKUN BROOK (MA21-77)

Location:	Headwaters, north of Reservoir Road, Lenox to mouth at confluence with Housatonic River, Lenox.
AU Type:	RIVER
AU Size:	6.6 MILES
Classification/Qualifier:	B

YOKUN BROOK - MA21-77

Watershed Area: 6.64 square miles



Landuse Type	Entire Basin	5km Radius Proximal Subbasin	100m Stream Buffer	Proximal Stream Buffer
Land Use Area (square miles)	6.64	5.89	1.62	1.57
Agriculture	1.8%	2%	1.4%	1.4%
Developed	11.9%	13.3%	9.4%	9.7%
Natural	73.7%	70.5%	60.5%	59.3%
Wetland	12.6%	14.2%	28.7%	29.6%
Impervious Cover	8.8%			

Fish, other Aquatic Life and Wildlife Use: Fully Supporting

Yokun Brook was sampled by MA DFG on 8/8/2006 (SampleID: 1792), using the Backpack Shocking method. A total of 65 individuals were collected with 7 species represented. The sample was composed of 98% fluvial specialists/dependents and 49% of individuals collected were considered intolerant/moderately intolerant to pollution while 51% were considered tolerant to pollution. Based on this fish sample dominated by fluvial specialists the Aquatic Life Use for Yokun Brook is assessed as fully supporting.

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