319 Federal Fiscal Year 2022 Priority Segments

The following Massachusetts waterbodies are proposed as nonpoint source impaired waters that are most likely to respond to remediation efforts that will result in meeting water quality standards (Table 1). Waterbodies listed here are defined by segment or waterbody number. Water quality impairments are found in the Final Massachusetts 2016 Integrated list of Waters (http://www.mass.gov/dep/water/resources/tmdls.htm)

This list has been developed using the following approach:

1. The Massachusetts Recovery Potential Screening Tool (RPST, version dated 2/14/2020) was used to identify HUC-12 subwatersheds that are most highly recoverable. Watersheds showing high and medium-high recoverability potential (Recovery Potential Index greater than 46) were selected. See Table 2 for the RPST tool setup parameters.
2. For watersheds selected in Step 1, maps of MS4 regulated areas were overlaid with MassDEP segment coverages. Segment locations were reconciled with regulated areas, and the waterbodies located in regulated areas were screened out as lower priority to receive 319 funds.
3. For each waterbody, the impaired causes were characterized as to whether they were likely nonpoint source related impairments (See Table 3 for impairment likely due to NPS cause). Additionally, for each waterbody the likely NPS related impairments were characterized based on whether they are priority (See Table 4 for list of priority NPS impairments).
4. Finally waterbodies in the Hudson, Housatonic, Deerfield, Farmington, Westfield, Connecticut, Millers and Quinebaug Watersheds where agriculture was listed as a suspected source of impairment where added back in regardless of their location in a MS4 area.
5. The targeted waterbodies are shown below, with the water quality impairments that can most effectively be addressed through NPS BMPs (Table 1).

This is a partial list for planning purposes only. Applicants wishing to work in other watersheds are encouraged to follow similar methodology in order to identify competitive, high priority projects. Contact Matthew Reardon at 508-849-4002 or matthew.reardon@mass.gov for assistance and access to resources.

Table 1: 2022 Priority Waterbodies for Nonpoint Source 319 Program

Watershed	Segment ID	Name	Segment Description	Size	Class	Impairment Causes (Likely NPS in italics)	All Sources	Priority NPS Cause	Recovery Potential Index Score
Buzzards Bay	MA95080	Leonards Pond	Rochester.	49 acres	B	Aquatic Plants (Macrophytes), *Chlorophyll-a, Transparency / Clarity*, Non-Native Aquatic Plants	Agriculture, Source Unknown, Introduction of Non-native Organisms (Accidental or Intentional)	TRUE	47
Cape Cod	MA96-67	Herring River	Headwaters outlet Herring Pond, Wellfleet to south of High Toss Road, Wellfleet.	3.6 miles	B (ORW)	Aluminum, Fish Kill(s), Fish Passage Barrier, Flow Regime Modification, pH, Low	Changes in Tidal Circulation/Flushing, Hydrostructure Impacts on Fish Passage	FALSE	53
Cape Cod	MA96-108	Unnamed Tributary	Unnamed tributary to Herring River, headwaters outlet Perch Pond, Wellfleet to mouth at confluence with Herring River, Wellfleet (area within Cape Cod National Seashore designated as ORW).	2 miles	B (ORW)	*Escherichia Coli (E. Coli)*	Source Unknown	TRUE	53
Cape Cod	MA96268	Ryder Pond	Truro.	18 acres	B (ORW)	Mercury in Fish Tissue, *Dissolved Oxygen, Phosphorus, Total*	Atmospheric Deposition - Toxics, Source Unknown	TRUE	53
Chicopee	MA36-01	East Branch Ware River	Headwaters, outlet Bickford Pond, Hubbardston to mouth at confluence with West Branch Ware River (forming headwaters of Ware River), Barre.	12.4 miles	A (PWS, ORW)	*Dissolved Oxygen*	Source Unknown	FALSE	55
Chicopee	MA36021	Brookhaven Lake	West Brookfield.	34 acres	B	*Turbidity*	Source Unknown	FALSE	53
Chicopee	MA36130	Quaboag Pond	Brookfield/East Brookfield.	544 acres	B	*Algae*, Eurasian Water Milfoil, Myriophyllum spicatum, Non-Native Aquatic Plants, Mercury in Fish Tissue, *Phosphorus, Total*	Internal Nutrient Recycling, Municipal Point Source Discharges, Introduction of Non-native Organisms (Accidental or Intentional), Source Unknown, Non-Point Source	TRUE	51

Watershed	Segment ID	Name	Segment Description	Size	Class	Impairment Causes (Likely NPS in italics)	All Sources	Priority NPS Cause	Recovery Potential Index Score
Chicopee	MA36-08	Prince River	Headwaters, outlet Hemingway Pond, Barre to mouth at confluence with Ware River, Barre (excluding approximately 0.6 miles through Old Reservoir, segment MA36114).	7.1 miles	B (CWF, HQW)	*Escherichia Coli (E. Coli)*	Source Unknown	TRUE	50
Chicopee	MA36-27	Ware River	Confluence of East Branch Ware and West Branch Ware rivers, Barre to MDC intake, Barre.	4.9 miles	A (PWS, ORW)	*Dissolved Oxygen, Temperature*	Municipal Point Source Discharges, Source Unknown	FALSE	49
Chicopee	MA36025	Browning Pond	Oakham/Spencer.	106 acres	B	Mercury in Fish Tissue, Non-Native Aquatic Plants, *Nutrient/Eutrophication Biological Indicators*	Atmospheric Deposition - Toxics, Introduction of Non-native Organisms (Accidental or Intentional), Source Unknown	TRUE	47
Chicopee	MA36056	Eames Pond	Paxton.	58 acres	B	*Dissolved Oxygen*	Source Unknown	FALSE	47
Chicopee	MA36050	Dean Pond	Oakham.	64 acres	B	*Algae, Turbidity*	Source Unknown	TRUE	47
Connecticut	MA34103	Lake Wyola	Shutesbury.	124 acres	B	*Nutrient/Eutrophication Biological Indicators, Phosphorus, Total*		TRUE	57
Connecticut	MA34042	Leverett Pond	Leverett.	91 acres	B	Eurasian Water Milfoil, Myriophyllum spicatum, Non-Native Aquatic Plants, *Nutrient/Eutrophication Biological Indicators*		TRUE	54
Connecticut	MA34-25	Mill River	Headwaters, outlet Factory Hollow Pond, Amherst to mouth at inlet Lake Warner, Hadley.	5.2 miles	B	*Escherichia Coli (E. Coli)*	Agriculture, Source Unknown, Unspecified Urban Stormwater	TRUE	54
Connecticut	MA34098	Lake Warner	Hadley.	65 acres	B	*Algae, Dissolved Oxygen, Non-Native Aquatic Plants, Phosphorus, Total, Turbidity*		TRUE	54

Watershed	Segment ID	Name	Segment Description	Size	Class	Impairment Causes (Likely NPS in italics)	All Sources	Priority NPS Cause	Recovery Potential Index Score
Connecticut	MA34-23	Weston Brook	Headwaters, south of State Street (Route 202), Belchertown to mouth at inlet Forge Pond, Granby (WWF applies from the confluence of Lampson Brook in Belchertown to the mouth).	2.7 miles	B (WWF*)	*Phosphorus, Total*	Source Unknown	TRUE	50
Connecticut	MA34024	Forge Pond	Granby.	72 acres	B (WWF)	*Nutrient/Eutrophication Biological Indicators*, Non-Native Aquatic Plants	Source Unknown, Introduction of Non-native Organisms (Accidental or Intentional)	TRUE	50
Deerfield	MA33-19	East Branch North River	Vermont line, Colrain to confluence with West Branch North River, Colrain.	7.5 miles	B (CWF, HQW)	*Escherichia Coli (E. Coli)*	Agriculture, Source Unknown	TRUE	61
Deerfield	MA33-07	South River	Headwaters, outlet Ashfield Pond, Ashfield to Emments Road, Ashfield.	2.3 miles	B (CWF)	*Temperature*	Dam or Impoundment, Source Unknown	FALSE	54
Deerfield	MA33-102	South River	From confluence with Johnny Bean Brook, Conway to confluence with Deerfield River, Conway (formerly part of MA33-08), (through South River Impoundment formerly segment MA33022).	6.8 miles	B	*Physical substrate habitat alterations, Escherichia Coli (E. Coli), Fecal Coliform*	Source Unknown	TRUE	54
Deerfield	MA33-101	South River	Emments Road, Ashfield to confluence with Johnny Bean Brook, Conway (formerly part of MA33-08).	6.1 miles	B (CWF)	*Escherichia Coli (E. Coli), Fecal Coliform*	Source Unknown	TRUE	54
Deerfield	MA33-17	Bear River	Headwaters west of Barnes Road, Ashfield to confluence with Deerfield River, Conway.	6.9 miles	B (CWF)	*Temperature*	Source Unknown	FALSE	50
Deerfield	MA33-20	Dragon Brook	Headwaters, perennial portion north of Patten Road, Shelburne to confluence with the Deerfield River, Shelburne.	4.4 miles	B	*Temperature*	Agriculture, Loss of Riparian Habitat, Source Unknown	FALSE	50
Deerfield	MA33-21	Hinsdale Brook	Headwaters east of Fiske Mill Road, Shelburne to confluence with Punch Brook, Greenfield.	2.8 miles	B	*Escherichia Coli (E. Coli)*	Agriculture, Source Unknown	TRUE	

Watershed	Segment ID	Name	Segment Description	Size	Class	Impairment Causes (Likely NPS in italics)	All Sources	Priority NPS Cause	Recovery Potential Index Score
Deerfield	MA33-70	Mill Brook	Headwaters, north of West Mountain Road, Bernardston to confluence with Cherry Rum Brook, Greenfield.	8.4 miles	B	*Benthic Macroinvertebrates Bioassessments*	Agriculture, Golf Courses, Highway/Road/Bridge Runoff (Non-construction Related), Residential Districts, Source Unknown	FALSE	
Farmington	MA31-11	Benton Brook	Headwaters, drainage from Hayden Swamp, Otis to mouth at confluence with the West Branch Farmington River, Otis.	5.2 miles	B (CWF, HQW)	*Benthic Macroinvertebrates Bioassessments*	Source Unknown	FALSE	58
Farmington	MA31036	Shaw Pond	Becket/Otis.	80 acres	B	*Dissolved Oxygen*, Eurasian Water Milfoil, Myriophyllum spicatum	Source Unknown, Introduction of Non-native Organisms (Accidental or Intentional)	FALSE	58
Farmington	MA31-01	West Branch Farmington River	Headwaters, outlet Hayden Pond, Otis to the MA/CT border in the Colebrook Reservoir, Sandisfield/Tolland.	16.1 miles	B (CWF, HQW)	Lack of a coldwater assemblage, *Temperature*	Dam or Impoundment	FALSE	57
Farmington	MA31044	Upper Spectacle Pond	Sandisfield/Otis.	53 acres	B	*Dissolved Oxygen*	Source Unknown	FALSE	57
Farmington	MA31052	York Lake	New Marlborough.	29 acres	B	*Dissolved Oxygen*	Source Unknown	FALSE	56
Farmington	MA31004	Big Pond	Otis.	325 acres	B	Mercury in Fish Tissue, Dissolved Oxygen	Atmospheric Deposition - Toxics, Source Unknown	FALSE	53
Housatonic	MA21040	Lake Garfield	Monterey.	255 acres	B	Mercury in Fish Tissue, *Dissolved Oxygen*, Eurasian Water Milfoil, Myriophyllum spicatum, Non-Native Aquatic Plants, *Phosphorus, Total*	Atmospheric Deposition - Toxics, Source Unknown, Introduction of Non-native Organisms (Accidental or Intentional), Internal Nutrient Recycling	TRUE	47
Housatonic	MA21014	Lake Buel	Monterey/New Marlborough.	191 acres	B	Eurasian Water Milfoil, Myriophyllum spicatum, Non-Native Aquatic Plants, *Dissolved Oxygen, Dissolved Oxygen Supersaturation, Phosphorus, Total*	Introduction of Non-native Organisms (Accidental or Intentional), Internal Nutrient Recycling, Source Unknown	TRUE	47.3

Watershed	Segment ID	Name	Segment Description	Size	Class	Impairment Causes (Likely NPS in italics)	All Sources	Priority NPS Cause	Recovery Potential Index Score
Hudson: Hoosic	MA11-05	Hoosic River	Confluence with North Branch Hoosic River, North Adams to the Vermont State line, Williamstown.		B	PCBs In Fish Tissue, Alteration in stream-side or littoral vegetative covers, Flow Regime Modification, *Nutrient/Eutrophication Biological Indicators, Escherichia Coli (E. Coli), Fecal Coliform*	Brownfield (Non-npl) Sites, Channelization, Streambank Modifications/destabilization, Agriculture, Municipal Point Source Discharges, Source Unknown, Urban Runoff/Storm Sewers	TRUE	
Hudson: Kinderhook	MA12-01	Kinderhook Creek	Headwaters, northwest of Sheeps Heaven Mountain and east of Route 43, Hancock to New York/Massachusetts border, Hancock.	5.5 miles	B (CWF, HQW)	*Benthic Macroinvertebrates Bioassessments*	Agriculture, Highway/Road/Bridge Runoff (Non-construction Related)	FALSE	
Ipswich	MA92-18	Gravelly Brook	Headwaters, Willowdale State Forest, Ipswich to confluence with Ipswich River, Ipswich.	1.5 miles	B	*Benthic Macroinvertebrates Bioassessments*	Source Unknown	FALSE	37.5
Islands	MA9708 5	Seths Pond	West Tisbury.	11 acres	B	*Algae, Transparency / Clarity*	Source Unknown	TRUE	53.0
Islands	MA97-17	Edgartown Great Pond	excluding Jacobs Pond (PALIS# 97038) Edgartown, Martha's Vineyard.	1.35 square miles	SA (SFO)	*Estuarine Bioassessments, Nitrogen, Total, Nutrient/Eutrophication Biological Indicators*	No information	TRUE	51.4
Islands	MA97-18	Tisbury Great Pond	Including Town Cove, Muddy Cove, Pear Tree Cove, Short Cove, Tiah Cove, Tississa Pond, Deep Bottom Cove, and Thumb Cove, Chilmark/West Tisbury, Martha's Vineyard.	1.1 square miles	SA (SFO)	*Dissolved Oxygen, Estuarine Bioassessments, Nitrogen, Total, Nutrient/Eutrophication Biological Indicators, Fecal Coliform*	Impervious Surface/Parking Lot Runoff, On-site Treatment Systems (Septic Systems and Similar Decentralized Systems), Residential Districts, Source Unknown	TRUE	51.4
Islands	MA9703 5	Head of Hummock Pond	Nantucket.	16 acres	B	*Harmful Algal Blooms*	Source Unknown	TRUE	51.0
Islands	MA97-02	Sesachacha Pond	South of Quidnet Road and north of Polpis Road, Nantucket.	0.42 square miles	SA (SFO)	*Fecal Coliform*	Source Unknown	FALSE	51.0

Watershed	Segment ID	Name	Segment Description	Size	Class	Impairment Causes (Likely NPS in italics)	All Sources	Priority NPS Cause	Recovery Potential Index Score
Islands	MA97-01	Nantucket Harbor	Waters south and east of an imaginary line drawn from Jetties Beach to Coatue Point (excluding Polpis Harbor and Coskata Pond), Nantucket.	7.16 square miles	SA (SFO)	*Estuarine Bioassessments, Nitrogen, Total, Fecal Coliform*	Impervious Surface/Parking Lot Runoff, On-site Treatment Systems (Septic Systems and Similar Decentralized Systems), Residential Districts, Source Unknown	TRUE	51.0
Merrimack	MA84A-31	South Branch Souhegan River	Headwaters, outlet Watatic Pond, Ashburnham to New Hampshire state line, Ashby.	3 miles	B	*Escherichia Coli (E. Coli)*	Source Unknown	TRUE	51.0
Merrimack	MA84096	Ward Pond	PALIS id changed from 35094 to 84096 on October 10, 1997. (WBID from MA35094 to MA84096) Ashburnham.	54 acres	B	*Dissolved Oxygen*	Source Unknown	FALSE	51.0
Millers	MA35024	Gales Pond	Warwick.	12 acres	B	*Turbidity*, Mercury in Fish Tissue	Source Unknown, Atmospheric Deposition - Toxics	FALSE	58.7
Millers	MA35035	Laurel Lake	Erving/Warwick.	44 acres	B	*Dissolved Oxygen*	Source Unknown	FALSE	58.7
Millers	MA35-16	Keyup Brook	Headwaters Great Swamp Northfield State Forest, Northfield, to confluence with Millers River, Erving.	5 miles	B	PCBs In Fish Tissue, *Escherichia Coli (E. Coli)*	Contaminated Sediments, Releases from Waste Sites or Dumps, Source Unknown	TRUE	58.5
Millers	MA35111	Tully Lake	Royalston/Athol.	214 acres	B	*Harmful Algal Blooms*	Source Unknown	TRUE	56.7
Quinebaug	MA41033	Morse Pond	Southbridge.	41 acres	B	Aquatic Plants (Macrophytes)*, Dissolved Oxygen*	Source Unknown	FALSE	56.0
Quinebaug	MA41-16	Unnamed Tributary	Unnamed tributary to Mill Brook, headwaters, outlet Sherman Pond, Brimfield to mouth at confluence with Mill Brook, Brimfield.	1.2 miles	B	*Benthic Macroinvertebrates Bioassessments, Dissolved Oxygen, Sedimentation/Siltation, Escherichia Coli (E. Coli)*	Source Unknown, Non-Point Source	TRUE	48.7

Watershed	Segment ID	Name	Segment Description	Size	Class	Impairment Causes (Likely NPS in italics)	All Sources	Priority NPS Cause	Recovery Potential Index Score
Quinebaug	MA41-17	West Brook	Headwaters, west of the Dix Hill Road/Route 19 intersection (excluding intermittent portion), Brimfield to mouth at confluence with Mill Brook, Brimfield.	1.8 miles	B	*Escherichia Coli (E. Coli)*	Source Unknown	TRUE	48.7
Quinebaug	MA4100 1	Alum Pond	Sturbridge.	198 acres	B	*Dissolved Oxygen*	Source Unknown	FALSE	48.7
Westfield	MA32-65	Middle Branch Westfield River	Source in Peru State Wildlife Management Area, north of Pierce Road, Peru to Kinnebrook Road, Dayville (locality in Chester).	13.7 miles	A (PWS, ORW, CWF)	*Temperature*	Loss of Riparian Habitat, Source Unknown	FALSE	58.2
Westfield	MA32-13	West Falls Branch	Headwaters (perennial portion), at confluence with Bronson Brook, northeast at the intersection of Dingle Road and Route 143, Worthington to mouth at confluence with Westfield River near the village of West Chesterfield, Chesterfield. (formerly identified by the Massachusetts Stream Classification Program as West Branch).	2.9 miles	B (CWF)	*Temperature*	Source Unknown, Loss of Riparian Habitat	FALSE	57.5
Westfield	MA32-16	Little River	Headwaters, confluence of Watts and Wards streams, Ringville (locality in Worthington), to mouth at confluence with Westfield River, Huntington.	5.7 miles	B	*Temperature*	Loss of Riparian Habitat, Source Unknown	FALSE	57.5
Westfield	MA32-04	Westfield River	Headwaters, confluence of Drowned Land Brook and Center Brook, Savoy to confluence with Middle Branch Westfield River, Huntington.	33.1 miles	B (CWF, HQW)	*Temperature, Enterococcus*	Loss of Riparian Habitat, Source Unknown	FALSE	57.5
Westfield	MA32-41	Moose Meadow Brook	Outlet Westfield Reservoir to mouth at confluence with Westfield River, Westfield (formerly part of segment MA32-23).	4.8 miles	B	*Escherichia Coli (E. Coli)*, Fecal Coliform	Agriculture, Grazing in Riparian or Shoreline Zones	TRUE	55.1

Watershed	Segment ID	Name	Segment Description	Size	Class	Impairment Causes (Likely NPS in italics)	All Sources	Priority NPS Cause	Recovery Potential Index Score
Westfield	MA32076	Windsor Pond	Windsor.	46 acres	B	Mercury in Fish Tissue, *Dissolved Oxygen*, Eurasian Water Milfoil, Myriophyllum spicatum	Atmospheric Deposition - Toxics, Source Unknown, Introduction of Non-native Organisms (Accidental or Intentional)	FALSE	55.0

Figure 1: Output from the Recovery Potential Screening Tool

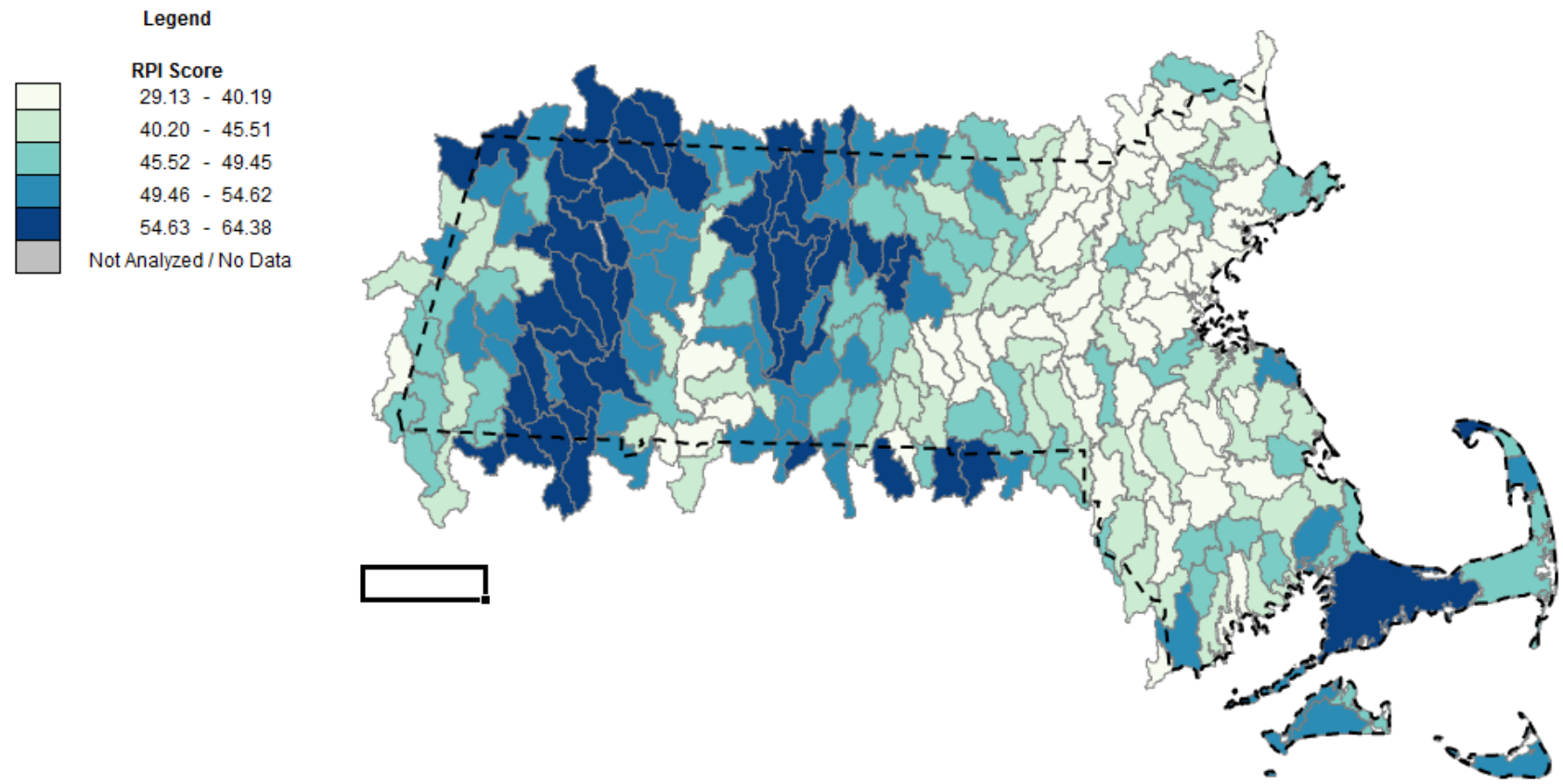

Table 2: Recovery Potential Screening Tool Indicator Setup

Indicator Type	Indicator Name	Weight
Ecological Indicator	Confluences Imp/Unimp (#/impaired mi) (INSTATE)	1
Ecological Indicator	Watershed % Forest (INSTATE)	1
Ecological Indicator	Stream Corridor (30.5M) % Woody Veg (INSTATE)	1
Ecological Indicator	Open Water Buffer (30.5M) % Woody Veg (INSTATE)	1
Ecological Indicator	PHWA Watershed Health Index, State Percentile (2016)	1
Ecological Indicator	Mean Index of Ecological Integrity (INSTATE)	1
Ecological Indicator	% Rare Ecosystem in WS	1
Ecological Indicator	Infiltration BMP Suitability (Ksat um/s) (INSTATE)	1
Stressor Indicator	% Agriculture in WS (2016)	1
Stressor Indicator	% Agriculture in RZ (2016)	1
Stressor Indicator	% Pasture/Hay in WS (2016)	1
Stressor Indicator	% Pasture/Hay in RZ (2016)	1
Stressor Indicator	N Yield (lb/sqmi) (INSTATE)	1
Stressor Indicator	P Yield (lb/sqmi) (INSTATE)	1
Stressor Indicator	% Imperviousness, Mean in WS (2016)	1
Stressor Indicator	Stream Corridor (61M) % Impervious (INSTATE)	1
Social Indicator	% Protected Land, All Types (2019)	1
Social Indicator	% Drinking Water Source Protection Area, Surface	1
Social Indicator	Pathogens Nonpoint Control Projects Presence	1
Social Indicator	Nutrients Nonpoint Control Projects Presence	1
Social Indicator	Land Use Complexity (INSTATE)	1
Social Indicator	NRCS Obligated Projects (#/sq. mi.) (INSTATE)	1
Social Indicator	% Area not in MS4 (INSTATE)	1
Social Indicator	303d Vision Priority Flag	1

Table 3: List of Likely NPS Impairment Causes

Cause
Algae
Escherichia Coli (E. Coli)
Bottom Deposits
Flocculant Masses
Phosphorus, Total
Scum/Foam
Turbidity
Benthic Macroinvertebrates Bioassessments
Dissolved Oxygen
Nutrient/Eutrophication Biological Indicators
Sedimentation/Siltation
Total Suspended Solids (TSS)
Temperature
Chloride
Harmful Algal Blooms
Fecal Coliform
Enterococcus
Transparency / Clarity
Chlorophyll-a
Dissolved Oxygen Supersaturation
Fish Passage Barrier
Estuarine Bioassessments
Nitrogen, Total
Combined Biota/Habitat Bioassessments
Alteration in stream-side or littoral vegetative covers
Habitat Assessment
Nutrients

Table 4: List of Priority NPS Impairment Causes (all related to pathogen or nutrient impairments)

Escherichia Coli (*E. Coli*)
Algae
Phosphorus, Total
Nutrient/Eutrophication Biological Indicators
Harmful Algal Blooms
Chlorophyll-a
Nitrogen, Total
Nutrients