

Page 1

Introduction

June 7, 2013

David Gray

USEPA Region 1

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Boston, MA 02110

Subject: Semi Annual Submittal under MassDOT's Impaired Waters Program

Dear Mr. Gray,

As part of MassDOT's Impaired Waters Program, the attached report documents MassDOT's activities between December 2012 and June 2013. In the last six months, MassDOT's Impaired Waters Program has generated assessment of 67 receiving waters including those performed for upcoming programmed (planned) roadway construction projects that will drain to an impaired water(s). Prioritizing assessments for programmed projects maximizes efficiency of the overall program by identifying the potential need for additional stormwater best management practices (BMPs) during the design process. As of today, MassDOT has design and permitting of BMPs underway for 36 receiving waters and construction in progress at nine locations, which illustrates the significant increase in design/ permitting and construction of recommended BMPs that has occurred in the last six months of this program.

This memo outlines the progress made towards the MassDOT commitment to assess the 684 impaired water bodies listed in Appendix L-1 of MassDOT's June 9, 2010 and July 23, 2010 submittals to EPA. MassDOT is completing the assessments using the methodologies outlined in BMP 7U: Impaired Waters Assessment and Mitigation Plan and/ or BMP 7R: TMDL Watershed Review. Assessments that do not require further design of BMPs to meet the target Impervious Cover (IC) or pollutant loading are finalized. For assessments where it is determined that further action is necessary to meet the target IC or pollutant loading reductions, MassDOT uses two steps to complete the assessment.

Step 1 Progress Report. The progress report assessment includes an evaluation of the potential contribution of stormwater from MassDOT urban roads and a calculation of the reduction of effective impervious area and/or pollutant loading reduction target taking into account existing BMPs. At this point, if existing BMPs are sufficient to meet the target, the assessment meets the EPA evaluation requirements and is considered final.

Step 2 Progress to Final Report. The steps between assessment and completing the design, which can take 6 to 18 months depending on the project size and complexity, include: survey, gathering site specific information, and design and permitting of the BMPs. Once the designs have reached the point that designers can calculate the pollutant or impervious cover reduction provided by the proposed BMPs, the assessments are finalized. Assessments at this second stage are identified as “progress to final” assessments, which provide a summary of the progress report assessment and the drainage design information.

The measurable goal set for BMP 7R committed MassDOT to annually review 20% of the 209 impaired waters with a TMDL. Table 1 summarizes the progress reports and final reports submitted as of this report to provide a holistic view of the progress made towards performing assessments for those water bodies listed on Appendix L-1 and towards meeting the commitments in the first three years of the program.

Tables 1 through 5

Table 1 Progress and Final Assessments for Water Bodies on Appendix L-1

Assessment Type	TMDL Status	Previous Submittals (#)	June 2013 Submittal (#)	Total (#)	% of Total Water Bodies
TMDL Method	Impaired Water Bodies with TMDL*	14	1	15	
IC Method**	Impaired Water Bodies with TMDL*	4	9	13	
TMDL and IC Method	Impaired Water Bodies with TMDL*	6	4	10	
No Discharge	Impaired Water Bodies with TMDL*	59	9	68	
Other (non-stormwater)	Impaired Water Bodies with TMDL*	21	0	21	
Total	Impaired Water Bodies with TMDL*	104	23	127	61%
IC Method	Impaired Water Bodies without TMDLs*	49	32	81	
<9% IC	Impaired Water Bodies without TMDLs*	31	1	32	
No Discharge	Impaired Water Bodies without TMDLs*	156	9	165	

Assessment Type	TMDL Status	Previous Submittals (#)	June 2013 Submittal (#)	Total (#)	% of Total Water Bodies
Other (non-stormwater)	Impaired Water Bodies without TMDLs*	27	1	28	
TMDL Method***	Impaired Water Bodies without TMDLs*	1	0	1	
TMDL and IC Method	Impaired Water Bodies without TMDLs*	2	1	3	
Total	Impaired Water Bodies without TMDLs*	266	44	310	
Total	Total	370	67	437	64%

* TMDL listing as included in Appendix L-1

** The TMDL for these water bodies was for pathogens which was not applicable to MassDOT's TMDL methodology. Therefore, the IC method was used to address the other listed impairments for the water body and the assessments addressed pathogens programmatically.

*** TMDL has been finalized for the receiving water since the submittal of Appendix L-1. Therefore, the TMDL method was used for the assessment.

Table 2a and Table 2b are a subset of Table 1. Table 2a summarizes the assessments that have been finalized (either initially or as a progress to final report). A complete listing of the impaired waters with final assessments included in this submittal appears in Table 6 at the end of this letter.

Table 2a Final Assessments for Water Bodies in Appendix L-1

Assessment Type	TMDL Status	Previous Submittals (#)	June 2013 Submittal (#)	Total (#)
Impaired Water Bodies with TMDLs*	Impaired Waterbodies with TMDL*	0	0	0
TMDL Method	Impaired Waterbodies with TMDL*	11	0	11
IC Method**	Impaired Waterbodies with TMDL*	3	2	5
TMDL and IC Method	Impaired Waterbodies with TMDL*	5	2	7
No Discharge	Impaired Waterbodies with TMDL*	59	9	68
Other (non-stormwater)	Impaired Waterbodies with TMDL*	21	0	21
Total Impaired Water Bodies with TMDLs*	Impaired Waterbodies with TMDL*	99	13	112
IC Method	Impaired Waterbodies without TMDL	29	4	33
<9% IC	Impaired Waterbodies without TMDL	31	1	32
No Discharge	Impaired Waterbodies without TMDL	156	9	165

Assessment Type	TMDL Status	Previous Submittals (#)	June 2013 Submittal (#)	Total (#)
Other (non-stormwater)	Impaired Waterbodies without TMDL	27	1	28
TMDL Method***	Impaired Waterbodies without TMDL	1	0	1
TMDL and IC Method	Impaired Waterbodies without TMDL	1	1	2
Total	Impaired Waterbodies without TMDL	245	16	261
Total	Water Bodies	344	29	373

* TMDL listing as included in Appendix L-1

** The TMDL for these water bodies was for pathogens which was not applicable to MassDOT's TMDL methodology. Therefore, the IC method was used to address the other listed impairments for the water body and the assessments addressed pathogens programmatically.

*** TMDL has been finalized for the receiving water since the submittal of Appendix L-1. Therefore, the TMDL method was used for the assessment.

Table 2b summarizes the assessments that are in the progress report stage. A complete listing of the impaired waters with progress reports included in this submittal appears in Table 7 at the end of this letter.

Table 2b Progress Report Assessments for Water Bodies in Appendix L-1

Assessment Type	TMDL Status	Previous Submittals (#)	June 2013 Submittal (#)	Total (#)
TMDL Method	Impaired Water Bodies with TMDLs	3	1	4
IC Method*	Impaired Water Bodies with TMDLs	1	7	8
TMDL and IC Method	Impaired Water Bodies with TMDLs	1	2	3
Total	Impaired Water Bodies with TMDLs	5	10	15
IC Method	Impaired Water Bodies without TMDLs	20	28	48
TMDL and IC Method	Impaired Water Bodies without TMDLs	1	0	1
Total	Impaired Water Bodies without TMDLs	21	28	49
Total	Water Bodies	26	38	64

*The TMDL for these water bodies was for pathogens which was not applicable to MassDOT's TMDL methodology. Therefore, the IC method was used to address the other listed impairments for the water body and the assessments addressed pathogens programmatically.

Table 3 below summarizes the assessments that have been submitted in a previous submittal as a progress report and that have been finalized. Designs for these projects have reached the point that the pollutant or impervious cover reduction provided by the proposed BMPs can be calculated. These reports provide a summary of the progress report assessment and the drainage design information and are included in Table 6 at the end of this letter.

Table 3 Progress to Final Reports for Water Bodies in Appendix L-1

Assessment Type	TMDL Status	Previous Submittals (#)	June 2013 Submittal (#)	Total (#)
TMDL and IC Method	Impaired Water Bodies with TMDLs	0	0	0
IC Method*	Impaired Water Bodies with TMDLs	3	0	3
TMDL Method	Impaired Water Bodies with TMDLs	0	0	0
TMDL and IC Method	Impaired Water Bodies without TMDLs	0	0	0
IC Method	Impaired Water Bodies without TMDLs	7	5	12
Total	Water Bodies	10	5	15

*The TMDL for these water bodies was for mercury which is unrelated to stormwater and not applicable to MassDOT's TMDL methodology. Therefore, the IC method was used to address the other listed impairments for the water body.

MassDOT has implemented the Impaired Waters Program comprehensively and strived to be proactive, therefore our submittals continue to include assessments for water bodies that were not listed in Appendix L-1 but where the program is now applicable.

While not required under the BMP 7U and 7R commitments made to EPA explicitly, MassDOT has reviewed these water bodies when identified as part of programmed projects or when reviewing larger watershed areas. Tables 4 and 5 are included below to keep track of these “additional” submittals separately to illustrate the breadth of the work being accomplished under the Impaired Waters Program.

Table 4 Final Assessments for Water Bodies Not Included in Appendix L-1

Assessment Type	Previous Submittals (#)	June 2013 Submittal (#)	Total (#)
TMDL Method	3	0	3
<9% IC	3	0	3
No Discharge	0	1	1
Other (non-stormwater)	4	0	4
Other	1	0	1
Total	11	1	12

*No Discharge assessments are typically unnecessary for submittal if the water body is not included in Appendix L-1. However, the water body assessed in this submittal is considered part of another water body that is included in Appendix L-1. Therefore, the assessment of this water body is included in this submittal.

Table 5 Progress Report Assessments for Water Bodies Not Included in Appendix L-1

Assessment Type	Previous Submittals (#)	June 2013 Submittal (#)	Total (#)
TMDL Method	1	4	5
IC Method	0	4	4

Assessment Type	Previous Submittals (#)	June 2013 Submittal (#)	Total (#)
Total	1	8	9

Overview of Attachments

In March 2013, the *Final Year 2012 Integrated List of Waters* was finalized and issued. In general, some impairments for water bodies changed between the *Final Year 2010 Integrated List of Waters* and *Final Year 2012 Integrated List of Waters* but most remained the same. For the assessments that were already complete at the time of the final list being issued, we did not include changes from the updated list. The approach used for assessing these waters (the IC method) addresses a range of impairments, and therefore, any changes to the list of impairments is unlikely to impact the conclusion of the assessment. For assessments performed after the impaired waters list was issued, impairments on the *Final Year 2012 Integrated List of Waters* were used.

Impaired Waters Assessments, Attachments

This submittal includes the following attachments, showing impaired waters assessments in the categories identified below:

Final Assessments. Attachment 1 includes nine completed assessments for impaired water bodies that required a full assessment.

Progress Report Assessments. Attachment 2 includes progress reports of 38 water bodies on Appendix L-1 and eight water bodies not on Appendix L-1. These progress reports include target reductions in pollutant loading and impervious cover. These assessments will now be forwarded to MassDOT design contractors for design and permitting of BMPs to meet the target reductions to the maximum extent practicable. These progress reports represent a significant amount of work towards completing the assessment.

Progress to Final Assessments. Attachment 3 includes five “progress to final reports” that finalized a previously submitted progress report.

No Discharge from MassDOT Outfalls Assessments. Attachment 4 includes assessments of 18 water bodies where desktop review or field review of the subwatershed found that MassDOT urban roads do not drain directly to the receiving water in question and therefore according to BMP 7U and 7R no further assessment is necessary. Only direct discharges, and not MassDOT properties that drain to other watercourses or segments upstream of the subject water body or stream segment, are included in the assessment.

Less than 9% Impervious Cover Assessments. Attachment 5 includes one assessment where desktop/GIS analysis of the subbasin indicated that the subwatershed includes less than 9% impervious cover. The water body for submission is West River Pond (MA51177) which is now considered run-of-the-river with West River (MA51-12). West River was submitted as part of the December 7, 2012 submission; however, we are resubmitting it to account for West River Pond. These water bodies’ impairments are most likely not stormwater related. No further assessment is necessary.

Unrelated Impairments Assessments. Attachment 6 includes one assessment where the impairment is not stormwater related and therefore according to BMP 7U and 7R no further assessment is necessary.

BMP Design Information

BMP Design

MassDOT is eager to facilitate the design and construction of BMPs and continue to meet the schedule as more of the program moves into the design and construction phase. Design can take 12-18 months, including identifying a designer, conducting survey, and completing design. Field work associated with permitting and construction schedules is weather dependent, which can result in schedule delays. In order to facilitate this increased design focus, MassDOT advertised for new design consultant contracts and in March 2013, MassDOT chose five firms to award \$2.5M contracts. This increases the number of design consultants with on-call contracts from three to five.

MassDOT's design contractors are developing design and construction documents for BMPs proposed in previously submitted assessments and progress reports. Designs are underway to provide additional treatment for impaired waters including those identified below. Table 8 at the end of this letter shows a summary of the progress on design of BMPs recommended in previous assessment submittals or in this submittal.

Retrofit Initiative Project's Design Status

Survey:

Indian Lake/ Unnamed Tributary (Rt. 290/190, Worcester)

Design:

Lee River (Rt. 103/I-195, Somerset and Swansea)

Cole River (I-195, Swansea)

Mine Brook (Rt. 495, Franklin and Bellingham)

Monatiquot (I-95, Braintree)

Rumford River (South Main Street/I-495, Mansfield)

Miles River (Route 1A, Ipswich)

Charles River MA72-07/ Rosemary Brook/ Cheesecake Brook (I-90/ I-95, Newton and Weston)

Charles River MA72-36 (I-90/Rt. 30/I-95, Weston, Newton and Needham)

Mystic River (Rt. 16/I-93, Arlington, Boston, Medford, Somerville, and Winchester)

Saugus River MA93-34 (I-95/Rt. 128, Lynnfield and Wakefield)

Saugus River MA93-35 (I-95/Rt. 128, Lynnfield, Saugus and Wakefield)

Westfield River (Rt. 20, Russell and Westfield)

Stony Brook (Rt. 202/Rt. 116, Granby and South Hadley)

Greenwood Pond (Rt. 2/Rt. 2a, Templeton)

Norton Reservoir (I-495, Norton and Mansfield)

Robinson Brook (I-95, Foxborough and Mansfield)

BMP Construction Information

BMP Construction

MassDOT completed construction of two projects in 2012, and nine more projects are currently in the construction phase. MassDOT plans to move projects currently at the 100% design phase into construction over the next six months. Table 8 shows a summary of the water bodies with projects in construction or complete.

Under Construction:

Burncoat Park Pond (Rt. 290, Worcester)

Mill Pond/ Beaver Brook (Rt. 495 Littleton)

Noquochoke Lake (MA95113/MA95171/MA95170)

Aberjona River (I-93/I-95, Woburn)

Hawkes Pond (Rt. 1/ Rt. 95, Lynnfield/ Saugus)

Wading River (Rt. 95, Mansfield)

Spy Pond (Route 2, Arlington/ Belmont)

Kettle Brook/ Leesville Pond (I-290/ Rt. 12, Auburn and Worcester)

Dark Brook (I-290/I-190, Auburn)

Closing

MassDOT welcomes any input or feedback from the EPA on the assessments and documents included in this and all future progress reports. If you have any questions or concerns, or would like to meet to discuss this submittal, please feel free to contact me at (857) 368-8788.

Sincerely,

Henry Barbaro

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cc:

Kathleen Woodward, Esq., EPA Region I

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Tables 6 through 8

Table 6 Final Assessments in June 2013 Submittal

Water Body ID	Water Body Name	Water Body included in Appendix L-1 or Report Type	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	No Discharge Assessment	<9% IC Assessment	Proposed BMPs Assessment	Unrelated to Stormwater Assessment	Site Constraints Assessment	Notes
MA35029	Hilchey Pond	Water Body included in Appendix L-1	Turbidity	Phosphorus			X					
MA36011	Bemis Pond	Water Body included in Appendix L-1	Total Suspended Solids				X					Assessed in combination with Abbey Brook (MA36-40)
MA42015	Dutton Pond	Water Body included in Appendix L-1	Nutrient/Eutrophication Biological Indicators, Phosphorus (Total)	Phosphorus			X					
MA51105	Mill Pond	Water Body included in Appendix L-1	Turbidity	Phosphorus			X					
MA51177	West River Pond	Water Body included in Appendix L-1	Aquatic Plants (Macrophytes), Cadmium, Chloride, Copper, Lead, (Non-Native Aquatic Plants*), Nutrient/Eutrophication Biological Indicators, pH, Low					X				Assessed in combination with West River (MA51-12) which was already submitted on 12/8/2012 as less than 9% IC
MA71047	Winter Pond	Water Body included in Appendix L-1	(Non-Native Aquatic Plants*), Nutrient/Eutrophication Biological Indicators				X					

Water Body ID	Water Body Name	Water Body included in Appendix L-1 or Report Type	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	No Discharge Assessment	<9% IC Assessment	Proposed BMPs Assessment	Unrelated to Stormwater Assessment	Site Constraints Assessment	Notes
MA71-09	Winn Brook	Water Body included in Appendix L-1	Physical Substrate habitat alterations*), Escherichia coli				X					
MA72-09	Stop River	Water Body included in Appendix L-1	Ambient Bioassays -- Chronic Aquatic Toxicity	Phosphorus	5.8	1.0					X	Site constraints due to limited right-of-way and protected wetland area
MA72-33	Charles River	Water Body included in Appendix L-1	(Physical substrate habitat alterations*), Escherichia coli, Nutrient/Eutrophication Biologic Indicators	Pathogens			X					
MA73-28	Mother Brook	Water Body included in Appendix L-1	(Low flow alterations*), Color, DDT, Escherichia coli, Fecal Coliform, Mercury in Fish Tissue, Oxygen, Dissolved, PCB in Fish Tissue, Phosphorus (Total), Taste and Odor	Bacteria		0.1					X	Site constraints due to limited right-of-way and close proximity to MS4 storm drains.
MA73-29	Pine Tree Brook	Water Body included in Appendix L-1	Fecal Coliform, Escherichia Coli, Oxygen, Dissolved, Turbidity, Aquatic Plants (Macrophytes), (Physical Substrate Habitat Alterations*)	Bacteria		0.1					X	Site constraints due to direct connections of Route 138 drainage to MS4 storm drains. There are no suitable locations for stormwater diversions or treatment.
MA73044	Popes Pond	Water Body included in Appendix L-1	Turbidity, (Aquatic Plants (Macrophytes)*)			0.1					X	Assessed in combination with Pine Tree Brook (MA73-29)

Water Body ID	Water Body Name	Water Body included in Appendix L-1 or Report Type	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	No Discharge Assessment	<9% IC Assessment	Proposed BMPs Assessment	Unrelated to Stormwater Assessment	Site Constraints Assessment	Notes
MA74-06	Cochato River	Water Body included in Appendix L-1	Chlordane, DDT, Fecal Coliform, Oxygen, Dissolved				X					
MA82B-03	Assabet River	Water Body included in Appendix L-1	(Debris/Floatables/Tra sh*), (Non-Native Aquatic Plants*), Excess Algal Growth, Fecal Coliform, Phosphorus (Total), Taste and Odor	Phosphorus	4.6	1.3					X	Bridge site constraints and limited right-of-way
MA82B-05	Assabet River	Water Body included in Appendix L-1	(Debris/Floatables/Tra sh*), (Non-Native Aquatic Plants*), Aquatic Plants (Macrophytes), Excess Algal Growth, Fecal Coliform, Nutrient/Eutrophication Biological Indicators, Oxygen, Dissolved, Phosphorus (Total), Taste and Odor	Phosphorus	0.5	0.1					X	Bridge site constraints prevent improvements.
MA82A-09	Concord River	Water Body included in Appendix L-1	(Debris/Floatables/Tra sh*), Excess Algal Growth, Fecal Coliform, Mercury in Fish Tissue, Phosphorus (Total)			0.1					X	Bridge site constraints prevent improvements.
MA83-08	Shawsheen River	Water Body included in Appendix L-1	Fecal Coliform, Physical substrate habitat alterations	Bacteria			X					

Water Body ID	Water Body Name	Water Body included in Appendix L-1 or Report Type	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	No Discharge Assessment	<9% IC Assessment	Proposed BMPs Assessment	Unrelated to Stormwater Assessment	Site Constraints Assessment	Notes
MA83009	Hussey Pond	Water Body included in Appendix L-1	Excess Algal Growth				X					
MA83015	Rabbit Pond	Water Body included in Appendix L-1	Turbidity				X					
MA83-11	Long Meadow Brook	Water Body included in Appendix L-1	Fecal Coliform	Bacteria			X					
MA83-13	Sandy Brook	Water Body included in Appendix L-1	Fecal Coliform	Bacteria			X					
MA84A-22	Cobbler Brook	Water Body included in Appendix L-1	(Debris/Floatables/Tra sh*)							X		Impairments are unrelated to stormwater
MA93011	Cape Pond	Water Body included in Appendix L-1	Turbidity				X					
MA93-18	Gloucester Harbor	Water Body included in Appendix L-1	Combined Biota/Habitat Bioassessments, Fecal Coliform, Oxygen, Dissolved			1.6					X	Site constraints due to limited right-of-way and surrounding area is residential or protected open space
MA93024	Floating Bridge Pond	Water Body included in Appendix L-1	Excess Algal Growth, Phosphorus (Total), Turbidity			1.7					X	Bridge site constraints prevent improvements.

Water Body ID	Water Body Name	Water Body included in Appendix L-1 or Report Type	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	No Discharge Assessment	<9% IC Assessment	Proposed BMPs Assessment	Unrelated to Stormwater Assessment	Site Constraints Assessment	Notes
MA95166	White Island Pond	Water Body included in Appendix L-1	(Non-Native Aquatic Plants*), Chlorophyll-a, Excess Algal Growth, Oxygen, Dissolved, Phosphorus (Total), Secchi disk transparency	Phosphorus**			X					Located within a groundwatershed. MassDOT does not discharge to water body as there are no MassDOT roads in the groundwatershed.
MA95173	White Island Pond	Water Body included in Appendix L-1	(Non-Native Aquatic Plants*), Excess Algal Growth, Oxygen, Dissolved, Phosphorus (Total)	Phosphorus**			X					Located within a groundwatershed. MassDOT does not discharge to water body as there are no MassDOT roads in the groundwatershed.
MA95-35	Mattapoisett Harbor	Water Body included in Appendix L-1	Fecal Coliform	Pathogens			X					
MA95-64	Little Bay	Water Body included in Appendix L-1	Fecal Coliform	Pathogens			X					
MA36-40	Abbey Brook	No	Total Suspended Solids				X					
MA51012	Burncoat Park Pond	Progress to Final Report	Aquatic plants (macrophytes), turbidity			0			X			2 BMPs proposed that will provide 0.82 acres effective IC reduction

Water Body ID	Water Body Name	Water Body included in Appendix L-1 or Report Type	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	No Discharge Assessment	<9% IC Assessment	Proposed BMPs Assessment	Unrelated to Stormwater Assessment	Site Constraints Assessment	Notes
MA51-03	Blackstone River	Progress to Final Report	(Debris/Floatables/Trash*), (Other flow regime alterations*), (Physical substrate habitat alterations*), Ambient Bioassays – Chronic Aquatic Toxicity, Aquatic microinvertebrate Bioassessments, Escherichia coli, Excess Algal Growth, Fishes Bioassessments, Foam/Flocs/Scum/Oil Slicks, Lead, Nutrient/Eutrophication Biological Indicators, Other, Dissolved Oxygen, Phosphorous (Total), Sedimentation/Siltation, Taste and Odor, Turbidity			0			X			Existing BMPs will be improved to increase effective IC reduction to 20 acres
MA71040	Spy Pond	Progress to Final Report	Chlordane, DDT, Excess algal growth, Dissolved oxygen, Phosphorus (total), (Eurasian water milfoil, myriophyllum spicatum)			26.0			X			10 BMPS proposed that will reduce effective IC by 2.1 acres

Water Body ID	Water Body Name	Water Body included in Appendix L-1 or Report Type	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	No Discharge Assessment	<9% IC Assessment	Proposed BMPs Assessment	Unrelated to Stormwater Assessment	Site Constraints Assessment	Notes
MA71-03	Mystic River	Progress to Final Report	Sediment Screening Value (Exceedence), Ammonia (Un-ionized), Fecal Coliform, Foam/Flocs/Scum/Oil Slicks, Other, Oxygen, Dissolved, PCB in Fish Tissue, , Petroleum Hydrocarbons, Taste and Odor			13.9					X	
MA84B-02	Beaver Brook	Progress to Final Report	fecal coliform, oxygen, Dissolved, pH, Low, total suspended solids (TSS)			3.3			X			9 BMPs proposed that will reduce effective IC by 6.0 acres

[□]Impairments listed on MassDEP’s final Massachusetts Year 2012 Integrated List of Waters.

* “TMDL not required (Non-Pollutant)” according to MassDEP’s final Massachusetts Year 2010 Integrated List of Waters or Year 2012 Integrated List of Waters

**TMDL impairment based on finalized TMDLs after Appendix L-1 was created.

Table 7 Progress Report Assessments in June 2013 Submittal

Water Body ID	Water Body Name	Water Body Included on Appendix L-1	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	Will be Assigned to Designer	Contractor Assigned	Notes
MA51-02	Middle River	Yes	(Debris/Floatables/Trash*), (Physical substrate habitat alterations*), Aquatic Macroinvertebrate Bioassessments, Escherichia coli, Nutrient/Eutrophication Biological Indicators, Other, Turbidity			18.1	X		

Water Body ID	Water Body Name	Water Body Included on Appendix L-1	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	Will be Assigned to Designer	Contractor Assigned	Notes
MA51020	City Farm Pond	Yes	(Low Flow alterations*) Sedimentation/Siltation, (Aquatic Plants (Macrophytes)*)			1.2	X		Assessed in combination with Poor Farm Brook (51-17)
MA51-04	Blackstone River	Yes	(Other flow regime alterations*), (Physical substrate habitat alterations*), Aquatic Macroinvertebrate Bioassessments, Cadmium, Copper, DDT, Escherichia coli, Excess Algal Growth, Fishes Bioassessments, Lead, Nutrient/Eutrophication Biological			1.3	X		
MA51136	Riverdale Impoundment	Yes	(Other flow regime alterations*), (Physical substrate habitat alterations*), Aquatic Macroinvertebrate Bioassessments, Cadmium, Copper, DDT, Escherichia coli, Excess Algal Growth, Fishes Bioassessments, Lead, Nutrient/Eutrophication Biological			1.3	X		Assessed in combination with Blackstone River (MA51-04).
MA51131	Rice City Pond	Yes	(Low Flow Alterations*), (Non-Native Plants*), Aquatic Plants (macrophytes), Copper, Lead			1.3	X		Assessed in combination with Blackstone River (MA51-04).
MA51-05	Blackstone River	Yes	(Other flow regime alterations*), Aquatic Macroinvertebrate Bioassessments, Cadmium, Copper, Escherichia coli, Excess Algal Growth, Lead, Nutrient/Eutrophication Biological Indicators, Phosphorus (Total), Polychlorinated biphenyls, Taste and Odor,			3.1	X		
MA51-06	Blackstone River	Yes	(Other flow regime alterations*), Cadmium, Copper, DDT, Lead, PCB in Fish Tissue, Phosphorus (Total), Total Suspended Solids (TSS)			1.9	X		

Water Body ID	Water Body Name	Water Body Included on Appendix L-1	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	Will be Assigned to Designer	Contractor Assigned	Notes
MA51-10	Mill River	Yes	Aquatic Plants (Macrophytes), PCB in Fish Tissue, (Non-Native Aquatic Plants*), Other			0.07	X		
MA51049	Fiske Millpond	Yes	Aquatic Plants (Macrophytes), PCB in Fish Tissue, (Non-Native Aquatic Plants*), Other			0.07	X		Assessed in combination with Mill River (MA51-10).
MA51158	Spindleville Pond	Yes	Aquatic Plants (Macrophytes), PCB in Fish Tissue, (Non-Native Aquatic Plants*), Other			0.07	X		Assessed in combination with Mill River (MA51-10)
MA51135	Lake Ripple	Yes	(Non-Native Aquatic Plants*), Aquatic Plants (Macrophytes)			0.09	X		
MA51-14	Mumford River	Yes	(Low Flow Alterations*), (Non-Native Plants*), Aquatic Plants (macrophytes), Copper, Lead			7.8	X		
MA51052	Gilboa Pond		(Low Flow Alterations*), (Non-Native Plants*), Aquatic Plants (macrophytes), Copper, Lead			7.8	X		Assessed in combination with Mumford River (51-14).
MA51193	Meadow Pond		(Low Flow Alterations*), (Non-Native Plants*), Aquatic Plants (macrophytes), Copper, Lead			7.8	X		Assessed in combination with Blackstone River (MA51-14).
MA51-15	Tatnuck Brook	Yes	(Debris/Floatables/Trash*), (Non-native Aquatic Plans*), (Other flow regime alterations*), Aquatic Macroinvertebrate Bioassessments, Sedimentation/Siltation, Turbidity			0.2	X		
MA51196	Shirley Street Pond	Yes	Aquatic Plants (Macrophytes)	Phosphorus	37			Tetrattech	
MA61-06	Mount Hope Bay	Yes	Chlorophyll-a, Fecal Coliform, Fishes Bioassessments, Nitrogen (Total), Temperature, water			1.0	X		

Water Body ID	Water Body Name	Water Body Included on Appendix L-1	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	Will be Assigned to Designer	Contractor Assigned	Notes
MA62-04	Taunton River	Yes	Fecal Coliform, Fishes Bioassessments, Oxygen, Dissolved			63.6	X		
MA72-03	Charles River	Yes	DDT, Dissolved oxygen saturation, Escherichia coli, Excess Algal Growth, Organic Enrichment (Sewage) Biological Indicators, Phosphorus (Total)			4.3		VHB	2 BMPs proposed that will provide 1.3 lbs/yr of reduction
MA72-28	Beaver Brook	Yes	(Non-native Aquatic Plants*), (Other anthropogenic substrate alterations*), (Other flow regime alterations*), Escherichia coli, Excess algal growth, Organic Enrichment (Sewage) Biological Indicators, Oxygen dissolved, Phosphorus (Total), Sedimentation/Siltation, Taste and Odor, Turbidity	Phosphorous	22.8	19.8		VHB	18 BMPS proposed that will provide 32.9 reduction of IC acres and 51 lbs/yr of phosphorus reduction
MA73003	Russell Pond	Yes	(Non-Native Aquatic Plants*), Turbidity			1.0	X		
MA73-26	Unquity Brook	Yes	(Debris/Floatables/Trash*), (Low flow alterations*), (Physical substrate habitat alterations*), Escherichia coli, Fecal Coliform, Oxygen, Dissolved, pH, Low, Phosphorus (Total), Sedimentation/Siltation, Mercury in Fish, PCB in Fish Tissue	Bacteria		12.7	X		
MA73-30	Gulliver Creek	Yes	Other, PCB in Fish Tissue, Fecal coliform	Bacteria		6.7	X		
MA74-04	Mill River	Yes	Fecal Coliform, Nutrient/Eutrophication Biological Indicators			11.5		AECOM	Assessment completed after the FY14 resurfacing of Rte 3 stormwater improvements memo.

Water Body ID	Water Body Name	Water Body Included on Appendix L-1	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	Will be Assigned to Designer	Contractor Assigned	Notes
MA74-09	Town Brook	Yes	(Other flow regime alterations*), (Physical substrate habitat alterations*), Aquatic Macroinvertebrate Bioassessments, Fecal Coliform			20.7	X		Assessment completed after the FY14 resurfacing of Rte 3 stormwater improvements memo. Assessment includes proposed BMPs in memo.
MA82A-08	Concord River	Yes	(Eurasian Water Milfoil, Myriophyllum spicatum*), (Non-Native Aquatic Plants*), Mercury in Fish Tissue, Phosphorus (Total)			19.2	X		
MA82B-02	Assabet River	Yes	Aquatic Macroinvertebrate Bioassessments, Fecal Coliform, Nutrient/Eutrophication Biological Indicators, Oxygen, Dissolved, Phosphorus (Total)	Phosphorus	18.8	2.9	X		
MA83-04	Rogers Brook	Yes	(Physical substrate habitat alterations*), Fecal Coliform, Turbidity	Bacteria		1.6	X		
MA83-05	Elm Brook	Yes	(Physical substrate habitat alterations*), Fecal Coliform, Turbidity	Bacteria		1.8	X		
MA83-19	Shawsheen River	Yes	Shawsheen River	Bacteria		38.3	X		Assessment completed after the FY15 resurfacing of I-495 stormwater improvements memo.
MA84046	Newfield Pond	Yes	(Eurasian Water Milfoil, Myriophyllum spicatum*), (Non-Native Aquatic Plants*), Mercury in Fish Tissue, Oxygen, Dissolved	Mercury		0.4	X		
MA84A-10	Spicket River	Yes	(Debris/Floatables/Trash*), (Physical substrate habitat alterations*), Aquatic Macroinvertebrate Bioassessments, Copper, Escherichia coli, Mercury in Water Column, Other			31.8	X		

Water Body ID	Water Body Name	Water Body Included on Appendix L-1	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	Will be Assigned to Designer	Contractor Assigned	Notes
MA84A-17	Black Brook	Yes	(Debris/Floatables/Trash*), (Physical substrate habitat alterations*), Aquatic Macroinvertebrate Bioassessments, Escherichia coli, Fishes Bioassessments, Sedimentation/Siltation, Turbidity			5.1	X		
MA84A-18	Bare Meadow Brook	Yes	Escherichia coli, Sedimentation/Siltation, Turbidity			11.4	X		
MA93-07	Bass River	Yes	(Fish-Passage Barrier*), Turbidity			5.0		VHB	5 BMPs proposed that will provide 6.0 acres of reduction
MA93-10	Forest River	Yes	Dissolved oxygen saturation			3.5		FST	Assessment includes BMP recommendations
MA93-37	Beaver Brook	Yes	Oxygen, Dissolved			40.0		VHB	27 BMPs proposed that will provide 22.1 acres of reduction
MA93-51	Unnamed Tributary	Yes	(Alteration in stream-side or littoral vegetative covers*), (Debris/Floatables/Trash*), (Other flow regime alterations*), (Physical substrate habitat alterations*), Fecal Coliform, Taste and Odor			1.7	X		Assessment completed after the FY15 resurfacing of Route 1 stormwater improvements memo.
MA41-02	Quinebaug River	No	(Debris/Floatables/Trash*), Excess Algal Growth, Turbidity			2.7	X		Assessment completed after the FY15 resurfacing of I-84 stormwater improvements memo.
MA51002	Aldrich Pond	No	Aquatic Plants (Macrophytes), (Non-Native Aquatic Plants*)			0.2	X		
MA51050	Flint Pond	No	(Eurasian Water Milfoil, Myriophyllum spicatum*) (non-native aquatic plants*), Aquatic Plants (Macrophytes), turbidity	Phosphorus	3.0			Tetrattech	
MA51093	Marble Pond	No	(Non-Native Aquatic Plants*), Aquatic Plants (Macrophytes)			1.6	X		

Water Body ID	Water Body Name	Water Body Included on Appendix L-1	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	Will be Assigned to Designer	Contractor Assigned	Notes
MA51120	Pondville Pond	No	(non-native Aquatic Plants *), Excess Algal Growth	Phosphorus	0.9		X		
MA51125	Lake Quinsigamond	No	(Eurasian Water Milfoil, Myriophyllum spicatum*)	Phosphorus	44.3			Tetrattech	
MA51-17	Poor Farm Brook	No	(Low Flow alterations*) Sedimentation/Siltation, (Aquatic Plants (Macrophytes)*)			1.2	X		
MA51188	Flint Pond	No	(Eurasian Water Milfoil, Myriophyllum spicatum*) (non-native aquatic plants*), Aquatic Plants (Macrophytes)	Phosphorus	24.3			Tetrattech	

[□]Impairments listed on MassDEP’s final Massachusetts Year 2012 Integrated List of Waters.

* “TMDL not required (Non-Pollutant)” according to MassDEP’s final *Massachusetts Year 2012 Integrated List of Waters*.

**TMDL impairment based on finalized TMDLs after Appendix L-1 was created.

Table 8 Status of Assessments for Design and Construction

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Submitted as a Progress Report?	Submitted as a Final Report?	Progress to Final Report Submitted?	Progress (Design, Construction or Complete) December 8, 2012	Progress (Design, Construction or Complete) June 8, 2013	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
6/8/2012	MA41-05	Cady Brook	No	Yes	No	Pre-Design	Pre-Design	--	Unknown	Tetrattech
6/8/2012	MA42-03	French River	No	Yes	No	Pre-Design	Pre-Design	--	Unknown	--
6/8/2012	MA42058*	Texas Pond	No	Yes	No	Pre-Design	Pre-Design	--	Unknown	--
6/8/2012	MA42059*	Thayers Pond	No	Yes	No	Pre-Design	Pre-Design	--	Unknown	--
6/8/2012	MA72-31	Unnamed Tributary (Millers River)	No	Yes	No	Pre-Design	Pre-Design	--	2014	MassDOT
6/8/2012	MA73-01	Neponset River	Yes	No	No	Pre-design	Pre-design	--	2014	VHB

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Submitted as a Progress Report?	Submitted as a Final Report?	Progress to Final Report Submitted?	Progress (Design, Construction or Complete) December 8, 2012	Progress (Design, Construction or Complete) June 8, 2013	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
6/8/2012	MA73-02	Neponset River	Yes	No	No	Pre-design	Pre-design	--	2014	VHB
12/8/2012	MA51039	Dorothy Pond	No	Yes	No	Pre-Design	Pre-Design	--	Unknown	VHB
6/8/2013	MA51050	Flint Pond	Yes	No	No	n/a	Pre-Design	--	Unknown	Tetrtech
6/8/2013	MA51125	Lake Quinsigamond	Yes	No	No	n/a	Pre-Design	--	Unknown	Tetrtech
6/8/2013	MA51188	Flint Pond	Yes	No	No	n/a	Pre-Design	--	Unknown	Tetrtech
6/8/2012	MA51073	Indian Lake	Yes	No	No	Pre-design	Pre-design (survey)	--	2014	VHB
6/8/2012	MA51-08	Unnamed Tributary	Yes	No	No	Pre-design	Pre-design (survey)	--	2014	VHB
3/8/2011	MA36-16	Quaboag River	No	Yes	No	Design	Design	25-75%	2013	VHB
12/8/2011	MA61-02	Lee River	Yes	No	Yes (6/8/12)	Design	Design	75%	2013	Tetrtech
12/8/2011	MA61-04	Cole River	Yes	No	Yes (6/8/12)	Design	Design	25%	Incorporating the BMP Design into the MassDOT "Swansea Superstructure Replacement of Bridge S35-018, I-195 (EB/WB) over the Cole River" Project	Tetrtech
12/8/2012	MA71-04	Alewife Brook	Yes	No	No	25% Design	Design	75%	Unknown	VHB
12/8/2011	MA72-14	Mine Brook	Yes	No	No	Pre-design	Design	Pre-25/75%	2013	VHB
12/8/2011	MA74-08	Monatiquot River	Yes	No	No	Pre-design	Design	Pre-25/75%	2013	VHB
12/8/2011	MA93-34	Saugus River	Yes	No	Yes (6/8/12)	Design	Design	75%	Unknown	Tetrtech
12/8/2011	MA93-35	Saugus River	Yes	No	Yes (6/8/12)	Design	Design	75%	Unknown	Tetrtech

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Submitted as a Progress Report?	Submitted as a Final Report?	Progress to Final Report Submitted?	Progress (Design, Construction or Complete) December 8, 2012	Progress (Design, Construction or Complete) June 8, 2013	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
6/8/2012	MA32-05	Westfield River	Yes	No	No	Design	Design	30%	2013	CEI
6/8/2012	MA34-19	Stony Brook	Yes	No	No	Design	Design	30%	2013	CEI
6/8/2012	MA35026	Greenwood Pond	Yes	No	No	Design	Design	30%	2012	CEI
6/8/2012	MA62134	Norton Reservoir	No	Yes	No	Design	Design	100%	2012	MassDOT
6/8/2012	MA62-14	Robinson Brook	Yes	No	No	Design	Design	75%	2013	MassDOT
6/8/2012	MA62-39	Rumford River	Yes	No	No	Design	Design	75%	2013	Tetrtech
6/8/2012	MA71-02	Mystic River	Yes	No	No	Design	Design	25%	2013	Tetrtech
6/8/2012	MA72-07	Charles River	No	Yes	Toll Area Project Interstate 95 North Project Area	Design Pre-Design	Design Pre-Design	25-75% --	2013 2013	VHB VHB
6/8/2012	MA72-25	Rosemary Brook	No	Yes	No	Design	Design	75%	2012	BSC
6/8/2012	MA72-29	Cheese Cake Brook	No	Yes	No	Design	Design	75%	2013	VHB
6/8/2012	MA72-36	Charles River	No	Yes	No	Design	Design	75%	2013	VHB
12/8/2012	MA92-03	Miles River	Yes	No	No	--	Design	25-75%	Unknown	AECOM
Not Yet Submitted to EPA	MA34-05	Connecticut River (Subbasin C)	No	Yes	No	n/a	Design	25%	Unknown	Tetrtech
Not Yet Submitted to EPA	MA34-05	Connecticut River (Subbasin D)	Yes	No	No	n/a	Design	25%	Unknown	Tetrtech
12/8/2010	MA51012	Burncoat Park Pond	No	Yes	Yes (6/8/2013)	Construction	Construction	100%	Complete	Tetrtech
12/8/2011	MA51-16	Dark Brook	No	Yes	No	Design	Construction	100%	Complete	VHB

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Submitted as a Progress Report?	Submitted as a Final Report?	Progress to Final Report Submitted?	Progress (Design, Construction or Complete) December 8, 2012	Progress (Design, Construction or Complete) June 8, 2013	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
12/8/2011	MA51-01	Kettle Brook**	Yes	No	No	Design	Construction	100%	Complete	VHB
12/8/2011	MA51087	Leesville Pond**	Yes	No	No	Design	Construction	100%	Complete	VHB
6/8/2011	MA84038	Mill Pond**	No	Yes	Yes (6/8/2013)	Construction	Construction	100%	Complete	VHB
6/8/2011	MA84B-02	Beaver Brook**	No	Yes	Yes (6/8/2013)	Construction	Construction	100%	Complete	VHB
6/8/2011	MA95113	Noquochoke Lake** ^{oo}	No	Yes	No	Construction	Construction	100%	Complete	Tetrattech
6/8/2011	MA95170	Noquochoke Lake** ^{oo}	No	Yes	No	Construction	Construction	100%	Complete	Tetrattech
6/8/2011	MA95171	Noquochoke Lake** ^{oo}	No	Yes	No	Construction	Construction	100%	Complete	Tetrattech
12/8/2011	MA71-01	Aberjona River	Yes	No	Yes (6/8/12)	Construction	Construction	100%	Complete	Tetrattech
12/8/2011	MA71040	Spy Pond	Yes	No	Yes (6/8/2013)	Design	Construction	100%	Complete	VHB
12/8/2011	MA93032	Hawkes Pond	Yes	No	Yes(6/8/12)	Design	Construction	100%	Complete	Tetrattech
6/8/2012	MA62-47	Wading River ^{oo}	No	Yes	No	Construction	Construction	100%	Complete	VHB
12/8/2010	MA51-03	Blackstone River	No	Yes	Yes(6/8/2013)	Construction	Complete	100%	Complete	VHB
3/8/2011	MA42034	Lowes Pond	No	Yes	No	Construction	Complete	100%	Complete	Tetrattech

*French River (MA42-03), Thayers Pond (MA42059) and Texas Pond (MA42058) were assessed together since Thayers Pond and Texas Pond are now considered run-of-the-river.

**Considered one project with another water body.

^{oo} Additional effective IC removal is not required in the subwatersheds of Noquochoke Lake and Wading River. However, BMPs will be implemented to treat MassDOT storm water runoff prior to discharging to these water bodies.

List of Attachments

Attachment 1 Impaired Waters Assessments Final Reports

Attachment 2 Impaired Waters Assessments Progress Reports

Attachment 3 Impaired Waters Assessments Progress to Final Reports

Attachment 4 No Discharges from MassDOT Outfalls Assessments

Attachment 5 Less than 9% Impervious Cover Assessments

Attachment 6 Unrelated Impairments Assessments