



Deval L. Patrick, Governor
Timothy P. Murray, Lt. Governor
Richard A. Davey, Secretary & CEO
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June 6, 2014

David Gray
U.S. Environmental Protection Agency, Region 1
5 Post Office Square - Suite 100, Mail Code #OEP06-1
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 2013 and June 2014. In the last six months, MassDOT's Impaired Waters Program has generated 89 assessments of impaired receiving waters (76 of the 89 are part of the Original L-1 list), including those performed for upcoming programmed (planned) roadway construction projects. Prioritizing assessments for programmed projects maximizes the efficiency of the overall program by identifying the potential need for additional stormwater best management practices (BMPs) during the design process, and then implementing construction of these BMPs during a larger construction effort. Implementing BMP construction during larger, programmed construction projects reduces costs such as mobilization, achieves savings through an economy of scale, maximizes efficient use of DOT resources needed for bidding and construction oversight, and allows a holistic approach to stormwater management in a discrete geographic area.

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: Total maximum Daily Load (TMDL) Watershed Review. For assessments where it is determined that further action is necessary to meet the target Impervious Cover (IC) or pollutant loading reductions, MassDOT forwards these assessments to design consultants for BMP design.

MassDOT has decided to discontinue the two step process of Progress Reports and Progress to Final Reports assessments and instead has included sufficient information in each assessment in this submittal to document whether BMPs are feasible to address identified target IC or pollutant reductions, thereby fulfilling the assessment requirement in one document. Progress Reports that identified targets which have been addressed by BMPs designed between March 2013 and March 2014 were summarized in the MassDOT MS4 Annual Report (dated, May 1, 2014). Assessments in this and future bi-annual submittals that have identified target reductions will proceed to design and, once design is complete, the achieved reductions will be reported in future MS4 Annual Reports. Final IC or pollutant reductions achieved by BMP designs initiated prior to March 2013 are documented in MassDOT's new Impaired Waters Database, which was launched in 2013.

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 assessments submitted as part of this report to provide a holistic view of the progress made towards performing assessments for those water bodies listed in Appendix L-1 and towards meeting the commitments in the first four years of the program. As shown in Table 1, MassDOT has assessed 93% of the 209 TMDL waters included on the original L-1 List, and is therefore ahead of the schedule commitment to complete 100% of these assessments by June 2015.

It should be noted that since December 2013, MassDOT has completed an extensive review of assessments completed to date as well as water bodies that were on the original Appendix L-1 List and still remain to be assessed. As part of this review, it was determined that some of the previous data in Table 1 of the December 8, 2013 submittal to EPA was inaccurate. The inaccuracy was due to counting of final TMDL assessments that were not part of the original Appendix L-1 TMDL list. Table 1 has been updated to reflect the current understanding of the completed assessments on the Appendix L-1 List.

Table 1 Assessments for Water Bodies on Appendix L-1

Assessment Type	Previous Submittals (#)	June 2014 Submittal (#)	Total (#)	% of Total Water Bodies
Impaired Water Bodies with TMDLs*				
TMDL Method	17	0	17	
IC Method**	18	1	19	
TMDL and IC Method	11	0	11	
No Discharge	70	6	76	
Pathogen Only	12	21	33	
Nitrogen TMDL and Groundwater	0	13	13	
Removed from 303 (d) list	24	2	26	
Impaired Water Bodies (with TMDLs) Total	152	43	195	93%
Impaired Water Bodies without TMDLs*				
IC Method	107	9	116	
<9% IC	32	0	32	
No Discharge	158	1	159	
Pathogen Only	17	9	26	
Other (Includes Chloride, Pathogen with other Impairments unrelated to Stormwater)	28	11	39	
Nitrogen TMDL and Groundwater	0	3	3	
TMDL Method***	1	0	1	
TMDL and IC Method	3	0	3	
Impaired Water Bodies (without TMDLs) Total	346	33	379	
Impaired + TMDL Total	498	76	574	84%

Table 3A is the list of all Additional Appendix L-1 assessments completed for this submittal.

*TMDL listing as included in Appendix L-1

** The TMDL for these water bodies was for pathogens. 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.

MassDOT has implemented the Impaired Waters Program comprehensively and has strived to be proactive, therefore our submittals continue to include assessments for water bodies that were not listed in Appendix L-1 but have since become 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. Table 2 is 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 2 Assessments for Water Bodies Not Included in Appendix L-1

Assessment Type	Previous Submittals (#)	June 2014 Submittal (#)	Total (#)
TMDL Method	9	0	9
<9% IC	3	1	4
No Discharge	4	6	10
IC Method	6	3	9
Other (pathogen/chloride)	5	3	8
Total	27	13	40

Table 3B is the list of all Additional Appendix L-1 assessments completed for this submittal.

Over the last year, MassDOT has been working to finalize a methodology to assess impaired water bodies with an established nitrogen Total Maximum Daily Load (TMDL) in groundwater-controlled watersheds. MassDOT has now completed this methodology, as modified from Best Management Practice (BMP) 7R of MassDOT’s Storm Water Management Plan (SWMP), and it is included as Attachment 5 of this submittal. For brevity, MassDOT has termed this methodology “MassDOT’s Nitrogen TMDL Method.” This methodology relies on research performed by the United States Geological Survey (USGS) for the Massachusetts Estuaries Program and conservatively assumes that the entire nitrogen load from runoff that infiltrates into the USGS determined groundwatershed contributes to the target water body without a load reduction. The methodology has been applied to numerous N TMDL water bodies on Cape Cod, and these assessments are included in Attachment 6.

Impaired Waters Assessments -- Attachments

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

1. **Final Assessments:** Attachment 1 includes 14 completed assessments for impaired water bodies that required a full assessment.
2. **Other:** Attachment 2 includes assessments of 16 water bodies. This attachment includes the following impaired waters assessments: Chlorides, Pathogens with Chlorides,

Pathogens with Impairments unrelated to Stormwater (mercury), and Impairments that are Unrelated to Stormwater. This attachment also includes water bodies which have been removed from the 303(d) list. These water bodies may no longer be impaired or may have been included in other water bodies to be assessed.

3. **No Discharge from MassDOT Outfalls Assessments:** Attachment 3 includes 13 assessments of water bodies where desktop review or field review of the subwatershed found that MassDOT urban roads do not drain to the receiving water in question and therefore, according to BMP 7U and 7R, no further assessment is necessary. Of these 13, seven are considered No Discharge because the MassDOT roads in the subwatershed do not drain directly to the receiving water in question; 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. In addition, six assessments were completed for water bodies assessed using MassDOT's Nitrogen TMDL Method, and it was determined that all MassDOT property is located outside of the USGS delineated groundwatershed that contributes to the impaired water body assessed.
4. **Pathogen Only Assessments:** Attachment 4 includes 30 assessments where the only impairment is pathogens.
5. **MassDOT's Nitrogen TMDL Method:** Attachment 5 is MassDOT's Application of BMP 7R TMDL Method to Nitrogen in USGS identified Groundwater-Controlled Massachusetts Watersheds.
6. **Groundwater and Nitrogen TMDL Assessments:** Attachment 6 includes 16 assessments for water bodies covered by a Final Nitrogen TMDL that are located within a USGS delineated groundwatershed on Cape Cod and include MassDOT urban area roads.

A summary of the assessments being submitted in Attachments 1 through 4, and 6 are included in Table 3A (Original Appendix L-1 list) and 3B (Additional L-1 list).

BMP Design

More of the Impaired Waters Program is moving in the design and construction of BMPs stages. As illustrated in Table 4, MassDOT has 47 projects in some stage of design and is utilizing all five design contractors to complete the projects. This design activity is a significant increase from just six months ago when 30 projects were under design, and a year ago when 19 projects were under design. Design can take 12-18 months, including identifying a designer, conducting survey, completing design and environmental permitting and advertising the project. Some projects are tied to programmed projects or resurfacing projects while others are stand-alone retrofit projects being solely constructed to meet the Impaired Waters Program commitments and sometimes impaired waters are addressed by a combination of the project types. Tables 4A and 4B at the end of this letter show a summary of the progress on the design of BMPs recommended in previous assessment submittals or in this submittal. MassDOT is working on a schedule for the design completion deadlines which will be based on availability of construction funding.

BMP Construction

As of June 2014, MassDOT has seventeen projects in the construction phase. MassDOT has completed construction of three projects since the December 2013 submittal. MassDOT plans to move retrofit projects currently at the 100% design phase into construction over the next six months. Tables 4A and 4B show a summary of the water bodies with projects in construction or completed. MassDOT has issued almost \$9 million in maintenance contracts to date to construct retrofit project BMPs, with approximately \$2.6 million allocated in the 2013/2014 NPDES permit year. This allocation will come close to allocating all of the \$9 million and therefore, future work will be completed as part of geographically bundled bid projects.

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
Supervisor of Wetlands & Water Resources
Environmental Services Section
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cc: Kathleen Woodward, Esq., EPA Region I
Tracy W. Klay, Esq., Environmental Counsel, MassDOT
Tori Kim, Esq., MA Attorney General's Office

Table 3a Original Appendix L-1 Assessments in June 2014 Submittal

Water Body ID	Water Body Name	Impairment	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	No Discharge	<9% IC	Negligible	Pathogen Only	Site Constraints	Notes
MA21-02	East Branch Housatonic River	Fecal Coliform; PCB in Fish Tissue									Pathogen and Impairments unrelated to stormwater
MA34-04	Connecticut River	Escherichia coli; PCB in Fish Tissue									Pathogen and Impairments unrelated to stormwater
MA62-02	Taunton River	Fecal Coliform [256.0]	Pathogen						X		
MA73062	Willet Pond	Mercury in Fish Tissue [376.0]	Mercury in Fish Tissue								Impairments unrelated to stormwater
MA73-13	Unnamed Tributary (7341595)	Mercury in Fish Tissue [376.0]	Mercury in Fish Tissue								Impairments unrelated to stormwater
MA74-10	Furnace Brook	Oxygen, Dissolved			7.6					X	Utilities/Bridge abutments/ limited ROW
MA82020	Lake Cochituate	(Eurasian Water Milfoil, Myriophyllum spicatum*); Oxygen, Dissolved; PCB in Fish Tissue			2.5						
MA82097	Saxonville Pond	(Non-Native Aquatic Plants*); Aquatic Plants (Macrophytes); Mercury in Fish Tissue			5.8						
MA82112	Waushakum Pond	(Non-Native Aquatic Plants*); Aquatic Plants (Macrophytes); Oxygen, Dissolved; Phosphorus (Total); Turbidity			0.8					X	Limited ROW
MA82125	Lake Cochituate	(Eurasian Water Milfoil, Myriophyllum spicatum*); (Non-Native Aquatic Plants*); Enterococcus; Oxygen, Dissolved; PCB in Fish Tissue			13.8						
MA82127	Lake Cochituate	(Eurasian Water Milfoil, Myriophyllum spicatum*); (Non-Native Aquatic Plants*); Oxygen, Dissolved; PCB in Fish Tissue			6.2						
MA82A-10	River Meadow Brook	(Debris/Floatables/Trash*); (Non-Native Aquatic Plants*); Fecal Coliform									Pathogen and Impairments unrelated to stormwater
MA82A-22	Unnamed Tributary	Aquatic Macroinvertebrate Bioassessments; Nutrient/Eutrophication Biological Indicators			10.9						
MA82A-26	Sudbury River	Aquatic Macroinvertebrate Bioassessments; Mercury in Fish Tissue			19.3						
MA83005	Fosters Pond	(Non-Native Aquatic Plants*); Mercury in Fish Tissue; Oxygen, Dissolved				X					
MA83-15	Unnamed Tributary	Chloride; Fecal Coliform [122.0]	Pathogens								Chloride and Pathogen
MA83-18	Shawsheen River	Fecal Coliform [122.0]; Mercury in Fish Tissue; Oxygen, Dissolved	Pathogens		6.5						
MA84A-01	Merrimack River	Fecal Coliform; Mercury in Fish Tissue									Pathogen and Impairments unrelated to stormwater
MA84A-05	Merrimack River	Enterococcus; PCB in Fish Tissue									Pathogen and Impairments unrelated to stormwater
MA84A-06	Merrimack River	Enterococcus; Fecal Coliform; PCB in Fish Tissue									Pathogen and Impairments unrelated to stormwater
MA84A-08	Powwow River	Escherichia coli							X		
MA84A-09	Little River	(Debris/Floatables/Trash*); (Habitat Assessment (Streams)*); Escherichia coli									Pathogen and Impairments unrelated to stormwater

Water Body ID	Water Body Name	Impairment	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	No Discharge	<9% IC	Negligible	Pathogen Only	Site Constraints	Notes
MA84B-01	Unnamed Tributary	Fecal Coliform							X		
MA92-02	Ipswich River	Fecal Coliform							X		
MA92-12	Unnamed Tributary	Fecal Coliform							X		
MA93-42	North River	Ammonia (Un-ionized); Dissolved oxygen saturation; Fecal Coliform			3.2						
MA94-05	North River	Fecal Coliform; Mercury in Fish Tissue									
MA95-07	Sippican River	Fecal Coliform [251.1]	Pathogens						X		
MA95-13	Buttonwood Brook	Fecal Coliform [251.1]	Pathogens						X		
MA95-14	Cape Cod Canal	Fecal Coliform [251.1]	Pathogens						X		
MA95-15	Phinneys Harbor	Fecal Coliform [251.1]; Nitrogen (Total) [247.0]	Pathogens and Nitrogen								Groundwater and Nitrogen
MA95-16	Pocasset River	Fecal Coliform [251.1]	Pathogens			X					
MA95-18	Red Brook Harbor	Fecal Coliform [251.1]	Pathogens						X		
MA95-20	Wild Harbor	Fecal Coliform [251.1]	Pathogens						X		
MA95-24	Little Sippewisset Marsh	Fecal Coliform [251.1]	Pathogens			X					
MA95-25	Quissett Harbor	Fecal Coliform [251.1]	Pathogens						X		
MA95-40	East Branch Westport River	Fecal Coliform [251.1]	Pathogens						X		
MA95-46	Harbor Head	Estuarine Bioassessments [243.0]; Fecal Coliform [251.1]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA95-47	Back River	Fecal Coliform [251.1]	Pathogens			X					
MA95-48	Eel Pond	Fecal Coliform [251.1]	Pathogens			X					
MA95-49	Broad Marsh River	Fecal Coliform [251.1]	Pathogens						X		
MA95-50	Wankinco River	Fecal Coliform [251.1]	Pathogens						X		
MA95-51	Crooked River	Fecal Coliform [251.1]	Pathogens						X		
MA95-52	Cedar Island Creek	Fecal Coliform [251.1]	Pathogens						X		
MA95-58	Bread and Cheese Brook	Fecal Coliform [251.1]	Pathogens						X		
MA95-60	Mattapoissett River	Fecal Coliform [251.1]	Pathogens						X		
MA96-02	Bumps River	Fecal Coliform [252.0]	Pathogens			X					
MA96-04	Centerville River	Estuarine Bioassessments [248.0]; Fecal Coliform [252.0]; Nitrogen (Total) [248.0]	Pathogens and Nitrogen			X					
MA96-05	Hyannis Harbor	Fecal Coliform [252.0]	Pathogens						X		
MA96-06	Maraspin Creek	Fecal Coliform [252.0]	Pathogens						X		
MA96-07	Prince Cove	Estuarine Bioassessments [242.0]; Fecal Coliform [309.0]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-08	Shoestring Bay	Estuarine Bioassessments [217.0]; Fecal Coliform [252.0]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-09	Quivett Creek	Fecal Coliform [252.0]	Pathogens						X		
MA96-13	Sesuit Creek	Fecal Coliform [252.0]	Pathogens						X		
MA96-16	Rock Harbor Creek	Fecal Coliform [252.0]	Pathogens						X		
MA96-19	Little Harbor	Fecal Coliform [252.0]	Pathogens						X		
MA96-22	Herring River	Fecal Coliform [252.0]	Pathogens						X		

Water Body ID	Water Body Name	Impairment	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	No Discharge	<9% IC	Negligible	Pathogen Only	Site Constraints	Notes
MA96-23	Saquatucket Harbor	Fecal Coliform [252.0]	Pathogens						X		
MA96-24	Mashpee River	Estuarine Bioassessments [217.0]; Fecal Coliform [252.0]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-26	Little Namskaket Creek	Fecal Coliform [252.0]	Pathogens						X		
MA96-30	Scorton Creek	Fecal Coliform [252.0]	Pathogens						X		
MA96-34	Wellfleet Harbor	N/A									Removed from 303(d) list
MA96-38	Parkers River	Fecal Coliform [252.0]	Pathogens						X		
MA96-41	Mill Creek	Fecal Coliform [252.0]	Pathogens						X		
MA96-42	Taylors Pond	Fecal Coliform [252.0]; Nitrogen (Total) [206.1]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-43	Harding Beach Pond	Fecal Coliform [252.0]; Nitrogen (Total) [206.1]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-44	Bucks Creek	Enterococcus [252.0]; Fecal Coliform [252.0]; Nitrogen (Total) [206.1]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-45	Oyster Pond	Estuarine Bioassessments [206.1]; Fecal Coliform [252.0]; Nitrogen (Total) [206.1]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-46	Oyster Pond River	Estuarine Bioassessments [206.1]; Fecal Coliform [252.0]; Nitrogen (Total) [206.1]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-53	Perch Pond	Nitrogen (Total) [181.0]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-54	Great Pond	Estuarine Bioassessments [181.0]; Nitrogen (Total) [181.0]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-55	Green Pond	Estuarine Bioassessments [181.0]; Fecal Coliform [252.0]; Nitrogen (Total) [181.0]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-56	Little Pond	Estuarine Bioassessments [246.0]; Fecal Coliform [252.5]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-57	Bournes Pond	Estuarine Bioassessments [181.0]; Fecal Coliform [252.0]; Nitrogen (Total) [181.0]	Pathogens and Nitrogen					X			Groundwater and Nitrogen
MA96-69	Coonamessett River	N/A									Removed from 303(d) list
MA96-70	Areys Pond	Estuarine Bioassessments [244.0]; Nitrogen (Total) [244.0]	Nitrogen					X			Groundwater and Nitrogen

Table 3b Assessments not included on the Original Appendix L-1 in June 2014 Submittal

Water Body ID	Water Body Name	Impairment [□]	TMDL Impairment	Load Reduction Target TMDL (lb/yr)	Load Reduction Target IC (ac)	No Discharge	<9% IC	Negligible	Pathogen Only	Site Constraints	Notes
MA34005	Arcadia Lake	(Non-Native Aquatic Plants*); Nutrient/Eutrophication Biological Indicators				X					
MA34051	Metacomet Lake	(Non-Native Aquatic Plants*); Oxygen, Dissolved				X					
MA36003	Alden Pond	Nutrient/Eutrophication Biological Indicators					X	X		X	Steep Slopes/Limited ROW
MA42005	Buffumville Lake	(Non-Native Aquatic Plants*); Excess Algal Growth [110.0]; Mercury in Fish Tissue [376.0]	Phosphorous			X					
MA42014	Dresser Hill Pond	Turbidity [110.0]	Phosphorous			X					
MA42043	Pierpoint Meadow Pond	(Non-Native Aquatic Plants*); Aquatic Plants (Macrophytes) [110.0]	Phosphorous			X					
MA51-31	Singletary Brook	(Non-Native Aquatic Plants*); Aquatic Plants (Macrophytes)			1.8						
MA81053	Grove Pond	(Non-Native Aquatic Plants*); Aquatic Plants (Macrophytes); Arsenic; DEHP (Di-sec-octyl phthalate); Mercury in Fish Tissue; Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems); Sediment Bioassays -- Chronic Toxicity Freshwater			3.0						
MA81103	Plow Shop Pond	(Non-Native Aquatic Plants*); Aquatic Plants (Macrophytes); Arsenic; Chromium (total); Mercury in Fish Tissue; Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems); Sediment Bioassays -- Chronic Toxicity Freshwater				X					
MA81-17	Nonacoicus Brook	Oxygen, Dissolved			0.4					X	Limited ROW
MA83-20	Unnamed Tributary	Chloride									Chloride
MA84A-40	Fish Brook	Chloride and Pathogens									Chloride and Pathogen
MA92-26	Unnamed Tributary (Martin's Brook)	Chloride									Chloride

Table 4A Status of Assessments for Design and Construction (Sorted By Water Body ID)

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Progress Dec. 8 2013	Progress June 8, 2014	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
6/8/2012	MA32-05	Westfield River	Design	Design	25/75%	2014	CEI
12/8/2013	MA34-05	Connecticut River (A, B)	Pre-design	Design	Pre-25/75%	--	AECOM
12/6/2013	MA34-05	Connecticut River (Subbasin C)	Design	Construction	Complete	Complete	Tetratech
12/6/2013	MA34-05	Connecticut River (Subbasin D)	Design	Construction	Complete	Complete	Tetratech
6/8/2012	MA34-19	Stony Brook	Design	Design	100%	Complete	CEI
6/8/2012	MA35026	Greenwood Pond	Construction	Construction	Complete	Complete	CEI
12/8/2013	MA35056	Parker Pond	N/A	Design	Pre-25/75%	--	BSC
12/8/2013	MA35101	Whitney Pond	N/A	Design	Pre-25/75%	--	BSC
3/8/2011	MA36-16	Quaboag River	Construction	Construction	Complete	Complete	VHB
6/8/2013	MA41-02	Quinebaug River***	Design	Design	25/75%	2014	CEI
6/8/2012	MA41-05	Cady Brook	Pre-Design	Design	Pre-25/75%	--	BSC
6/8/2012	MA42-03	French River	Design	Design	25/75%	2014	CEI
3/8/2011	MA42034	Lowes Pond	Complete	Complete	Complete	Complete	Tetratech
6/8/2012	MA42058*	Texas Pond	Design	Design	25/75%	2014	CEI
6/8/2012	MA42059*	Thayers Pond	Design	Design	25/75%	2014	CEI
12/8/2011	MA51-01	Kettle Brook**	Construction	Construction	Complete	Complete	VHB
12/8/2010	MA51012	Burncoat Park Pond	Complete	Complete	Complete	Complete	Tetratech
6/8/2013	MA51-02	Middle River	Pre-design	Proposal	Pre-25/75%	--	Tetratech
6/8/2103	MA51020	City Farm Pond (51020)	N/A	N/A	--		CEI
12/8/2010	MA51-03	Blackstone River	Complete	Complete	Complete	Complete	VHB
12/8/2012	MA51039	Dorothy Pond	N/A	Pre-design	--	2015	VHB
6/8/2013	MA51-05	Blackstone River	Design	Design	25/75%	2014	Tetratech
6/8/2012	MA51073	Indian Lake**	Pre-design	Design	Pre-25/75%	--	VHB

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Progress Dec. 8 2013	Progress June 8, 2014	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
6/8/2012	MA51-08	Unnamed Tributary** - Resurfacing	Pre-design	Design	Pre-25/75%	2014	VHB
6/8/2012	MA51-08	Unnamed Tributary** - Retrofit	Pre-design	Pre-Design	Pre-25/75%	2015	VHB
12/8/2011	MA51087	Leesville Pond**	Construction	Construction	Complete	Complete	VHB
6/8/2013	MA51093	Marble Pond		Pre-Proposal	--		BSC
6/8/2013	MA51-10 (includes MA51-35 and MA51-36)	Mill River	Pre-Design	Pre-design	--	--	BSC/CEI
6/8/2013	MA51125	Lake Quinsigamond	Design	Design	25/75%	--	Tetratech
6/8/2013	MA51135	Lake Ripple	Pre-Design	Design	25/75%	2014	CEI
6/8/2013	MA51-14	Mumford River	Design	Design	Pre-25/75%	--	BSC
6/8/2013	MA51-15	Tatnuck Brook	Design	Design	25/75%	2014	BSC
12/8/2011	MA51-16	Dark Brook (I-290)	Construction	Construction	Complete	Complete	VHB
12/8/2011	MA51-16	Dark Brook (I-190)	Construction	Construction	Complete	Complete	VHB
6/8/2013	MA51-17	Poor Farm Brook	Pre-Design	Design	Pre-25/75%	--	BSC
6/8/2013	MA51188	Flint Pond	Design	Design	25/75%	--	Tetratech
6/8/2013	MA51196	Shirley Street Pond	Design	Design	25/75%	--	Tetratech
12/7/2012	MA53001	Burrs Pond (53001)	Pre-design	Design	25/75%	2015	CEI
12/7/2012	MA53-01	Runnins River	Pre-design	Design	25/75%	2015	CEI
12/8/2011	MA61-02	Lee River	Design	Design	100%	Complete	Tetratech
12/8/2011	MA61-04	Cole River	Construction	Construction	Complete	Complete	MassDOT
6/8/2013	MA61-06	Mount Hope Bay	Pre-design	Design	Pre-25/75%	--	VHB
6/8/2013	MA62-04	Taunton River	Pre-Design	Design	Pre-25/75%	--	VHB
12/7/2012	MA62-06	Salisbury Plain River	Pre-design	Design	25/75%	2014	FST

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Progress Dec. 8 2013	Progress June 8, 2014	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
6/8/2012	MA62134	Norton Reservoir	Design	Construction	100%	Complete	MassDOT
6/8/2012	MA62-14	Robinson Brook	Design	Construction	100%	Complete	MassDOT
6/8/2012	MA62-39	Rumford River	Design	Design	25/75%	--	Tetrattech
6/8/2012	MA62-47	Wading River ^{oo}	Construction	Complete	Complete	Complete	VHB
12/8/2011	MA71-01	Aberjona River	Complete	Complete	Complete	Complete	Tetrattech
6/8/2012	MA71-02	Mystic River	Design	Design	25/75%	2014	Tetrattech
12/8/2012	MA71-04	Alewife Brook	Design	Design	100%	Complete	VHB
12/8/2011	MA71040	Spy Pond	Construction	Complete	Complete	Complete	VHB
12/8/2013	MA71-05	Malden River	N/A	Pre-Design	--	--	BSC
6/8/2012	MA72-07	Charles River - Tolls Project	Design	Design	100%	Complete	VHB
6/8/2012	MA72-07	Charles River - I-95 North Project	Pre-Design	Design	100%	Complete	VHB
12/8/2011	MA72-14	Mine Brook - Resurfacing Project FY15	Pre-design (survey)	Design	Pre-25/75%	2015	Green/ VHB
12/8/2011	MA72-14	Mine Brook - Resurfacing Project 607179	Construction	Construction	Complete	Complete	VHB
6/8/2012	MA72-25	Rosemary Brook	Design	Construction	Complete	Complete	BSC
6/8/2013	MA72-28	Beaver Brook	Pre-design	Pre-design (survey)	Pre-25/75%	--	VHB
6/8/2012	MA72-29	Cheese Cake Brook	Design	Design	100%	Complete	VHB
6/8/2012	MA72-36	Charles River - Tolls Project	Design	Design	100%	Complete	VHB
6/8/2012	MA73-01	Neponset River	Pre-design	Pre-design (survey)	Pre-25/75%	--	VHB
6/8/2012	MA73-02	Neponset River	Pre-design	Pre-design (survey)	Pre-25/75%	--	VHB
12/8/2013	MA73-04	Neponset River	Design	Design	25/75%	2014	AECOM
6/8/2013	MA73-26	Unquity Brook	Pre-Design	Pre-design	--	--	BSC/CEI
12/8/2013	MA74-02	Weir River	N/A	Pre-design	--	--	FST
6/8/2013	MA74-04	Mill River	Design	Design	25/75%	2014	AECOM
12/8/2011	MA74-08	Monatiquot River	Design	Construction	Complete	Complete	VHB
6/8/2013	MA74-09	Town Brook	Design	Design	25/75%	2014	AECOM

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Progress Dec. 8 2013	Progress June 8, 2014	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
12/8/2013	MA74-16	Accord Brook	N/A	Pre-design	--	--	FST
12/8/2013	MA81-02	North Nashua River	N/A	Proposal	Pre-25/75%	--	Tetratech
12/8/2011	MA81-04	North Nashua River	Complete	Complete	Complete	Complete	VHB
12/8/2013	MA81-05	Nashua River	N/A	Design	Pre-25/75%	--	Tetratech
6/8/2014	MA81053	Grove Pond	N/A	Proposal	Pre-25/75%	--	Tetratech
12/8/2011	MA82A-08	Concord River	Pre-design	Design	Pre-25/75%	--	VHB
6/8/2013	MA82B-02	Assabet River	Pre-design	Design	Pre-25/75%	--	VHB
12/8/2011	MA82B-04	Assabet River	N/A	Design	Pre-25/75%	--	Tetratech
12/8/2013	MA82B-07	Assabet River	N/A	Pre-Proposal	--	--	
12/8/2013	MA82B-14	Nashoba River	Complete	Complete	Complete	Complete	Tetratech
6/8/2013	MA83-19	Shawsheen River	Design	Design	25/75%	2014	AECOM
6/8/2011	MA84038	Mill Pond**	Complete	Complete	Complete	Complete	VHB
6/8/2013	MA84046	Newfield Pond	Design	Construction	Complete	Complete	BSC
12/8/2013	MA84A-03	Merrimack River	N/A	Design	Pre-25/75%	--	AECOM
12/8/2013	MA84A-04	Merrimack River	N/A	Design	Pre-25/75%	--	AECOM
6/8/2013	MA84A-10	Spicket River	Pre-design	Design	25/75%	2014	FST
6/8/2013	MA84A-17	Black Brook	Pre-design	Design	25/75%	2014	FST
6/8/2013	MA84A-18	Bare Meadow Brook	Pre-design	Design	25/75%	2014	FST
6/8/2011	MA84B-02	Beaver Brook**	Complete	Complete	Complete	Complete	VHB
12/8/2012	MA92-03	Miles River	Construction	Complete	Complete	Complete	AECOM
12/7/2012	MA92-06	Ipswich River	Pre-design	Pre-design	--	--	AECOM
12/8/2011	MA93032	Hawkes Pond	Construction	Construction	Complete	Complete	Tetratech
6/7/2013	MA93-07	Bass River	N/A	Design	Pre-25/75%	--	Tetratech
12/8/2011	MA93-34	Saugus River	Construction	Construction	Complete	Complete	Tetra Tech/MassDOT
12/8/2011	MA93-35	Saugus River	Construction	Construction	Complete	Complete	Tetra Tech/MassDOT
6/8/2013	MA93-37	Beaver Brook	Pre-design (survey)	Pre-design (survey)	--	--	VHB
6/8/2014	MA93-42	North River	N/A	Proposal	Pre-25/75%	--	Tetratech

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Progress Dec. 8 2013	Progress June 8, 2014	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
6/8/2013	MA93-51	Unnamed Tributary to Town Line Brook	Pre-Design	Pre-design	--	--	BSC/CEI
6/8/2011	MA95113	Noquochoke Lake	Construction	Construction	Complete	Complete	Tetrattech
6/8/2011	MA95170	Noquochoke Lake	Construction	Construction	Complete	Complete	Tetrattech
6/8/2011	MA95171	Noquochoke Lake	Construction	Construction	Complete	Complete	Tetrattech
6/8/2013	MA95-42	New Bedford Inner Harbor	Complete	Complete	Complete	Complete	BSC

*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.

Table 4B Status of Assessments for Design and Construction (Sorted By % Design Complete)

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Progress Dec. 8, 2013	Progress June 8, 2014	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
12/6/2013	MA34-05	Connecticut River (Subbasin C)	Design	Construction	Complete	Complete	Tetratech
12/6/2013	MA34-05	Connecticut River (Subbasin D)	Design	Construction	Complete	Complete	Tetratech
6/8/2012	MA35026	Greenwood Pond	Construction	Construction	Complete	Complete	CEI
3/8/2011	MA36-16	Quaboag River	Construction	Construction	Complete	Complete	VHB
3/8/2011	MA42034	Lowes Pond	Complete	Complete	Complete	Complete	Tetratech
12/8/2011	MA51-01	Kettle Brook**	Construction	Construction	Complete	Complete	VHB
12/8/2010	MA51012	Burncoat Park Pond	Complete	Complete	Complete	Complete	Tetratech
12/8/2010	MA51-03	Blackstone River	Complete	Complete	Complete	Complete	VHB
12/8/2011	MA51087	Leesville Pond**	Construction	Construction	Complete	Complete	VHB
12/8/2011	MA51-16	Dark Brook (I-290)	Construction	Construction	Complete	Complete	VHB
12/8/2011	MA51-16	Dark Brook (I-190)	Construction	Construction	Complete	Complete	VHB
12/8/2011	MA61-04	Cole River	Construction	Construction	Complete	Complete	MassDOT
6/8/2012	MA62-47	Wading River ^{oo}	Construction	Complete	Complete	Complete	VHB
12/8/2011	MA71-01	Aberjona River	Complete	Complete	Complete	Complete	Tetratech
12/8/2011	MA71040	Spy Pond	Construction	Complete	Complete	Complete	VHB
12/8/2011	MA72-14	Mine Brook - Resurfacing Project 607179	Construction	Construction	Complete	Complete	VHB
6/8/2012	MA72-25	Rosemary Brook	Design	Construction	Complete	Complete	BSC
12/8/2011	MA74-08	Monatiquot River	Design	Construction	Complete	Complete	VHB
12/8/2011	MA81-04	North Nashua River	Complete	Complete	Complete	Complete	VHB
12/8/2013	MA82B-14	Nashoba River	Complete	Complete	Complete	Complete	Tetratech
6/8/2011	MA84038	Mill Pond**	Complete	Complete	Complete	Complete	VHB
6/8/2013	MA84046	Newfield Pond	Design	Construction	Complete	Complete	BSC
6/8/2011	MA84B-02	Beaver Brook**	Complete	Complete	Complete	Complete	VHB

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Progress Dec. 8, 2013	Progress June 8, 2014	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
12/8/2012	MA92-03	Miles River	Construction	Complete	Complete	Complete	AECOM
12/8/2011	MA93032	Hawkes Pond	Construction	Construction	Complete	Complete	Tetratech
12/8/2011	MA93-34	Saugus River	Construction	Construction	Complete	Complete	Tetra Tech/MassDOT
12/8/2011	MA93-35	Saugus River	Construction	Construction	Complete	Complete	Tetra Tech/MassDOT
6/8/2011	MA95113	Noquochoke Lake	Construction	Construction	Complete	Complete	Tetratech
6/8/2011	MA95170	Noquochoke Lake	Construction	Construction	Complete	Complete	Tetratech
6/8/2011	MA95171	Noquochoke Lake	Construction	Construction	Complete	Complete	Tetratech
6/8/2013	MA95-42	New Bedford Inner Harbor	Complete	Complete	Complete	Complete	BSC
6/8/2012	MA34-19	Stony Brook	Design	Design	100%	Complete	CEI
12/8/2011	MA61-02	Lee River	Design	Design	100%	Complete	Tetratech
6/8/2012	MA62134	Norton Reservoir	Design	Construction	100%	Complete	MassDOT
6/8/2012	MA62-14	Robinson Brook	Design	Construction	100%	Complete	MassDOT
12/8/2012	MA71-04	Alewife Brook	Design	Design	100%	Complete	VHB
6/8/2012	MA72-07	Charles River - Tolls Project	Design	Design	100%	Complete	VHB
6/8/2012	MA72-07	Charles River - I-95 North Project	Pre-Design	Design	100%	Complete	VHB
6/8/2012	MA72-29	Cheese Cake Brook	Design	Design	100%	Complete	VHB
6/8/2012	MA72-36	Charles River - Tolls Project	Design	Design	100%	Complete	VHB
12/8/2012	MA95-42	Acushnet River/I-195	Pre-Design	Design	100%	Complete	BSC
6/8/2012	MA32-05	Westfield River	Design	Design	25/75%	2014	CEI
6/8/2013	MA41-02	Quinebaug River***	Design	Design	25/75%	2014	CEI
6/8/2012	MA42-03	French River	Design	Design	25/75%	2014	CEI
6/8/2012	MA42058*	Texas Pond	Design	Design	25/75%	2014	CEI
6/8/2012	MA42059*	Thayers Pond	Design	Design	25/75%	2014	CEI
6/8/2013	MA51-05	Blackstone River	Design	Design	25/75%	2014	Tetratech
6/8/2013	MA51125	Lake Quinsigamond	Design	Design	25/75%	--	Tetratech

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Progress Dec. 8, 2013	Progress June 8, 2014	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
6/8/2013	MA51135	Lake Ripple	Pre-Design	Design	25/75%	2014	CEI
6/8/2013	MA51-15	Tatnuck Brook	Design	Design	25/75%	2014	BSC
6/8/2013	MA51188	Flint Pond	Design	Design	25/75%	--	Tetrattech
6/8/2013	MA51196	Shirley Street Pond	Design	Design	25/75%	--	Tetrattech
12/7/2012	MA53001	Burrs Pond (53001)	Pre-design	Design	25/75%	2015	CEI
12/7/2012	MA53-01	Runnins River	Pre-design	Design	25/75%	2015	CEI
12/7/2012	MA62-06	Salisbury Plain River	Pre-design	Design	25/75%	2014	FST
6/8/2012	MA62-39	Rumford River	Design	Design	25/75%	--	Tetrattech
6/8/2012	MA71-02	Mystic River	Design	Design	25/75%	2014	Tetrattech
12/8/2013	MA73-04	Neponset River	Design	Design	25/75%	2014	AECOM
6/8/2013	MA74-04	Mill River	Design	Design	25/75%	2014	AECOM
6/8/2013	MA74-09	Town Brook	Design	Design	25/75%	2014	AECOM
6/8/2013	MA83-19	Shawsheen River	Design	Design	25/75%	2014	AECOM
6/8/2013	MA84A-10	Spicket River	Pre-design	Design	25/75%	2014	FST
6/8/2013	MA84A-17	Black Brook	Pre-design	Design	25/75%	2014	FST
6/8/2013	MA84A-18	Bare Meadow Brook	Pre-design	Design	25/75%	2014	FST
12/8/2013	MA34-05	Connecticut River (A, B)	Pre-design	Design	Pre-25/75%	--	AECOM
12/8/2013	MA35056	Parker Pond	N/A	Design	Pre-25/75%	--	BSC
12/8/2013	MA35101	Whitney Pond	N/A	Design	Pre-25/75%	--	BSC
6/8/2012	MA41-05	Cady Brook	Pre-Design	Design	Pre-25/75%	--	BSC
6/8/2013	MA51-02	Middle River	Pre-design	Proposal	Pre-25/75%	--	Tetrattech
6/8/2012	MA51073	Indian Lake**	Pre-design	Design	Pre-25/75%	--	VHB
6/8/2012	MA51-08	Unnamed Tributary** - Resurfacing	Pre-design	Design	Pre-25/75%	2014	VHB
6/8/2012	MA51-08	Unnamed Tributary** - Retrofit	Pre-design	Pre-Design	Pre-25/75%	2015	VHB
6/8/2013	MA51-14	Mumford River	Design	Design	Pre-25/75%	--	BSC

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Progress Dec. 8, 2013	Progress June 8, 2014	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
6/8/2013	MA51-17	Poor Farm Brook	Pre-Design	Design	Pre-25/75%	--	BSC
6/8/2013	MA61-06	Mount Hope Bay	Pre-design	Design	Pre-25/75%	--	VHB
6/8/2013	MA62-04	Taunton River	Pre-Design	Design	Pre-25/75%	--	VHB
12/8/2011	MA72-14	Mine Brook - Resurfacing Project FY15	Pre-design (survey)	Design	Pre-25/75%	2015	Green/ VHB
6/8/2013	MA72-28	Beaver Brook	Pre-design	Pre-design (survey)	Pre-25/75%	--	VHB
6/8/2012	MA73-01	Neponset River	Pre-design	Pre-design (survey)	Pre-25/75%	--	VHB
6/8/2012	MA73-02	Neponset River	Pre-design	Pre-design (survey)	Pre-25/75%	--	VHB
12/8/2013	MA81-02	North Nashua River	N/A	Proposal	Pre-25/75%	--	Tetratech
12/8/2013	MA81-05	Nashua River	N/A	Design	Pre-25/75%	--	Tetratech
6/8/2014	MA81053	Grove Pond	N/A	Proposal	Pre-25/75%	--	Tetratech
12/8/2011	MA82A-08	Concord River	Pre-design	Design	Pre-25/75%	--	VHB
6/8/2013	MA82B-02	Assabet River	Pre-design	Design	Pre-25/75%	--	VHB
12/8/2011	MA82B-04	Assabet River	N/A	Design	Pre-25/75%	--	Tetratech
12/8/2013	MA84A-03	Merrimack River	N/A	Design	Pre-25/75%	--	AECOM
12/8/2013	MA84A-04	Merrimack River	N/A	Design	Pre-25/75%	--	AECOM
6/7/2013	MA93-07	Bass River	N/A	Design	Pre-25/75%	--	Tetratech
6/8/2014	MA93-42	North River	N/A	Proposal	Pre-25/75%	--	Tetratech
6/8/2103	MA51020	City Farm Pond (51020)	N/A	N/A	--		CEI
12/8/2012	MA51039	Dorothy Pond	N/A	Pre-design	--	2015	VHB
6/8/2013	MA51093	Marble Pond		Pre-Proposal	--		BSC
6/8/2013	MA51-10 (includes MA51-35 and MA51-36)	Mill River	Pre-Design	Pre-design	--	--	BSC/CEI
12/8/2013	MA71-05	Malden River	N/A	Pre-Design	--	--	BSC
6/8/2013	MA73-26	Unquity Brook	Pre-Design	Pre-design	--	--	BSC/CEI
12/8/2013	MA74-02	Weir River	N/A	Pre-design	--	--	FST
12/8/2013	MA74-16	Accord Brook	N/A	Pre-design	--	--	FST

Semi- Annual Submittal Date	Water Body ID	Water Body Name	Progress Dec. 8, 2013	Progress June 8, 2014	% Design Complete	Anticipated Date of 100% Design Completion	Design Consultant
12/8/2013	MA82B-07	Assabet River	N/A	Pre-Proposal	--	--	
12/7/2012	MA92-06	Ipswich River	Pre-design	Pre-design	--	--	AECOM
6/8/2013	MA93-37	Beaver Brook	Pre-design (survey)	Pre-design (survey)	--	--	VHB

*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.

List of Attachments

Attachment 1 Impaired Waters Assessments Final Reports (IC/TMDL)

Attachment 2 Other

Attachment 3 No Discharges from MassDOT Outfalls Assessments

Attachment 4 Pathogen Only Assessments

Attachment 5 MassDOT's Nitrogen TMDL Method

Attachment 6 Groundwater and Nitrogen TMDL Assessments