Attachment 8:

Resubmitted Assessments

Attachment 8 includes 2 assessments for water bodies that were further reviewed during the BMP design and MassDOT decided that the original assessment needed to be updated and resubmitted; these assessments are not included in Appendix 1, Table 1A.

List of Impaired Water Bodies

MA62-06	Salisbury Plain River
MA62-47	Wading River

Impaired Waters Assessment for Salisbury Plain River (MA62-06)

Summary

Impaired Water[1]	Impairments:	Stormwater:	*Fecal coliform, Dissolved oxygen Aquatic macroinvertebrate bioassessments, Excess algal growth,Taste and odor, Total phosphorus, Turbidity*
		Non-Stormwater:[2]	*Debris/floatables/trash*
	Category:	*5 (*Waters *requiring a TMDL)*	
	Final TMDLs:	Final Pathogen TMDL for the Taunton River Watershed [3]	
	WQ Assessment:	*Taunton River Watershed 2001 Water Quality Assessment Report*[4]	
Location	Towns:	*West Bridgewater & Brockton, MA*	
	MassDOT Roads:	*Route 28*	
Assessment Method(s)	7R (TMDL Method) ☐	7U (Non-TMDL Method**)** ☒	No Discharge ☒

Site Description

The Salisbury Plain River (MA62-06) is 2.26 miles long and is located in the Taunton River watershed in West Bridgewater and Brockton, MA. The segment is defined as the reach of river from the

[1] MassDEP, March 2013. Massachusetts Year 2012 Integrated List of Waters – Final Listing of the Condition of Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act. Massachusetts. Available at: http://www.mass.gov/eea/docs/dep/water/resources/07v5/12list2.pdf

[2] MassDOT, December 2012. Impaired Waters Assessment for Impaired Waters with Impairments Unrelated to Stormwater. Available at: http://www.massdot.state.ma.us/Portals/8/docs/environmental/impairedWaters/Year3/Year3_ImpairedWatersAssessment_1.pdf#page=308

[3] MassDEP. 2011. Final Pathogen Total Maximum Daily Loads for the Taunton River Watershed. Available at: http://www.mass.gov/eea/docs/dep/water/resources/n-thru-y/taunton1.pdf

[4] MassDEP, 2001. Taunton River Watershed 2001 Water Quality Assessment Report. Available at: http://www.mass.gov/eea/docs/dep/water/resources/3baapp/62wqar1.pdf

Brockton Advanced Water Reclamation Facility (AWRF) to the confluence with Beaver Brook (MA62-09) forming the Matfield River (MA62-33) in East Bridgewater. The total and subwatershed to Salisbury Plain River are shown on Figures 1A and 1B, respectively. The subwatershed is densely developed with residential properties throughout and commercial/industrial development adjacent to Route 28. The portion of Route 28 from a highpoint south of the Brockton/West Bridgewater town line to a highpoint near Friendship Drive denote the MassDOT-owned property contributing stormwater runoff to an unnamed brook which flows to the Salisbury Plain River, as shown in Figure 1B.

MassDEP's *Taunton River Watershed 2001 Quality Assessment Report* for this receiving water identified the Primary and Seconday Contact, Recreational Use, and Aesthetic uses of the Salisbury Plain River as "impaired" due to elevated bacteria counts and objectionable conditions (i.e., odors, turbidity, filamentous green algae, and trash and debris).[4] The report states that the degradations likely result from the Brockton Advanced Water Reclamation Facility and suspected sources also include discharges from municipal separate storm sewer systems.

This assessment has been completed based on the *Massachusetts Year 2012 Integrated List of Waters – Final Listing of the Condition of Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act*.[1] MassDEP has released a proposed *Massachusetts Year 2014 Integrated List of Waters,* which has been reviewed for any proposed changes to the condition of the water bodies.[5] The condition of the Salisbury Plain River is not proposed to change.

After review, it was determined that the MassDOT property does not directly discharge to the Salisbury Plain River. This was determined based on a review of MassDOT drainage plans, aerial imagery, topography data, and MassDOT's outfall GIS database, as well as a site visit on October 21, 2013. During the site visit, one outfall location along Route 28 was identified. This outfall, a 30-inch reinforced concrete outfall pipe, conveys flow from a pair of catch basins and discharges to an unnamed brook, which then flows through a pair of 36-inch by 76-inch corrugated metal culverts under Route 28. Because stormwater travels in the unnamed brook approximately 0.4 miles to the Salisbury Plain River, stormwater from Route 28 was determined to be an indirect discharge. The distance from the outfall location to the Salisbury Plain River was determined to be significant, and provides an area where infiltration and/or treatment are likely to occur.

As defined in MassDOT's assessment methodology,[6] since this portion of MassDOT's urban area property does not directly contribute stormwater runoff to the Salisbury Plain River, further assessment of this water body is not warranted under the Impaired Waters Program. MassDOT will continue to implement the measures outlined in its Stormwater Management Plan (SWMP) statewide to minimize the impacts of stormwater from its property.

This Salisbury Plain River segment was submitted to U.S. EPA Region 1 on December 7, 2012 as part of MassDOT's Impaired Waters Program Semi-Annual Submittal. At that time, this segment was evaluated as having direct discharges from MassDOT property under MassDOT's Impervious Cover

[5] MassDEP, June 2014. Massachusetts Year 2014 Integrated List of Waters – Proposed Listing of the Condition of Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act. Massachusetts. Available at: http://www.mass.gov/eea/docs/dep/water/resources/07v5/14iwlistp.pdf

[6] MassDOT, 6 April, 2011. Description of MassDOT's Application of Impervious Cover Method in BMP 7U (MassDOT Application of IC Method). http://www.massdot.state.ma.us/Portals/8/docs/environmental/npdes/IC_MethodApplication2011Apr6.pdf

Method BMP-7U[7]. Based on additional review, it was determined that MassDOT property does not directly discharge to the Salisbury Plain River.

[7] MassDOT, April 2010. BMP 7U: Water Quality Impaired Waters Assessment and Mitigation Plan. Available at: http://www.massdot.state.ma.us/Portals/8/docs/environmental/npdes/BMP_7U_ImpairedWaterbodiesAssessment.pdf

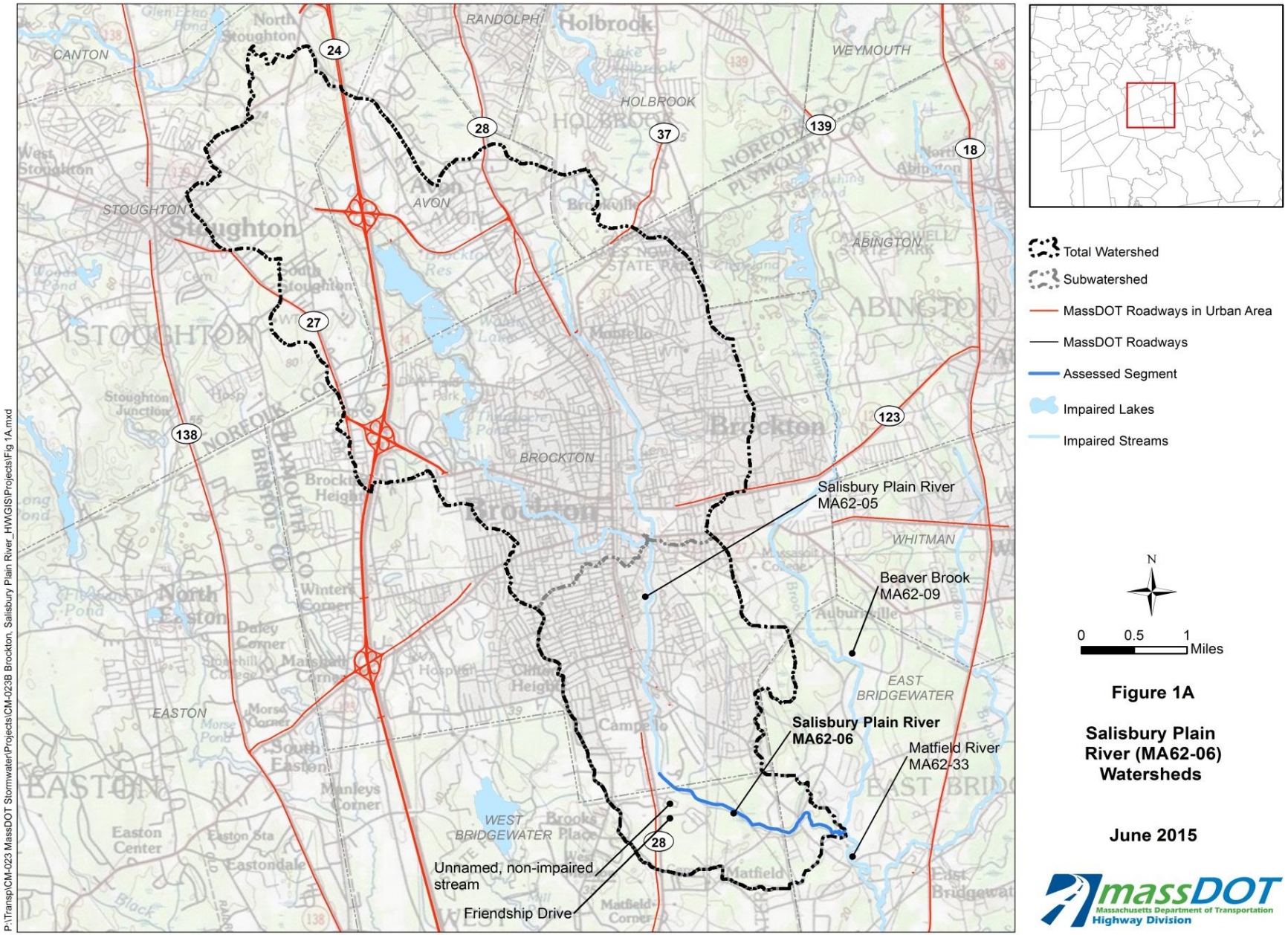

Figure 1A

Salisbury Plain River (MA62-06) Watersheds

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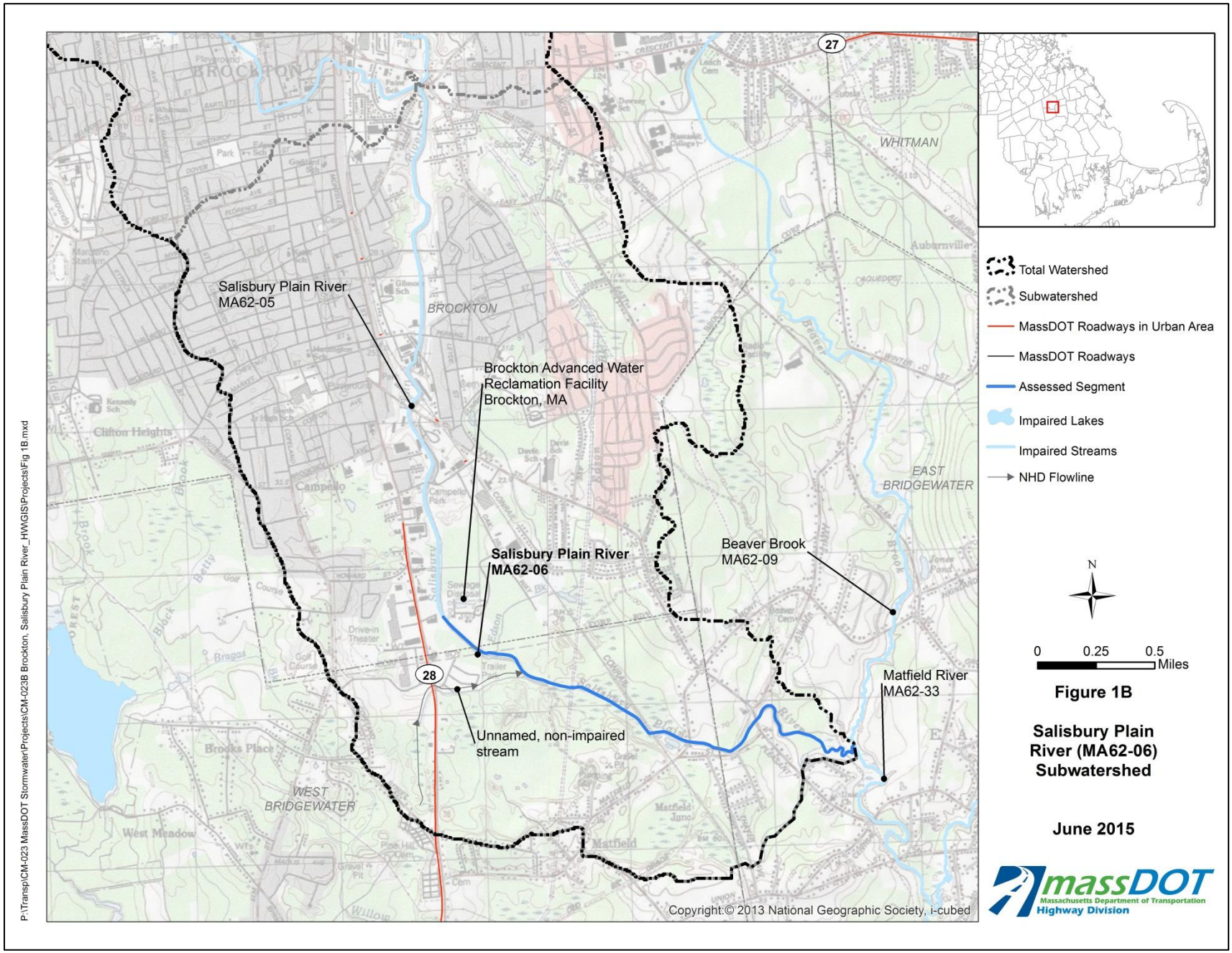
Salisbury Plain River
MA62-05
Brockton Advanced Water
Reclamation Facility
Brockton, MA
Salisbury Plain River
MA62-06
Beaver Brook
MA62-09
Matfield River
MA62-33
Unnamed, non-impaired
stream
BROCKTON
WHITMAN
EAST
BRIDGEWATER
WEST
BRIDGEWATER
Auburnville
Clifton Heights
Campello
Brooks Place
West Meadow
Matfield
27
28
Total Watershed
Subwatershed
MassDOT Roadways in Urban Area
MassDOT Roadways
Assessed Segment
Impaired Lakes
Impaired Streams
NHD Flowline
N
0
0.25
0.5
Miles
Figure 1B
Salisbury Plain
River (MA62-06)
Subwatershed
June 2015
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06/08/2015

Impaired Waters Assessment for Wading River (MA62-47)

Summary

Impaired Water[1]	Stormwater Impairments:	*Fecal Coliform, Dissolved Oxygen*
	Category:	*5 (Waters requiring a TMDL)*
	Final TMDLs:	*Final Pathogen TMDL for the Taunton River Watershed*[2]
	WQ Assessment:	*Taunton River Watershed 2001 Water Quality Assessment Report*[3]
Location	Towns:	*Foxborough, Mansfield*
	MassDOT Roads:	*I-95, I-495, Spruce St., Grove St., South St.*
Assessment Method(s)	7R (TMDL Method) ☒	7U (Non-TMDL Method**)** ☒
BMPs	Existing:	*4 Infiltration Swales*
MassDOT Area and Targets		Impervious Cover (IC)
	Directly Contributing Area:	*20.4 acres*
	Contributing Area Reduction Target:	*1.8 acres*
	Existing BMPs Reduction:	*2.5 acres*
	Remaining Reduction to Meet Target:	*0.0 acres*

Site Description

Wading River (MA62-47) is a 4.2-mile river segment located within Foxborough and Mansfield, Massachusetts. The segment begins at a wetland north of West Street in Foxborough and flows south, ending at Balcolm Street in Mansfield, where it becomes Wading River (MA62-49). The subwatershed to Wading River (MA62-47) covers approximately 7.4 square miles, predominantly in Mansfield and Foxborough. North of I-495, the subwatershed is dominated by forested area, but

[1] MassDEP, March 2013. Massachusetts Year 2012 Integrated List of Waters – Final Listing of the Condition of Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act. Massachusetts. Available at: http://www.mass.gov/eea/docs/dep/water/resources/07v5/12list2.pdf

[2] MassDEP, June 2011. Final Pathogen TMDL for the Taunton River Watershed. Available at: http://www.mass.gov/eea/docs/dep/water/resources/n-thru-y/taunton1.pdf

[3] MassDEP, December 2005. Taunton River Watershed 2001 Water Quality Assessment Report. Available at: http://www.mass.gov/eea/docs/dep/water/resources/3baapp/62wqar1.pdf

south of I-495 the land use transitions to more residential area. The total watershed covers approximately 19.6 square miles, extending west of the subwatershed into Wrentham and Plainville. The waterbody location and its watershed delineations are shown in Figure 1.

An assessment for Wading River (MA62-47) was previously submitted to the EPA on June 8, 2012. The assessment included only the southernmost USGS Dataset 451 basin,[4] mistakenly omitting a northern basin that also contains a stretch of the river segment. The original assessment correctly identified the section of I-95 that directly discharges to Wading River but omitted the directly discharging section of I-495. The necessary corrections to the delineations and target calculations are included herein.

According to the *Taunton River Watershed 2001 Water Quality Assessment Report,*[3] Wading River is "not assessed" for the Aquatic Life, Fish Consumption, Primary Contact, and Secondary Contact designated uses due to insufficient data. The report indicates that, "whether or not low dissolved oxygen/saturation results from anthropogenic influences or from natural conditions (wetland influences) is unknown." Aesthetics is listed as "support," since there were no objectionable conditions identified during the surveys. This segment of Wading River serves as a source for the City of Attleboro's drinking water and is a Class A public drinking water supply under 314 CMR 4.06. Class A waters are designated as sources of public drinking water, excellent fish and wildlife habitat, and areas for primary and secondary contact recreational activities.

Wading River (MA62-47) passes beneath I-495 in Foxborough and beneath I-95 in Mansfield, receiving direct discharges from both interstates. MassDOT's directly discharging areas to Wading River are shown in Figure 2. Drainage from I-495 northbound (NB) and southbound (SB) between mile markers (MM) 33.8–34.4 directly discharges to Wading River. I-495 is crowned between the middle lane and the left-hand lane, and runoff sheet flows to the shoulder or median into grassed ditches with longitudinal slopes that closely mimic the road profile. Curbing is only present at select low points in the road profile. To the west of where I-495 crosses Wading River, sporadic drop inlets collect flow from the ditches and pipe it to outfalls at the river. Runoff from the MassDOT-owned portion of Spruce Street, which passes over I-495, is also collected in these piped systems. East of where I-495 crosses Wading River, piping is not utilized and the ditches terminate directly at water bodies. A non-impaired stream receives discharges between MM 33.8–34.0, but it joins with Wading River after flowing a short distance beyond I-495, so these discharges were also considered direct. Drainage from South Street and the section of I-495 immediately to its east discharges to a wetland east of the non-impaired stream, making it indirect to Wading River.

Approximately 0.9 miles of I-95 NB and SB, between MM 10.5–11.4, directly discharge to Wading River. Almost the entire section of roadway has open drainage, with runoff sheeting to the grassy shoulder. At the low point in the roadway profile, located on the south side of the Wading River crossing, sets of three catch basins along the shoulders and left-hand lanes receive runoff from small sections of roadway and discharge to flared-end sections at the adjacent toes of slope. In the roadway area north of the river crossing, drop inlets within the shoulders are spaced approximately 250 to 300 feet apart to collect stormwater and convey it toward the river in a closed drainage network. Existing water quality swales, discussed in the following section, are present in this area. Runoff from the MassDOT-owned portion of Grove Street, which passes over I-95, is also collected in the piped systems. South of Wading River, runoff is conveyed in grassed ditches along the toe of the shoulder. The ditch along the NB shoulder outlets to the river downstream of I-95. Drainage on the SB shoulder flows into the wetland system that is associated with Wading River upstream of I-95.

[4] USGS Data Series 451 Local and Cumulative Impervious Cover of Massachusetts Stream Basins Available at: http://pubs.usgs.gov/ds/451/

Existing BMPs

BMP potential along I-95 was explored following the June 8, 2012 Wading River assessment submittal. As part of MassDOT Project Number 606281 (an Impaired Waters Program Retrofit Project), MassDOT constructed four infiltration swales between I-95 MM 10.9–11.2 in 2013. The BMP locations are depicted in Figure 2. The project incorporated check dams into the previously existing grassy ditches in the shoulders and median. Soils at the BMP locations are a combination of sandy loam (hydrologic soil group B) and silt loam (hydrologic soil group C). The BMPs receive sheet-flow runoff from adjacent sections of I-95.

Assessment

In cases where a TMDL has been approved, MassDOT assesses the waterbody for the impairments covered by the TMDL under the BMP 7R methodology.[5] MassDOT separately assesses the waterbody for any stormwater-related impairments that are not covered by the TMDL under the BMP 7U methodology.[6] MassDOT assessed Wading River (MA62-47) using the methodologies described below.

This assessment has been completed based on the *Massachusetts Year 2012 Integrated List of Waters – Final Listing of the Condition of Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act*.[1] MassDEP has released a proposed *Massachusetts Year 2014 Integrated List of Waters,* which has been reviewed for any proposed changes to the condition of the water bodies.[7] The condition of Wading River is not proposed to change.

BMP 7R for Pathogen TMDL (CN 256.0)

MassDOT assessed the indicator bacteria (fecal coliform) impairment using the approach described in BMP 7R[5] of MassDOT's Storm Water Management Plan (SWMP), which applies to impairments that have been assigned to a water body covered by a final TMDL. Wading River (MA62-47) is covered by the *Final Pathogen TMDL for the Taunton River Watershed.*[2]

Pathogen concentrations in stormwater vary widely and concentrations can vary by an order of magnitude within a given storm event at a single location making it difficult to predict pathogen concentrations in stormwater with accuracy. MassDOT generally will not conduct site specific assessments of pathogen loading for each water body impaired for pathogens but instead developed an iterative adaptive management approach to be consistent with relevant TMDLs and permit condition requirements and an approach to stormwater management. Greater detail of the assessment methodology is provided in MassDOT's BMP 7R Pathogen Methodology.[8]

The *Final Pathogen TMDL for the Taunton River Watershed* states that the "major sources of bacteria in the Taunton River watershed during dry weather include leaking sewer pipes, stormwater drainage

[5] MassDOT, July 2010. BMP 7R: TMDL Watershed Review. Available at: http://www.massdot.state.ma.us/Portals/8/docs/environmental/npdes/BMP_7R_TMDL_WatershedReview.pdf

[6] MassDOT, April 2010. BMP 7U: Water Quality Impaired Waters Assessment and Mitigation Plan. Available at: http://www.massdot.state.ma.us/Portals/8/docs/environmental/npdes/BMP_7U_ImpairedWaterbodiesAssessment.pdf

[7] MassDEP, June 2014. Massachusetts Year 2014 Integrated List of Waters – Proposed Listing of the Condition of Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act. Massachusetts. Available at: http://www.mass.gov/eea/docs/dep/water/resources/07v5/14iwlistp.pdf

[8] MassDOT, December 2014. Description of MassDOT's Application of BMP 7R for Pathogen Related Impairments. Available at: http://www.massdot.state.ma.us/Portals/8/docs/environmental/impairedWaters/Year5/Attachment4.pdf

systems (illicit connections of sanitary sewers to storm drains), and failing septic systems. Wet weather sources include stormwater runoff including municipal separate storm sewer systems (MS4), combined sewer overflows (CSOs), and sanitary sewer overflows (SSOs)." According to the report, municipalities in the watershed made significant reductions to the number of CSO events in the decade preceding the report's publication.[2]

Wading River (MA62-47) is listed as medium priority for both dry and wet weather. It was elevated one priority level due to its status as a Class A waterbody.

In addition to the generic recommendations provided in the draft NPDES MS4 permits for Massachusetts and discussed in the MassDOT Pathogen Methodology, the Taunton River Watershed TMDL report (Section 8.1, page 77) recommends the following specific tasks to address elevated bacteria levels in the watershed:

- Development of comprehensive stormwater management programs including identification and implementation of BMPs,
- Illicit discharge detection and elimination,
- Leaking sewer pipes and sanitary sewer overflows,
- CSO management,
- Inspection and upgrade of on-site sewage disposal systems,
- Organization and implementation of education and outreach program.

The TMDL report also indicates that if non-structural stormwater BMPs are insufficient to meet water quality standards, structural controls may be necessary. However, MassDEP concedes that additional study would likely be key to identifying cost efficient and effective technology.

The following BMPs are specifically identified as ongoing and/or planned in order to meet the Pathogen TMDL for the Taunton River Watershed in Foxborough and Mansfield:

- A bylaw addressing illicit discharges (Mansfield and Foxborough).
- Mapping of stormwater outfalls and contributing systems (Mansfield and Foxborough).
- Scheduled cleaning of catch basins, occurring annually (Foxborough) or at a frequency of 25% of all Town-owned basins annually (Mansfield).
- Scheduled street sweeping (Mansfield and Foxborough).
- Creation and distribution of an educational pamphlet (Mansfield).
- Publication of stormwater information in the Town's annual report and on the Town's website (Mansfield).
- Dry-weather screening of 11 outfalls from 2007–2008 (Mansfield).

BMP 7U for Impervious Cover Related Impairments

A Final TMDL is not in place to address Wading River's (MA62-47) following impairment: dissolved oxygen. Therefore, MassDOT assessed the stormwater-related impairments not addressed by a TMDL using the approach outlined in the Description of MassDOT's Application of Impervious Cover

Method in BMP 7U[9] which was developed using the EPA Region I's Impervious Cover (IC) Method, described in EPA's Stormwater TMDL Implementation Support Manual.[10] Consistent with the findings of EPA and others, MassDOT concluded that when a watershed had less than 9% IC, stormwater was not the likely cause of the impairment.

MassDOT calculated the following values for the total contributing watershed and the subwatershed of the impaired water (Wading River) to determine the IC area and set a reduction target. Watersheds are based on the USGS Dataset 451[4] and modified as necessary using topography. MassGIS's impervious surfaces data layer[11] was used to determine the IC of the watersheds. The total watershed and the subwatershed are shown in Figure 1.

Table 1 Impaired Segment Watershed

	Total Watershed	
Watershed Area	12,532 acres	4,746 acres
Impervious Cover (IC) Area	1,454 acres	469 acres
Percent Impervious	12%	10%
IC Area at 9% Effective IC Target	1,128 acres	427 acres
Target Effective IC Reduction	22%	9%

The total and subwatershed's percent impervious are greater than or equal to 9%, indicating that stormwater is a likely contributor to the impairment. To meet the 9% effective IC target, the effective IC within the subwatershed will need to be reduced by the percentage calculated in Table 1. MassDOT then uses the same target percent reduction for their directly contributing watershed as shown in Table 2.

Table 2 MassDOT Directly Contributing Watershed

Directly Contributing Area	90.0 acres
Directly Contributing IC Area	20.4 acres
Percent Impervious	23%
Directly Contributing Area Effective IC Reduction Target (9% Target Effective IC Reduction of MassDOT Directly Contributing IC Area)	1.8 acres
Target Effective IC	21%
Target Effective IC	18.6 acres

Next, MassDOT estimated the effective IC of the MassDOT directly contributing drainage areas accounting for treatment provided by existing BMPs. The effective IC reduction was calculated by applying effective IC reduction rates to existing BMPs based on their size, function and contributing watershed. BMP performances were derived from EPA Region 1's BMP performance analysis

[9] MassDOT, April 2011. Description of MassDOT's Application of Impervious Cover Method in BMP 7U. Available at: http://www.massdot.state.ma.us/Portals/8/docs/environmental/npdes/IC_MethodApplication2011Apr6.pdf

[10] ENSR, March 2006. Stormwater TMDL Implementation Support Manual for US EPA Region 1. ENSR International & EPA Region 1, Boston, MA. Available at http://www.epa.gov/region1/eco/tmdl/pdfs/Stormwater-TMDL-Implementation-Support-Manual.pdf

[11] MassGIS Impervious Surfaces datalayer taken from 2005 orthoimagery. Available at: http://www.mass.gov/mgis/impervious_surface.htm

report[12] and engineering judgment. Table 3 shows the existing BMPs, their MassDOT drainage areas, and their effective IC reductions.

Table 3 Existing Conditions

BMP Name	BMP Type	Contributing Effective IC (acres)	Estimated Percent Reduction	Estimated Effective IC Reduction (acres)
EX-01	Infiltration Swale	0.89	90%	0.80
EX-02	Infiltration Swale	0.44	91%	0.40
EX-03	Infiltration Swale	0.56	73%	0.41
EX-04	Infiltration Swale	0.91	92%	0.84
Total Directly Discharging Area		**20.4**	**12%**	**2.5**
Target Effective IC Reduction				1.8
Remaining Reduction to Meet Target				**0.0**

Under existing conditions, MassDOT's estimated effective IC meets the target calculated above. No further IC reduction is required under BMP 7U,[6] and as such, potential opportunities for additional BMPs are not explored in this assessment.

Proposed Mitigation Plan

Although MassDOT has already met the target effective IC reduction for Wading River, a programmed project is currently under design along I-495 in the Wading River subwatershed. Project Number 606176 will involve resurfacing I-495 in Foxborough, Plainville, and Wrentham. MassDOT plans to implement BMPs to treat stormwater discharging directly to Wading River. Once the design of the proposed BMPs is finalized, MassDOT will provide an update in the NPDES permit annual report with BMP information and summarize the final effective IC reduction.

With respect to the fecal coliform impairment, MassDOT implements a variety of non-structural BMP programs across their system in accordance with their existing SWMP including educational programs, illicit connection review and source control. As discussed in MassDOT's BMP 7R Pathogen Methodology, MassDOT believes that existing efforts are consistent with the current and draft MS4 permit requirements and TMDL recommendations in regard to pathogens.

In accordance with the BMPs identified in the TMDL report as planned measures to reach compliance with the *Final Pathogen TMDL for the Taunton River Watershed,*[2] MassDOT has documented the locations of its stormwater outfalls. In addition, as part of its pet waste management program, MassDOT has determined that no MassDOT targeted rest stops are located within the subwatershed of this water body. MassDOT will be installing signs at rest stops within the subwatersheds of pathogen impaired waterbodies. The signs will inform the public of the need to

[12] U.S. Environmental Protection Agency, March 2010, Stormwater Best Management Practices (BMP) Performance Analysis. Available at: http://www.epa.gov/region1/npdes/stormwater/assets/pdfs/BMP-Performance-Analysis-Report.pdf

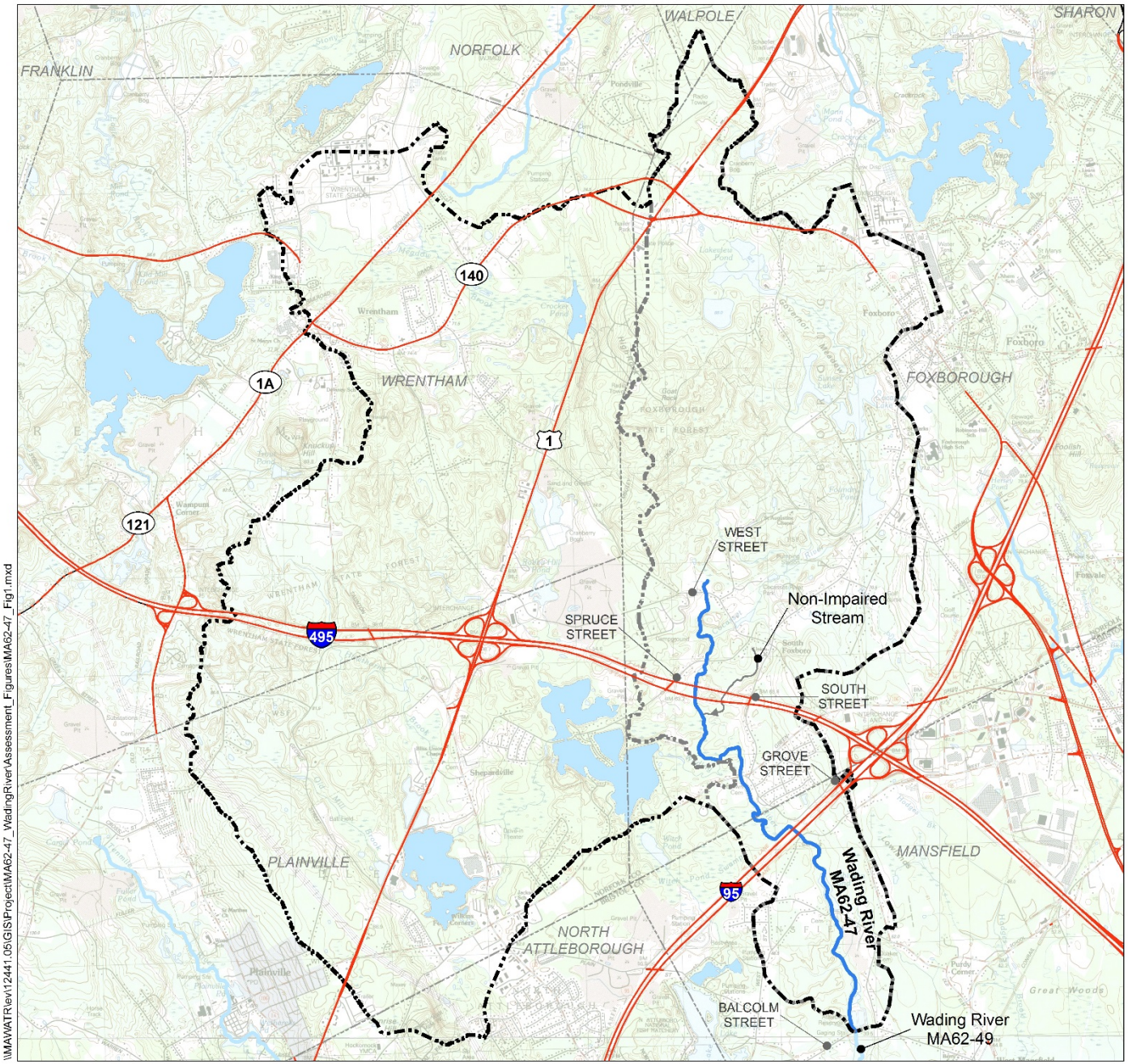
remove pet waste, which can minimize contributions of pathogens to stormwater runoff. Pet waste removal bags and disposal cans will be provided.

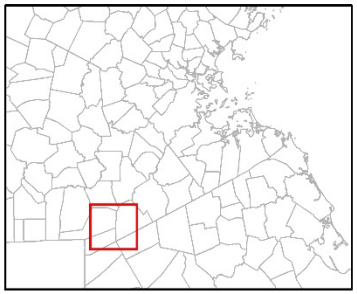
Although the TMDL report also identifies the benefits of structural BMPs to address stormwater runoff in some instances, MassDOT feels that it is not a beneficial approach to implement these BMPs in advance of other ongoing BMP efforts identified in the watershed, given the documented variability of pathogen concentrations in highway runoff, and the low probability of achieving substantial gains towards meeting the TMDL with solely implementing IC reductions and controls.

Furthermore, MassDOT has an ongoing inspection and monitoring program aimed at identifying and addressing illicit discharges to MassDOT's stormwater management system. MassDOT investigates any suspicious flows noted, and will work with owners of confirmed illicit discharges to remove these flows, and thereby minimize the possibility of pathogen contributions to receiving waters. At present, there are no suspected or known illicit discharges, or unauthorized drainage tie-ins, within the subwatershed of this water body that could be contributing pathogens to the impaired water body.

MassDOT has concluded that the BMPs outlined in the SWMP are consistent with its existing permit requirements for Wading River. These measures achieve pathogen reductions (including fecal coliform) to the maximum extent practicable and are consistent with the intent of its existing stormwater permit and the applicable Pathogen TMDLs. As stated previously, pathogen loadings are highly variable and although there is potential for stormwater runoff from MassDOT roadways to be a contributing source it is unlikely to warrant action relative to other sources of pathogens in the watershed.

MassDOT will continue to ensure proper non-structural BMPs are being implemented within the watershed of Wading River, including regular roadway and drainage system maintenance, erosion and sedimentation control, and outreach and education. Further work by MassDOT on programmed projects, which often include broader scale road layout changes, may provide additional opportunities for construction of new treatment BMPs. This is consistent with an iterative adaptive management approach to address impairments. MassDOT will include an update in NPDES permit annual reports to EPA regarding proposed BMP design either through retrofit or programmed projects, plans for construction of BMPs, reduction achieved by finalized BMP designs and progress made towards meeting target effective IC reductions.





MassDOT Roadways in Urban Area
MassDOT Roadways
Total Watershed
Subwatershed
Assessed Segment
Impaired Lakes
Impaired Streams
Non-Impaired Streams

N

0 0.4 0.8 Miles

Figure 1

Wading River (MA62-47) Watersheds

June 2015

massDOT Massachusetts Department of Transportation Highway Division

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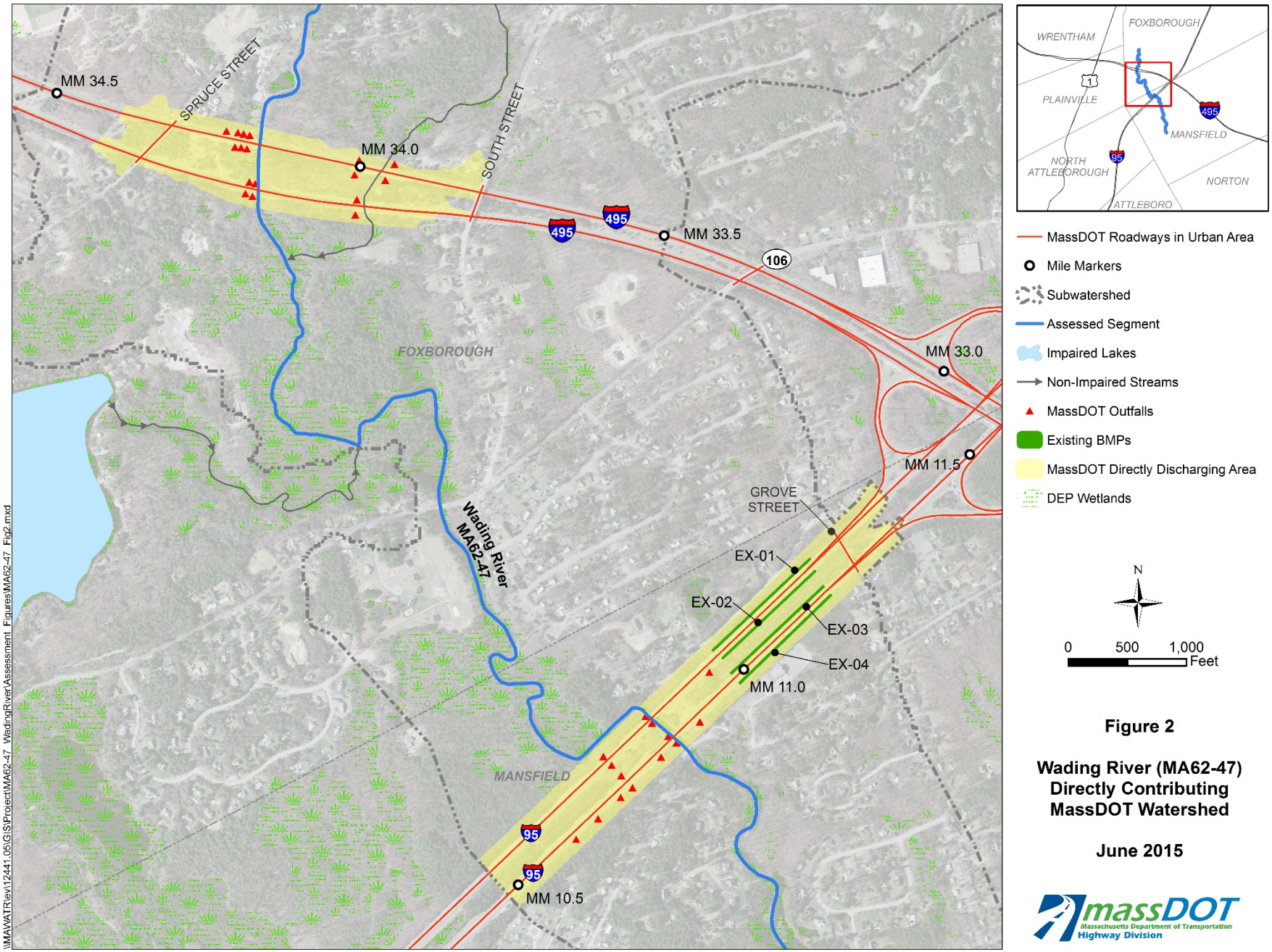

Figure 2

Wading River (MA62-47)
Directly Contributing
MassDOT Watershed

June 2015

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