**Attachment 3:**

**Impairments Unrelated to Stormwater**

Attachment 3 includes 9 assessments of water bodies which MassDOT determined have impairments not stormwater related and therefore MassDOT will not review the water body further under this program.

# List of Impaired Water Bodies

| | |
|---|---|
| MA36129 | Quabbin Reservoir* |
| MA41014 | East Brimfield Reservoir* |
| MA73043 | Ponkapoag Pond* |
| MA73048 | Reservoir Pond* |
| MA82110 | Warners Pond* |
| MA93014 | Chebacco Lake* |
| MA94178 | Aaron River Reservoir* |
| MA96012 | Bearse Pond* |
| MA96333 | Wequaquet Lake* |

*Not on Appendix L-1 list.

# Impaired Waters Assessment for Impaired Waters with Impairments Unrelated to Stormwater

## Impaired Water Bodies

As part of the Impaired Waters Program, MassDOT has been reviewing those impaired water bodies identified as potentially receiving MassDOT property runoff in urban areas (Appendix L-1 list) to determine the appropriate assessment methodology. The Appendix L-1 list is based on the *Final Massachusetts 2008 Integrated List of Waters*.[1] MassDEP updates the Integrated List of Waters ("303(d) list") every two years to reflect changes to the water quality of Massachusetts' streams and lakes. The *Final Massachusetts 2012 Integrated List of Waters*[2] was finalized in March 2013 and replaces the *Final Massachusetts Year 2010 Integrated List of Waters*,[3] which replaced the 2008 "303(d) List". MassDEP has released a proposed *Massachusetts Year 2014 Integrated List of Waters,*[4] which has not yet been finalized but was reviewed for any proposed changes to the condition of the water bodies. During our review of the updated 2012 "303(d) list", it was determined that eight water bodies that were included in the Appendix L-1 list have impairments unrelated to stormwater. An assessment for other water body impairments unrelated to stormwater was submitted in December 2012;[5] however, these waterbodies were inadvertently omitted. This assessment completes the assessment for the remaining water bodies with impairments unrelated to stormwater (Table 1).

### Impairments

This assessment addresses the impairments listed below.

- Mercury in Fish Tissue
- Non-pollutants

Table 1 includes the eight water bodies and respective receiving water impairments as listed on the 2012 "303(d) List". Other water bodies may include these impairments but are also listed for pollutants that are potentially related to stormwater. Those impairments will be addressed in specific assessments for the water bodies to which they apply.

[1] Massachusetts Department of Environmental Protection (MassDEP). (2008). Massachusetts Year 2008 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. Available at: http://www.mass.gov/eea/docs/dep/water/resources/07v5/08list2.pdf

[2] MassDEP. (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. Available at: http://www.mass.gov/eea/docs/dep/water/resources/07v5/12list2.pdf

[3] MassDEP. (2011). Massachusetts Year 2010 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. Available at: http://www.mass.gov/dep/water/resources/10list6.pdf

[4] MassDEP. (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. Available at: http://www.mass.gov/eea/docs/dep/water/resources/07v5/14iwlistp.pdf

[5] 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

**Table 1. Appendix L-1 Impaired Waters with Impairments that are Unrelated to Stormwater**

| Water Body ID | Water Body Name | Impairments of Concern (According to the 2012 303d List) | TMDL Impairment on Appendix L-1[+] |
|---|---|---|---|
| MA36129 | Quabbin Reservoir | (Non-Native Aquatic Plants*), Mercury in Fish Tissue | -Metals [12/20/2007-NEHgTMDL] |
| MA41014 | East Brimfield Reservoir | (Non-Native Aquatic Plants*), Mercury in Fish Tissue | -Metals [12/20/2007-NEHgTMDL] |
| MA73043 | Ponkapoag Pond | (Eurasian Water Milfoil, Myriophyllum spicatum*), (Non-Native Aquatic Plants*), Mercury in Fish Tissue | |
| MA73048 | Reservoir Pond | (Non-Native Aquatic Plants*), Mercury in Fish Tissue | |
| MA82110 | Warners Pond | (Non-Native Aquatic Plants*), Mercury in Fish Tissue | -Metals [12/20/2007-NEHgTMDL] |
| MA93014 | Chebacco Lake | (Non-Native Aquatic Plants*), Mercury in Fish Tissue | -Mercury in Fish Tissue [12/20/2007-NEHgTMDL] |
| MA94178 | Aaron River Reservoir | (Fish-Passage Barrier*), Mercury in Fish Tissue | -Metals [12/20/2007-NEHgTMDL] |
| MA96012 | Bearse Pond | (Non-Native Aquatic Plants*), Mercury in Fish Tissue | |
| MA96333 | Wequaquet Lake | (Non-Native Aquatic Plants*), Mercury in Fish Tissue | -Metals [12/20/2007-NEHgTMDL] |

[+] TMDL impairment listed on Appendix L-1 based on 2008 "303(d) List". All of these water bodies have Total Maximum Daily Loads (TMDLs) that have since been completed for these impairments, as indicated on the 2012 "303(d) List".

## Assessment under BMP 7R

A Total Maximum Daily Load (TMDL) has been developed for mercury in fish tissue which covers the nine water bodies listed in Table 1. Therefore, MassDOT began to assess these impairments using the TMDL method, described in BMP 7R of MassDOT's Storm Water Management Plan.[6] In

[6] Massachusetts Department of Transportation (MassDOT). (2012). Description of MassDOT's TMDL Watershed Review Method in BMP 7R. Retrieved from: http://www.massdot.state.ma.us/Portals/8/docs/environmental/npdes/BMP_7R_TMDL_WatershedReview.pdf

reviewing the water bodies addressed by the *Northeast Regional Mercury TMDL,*[7] the TMDL indicated that this impairment is not stormwater related. According to the TMDL, regulated stormwater is considered to be a *de minimis* contributor to the waste load allocation for mercury. Additionally, the primary source of mercury in stormwater in Massachusetts is atmospheric deposition, which must be controlled by targeting sources that emit into the air. Based on the TMDL, the impairment mercury in fish tissue has been excluded from the TMDL Method and deemed "unrelated to stormwater," so no further action is necessary for this pollutant.

### Assessment under BMP 7U

Table 1 also lists "non-pollutants" for impaired water bodies which are listed in the format ( ___*), such as (Non-Native Aquatic Plants*). These impairments are considered non-pollutants according to the *Massachusetts Year 2012 Integrated List of Waters*.[2] The demarcation indicates that amelioration of the stressor will require measures other than TMDL development and implementation. The Impaired Waters Program does not address these impairments in its scope because non-pollutant impairments are considered to be "unrelated to stormwater."

## Conclusions

MassDOT has concluded, in accordance with the BMP 7U and 7R methods, that there is no required reduction in pollutant loading for the water bodies listed in Table 1 because the impairments are not related to stormwater runoff from MassDOT property. As such, further assessment of these water bodies is not warranted under the Impaired Waters Program.

MassDOT will continue to ensure proper non-structural BMPs are being implemented within the watersheds of Quabbin Reservoir, East Brimfield Reservoir, Ponkapoag Pond, Reservoir Pond, Warners Pond, Chebacco Lake, Aaron River Reservoir, Bearse Pond, and Wequaquet Lake, 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 achieving phosphorus load reductions.

[7] New England Interstate Water Pollution Control Commission (NEIWPCC). (2007). Northeast Regional Mercury Total Maximum Daily Load. Retrieved from: http://www.epa.gov/region1/eco/tmdl/pdfs/ne/tmdl-Hg-approval-doc.pdf