

Attachment 3:

Unrelated Impairments Assessments

Impaired Waters Assessment for Log Pond Cove (MA34124)

Impaired Waterbody

Name: Log Pond Cove

Location: Holyoke, MA

Water Body ID: MA34124

Impairments

Final *Massachusetts Year 2008 Integrated List of Waters* (MassDEP, 2008):

- Non-native aquatic plants
- PCB in fish tissue

Final *Massachusetts Year 2010 Integrated List of Waters* (MassDEP, 2011):

- Non-native aquatic plants
- PCB in fish tissue

Log Pond Cove (MA34124) is listed under Category 5 Waters, "Waters requiring a TMDL," on MassDEP's Final *Massachusetts Year 2010 Integrated List of Waters*. According to MassDEP's *Connecticut River Watershed 2003 Water Quality Assessment Report* (MassDEP, 2008), the 19-acre pond is listed as a Category 5 Water due to impairment by non-native aquatic plants and PCB in fish tissue. The non-native aquatic plant impairment is related to the severe infestation of the non-native *Trapa natans*. Additionally, Log Pond Cove is hydraulically connected to the mainstem Connecticut River, and site-specific fish consumption advisory is recommended by MA DPH due to elevated levels of PCB in fish tissue. The impairments are not storm water related; therefore, the impairments for Log Pond Cove (MA34124) will not be investigated further.

Relevant Water Quality Standards

Water Body Classification: Class B

Applicable State Regulations:

- N/A

Site Description

Log Pond Cove (MA34124) is a 19-acre pond hydraulically connected to the Connecticut River. The pond is located just upstream of the Holyoke Dam in Holyoke, MA. The location of Log Pond Cove is shown in Figure 1.

Assessment under BMP 7U

In compliance with the assessment protocol outlined in BMP 7U (MassDOT, 2011), MassDOT proceeded with Step 1 to determine whether or not storm water runoff could potentially be linked to the impairment for this water body.

The impairment for non-native aquatic plants is not linked to storm water runoff. According to the final *Massachusetts Year 2010 Integrated List of Waters*, non-native aquatic plants are a non-pollutant stressor which indicates that restoration will require measures other than TMDL development and implementation. Furthermore, MassDOT is not aware of any evidence that storm water is a contributor of non-native aquatic plants. As a result, MassDOT has concluded that storm water runoff from its roadways does not contribute to the impairments of non-native aquatic plants found in Log Pond Cove.

MassDOT also concluded that the impairment for PCB in fish tissue is unrelated to storm water runoff. The Nationwide Urban Runoff Program (NURP) conducted by the EPA found that PCB was detected in less than 1% of storm water samples collected (EPA, 1983). Therefore, MassDOT concluded that storm water runoff from its roadways does not contribute to the impairments of PCB in fish tissue.

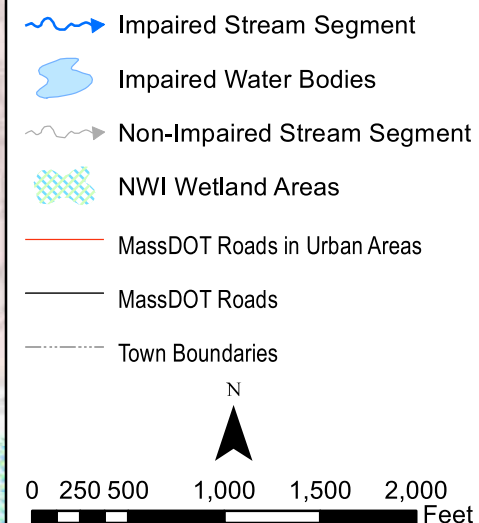
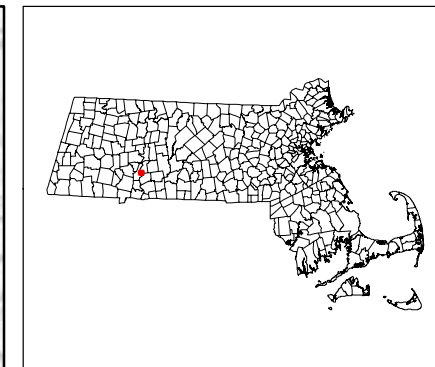
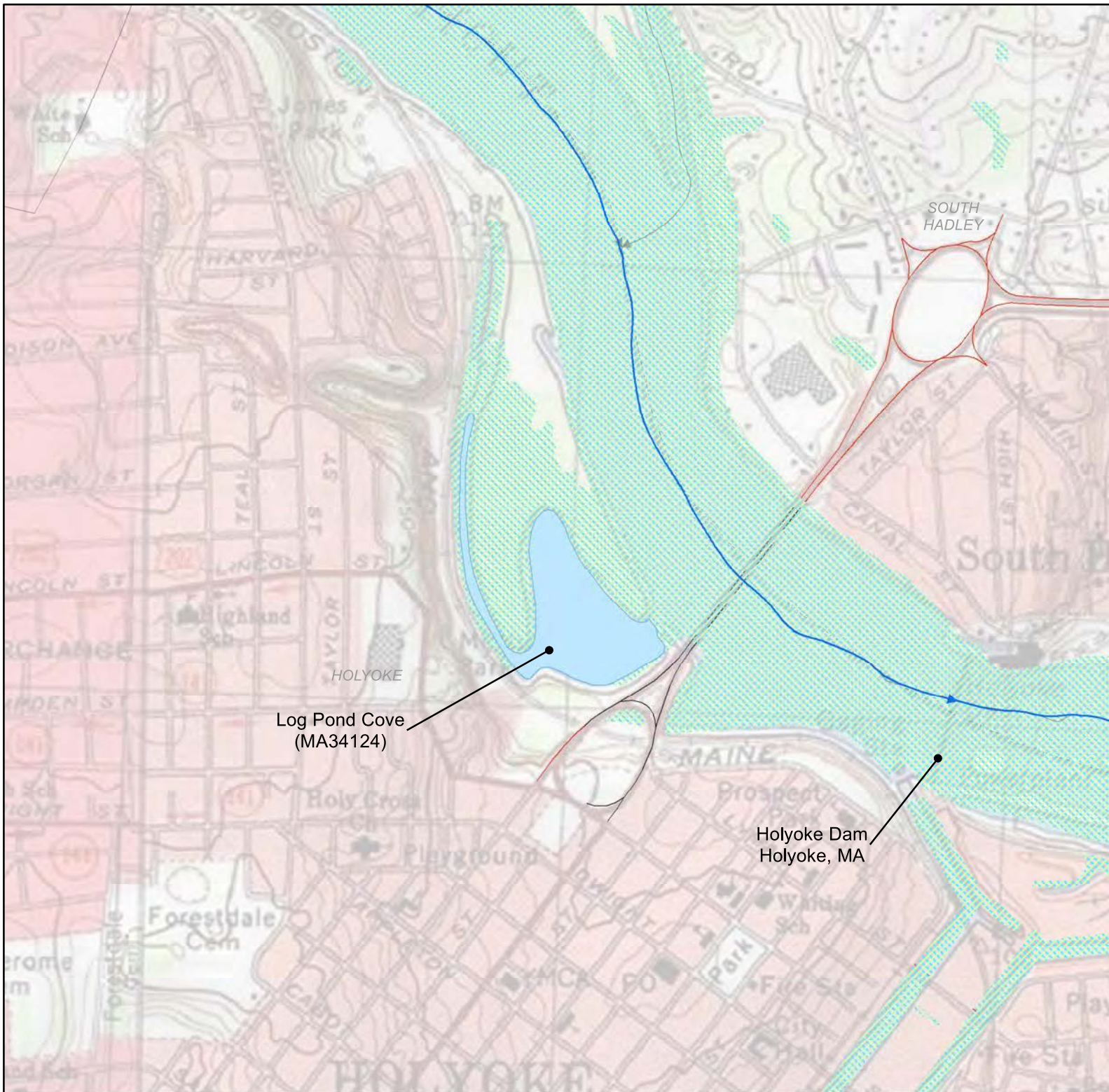
Conclusions

Storm water discharges from MassDOT-owned property do not contribute to the non-native aquatic plants and PCB in fish tissue impairments for Log Pond Cove. Therefore, MassDOT has determined that further assessment of this water body is not warranted under the MassDOT Impaired Waters Program.

MassDOT will continue to implement the measures outlined in its Stormwater Management Plan (SWMP).

References

- Environmental Protection Agency (EPA). (1983). Results of the Nationwide Urban Runoff Program. Retrieved from: http://www.epa.gov/npdes/pubs/sw_nurp_vol_1_finalreport.pdf
- Massachusetts Department of Environmental Protection (MassDEP). (2008). Connecticut River 2003 Water Quality Assessment Report. Retrieved from: <http://www.mass.gov/dep/water/resources/34wqar07.pdf>.
- 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 303(d) and 305(b) of the Clean Water Act. Retrieved from: <http://www.mass.gov/dep/water/resources/08list2.pdf>
- Massachusetts Department of Environmental Protection (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. Retrieved from: <http://www.mass.gov/dep/water/resources/10list6.pdf>
- Massachusetts Department of Transportation (MassDOT). (2011). Description of MassDOT's Application of Impervious Cover Method in BMP 7U (MassDOT Application of IC Method).



1 in = 1,000 ft

Figure 1

**Log Pond Cove
MA34124
Location**

February 2012

Impaired Waters Assessment for Pontoosuc Lake (MA21083)

Impaired Waterbody

Name: Pontoosuc Lake

Location: Lanesborough and Pittsfield, MA

Water Body ID: MA21083

Impairments

Final *Massachusetts Year 2008 Integrated List of Waters* (MassDEP, 2008):

- DDT
- Eurasian Water Milfoil, *Myriophyllum spicatum**
- Non-Native Aquatic Plants*
- Mercury in Fish Tissue

Final *Massachusetts Year 2010 Integrated List of Waters* (MassDEP, 2011):

- DDT
- Eurasian Water Milfoil, *Myriophyllum spicatum**
- Non-Native Aquatic Plants*
- Mercury in Fish Tissue

Pontoosuc Lake (MA21083) is listed under Category 5, "Waters requiring a TMDL", on MassDEP's final *Massachusetts Year 2010 Integrated List of Waters*. According to MassDEP's *Housatonic River Watershed 2002 Water Quality Assessment Report* (MassDEP, 2007), Pontoosuc Lake is impaired for the presence of non-native aquatic macrophytes and elevated concentrations of mercury which are suspected to be due to atmospheric deposition.

Relevant Water Quality Standards

Water Body Classification: Unknown

Applicable State Regulations:

- **314 CMR 4.05 (5) (a) Aesthetics.** All surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste or turbidity; or produce undesirable or nuisance species of aquatic life.
- **314 CMR 4.05 (5)(e) Toxic Pollutants.** All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife. For pollutants not otherwise listed in 314 CMR 4.00, the National Recommended Water Quality Criteria: 2002, EPA 822R-02-047, November 2002 published by EPA pursuant to Section 304(a) of the Federal Water Pollution Control Act, are the allowable receiving water concentrations for the affected waters, unless the Department either establishes a site specific criterion or determines that naturally occurring background concentrations

are higher. Where the Department determines that naturally occurring background concentrations are higher, those concentrations shall be the allowable receiving water concentrations. The Department shall use the water quality criteria for the protection of aquatic life expressed in terms of the dissolved fraction of metals when EPA's 304(a) recommended criteria provide for use of the dissolved fraction. The EPA recommended criteria based on total recoverable metals shall be converted to dissolved metals using EPA's published conversion factors. Permit limits will be written in terms of total recoverable metals. Translation from dissolved metals criteria to total recoverable metals permit limits will be based on EPA's conversion factors or other methods approved by the Department. The Department may establish site specific criteria for toxic pollutants based on site specific considerations.

Site Description

Pontoosuc Lake (MA21083) is a 500-acre water body located in Lanesborough and Pittsfield, MA (MassDEP, 2007). This lake receives water from the West Branch Housatonic River (MA21-08). A MassDOT-owned portion of Route 7/South Main Street runs north to south along part of the lake. The subwatershed of Pontoosuc Lake (MA21083) is shown in Figure 1.

Assessment under BMP 7U

In compliance with the assessment protocol outlined in BMP 7U (MassDOT, 2011), MassDOT proceeded with Step 1 to determine whether or not storm water runoff could potentially be linked to the impairment for this water body. According to MassDEP, the impairments for Eurasian Water Milfoil, *Myriophyllum spicatum** and non-native aquatic plants* are not caused by pollutants (MassDEP 2008 and 2011) and therefore are not considered further here. According to Northeast Regional Mercury TMDL, storm water is a *de minimis* contributor to water bodies impaired with mercury (NEIWPCC, 2007). Similarly, storm water is not likely to contribute significantly to the impairment due to DDT. The Nationwide Urban Runoff Program (NURP) conducted by the EPA found that DDT was detected in less than 1% of 121 samples collected and that it "should be considered to pose a minimal threat to the quality of surface waters from runoff contamination" (EPA, 1983). Therefore, MassDOT concluded that storm water runoff from its roadways does not contribute to the impairments of mercury, Eurasian Water Milfoil, *Myriophyllum spicatum**, non-native aquatic plants*, or DDT.

Conclusions

Storm water discharge from MassDOT-owned property does not contribute to the impairments for Pontoosuc Lake (MA21083). Therefore, MassDOT has determined that further assessment of this water body is not warranted under the MassDOT Impaired Waters Program.

MassDOT will continue to implement the measures outlined in its Stormwater Management Plan (SWMP).

References

Environmental Protection Agency (EPA). (1983). Results of the Nationwide Urban Runoff Program. Retrieved from: http://www.epa.gov/npdes/pubs/sw_nurp_vol_1_finalreport.pdf

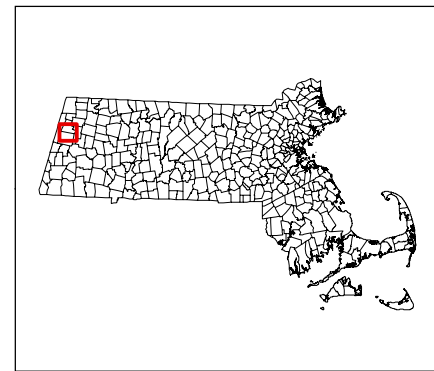
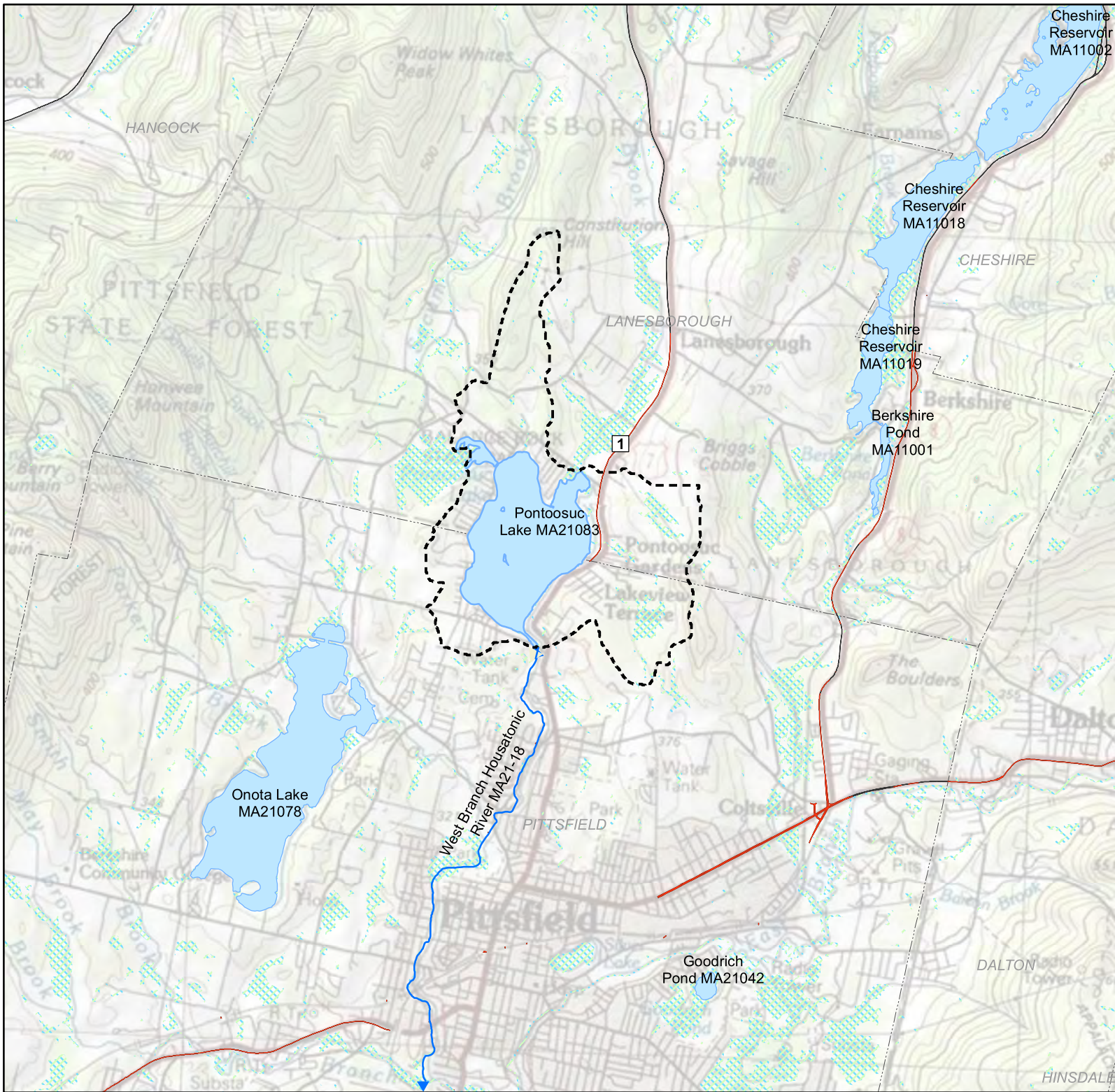
Massachusetts Department of Environmental Protection (MassDEP). (2007). Housatonic River Watershed 2002 Water Quality Assessment Report. Retrieved from:
<http://www.mass.gov/dep/water/resources/21wqar07.pdf>

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 303(d) and 305(b) of the Clean Water Act. Retrieved from:
<http://www.mass.gov/dep/water/resources/08list2.pdf>

Massachusetts Department of Environmental Protection (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. Retrieved from:
<http://www.mass.gov/dep/water/resources/10list6.pdf>

Massachusetts Department of Transportation (MassDOT). (2011). Description of MassDOT's Application of Impervious Cover Method in BMP 7U (MassDOT Application of IC Method).

NEIWPCC. (2007). Northeast Regional Mercury Total Maximum Daily Load. Retrieved from:
<http://www.neiwpcc.org/mercury/mercurydocs/Final%20Northeast%20Regional%20Mercury%20TMDL.pdf>.



- Pontoosuc Lake (MA21083) Subwatershed
- Impaired Stream Segment
- MA21083
- Impaired Water Bodies
- NWI Wetland Areas
- MassDOT Roads in Urban Areas
- MassDOT Roads
- Town Boundaries



1 in = 1 miles

0 0.25 0.5 1 1.5 2 Mi

Figure 1

**Pontoosuc Lake (MA21083)
Subwatershed**

March 2012