

Water Bodies Assessment and Recommendation Report

Arlington Conservation Commission April 2017

The Arlington Conservation Commission has carried out an assessment of fourteen water bodies in the Town of Arlington, which include five lakes and ponds and nine streams. A majority of these are negatively impacted by polluted runoff and stormwater discharges due to the highly urban nature of Arlington and surrounding towns. Most of these water bodies also have excessive aquatic invasive plants that degrade water quality, impede recreational use, and degrade aesthetics. In determining which waterbodies could benefit from management measures using Town funding, we have taken a triage-based approach:

1. Water bodies that are in generally good shape that do not need much help, or whose issues are being addressed by other agencies or funding sources, e.g., Upper & Lower Mystic Lakes and Upper Mystic River
2. Water bodies with some issues that could benefit from directed intervention, e.g. Spy Pond, Arlington Reservoir, Hills Pond, McClennen Park Detention Ponds (Reeds Brook)
3. Water bodies that are in poor shape with many issues that would need major efforts and thus funding to improve, e.g. Mill Brook, Alewife Brook.

Based on our analysis and discussions with various community groups we have identified the following five priority locations for the coming year:

- **Arlington Reservoir** – Town-owned water body in Arlington and Lexington with aquatic invasive water chestnuts that form dense, impenetrable mats at the water’s surface, which impair public use and water quality. Recommend continuation of current management practices to mechanically remove water chestnut plants. In addition, the Mystic River Watershed Association (MyRWA) has been organizing hand harvesting events in the more shallow areas. Once the water chestnuts’ seed bank is further depleted, the harvesting efforts and costs will be reduced.
- **Hills Pond** – A small pond in the heavily used Menotomy Rocks Park with water quality and invasive plant problems. Recommend continuation of chemical treatments to control algae and other detrimental water plants. Last year we recommended review of the current management practices for greater use of non-chemical treatments, such as aeration. The Friends of Menotomy Rocks Park and the Town DPW have met to proceed with our recommendation of the maintenance of a formerly existing aeration pump system for the pond to improve water quality, which is dependent on DPW’s provision of electricity and a mounting for the pump from other funds. Additionally, we recommend that an in-depth assessment of this water body be performed to develop a best management program for the future, and Community Preservation Act (CPA) funds will be sought for that purpose.
- **Mill Brook** – The very poor water quality (EPA/MyWRA 2015 rating of D) is primarily due to storm water runoff; however, the brook and its adjacent shore provide valuable wildlife habitat and opportunities for nature views. Some areas are attractive natural areas and efforts should be made to enhance public access. A possible effort might be invasive plant control along the banks and adjacent areas. In addition, the Working Group recommends that the Town DPW prioritize pretreatment stormwater improvements in the drainage area of Mill Brook to improve the water quality, since this is the most highly impacted Water Body in Arlington. Currently MyRWA is pursuing CPA funds for improving public access, investigating illicit discharges and monitoring water quality near Wellington Park.

- **McClennen Park Detention Ponds on Reeds Brook** – These are small constructed ponds that have major value for storm water control and provide wildlife habitat. A preliminary review indicated that there may be seepage from the landfill material – which was capped but not lined, as evidenced by the brown color (iron flocculation) of the ponds in certain locations. In Fall-Winter of 2016, the Arlington Conservation Commission provided oversight of a contractor’s assessment of these ponds, which included document reviews at DEP and on-site sampling of the surface water and sediment (performed in December 2016). The report of this initial assessment indicated that 1) the concentration of volatile organic compounds (VOCs) and metals that are present in the surface water and sediments do not pose a risk to human health and 2) recommended further investigation of the potential ecological risk from high iron and manganese content in the surface water and sediments.

Based on these findings, we recommend an ecological assessment of the detention ponds be performed using Water Bodies funds. If the ecological assessment shows adverse conditions (risk) for organisms, further investigation on the source of the elevated metals may be required (e.g., monitoring wells to assess whether the capped landfill adjacent to the detention ponds is the source of the metals). Based on this assessment, we may find that any solution will be beyond the resources of the Water Bodies fund and may require a combination of CPA and Town financing towards the broader goal of improving the site’s aesthetic, recreational, and wildlife functions.

- **Spy Pond** – Heavily used by public for recreation with invasive plant problems in and around the pond that impair use; also erosion along portions of the shoreline. Recommend assessment, updating or creating the operation and management plan, and continuation of aquatic invasive plant management practices. Additionally, last year we recommended assessment, design review, and implementation of shoreline erosion control, which was initiated in 2016 using CPA funding for an assessment of shoreline erosion and evaluation of design options. Currently, a project sponsored by the Conservation Commission to address implementation of erosion control based on the 2016 study is seeking CPA funding.

The ACC and the Town of Arlington was awarded the Natural Resource Damages Assessment and Restoration Program Grant in the amount of \$47,325. The Restoration project will create a native riverbank (riparian) habitat and improve stormwater quality. It is located along the Mystic River at the end of Park Street in the area that was directly impacted by oil released from a tanker truck that overturned nearby on Route 60 in May 2013. The project is expected to break-ground late spring 2017.

The Water Bodies Working Group has collected information for all the water bodies evaluated in support of this report. We recommend that other locations that have not been identified above as a priority for current Town Water Bodies funding should continue to be monitored, and recommendations for actions and funding should be reviewed on an annual basis.

Respectfully Submitted by:

Water Bodies Working Group of the Arlington Conservation Commission:

Susan Chapnick
Chuck Tirone
David White
Draft 4/28/17