



Mystic River Watershed Association
20 ACADEMY STREET, SUITE 203
ARLINGTON, MA 02476

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The Mystic River Watershed Association (MyRWA) is pleased to support House 21 to add the Silver Maple Forest to the Alewife Reservation. We hope this memo will provide useful background on this issue and on our reasons for supporting this bill.

INTRODUCTION

The Mystic River Watershed Association (MyRWA) is a grassroots organization dedicated to the protection and restoration of the Mystic River, its tributaries, and the related natural resources throughout the watershed's 22 communities. The Alewife Brook basin is a sub-watershed of the Mystic River watershed.

MyRWA has been an active participant in efforts to address water quality, flooding, open space and habitat issues in the Alewife area. MyRWA helped found the Tri-community Flooding Workgroup, consisting of representatives from Arlington, Belmont, Cambridge; conducted research and provided comments on combined sewer overflows throughout the watershed and statewide; submitted comments on development proposals at Discovery Park in Cambridge, the Silver Maple Forest (sometimes called the Belmont Uplands even though its highest point is 27 feet above sea level) and the Mugar property in Arlington; conducted extensive water quality monitoring in Alewife Brook and its tributaries; and participated in the public discussions on the Concord-Alewife rezoning in Cambridge.

The Alewife area has been extensively degraded by past development practices. It is burdened by serious flooding, poor water quality (including combined sewer overflows, or CSOs), and encroachments on the habitat and open space resources. Significant efforts have been made in recent years to begin restoration of the area, including the Tri-community Flooding Work Group, the Alewife Reservation Master Plan, and – farther back – the 1979 plan for the area. Cambridge and the MWRA are making major investments in sewer repairs and CSO separations, which will benefit the area's water quality. Two years ago a state-owned parking lot at Discovery Park was finally returned of to public use. The community has reason to hope that Alewife will become a cleaner, more attractive area in which to live, shop, work, and enjoy nature.

The Silver Maple Forest is a rare urban wild serving Cambridge, Belmont, Medford, Somerville, and Arlington, as well as other municipalities. A 299-unit development under Chapter 40B is now proposed for this site. Given the location of the Forest, the fragility of the local habitat, the current problems with flooding, poor water quality, sedimentation, and habitat fragmentation, development on this site will cause substantial environmental harm. State acquisition and permanent protection are clearly the best alternative.

The Silver Maple Forest consists of forest and wetlands that significantly enhance the value of the adjoining Alewife Reservation and that, if developed, will irretrievably diminish the habitat, aesthetic, and other values of the Reservation. Though it is surrounded by densely developed transportation, commercial and residential areas, the land remains a forest – an unusual urban forest. The affected communities offer many opportunities



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for development without damaging valuable and rare habitat. Our residents and future generations would be ill served if we fail to take action now to preserve this rare natural asset.

The Silver Maple Forest is located in the Little River, Little Pond, and Alewife Brook sub-watersheds, areas of special concern to MyRWA because of their important role in water quality, flooding, and future recreational uses. The poor water quality and flooding problems that plague Alewife now are the result of many poor land use planning decisions in the past. These decisions have not taken into account the flat topography of the area and the poor condition of much of the sewer infrastructure. Each decision about development can be portrayed as a minor contributor to the overall problems. The cumulative effects have been dramatic, however. It is clear that the area's wastewater infrastructure and capacity to control flooding are already inadequate, and the affected municipalities are just now beginning to deal with the high costs of past development decisions.

DESCRIPTION AND HISTORY

The Silver Maple Forest is located off Frontage Road (connecting Lake Street and Route 2) and Acorn Park Drive in the northeast corner of Belmont and the northwest corner of Cambridge and across Route 2 from Arlington. The property consists of 15.6 acres, with 12.9 acres in Belmont and 2.7 acres in Cambridge. Despite the "Uplands" misnomer, of the total area in Belmont, 3.4 acres are wetlands and 9.5 acres upland. In Cambridge, 1.2 acres are wetland; and 1.5 acres upland. Thus, 4.6 acres out of the total 15.6 acres are wetlands. The small hillock that is the principal buildable land is effectively an island surrounded by wetlands. The 100-foot wetland buffer and the 200-foot Little River riverfront area come right to the edge of the proposed development. The wetlands and riverfront area will be seriously damaged by the proposed development.

A 1903 map shows much more of the Silver Maple Forest as wetlands. The land used to be farmed. Over time, the area has been filled. In constructing Route 2 in the 1930s and later widening Route 2 in the 1960s, the former Massachusetts DPW relocated Little River, whose 200-foot riverfront area overlaps the Silver Maple Forest. The forest directly abuts DCR's 120-acre Alewife Reservation. The Reservation now consists of a narrow corridor located along Little Pond, Little River, and Alewife Brook. It starts in Belmont at Little Pond, extends through Cambridge, and borders on Alewife Brook within both Cambridge and Arlington. The Reservation is the only existing naturally forested area open to the public in Cambridge; it is only one of two or three such areas in Belmont and Arlington. It is accessible by bike and walking paths and by public transportation.

The Reservation was established by the Legislature in 1903 as an addition to the Metropolitan Park system planned by Charles Eliot and the office of Frederick Law Olmsted. The acquisition of the Silver Maple Forest by DCR would expand the Reservation and reverse the series of reductions and adverse impacts to the forest, wetlands, and water bodies comprising the Reservation over the years. Adding the Forest to the Reservation will reduce floods, preserve habitat, and strengthen a regional greenway, all priorities under the DCR June 2003 Alewife Master Plan.



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VALUES

Flood Storage: Flooding has become worse in the flat Alewife Watershed of Arlington, Cambridge, and Belmont because of the increase in the amount of impervious surfaces from commercial and residential development and roadway expansions. The area has experienced four major flood events in the past nine years. The Silver Maple Forest, with 15.6 acres of permeable soils and plant life, plays an important role in keeping the flooding from getting even worse.

The seriousness of this problem is underscored by the efforts the Alewife municipalities have made to combat it. The Tri-Community Task Force of Arlington, Belmont, Cambridge issued a preliminary report on flooding in June 2004. On January 10, 2005, the Arlington- Belmont- Cambridge Storm Water Flooding Board was established as a successor to the Task Force under an Environmental Joint Powers Agreement to continue to solve flooding problems.

FEMA will publish shortly its revised 100- and 500-year flood-plain map. The flood plain delineation is important. DEP's wetland regulations (a) protect portions of the flood plain for wildlife habit, and (b) require a developer to provide compensatory flood storage for all flood storage lost as a result of a proposed project. The compensatory storage must be located at the same elevations from which flood storage is being removed.

The Alewife Reservation and the Silver Maple Forest provide vital floodwater storage in the naturally pervious land and wetland areas. These functions help to ameliorate both flooding and water shortages in the adjacent area through the absorption of rain and snow melt and the slow release of groundwater in the soils.

However, if the Forest were to be developed, flooding would certainly get worse. DEP's Stormwater Management Standards are controls over peak discharges only and do not regulate large quantities of water over several days of rainfall.^[1] Moreover, the impact from the volume of water discharged over time is not fully compensated for because under DEP's Stormwater Policy loss of annual recharge to groundwater need only be minimized to the "maximum extent practicable."

The development of the Silver Maple Forest would also result in the loss of the evapotranspiration naturally occurring in the forest. It is not just the land itself that reduces downstream flooding through infiltration and wetland storage, but the existing vegetation as well. It is questionable whether a development with an engineered stormwater system can ever be designed or maintained to mimic natural soils and trees and plant life in this location.

Last, such development means a potential increase in pollutant loading, assuming standard urban stormwater runoff of zinc, lead and copper, unless careful attention is given to sediment removal and ongoing maintenance of deep hooded catch basins and other applicable best management practices.

Greenway: As demonstrated in the Alewife Master Plan, the Alewife Reservation, with improved access from the Alewife MBTA station and the Minuteman Bike Path as well as the bike path between Blanchard Road and the Alewife MBTA station, could provide a vital link to the existing urban greenway. This greenway connects Little River, Alewife Brook, and Mystic River to Boston Harbor to the east, and to the west, Clay Pit Pond, the McLean "Lone Tree" Meadow, Habitat (operated by the Massachusetts Audubon Society), Belmont's Rock Meadow Conservation Land, and the DCR managed Metropolitan State Open



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Space. By adding the Silver Maple Forest to the Alewife Reservation, DCR would be permanently extending the current limited corridor to facilitate bird watching, hiking, education and recreation for the large nearby urban/suburban population in Arlington, Cambridge, Medford, Somerville, and Belmont in addition to enhancing the value of the land as wildlife habitat.

Wildlife Habitat: The habitat resources of the Silver Maple Forest have been studied by environmental specialists coordinated by Friends of Alewife Reservation, community volunteers, and technical consultants hired by the landowner, O'Neill Properties. The Forest is an unusual upland forest of silver maples and a mixed wetland community including trees, shrubs, and other wetland plants providing habitat for a wide variety of wetland and upland species. Many species require not only the wetlands but also the uplands for successful breeding. Species that need both wetland and upland that have been sighted in the Alewife area include 3 species of mammals, 2 of reptile and 1 snake species and 12 species of birds, as well as amphibians. In addition, size and shape of this forest supports interior dwelling species of birds and mammals. The Alewife BioDiversity Study found over 80 species of birds including 45 nesting species and 19 mammals dependent on the area habitat. As Dr. David Morimoto states, "The unique wild nature of this place, with its complex mosaic of habitat types, is not replicated anywhere within the greater Boston area."

Examples of the neo-tropical migrant birds and resident avian species that have been sighted within and adjacent to the Silver Maple Forest include: screech owl, red tailed hawk, robin, catbird, hairy woodpecker, downy woodpecker, cedar waxwing, American goldfinch, belted kingfisher, great blue heron, and various aquatic species such as American black duck, mallard, hooded and common mergansers. Some of these species also breed here. Mammals such as beaver, muskrat, skunk, raccoon, chipmunk, otter, weasel, woodchuck, gray and red squirrel, and rabbit are likely residents according to habitat surveys.

The Alewife Master Plan for the entire Alewife Reservation cites 176 plants plus 7 invasives, 6 species of fish plus 2 invasives, 100 birds, 18 mammals plus 2 introduced, 4 reptiles, and 9 insect species.

Little Pond, wetlands, and adjacent uplands are vital to reptiles and amphibians. Spring peeper eggs have been found in vernal pools on the site so it may be assumed that green, wood and bull frogs are also likely to be present. Salamanders, garter snakes, and painted and snapping turtles have also been sighted in Little Pond.

Invasive plant species are also present in and near the Silver Maple Forest, including phragmites and loosestrife. Wetland restoration could lead to removal of these plants so common on disturbed wetlands and water bodies.

By preserving this site from development and restoring and expanding the wetland areas within and adjacent to the Silver Maple Forest, DCR will be recovering lost wetlands and insuring the health of existing wetlands. Conditions will be enhanced for blue backed herring and Alewives that come up Little River to spawn in Little Pond.

Education: Tufts University in connection with course work and as part of volunteer programs works extensively in the Mystic River Watershed to study water quality and undertake cleanups of the Alewife Brook and the Mystic Rive. Friends of Alewife Reservation is involving public school teachers in Cambridge to use the Reservation to study wildlife and vegetation in a natural upland/wetland area.



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COORDINATION WITH GOVERNMENT INITIATIVES

The Silver Maple Forest is in the heart of an area being addressed by a number of current and potential public and private efforts to improve the local environment. The values of these efforts will be diminished if the Forest site is developed. The following are some of these efforts:

- In accordance with the Alewife Master Plan, Bulfinch, as developer of Cambridge Discovery Park (the old Arthur D. Little property in Cambridge), with the support of Friends of Alewife Reservation, has agreed to participate in a Corporate Partners Wetlands Restoration Program under the CZM to restore 10 acres of degraded wetlands called the Central Marsh directly to the east of the Silver Maple Forest.
- Bulfinch has also agreed as part of the zoning process in Cambridge to raze the old Arthur D. Little buildings on the Little River side of Acorn Park Drive. This will increase open space along Little River, with substantial water quality, flooding, public access, and habitat benefits.
- As part of the CSO project, calling for the separation of sanitary waste and stormwater flows, the city of Cambridge and the MWRA propose to create a wetland basin nearby on the south side of Little River within the Reservation to accommodate stormwater flows.
- The wetlands at the perimeter of the Silver Maple Forest such as the ditch area along Frontage Road could be upgraded through reintroduction of natural drainage, removal of invasive species and introduction of native plants to restore wildlife habitat and wetland functions.
- In due course, the abandoned DCR skating rink site adjacent to the Silver Maple Forest on Route 2 could be restored and made part of the Alewife Reservation and serve to abate flooding and enhance wetland conditions.
- The town of Belmont, in its commitment to improve water quality, is proceeding with the long range rehabilitation of sanitary and storm sewers, prevention of infiltration/inflow, and removal of illegal connections in the Winn Brook neighborhood adjoining Little Pond (across from the Silver Maple Forest).

The above efforts combined with the Silver Maple Forest preservation and wetland restoration will improve natural drainage and natural plant life and wildlife in the entire Alewife Watershed.

An earlier Belmont Uplands Advisory Committee in its study of priorities for the best use of the Silver Maple Forest recommended that the land remain Open Space. The Belmont Open Space and Recreation Plan of January 2001 cited the land as a priority for acquisition as Open Space. Moreover, two years ago, the Belmont/Arlington Boards of Selectmen meeting in a joint session resolved, as a first priority, to preserve the Silver Maple Forest as open space.

CONSISTENCY WITH STATE INITIATIVES

Smart Growth: Preserving the Silver Maple Forest is consistent with the State Administration's Sustainable Development and Smart Growth Principles coordinated by the Massachusetts Office for Commonwealth Development and Executive Order 385. The town of Belmont is in the midst of efforts to develop housing on already built up sites in existing residential neighborhoods.

Massachusetts Water Policy 2004: Preserving the Silver Maple Forest is consistent with EOE's new Water Policy that promotes increased infiltration close to the place of origin of the rainfall and runoff. Most



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important, EOEA supports grant programs for acquisition of land to maintain filtration capability, to serve as recharge areas, and to maintain biological integrity.

CONCLUSION

MyRWA is working to preserve and enhance the Silver Maple Forest. We ask the Legislature to take the lead. The Commonwealth's acquisition of the land could also be facilitated through the use of charitable tax deductions and/or the transfer of the development rights to an already built-up site. If the communities work together, they can maximize benefits such as flooding mitigation, sanitary and stormwater pipe upgrade, and expansion of recreational and educational opportunities.

This is an opportune time. Three of the affected municipalities are cooperating under the Joint Powers Agreement. DCR is implementing the Alewife Master Plan; and Bulfinch is undertaking restoration of the Central Marsh. Cambridge and MWRA are working to establish the wetland basin for stormwater flows; Belmont is upgrading its stormwater/sanitary systems; and Bulfinch is correcting the drainage system across the old Arthur D. Little property.

The benefits to the Commonwealth and the nearby communities, as well as the Boston Metropolitan Region, include the following:

1. The restoration of the natural drainage in the Silver Maple Forest and surrounding area will mitigate the increasingly frequent flood events harmful to health and public safety.
2. The enhancement of the Alewife Reservation parkland for recreational and educational purposes will benefit the dense urban/suburban population living and working near the Reservation, and enhance the revitalization of the neighborhoods and commercial areas in the vicinity of the Alewife Reservation.
3. The preservation of the Silver Maple Forest will protect the diversity and health of wildlife populations.
4. The expansion of the Alewife Reservation with the addition of the Silver Maple Forest provides mitigation for the impacts to the Alewife Reservation caused by the proposed construction of the basin for stormwater flows as part of the effort by MWRA and Cambridge to eliminate CSOs.

[1] Developers may not exceed pre-development peak discharge rates for 2 and 10-year storm events, but the 100-year 24-hour storm event must only be evaluated to demonstrate that there will not be increased flooding impacts offsite.