

4

Environmental Inventory and Analysis

A. Topography, Geology, and Soils

Arlington is situated in the Coastal Plain of Eastern Massachusetts. Approximately 8 percent (286 acres) of Arlington's area is the surface water of bodies of water, including Spy Pond, Hill's Pond, Arlington Reservoir, Mill Brook, Alewife Brook, and the Mystic Lakes. The town lies on the western, or outer, geological edge of a broad, flat, floodplain known geologically as the Boston Basin (see Map 4-1).

Topography and Geology

Approximately one-third of the town (east of Arlington Center) is part of the Boston Basin, a fairly low and level land mass. The range of elevation in this section is from 10 to 40 feet above mean sea level; it is located along the Alewife Brook floodplain and extends to Spy Pond and the Lower Mystic Lake. Spy Pond is part of the headwaters of Alewife Brook. It feeds the brook through the Little River in Belmont, although the construction of Route 2 altered Spy Pond's historic relationship to the Little River.

Just beyond the western shores of the Lower Mystic Lake and Spy Pond is an unbroken ridge (elevation 49.2'), which is part of a terminal moraine. This ridge marks the beginning of Arlington's characteristic rocky knobs

and unsorted glacial rock masses. The western portion of Arlington is hilly and rocky, with elevations ranging from 100 to nearly 400 feet above sea level. This part of town marks the beginning of the Boston escarpment. Arlington's hills, which are remnants of ancient mountains, are divided by a valley carved by the action of the now-extinct Arlington River. Outcrops of igneous rock are evidence of an earlier mountain-building volcanic period. Mill Brook now flows in a west-to-east direction through this valley.

Arlington's topography bears distinct marks of the glacial period. As the glacier moved down from the north, rocks of various shapes and sizes were scoured from the mountains, pulled up and carried forward by the flow of ice. As the glacial period ended, masses of rocks were dropped in unsorted layers as the forward edge of ice melted. These formations are called terminal moraines, and an example may be seen on the southern slopes of Arlington Heights.

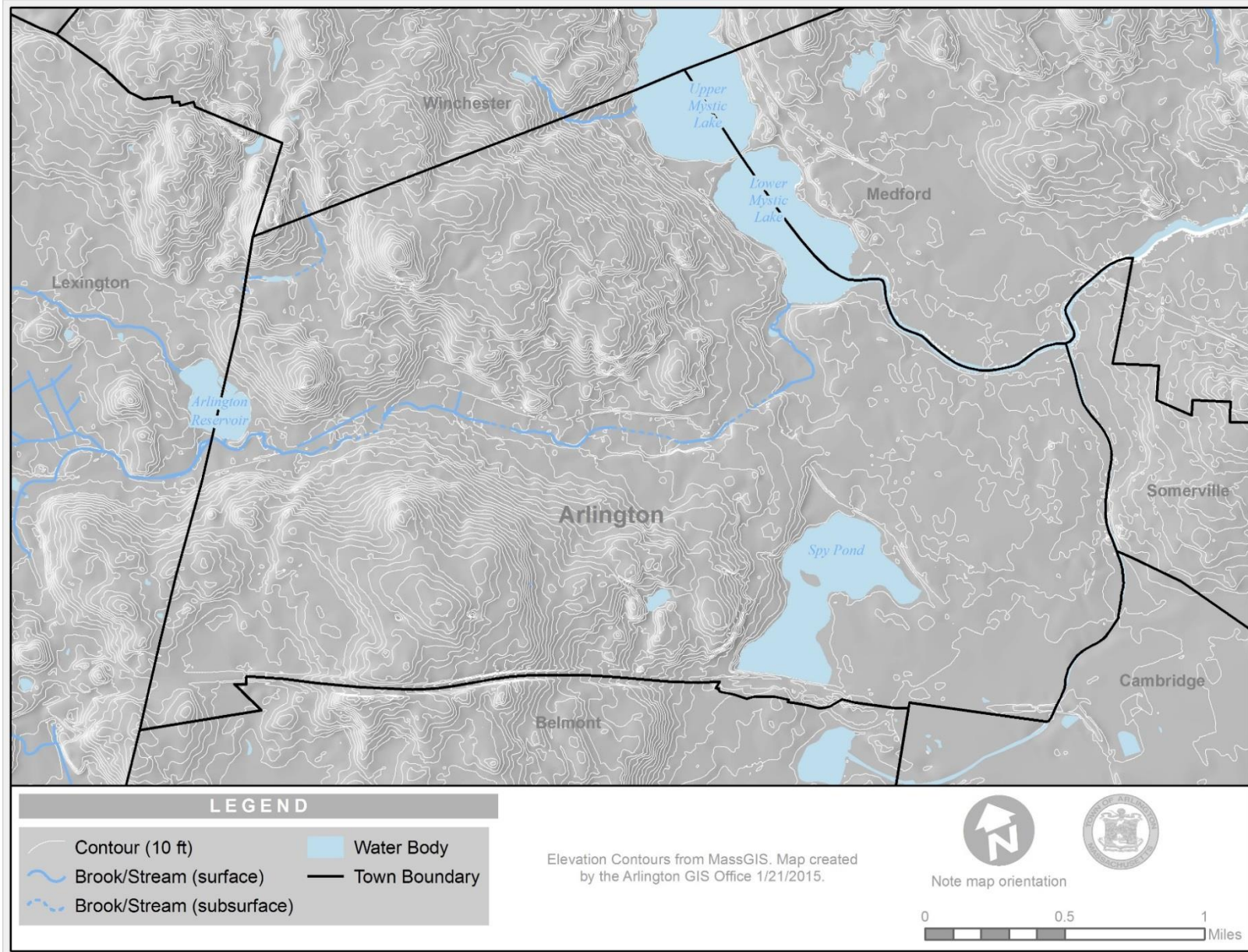
Soils

Most of the soils in Arlington are designated urban land complexes because they have been modified so they no longer retain their original properties. Arlington's most common soil, a Charlton-Hollis-Urban Land Complex, is located in western areas and is found on slopes of 3 to 5 percent. Charlton soils are well-drained, upland soils where the relief is affected by the bedrock. They are stony, with 60 inches or more of friable fine sandy loam (a silt-sand-clay mixture). Hollis soils are shallow (<20 in.), excessively drained soils on bedrock uplands. They are also friable fine sandy loam (adapted from McLaughlin 1994, 13).

The Newport-Urban Land Complex soil is also located in western areas of town, particularly the land west and northwest of Park Circle, lands east of Turkey Hill, and lands west of the Winchester Country Club. These soils have 3-15 percent slopes and tend to be silty loam.

East Arlington contains primarily a Merrimac-Urban Land Complex soil found on 0-8 percent slopes. Merrimac soils are excessively drained soils on glacial outwash plains and are sandy loams over a loose sand and gravel

Map 4-1. Topography at Ten-foot Intervals in and around Arlington



layer at 18-30 inches (adapted from McLaughlin 1994, 13). These soils contain approximately 75 percent urban land/disturbed soils. There are also some pockets of Sandy Unorthents and Unorthents wet substratum soils by the lakes, streams, and wet areas. Unorthents soils have "been excavated and/or deposited due to construction operations" (USDA Soil Conservation 1991, 27). Map 4-2 shows the location of Arlington's most prominent soils and special landscape features.

B. Landscape Character

Arlington has a rich variety of terrain and water bodies, but its current landscape character has been more affected by its location in the greater metropolitan Boston area than by its soil types or topographical and geological limitations. Even though much of Arlington is quite hilly, especially in the western area known as the Heights, these hills have not significantly affected development. They do offer valuable vistas of Boston and Cambridge, especially from Robbins Farm Park and Hattie Symmes Park on top of two of the highest hills (see Map 4-4).

Arlington's most common soils and topographical and geological characteristics pose little hindrance to potential development or redevelopment. The majority of buildable land has already been used for housing development, and very little land is available for other purposes, including open space and recreational use. Nevertheless, water resources, parks, and other recreational facilities are found in neighborhoods throughout the town. Only one significant parcel, the Mugar land in East Arlington, is still undeveloped, but it is largely wetland and has limited potential for extensive development of any kind.

C. Water Resources

Arlington's water resources have great scenic, recreational, and ecological value; they are not used for drinking water, because Arlington receives its drinking water from Massachusetts Water Resources Authority (MWRA).

All of Arlington's major water bodies are part of the Mystic River Watershed, which is part of the Boston Harbor River Basin. A small portion of the town, including one small wetland in the southwest corner, is in the Charles River Watershed. Map 4-3 shows Arlington's water resources, wetlands, and floodplains based on recent FEMA analysis.

Watersheds

As indicated on Map 4-3, over 90 percent of Arlington is in the Mystic River Watershed. The primary streams in this watershed are Mill Brook in the western upland sections and Alewife Brook along the eastern border with Somerville and Cambridge. A small area in the southwest section of town are the headwaters of Rock Meadow Brook, which is part of the Charles River watershed. Neither of these watersheds is used for water supply purposes.

Arlington has an active stormwater management program under the direction of the Town Engineer in the Department of Public Works. The Stormwater Awareness Series, which is open to Arlington residents and the general public, is designed to educate business owners and residents on stormwater and the impacts on runoff, water quality, flood control and prevention, erosion, and other stormwater related impacts within the Town of Arlington. Information is provided by stormwater professionals for the purpose of increasing awareness of these issues within the Town and to provide information for residents to help understand how the surrounding environment affects, and impacts, the local water resources and what can be done to reduce these impacts. The series is filmed by the local public access TV station and archived for future viewing.

The offices of the Mystic River Watershed Association (<http://mysticriver.org/>) are located in Arlington, and the organization has been actively involved with the town in a number of ways. One recent program has been the creation of demonstration rain gardens on public properties to manage stormwater runoff.

Surface Water

Surface water makes up roughly 8 percent (286 acres) of Arlington’s area (3,517.5 acres). The numerous water bodies make water resources a unique attribute of the town and its open space assets, compared to other metro-Boston communities (see Table 4-1). However, as in many Massachusetts communities, access to water bodies is limited, since shoreline in Arlington is predominantly in private ownership. Charles Eliot (1926) and others recognized the recreational, ecological, and visual importance of the town’s larger water bodies—Spy Pond, the Mystic Lakes, and the Arlington Reservoir. Even though much of the land bordering these water bodies has been lost to development, there are still significant opportunities for improving access to them.

Table 4-1. Water Resources in Arlington

Lakes and Ponds	Rivers and Streams
Arlington Reservoir	Alewife Brook
Hill’s Pond	Mill Brook
Lower Mystic Lake	Mystic River
Upper Mystic Lake	Reed’s Brook
Spy Pond	

According to the Department of Environmental Protection's (DEP) 314 CMR 4.00 (as most recently amended in December 2013), all Arlington water resources have a classification of B or better, indicating either the water body's current class or its goal classification. The DEP defines waters classified as B or better as water bodies that "are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation."¹

¹ See DEP Massachusetts Surface Water Quality Standards - 314 CMR 4.05(3)b).

Aquifer Recharge Areas

There are no existing or potential drinking water supply aquifers in Arlington. There are also to our knowledge no private drinking water wells in the town. As mentioned earlier, Arlington imports water from the MWRA for its domestic and commercial consumption; therefore, the issue of aquifer recharge is not relevant to Arlington.

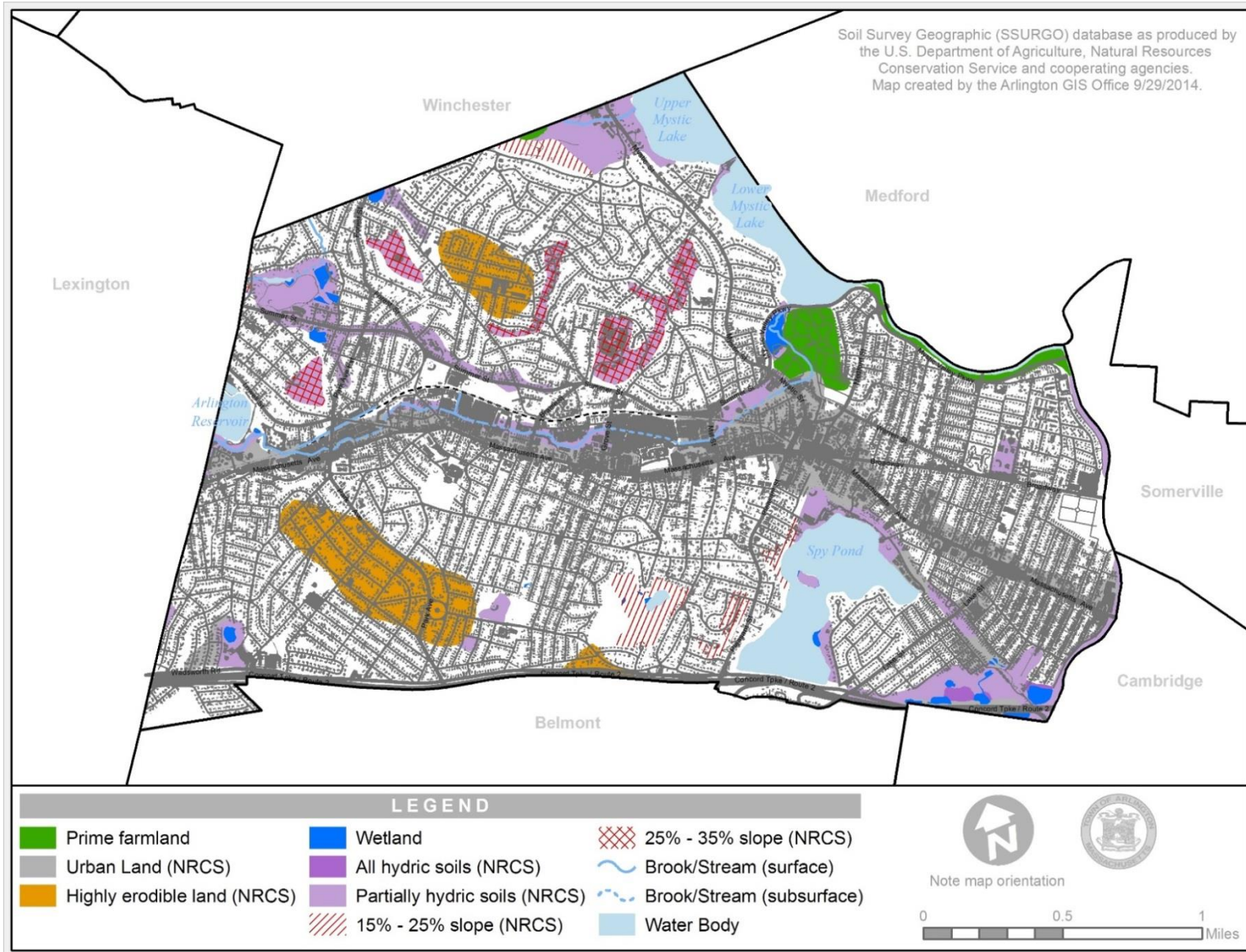
Flood Hazard Areas

Major flooding problems caused by severe storms have been experienced every few years. The areas around Reed’s Brook (northwest), Mill Brook (central corridor), and Alewife Brook and the so-called Mugar property wetlands in East Arlington were particularly affected. A recently proposed development project on the privately owned Mugar property is of particular concern because of the history of flooding in that part of town, and throughout the highly developed Cambridge-Belmont-Arlington region, which was part of the Great Swamp dating to the colonial period. The FEMA 100-year floodplain areas are shown in yellow on Map 4-3.

Wetlands

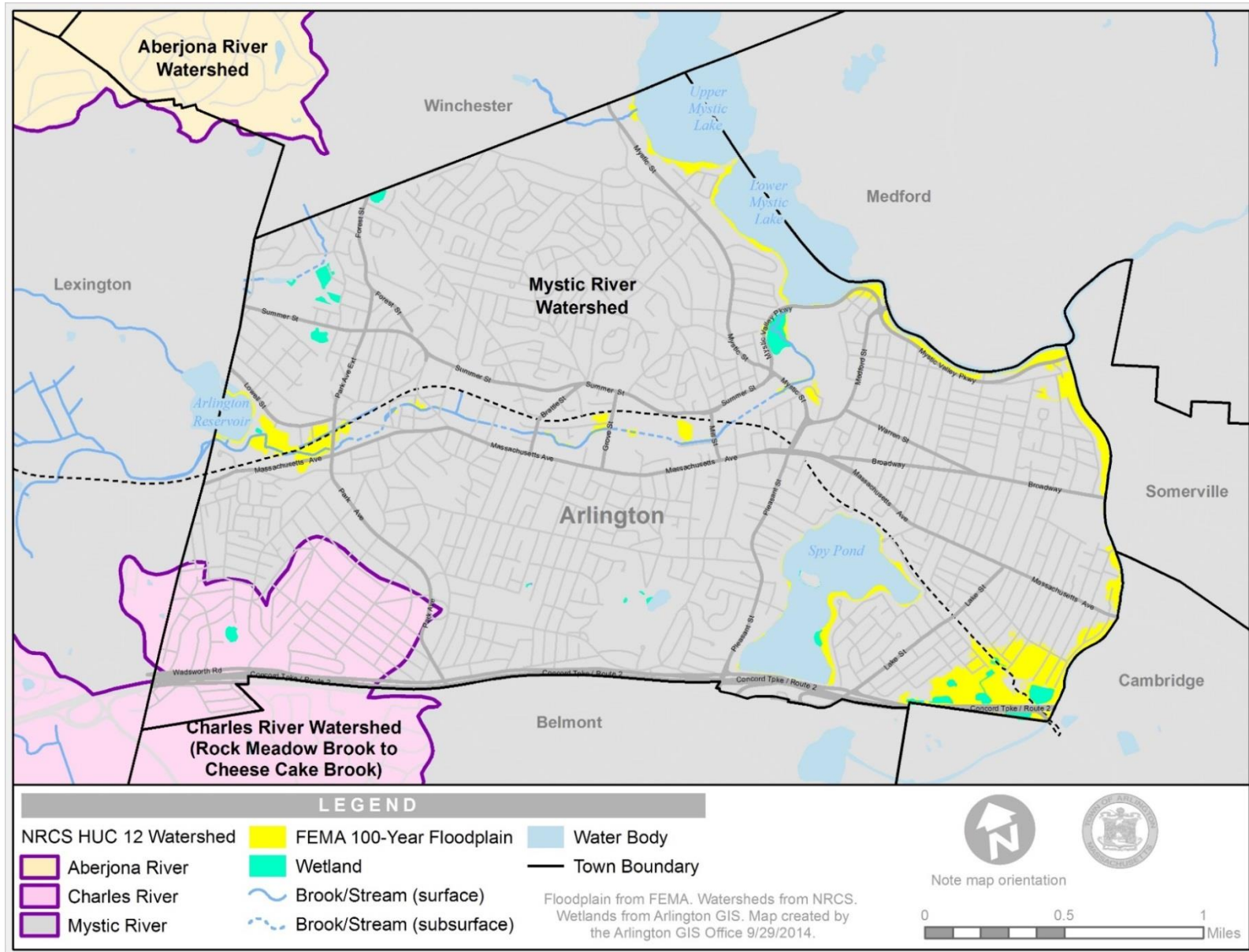
Arlington's wetlands provide opportunities for nature observation, as well as walking and bird watching in adjacent uplands. The largest wetland area in Arlington in Meadowbrook Park at the mouth of Mill Brook adjacent to the Lower Mystic Lake. Other wetland areas are scattered throughout town, as shown in dark blue on Map 4-2. As noted, the area of southeastern Arlington in and around the Mugar property is another significant wetland zone. Some of the wetland areas are used as open space and recreational resources, such as McClennen Park in the Reed's Brook area of northwestern Arlington, and Poet's Corner in the southwestern corner.

Map 4-2. Soils and Special Landscape Features



Town of Arlington Open Space and Recreation Plan, 2015-2022
4-Environmental Inventory and Analysis

Map 4-3. Water Resources, Wetlands, and Floodplains



Profiles of Key Water Resources

A brief profile of each water resource follows, including public access, recreational uses and, for some water bodies, wildlife uses. The Inventory of Lands of Conservation and Recreation Interest (Chapter 5) has further details on these resources.

Alewife Brook

Access: Much of the state-owned Department of Conservation and Recreation (DCR) Alewife Brook Reservation in East Arlington is accessible by foot; the reservation also encompasses areas in Cambridge and Belmont. Access points to walking paths along the brook can be found at the intersections of the brook and the following major roads: Massachusetts Avenue, Broadway, and Mystic Valley Parkway; access is also available at the end of Thorndike Street, where there is a large phragmites marsh adjacent to the brook. DCR's construction of the Alewife Brook Greenway linking the Minuteman Bikeway and Mystic Valley Parkway with a walking and bicycling path along the brook has increased access and enhanced landscaping in the area since its completion in 2013.

However, recently constructed and proposed residential and commercial developments in Arlington, Belmont, and Cambridge continue to threaten the hydrology and nature of the upper Alewife Brook drainage area. The threat of flooding conditions to wildlife habitat, native vegetation, and public access for passive recreation is very serious and has prompted much public comment and advocacy.

Recreational Use: Passive recreation is the primary use of Alewife Brook, notably walking and bird watching. The brook itself is not typically used for active recreation, although parts of the brook are navigable by canoe or kayak, when the water level is high enough.

Wildlife Use: Alewife Brook supports a small herring run, one of the few left in the Boston area. The brook and its banks attract many varieties of birds, small mammals, reptiles, and amphibians.

Arlington Reservoir

Access: The Arlington Reservoir, which is located in both Arlington and Lexington, is accessible from several streets and neighborhoods via paths to the walking trail around the water body. A parking lot on Lowell Street is accessible throughout the year. Another year-round parking lot abuts Hurd Field and Drake Village, a short walk from the Reservoir trail, the Minuteman Bikeway and Massachusetts Avenue. There is also the potential to connect the Reservoir to Arlington's Great Meadows in Lexington via walking trails along Munroe Brook and existing roadways. Another trail along Sickle Brook links the Reservoir to the Minuteman Bikeway in East Lexington.

The Massachusetts Department of Environmental Management (DEM) notified the town in 1998 that the earthen dam around the southern (Arlington) end of the Reservoir posed a high hazard to downstream residents and property. The initial remediation proposal called for the removal of trees and other vegetation and the rehabilitation of the dam. In response to active community involvement, a mitigation plan was developed over the next several years that met safety concerns yet also preserved the natural habitats. The dam was reinforced with an I-Wall barrier that protects against seepage and breaching while also preserving most of the trees.

The work, which also added a new spillway and bridge, was completed in 2006. The project won the Public Works Project of the Year for 2006 from the American Public Works Association and a state award. Beyond habitat concerns and scenic/passive recreational benefits from the walking path around the Reservoir, the initial, more drastic changes to the dam and the water level would have had important consequences for public access to the swimming area and beach.

Recreational Use: Arlington Reservoir is a manmade recreational and flood control reservoir. In the late 1970s the town reconstructed a sandy beach and swimming area within the Reservoir by building an earthen

impoundment to separate the swimming area from the rest of the Reservoir. A water filtration system keeps the swimming water clean. Residents from Arlington and surrounding communities use this area (called Reservoir Beach) in the summertime for swimming and other recreation. The Reservoir and its one-mile walking trail is used throughout the year for birding, cross-country running, fishing, jogging, and skating.

Wildlife Use: Arlington Reservoir supports the most diverse aquatic wildlife in town. Over 60 species of water birds and shorebirds have been found there among the more than 200 bird species recorded to date. The annual cycle of raising and lowering the water level enhances the variation of habitats that attract different species at different times of year.



Great Blue Heron at Arlington Reservoir. Courtesy of Open Space Committee.

Hill's Pond

Access: Hill's Pond in Menotomy Rocks Park is accessible by a path that begins at the Jason Street entrance and from other entry points on several streets around the park.

Recreational Use: Hill's Pond is a manmade pond that offers scenic recreational value. People use the pond for passive recreation, including fishing, ice skating, and bird watching.

Wildlife Use: This small pond is home to common inhabitants such as birds, sunfish, frogs, and insects.

Mill Brook

Access: Most of the area abutting Mill Brook is developed, and some of it is industrial, so access is limited. Several sections of the brook run through underground culverts. The public can access the brook at Meadowbrook Park, Mt. Pleasant Cemetery, Cooke's Hollow conservation area (all off Mystic Street near the brook's eastern end), Mill Street, Mill Brook Drive, Wellington Park (on Grove St.), Watermill Place and Old Schwamb Mill (on Mill Lane), Park Avenue, Hurd Field, and the Arlington Reservoir, where the brook begins. Town policy requires that all new developments or redevelopment abutting Mill Brook provide public access.

Recreational Use: Mill Brook has scenic and historic value in certain areas, but is not used for active recreation. Accessible areas are limited, but are used for walking and bird watching.

Mystic Lakes

Access: Access to the Mystic Lakes in Arlington is limited because most of the shore land is privately owned. Public access is available along Mystic Valley Parkway in Medford and Winchester, but parking on the Arlington side is available only by parking on side streets nearby.

Recreational Use: The Upper and Lower Mystic Lakes straddle the boundaries of Arlington, Winchester, and Medford. People use the lakes for swimming, boating, and fishing. A three-acre wooded waterfront conservation area in Arlington next to Upper Mystic Lake off Mystic Street (Route 3) near the Winchester town line, known as "Window-On-The-Mystic," is used for passive recreation. The Arlington Conservation Commission installed a bench on this shoreline so visitors may rest and enjoy the view of the lake and the preserved open space. Two private boat clubs are located on the Mystic Lakes. The Medford Boat Club is on DCR land and is accessible from both Arlington and Medford. It straddles land next to the dam that separates the upper and lower lakes. The Winchester Boat Club on Upper Mystic Lake is not accessible from Arlington.

Wildlife Use: The Mystic Lakes support a varied fish population, notably Alewife and Blueback Herring that migrate and spawn each spring. When DCR rebuilt the dam between the two lakes in 2013, it included a fish ladder that has increased the herring activity significantly. The lakes also support numbers of seasonal and migrating water birds. Bald Eagles have been seen regularly over the past several winters.

Mystic River

Access: Access to the Mystic River is available along the Arlington portion of the Department of Conservation and Recreation (DCR) parkways. The only parking area along the Arlington side of the river is near the intersection of Alewife Brook and Mystic Valley Parkway at the northern end of the new Alewife Brook Greenway.

Recreational Use: The Mystic River is used for boating, fishing, bird watching, and appreciation of nature in an urban area. Along its banks, many people enjoy picnicking, walking, and dog walking.

Wildlife Use: The Mystic River supports a small herring run of both Alewife and Blueback Herring. The river is an important habitat for many species of birds, and an over-wintering area for waterfowl, because its water current usually prevents it from freezing completely.

Spy Pond

Access: Spy Pond is accessible to the public at several points, via streets that lead to the pond and at Spy Pond Park on the northeastern shore. Access to the pond also exists along a paved path on its southern shore, adjacent to Route 2. The Spy Pond Committee of Vision 2020, with assistance from the Appalachian Mountain Club Trail Team, has carried out major rehabilitation work on that path, including building steps at access points, removing invasive plants, and planting native vegetation.

Recreational Use: Fishing, boating, bird watching, and skating are popular on and around Spy Pond. The Arlington Boys and Girls Club, located on the northeastern shore, uses Spy Pond for boating in the summer months. A major landscape renovation of the park land was implemented in 2005 through the Park and Recreation Commission. In addition, the Town received a grant from the Massachusetts Department of Environmental Management (DEM) for a Lake and Pond Watershed Restoration Project, which incorporated innovative and comprehensive storm water management measures in an effort to restore this urban pond to recreational usability.

Wildlife Use: Spy Pond supports a limited fish population, and in the fall and spring the pond is an important resting and feeding area for migrating birds. Throughout the year Canada geese, mallard ducks, and mute swans are found along the shores, and more than 120 permanent and migrating species have been documented.

D. Vegetation

Arlington's vegetation consists of a mixture of native and introduced species. Little is known about the town's pre-Colonial era vegetation, since Arlington was clear-cut in the 1600s (McLaughlin 1994) when much of the area was farmed, so most of the existing vegetation is second or third growth. An in-depth, townwide survey of flora found in Arlington has not been undertaken, but a major study of vegetative communities in

Arlington's Great Meadows was commissioned by the Arlington Conservation Commission and completed in the spring of 2001 (see Clark 2001). The Friends of Menotomy Rocks Park has surveyed the vegetation in that park, and the Town now has a Tree Committee that is primarily concerned with protection and replacement of street trees.

Woodland Areas

A few small woodlands in Arlington provide peaceful areas for passive recreational activities, walking and nature observation, and are second-growth reminders of more heavily wooded areas or forests of the past. Arlington's wooded areas include Menotomy Rocks Park, Turkey Hill, Mount Gilboa, Arlington Reservoir, a portion of the Symmes property, and the Crusher Lot at the Ottoson Middle School. All of Arlington's woodlands have significant overstories, which do not allow extensive shrub growth. Species typical of an Oak-Hickory forest dominate the woodland areas, including White Ash, Black Oak, Red Oak, White Oak, Scarlet Oak, Hophornbeam, Bitternut Hickory, Shagbark Hickory, White Pine, and Sassafras. These areas also contain species common to disturbed soils, including Staghorn Sumac, Grey Birch, and Paper Birch. Some woodland communities also include Sugar Maple, Black Cherry, and Basswood (Linden).

The native shrubs and plants found in Arlington woodlands are typical of those found in other Boston Basin areas: Blueberry, Currant, Dangleberry, Deerberry, Maple Leaf Viburnum, Pipsissewa, Whorled Loosestrife, Sarsaparilla, and False Solomon's Seal.

Nonnative species that have infiltrated Arlington woodland areas include Norway Maple, Tree-of-Heaven (Ailanthus), Sycamore Maple, European Mountain Ash, and Cherry Cultivars. Nonnative shrubs include Common Buckthorn, European Buckthorn, Forsythia, Winged Euonymus, some Honeysuckles, Multiflora Rose, Oriental Bittersweet, Barberry, and Japanese Knotweed.

Wetland Areas

Arlington has a number of marshes, ponds, streams, rivers, and lakes containing trees such as Green Ash, Silver Maple, Red Maple, Ashleaf Maple, Cottonwood and Willow. Cattail, Silky Dogwood, Red Osier Dogwood, Buttonbush, and the pervasive Purple Loosestrife and Phragmites are also key constituents in these areas. Willow trees, which grow in wet soils, line the edge of Spy Pond, Thorndike Field, and Arlington Reservoir. Reed pads and aquatic weeds are found in and along the edges of the watercourses, inland marshes, Mystic Lakes, and Spy Pond.



Wetlands in Menotomy Rocks Park. Courtesy of Open Space Committee.

Landscaped and Mowed Areas

Arlington contains many landscaped and mowed parks and reservations that are accessible for sporting activities, sledding, picnicking, strolling, relaxation, and scenic viewing. Robbins Farm, Town Hall Garden, Poets Corner, Hibbert Street Playground, Thorndike Field, Magnolia Field, and McClennen Park are some of these areas. Given the suburban character of the town, the primary vegetation found in its parks and reservations is a variety of deciduous and coniferous trees and cultivated shrubs and grasses.

In mowed areas, a variety of herbs and wildflowers grow naturally. Chicory, Yarrow, Burdock, Clover, All-heal, Plantain, and Tansy are among the plants that have managed to take root amidst the grasses. Nonnative Japanese Knotweed often invades paved or mowed areas, and is especially prevalent along the Minuteman Bikeway.

Tree plantings in parks and reservations include Alder, Cedar, Hawthorn, Metasequoia, Lombardy Poplar, Sycamore, Dogwood, and flowering ornamentals. Arlington's streets are lined with several species of maples and oaks, Sycamore, Basswood (Linden), and Ash, among other trees.

The use of native plantings in Arlington has gained ground through the efforts of the Arlington Conservation Commission and its native plant list, and through the policies of the Town Department of Public Works to use native trees and plants in its own work.

Rare, Threatened, or Endangered Species

Currently six species of vascular plants are listed as threatened (T) or endangered (E) on the Massachusetts Endangered Species List (see Table 4-2). Threatened species, as defined by the Massachusetts Division of Fisheries and Wildlife, "are native species which are likely to become

endangered in the foreseeable future, or which are declining or rare as determined by biological research and inventory" (321 CMR 10.03(6)(b)).

Table 4-2. Rare, Threatened, or Endangered Plant Species

Taxonomic Group	Scientific Name	Common Name	MESA Status	Most Recent Observation
Vascular Plant	<i>Aristida purpurascens</i>	Purple Needlegrass	T	1913
Vascular Plant	<i>Cyperus engelmannii</i>	Engelmann's Umbrella-sedge	T	2010
Vascular Plant	<i>Sagittaria montevidensis</i> ssp. <i>spongiosa</i>	Estuary Arrowhead	E	1870
Vascular Plant	<i>Houstonia longifolia</i> var. <i>longifolia</i>	Long-leaved Bluet	E	1898
Vascular Plant	<i>Galium boreale</i>	Northern Bedstraw	E	1890
Vascular Plant	<i>Asclepias verticillata</i>	Linear-leaved Milkweed	T	1854

Source: <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/town-species-viewer.html>

E. Fisheries and Wildlife

Although there are few areas for wildlife to thrive in Arlington's urban setting, the town still has a good mixture of fish and other wildlife species. Arlingtonians value the town's natural areas, and protection of wildlife is an important aspect of preserving those open spaces and natural corridors.

Fauna, in General

The variety of fauna in Arlington is linked directly to the quantity, quality, and diversity of soils, water, and vegetation, but their relative abundance is also constrained by human activity. Thus, maintenance and regulation of the use of certain areas within open spaces is crucial to Arlington's ability to enhance, preserve, and enjoy its living resources.

Currently, there are few up-to-date inventories of Arlington's fauna. Birds are the best documented species, due to the expertise of local observers and the relative ease with which they can be documented. The Menotomy Bird Club maintains an informative website, and bird lists have been compiled by volunteers for the Arlington Reservoir, Menotomy Rocks Park, McClennen Park, and Spy Pond.

In general, what is known about birds probably represents most of the fauna in town; that is, where proper habitat exists, there are pockets of wildlife that have adapted to or tolerate the changes of the last three centuries. However, some areas that appear to be natural are not prime wildlife habitat and require active management. The majority of Arlington's wetlands are good examples of these poor habitat areas, because of the large stands of introduced Phragmites reed and Purple Loosestrife that have thrived, compared to native cattails, sedges, and grasses. In addition, most wildlife does not thrive in fragmented, small plots, and each wildlife species requires a certain minimal sized area. Even paths or roads through certain habitats can change the species' assemblage.

The presence and distribution of major fauna groups other than birds, such as invertebrates, reptiles, amphibians, and mammals, are less well known. Most local native fauna have declined over the past century, as has wildlife across all of urban North America. However, because of its well-planted residential areas, existing undeveloped open spaces, small wildlife corridors, and the close proximity of open space in neighboring towns, Arlington hosts a surprising array of wildlife for a town of its size and development.

Invertebrates

Thousands of species of invertebrates inhabit Arlington, but none have been well surveyed. Because these animals are the part of the fauna that binds ecosystems together, they are vital to a viable ecosystem. The most common invertebrates are insects. Arlington's fauna range from the obvious butterflies (e.g., Monarch, Viceroy, Cabbage Butterfly, and Black and Tiger Swallowtails), to the dragonflies, to the many other pest and nonpest species. The abundance and distribution of common insects in Arlington is unknown. Numbers of species of spiders, crustacea, and mollusca are also unknown.

Fishes

The Mystic River watershed has very few species of fishes; biologists have documented only 29 species (23 native and 6 introduced or stocked; Hartel, Halliwell, and Launer 2002). Due to the geology, the relative small size of the Mystic drainage basin, and the changes in the quality of the town's streams, the Arlington area may now have fewer species. While not listed state-wide, two species of river herring have declined drastically in the Cambridge/Arlington area. They currently migrate in small numbers in Little River and the lower parts of Mill Brook from the Mystic River. The Mystic River Watershed Association (MyRWA) has been active in promoting enhancement of the passage of migrating native anadromous herrings wherever they have potential access in the watershed.

There is a limited amount of sport and ice fishing in Arlington's major water bodies. Large Carp, Bluegill, and Pumpkinseed Sunfish are common, and even 2-3 pound Largemouth Bass appear occasionally. Spy Pond was first stocked as early as 1918. The infertile hybrid tiger-musky was later introduced into Spy Pond as a trophy fish and as biological control for overpopulated sunfishes.

Reptiles and Amphibians

Because of the secretive nature of reptiles and amphibians, little is known about their occurrence in Arlington. The common species that exist in

populated areas can easily be found in Arlington: Eastern Red-backed Salamander, Bullfrog, Green Frog, Garter Snake, Snapping Turtle, and Painted Turtle.

Birds

Over the past 25 years, careful observers have recorded nearly 240 species of birds in and around Arlington, including more than 60 breeding species. The most abundant are those that have adapted to urban habitats. The European Starling, Rock Dove (Pigeon), and House Sparrow, which were introduced in the 1800s, are very numerous. Common breeding birds found year round in backyards, small wooded areas, and vegetated parks in Arlington are Northern Cardinal, Blue Jay, Tufted Titmouse, Black-capped Chickadee, Goldfinch, White-breasted Nuthatch, Northern Mockingbird, Downy Woodpecker, House Finch, American Robin, and Mourning Dove.

Species such as Northern Flicker, Chimney Swift, Eastern Kingbird, Great Crested Flycatcher, House Wren, Gray Catbird, Northern Oriole, and Red-tailed Hawk breed in Arlington, but generally migrate south for the winter. Most of these species are insect eaters, consuming thousands of insects



Menotomy Bird Club on an outing. Credit: Menotomy Bird Club

and worms over the summer season.

Arlington's wet open spaces and ponds attract large numbers of birds, especially during migration. More than 25 species of ducks visit Spy Pond, the Mystic Lakes, and Arlington Reservoir; the most spectacular and common are American Wigeon, Hooded, Common, and Red-breasted Merganser, Ring-necked Duck, Wood Duck, Northern Shoveler, and Ruddy Duck. Also common are Mallard Duck, Black Duck, Canada Geese, and Mute Swans.

A dozen species of sandpipers and plovers can be found at the water's edge, especially around the flats at Arlington Reservoir and Hill's Pond. All of these species require relatively clean aquatic habitat with abundant prey items. Spotted, Least, Pectoral, Semi-palmated and Solitary Sandpipers, along with Greater and Lesser Yellowlegs, are found regularly. Great Blue and Black-crowned Night Herons are quite common.

More than 50 species, many of which require open meadow or edge, nest at Arlington's Great Meadows. American Woodcock, Common Snipe, Northern Harrier, Ring-necked Pheasant, Marsh Wren, and other meadow birds are some of the less common birds that can be found there (Andrews et al. 1993; Clark 2001).

Of the 237 species of birds reported in Arlington, more than 40 species are new to the area since the 193 species reported in the 1996 Arlington Open Space Plan, which was based on the bird list of Andrews et al. (1993). Recent additions include: Snowy Egret, Glossy Ibis, Tricolored Heron, Baird's Sandpiper, Short-billed Dowitcher, Northern Goshawk, Philadelphia Vireo, Horned Lark, Pileated Woodpecker, Grasshopper Sparrow, Monk Parakeet, White-fronted Goose, and Leach's Storm Petrel.

A number of locally uncommon or unusual birds are found in and around Arlington's open spaces and water bodies. These species may not be listed officially as rare, but they form a special part of the very urban nature of Arlington and Greater Boston. Such species include the Bald Eagle, Wild Turkey, Great Cormorant, Green Heron, European Wigeon, Canvasback,

Woodcock, Golden Plover, Pectoral Sandpiper, two species of Cuckoos, Red-bellied and Pileated Woodpeckers, all six species of local swallows, numerous warblers species, Bobolink, and Orchard Oriole. These species may be found in Arlington because of the availability of appropriate habitat, such as the large Mystic Lakes, the mudflats of the Reservoir, the wet meadows at Great Meadows, or the mature trees at Menotomy Rocks Park.

Mammals

Many of the typical mammals that survive and sometimes even thrive in urban settings appear in all areas of Arlington, including Virginia Opossum, Raccoon, Striped Skunk, Gray Squirrel, House Mouse, and Norway Rat. Other species are found less frequently, such as Northern Short-tailed Shrew, Little Brown Bat, Eastern Chipmunk, White-footed Mouse, and Eastern Cottontail. Certain species may be common but are found only in restricted habitats, such as Muskrat in aquatic areas, Meadow Vole in open meadows and Red-backed Vole in wooded areas. Larger mammals are generally absent from Arlington, although White-tailed Deer, Red Fox, Coyote, Fisher Cat, and Woodchuck are seen regularly. Several coyote dens have been reported in different parts of town (Clark 2001).

Rare, Threatened or Endangered Species

There are few federal- or state-listed threatened (T), endangered (E), or special concern (SC) species in Arlington (Table 4-3). One bird—the Golden-winged Warbler—is listed as endangered.² Massachusetts Natural Heritage & Endangered Species Program Town Species Viewer, 2014. The Mystic Valley Amphipod *Crangonyx aberans*, is known from Great Meadows and possibly other water bodies (Smith 1983; 1991). The Bridle Shiner *Notropis bifrenatus* is found, or was known from, the Mystic River just east of Arlington and might have occurred in Arlington in the past. Arlington also has breeding populations of the uncommon Black-billed

² Massachusetts Natural Heritage & Endangered Species Program Town Species Viewer, 2014.

Cuckoo and Orchard Oriole. Other state-listed species, such as Bald Eagle, Peregrine Falcon, Northern Harrier and American Bittern, are also recorded occasionally but are not known to breed in Arlington (Andrews 1993; Viet and Peterson 1993). No state or federally listed fishes or mammals have been found in Arlington.

Table 4-3. Rare, Threatened, or Endangered Fisheries and Wildlife Species

Taxonomic Group	Scientific Name	Common Name	MESA Status	Most Recent Observation
Amphibian	Ambystoma laterale	Blue-spotted Salamander	SC	1895
Amphibian	Ambystoma opacum	Marbled Salamander	T	Historic
Beetle	Cicindela duodecimguttata	Twelve-spotted Tiger Beetle	SC	1923
Beetle	Cicindela rufiventris hentzii	Eastern Red-bellied Tiger Beetle	T	1930
Bird	Circus cyaneus	Northern Harrier	T	1879
Bird	Vermivora chrysoptera	Golden-winged Warbler	E	1874
Butterfly / Moth	Eacles imperialis	Imperial Moth	T	1903
Reptile	Glyptemys insculpta	Wood Turtle	SC	1898

Source: <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/town-species-viewer.html>

Wildlife Corridors

Natural corridors that connect two or more habitat areas allow the free movement of wildlife. In densely populated communities such as Arlington,

wildlife may be forced to use train tracks, rail trails, bike paths or power lines as corridors, as well as streams, rivers, undeveloped wetlands and riparian buffers.

Due to its proximity to many open space parcels, Mill Brook, and other water bodies in Arlington, the Minuteman Bikeway forms an important spine of habitat movement. It runs roughly west to east from the northwest portion of Arlington near the Arlington Reservoir to the southeast corner and Spy Pond (the area of BioMap Core Habitat and Priority Habitat of Rare Species in Arlington). Open space access from the bikeway near Buzzell Field leads to Mt. Pleasant Cemetery, through Meadowbrook Park, and into the Lower Mystic Lake. An additional habitat corridor is formed to the north along the banks of the Lower Mystic Lake, which then leads to the Upper Mystic Lake and into Winchester. To the south the habitat corridor continues with the Minuteman Bikeway leading into Cambridge, with links to the Alewife Brook Reservation on both sides of the brook. Much wildlife activity has been observed at the Arlington Reservoir along the Munroe Brook toward Lexington, as well as in neighborhoods between wooded parcels such as near the Symmes Hospital site and Turkey Hill.

F. Scenic Resources and Unique Environments

Arlington's scenic areas contribute to the character of Arlington and remain cherished by town residents and visitors. Fortunately, the town's zoning bylaws protect most of these significant areas. Some of Arlington's unique natural and historical resources and features are shown in Map 4-4.

Situated in the Mill Brook Valley (the site of a major glacial river at the end of the Ice Age), Arlington is a landscape of many steep hills that provide scenic vistas both throughout town and into Boston and neighboring communities. Most streets are tree-lined, making Arlington feel less urban than neighboring Cambridge or Somerville.

With houses dating back to the eighteenth century, Arlington retains some of its colonial roots. Perhaps the town's biggest claim on American history is its role at the dawn of the American Revolutionary War, in the events of April 19, 1775, when Arlington (then known as Menotomy) saw some of the fiercest fighting between the British troops and the Minutemen all along Massachusetts Avenue between Lexington and Cambridge. The area is now designated the Battle Road Scenic Byway and features numerous historic markers.

Scenic Landscapes

Views of Boston are available from vantage points atop the town's many hills on both sides of the Mill Brook Valley (Robbins Farm Park/Eastern Ave., Route 2 East, Mount Gilboa, Jason Heights, Turkey Hill, former Symmes Hospital property). The Robbins Farm playground area has such a good view of Boston that on July 4th hundreds of people gather on this steep hillside to view the Esplanade Fireworks — 8 miles away!

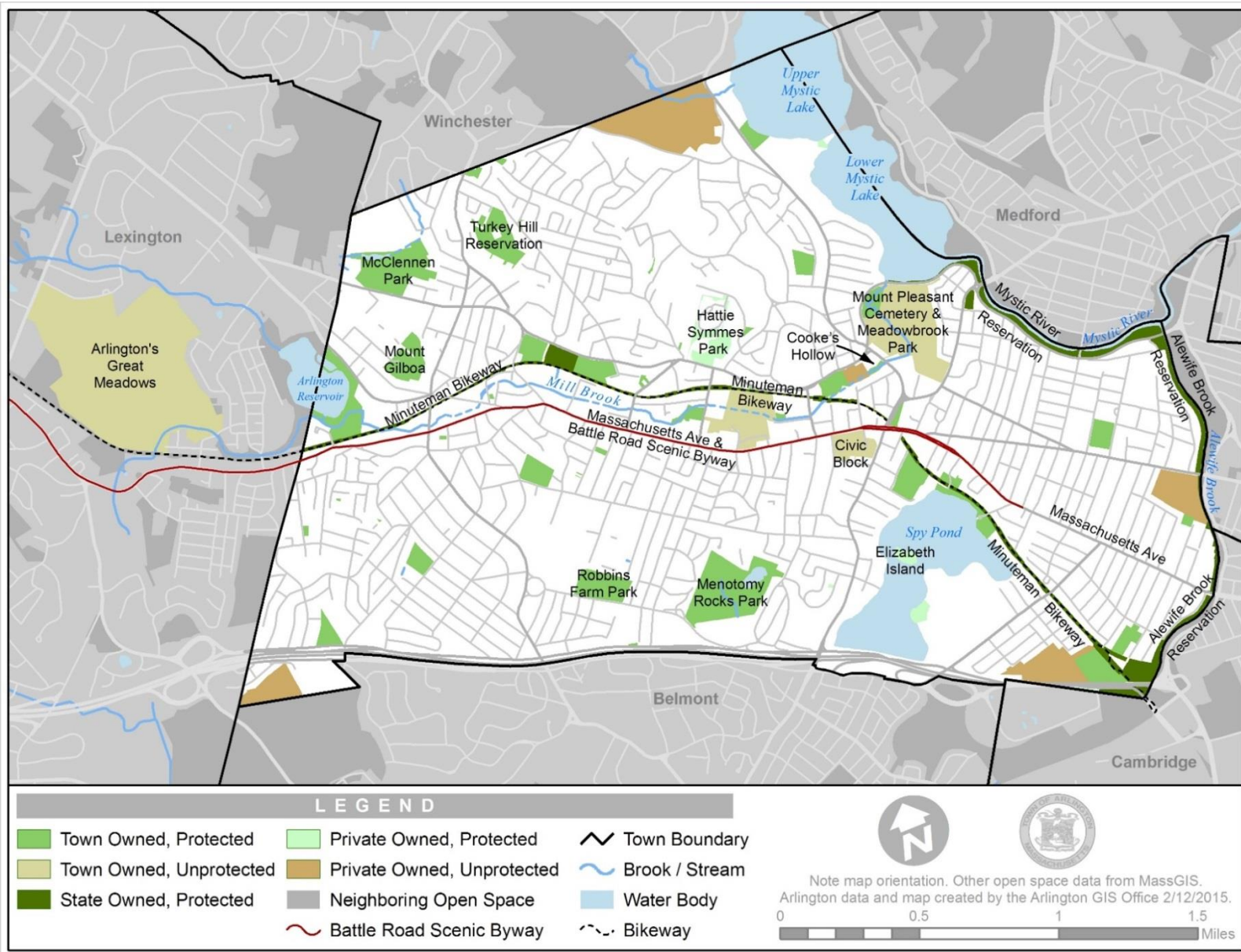
The Winfield Robbins Memorial Garden, enclosed by a wall as part of the Town Hall Civic Block, features a brick walkway through a formal garden of flowering trees and shrubs (designed by Olmsted Brothers) and a statue of a Native American (called "Menotomy Indian Hunter") by Cyrus E. Dallin, the famous sculptor who lived and worked in Arlington.

Views of the Mystic Lakes are seen most easily from Arlington at the Window-on-the-Mystic, a three-acre conservation site off Route 3, which is Arlington's only public waterfront on the Upper Lake. A bench has been provided by the Arlington Conservation Commission. Mt. Pleasant Cemetery also offers pleasing views of the Mystic Lakes.

Mystic River views are best from areas along the Mystic Valley Parkway (DCR land).

Spy Pond can be viewed from a walking path along the border of Route 2, from the Minuteman Bikeway, and from the recreational areas along the shore at Spy Pond Park.

Map 4-4. Unique Resources and Features in Arlington



Mill Brook forms the central spine of Arlington and is visible from numerous locations, including the Arlington Reservoir walking trail, the Minuteman Bikeway, Cooke's Hollow conservation land on Mystic Street, Mt. Pleasant Cemetery, and other pockets of unculverted stretches throughout the valley. Cooke's Hollow is the location of Arlington's only waterfall and was the site of the first grist mill dating to the 1630s.

Alewife Brook can be viewed from the Alewife Brook Parkway and from several neighborhoods in East Arlington.

Arlington Reservoir is reached from its beach area on Lowell Street, the walking trail around the reservoir, and the Mount Gilboa hillside. Parking is also available on the Massachusetts Avenue side next to the Drake Village elderly housing complex and Hurd Field, with access available by crossing the field.

Mount Gilboa and Menotomy Rocks Park have glacial rock formations and woodlands.

Arlington's Great Meadows is reached from the Minuteman Bikeway, and offers one of the most scenic areas along the bikeway. This 183-acre site is owned by Arlington, but it is located entirely within Lexington's borders.

Views of historic houses and buildings and their surrounding open space include the Jason Russell House (situated at Mass Ave. and Jason St., on a large landscaped lot), the Jefferson Cutter House (situated on Whittemore Park in Arlington Center), the Old Schwamb Mill complex (situated on Mill Lane in Arlington Heights), and the Whittemore-Robbins House (behind the Robbins Library in Arlington Center).

The Minuteman Bikeway is scenic because of landscaping, converted railroad bridges, historic landmarks, (e.g., Jefferson Cutter House), and abutting open space (e.g., Spy Pond Park playground, Hurd Field, Great Meadows). The Minuteman Bikeway has become one of the most used bicycle/recreational trails in the country, according to the Rails-to-Trails Conservancy, and helps to sustain a sense of community in the town.

Mount Pleasant Cemetery, the town's public cemetery, adds green open space near Arlington Center. Trees and rolling hills and many historic markers provide picturesque scenery and complement adjacent open space in Meadowbrook Park, which is protected by the Conservation Commission. Mill Brook runs through the cemetery and park and empties into the Lower Mystic Lake, creating wetlands that are home to many bird species.



Cleaning up around Mill Brook in Meadowbrook Park. Credit: David White

The former Symmes Hospital property was acquired by the town in early 2001 to control its redevelopment and to protect public access to this hilltop following construction. After a lengthy public process and delays associated with the downturn in the economy in 2008, construction of a large residential condominium and apartment project and a separate

assisted living facility was finally completed in 2014. The project also included two new public parks at the top of the steep hill and woodlands totaling nearly 9 acres, all of which is protected by a conservation restriction and is maintained by the development association. Hattie Symmes Park at the very top of the hill offers expansive views of Boston.

Major Characteristic or Unusual Geologic Features

Arlington is geologically interesting because of its dramatic changes of elevation and its hilly and rocky contours. The eastern part of town has elevations close to sea level, whereas elevations in western Arlington are often as high as 350 to 400 feet above sea level. Almost all the hills, including Turkey Hill, Mount Gilboa, Symmes, and Menotomy Rocks, contain rock formations left behind by melting glaciers after the Ice Age that are suitable for light hiking or rock climbing.

Areas of Critical Environmental Concern

According to the Massachusetts Areas of Critical Environmental Concern (ACEC) program, administered by the Executive Office of Environmental Affairs, Arlington does not have any areas of critical environmental concern.

Cultural, Archaeological, and Historic Resources

Arlington has many cultural and historic areas that attract both residents and visitors. Populated by many people in the visual, print, performing arts, and related fields, the town also has many organizations concerned with maintaining and enhancing its cultural and historic attractions and heritage.

Performing and Visual Arts

In Arlington Center, the renovated Regent Theater and the Arlington Friends of the Drama present live theater and other performance programs. In East Arlington, the popular Capitol Theater shows feature films and has an old-fashioned concession counter.

The Arlington Center for the Arts, located at the former Gibbs Junior High School in East Arlington, is a vibrant center with studios for visual, print, and performing artists, as well as a resident theater (Arlington Children's Theater). This center offers arts classes for adults and children, and vacation/summer camp programs, as well as regular exhibits and special programs for the community. Open studio exhibits, literary readings, crafts, and drama and musical offerings make the center an exciting place for people of all ages

Throughout Arlington, churches, libraries, and other halls (Robbins Memorial Town Hall Auditorium, Arlington High School Lowe Auditorium) provide rehearsal and performance space for dance, choral, and other performing arts groups.

Arlington Public Art (APA) is a new collaboration of the Arlington Center for the Arts (ACA) and Vision 2020. The group works with the schools and other town departments to engage the community and enrich public spaces through original public art that celebrates and adds to Arlington's unique historic, cultural, natural, and human resources.

Festivals, Fairs, and Parades

The Town Recreation Department sponsors carnivals and other special programs for young children in the summer and winter.

East Arlington celebrates the Feast of the East, a springtime street fair sponsored by restaurants, art galleries, and other businesses in that neighborhood and business district.

In mid-September during Town Day, Arlington commemorates the birthday of Uncle Sam (Samuel Wilson), supplier to the U.S. Army, who was born in Arlington on September 13, 1766. This event includes a street fair, picnic, and fireworks.

Arlington hosts its own Patriot's Day Parade, (one of the largest local parades in Massachusetts), complete with appearances from "William

Dawes” and “Paul Revere” in an annual re-creation of their famous ride in 1775. A Veterans’ Day Parade is also held annually in November.

Cultural Organizations

The Cyrus E. Dallin Art Museum, founded in 1995 by a dedicated volunteer group of Arlington residents, is housed in the Jefferson Cutter House in Arlington Center. Many of Dallin’s 60 Town-owned sculptures are exhibited there, and plans are underway to locate the collection to a larger facility.

The Arlington Cultural Council (ACC) supports public programs in the community that promote access, education, diversity, and excellence in the arts, humanities, and the interpretive sciences. The ACC is a local council of the Massachusetts Cultural Council (MCC) and disburses funds allocated by the MCC to successful grant applicants.

Arlington’s Vision 2020 Culture and Recreation Task Group works to maintain and establish a variety of cultural and recreational activities.

The Commission on Arts and Culture (ACAC) is a new organization that seeks to preserve and promote the cultural and artistic resources in Town and work toward establishing Arlington as a significant cultural destination through promotion, education, advocacy, and related activities.

Archaeological Areas

In 1959, Arvid Carlson found a fossil tusk of a mastodon (a prehistoric cousin of the elephant) in Spy Pond (Balazs 1973). The Arlington Historical Society’s Smith Museum now displays the 6 1/2 foot tusk, which is about 42,000 years old.

In 1988, members of Boston University’s Archaeology Department, under contract with the Prince Hall Mystic Cemetery Association, performed a geophysical survey of Arlington’s Prince Hall Mystic Cemetery, the country’s earliest Black Masonic cemetery. People buried in this cemetery are said to be from the country’s first Black Grand Lodge, formed in 1776 (Pendleton 1989). Survey findings included remains from structures that

once belonged in the cemetery, such as the cemetery gate and an obelisk monument. A small park and historical marker now commemorate the cemetery, although most of the former cemetery land has since been developed.

During work in the early 1990s to renovate Spy Pond Field (Ritchie 1993), the town conducted archaeological excavations along the shores of Spy Pond. Some of the archaeological remains found in this area included prehistoric lithic chipping debris and structural remains from the nineteenth and early twentieth centuries ice industry buildings.

Historic Organizations

Several historic organizations in Arlington focus on the town’s heritage, including:

- Arlington Historical Society (private nonprofit)
- Arlington Historical Commission (Town)
- Arlington Historic District Commissions (Town).

Historic Districts

Arlington has three multi-property National Register Districts, three National Register Districts encompassing three or fewer properties, and 57 properties that are individually listed in the National Register. The Arlington Center National Register Historic District encompasses eleven properties, including the historic Whittemore-Robbins House, the Robbins Memorial Town Hall, and the Winfield Robbins Memorial Garden. The Arlington Historical Commission has jurisdiction over this space.

Arlington also has seven local historic districts, comprised mostly of single-family homes with a combined total of 359 properties. These districts are under the jurisdiction of the Arlington Historic District Commissions (see Map 4-5).

- The Broadway Historic District

- The Central Street Historic District
- The Mount Gilboa/Crescent Hill Historic District
- The Pleasant Street Historic District
- The Russell Street Historic District
- The Avon Place Historic District
- The Jason Gray Historic District

The town also has demolition delay bylaws that protects individual historic structures within or outside of the historic districts.

Historic Sites and Attractions

In addition to the seven locally designated historic districts, Arlington has many historically significant individual properties and landmark sites, such as the milestone marking the ride of Paul Revere at the corner of Appleton and Paul Revere Road. Several of the town's key historic attractions are described below.

The Jason Russell House (ca. 1740), which is open for public tours, is the centerpiece of the town's history. On the evening of April 18, 1775, Paul Revere and William Dawes rode through Arlington warning the colonists that the British were marching to Concord. The following day, battles between British troops and Colonial Minutemen took place along Massachusetts Avenue in Arlington. As the British retreated through Arlington to Boston, colonists fired guns on the Redcoats marching down Massachusetts Avenue.

In the restored Jason Russell House, visitors can see several bullet holes from shots fired that day. Its owner, Jason Russell, was killed and is buried in the Old Burial Ground in Arlington Center, along with 11 other Minutemen (from Arlington and other Massachusetts communities) who died that day. A plaque on the property reads:

"The site of the house of Jason Russell where he and 11 others were captured, disarmed, and killed by the retreating British on April 19, 1775."

The Jefferson Cutter House (ca. 1830) was moved in 1988 to Whittemore Park, the location of one of the town's first houses in Arlington Center. This house now serves as the town's Visitor Center (sponsored by the Arlington Chamber of Commerce) and houses the Cyrus Dallin Art Museum, which displays many of his sculptures. The Cutter House has meeting and gallery space in its basement, which provides public exhibition space for rotating exhibits by local artists throughout the year.

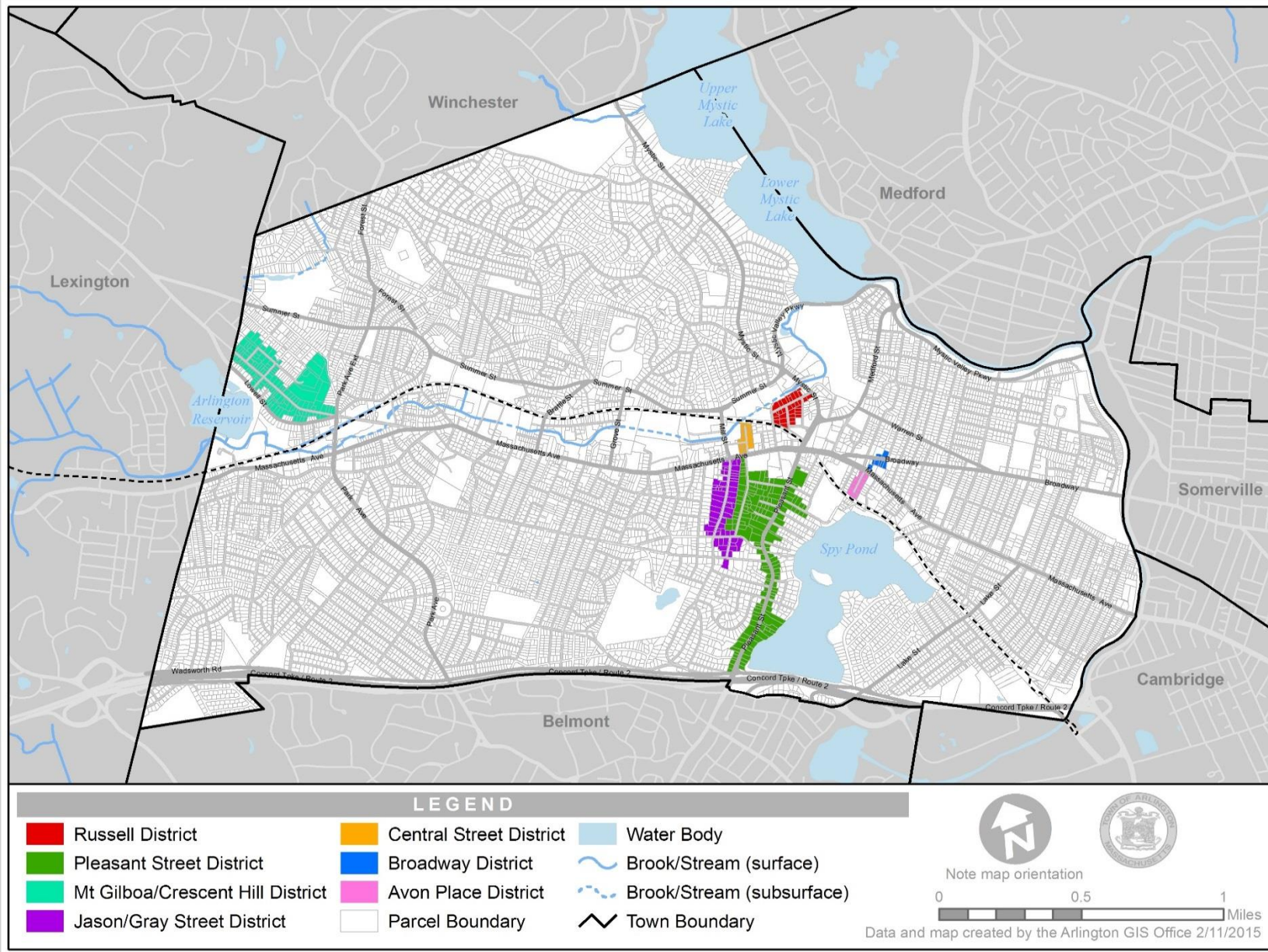


Jefferson Cutter House, home of the Cyrus Dallin Art Museum, in Whittemore Park. Credit: Ann LeRoy

The Old Schwamb Mill (ca. 1861), now a working museum, is open for public tours and a variety of special events and educational programs. Visitors can view the manufacture of high-quality oval and circular wooden picture frames using original tools and processes. It is the only place left in the United States that practices this craft.

The "Uncle Sam" Memorial Statue commemorates Samuel Wilson, who was born in Arlington in 1766. It is located in a small park in the town center (at the intersection of Mystic/Pleasant Streets with Mass. Ave.).

Map 4-5. Local Historic Districts



Town of Arlington Open Space and Recreation Plan, 2015-2022
4-Environmental Inventory and Analysis

G. Environmental Challenges

Arlington's environmental problems and challenges are typical of other communities in northwest suburban Boston. The major types of environmental problems the town faces include hazardous waste site remediation, stormwater and drainage control, and wetland enforcement matters. As the threats of climate change become better known and are experienced in this region, Arlington will have to consider policies and actions to introduce environmental planning for adaptation and mitigation of those changes.

Hazardous Waste Sites

Most of Arlington's required hazardous waste remediation efforts are the responsibility of private parties. According to the DEP's Reportable Release Lookup table, there have been 193 reported disposal incidents in Arlington since 1987. The vast majority of incidents reported to DEP were relatively minor or low risk, involving a response that did not require oversight by DEP or a Licensed Site Professional (LSP).

Seven incidents are "Tier classified," however, meaning a type or an extent of contamination that poses a higher risk to the public. Arlington has no Tier 1A (highest risk) sites, but there are two Tier 1D sites and five Tier 2 sites, as shown in Table 4-4. Tier 1D is a default classification that DEP assigns when the responsible party misses a regulatory deadline, e.g., failing to file a report. Tier 2 sites warrant clean-up under LSP supervision, but they do not involve a high enough risk to require a DEP permit.

DEP has identified six sites in Arlington that are subject to Activity and Use Limitations (AUL): remediated (and sometimes unremediated) sites that can be used for new purposes, subject to restrictions recorded with the deed (Table 4-5).

Table 4-4 – DEP Tier Classified Sites in Arlington

Site Name	Address	Contamination Type	Chapter 21E Status
Arlington High School	869 Massachusetts Ave.	Hazardous Material	Tier 1D
Dry Cleaners	1092 Massachusetts Ave.	Not Identified	Tier 2
Former Arrow Pontiac	25 Massachusetts Ave.	Not Identified	Tier 2
Residential Group Home	44 School St.	Oil	Tier 2
Mile Marker 132	Route 2 West	Oil	Tier 1D
MBTA Bus Station	1389 Massachusetts Ave.	Oil and Hazardous Material	Tier 2
TD Bank	880 Massachusetts Ave.	Hazardous Material	Tier 2

Sources: MassGIS, Chapter 21 Database, and Dept. of Environmental Protection, Reportable Release Lookup, September 2013.

Table 4-5 – DEP Sites with Activity and Use Limitations (AUL)

Site Name	Address	Status	RAO Class	AUL Date
Arlington Catholic Playing Field	Summer St.	RAO*	B2†	2009-11-19
MBTA Parking Lot	1395-1425 Massachusetts Ave.	INVSUB**		2002-07-24
Brighams, Inc. Brighams, East Edge of Parking Lot	30 Mill St.	RAO	A2‡	2012-04-04
Unnamed Site	24 Central St.	RAO	A3§	1998-05-01
Unnamed Site	1386 Massachusetts Ave.	RAO	B2	2002-10-03
Unnamed Site	180 Mountain Ave.	RAO	A3	2012-10-15

Source: MassGIS.
Notes:
*RAO means "Response Action Outcome," or a report filed with DEP that actions taken have eliminated substantial hazards and no significant risk exists on the site.
**INVSUB means the RAO filed with DEP is invalid.
†Class B2: no remedial action required if AULs are implemented.
‡Class A2: Permanent solution achieved, but some contamination remains.
§Class A3: Permanent solution achieved; but some contamination remains; AULs have been implemented.

Environmental Challenges at Waste Sites

Two current open space and recreational sites in Arlington were used as waste disposal sites at some time in history, and are known to contain hazardous waste contaminants in the soil and/or groundwater: the former Reed's Brook site in the northwest area of town and an Arlington High School athletic field site. Reed's Brook, a town landfill from 1959 to 1969, has undergone a Comprehensive Site Assessment as part of a closure process and was redeveloped and dedicated as McClennen Park in June 2006. The Arlington High School fields were investigated under DEP governance because of the chromium and manufactured gas products discovered in the soil. The Town reached an agreement with Massachusetts Electric and Honeywell for remediation of the site. Remediation began in 2004 and the fields were completed and have been in use since 2006.

In another area, a "due diligence" review for the Town's purchase of the Lahey Clinic/Health South Symmes Hospital site in 2002, alerted Town officials to the presence of two hazardous waste areas on the property. One site was the result of oil storage leakage, and the second site was contaminated with elevator oil. The Town sold the property in June 2007, and the new owners performed the remediation. Nearly nine acres of the redeveloped site have been set aside as open space and recreational areas with a conservation restriction held by the Town's Conservation Commission and the Arlington Land Trust.

Landfills/Solid Waste

There are no active landfill sites in Arlington. In previous decades municipal solid waste was dumped at Reed's Brook and at several sites along lower Mill Brook which are now playing fields. All of those sites have been capped, evaluated, and appropriately remediated.

Arlington has an extensive trash and curbside recycling program, including collection of seasonal yard waste, carried out under a contract with JRM Hauling and Recycling. A recycling coordinator with the Department of

Public Works oversees this program. One recent initiative has been the distribution of educational materials about separating invasive plant material from other yard waste.

Erosion

Arlington is almost totally developed with paved streets and a complete network of storm sewers, so it has very few erosion problems. There are a number of localized erosion areas along the Minuteman Bikeway, which is a converted rail line. Efforts have been made to reinforce those areas and minimize erosion. Some parks, playgrounds, and wooded conservation areas also experience localized erosion around pathways and on steep slopes. Erosion bars and other remediation measures are taken to minimize any extensive damage.

Chronic Flooding

Two areas in Arlington have chronic flooding problems: East Arlington near Alewife Brook, and the Colonial Village complex in the Heights next to Mill Brook and the Arlington Reservoir. The greatest concern is for East Arlington, which is very flat and not far above sea level. This is the area of the former Great Swamp. Stormwater runoff from Belmont, Cambridge, and Route 2 have been a frequent source of flooding in the Alewife area during heavy rainfalls. This problem is likely aggravated by continued development in the area that reduces the land's water storage potential and increases run off. As noted in other sections, the proposed development on the Mugar property in the heart of this vulnerable region is of great concern.

Sedimentation

Sedimentation is not a problem in Arlington's open spaces, with the exception of Meadowbrook Park at the mouth of Mill Brook. Every year that area receives a heavy deposit of sand from the winter snow control efforts. Eventually this may change the nature of the wetland there. The Conservation Commission, which oversees this area, holds regular spring clean-ups and monitors the situation.

New Development

Arlington is almost totally built out, although the Mugar property in East Arlington along Route 2 near Alewife Brook is the last remaining undeveloped site that could be threatened. Nearly all of that area is in the FEMA-designated floodplain, and many residents are concerned that any development there could increase flooding events. There is also potential for redevelopment of some light industrial sites along the Mill Brook corridor. Both the Master Plan and this Open Space and Recreation Plan stress that a major goal of the town is to ensure that any new development is done in an environmentally friendly manner that enhances the open space values of the corridor.

Ground and Surface Water Pollution

All of the water bodies in Arlington (particularly Spy Pond, Arlington Reservoir, Mystic Lake, Mill Brook, and Alewife Brook) face the threat of nonpoint pollution from roadway, house, business, and stormwater runoff. Nonpoint pollution is pollution that is not traceable to a specific structure. For instance, a pipe that might dump volumes of pollution into the water body at one "point" would be traceable. Nonpoint pollution travels through runoff or sheets of rainwater that travel across the land. For example, Spy Pond receives roadway runoff from Route 2, and Arlington Reservoir has received pesticide and fertilizer runoff from nearby farmland.

Water Resources and Impaired Water Bodies

All of the water bodies in Arlington (particularly Spy Pond, Arlington Reservoir, Mystic Lake, Mill Brook, and Alewife Brook) face the threat of nonpoint pollution from roadway, house, business, and storm water runoff. Nonpoint pollution is pollution that is not traceable to a specific structure. For instance, a pipe that might dump volumes of pollution into the water body at one "point" would be traceable. Nonpoint pollution travels through runoff or sheets of rainwater that travel across the land. For example, Spy Pond receives roadway runoff from Route 2, and Arlington Reservoir receives pesticide and fertilizer runoff from nearby lands.

Refer to chapter 7 of this Plan regarding Water Resource Protection Needs for more details on the specific problems faced by each of Arlington's major water resource areas.

Street Trees

Arlington is recognized for its "leafy suburban" character and the abundance of street trees. However, the majority of these trees are Norway Maples, which are now considered invasive and continue to proliferate although they are no longer being planted. Because many of the older trees were planted decades ago, they are showing signs of age and often have to be removed. Many of them are also growing under utility wires, so they are susceptible to extreme pruning for storm hazard and safety reasons. The Town has a goal of planting new and replacement trees regularly, but the loss ratio is greater than would be desired.

The Arlington Tree Committee was established in 2010 by the Arlington Board of Selectmen. Its mission is to promote the protection, planting, and care of trees in Arlington through coordination with the Department of Public Works and its own educational and outreach programs with residents.

Environmental Equity

Chapter 3 addresses issues related to Arlington's environmental justice block areas, which are found primarily in the central and eastern parts of town. There are no unusual environmental problems in any of those areas, and open space and recreational facilities are well distributed throughout all of the neighborhoods to provide equitable access to resources for all ages and abilities (see Map 3-5).