

2018 Braintree Open Space and Recreation Plan



Mayor Joseph C. Sullivan

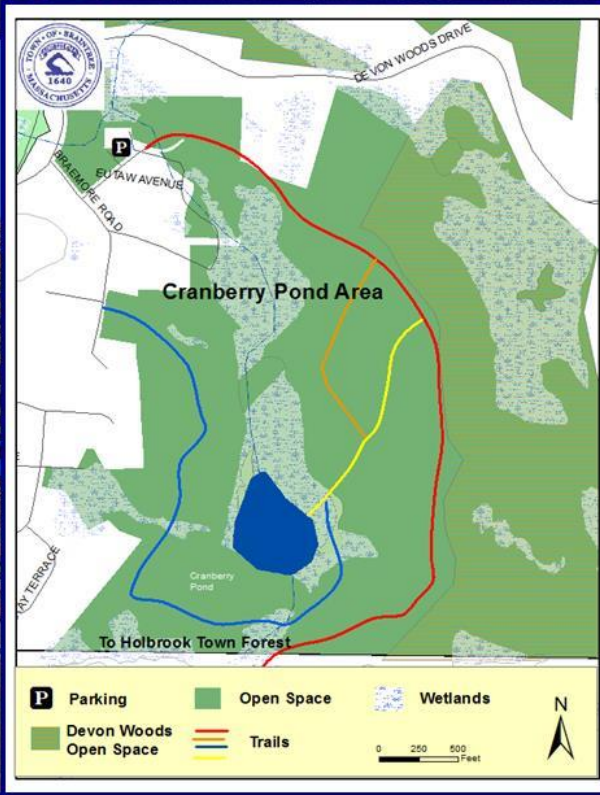
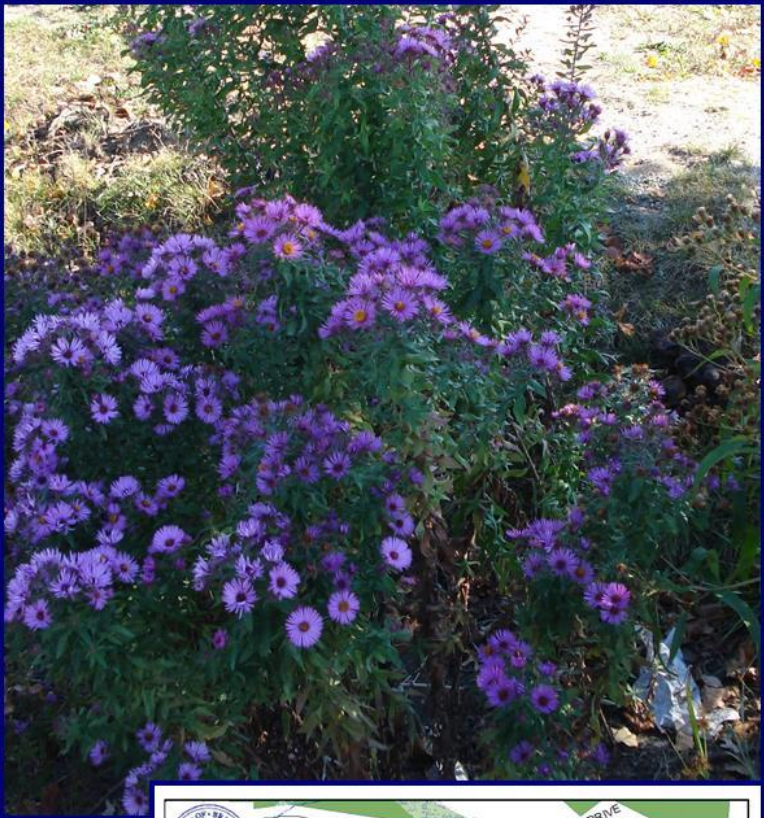


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Mayor of Braintree

Braintree Planning Board

Metropolitan Area Planning Council

SECTION 1: PLAN SUMMARY



This Plan reflects Braintree's desire to protect existing open space as well as to increase the open space available to its residents. Braintree acknowledges the value of open space for recreation, health and wellness, biological diversity and environmental quality. This plan continues the ongoing efforts by the Town of Braintree to enhance and protect its natural areas and maintain accessible parks and recreational areas.

Sections 2, 3 and 4 of this Plan provide important background information on the Town, including history, demographic information, development patterns and the natural environment. This information helps to set the context for the inventory of the Town's present open spaces and recreation facilities, contained in Section 5. Based on public input, Sections 6 through 8 identify the Town's future open space and recreational needs and outlines community priorities. Finally, the Action Plan in Section 9 provides a prioritized five-year program to address the identified goals:

- Goal 1: Protect Remaining Undeveloped Open Space
- Goal 2: Improve Parks, Playgrounds and Fields
- Goal 3: Provide More Opportunity for Outdoor Activity- Trails, Water Access
- Goal 4: Improve Ecological Function of Braintree's Natural Resources

Since the last plan was completed in 2009 the Town has made improvements to trail systems at Town Forest and Eaton's Pond Area, published a trail guide, created a new playground (Highlands Playground) and improved a playground at Hollingsworth Park, built the splash pad at Watson Park and made water quality improvements for Sunset Lake. The plan builds upon this work and identifies additional action items to accomplish the Town's goals.

SECTION 2: INTRODUCTION

A. Statement of Purpose

This plan is intended to be a comprehensive source of information on the town's natural and recreational resources and to inform decision making about open space and recreation land and opportunities in Braintree over the next five to seven years. The plan and the planning process are intended to increase awareness of Braintree's quite extensive existing open space and reflect the Town's priorities for potential land acquisition and land management.

B. Planning Process and Public Participation

Two public forums were held and an online map survey was conducted. The forums were advertised on the town's website as well as various neighborhood social media outlets and through civic associations. The local newspaper, the Patriot Ledger, published articles about the process on September 22, 2017 and on November 9, 2017.

The first forum was on September 28, 2017 at Braintree Town Hall. Approximately 40 people attended and were able to view large maps of existing open space areas and also break into groups to discuss and mark up maps in response to questions such as "what areas need protection or improvement".

The online map survey went live on November 1, 2017 and ran through December 1, 2017. The map was aerial photo based with existing open space areas noted. The map allowed for people to pin comments at specific locations to help identify acquisition priorities, areas needing improvements, suggested amenities, or simply areas people enjoy visiting.

A second public forum was held on December 11 to review common themes identified in the first forum and by the online map and refine priorities.



September 28, 2017 Public Forum

C. Enhanced Outreach to Environmental Justice Populations

As part of the lead up to the fall, 2017 public forums and online map there was an extensive neighborhood outreach effort to inform the public of the Open Space and Recreation Plan update process. Walks and events at various trails, parks and conservation areas were held throughout 2016. This included several events at parks and conservation areas in Environmental Justice areas with a focus on determining needs in those areas. Additionally, the public forums were held at Town Hall which is located in an Environmental Justice Area. Notice of events was given to neighborhood associations and community organizers.

SECTION 3: COMMUNITY SETTING

A. Regional Setting

Only 10 miles south of Boston and within Norfolk County, Braintree is a mature “inner ring” suburb of Boston. Braintree provides easy access to Boston and surrounding towns and to the South Shore through the major highways, Route 93 and Route 3, as well as the MBTA Red Line and Greenbush commuter rail. While Braintree has had strong residential development, there is a well-established pattern of commercial development along these transportation routes and the secondary highways (Route 37 and Route 53) through the Town. The intensity of this commercial use and its associated traffic impacts is one of the defining features of the Town.

Braintree is part of the Southern New England Coastal Plains and Hills ecoregion and part of the Weymouth Fore River watershed, which in turn is part of the Boston Harbor watershed. The Fore River provides access to Boston Harbor.

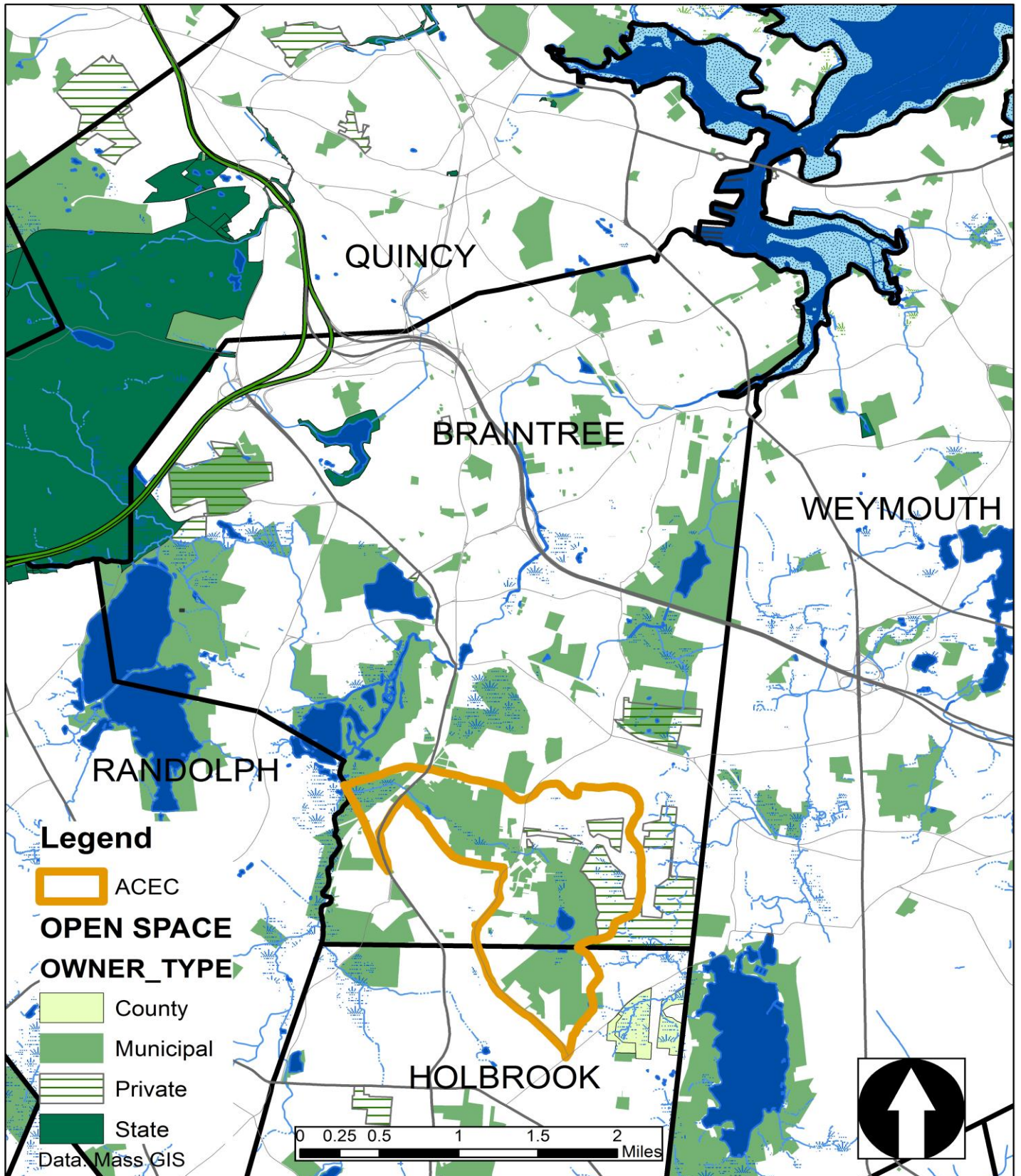
Braintree shares several natural resources with neighboring towns. The drinking water reservoirs and treatment system are shared with Randolph and Holbrook. These resources are managed by the Tri Town Water Board, which is composed of a representative of each of the three communities. The Great Pond reservoir in Braintree is part of the river herring restoration efforts the Town is undertaking with the Division of Marine Fisheries.

The northwest area of Braintree borders on the 3000 acre Blue Hills Reservation. The bulk of the reservation land is located in the surrounding towns of Quincy and Milton but a portion of the Reservation is located in Braintree and separated from the rest by Route 93.

A 320-acre open space area, Pond Meadow Park, is shared with Weymouth. The park was created as part of an Army Corps of Engineers flood control project in the 1970’s to prevent flooding in the Weymouth Landing area which is shared by both communities.

One of the most significant open space areas is the state-designated Area of Critical Environmental Concern (ACEC). The Cranberry Brook ACEC includes approximately 1050 acres of land associated with the Cranberry Brook Watershed. This includes a mix of private and public land. Protected areas within the ACEC include the Cranberry Pond Conservation Area, the Devon Woods Conservation Restriction land, Braintree Town Forest and Holbrook Town Forest. A trail connects the Cranberry Town Forest to the Holbrook Town Forest. The large block of open space connects from this area through Holbrook and Weymouth all the way to Ames Norwell State Park in Abington.

REGIONAL CONTEXT



B. History of Community

The archeological record indicates that the Braintree area has been more or less continuously inhabited by Native American groups for settlement, resource procurement, and transportation from at least 12,000 years ago through the historical period. In 1634 an area encompassing present day Braintree, Quincy, Holbrook, and Randolph was annexed to Boston to provide lands to Boston residents for farming and other agricultural purposes. Within six years, on May 13, 1640 the town of Braintree was officially incorporated.

The earliest settlement of present day Braintree occurred along the north side of the Monaquot River in the area of present day Elm and Middle Streets. Although established primarily as an agricultural community predominated by lumber and farming, water powered industrial activities, including iron production, was part of the area from the outset. As the population of the town grew settlement would spread out to the east and west along the banks of the Monaquot River. By the early 19th century Braintree had a growing ship building industry in East Braintree on the Fore River and a growing number of mills in South Braintree, including a short lived copper foundry established by Paul Revere's son. Shipbuilding and manufacturing would define the economy of Braintree well into the last half of the 20th century.

Braintree's history was also shaped by the many transit routes that transect it some of which were established by Native American groups. These include: the Boston-Plymouth Highway (Commercial Street), Liberty Street which reached toward the Weymouth Great Pond, and the Washington/Pond/Granite Street path that leads to the southwest and Randolph.

During the early industrial era Braintree became a major railroad junction with construction of the Old Colony Railroad connecting Boston to the southeast part of the state. By the mid-nineteenth century these transportation links would play a role in establishing Braintree as a suburb of Boston. This suburbanization resulted in the development of a number of residential neighborhoods, the most notable example being the Highlands which, although laid out in the 1870s, was developed in the 1930s.

Since the 1980s commercial/retail uses have become a significant component of the Town's economic life.



Thayer House

Braintree has a distinct historical district around the town center. The town center includes French's Common, the Town Hall, the Thayer Academy campus, the General Sylvanius Thayer House (now Home of the Historical Society), and the Water Department building (formerly the Town Library, built in 1874). Streetscape improvements undertaken in this area reinforce the historical character of the town center as does the Thayer Public Library.

C. Population Characteristics

Trends noted in 2015 Envision Braintree Study

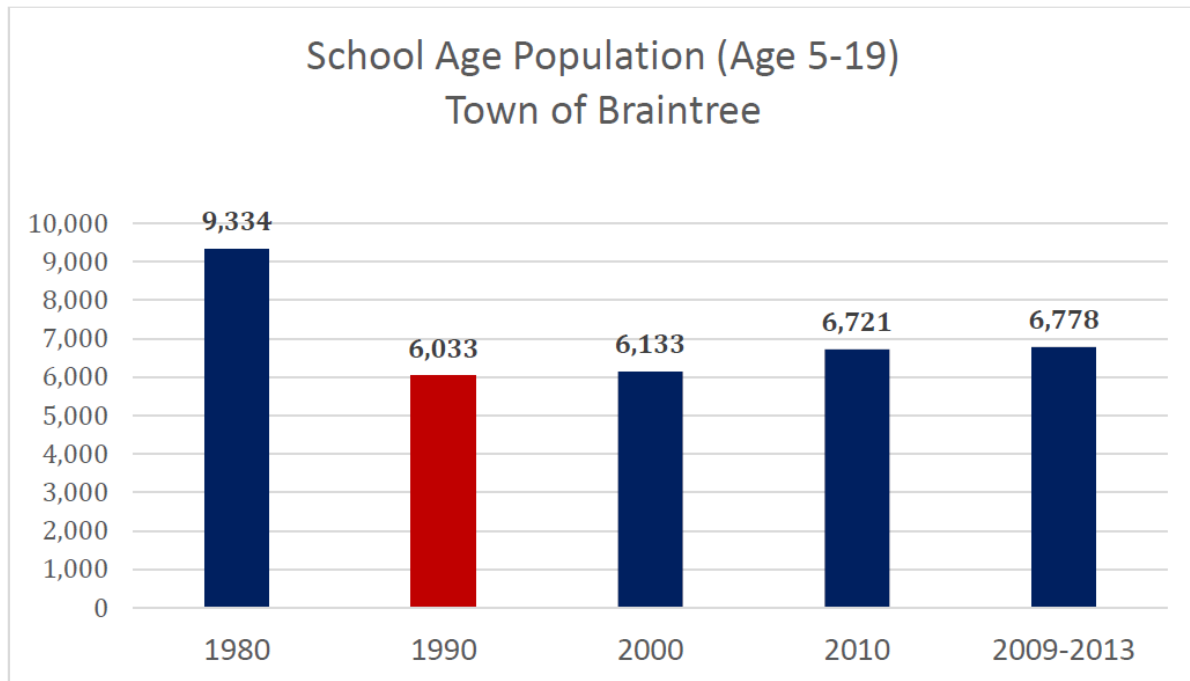
The 2015 Study *Envision Braintree: Demographic Profile & Demographic Projections* by the Dukakis Center for Urban and Regional Policy provided a comprehensive overview and analysis of demographic trends in Braintree, based on US Census data. The report focused largely on implications for housing but its findings may also be applied to demand for open space and recreation. Its key conclusions are summarized below.

Population Change: Between 2000 and 2010 Braintree's population increased by about 2000 people. The 2010 population was 35,744. This increase was about twice the rate of both Norfolk County and the Commonwealth of Massachusetts.

Household Change: Household size is declining, consistent with trends across the Commonwealth as people have fewer children and more people live alone.

Population Age: The population of school age children (5-19) has been increasing since 1990 but is down significantly from 1980, as seen in Figure 1.

Figure 1

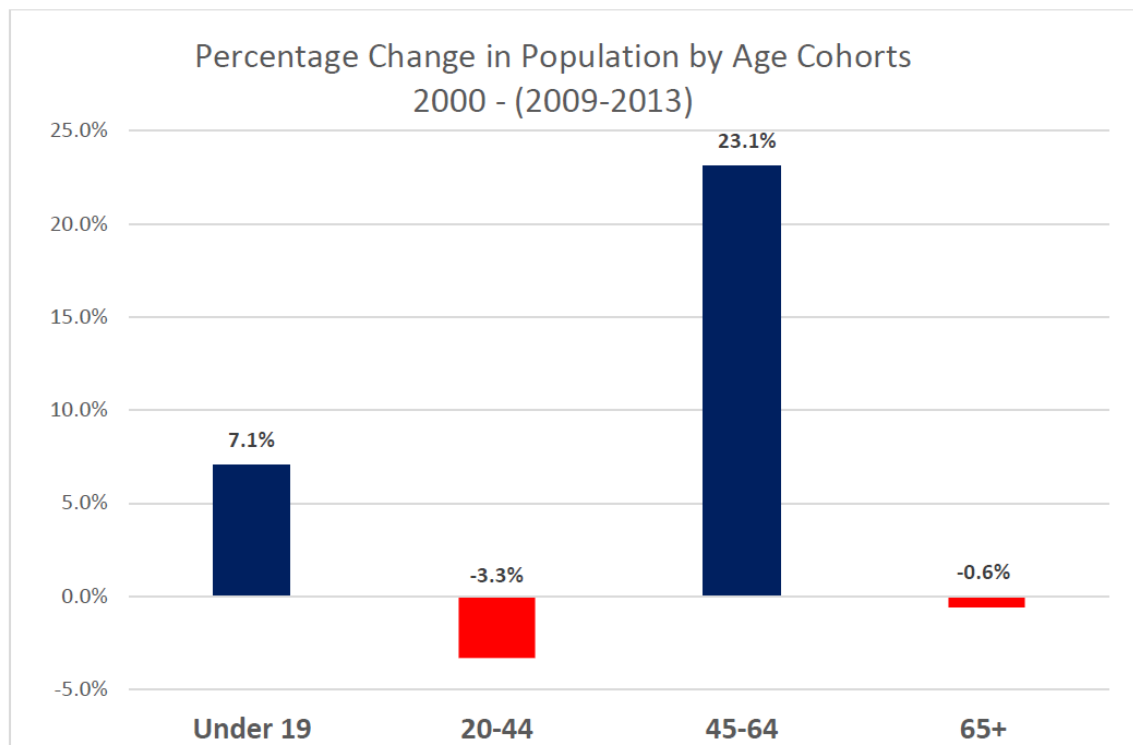


Source: U.S. Decennial Census (1980 – 2010); American Community Survey (2009-2013)

Approximately 19% of Braintree's population is of school age.

The most significant demographic change in Braintree between 2000 and 2010 was the aging of the population. During the last decade the number of those in the 45-64 year old age cohort increased by more than 23 percent. Over the next decade, this group will be reaching retirement age.

Figure 2



Source: U.S. Decennial Census (2000); American Community Survey (2009-2013)

Families as a Proportion of Households: While the number of households increased overall, the proportion of families within those households decreased nearly 20 percent between 1980 and 2010, as did the numbers of families with children under 18. In place of the traditional family, Braintree, like most of Massachusetts and the nation, is increasingly comprised of a diverse arrangement of household types. This shift in household composition has significant implications for housing policy in Braintree and suggests that despite an increase in overall population, the school age population is expected to increase only modestly.

Racial and Ethnic Diversity: Like many Greater Boston area communities, Braintree is growing more diverse. In 1980, over 99 percent of Braintree's residents were white. Today, that figure is down to 87 percent. Communities like Braintree are seeing rapid increases in minority residents, and will likely continue to experience greater diversity in the coming decades.

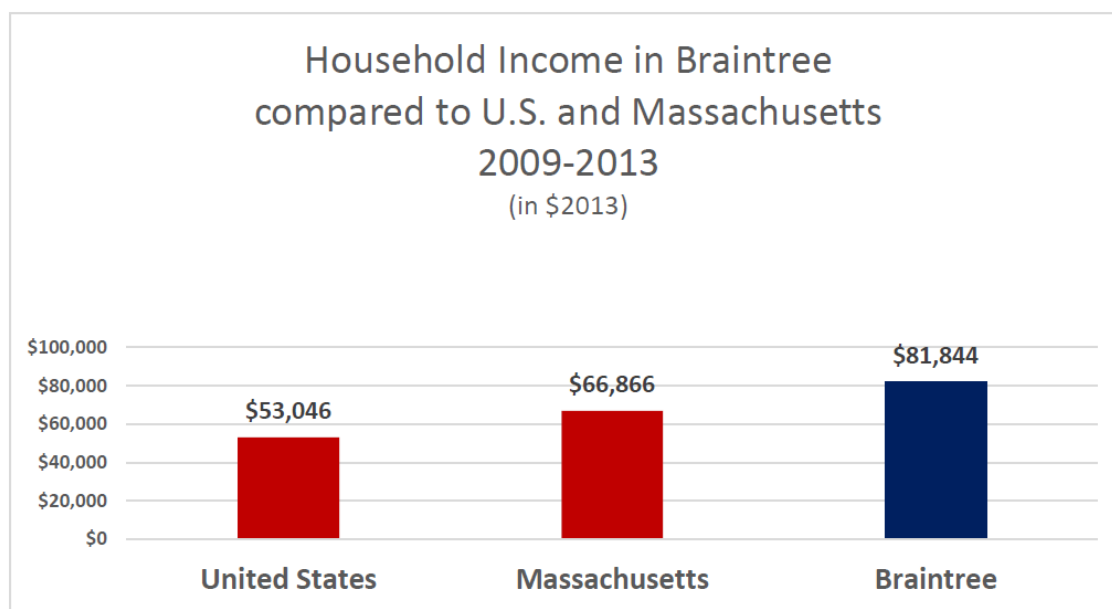
Educational Attainment: Educational attainment for Braintree is relatively high, with over 45 percent of the population reaching an educational attainment level of an associate's degree or higher.

Changes to Housing Stock: A significant trend for Braintree and the rest of the Greater Boston area is the shift away from single-family homes and toward multi-unit, apartment style living. This shift will serve both the younger working age population that has increased slightly in Braintree, and more importantly, the aging population (ages 45-64 and 65+) who will likely

desire smaller and less costly homes if they are to remain in Braintree. Braintree has also seen a significant increase in the number of housing permits issued, particularly following the 2008 financial crisis. The vast majority of these housing permits have been issued for buildings that will house 5 or more units.

Median Income: Median household income, at \$81,844 (from the 2009-2013 periods) is substantially above the median for both the state and the nation. This was 22% higher than the median for the Commonwealth and 54% higher than the median for the nation.

Figure 3



Source: U.S. Census Bureau, 2009-2013 American Community Survey

The study also notes that the number of residents in poverty is significantly less in Braintree than in the rest of the Commonwealth. Only 5% of Braintree's population is living in poverty, compared to 11% for the rest of the state.

Economic Development

Braintree has a well-developed commercial sector which provides a strong tax base. According to the 2010 census; retail trade continues to take the lead in employment for the Town, followed by health care and social services, manufacturing, accommodations and food services and professional services.

Although the resident population of the Town is 35,744, the daily population as a result of employees, commuters and students is significantly higher due to the Town's major employers, public transportation and private educational institutions. This influx of people creates a high volume of traffic and negatively effects bicycle and pedestrian traffic along busy corridors.

Employment Trends

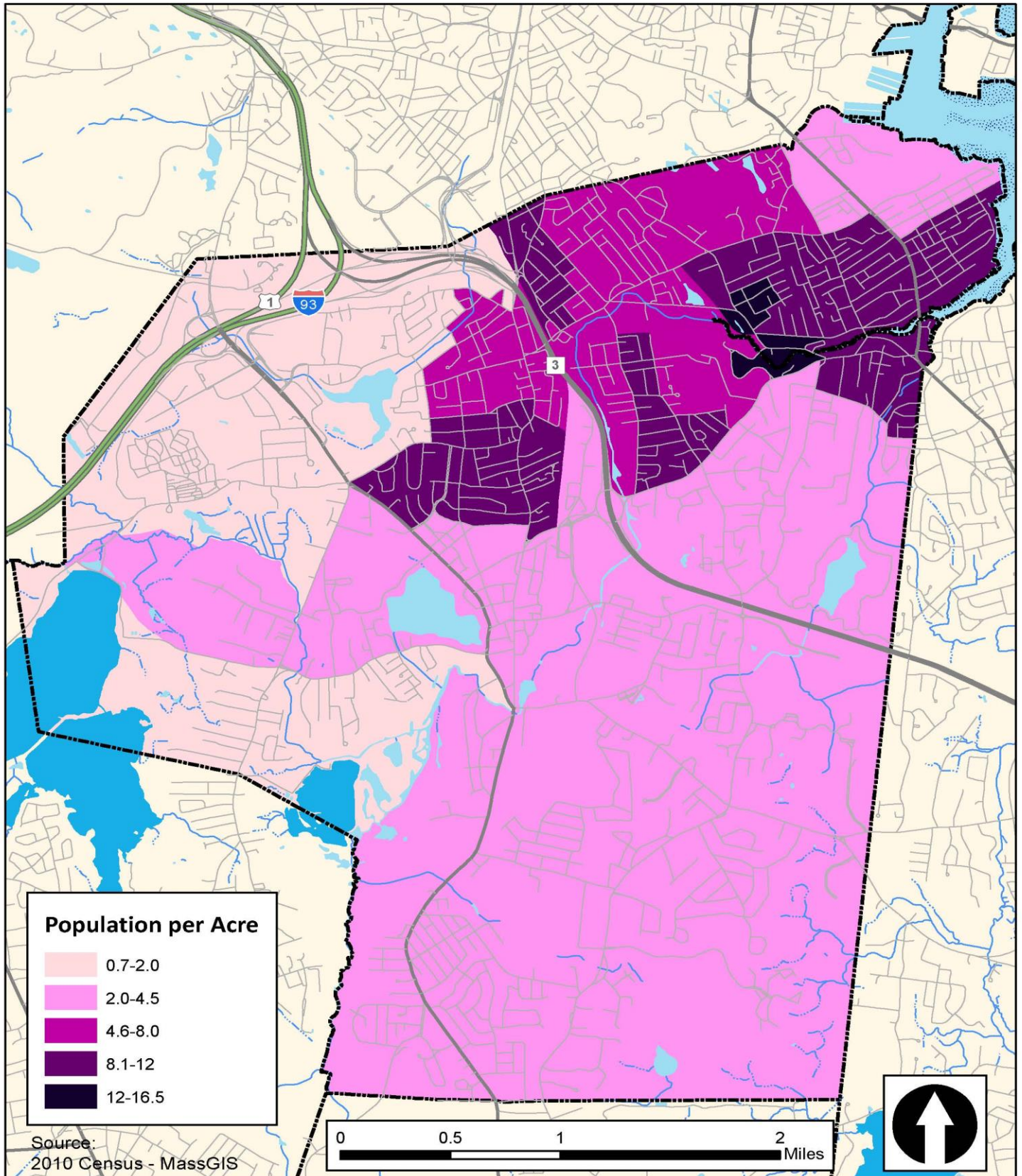
In the Town of Braintree there are a couple of areas that offer a rich inventory of commercial development. Adjacent to Interstate 93 and the Route 3 Split is a part of the Town's Highway Business Zoning District. This area includes the South Shore Plaza, South Shore Place and businesses with uses such as minor manufacturing, food and beverage, lodging, offices, retail, entertainment, and transportation. The South Shore Plaza, one of Braintree's largest employers, is a 2 story shopping mall with 1.6 million Square Feet of leasable space. Just over a quarter mile away from the South Shore Plaza is Haemonetics, a medical technology manufacturer, who is also another sizeable employer. Daniel J Quirk, INC. is another large employer in the Town of Braintree with 5 different auto dealerships along Quincy Avenue.

Density

Population density based on the 2010 US Census is represented on the following map. Density is highest in East Braintree and near Braintree square. Lower density, suburban style development is the dominant pattern throughout the remaining areas of Braintree. As redevelopment of areas near public transportation and in the Braintree Square and South Braintree Square occurs, it will be important to integrate sufficient open space and recreational areas. East and North Braintree were also identified during the planning process as areas which lack open space, especially when compared to the rest of the Town.

Population density strongly influences the demand for open space and public outdoor recreation facilities. In high-density residential areas, houses may lack private yard space sufficient to be of recreational value. Typically, such areas need parks and playgrounds for children as well as areas for people of all ages to walk. In residential areas with lower density, the need for small parks may be less. In any case, larger areas such as Pond Meadow Park, Watson Park, Hollingsworth Park and Sunset Lake draw visitors from throughout the Town (and from surrounding towns) and should continue to do so.

POPULATION DENSITY



Environmental Justice

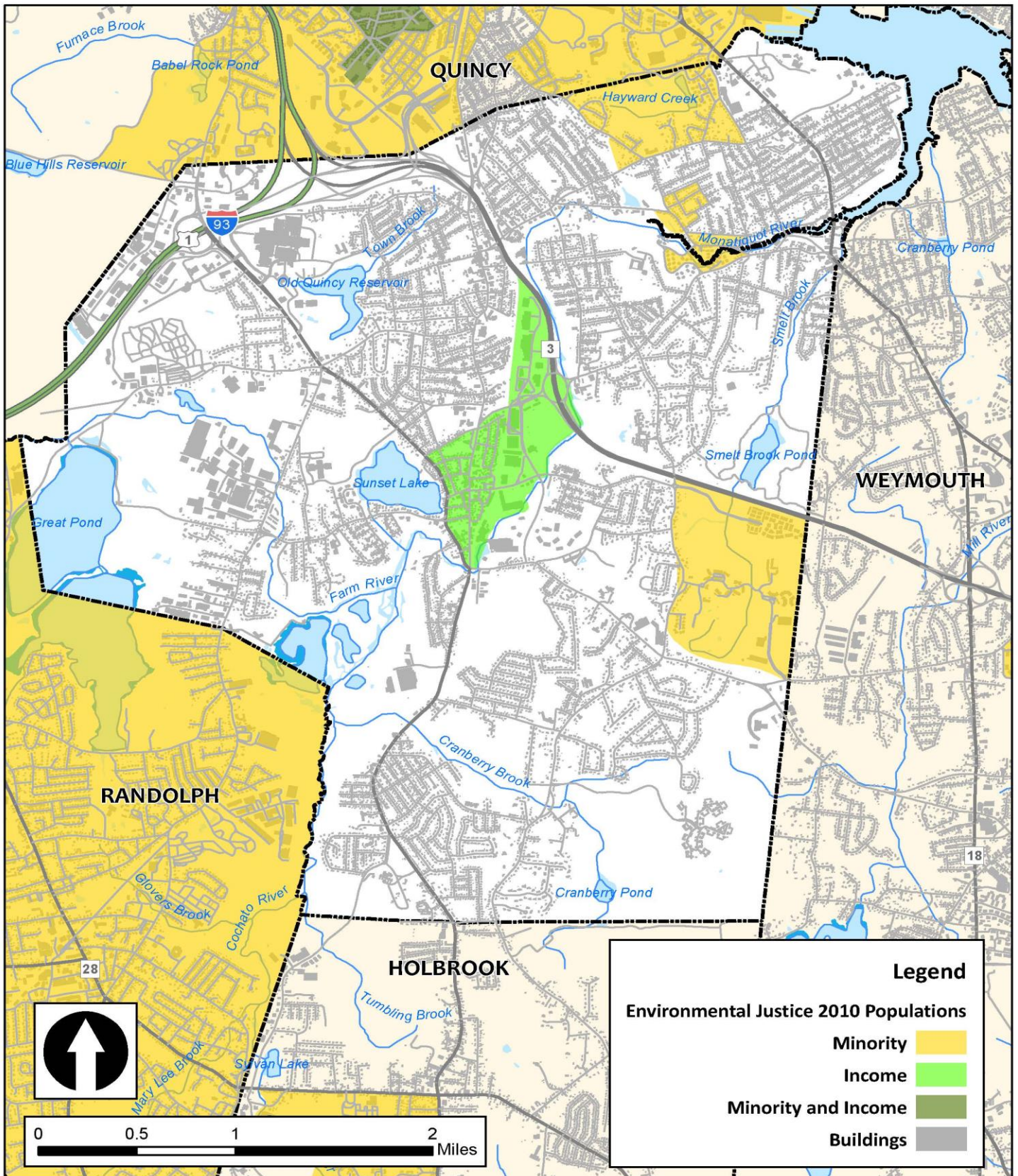
The MA Executive Office of Energy and Environmental Affairs has been implementing an Environmental Justice Policy to help ensure that all Massachusetts residents experience equitable distribution of environmental benefits. Environmental justice efforts are intended to ensure that all communities have a voice in decision-making.

A community is recognized as an Environmental Justice community if any of the following are true: block group whose annual median household income is equal to or less than 65 percent of the statewide median (\$62,072 in 2010); or 25% or more of the residents identifying as minority; or 25% or more of households having no one over the age of 14 who speaks English only or very well - Limited English Proficiency (LEP).

Environmental Justice populations have been mapped by Mass GIS and are depicted on the following map. Braintree has four (4) census block groups mapped as environmental justice areas; three based on minority populations and one based on income. According to the MA Executive Office of Energy and Environmental Affairs analysis of census data, approximately 13.2% of the population lives in an Environmental Justice Area.

Opportunities to address open space and recreational needs in these areas are an important consideration of the plan.

ENVIRONMENTAL JUSTICE POPULATIONS MAP



Conclusions on Population Characteristics

Braintree is a dynamic community facing some fundamental changes in its demography over the next fifteen years. The age of the population may affect the demand for specific types of recreational facilities. While residents of all ages differ in their recreational needs based on individual interests, there are some assumptions that can be made about the demand for facilities based on demographics. Families with young children tend to need neighborhood playgrounds. Older children, teenagers and adults need playing fields and areas for walking and running. Boating and fishing are activities enjoyed by many. Older residents need accessible places to walk, sit outdoors and places to go for group outings. Residents in dense areas and environmental justice areas may need additional facilities and open space.

While addressing the needs of all residents, open space and recreational planning should include a focus on:

- the needs of an aging population;
- providing the vitality that will maintain Braintree's appeal to younger families;
- ensuring sufficient open space in more densely developed areas;
- addressing the needs of environmental justice communities.

D. Growth and Development Patterns

Patterns and Trends:

Like many communities, Braintree experienced a population boom after World War II. Between 1930 and 1960, its population nearly doubled to more than 31,000 residents from less than 16,000. The 1963 Master Plan for Braintree noted that prior to 1940, Braintree was a loose cluster of “villages” and that residential growth since the 1940s had erased those village boundaries.

Since the baby boom, growth slowed for a period but has resumed steady rates of increase. Since 2000, the population of Braintree has been increasing faster than the state as a whole and faster than the surrounding communities of Norfolk County.

As population grew and automobile use became increasingly common, commercial development became a dominant land use in the town, particularly along the transportation corridors in Town. Regional retail and office use is strongly established close to the highway exits and surrounding areas.

The automobile-dependent form of development which Braintree has experienced has inhibited opportunities for cycling and pedestrians. In February, 2017 Braintree approved a Complete Streets Policy. The Policy requires consideration of road users of all ages, abilities and modes and sets out design guidance and standards. The Town is completing a Complete Streets Prioritization Plan to assess needs for safe pedestrian crossings and bicycle routes, among other needs.

Infrastructure:

Three major transportation systems come together in the north central part of town. Route 93 passes through the northwestern area of town and merges with Route 3 (the Southeast Expressway), which traverses through town from the east. Three MBTA commuter rail lines (Plymouth, Middleboro and Greenbush) traverse through Town. The Greenbush commuter line has a stop in the Weymouth Landing area of Braintree which is spurring redevelopment of the Landing area.

Drinking water is supplied to Braintree, Randolph and Holbrook from the Great Pond, Upper Reservoir and Richardi Reservoir. The Tri Town Board, composed of one representative from each town, manages the drinking water supply. Plans are being developed for a new water treatment plant to service the three towns and dredging of both the Upper Reservoir and Richardi Reservoir. Dredging is intended to expand the capacity of the reservoirs to provide for a safe yield (the maximum rate at which the system can be expected to deliver water continually under a defined set of drought conditions).

Braintree is part of the Massachusetts Water Resource Authority (MWRA) sewer system. Sewage is piped from Braintree to MWRA’s Deer Island plant for treatment.

Long-Term Development:

There are very few large pieces of undeveloped land left in town which are not protected from development. The sizeable, privately owned areas which remain include; a few parcels on the Weymouth border, the Rifle and Pistol club, and a large marsh and floodplain area adjacent to Route 3.

The limited availability of land means most development in Braintree is reuse of previously built sites. Over the course of the last two decades, the town has seen several large redevelopment projects converting older development sites to high density residential. This trend is expected to continue. It is worth noting a few points relative to this:

- The undeveloped land that remains tends to be sensitive areas and/or buffer to the Area of Critical Environmental Concern (ACEC) and not desirable for development;
- The Town should be mindful of opportunities to improve environmental quality during permitting processes for redevelopment;
- The potential for restoration of previously developed sites for open space and recreational opportunities should be considered.

The majority of the Town is zoned for residential use and is almost entirely built-out. Approximately 21% of the land area of the town is zoned as either Commercial, Highway Business or General Business. Finally, almost 23% of the town is zoned as Open Space which precludes most forms of development with the exception of day cares, schools, churches and cemeteries. The Open Space Conservancy District includes conservation lands, water supply lands, Pond Meadow Park, the Braintree Golf Course as well as most parks and general town-owned land and the Blue Hill Cemetery.

Table 1

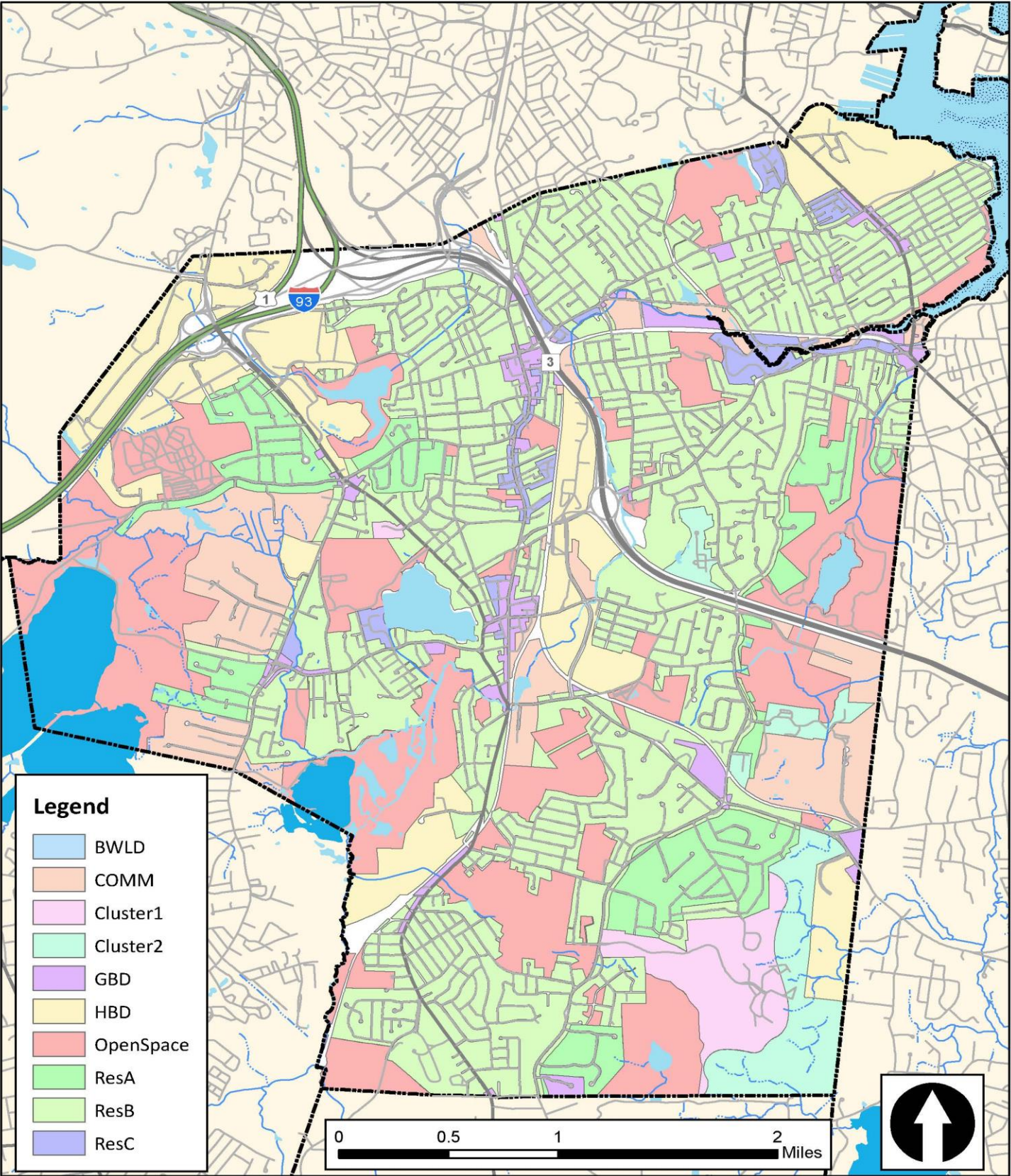
General Zoning Categories	% of Town
Residential	55.41
Open Space	22.88
Commercial/Business	21.31

As of the writing of the 2018 Update to the Open Space Plan, the Town is doing a comprehensive assessment of its zoning in order to update the zoning ordinance and reflect the priorities of the Town. A significant part of this effort is the recognition that mixed-use development and redevelopment in areas close to public transportation is desirable in order to accommodate growth without significantly increasing vehicle trips and traffic.

Conclusions on Growth and Development

There is very little land in Braintree which is both undeveloped and unprotected from development. Development continues to occur in Braintree, predominantly as redevelopment of previously utilized land. The potential for restoration of previously developed sites for open space and recreational opportunities should be considered.

ZONING MAP



SECTION 4: ENVIRONMENTAL INVENTORY

A. Geology, Soils, Topography

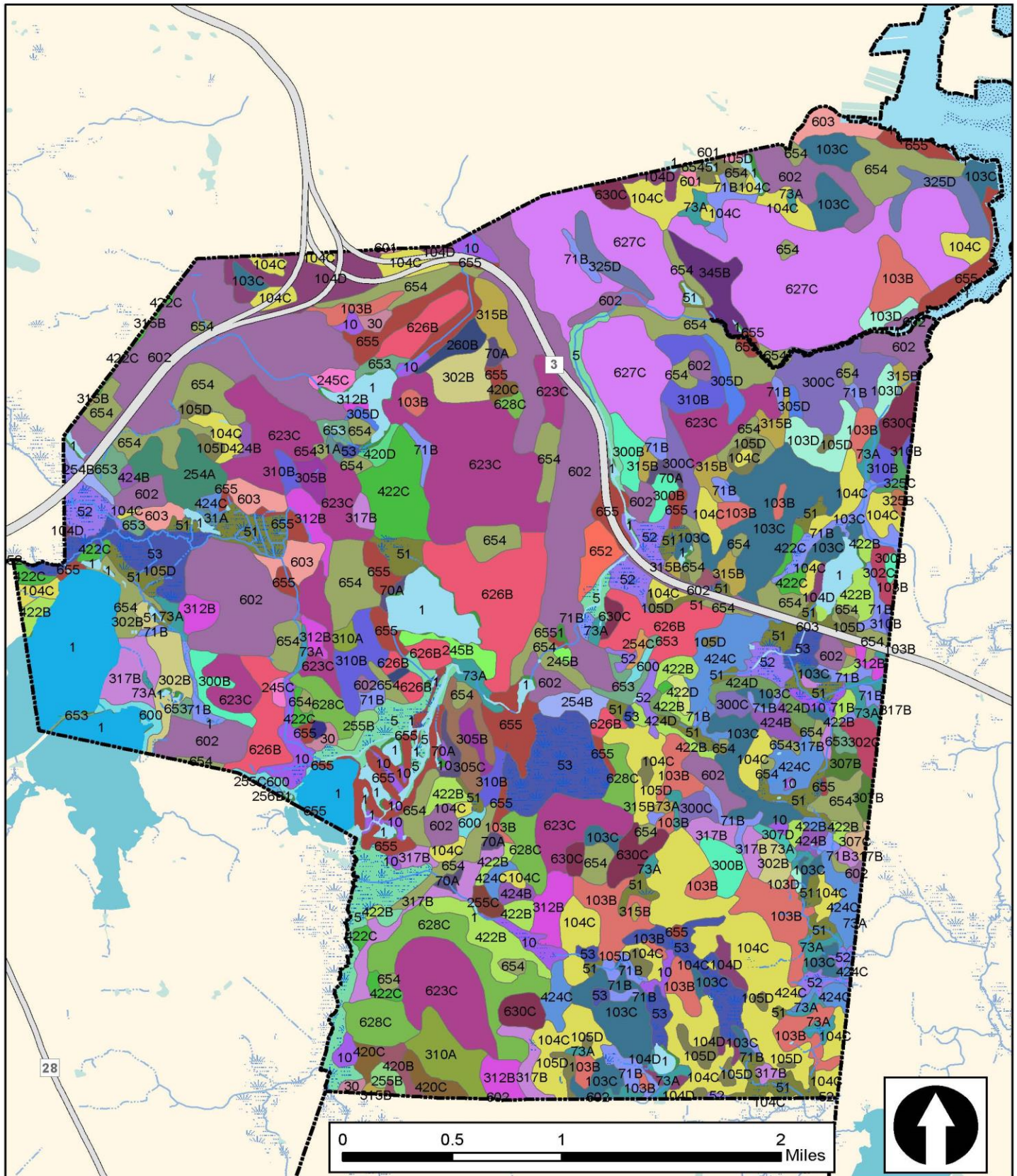
Braintree is part of the Southern New England Coastal Plains and Hill ecoregion. Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources. The landforms of the Southern New England Coastal Plains and Hills ecoregion are irregular plains with low hills and some open high hills with relief of about 100 to 400 feet. Elevations in Braintree range from 0 feet above sea level at the mouth of the Fore River to 200 feet at Whites Hill and in the Cranberry Pond area.

Braintree's geology is characterized by granite and some sandstone bedrock overlain mostly by glacial till and shallow soils. Areas within the influence of waterways consist of sand and gravel deposits and floodplain alluvium soils. The majority of Braintree's soil is well-drained at the surface, but contains hardpan within two feet of the surface. These hardpan layers inhibit the downward movement of water, thus the soil material above these layers becomes saturated quickly. Additional water cannot be absorbed, and the remainder runs off the surface into nearby streams. (1988 Braintree Master Plan).

Wetlands and ledge outcroppings limited development in Braintree to some extent but many areas of wetlands were filled in prior to the establishment of environmental regulations. Development in Braintree is now constrained by the lack of available land and redevelopment of previously altered sites is common.

The topography along the Monaquot River is a limiting factor for recreational access. Many areas along the river have steep slopes which prevent access. This limitation is in addition to the fact that most land along the river is privately owned and already developed so access easements would be required. Between these two factors the Town has been not been successful and providing significant access to the river. One exception to that is that the Town recently acquired a six-acre parcel along the river. Extensive grading to provide access from the street is required.

SOILS MAP



Legend

Soils Map Unit		245C		300C		310B		420C		52		630C	
	10		254A		302B		312B		420D		53		652
	103B		254B		302C		315B		422B		600		653
	103C		254C		305B		317B		422C		601		654
	103D		255B		305C		31A		422D		602		655
	104C		255C		305D		325B		424B		603		70A
	104D		256B		307B		325C		424C		623C		71B
	105D		260B		307C		325D		424D		626B		73A
	223B		30		307D		345B		5		627C		
	245B		300B		310A		420B		51		628C		

Source:
NRCS SSURGO Certified Soils, Norfolk-Suffolk County - MassGIS

B. Landscape Character

Braintree has a predominantly level landscape with many areas of ledge outcroppings.

Among the distinctive areas of the Braintree landscape are the historic town center, the Sunset Lake area, and the East Braintree waterfront area. Pond Meadow Park, Cranberry Pond, the Braintree Dam and Braintree Golf Course are very scenic spots, though they are best seen from inside the property boundaries.

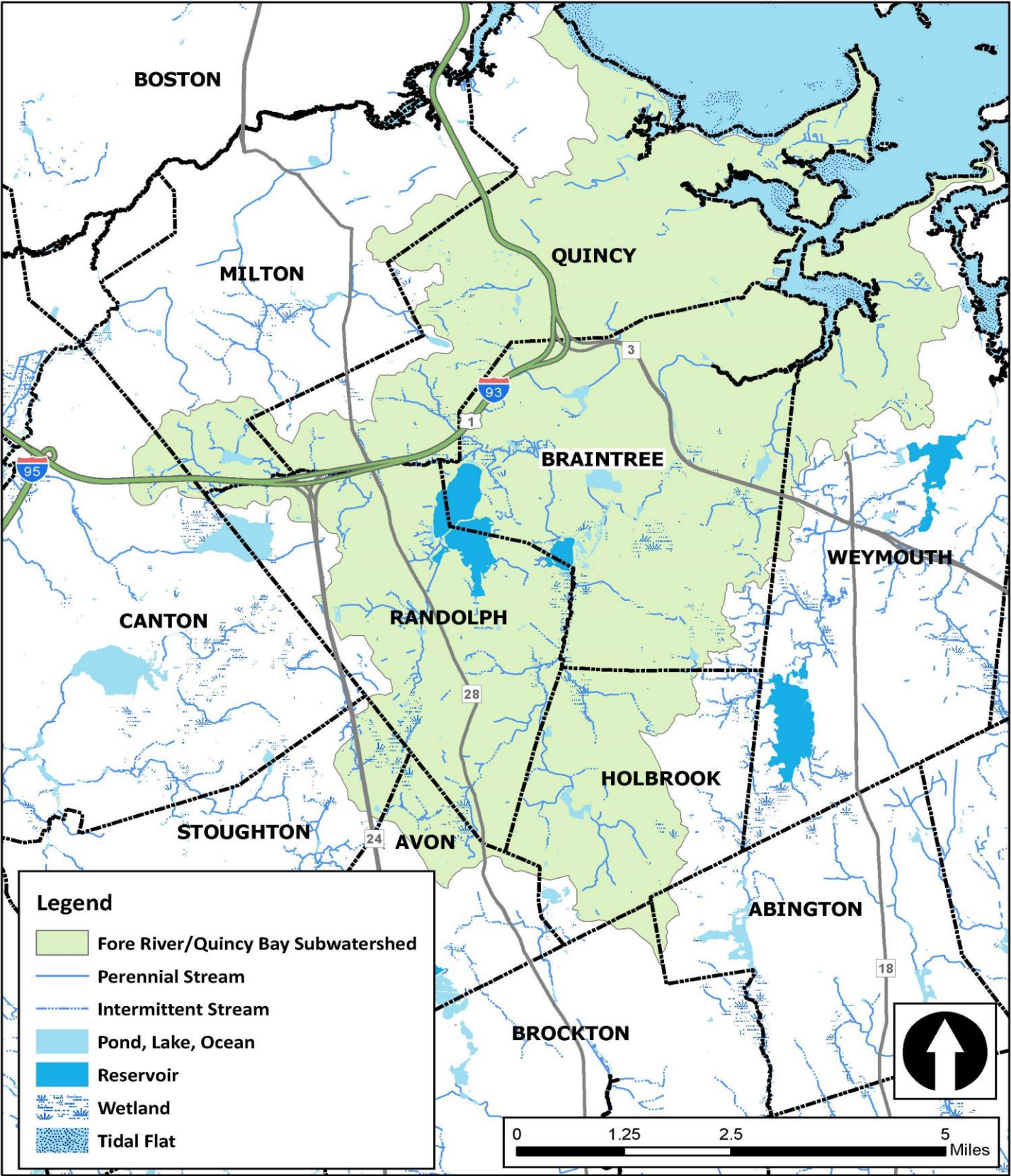
In many locations in town the commercial development of Braintree is dominant. For example, several scenic stretches of the Monatikot River are hidden behind parking lots and storefronts. Efforts to reveal the “hidden” landscape of Braintree through redevelopment and acquisition are a priority of this plan.

C. Water Resources

Watersheds

Braintree is part of the Fore River watershed, a 36 square mile area encompassing parts of Braintree, Weymouth, Quincy, Randolph and Holbrook, which all eventually drain to the Fore River. The Fore River is part of an estuary, or area where the river meets the sea and fresh and salt waters mix.

FORE RIVER/QUINCY BAY SUBWATERSHED



Surface Water

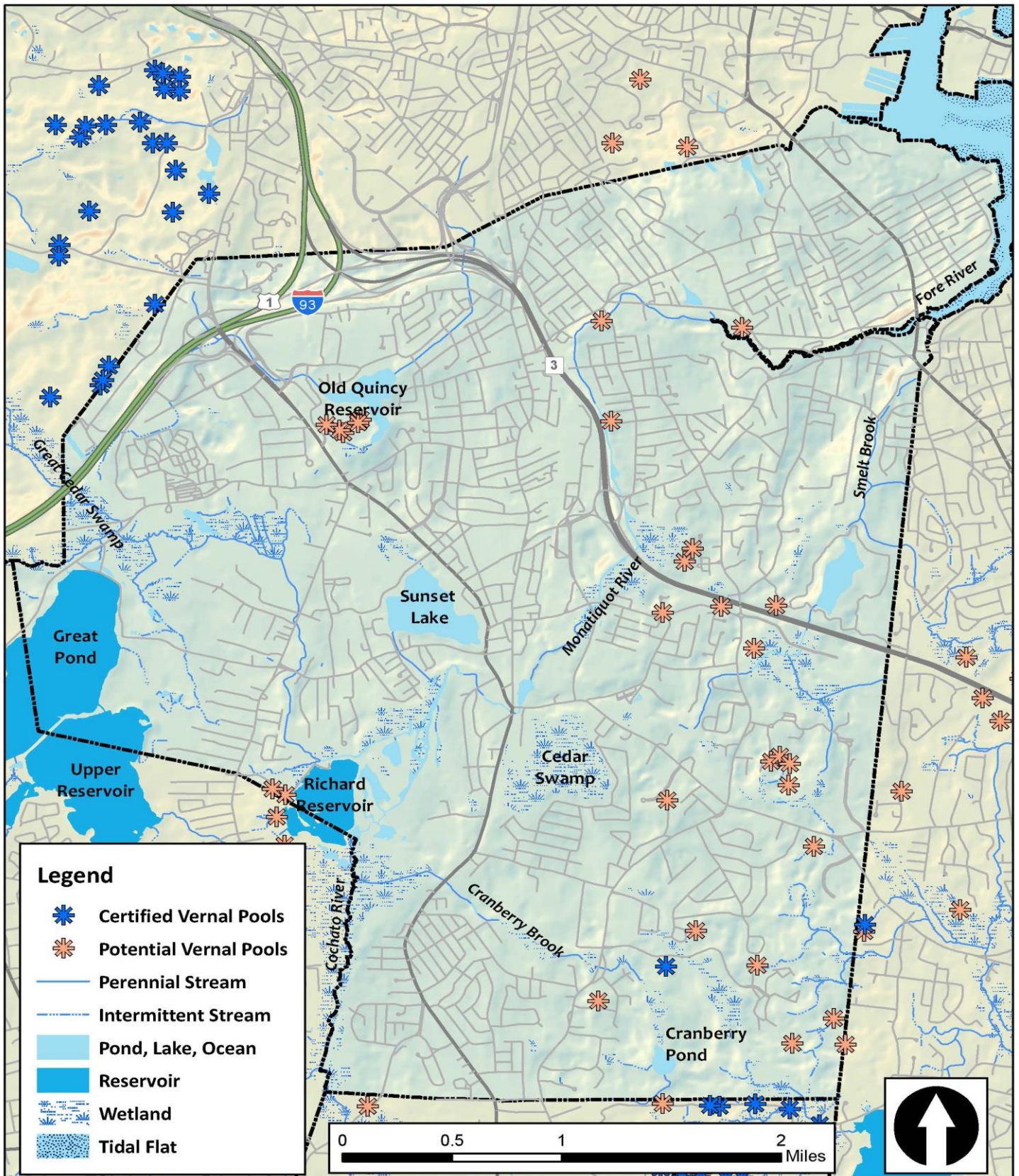
There are several lakes, ponds and reservoirs in town. Pond Meadow was created as an Army Corps of Engineers flood control project and is an active recreational area with walking trails and a nature center. The Great Pond and Upper Reservoir and Richardi Reservoir are drinking water supply waters. Other water bodies include the Braintree Dam which used to be part of Quincy's water supply, Sunset Lake, Cranberry Pond and Eaton's Pond. Sunset Lake is an active recreational area with a swimming beach, playground and summer concert series. Cranberry Pond and Eaton's Pond lie within town-owned conservation land.

The Farm and Cochato Rivers join near the Braintree golf course to form the Monatiquot River. The Monatiquot River runs through Braintree for approximately four miles. Historically, the Monatiquot River was of vital importance to residents for its fisheries and for the hydropower it supplied.

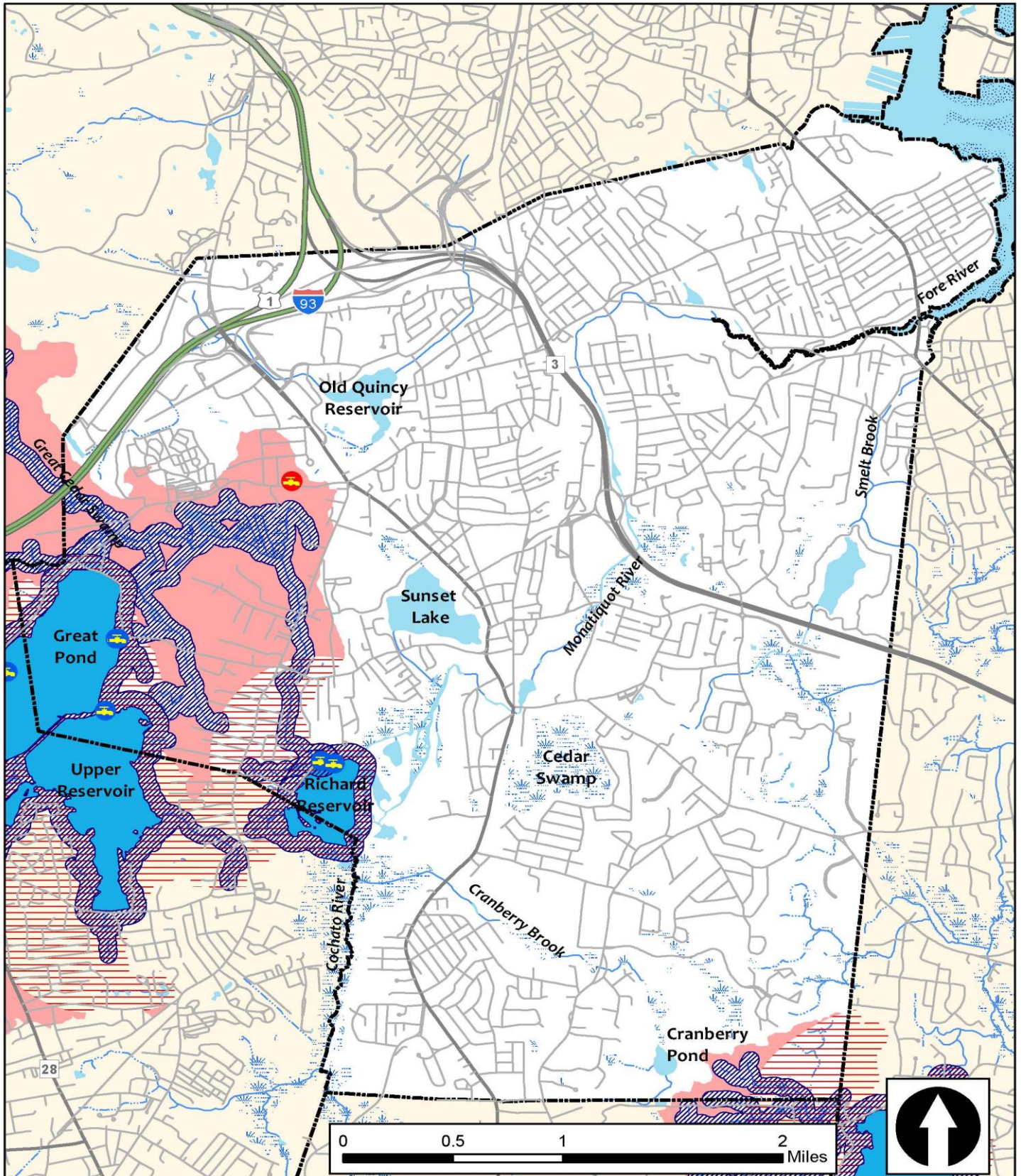
The Monatiquot River broadens out into the Fore River near the Quincy Avenue bridge, from which point the Fore River provides boat access to Boston Harbor. The tidal influence of the Fore River extends up to approximately the Shaw St. Bridge.

Other rivers and streams within town include Smelt Brook which flows from the pond at Pond Meadow Park and the Town Brook which flows from the Braintree Dam into Quincy.

WATER RESOURCES MAP



WATER RESOURCES MAP - WATER SUPPLY AREAS



Legend

-  Surface Water Intake
-  Non-Community Groundwater Source
-  ZONE A
-  ZONE B
-  ZONE C
-  Perennial Stream
-  Intermittent Stream
-  Pond, Lake, Ocean
-  Reservoir
-  Wetland
-  Tidal Flat

Sources:

Public Water Supplies;
Surface Water Supply Areas - MassGIS, 4/18/17

Drinking Water Supply

Braintree is part of the Tri Town Water Board with Randolph and Holbrook. The three communities receive drinking water from the Great Pond/Upper Reservoir, Richardi Reservoir and the Farm River. Water is pumped from the Richardi Reservoir to the Great Pond/Upper Reservoir when water levels in the Great Pond/Upper Reservoir are low.

Like many communities, Braintree and Tri Town have water use restrictions in place.

Tri Town Water Use Policy

Phase One

The use of all automatic watering devices and soaker hoses is prohibited. Only the use of hand held hoses with shutoff shall be allowed. No organized car washes are allowed from June 1 and September 1. The filling of inground or aboveground swimming pools from the municipal water supply shall be prohibited after June 1 of the year. This phase is in effect at times when further restrictions are not required.

Phase Two

(Including Phase One)

When reservoirs are below 80% full a further restriction shall be implemented as follows: Outside water use is restricted from the hours of 7:00AM to 10:00AM and 6:00PM to 9:00PM.

Phase Three

(Including Phase Two)

When reservoirs are below 70% full (*with incoming water*) a further restriction shall be implemented as follows: Outside watering is restricted to 6:00PM and 9:00PM only.

Phase Four

When reservoirs are below 70% full (with *no* incoming water) **THERE SHALL BE NO OUTSIDE USE OF WATER.**

Phase Five

When reservoirs are between 50% and 40% **ALL OUTSIDE WATERING SHALL BE PROHIBITED** AS IN PHASE 4 AND ALL USE OF NON-ESSENTIAL WATER IS PROHIBITED.

The question of whether the drinking water supply limits development potential is often asked. According to the Braintree Public Works /Water Department, there is sufficient capacity within the reservoir system for additional residential and commercial development, particularly given the use of water efficient, low-flow fixtures. However, outdoor use of water for grass and other plants is restricted because it demands a high volume of water use that significantly impacts our water supply and is not a critical need of the community.

Flood Hazard Areas

Flood Insurance Rate Maps, developed by the Federal Emergency Management Agency depict flood hazard areas. Flood hazard areas are found along the most of the large streams and rivers; Town Brook, Cranberry Brook, and the Farm, Cochato and Monatiquot Rivers. Flood hazard areas are also found along the Quincy and Richardi Reservoirs, Cedar Swamp and Eaton's Pond and Sunset Lake. Many areas of Town experienced serious flooding in March, 2010 and these corresponded to a large extent with the flood hazard areas depicted on the FEMA maps.

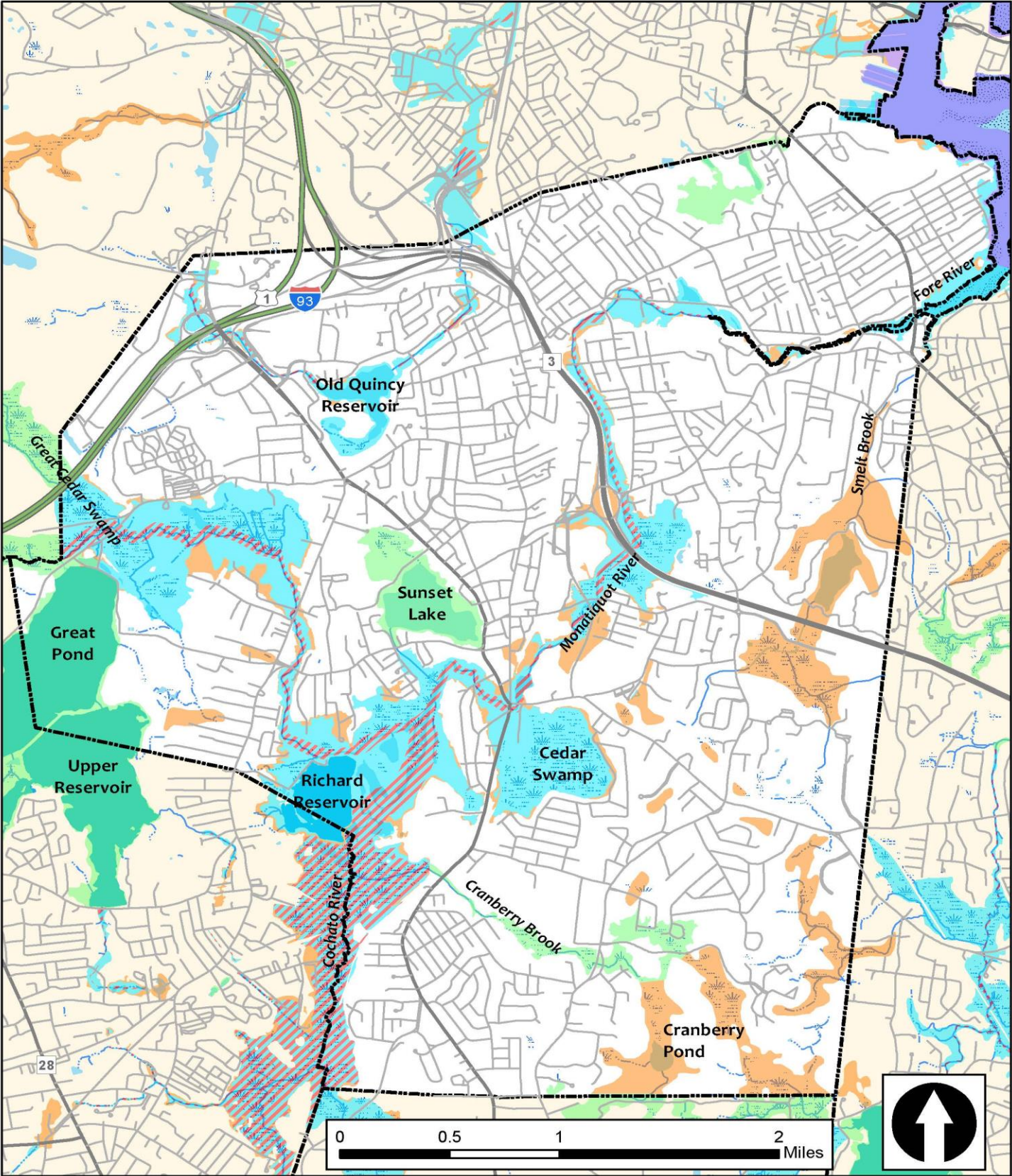
Wetlands

Wetlands serve many valuable functions. They filter pollutants from water, recharge groundwater, provide protection from storm damage and flooding as they store water and provide wildlife habitat.

Braintree has several large wetland systems. The Broad Meadow is a large marsh/wet meadow which borders the Cochato River on the Randolph town boundary. The Cedar Swamp is a large Atlantic White Cedar swamp off of Plain St. There is another large wetland area off of West St., near the reservoirs which is part of a wetland system that begins in the Blue Hills reservation. Arnold Meadow is a large wetland behind the Braintree Highway barn near the Rt. 3 rotary. This area is frequently flooded by the Monatiquot River.

See also the Vernal Pool section under the Fisheries and Wildlife Section for information on vernal pools.

WATER RESOURCES MAP - FEMA FLOOD HAZARD AREAS



Legend

-  Surface Water Intake
-  Non-Community Groundwater Source
-  ZONE A
-  ZONE B
-  ZONE C
-  Perennial Stream
-  Intermittent Stream
-  Pond, Lake, Ocean
-  Reservoir
-  Wetland
-  Tidal Flat

Sources:

Public Water Supplies;
Surface Water Supply Areas - MassGIS, 4/18/17

D. Vegetation

Historically, forests in the Southern New England Coastal Plains ecoregion were dominated by a mix of oaks, American chestnut, hickories, other hardwoods and some hemlock and white pine. As with many areas of New England, these forests were cleared either for agriculture, grazing or the production of charcoal. A variety successional oak and oak-pine forests cover the region today, along with some elm, ash and red maple typical of southern New England's forested wetlands.

There are several large areas of forest land in Braintree today, most of which are permanently protected. Protected areas include the Town Forest, Cranberry Pond conservation land, South Street conservation land, Pond Meadow Park, Eaton's Pond conservation land and land around the Great Pond Reservoir.

Natural plant community types in Braintree have been identified by using the classification system developed by the state Natural Heritage and Endangered Species Program. A natural community is a distinct grouping of plant species that occur together in recurring patterns.

Common forest types found in Braintree, as well as examples of each are listed in Tables 2-4 below.

Table 2: Mixed Oak Forest/Woodland

Mixed Oak Forest/Woodland			
Braintree example: Pond Meadow Park			
Canopy	Sub-Canopy	Shrub Layer	Herb Layer
Oaks (black, red, white and chestnut)	Saplings of canopy species Birch (gray and black) Aspen (quaking and big-toothed) Red Maple Chestnut	Blueberry Huckleberry Sweet Fern, Scrub Oak Mountain Laurel	Pennsylvania Sedge Poverty Grass Wild Sarsaparilla Pinweed Pale Corydalis

Table 3: Chestnut Oak Forest/Woodland

Chestnut Oak Forest/Woodland			
Braintree example: Cranberry Pond Area			
Canopy	Sub-Canopy	Shrub Layer	Herb Layer
Chestnut oaks dominant Red, black and white oaks also present. Red maple and white pine also occur	Sparse; Contains canopy species as well as black birch and sassafras	Mountain Laurel Striped maple American chestnut Witch Hazel Black Huckleberry Low bush blueberry Sheep laurel	Sparse; Wintergreen Sedges Bracken Fern

The Black Oak - Scarlet Oak Woodland is found at Eaton's Pond Area. This type of plant community is maintained by regular light fire.

Table 4: Black Oak-Scarlet Oak Woodland

Black Oak- Scarlet Oak Woodland			
Braintree example: Eaton's Pond Area			
Canopy	Sub-Canopy	Shrub Layer	Herb Layer
Black oak and Scarlet oak Also white oak and red maple	Sparse; Grey birch, black cherry, Sassafras, flowering dogwood, shadbush	Low bush blueberry Huckleberry Scrub oak Sheep laurel Maple-leaf viburnum Hazelnut	Sparse; Pennsylvania sedge Bracken fern Pink lady's slipper



Black Oak Woodland at Eaton's Pond Area

Agricultural Land

Braintree has no land remaining in agricultural use.

Wetland Vegetation

Braintree has a range of wetland plant communities from common red maple swamps and cattail marshes to the Atlantic white cedar swamps and the unique bogs and fens of the Cranberry Pond Area.

Red maple swamps are the most common forested wetlands in Massachusetts. These swamps occur in seasonally flooded areas along streams as well as in closed basins. In eastern MA the

common plant species found in these areas include the fragrant spicebush (*Lindera benzoin*), sweet pepperbush (*Clethra alnifolia*) and highbush blueberry (*Vaccinium corymbosum*).

Atlantic white cedar swamps are acidic, low nutrient basin swamps dominated by Atlantic white cedar in the overstory and a mixture of species in the understory. Bogs and fens are also acidic, low-nutrient areas which support a limited range of species, such as sphagnum moss, cranberries and other plants adapted for low-nutrient conditions.

Table 5: Coastal Atlantic White Cedar Swamp

Coastal Atlantic White Cedar Swamp			
Braintree example : Within Cranberry Pond Area and off of Plain St.			
Canopy	Sub-Canopy	Shrub Layer	Herb Layer
Atlantic White Cedar (dominant) Red maple	N/A	Highbush Blueberry Swamp Azalea	Cinnamon Fern Virginia Chain Fern Starflower Wild Sarsaparilla Sphagnum Moss



Atlantic White Cedar Swamp

Rare Species

The Cranberry Pond area, in the southern part of town, is part of a state-designated Area of Critical Environmental Concern and contains unusual habitats including fens and bogs which support a variety of unusual species.

Table 6: Atlantic White Cedar Bog

Atlantic White Cedar Bog			
Braintree example : Within Cranberry Pond Area			
Canopy	Sub-Canopy	Shrub Layer	Herb Layer
Atlantic White Cedar (dominant) Red maple	N/A	Highbush Blueberry Swamp Azalea Leatherleaf Sheep Laurel Huckleberry	Cranberry Sundews Pitcher Plant

Sites with Unique Resources

Cedar Swamp and Cranberry Pond (see above).

Shade Trees

The Town Hall Mall and surrounding area, including French's Common has an excellent canopy of mature shade trees. Many of these trees are several hundred years old. Several trees in French's Common have fallen or been removed due to deteriorating condition and replanting to create shade trees for the future is underway.

Older neighborhoods in Braintree have limited street trees. The inclusion of street trees in roadway rehabilitation plans is considered on a case by case basis by the Department of Public Works as part of the Complete Streets program.

E. Fisheries and Wildlife

Fisheries

Historically, the Monaquot River has supported large fish populations including river herring and smelt. Both river herring and smelt are anadromous; living much of their adult life in the ocean but returning to freshwater in the spring to spawn.

The Town has been working with The Division of Marine Fisheries, Fore River Watershed Association, and as of 2017, the MA Division of Ecological Restoration to restore the river herring run to its historical significance. The owner of the obsolete Armstrong Dam, which impedes fish passage, has committed to removing the dam and the project partners are working toward final design and engineering and permitting to allow the dam removal to proceed. Meanwhile a fish ladder is being installed at the Great Pond dam to allow herring to access the 180-acre spawning habitat in Great Pond. Fisheries biologists expect an exponential increase in the number of herring when the fish are able to reach the spawning habitat in Great Pond.

The Monaquot River also supports one of the largest Rainbow smelt runs in the state (DMF 2001). Smelt spawning begins in late February or early March and continues through May. The

smelt move from the estuary upstream into freshwater at night and spawn in shallow riffles (fast-flowing water). Fisheries biologist have found that egg deposition begins just upstream of the Shaw St. bridge and continues to the spillway at McCusker Drive (DMF 2001).

Smelt also spawn in Smelt Brook which flows out of the pond at Pond Meadow. The brook and Pond Meadow are part of an Army Corps of Engineers flood control structure and managed by Pond Meadow (Weymouth-Braintree Regional Recreation and Conservation District). The Towns of Braintree and Weymouth as well as the Weymouth Braintree Regional Recreation Conservation District are working with Army Corps of Engineers to improve this system for smelt while maintaining its flood control function.

Common Wildlife

While no formal inventory of mammals in Braintree has been conducted, observations indicate that the following mammals are found in Braintree: Eastern coyote, red fox, white-tailed deer, otter, muskrat, raccoon, skunk, Virginia opossum, gray squirrels, Eastern chipmunk, woodchuck, Eastern cottontail rabbit, various bats, and various small mammals (shrews, moles, voles, mice, rats) as well as common songbirds and birds of prey, waterfowl and shorebirds.

There is a large population of Canada geese in Braintree. Canada geese are attracted to areas with lush, frequently mown lawns and easy access to open water, such as the Braintree golf course and areas around Sunset Lake. [Allowing tall vegetation to grow between the edge of the water and the lawn is recommended as a deterrent to geese as they prefer unrestricted access to the water. Another recommendation is to reduce mowing and fertilizing of grass as much as possible to reduce the appeal of the grass to the geese.]

Vernal Pools

Vernal pools are depressions which fill up with water from rising groundwater and/or precipitation, usually in the spring. In most years the pool will dry out by summer. For this reason, the pools do not support fish and make excellent habitat for frogs, salamanders and other amphibians. In fact, many species, called obligate species, are dependent on vernal pools for their survival.

While several potential vernal pool locations have been identified by the state Natural Heritage and Endangered Species Program, only one has been certified, to date.

Corridors for Wildlife Migration

Wildlife corridors are strips of undeveloped land which allow wildlife to move between large areas of habitat. Such corridors provide a way for animals to move between areas when food or water is scarce in one area or when seeking suitable habitat for nesting and raising young as well as for finding mates and escaping predators. They are also important for genetic diversity since they allow greater interchange of genetic material.

Wildlife crossing points may occur in areas where large habitat areas are bisected by a major road or populated area. One example is the area on Liberty Street between the Town Forest and Cranberry Pond area.

River corridors often provide areas for wildlife passage. Efforts to increase connectivity along Braintree's river systems would include improving stream crossings (i.e. wider culverts or bridges which would allow mammal passage) and restoring vegetated buffer strips along the rivers.

Rare Species

The Natural Heritage and Endangered Species Program collects records of sightings of rare and endangered species throughout the state.

"Endangered" (E) species are native species which are in danger of extinction throughout all or part of their range, or which are in danger of extirpation from Massachusetts, as documented by biological research and inventory. "Threatened" (T) species 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. "Special concern" (SC) species are native species which have been documented by biological research or inventory to have suffered a decline that could threaten the species if allowed to continue unchecked, or which occur in such small numbers or with such restricted distribution or specialized habitat requirements that they could easily become threatened within Massachusetts.

The following table contains the record of rare and endangered species observed in Braintree.

Table 7: Rare and Endangered Species Observed in Braintree
Source: Natural Heritage & Endangered Species Program

Taxonomic Group	Scientific Name	Common Name	MESA Status	Most Recent Obs
Vascular Plant	<i>Asclepias purpurascens</i>	Purple Milkweed	E	1922
Vascular Plant	<i>Houstonia longifolia</i>	Long-leaved Bluet	E	1886
Mussel	<i>Ligumia nasuta</i>	Eastern Pondmussel	SC	2011
Vascular Plant	<i>Malaxis unifolia</i>	Green Adder's Mouth	T	1894
Dragonfly/Damselfly	<i>Somatochlora linearis</i>	Mocha Emerald	SC	1989
Reptile	<i>Terrapene carolina</i>	Eastern Box Turtle	SC	1997

Natural Heritage also produces maps of rare species habitat areas for regulatory purposes. The Cranberry Pond area, Great Pond and Upper Reservoir, and Sunset Lake have been mapped as estimated habitat of rare species.

F. Scenic Resources and Unique Environments

There are many unique and scenic areas of Braintree which encompass a range of geographic and historic elements of the Town.

West St. from Five Corners toward Randolph is a heavily wooded road with views of the Great Pond Reservoir. Most of the wooded area is water supply protection land.

East Braintree is a unique waterfront community with two marinas, a beach and a salt marsh. This area is an estuary “where a river meets the sea” and provides Braintree a bit of coastline. The Toland and Dingee trails provide a walkway along the Fore River, from Smith Beach through Watson Park. One can also continue up Gordon Rd. across the Quincy Avenue bridge and over to the canoe launch in Weymouth, just across the river from the Braintree Yacht Club to extend the walk.



Views along Toland Walkway from Watson Park to Smith Beach

The Town Hall mall and vicinity is designated a historic district. Town Hall itself, the Thayer House across the street and Gilbert Bean drive with its “Great Oak” tree form a historic corridor.



Rock falls along Monatiquot River

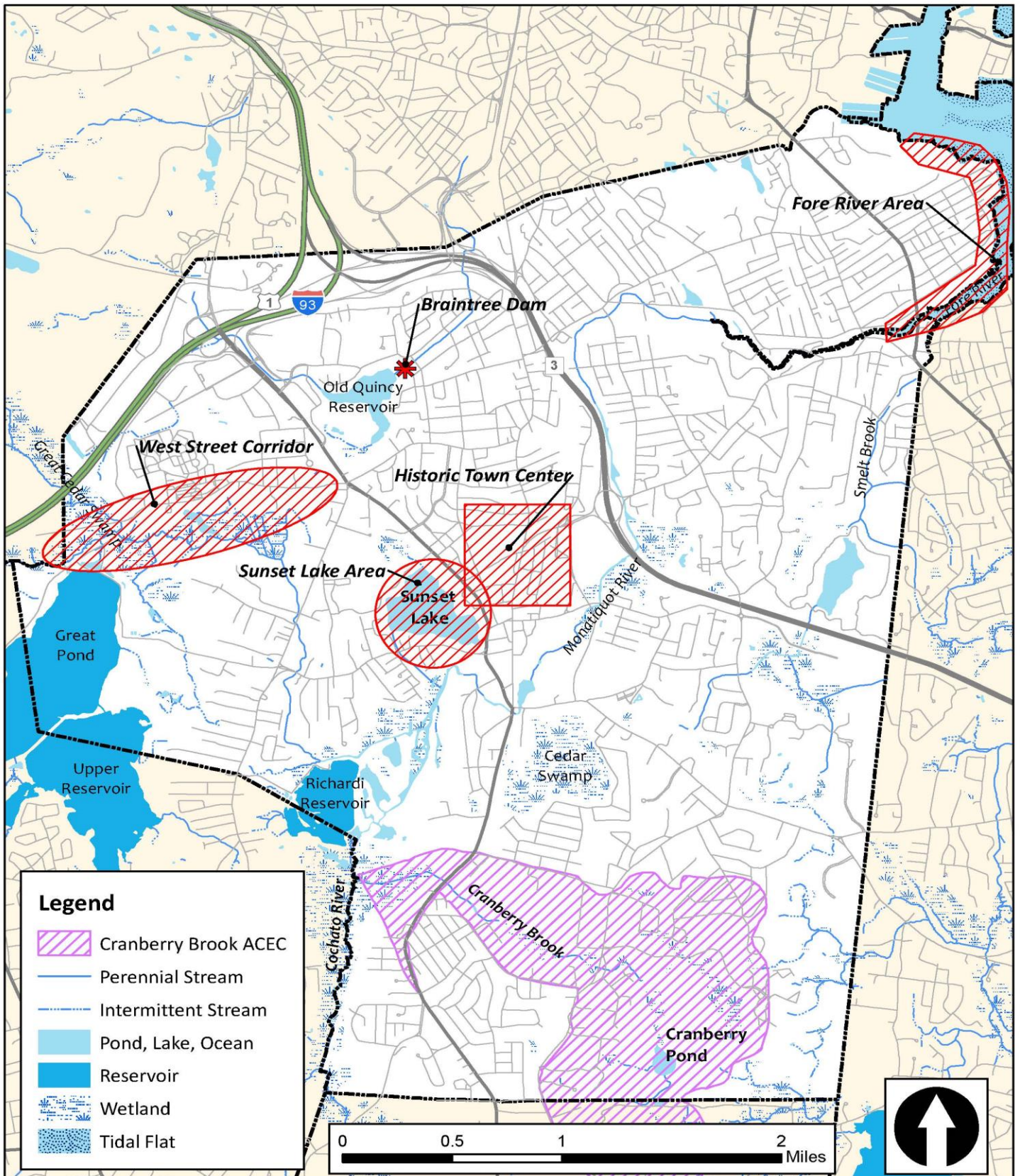
A wonderful view of the Monatiquot River can be observed from behind Plain St. (the former Armstrong Cork site). A series of large rocks in this location create a cascading waterfall. Public access to the river in this area will be part of the Armstrong Dam removal project along with redevelopment of the site.



Cranberry Pond

Environmentally speaking, one of the most unique environments within Braintree is the Cranberry Pond area. The Cranberry Pond watershed was designated an Area of Critical Environmental Concern in 1983. Significant features include bogs, Atlantic White Cedar swamps, Cranberry Brook and the 7.5-acre Cranberry Pond. This area also abuts the 243-acre conservation area protected as part of the Devon Woods Development as well as the Holbrook Town Forest to the south.

UNIQUE AND SCENIC RESOURCES MAP



G. Environmental Challenges

Climate Change

The “Braintree Climate Vulnerability Assessment and Action Plan” notes that we are already experiencing warmer temperatures, increased precipitation, and rising seas based on documented observation records and scientific research. Precipitation in the Boston area has increased by 10% in the past fifty years. Recently released design storm figures (NOAA 14) for the 10-year, 24-hour storm are 15% higher than those issued in 1961. Climate projections for this century include increased frequency and intensity of rain and snow storms, rising seas, inland flooding and more frequent days with extreme heat.

Open space plays a significant role in helping to mitigate climate change, specifically:

- as buffers to flood areas;
- as habitat connections to foster resilience;
- to cool “hot spots” created by large areas of impervious surfaces;
- to take up carbon to help offset emissions of greenhouse gases.

In addition to dealing with a changing climate, Braintree also has the environmental challenges typical of a highly developed town, including a high percentage of paved surfaces, water quality issues, degraded sites, etc.

Stormwater

When land is paved or built upon, stormwater can not be absorbed by the soil. This increases the volume of water which “runs off” to rivers and streams and can cause erosion and increase flooding. It can also cause negative impacts to water quality because all the pollutants on the pavement (sand, salt, oil, litter, etc.) are washed into the waterways. There are many areas throughout Town where untreated stormwater runoff from roads and parking lots discharges to waterways without any treatment. Water quality would benefit from stormwater retrofits to provide treatment, infiltration and retention of stormwater. This would provide for increased groundwater flow to waterways to help sustain waterways during periods of drought.

As properties are redeveloped, stormwater improvements are mandated through the permitting process of the Planning Board and/or Conservation Commission. Stormwater discharges from the Town’s drainage system are also regulated by the EPA under the Clean Water Act.

Impaired Waters

As part of the federal Clean Waters Act, states are required to monitor and assess the quality of the waterbodies. Waters are evaluated with respect to their capacity to support designated uses such as aquatic life support, fish and shellfish consumption, drinking water supply, and primary (e.g. swimming) and secondary (e.g. boating) contact-recreation. Several waterbodies have impairments as noted in the Environmental Challenges Map (Map 11).

Aquatic Weeds

Sunset Lake, Eaton's Pond and Pond Meadow all experience problems with nuisance growth of non-native aquatic weeds. These waterbodies are shallow and provide ample opportunity for plants to root in the bottom sediment. These lakes/ponds are also eutrophic, meaning they have experienced a high level of nutrient enrichment due largely human activity such as over fertilizing lawns which fuels aquatic plant growth. Unfortunately, aquatic weeds require ongoing management, typically with aquatic herbicides.

Invasive Species

Invasive species are species which are not native to New England and which cause harm when they out-compete native species by reproducing and spreading rapidly in areas where they have no natural predators and they change the balance of ecosystems. They are extremely common in disturbed sites and edge habitat and can even become problematic within relatively intact ecosystems. Common invasive species include Japanese knotweed, multiflora rose, glossy buckthorn, *Phragmites* and oriental bittersweet.

Invasive species are well established in our landscape and eradication is an unrealistic goal. Efforts should focus on early detection and elimination of new invasive species along with targeted management of invasive species where they threaten sensitive resources or intact ecosystems.

Contamination/Degraded Sites

There are many sites in Braintree, particularly in the older and more urbanized areas of Town that have contamination by oil and/or hazardous materials. Mass DEP regulates these sites under Massachusetts General Law Chapter 21E. Mass DEP maintains an online database of reported sites. There are several sites in Braintree in various areas of the Town as noted in the Environmental Challenges map.

Overpopulation of Deer

Deer population density is an ongoing issue in suburban areas. Deer are highly adaptable to suburban conditions- they benefit from the nutrient dense landscaping provided around developed areas and thrive in the edge habitat free of predators. While many people enjoy seeing deer, negative effects of high deer populations include vehicle collisions, Lyme disease and degradation of the forest understory.

The Massachusetts Division of Fisheries & Wildlife (DFW) estimates that there are 20-30 deer per square mile in Zone 11 which is the Wildlife Management zone for most of Braintree. DFW recommends no more than 20 deer per square mile.

In 2015, in recognition of the high deer density in the area the Blue Hills Reservation (managed by the Massachusetts Department of Conservation and Recreation) allowed deer-hunting for the first time since the reservation was created in 1893. The Town of Braintree and the Conservation Commission have considered allowing bow-hunting on certain town-owned lands to help manage the deer population but have not implemented this to date.

Landfills

There is a capped landfill on Ivory Street behind the transfer station. The landfill was capped in the late 1980s and is monitored for settlement, gases and leaching. A solar panel installation of 1.6 kilowatt hours on the top of the landfill was completed in late 2014.

Erosion

There is a significant erosion problem at the edge of Watson Park along the Fore River. In 2017 The Town obtained a grant from MA Coastal Zone Management to evaluate the area and design a shoreline stabilization project. Implementation of a final design will occur in a subsequent phase of the project. Other areas of erosion are minor and addressed on a case by case basis.

Chronic Flooding

Repetitive loss areas have been identified through floodplain management and planning. These are areas which have seen have had multiple flood insurance claims and as such, good indicator for chronic flooding problems. These areas include: Rex Drive area, Adams St. area, Lunar Ave./Altair Ave. area, Wayne Ave./Saint Michael St. area, Washington St./Jefferson St. area, Kensington/Logan Area. These areas were developed in the floodplain prior to the regulations restricting such development. As these properties are redeveloped in the future decades they will be encouraged and in some cases required to elevate or otherwise mitigate the situation.

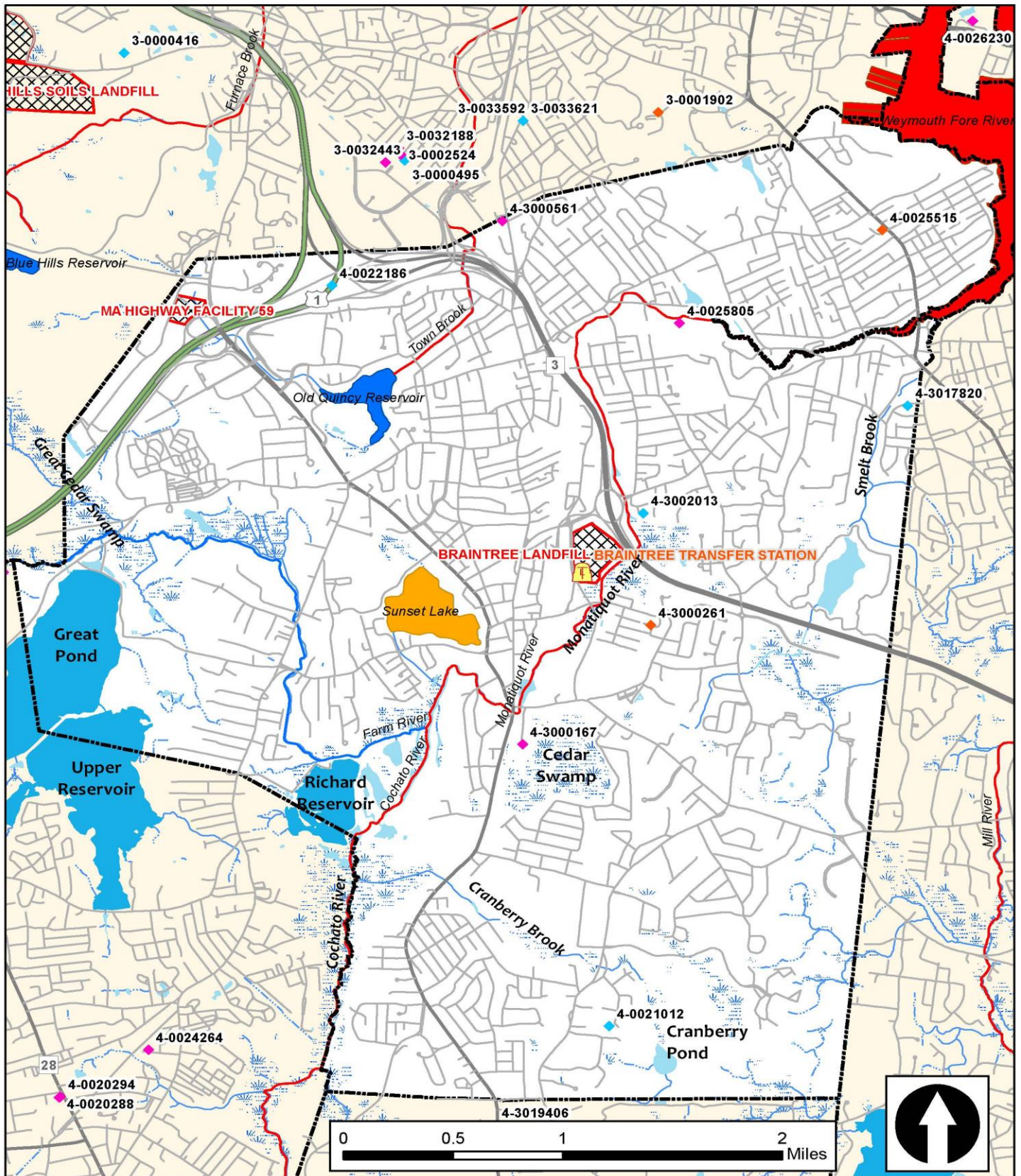
Sedimentation

Sedimentation to waterways is managed through review of site disturbance by the Planning Board, Conservation Commission and the Stormwater Division. Erosion controls are required and additional staff has been added to increase the capacity of the Town to ensure compliance.

Environmental Equity

Environmental equity refers to the equitable distribution of open space and recreational resources throughout Town. Reviewing the map of the Open Space and Recreation Areas indicates that there are more resources in the south and west of the Town. This was reinforced during the public participation process as participants noted that more open space is needed in East and North Braintree. Protecting or acquiring open space in these areas of Town is identified as a specific objective of this plan.

ENVIRONMENTAL CHALLENGES MAP



Legend

Chapter 21E Tier Classified Sites - Currently Active

Regulated Status

-  TIER I
-  TIER II
-  TIER1D
-  Large Transfer Stations
-  Closed Landfill

Water Body Segments - Rivers

Category

-  2 - Attaining some uses; other uses not assessed
-  3 - No uses assessed
-  4A - Impaired - TMDL is completed
-  4C - Impairment not caused by a pollutant
-  5 - Impaired - TMDL required

Water Body Segments - Lakes, Estuaries

Category

-  2 - Attaining some uses; other uses not assessed
-  3 - No uses assessed
-  4A - Impaired - TMDL is completed
-  4C - Impairment not caused by a pollutant
-  5 - Impaired - TMDL required

SECTION 5: INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST

The importance of open space cannot be overstated, especially in the towns close to Boston which developed early. Open space offers a relief from the busy pace of life and provides opportunity for people to enjoy being outside and/or engaging in sports or other activities. Open space provides wildlife habitat. It helps to mitigate flooding and the other impacts of climate change. Open space is part of what creates a unique sense of place in a community.

The purpose of this inventory is to identify areas of conservation and recreation interest in the Town in order to evaluate current and future open space needs.

The following table provides a summary of management of publicly-owned or managed open space in Braintree.

Table 8: Existing Open Space

<u>Property</u>	<u>Managing Agency</u>	<u>Acres</u>
Conservation Lands	Conservation Commission	454
Devon Woods Conservation Restriction	Conservation Commission	244
Water Supply Protection	Water & Sewer Department	390
Parks & Playgrounds, Golf Course	Department of Public Works	255
Town Forest	Town Forest Committee	127
School Trust Land	School Trust Fund	19
School Lands	School Department	254
Town-owned Vacant Land		122
Pond Meadow Park	Weymouth-Braintree Regional Recreation-Conservation District	300
Blue Hills Reservation	(State) Division of Conservation & Recreation	71
Braintree Dam	(State) Division of Conservation & Recreation	65
		2301
		24.6% of town (9322 acres)

Appendix A is a parcel by parcel breakdown of the above information. It lists all of the town-owned open space parcels. This includes land under the management of the Conservation Commission, Parks Department, Water Department, and School Department (although most school parcels contain school buildings, they also provide significant acreage of playing fields

and other open space) as well as general town-owned vacant land. Pond Meadow Park land is also included in Appendix A; that land is owned by the Weymouth-Braintree Regional Recreation-Conservation District. Also included is land owned by the Commonwealth of Massachusetts for open space purposes (Blue Hills Reservation and the Braintree Dam site).

Many of these parcels are permanently protected open space per Article 97 of the Massachusetts Constitution. Article 97, adopted in 1972, is the 97th amendment to the state constitution. It guarantees Massachusetts residents basic environmental rights and outlines how those rights will be protected. Article 97 requires that any land or easements taken or acquired for natural resource or parkland purposes shall not be used for other purposes unless the Massachusetts legislature approves the change by a two thirds vote. Article 97 was intended to be a legislative 'check' to ensure that lands acquired for conservation or parkland purposes were not converted to other uses.

Land is considered protected if it falls into one or more of the following categories:

- State land owned by a state conservation agency, thereby covered by Article 97 of the Massachusetts Constitution
- Town land owned under the jurisdiction of:
 - a. Conservation Commission
 - b. Water Department for drinking water protection
 - c. Any town department if dedicated to natural resource protection in the deed
 - d. Dedicated park land
- Private Land which is protected by a Conservation Restriction pursuant to Massachusetts General Law, Chapter 184, Sections 31-33

Some of the town-owned land which is not protected should be transferred to the Conservation Commission or otherwise afforded Article 97 protection, specifically a parcel managed by the school off of Braemore Road and abutting the Cranberry Pond Area (Parcel ID 1101 0 1). Also, the "Flatley land" off Braxton Drive and abutting the Golf Course which was donated to the Town should be designated as conservation land (Parcel ID 1054 0 11A and 11B).

A. Lands of Interest

Areas of interest include land that could be valuable for one or more of the following purposes: recreation, protection of natural resources, historic or scenic character, potential to link existing resources, or potential to restore access to waterways.

Public participation during the planning process included identification of lands of interest. These are included as table 9 in the summary of community needs.

Also noted as lands of interest is Chapter 61 land. This is undeveloped land which is taxed at a lower rate in exchange for the land remaining in an undeveloped state. When the land is

transferred out of the program, the Town has the right of first refusal to purchase the property. The only land enrolled in Chapter 61 program is the Braintree Rifle and Pistol Club.

B. Description of Major Open Space

Parks and Playgrounds

Adams Playground

Just less than 4 acres, this park is located at intersection of Adams and Commercial Streets in East Braintree. The park has a softball field, basketball court and a children's play apparatus area.

There is no parking available for this park. Some “road shoulder” parking is available.

Berwick Playground

Berwick Playground is a small, neighborhood park of approximately one-acre located at end of Berwick Street off Shaw Street in East Braintree. The park has a half-court basketball area and a children’s play apparatus area. There is no parking available for this park.

Braintree Municipal Golf Course

The Braintree Municipal Golf Course is an eighteen-hole course at 101 Jefferson Street off Route 37 in South Braintree. Owned and operated by the Town of Braintree since 1954, the facility is located on approximately 148 acres along the Monatiquot River and partially within the floodplain. There is ample parking, including several handicapped accessible spaces.

Bus Stop Park

This is a small park of approximately 500 square feet in South Braintree Square with a few benches.

Daily Soccer Field

Approximately 4 acres, Daily Soccer Field is located behind 654 Washington Street (behind Howard Back Real Estate). Access is through a permanent right-of-way access easement through the real estate company's driveway into the field. There is no parking at this facility for users or spectators.

Daughraty Gym

This is the former field house gymnasium adjacent to the former Braintree High School (which is now a privately-owned housing development). The Braintree Park Department acquired the building in 1984 and operates it as an indoor recreation center. There is ample parking in the rear in the adjacent Hollis Field and Hollis School lot.

Davis Playground

This 4 acre playground is located on Faxon Street off of Commercial Street in East Braintree. The park is the site of the James Calhoun Basketball Court. James Calhoun is a 1960 graduate of

Braintree High School who achieved notoriety as a high school and college basketball coach. James Calhoun grew up on the hillside which overlooks the neighborhood. Other amenities include a softball field, children's play apparatus area and a winter skating area. There is a parking area along the perimeter of the playground for the playground and the adjacent Puritan Bridge Club.

Dyer Hill Playground

Dyer Hill Playground is a 5 acre park located off Washington Street in Dyer Hill section of South Braintree. New playground equipment and benches and trees were installed in 2008. The playground equipment area is accessible via a stone dust path. There is limited on-street parking.

French's Common

In use since the beginning of the 20th century, French's Common is the site of town's oldest open space and baseball field. The park is almost 7 acres and is located adjacent to Braintree Town Hall on Washington Street. Facilities include a basketball court, children's play apparatus area and 2 tennis courts. Parking is available at Town Hall (tennis courts also accessible from Tremont Street).

Furlong Park

Furlong Park is on Sunset Lake, at the corner of Pond and Washington Streets in South Braintree. The site is about half an acre and is landscaped by the Gardner's Guild. It also has several benches and provides a beautiful spot on the Lake. The park was formerly known as "Little Pond Park" and was renamed after South Braintree businessman and community leader Charles Furlong in the mid 1980s. There is no parking available at this park.

Harris Playground

A one-acre playground located on the corner of Elmlawn Road and Perry Road off of Elm St. with a ½ basketball court, children's play apparatus area, benches and shade trees. There is no parking available.

Highlands Community Playground

A .6 acre playground area is part of this 4.6 acre parcel of land which was purchased by the Town from Norfolk County in 2007. It is also home to the Braintree Community Arts Center. It borders South Street and Washington Street/Route 37. There is parking available.

Hollingsworth Park

This park is just over 20 acres and is located off of Pond Street behind the School Department Administrative Offices (formerly Colbert School). It is the home site of the Braintree American Little League and site of Rull, Brooks, Googins, Duffy and Tarallo fields (5 youth, turf surface baseball fields, 1 lighted). There is also a basketball court, children's play apparatus area, a concession stand and restrooms. There is off street parking for approximately 100 vehicles.

Hollis Field

Hollis Field is a 9 acre complex of playing fields (football, soccer, softball, and baseball), two tennis (and pickleball) courts and two basketball courts and the Hollis Community Playground. The field is located behind the Hollis School and the courts are behind the Daugherty Gym. Parking is available for 55 vehicles at the park and another 50 behind Hollis School.

Lincoln Park

Lincoln Park is on Hobart Street off of Hayward Street in East Braintree. The park is about four and half acres and is the former site of the Lincoln School. The school was closed by the town in 1979. The park has a basketball court, a small "sandlot" ballfield and children's play apparatus area. A portion of the property is heavily wooded and there is a short trail through the woods. There is limited off-street parking.

Mattulina Park

Mattulina Park is approximately 6.5 acres and is located at Kendall Avenue off Pearl Street in South Braintree. There is a small youth baseball/softball field, basketball court, children's play apparatus area and benches. There is no off street parking.

Penniman Park

Site of the former Penniman School on Cleveland Avenue, the park is 3.5 acres. The land was subdivided to enable the building to be retained for use by the Council on Aging. There is a basketball court, softball field, children's play apparatus area, tot lot and a parking lot for approximately 30 vehicles. The land abuts the Monaquot River.

Jonas Perkins Park

Located at the intersection of Liberty, Union and Commercial Streets at site of the former Jonas Perkins School, a portion of the 2.5 acre park is managed as a community garden.

Smith Beach

Braintree's saltwater beachfront along the riverfront of the Weymouth Fore River estuary. There are public restrooms and Red Cross certified lifeguard staffing in the summer. The Francis Toland Riverfront Walk connects the beach to Watson Park. There are 30 parking space across the street. The beach may be used to launch kayaks.

Sunset Lake

Almost 6 acres on Sunset Lake, the park includes a beach area which is staffed by Red Cross certified lifeguards during the summer. The lake itself (referred by state records as Little Pond) is 55 acres with residential property on most of the periphery and Braintree High School on its westerly boundary. There is parking at the beachfront for approximately 85 vehicles and public restrooms, a gazebo, two boat access points and a children's play apparatus area. A summer concert series is held each year at the site. No motorized boats are allowed in the lake per a town bylaw enacted in 1970's but non-motorized boats such as rowboats and kayaks are permitted. Paddleboards are increasingly seen at the lake.

Noah Torrey Park

Five and half acres, the park is the site of former Noah Torrey School on Pond Street and current site of the Marge Crispin Center (a social service agency). There is a children's play apparatus area and a basketball court. Ample parking is available behind the buildings. The Monatiquot River is at the bottom of the wooded slope behind the park, adjacent to the Braintree Golf Course.

Watson Park

Watson Park is just under 22 acres and is located on Gordon Road off Quincy Avenue (Route 53) approx. 1/8 mile from Weymouth Landing in East Braintree. There are 8 fields for baseball and softball, 1 basketball court, and 2 tennis courts. The park is the home site of East Braintree Little League (baseball for boys and girls 6-15) and has a refreshment stand/storage building/restroom facility, children's play apparatus area, splash pad and picnic area. There is off street parking for approximately 30 vehicles. The park is located on the Fore River and the Francis Tolland walkway connects the park with Smith Beach. The Lee Dingee stone dust walkway winds through the park along the shore of the Fore River.

Wildflower Garden Park

This ¼ acre park is located behind Central Fire Station off Tenney Road adjacent to Braintree Historical Society's Thayer House and Thayer Barn property. The plantings and landscaping are maintained by Braintree Gardener's Guild. The land was acquired by the Town for park purposes in 1987.

Braintree Yacht Club

Adjacent to Watson Park, the Yacht Club's 2 and half acre property is leased by the Town to Yacht Club on 10 year lease. Priority membership in the Club is given to Braintree residents. There is boat storage, a clubhouse, finger slips and mooring spaces in the Weymouth Fore River as well as a public boat launching ramp.

Patty Whitehouse Walkway

A short, ADA accessible walking path from Glenrose Avenue to the Fore River. The walkway was constructed by the Braintree Electric Light Department and commemorates Patricia Whitehouse, who was a strong advocate for the Fore River.

Undeveloped Park Land

Hobart/Tremont St. Island

An open space area of approximately a half-acre at the intersection Hobart Avenue and Tremont Street near Thayer Academy in South Braintree.

Kimball Road Parkland

Undeveloped land (six and half acres) located behind Kimball Road off Peach Street in the Braintree Highlands. The land was acquired by the Town for park purposes during Campanelli Home subdivision developed in 1950's.

Marion Leary Park

Acquired as part of Marion Leary Estate in late 1970's, this 3 acre area is located off Grove Street and is undeveloped with some wetlands. No parking.

Sumner Ave./Ray Lane Median

Similar to the Hobart and Tremont street island, this .3 acre median island is located at Sumner Avenue and Ray Lane off Elmwood Avenue in South Braintree.

Outdoor School Fields

Braintree High School

Outdoor athletic facilities on 28 acres located at 128 Town Street and includes 2 basketball courts, 6 tennis courts, 3 baseball diamonds (1 lighted), 3 soccer fields (1 lighted), 1 football field stadium with 2500 combined grandstand seats, 2 softball fields (1 lighted), an 8-lane all weather track, the Messina Skate Park, and restrooms/refreshment stand/storage garage. Approximately 700 parking spaces are available in the High School Parking lot.

East Middle School

There are 28 acres located at 305 River Street off Middle Street (also accessible from Hillside Avenue off Union Street) consisting of 8 soccer fields and 2 tennis courts. Parking is available in the school parking lot.

South Middle School

There are 20 acres located at 232 Peach Street off Washington Street or Liberty Street in Braintree Highlands with outdoor athletic facilities consisting of 2 football/soccer fields and a basketball court. Parking is available in the school parking lot.

Flaherty School

Approximately 7.5 acres, located on Lakeside Drive off Walnut Street behind South Shore Plaza, the site is home of the Norman Preston Softball Field and four other fields for South Braintree Girls Softball League use. Parking is available in the school lot and at the adjacent South Shore Plaza.

Foster School Ground

This area is 8 (mostly wooded) acres and is located on Foster Road off Washington Street in the Braintree Highlands. There is a baseball/softball field and a basketball court. The Foster School is owned by the Town but not currently used as a public school. Parking is available in the school lot.

Liberty School Grounds

Approximately 8 acres, located at 49 Proctor Road off Liberty Street, the grounds have 1 basketball court and 2 youth baseball/softball fields. Parking is available in the school lot.

Highland's School Grounds

The Highland School grounds (located at 144 Wildwood Avenue off Liberty Street or off Park Street from Washington Street) consists of 3.5 acres with 1 basketball court, 2 street hockey courts, children's play apparatus area and small play field in rear. Parking is available in the school lot.

Morrison School Grounds

Four acres located at 15 Mayflower Road in East Braintree (the school entrance is off Liberty Street in East Braintree) with 1 basketball court and 1 youth baseball/softball field. Parking is available in the school lot.

Monatiquot School Grounds

Two and a half acres, located at 25 Brow Avenue off Tremont Street or Academy Street with 1 basketball court and 1 youth softball field. Parking is available in the school lot.

Ross School Grounds

Five acres located at 20 Hayward Street at intersection of Commercial, Elm and Hayward Streets in East Braintree with a half-court basketball court and a large sloping mowed area. The grounds abut the Eaton's Pond Conservation Area however there are no trail connections due to thick wetland vegetation.

Conservation Areas

Cranberry Pond:

Approximately 140 acres of permanently protected open space is found in the Cranberry Pond area. The largest parcel is 84 acres and contains Cranberry Pond itself. Several additional protected parcels, ranging from under ¼ acre to 29 acres, are found throughout this area, which is part of the state designated Area of Critical Environmental Concern. A trail system throughout the area exists and connects to surrounding open space areas, including the Holbrook Town Forest.

In addition to the town-owned land, a Conservation Restriction (CR) exists on 243 acres of land surrounding Cranberry Pond. The CR prevents additional development around the Devon Woods condominium development.

The Cranberry Pond Conservation Area can be accessed from Braemore/Eutaw Road. There is very limited parking available (3 gravel parking spots).

Cedar Swamp

This unique natural resource area supports a stand of Atlantic White Cedar and serves as a critical stormwater retention area. It consists of approximately 87 acres and is located in the Monatiquot River floodplain. There are no trails or designated public access points to the swamp, however the fill over the sewer main through the area provides a higher/drier area upon which a trail could be possibly constructed but it leads only to backyards.

Eaton's Pond/Hayward Creek

Approximately 60 acres Eaton's Pond and Hayward Creek was taken by the town for flood control project implemented by the Army Corps of Engineers. An informal trail network exists through the area. There is no designated access point to this area. Potential access points could be developed behind the Ross School on Hayward Street or off of Commercial Street.

Cochato River Area

Fifty-four acres of conservation land exist along both sides of South Street, near Cats Academy and the Holbrook town line. The parcel on the western side of South Street provides access to the Cochato River (which is the municipal boundary with Randolph). Public accessibility to the river is quite limited by the extensive wetland bordering the Cochato River. There are no trail maps or designated parking for this area.

Water Supply Areas

Great Pond Watershed Area

Approximately 320 acres of water supply land is managed by the Water Department for protection of the drinking water supply. This land is adjacent to the Great Pond Reservoir and managed by the Water and Sewer Department. Public access to the watershed lands is prohibited by the Water Department due to public health and safety concerns.

Richardi Reservoir Area

The Water Department also manages about 80 acres of open space at the Richardi Reservoir. However, many of these acres are actually part of the reservoir itself. There is no formal public access to this land.

Other

Pond Meadow Park

Pond Meadow Park is a 320 acre park which is managed jointly by the Braintree Weymouth Regional Recreation and Conservation District. The Park has a 20 acre pond which was created as part of a flood control project in the 1970s, as well a 1.6 mile paved walking/bike path loop and multiple unpaved trails, picnic areas and a pavilion. The park is very popular and provides excellent passive recreation opportunities and a popular summer camp program. Pond Meadow is handicapped accessible and has ample parking available. The Pond at Pond

Meadow is the source of Smelt Brook which flows to the Weymouth Landing Area and the Fore River.

Town Forest

Town Forest consists of 126 acres of forestland as well as Cranberry Brook and associated wetlands. Access is primarily from Peach St. where there is a small parking lot. A map kiosk is located next the parking area. Expanding the parking area is currently under consideration. Boy Scout troops frequently use the forest for camping and hiking. It is also popular with dog walkers.

Blue Hills Reservation

Sixty-eight acres of the DCR's Blue Hills Reservation are located in the northwestern corner of Braintree. The small portion that lies within Braintree is separated from the predominant acreage of the Reservation by Route 128/I-93. This section of land is largely comprised of wetlands. A parking area and a map kiosk are located on West Street.

There is access to the Chickatawbut area of the Blue Hills off of Wood Rd.

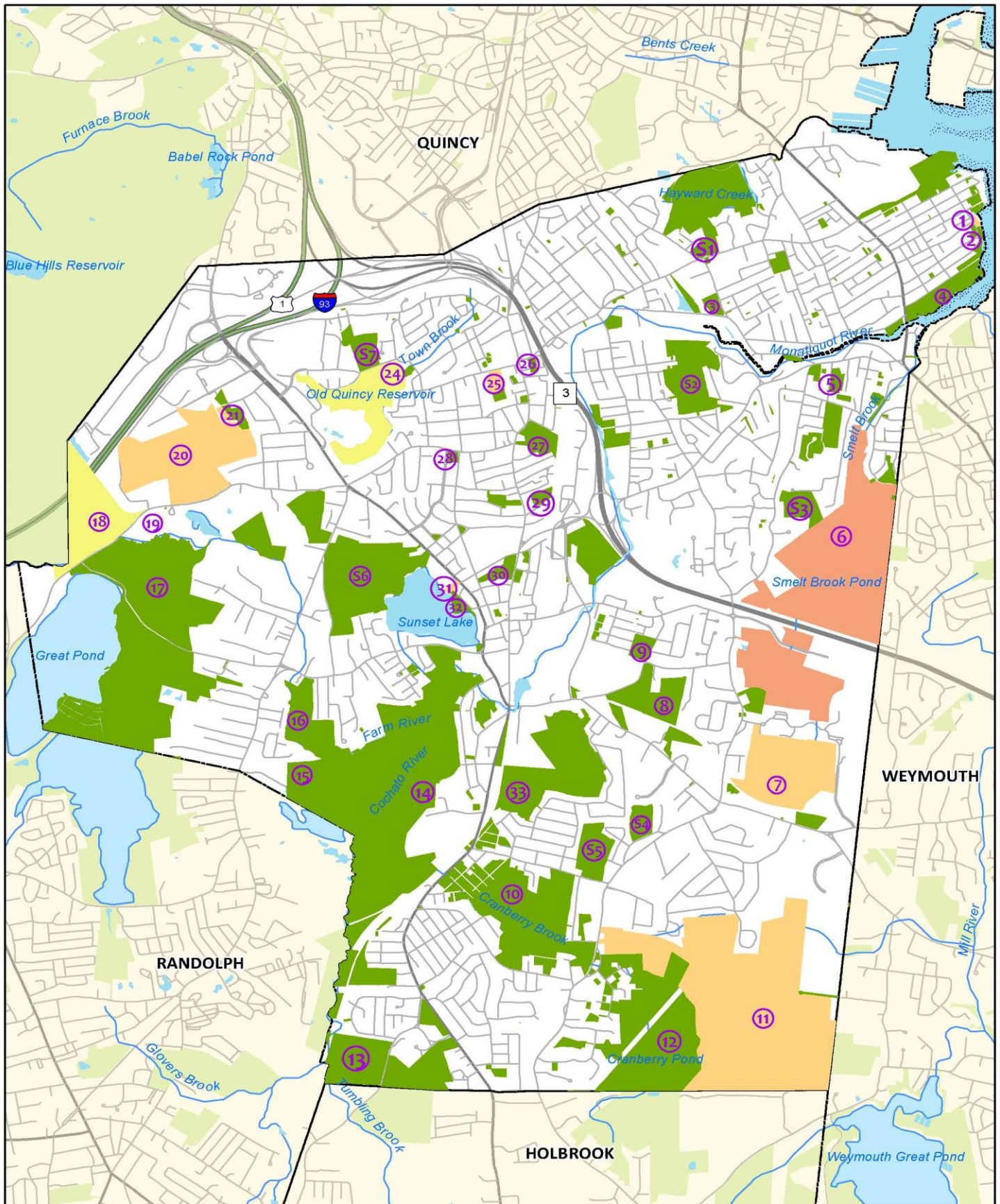
Braintree Dam

The Braintree Dam (also known as the Quincy Reservoir) is the former water supply for the City of Quincy. The 64 acre area was acquired by the DCR and is managed by the Town of Braintree for flood control along the Town Brook.

There is no public access to the reservoir. Since the water is not used as drinking water supply, the Town should work with the DCR to make public access available for walkers and joggers and other recreational users.

School Trust Land

The nineteen acre wooded parcel has frontage on both Granite St. and West St. near "five corners" intersection. It is owned by the Town and there is a restriction in place which limits development to no more than four athletic fields and a 1000 square foot building and associated parking off of Granite St.



OPEN SPACE LANDS MAP

SCHOOLS

- S1 Ross Elementary School
- S2 East Jr. High School
- S3 Morrison Elementary School
- S4 Liberty Elementary School
- S5 South Jr. High School
- S6 Braintree High School
- S7 Flaherty Elementary School

CEMETERIES

- 8 Plain Street Cemetery
- 20 Blue Hills Cemetery
- 26 Cemetery
- 31 Bestick Cemetery

STATE

- 18 Blue Hills Reservation
- 24 Town Brook Flood Control

MUNICIPAL

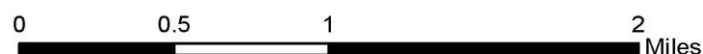
- 2 Smith Beach
- 3 Adams Playground
- 4 Watson Park
- 5 Davis Park
- 6 Pond Meadow Park
- 9 Mattulina Playground
- 10 Town Forest
- 12 Cranberry Pond
- 13 Cochato River Conservation Area
- 14 Hollis Memorial Golf Course
- 15 Farm River Conservation Area
- 16 Hollingsworth Playground
- 17 Great Pond Area
- 27 Hollis Field
- 28 Dearing Park
- 29 Daily Soccer Field
- 32 Sunset Lake
- 33 Cedar Swamp

PRIVATE / NON-PROFIT

- 1 Metropolitan Yacht Club
- 7 Braintree Rifle and Pistol Club
- 11 Devon Woods Open Space
- 19 Ridge Sports Area
- 21 Flatley Property
- 25 Archbishop Williams Stadium
- 30 Frenchs Common

OWNERSHIP

-  Town of Braintree
-  Private/Non-profit
-  Weymouth-Braintree Regional
-  State



Data Sources:
Town of Braintree, Assessor's Parcels, August 2017; MassGIS Protected Open Space, June 2017

SECTION 6: COMMUNITY VISION

A. Description of Process

The Previous Open Space and Recreation Plan (2009) was used as the foundation of this update. Planning and Community Development staff did much of the background research, data collection and plan development. An ad hoc Open Space Recreation Plan committee of Town Staff, (Conservation Planner and Recreation Director), Conservation Commission members and a Recreation Advisory Commission member provided direction and input to the planning process.

Two public forums were held and an online map survey was conducted. The first forum was on September 28, 2017 at Braintree Town Hall. Approximately 40 people attended and were able to view large maps of existing open space areas and also break into groups to discuss and mark up maps in response to questions such as “what areas need protection or improvement”.

An online map survey went live on November 1, 2017 and ran through December 1, 2017. The map was aerial photo based with existing open space areas noted. The map allowed for people to pin comments at specific locations to help identify acquisition priorities, areas needing improvements, suggested amenities, or simply areas people enjoy visiting.

The second public forum was held on December 11th. Approximately 16 people attended. The needs identified at the first forum and in the online map were discussed and refined and a list of proposed action items developed (see Action Plan).

B. Statement of Open Space and Recreation Goals

Through the use of large, town-wide maps at the public forums and the online survey map, residents were able to get a strong sense of how much open space is already protected; almost 25% of the Town. This visual exercise led to focus on where open space is lacking (East and North Braintree) and focus on particular areas which remain undeveloped. Comments were also focused on areas which need improvements and where additional outdoor recreational opportunities are needed.

The goals which arose from the public participation and plan development process are:

- Goal 1: Protect Remaining Undeveloped Open Space
- Goal 2: Improve Parks, Playgrounds and Fields
- Goal 3: Provide More Opportunity for Outdoor Activity- Trails, Water Access
- Goal 4: Improve Ecological Function of Braintree’s Natural Resources

SECTION 7: ANALYSIS OF NEEDS

A. Summary of Resource Protection Needs

There are many resource protection needs in Braintree. As an older suburb, much of the development in Braintree happened in the years before environmental regulation. Wetlands were filled, river channels altered and ecosystems were disrupted by roads, highways and other development. Restoring ecosystem connections and protecting the intact ecosystems that remain are both vitally important.

The concept of “green infrastructure” is helpful in thinking about resource protection needs. Green infrastructure is a term that is often used to describe landscape elements that utilize or mimic natural systems, such as rain gardens, for drainage and stormwater management. However, at its broadest definition green infrastructure includes open spaces, parks and other green areas which not only infiltrate stormwater also help to reduce extreme heat, provide resilience to impacts of climate change, provide and/or connect wildlife habitat and/or provide human health and recreation benefits.

Strategic climate considerations for open space planning includes protection of large and/or connected green space to foster resilience and biodiversity, creating green space to cool “hot spots” (areas of warmer than average temperature during summer months); buffering flood prone areas; infiltrating groundwater to protect stream flow and groundwater levels and protecting areas adjacent to the shoreline, which may be affected by future sea level rise.

The following resource protection needs have been identified.

- restore connectivity of the Monaquot River to allow fish passage and increase resilience of the river to changing climate and reduce flood risk;
- restore vegetated buffer zone to rivers and other waterbodies to improve water quality and wildlife habitat and to protect from flooding;
- maintain stormwater management systems for water quality benefits and flood protection;
- monitor deer population to prevent overbrowse of forest understory and ensure forest regeneration;
- protect land which is contiguous to existing open space or provides a connection between large open space areas.
- evaluate areas susceptible to sea level rise and increased flooding, particularly along the Fore River.

B. Summary of Community Needs

Community input gathered as part of the public forums and via the online comment map indicated a range of needs and concerns. Common themes were:

- remaining undeveloped land should be protected;
- more open space is needed in East and North Braintree;
- access to the Braintree Dam property is strongly desired by residents;
- more walking trails are need throughout town;
- better access/awareness of conservation areas and other open space is needed;
- certain parks are overdue for equipment and maintenance upgrades;
- there is an overall need for better maintenance and litter pick-up throughout Town.

The specific locations identified are listed in the tables below. Action items to address many of these are noted in Section 9: Seven Year Action Plan.

The specific areas identified during the forums and in the online map as land which should be evaluated for protection are listed below in table 9. The areas noted will be further evaluated by the implementation committee for suitability for acquisition or other protection.

Table 9: Lands of Interest Identified During Planning Process

Location
Monatiquot Village – vacant land along river
Behind St. Thomas Moore Church (Elm St.)
Middle St. Woods
Bestick Rd. Area
21 Acre Parcel at South Shore Plaza
Armstrong Dam Area (off Plain St.)
Behind Birch St.
Behind St. Clare Church (Liberty St.)

Many of these areas are in East and North Braintree. The need for more open space in East and North Braintree is reinforced by the population density map (Map 2) which reflects denser population in those areas of Town.

Table 10 lists the areas that were identified during the forums and in the online maps as desirable for more walking trails, water access or other needs. These areas will be further evaluated by the implementation committee.

Table 10: Areas Identified for Trails, Water Access or Other

Location	Comment
Penniman Park	Walking area along river
Penniman Park	Dog park
Sunset Lake	Add ADA kayak launch
Sunset Lake	Trail around lake
Allen St.(former BELD)	Remove buildings and provide a park
BELD	Add on to Patty Whitehouse walkway
Town Forest	Update walking trail
Hollingsworth Park	Need trail from neighborhood to the park
Great Pond Area	Public access and kayak launch
Monatiquot River	Walking trail around base of landfill
Monatiquot River	Trail parallel to highway
Montiquot River	Union St. rotary for kayak launch
Monatiquot River	River St. kayak launch
Monatiquot River	Armstrong Dam area for river access
Pond Meadow (south of Rte. 3)	Walking trails
Cranberry Pond Area	Walking trail along power lines
Cranberry Pond Area	Build bike path to Town Forest
Braintree Dam	Walking trail, connect to 21 acres piece at SS Plaza
Fore River – Vinedale Rd. area	Walking trail, water access

Several comments were received requesting public access to the land around Great Pond Reservoir. Because this is an active drinking water and water treatment plan, public access is not allowed. The Braintree Dam reservoir is not used for drinking water supply and as such, would be suitable for public access.

Some of the areas identified as desirable locations for walking paths or trails have limitations such as: multiple private property owners' backyards, wetlands or steep slopes which would make trail development impractical. A trail around Sunset Lake, for example would require easements from dozens of property owners and is not likely feasible.

Residents have also requested dog parks; designated fenced areas within which owners can let dogs run and play off-leash. A dog park committee has been pursuing locations with the Mayor's Office.

Also identified during the planning process was the need to improve awareness of existing areas. Many people do not know where conservation land, trails, water access or other opportunities exist. The specific areas identified are listed in Table 11. These suggestions will be further evaluated by the implementation committee.

Table 11: Areas Identified as Needing More Awareness

Location	Comment
Sunset Lake	Add signage on Franklin St re: kayak launch
Pond Meadow	Add signage on Liberty St re: kayak launch
Town Forest	Not well known

There are many areas in addition the three in Table 11 which are not well known. The Conservation Commission published a trail guide in 2017 to increase awareness of the town's open space. The guide includes trail maps where applicable, notes on access and parking as well as background information on each area.

Many maintenance/management needs were identified by participants in the Town's public forums and in the online survey map. Areas identified as needing equipment upgrades are listed in table 12. These suggestions will be further evaluated by the implementation committee.

Table 12: Areas Identified as Needing Equipment Upgrades

Location	Comment
Hollis Park	Upgrade ballfields
Penniman Playground	Playground improvement Fence-in the playground
Perry Park	New equipment needed
Lincoln Park	New equipment needed
Mattulina Park	Empty space/bare dirt
74 Pond St	Upgrade playground
Smith Beach	More sand needed
Highland Elementary	New equipment needed
Adams St. Park	Needs parking

Areas identified as needing better maintenance are listed in Table 13. These suggestions will be further evaluated by the implementation committee.

Table 13: Address Maintenance and Litter Removal at Parks and Schools

Location	Comment
Watson Park	Fence overgrown
Smith Beach	Litter, dog bag stations needed
74 Pond St.	Litter
High school fields	Need dedicated grounds crew
Parks and schools generally	Litter
Dyer Hill Park	Vandalism
Sunset Lake	Put docks back
Sunset Lake	Retaining wall tilting
Highlands Playground	Need light at South St./Washington St.

Several specific suggestions were made regarding litter and clean up needs around town:

- Hold two clean-up days a year instead of just one;
- Institute cleanup as part of community service and detention programs;
- Organize clean-ups by Town Council precinct;
- Generate a list of needs and request Town-funding.

Table 14 lists the natural areas identified during the planning process as needing better maintenance or management. These suggestions will be further evaluated by the implementation committee.

Table 14: Natural Areas Identified as Needing Improved Management

Location	Comment
Town Forest trails	Widen
Cranberry Pond Area	Wider trails, better access, parking
Cochato Trail	Parking, wider trails
BELD	Remove flotsam and jetsam along waterfront
Pond Meadow	Insect control

Several comments were received relative to widening trails however there is a balance to be struck with keeping impacts and disturbance low. The Conservation Commission and Open

Space and Recreation Plan Implementation Committee will evaluate this on a case by case basis.

Compliance with the Americans with Disabilities Act (ADA) was evaluated by the Town's ADA Coordinator with input from the Commission on Disabilities. The facility inventory revealed that the vast majority of town owned open space lacks designated accessible parking and pathways. Most of the parks are grass surface with no pathway. Each park and/or open space area is listed below with recommendations for access improvements. It should be noted that wherever a recommendation is made for accessible surfacing under and around playground equipment this means replacement of wood and rubber fiber material with either an ADA compliant pour in place rubber surfacing or artificial turf that is also considered fall safe by playground safety standards.

SCORP

The Massachusetts Statewide Comprehensive Outdoor Recreation Plan 2017 (SCORP) was reviewed in drafting Braintree's update. The SCORP notes the importance of outdoor recreational areas such as trails and water access to residents. Its goals are to provide access to underserved populations (such as teens and the elderly) and access in areas lacking in outdoor recreation facilities, support statewide trails initiatives, increase water-based recreation opportunities and support the creation and renovation of neighborhood parks. These goals are consistent with the goals of Braintree's plan. Of note in the SCORP is the objective to increase programming, particularly for seniors, teens and people with disabilities. For Braintree, this is addressed in more detail under management needs below.

Metro Future

The MetroFuture Plan prepared by the Metropolitan Area Planning Council was also reviewed in drafting Braintree's update. The MetroFuture Plan lays out a vision of development being concentrated near public transportation and infrastructure while outlying areas retain existing characteristics. The vision includes that all neighborhoods have access to parks and outdoor areas and seniors remain active. This is consistent with Braintree's goal and the SCORP goal to protect remaining open space, particularly in areas in which park areas are lacking.

C. Management Needs

There are several management needs or tools the Town needs in order to implement this plan.

An Open Space and Recreation Plan Implementation Committee is needed to evaluate and prioritize and carry out potential projects. There is also a need for the Town to be able to move quickly and with flexibility when an opportunity to acquire land arises. A mechanism for funding acquisition should be considered, perhaps a transfer from the Community Preservation Committee to the Conservation Commission so that Town Council approval is not required when pursuing an acquisition of land.

Formalized management of the Town Forest is needed since the Town Forest Committee is no longer active.

The Conservation Commission faces many challenges maintaining its land, including illicit activities, litter and encroachment. The Commission has a very part-time ranger (3 hours per week) to monitor conservation land and needs additional staff hours. A particular focus on Eaton's Pond Conservation Area is needed given the problems with illicit camping and dumping at this area.

Programming for conservation land or other undeveloped land would be helpful to encourage beneficial use of the properties, provide environmental education and increase stewardship. Programming for teens, youth and the elderly would provide more incentive for these populations to explore open space areas and activities. For example, the Town acquired 6 kayaks for use on the Fore River however, without programming to lead trips and organize the use of the kayaks on the river they are used infrequently.

A focused effort on improving water quality in the Town's waterbodies is needed. The Town is required to maintain its storm drainage system and to remove pollutants before they are discharged to the Town's waterways. The Department of Public Works passed a stormwater utility in 2017 to fund this work.

SECTION 8: GOALS AND OBJECTIVES

The goals and objectives of the plan were developed by reviewing the goals of the last plan, reviewing the common themes expressed at the public forums and the online map, and by incorporation of known natural resource protection/management needs.

Goal 1: Protect Remaining Undeveloped Open Space

- A. Evaluate Areas Identified During the Planning Process & Provide More Open Space in East and North Braintree

Goal 2: Improve Parks, Playgrounds and Fields

- A. Upgrade Equipment/Fields at Areas Identified During Planning Process
- B. Address Maintenance and Litter Removal at Parks and Schools

Goal 3: Provide More Opportunities for Outdoor Activity- Trails, Water Access

- A. Evaluate Areas Identified During the Planning Process
- B. Improve Awareness of Existing Areas & Natural Resources
- C. Address Maintenance/Management/Access of Existing Areas

Goal 4: Improve Ecological Function of Braintree's Natural Resources

- A. Improve Water Quality
- B. Manage Open Space Areas for Ecological Integrity
- C. Implement Climate Change Adaptation Strategies
- D. Continue Efforts to Remove Armstrong Dam and Restore Monatiquot River

SECTION 9: SEVEN YEAR ACTION PLAN

Responsible Party Abbreviations:

PCD = Planning & Community Development

CC = Conservation Commission

RAC = Recreation Advisory Board

MO = Mayor's Office

OSC = Open Space Committee

RD = Recreation Department

DPW = Department of Public Works

CPC = Community Preservation Committee

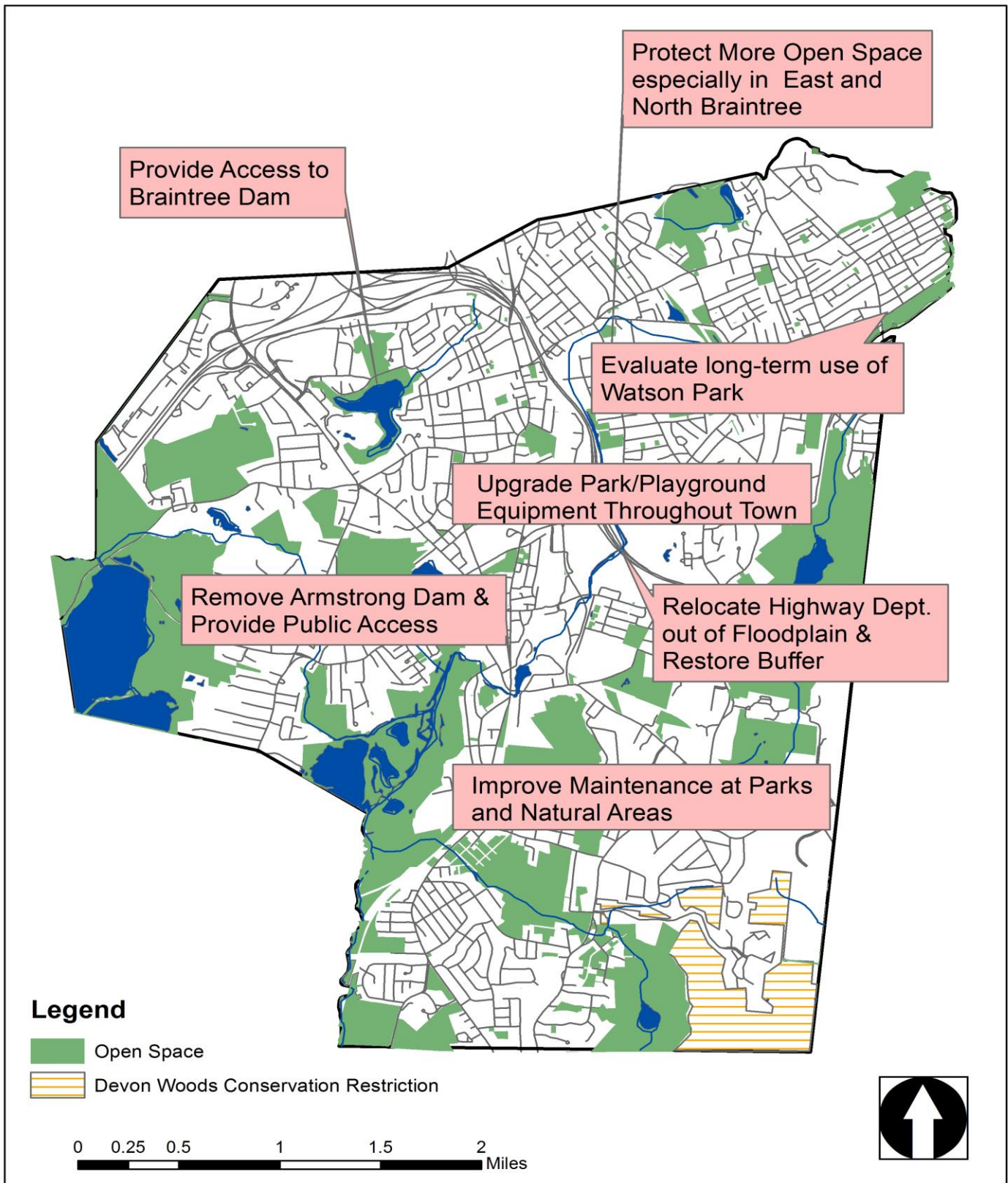
GOAL 1: PROTECT REMAINING UNDEVELOPED OPEN SPACE					
	Actions	Responsible Party	Funding Source	Year	Priority
Objective 1A: Evaluate Areas Identified During the Planning Process & Provide More Open Space in East and North Braintree	Review the areas in detail as to benefit, connectivity, prioritize areas for protection	PCD, OCC, CC, CPC MO	Staff time	Ongoing	High
	Work with land trust to facilitate transactions	PCD	Staff time	Ongoing	Medium
	Utilize CPA and Conservation fund and grants to fund land acquisition	PCD, CC, CPC	CPA funds Conservation fund Grant funding	Ongoing	High
	Expand cluster zoning to preserve open space during development	PCD	Staff time as part of zoning rewrite	2-3	Medium
	Utilize Conservation Restrictions to preserve open space during development	PCD	Mitigation	Ongoing	Medium
GOAL 2: IMPROVE PARKS, PLAYGROUNDS AND FIELDS					
	Actions	Responsible Party	Funding Source	Year	Priority
Objective 2A: Upgrade Equipment/Fields	Prioritize Areas listed in Table 12 and with existing capital improvement plan	RD RAC MO	Staff and RAC time	1	Medium

at Areas Identified During Planning Process	Implement 1 project per year	RD RAC DPW	CPA fund Recreation budget Grant funding	Ongoing	Medium
Objective 2B: Improve Maintenance and Litter Removal at Parks and Schools	Continue with annual clean-up days and encourage additional clean-up days	MO	Mayor's Office budget and donations	Ongoing	Medium
	Work with schools, civic associations, corrections department, volunteer groups, scouts	MO	Staff time	Ongoing	Medium
	Inform Town Departments of needs	MO	Staff time	Ongoing	Medium
	Organize by Council precincts	TC	Staff and Council time	Ongoing	Medium
GOAL 3: PROVIDE MORE OPPORTUNITIES FOR OUTDOOR ACTIVITY- WATER ACCESS, TRAILS					
	Actions	Responsible Party	Funding Source	Year	
Objective 3A: Evaluate Areas Identified During Planning Process	Review site constraints, wetlands, topography etc. for areas identified in Table 10	PCD CC OSC	Staff time	Year 1-2	Medium
	Develop plans, budgets	PCD	Staff time	Ongoing	Medium
	Implement projects as feasible	PCD	CPA fund Conservation fund Grant funding	Ongoing	Medium
Objective 3B: Improve Awareness of Existing Areas and Natural Resources	Republish & Advertise Trail Guide	PCD	PCD budget	Year 1	Medium
	Hold trail walks at various areas	PCD CC & OSC	Staff time Volunteer time	Ongoing	Medium
	Work with environmental or other groups on educational outreach and provide programming	PCD CC & OSC	Staff time Volunteer time	Ongoing	Medium
	Maintain, mark and widen trails as	PCD	Staff time	Ongoing	Medium

Objective 3C: Address Maintenance, Management and Access of Existing Areas	appropriate	CC & OSC	Volunteer time		
	Evaluate parking at areas with limited access	OSC	Staff time Volunteer time	Year 3-4	Medium
	Increase management of the Town Forest & consider reestablishing the Town Forest Committee	OSC	Staff time Volunteer time	Year 2	Medium
Goal 4: Improve Ecological Function					
Objective 4A: Improve Water Quality	Restore vegetated buffers to waterbodies to filter pollutants	CC DPW	Mitigation for private (re) development and stormwater or grant funding for Town property	Ongoing	High
	Comply with NPDES permit requirements for the Town's stormwater management system	DPW	Staff time Stormwater Utility	Ongoing	High
Objective 4B: Manage Open Space Areas for Ecological Integrity	Continue and expand vegetation monitoring at conservation land for deer impacts	Staff time	Staff time Volunteers	Ongoing	Medium
	Implement monitoring for spread of invasive species	Staff time	Staff time Volunteers	Ongoing	Medium
Objective 4C: Implement Climate Change Adaption Strategies	Implement action plan items from 2017 Climate Mitigation Plan	MO oversees Town Depts.	Staff time	Ongoing	Medium
	Use the Climate Tool developed by Trust for Public Land to identify sites suitable to mitigate impacts of climate change	Staff time	Work with Metropolitan Area Planning Council	Ongoing	Medium

Objective 4D: Continue Efforts to Remove Armstrong Dam and Restore Monaquot River	Continue to work with project partners including dam owner, watershed association and Division of Marine Fisheries	PCD	Staff time	Ongoing	Medium
	Include public access to Armstrong site in all agreements, negotiations, etc.	MO PCD	Staff time	Ongoing	
	Relocate Highway Department Facility out of the Floodplain and restore flood storage and buffer	MO DPW	Staff time Capital Plan Grant funding	As funding becomes available	

ACTION PLAN MAP



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