

# Town of Braintree



## Open Space and Recreation Plan



July, 2009  
Revised 2014

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**Braintree Mayor Joseph C. Sullivan**

**Braintree Planning Board**

**Metropolitan Area Planning Commission**

## **SECTION 1: PLAN SUMMARY**

This Plan reflects Braintree's desire to protect, maintain, diversify and 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 for the enjoyment of its residents and visitors. 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 the 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 Open Space

Goal 2: Improve Recreation Areas/Opportunities

Goal 3: Improve Environmental Quality of the Town

## **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 years. It is hoped that this plan will increase awareness of Braintree's natural resources. As this plan is carried out over the next five years, it should lead to increased accessibility to open space and recreation opportunities for all Braintree residents.

### **B. Planning Process and Public Participation**

A committee was formed by members of the Conservation Commission, Planning Board and Community Preservation Committee and residents. This committee met several times throughout 2006 and 2007 to develop the plan with staff from the Planning Department. A short survey was made available to residents through the Town website and at locations such as the public library, Town Hall, Council on Aging, Parks and Recreation Dept. Survey results were tabulated and discussed at a public hearing in June of 2006. The Committee and staff continued to develop the plan during 2007. The planning process was halted during the change in government (from representative Town meeting to a mayor form) in early 2008. New members were appointed Planning Board, Conservation Commission and Community Preservation Committee. In 2009, the Conservation Commission and Planning Department staff finalized the plan and sent it to the Mayor's Office, Planning Board and Community Preservation Committee and Recreation Advisory Committee for review and comment.

## SECTION 3: COMMUNITY SETTING

### A. Regional Setting

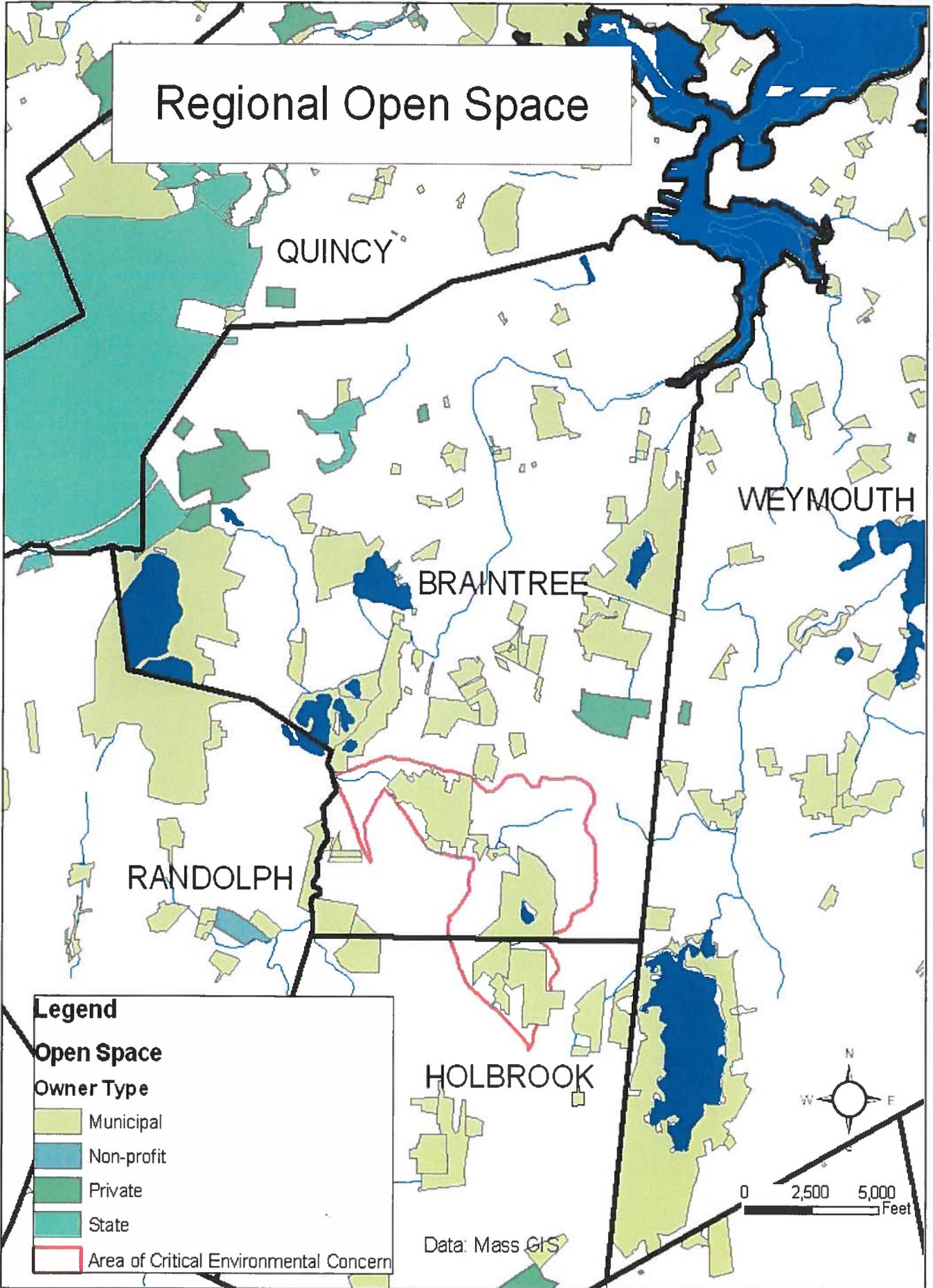
Braintree is part of the southern New England coastal plains region and part of the Weymouth Fore River watershed.

Only 10 miles south of Boston and within Norfolk County, Braintree is a mature suburb which includes several major transportation systems within its boundaries. As the 2004 Affordable Housing Plan observed, “residents of Braintree have easy access to Boston and its high wage jobs.” This proximity to Boston has greatly influenced the Town’s land use. The intensity of residential and commercial development over the last 30 years means that Braintree is almost fully developed.

Braintree shares several resources with neighboring Towns including

- drinking water resources with Randolph and Holbrook
- the Blue Hills Reservation with Quincy, Randolph and Milton
- Pond Meadow Park with Weymouth
- a state-designated Area of Environmental Concern (Cranberry Pond) with Holbrook

# Regional Open Space



**Legend**

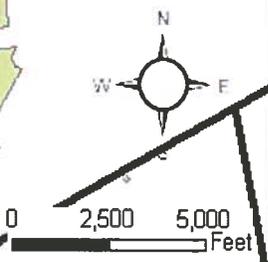
**Open Space**

**Owner Type**

- Municipal
- Non-profit
- Private
- State

Area of Critical Environmental Concern

Data: Mass GIS



## **B. History of Community**

Braintree was settled in 1634 and established as a Town on May 13, 1640. It was known as Monoticut (a native American word meaning “abundance”) and originally included what are now the communities of Quincy, Randolph and Holbrook.

Through its early history, Braintree was primarily an agricultural community although an ironworks was established in the 1640s (Braintree Observer 18 May 1940). . This led to shipbuilding which was an important industry through the 20<sup>th</sup> century. Although most of the Fore River Shipyard is located in Quincy, it was an important part of Braintree’s history as well. The Fore River Shipyard was established in 1900 and grew in size and business during the war years. General Dynamics purchased the shipyard in 1964 and continued shipbuilding until 1986. 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

### Population

As seen in Table 1, Braintree's population reached its highest level in 36,337 in 1980 and has actually decreased since then. This decline may be attributed to an increase in suburban development in areas outside the 128 corridor. According to the population projections developed by the Metropolitan Area Planning Council, Braintree's population is expected to increase only slightly through 2030. However, five large housing developments have been permitted since 2000. The total number of units within these developments is 1161. Three of these sites are redevelopment while two occur on undeveloped sites. Given the reality that there are very few large tracts of undeveloped land remaining in Braintree, it is unlikely that increases in housing units on this scale will occur again within the next 20 years.

Table 2: Multifamily development permitted since 2000	
Turtle Crossing	201 ownership units
Ridge at Blue Hills	186 rental units
614 Pond St.	132 ownership
Residences at Union Station	304 ownership
Lenox Farms	338 rental units
<b>Total</b>	<b>1161</b>

Source: Zoning Board and Planning Board Files

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. Elderly residents need pleasant places to walk, sit outdoors and places to go for group outings.

Table 1: Population

Year	Population	% Change
1910	8066	
1920	10,580	31.16
1930	15,712	48.50
1940	16,378	4.23
1950	23,161	41.41
1960	31,069	34.14
1970	35,050	11.35
1980	36,337	3.67
1990	33,836	6.88
2000	33,829	0.02
2010	34,889	3.1
2020	34,948	0.16
2030	35,296	0.99

Source: US Census Bureau & Metropolitan Area Planning Council,

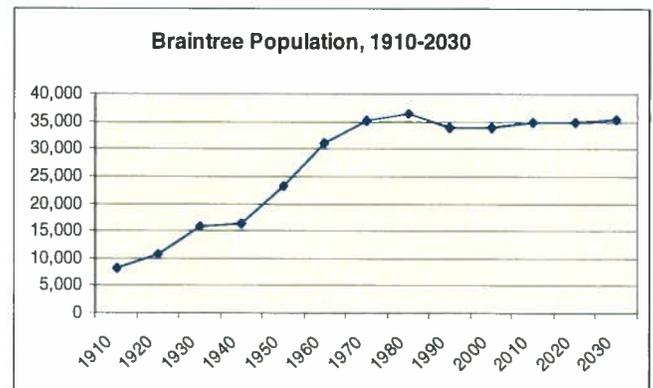


Figure 1

MAPC's population projections include information on the age groups comprising the total population. These projections are developed using the state birth and death rates, age-sex-race cohorts for the region, and on a community's overall recent growth trends as well as net population migration trends.

Table 3

AGE	1990	2000	2010	2020	2030
00-04	1,974	2,084	1,808	1,779	1,784
05-09	1,814	2,085	1,786	1,578	1,597
10-14	1,779	2,121	2,161	1,894	1,869
15-19	2,082	1,957	2,217	1,970	1,806
20-24	2,716	1,543	1,899	1,723	1,507
25-29	2,918	1,914	1,903	2,051	1,792
30-34	2,569	2,426	2,156	2,442	2,352
35-39	2,440	2,760	2,130	1,922	2,149
40-44	2,231	2,689	2,512	1,924	2,148
45-49	1,995	2,456	2,661	2,073	1,849
50-54	1,826	2,189	2,522	2,256	1,800
55-59	1,864	1,853	2,386	2,582	2,089
60-64	1,849	1,614	2,444	2,850	2,624
65-69	1,768	1,529	1,909	2,561	2,876
70-74	1,438	1,521	1,379	2,135	2,566
75-79	1,021	1,326	1,261	1,597	2,276
80-85	726	922	946	886	1,439
85+	826	839	809	725	773
<b>total</b>	<b>33,836</b>	<b>33,829</b>	<b>34,889</b>	<b>34,948</b>	<b>35,296</b>

Source: MAPC Population Projections 2010-2030

A look at this data in graphic format highlights the trend toward an older population.

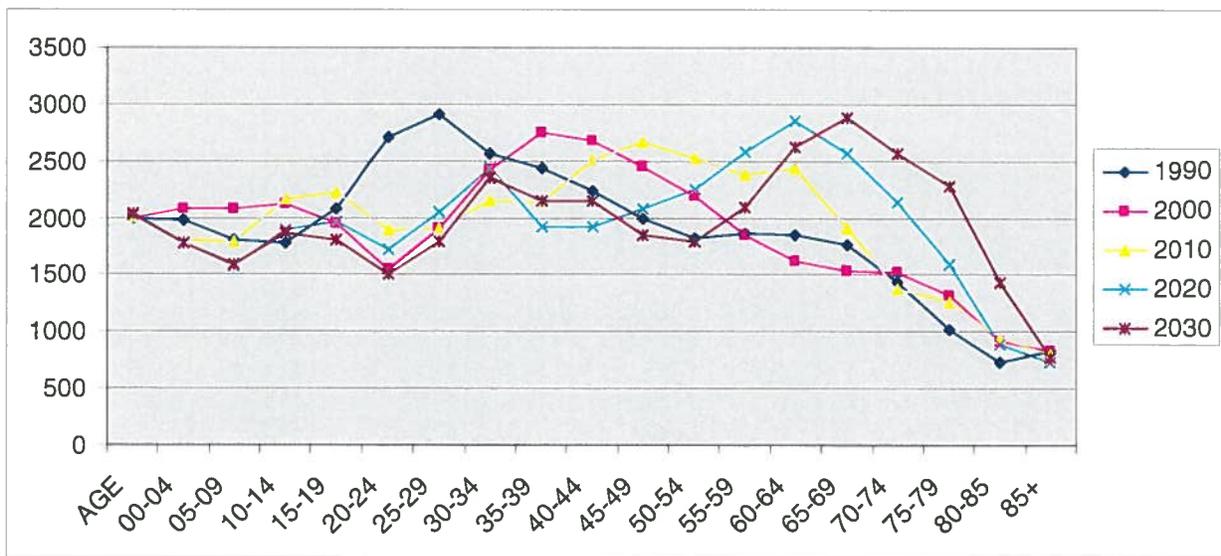


Figure 2

In the recent 2010 U.S. Census the Town of Braintree experience a minimal increase in population from 33,828 (2000) to 35,744 (2010) residents during the 10 year period. The ethnicity and race characteristics of the Town's population depicts greater diversity in the 10 year census period showing higher reporting in the African American and Asian race categories along with the Hispanic and Latino ethnicity. Our 45-54 year old residents continue to be the highest group by age with females out numbering males in the Town. Braintree continues to demonstrate a high educational attainment with 98% of our residents between the ages of 25-64 have graduated high school and continued on with higher educational degrees.

The Town has also experienced in an increase in the housing stock of approximately 1329 additional units a slight increase in owner occupied and increase in rental properties. Owner - occupied continues to be the preferred form of housing although recent housing developments have included multi-family of condominiums and apartments.

The increase in the middle age population may create a demand for additional recreational opportunities. The decrease in the proportion of the number of younger people may indicate that existing playgrounds and athletic fields may be sufficient for future needs. However, it should be noted that almost quarter of Braintree's residents are under the age of 19. The Analysis of Needs section will examine this further

*Population Density*

The population density of Braintree and surrounding Towns was compared. With 14.39 square miles of land area and a population of 33,829 the density of Braintree is 2352 people per square mile (or 3.6 people per acre). By this measure, Braintree is much less densely populated than some of its neighbors.

Table 4

	Square miles	Population	Density persons per square mile
Holbrook	7.40	10,785	1457
Braintree	14.38	33,829	2352
Randolph	10.50	30,963	2949
Weymouth	17.80	53,988	3031
Quincy	16.87	88,025	5218

Source: Metro Boston Data Center, 2000 Census

Of course the population is not spread evenly throughout the landscape. As seen on the Population Density map, higher density areas occur in the neighborhoods of East Braintree, South Braintree and in the Highlands.

The highest overall densities occur in the northeastern and north central parts of Braintree, those parts of Town which were settled first. Lower density, suburban style development is the dominant development pattern through parts of western Braintree and most of southeastern Braintree. The numbers and types of facilities in each area of Town will be analyzed in Section 7.

Population density influences demand for recreation facilities. In high density residential areas, the house lots tend to be small and lack the yard space to be of recreational value. These areas may need small parks and playgrounds for neighborhood children. In residential areas with lower density, the need for small parks is less pronounced.

Any new multifamily housing development should incorporate recreational areas within the site to the extent possible, particularly those located in areas without Town facilities nearby.

### *Economic Development*

Braintree has a well-developed commercial sector which provides a strong tax base. According to the U.S. 2007 Economic Census; Retail trade continues to take the lead in employment for the Town, followed by Health Care & Social Services, Manufacturing, Accommodations & Food Services and Professional Services.

Although the Town reports a 35,744 population of residents living in the Town 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 and increases the demand for local parks and walking trails.

### *Median Income*

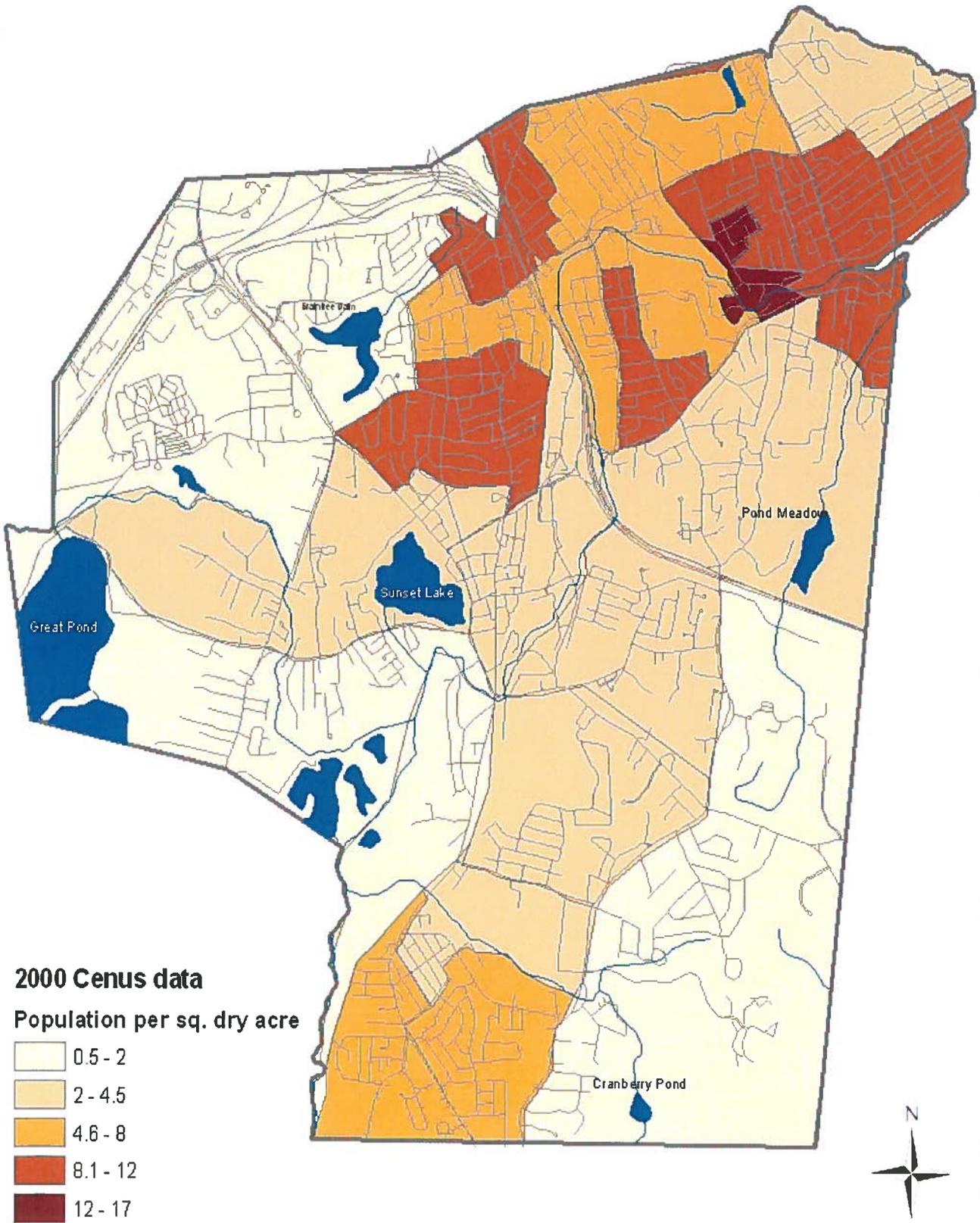
Braintree is located in Norfolk County which has reported in the 2010 census a median income of approximately \$84,087. Staff review of the census tracts indicates a median income of approximately \$85,000 for Braintree – in 2000 the median income was \$61,790.

### *Environmental Justice*

Environmental justice (EJ) refers to inequitable environmental burdens (such as pollution and proximity to industrial areas) borne by low-income and minority residents. The state Executive Office of Environmental Affairs has been implementing an Environmental Justice Policy to help ensure that all Massachusetts residents experience equitable distribution of environmental benefits. Population layers representing areas across the state with high minority, non-English speaking, and/or low-income populations are available from Mass GIS. Four EJ population areas have been mapped within the Town of Braintree and include 13.2% of the Town's population. EJ populations are located in the Town center, east Braintree and western boundary of Braintree. Existing and proposed open space and recreation opportunities were evaluated in these areas.

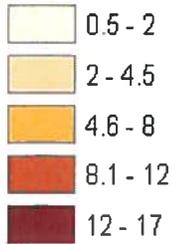
The Town's activities since the 2009 draft of this plan have improved opportunities in these areas. There has been an increase in programming at parks in Braintree, particularly in the Town Center. In East Braintree, a splash pad and walking path were recently constructed at Watson Park.

# Population Density



## 2000 Census data

### Population per sq. dry acre



Data: Mass GIS and 2000 Census

0 2,500 5,000 Feet



## **D. Growth and Development Patterns**

### *Patterns and Trends*

The 1963 Master Plan for Braintree noted that prior to 1940, Braintree was a loose cluster of 5 or 6 “villages” and that residential growth since the 1940s had erased those village boundaries. The population of Braintree increased by approximately 8000 people between 1950-1960. Also, between the 1950s and 1960s, commercial land uses became more common in Town, as regional retail became established close to the highway exits.

Available land in Braintree is largely developed as a result of both the historical development patterns in the greater Boston area and the Town of Braintree’s location within the regional transportation network. The nature of the local development pattern has resulted in a Town that is primarily residential in character. The bulk of non-residential development is concentrated along major transportation routes and secondary highways that cross the Town.

### *Infrastructure*

Three major transportation systems come together in the north central part of Town. Route 93(128) passes through the northwestern area of Town and merges with the Southeast Expressway, which passes through Town from the east. The MBTA Plymouth Line enters from the southeast area of Town the Middleborough line enters Town from the south, parallel to the Cochato River. Both of these lines also exit from the northern end of Town along with the red line. The Greenbush commuter line has a stop in the Weymouth Landing area of Braintree.

Braintree has sewer and water service throughout 99.9 % Town. 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.

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).

### *Long-Term Development*

The 1963 Master Plan stated, “due to its location within the metropolitan region and internal growth pressures, Braintree could have an ‘unlimited’ potential for residential development except for the limit of land availability”. In 2009, forty-six years later, we are running into the limit of available land. 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 has spurred a significant amount of redevelopment projects. Over the course of the last several years, the Town has seen several large redevelopment projects converting older development sites to high density residential.

Additional development in Braintree will primarily be redevelopment and improvement of existing sites. It is worth noting few points relative to this:

- The undeveloped land which 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.

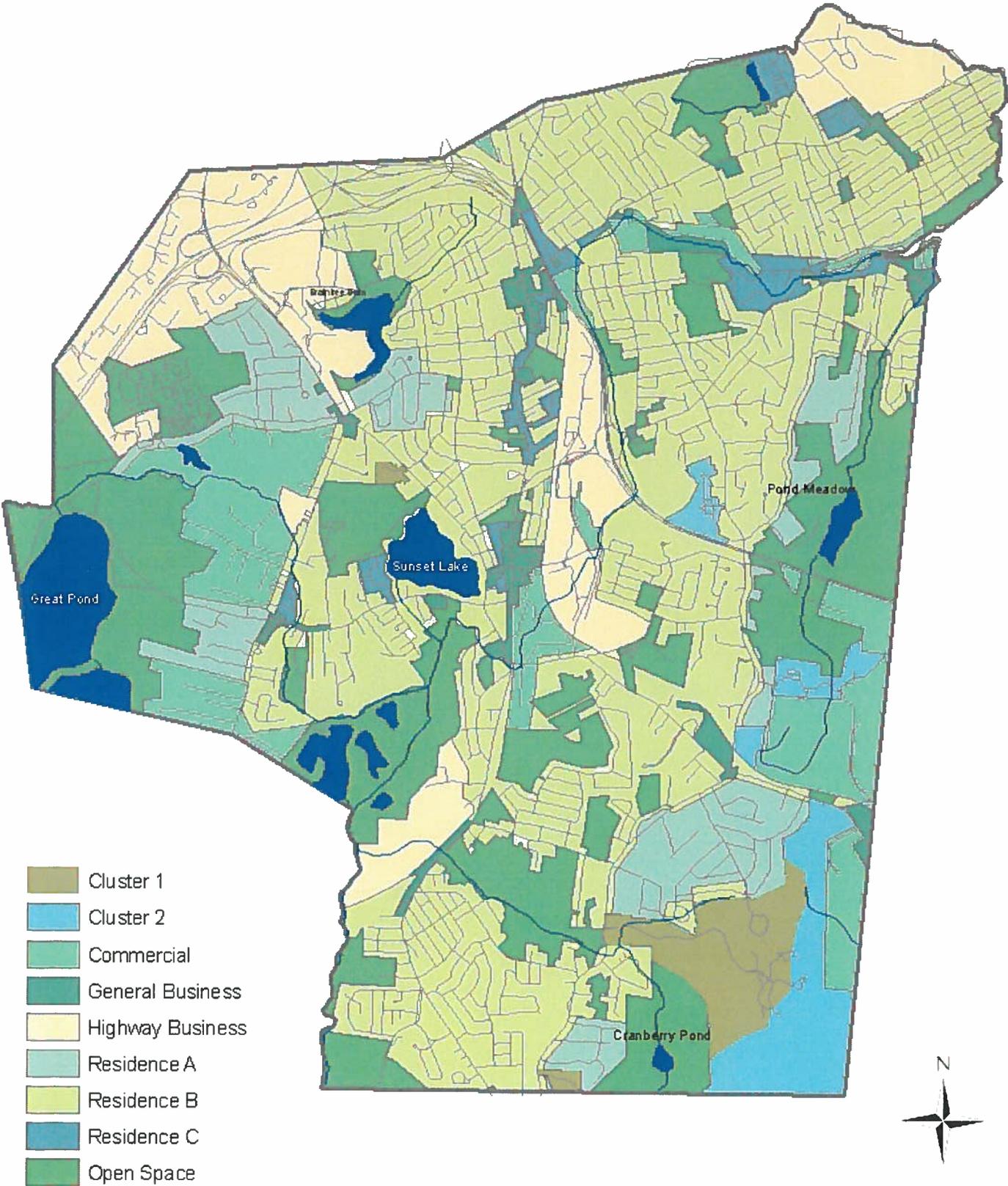
The majority of the Town is zoned for residential use and is almost entirely built-out. Approximately 21% of the land area of the Town is zoned as either Commercial, Highway Business or General Business. Some significant undeveloped land is found within this zoning district. Finally, almost 23% of the 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 park and general Town-owned land and the Blue Hill Cemetery.

Table 5

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

Source: Planning Department (calculated using MASS GIS data)

# Zoning



Data: Mass GIS and Town of Braintree



## Section 4 – Environmental Inventory

### **A. Geology, soils, topography**

Braintree's geology is characterized by granite and some sandstone bedrock overlain mostly by glacial till and shallow soils. About 10% of the land area consists of sand and gravel deposits. Floodplain alluvium soils also lace through Braintree in association with predominant waterbodies and wetland areas. 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. (Master Plan).

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.

As an inner ring suburb to Boston, Braintree experienced significant development prior to the period of environmental regulation. Therefore the effects of floodplains and wetland soils, in particular, have not limited development in Braintree to the extent they have in more recently developed communities. At this point in the development of Braintree, and given the very limited amount of undeveloped land which is not already protected; geology, soils and topography are not considered significant factors in the open space planning process.

Braintree's protected open space areas encompass a range of conditions, including floodplain, wetlands, upland, ledge outcroppings and lakes and ponds.

### **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 Monaquot River are hidden behind parking lots and storefronts. Efforts to reveal the "hidden" landscape of Braintree through redevelopment and acquisition should be part of this plan.

### **C. Water Resources**

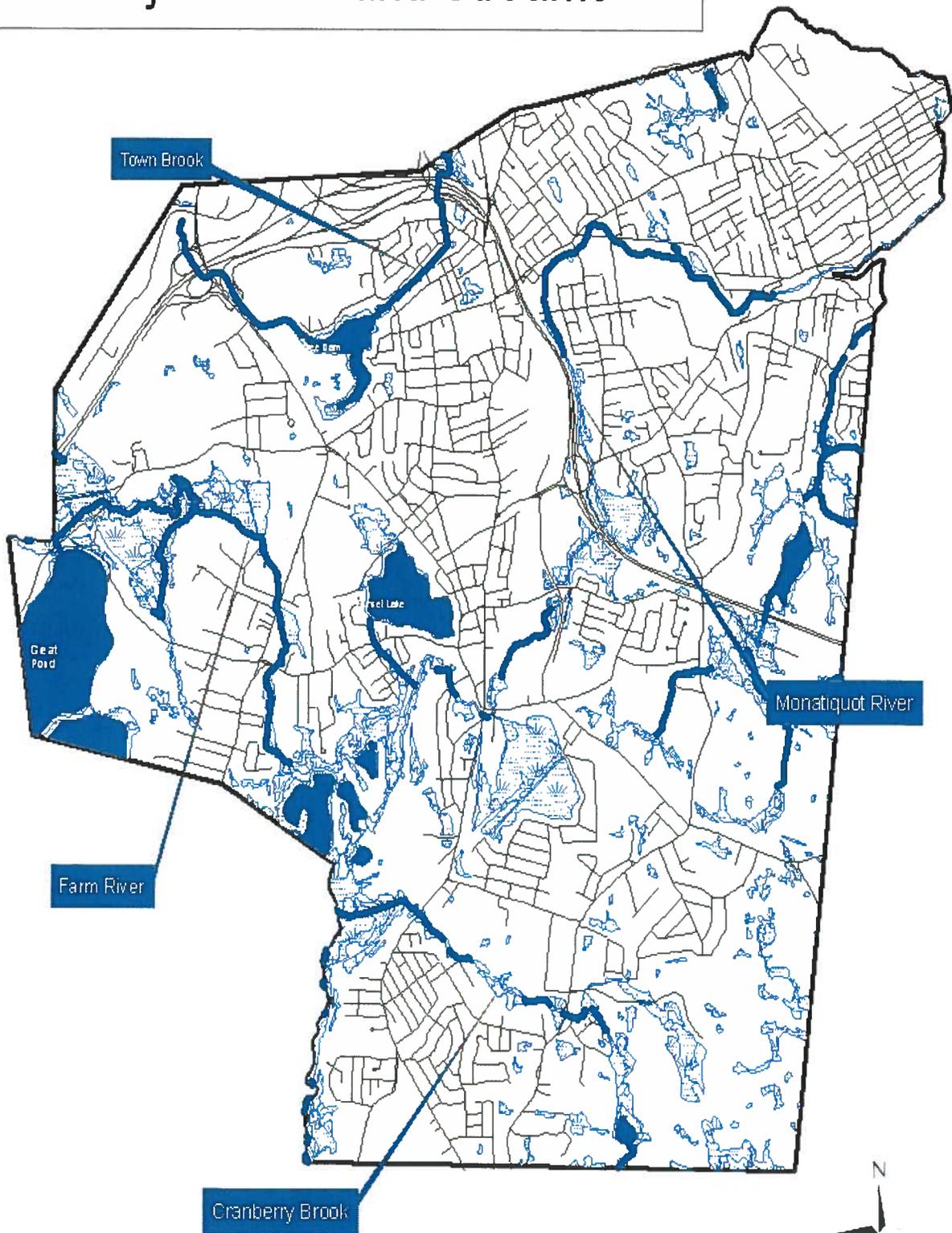
#### *Watersheds*

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

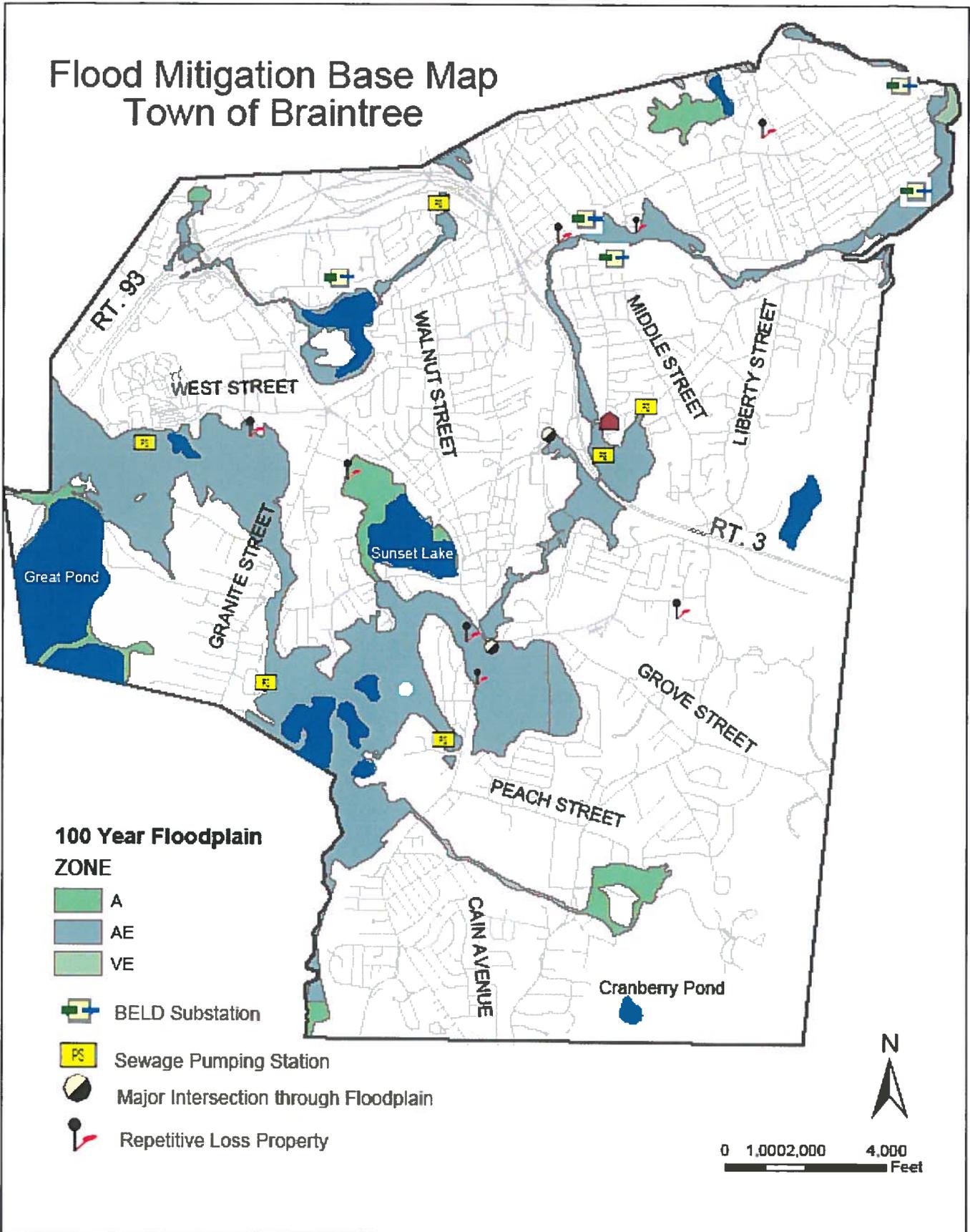
River. The Fore River is part of an estuary, or area where the river meets the sea and fresh and salt waters mix.

The Fore River Watershed Association has been actively engaged debris removal from the rivers and in restoration of habitat for migrating fish, particularly river herring.

# Major Rivers and Streams



# Flood Mitigation Base Map Town of Braintree



### *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. 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 until it broadens out into the Fore River near the Quincy Avenue bridge. Historically, the Monatiquot River was of vital importance to residents for its fisheries and for the hydropower it supplied. An excellent history of the Monatiquot River is attached as Appendix D.

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.

### *Aquifer Recharge Areas*

Braintree does not use groundwater for its drinking water. No Zones of Contribution (ZOC's) have been mapped for the Town because there are no public supply wells. However, areas of estimated high and medium yield aquifers have been mapped by MASS GIS. These areas are adjacent to the Monatiquot River in the vicinity of the Braintree Municipal Golf Course, Sunset Lake extending through the South Braintree Square area and along the Farm River in the vicinity of Great Pond. At the present time, the Town has no plans to use these aquifers for drinking water but their future use should not be ruled out.

### *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.

A 1982 study of the watershed found that almost 75% of the runoff and stream flow of the watershed is captured for drinking water supply (D'Amore).

Surface Water Supply Protection Zones A, B and C have been mapped (see Drinking Water Supply Zone Map which follows).

These Surface Water Supply Protection Areas delineate those areas included in 310 CMR 22.00, the Massachusetts Drinking Water Regulations, as Surface Water Supply Protection Zones:

- **ZONEA:** represents a) the land area between the surface water source and the upper boundary of the bank; b) the land area within a 400 foot lateral distance from the upper boundary of the bank of a Class A surface water source, as defined in 314 CMR 4.05(3)(a); and c) the land area within a 200 foot lateral distance from the upper boundary of the bank of a tributary or associated surface water body.
- **ZONEB:** represents the land area within one-half mile of the upper boundary of the bank of a Class A surface water source, as defined in 314 CMR 4.05(3)(a), or edge of watershed, whichever is less. Zone B always includes the land area within a 400 ft lateral distance from the upper boundary of the bank of a Class A surface water source.
- **ZONEC:** represents the land area not designated as Zone A or B within the watershed of a Class A surface water source, as defined in 314 CMR 4.05(3)(a).

### *Flood Hazard Areas*

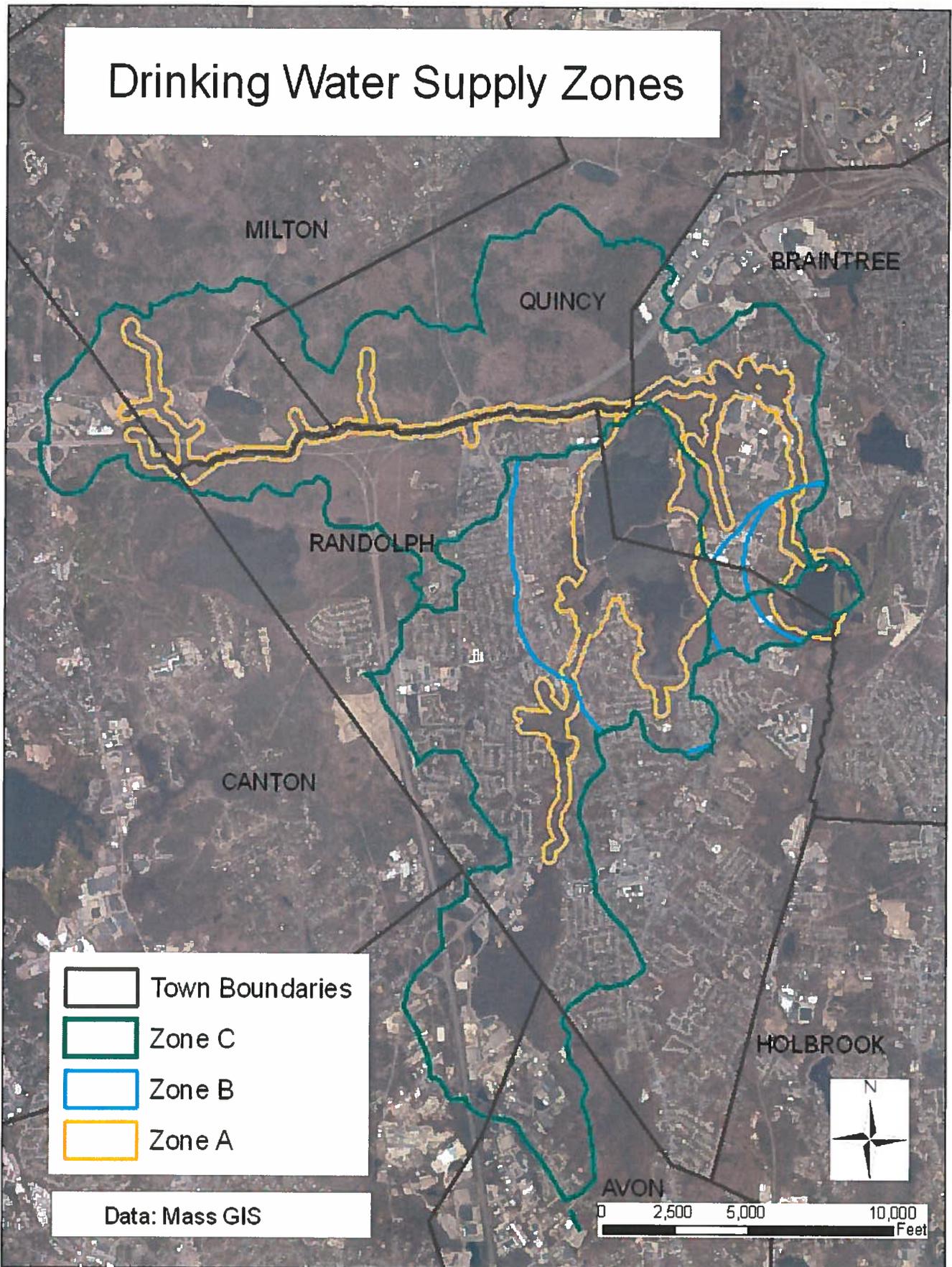
Flood Insurance Rate Maps, developed by the Federal Emergency Management Agency depict the 100 year floodplain (those areas which have a 1% chance of being flooded in any given year). Flood hazard areas are found along the most of the large streams and rivers; Town Brook, Cranberry Brook, and the Farm, Cochato and Monatiqout Rivers. Flood hazard areas are also found along the Quincy and Richardi Reservoirs, Cedar Swamp and Eaton's Pond and Sunset Lake.

### *Wetlands*

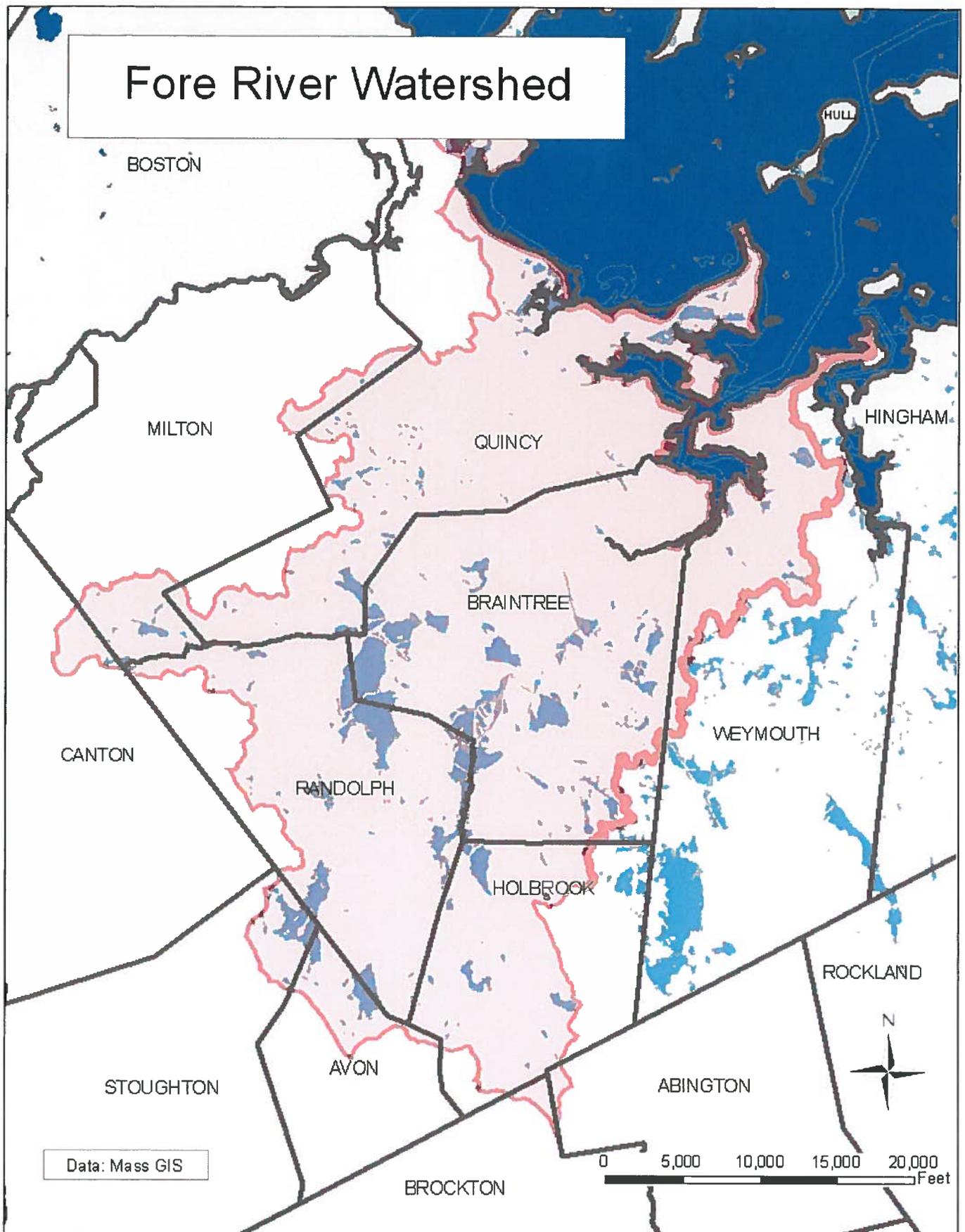
Wetlands serve many valuable functions. They filter pollutants from water, recharge groundwater, provide protection from storm damage and flooding as they store water and provide wildlife habitat.

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 Parks Dept. and Highway barn near the Rt. 3 rotary. This area is frequently flooded by the Monatiqout River.

# Drinking Water Supply Zones



# Fore River Watershed



## D. Vegetation

### *Forest Land*

There are several large areas of forest land in Braintree, most of which are permanently protected. These areas include the Town Forest, Cranberry Pond Conservation Area, South Street conservation land, Pond Meadow Park, and Eaton's Pond conservation land. Very few large areas of unprotected forest land exist in Braintree and these are targeted for conservation efforts as part of this plan.

### *General Inventory*

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 very common type of forest in Braintree is the Mixed Oak Forest

Table 6:

<b>Mixed Oak Forest</b>			
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 Sarsparilla Pinweed Pale Corydalis

Another common natural plant community type in Braintree is the Coastal Forest/Woodland. This forest type occurs in areas (i.e. most of eastern Massachusetts) which have their climates moderated by the proximity to the coast.

Table 7:

<b>The Coastal Forest/Woodland</b>			
Braintree example : Town Forest at Peach Street Entrance			
Canopy	Sub-Canopy	Shrub Layer	Herb Layer
Oaks (Scarlet, Black, White and Chestnut) Red Maple, Sassafras, Black Cherry, Black Gum, Beech White Pine	American Holly	Lowbush Blueberry Black Huckleberry Sweet Pepperbush	Pennsylvania Sedge, Bracken Fern, Wintergreen Wild Sarsparilla

### *Agricultural Land*

Braintree has virtually no land remaining in agricultural use. Given the interest in local food supplies and sustainability, steps toward encouraging farming in Braintree are included in this plan.

### *Wetland Vegetation*

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

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.

Table 8:

<b>Coastal Atlantic White Cedar Swamp</b>			
Braintree example: Within Cranberry Pond Area			
Canopy	Sub-Canopy	Shrub Layer	Herb Layer
Atlantic White Cedar dominant		Highbush Blueberry	Cinnamon Fern
Red Maple		Swamp Azalea	Virginia Chain Fern,
		Sweet Pepperbush	Starflower
		Fetterbush	Wild Sarsparilla
			Sphagnum Moss

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.

### *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. In the uplands there are many Chestnut Oaks which are unique in this part of the state.

### *Sites with Unique Resources*

Cedar Swamp and Cranberry Pond (see above).

### *Public Shade Trees*

Public shade trees are defined by Massachusetts General Law Chapter 87, Section 1 as

all trees within, or on, the boundaries of a public way and may not be cut down without a permit from the Tree Warden.

Many of Braintree's streets do not include tree strips due to space limitations so street trees are limited to a few older neighborhoods as well as Braintree Square and South Braintree Square. While Braintree does not have a great deal of trees within public ways, the Town has numerous shade trees in parks, on school properties and on other Town land, including the Plain St. Cemetery. Also, the Town has planted 500 new trees over the four year period from 2008 to 2012 as part of Mayor Joseph C. Sullivan's beautification plan.

## **E. Fisheries and Wildlife**

### *General Inventory*

Residents close to the large tracts of undeveloped land in Braintree commonly report seeing deer, fox, coyote and many species of birds.

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.]

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.

Historically, the Monatiquot 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 Fore River Watershed Association and the state Division of Marine Fisheries have been observing the river herring population since 1997. Large numbers of herring have been observed in the Monatiquot River, particularly at the McCusker Drive spillway and the railroad bridge behind Pearl St. Plaza.

The herring run could be much larger if the fish had access to additional spawning habitat beyond the Armstrong Cork dam. The Division of Marine Fisheries has been working, in partnership with the Town and the Fore River Watershed Association, to assess the feasibility of installing fish ladders in locations along the Monatiquot to restore the river herring run to its historical significance. Fisheries biologists expect an exponential increase in the number of herring if the fish are able to reach ideal spawning habitat in the Great Pond.

The Monatiquot 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).

The study conducted by the state Division of Marine Fisheries (2001) on the use of this river by rainbow smelt recommends a number of actions which could be taken to improve habitat for rainbow smelt. These steps are included in Table 9.

Table 9

Action	Status
Install stream flow gauge	The USGS installed a stream flow gauge at the Commercial Street bridge in 2006.
Minor physical alteration to the sluiceway lip at McCusker Dr. and the boulder pile near the Shaw St. bridge.	The boulder pile near the Shaw St. bridge was altered by the MBTA during Greenbush construction in 2007, under the supervision of fisheries biologist, Brad Chase.
Passage improvements at Smelt Brook	Identify structural and operational methods to improve passage around flood control structure.
Protection of river areas with stable banks, adequate vegetative shading and clear passage for migrating fish	Ongoing through Conservation Commission's oversight. Pursue possible acquisition of sites, including sites needing restoration.
Detailed review of projects which discharge stormwater to the Fore River	Ongoing, primarily through Conservation Commission and Planning Board review of project's stormwater management plans.
Elimination of the sanitary sewer overflow at Smelt Brook	Completed during MWRA sewer interceptor work in 2002.
Reduction of nutrient sources	Ongoing, primarily through Conservation Commission and Planning Board review of project's stormwater management plans

Source: 2001 DMF report

### *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.

While several potential vernal pool locations have been identified by the state Natural Heritage and Endangered Species Program, none have 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. They are also important for genetic diversity since they allow greater interchange of genetic material.

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.

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.

## *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 10

<b>Taxonomic Group</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>State Rank</b>	<b>Most Recent Observation</b>
Reptile	<i>Terrapene carolina</i>	Eastern Box Turtle	SC	1997
Mussel	<i>Ligumia nasuta</i>	Eastern Pondmussel	SC	2000
Dragonfly/Damselfly	<i>Anax longipes</i>	Comet Darner	SC	1970
Dragonfly/Damselfly	<i>Enallagma laterale</i>	New England Bluet	SC	1969
Dragonfly/Damselfly	<i>Somatochlora linearis</i>	Mocha Emerald	SC	1989

Vascular Plant	<i>Asclepias purpurascens</i>	Purple Milkweed	E	1922
Vascular Plant	<i>Houstonia longifolia</i> var <i>longifolia</i>	Long-Leaved Bluet	E	1886
Vascular Plant	<i>Sabatia kennedyana</i>	Plymouth Gentian	SC	1886

Source: Natural Heritage & Endangered Species Program

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 wildlife.

## F. Scenic Resources and Unique Environments

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

East Braintree is a unique waterfront community with two marinas, a beach, salt marsh, the Fore River Shipyard (soon to be redeveloped into a multi-use project) and several industrial uses. Watson Park and the Toland trail provide waterfront access and the Braintree Recreation Department took up residence in the former Watson Library in early 2009.

Sunset Lake and much of its surroundings in the center of Town also provide a somewhat historic landscape, with church steeples and other historic structures. 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.



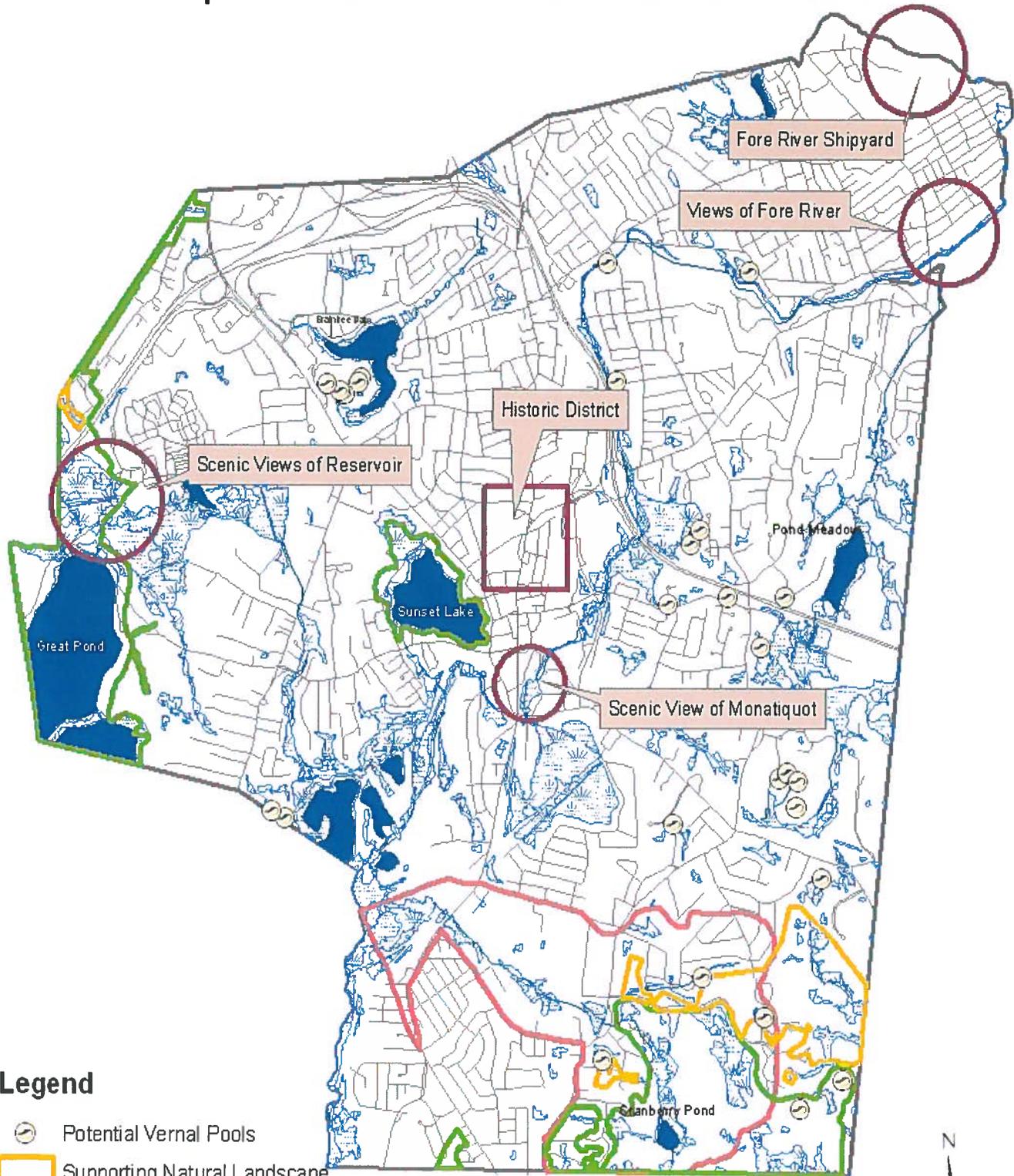
View across Sunset Lake

A wonderful view of the Monaquot 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. This is also the upstream extent of river herring migration as the fish can not ascend the falls.

Views of the Great Cedar Swamp (the one shared with Quincy, in the vicinity of the Blue Hills Reservation) can be seen, along with stunning views of the Great Pond Reservoir, from West St.

Environmentally speaking, the most unique environment 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, marshes, swamps, a stream and a 7.5 acre pond.

# Unique Features and Scenic Areas



## Legend

- Potential Vernal Pools
- Supporting Natural Landscape
- Estimated Habitat- Rare Wildlife
- Area of Critical Environmental Concern
- Wetlands

Data: Mass GIS

## **G. Environmental Challenges**

Braintree has the environmental challenges typical of highly developed Town, including a high percentage of paved surfaces, water quality issues and degraded sites.

### *Hazardous Waste and Brownfield Sites*

There are several sites in Braintree at which hazardous materials have been released. These are identified as “21E” sites and depicted on the Environmental Challenges map. Reuse and redevelopment of the sites will need to take the status of the clean-up and risk assessment into account.

### *Landfills*

The capped solid waste landfill on Ivory St. presents opportunities and challenges. The 27-acre landfill requires regular mowing to prevent tree growth from piercing the cap. This takes up significant staff time within the DPW and there is no beneficial use being made of the capped site. Efforts to redevelop the landfill as a mix of recreational and commercial use are currently being pursued by the Town.

### *Chronic Flooding*

In 2010, the Town experienced major flooding along the Monaquot, Farm and Cochato Rivers when over 9 inches of rain fell over the period of a few days. With the exception of the municipal golf course (discussed below), this is not a chronic flooding problem but the predicted increase in the frequency and intensity of storm events due to climate change could mean this becomes a chronic issue.

Many of the greens of the Braintree Municipal Golf Course were constructed within the floodplain of the Monaquot River. The lower lying greens are regularly flooded. While this is not a desirable situation for the golf course, it creates far less harm than if residences were located in this areas. The golf course provides for both flood storage and recreational use.

Another area which has a chronic flooding problem is the Bestick Rd. area. High intensity storms, such as summer thunderstorms overwhelm the restricted channel and flood the residences along the brook. The Town has undertaken mitigation projects such as an upstream detention basin to address this.

### *Sedimentation*

The biggest source of sedimentation into Braintree’s waterways appears to come from road sanding operations. The DPW tries to regularly sweep streets and clean catch basins to reduce the volume of sand washing into waterways.

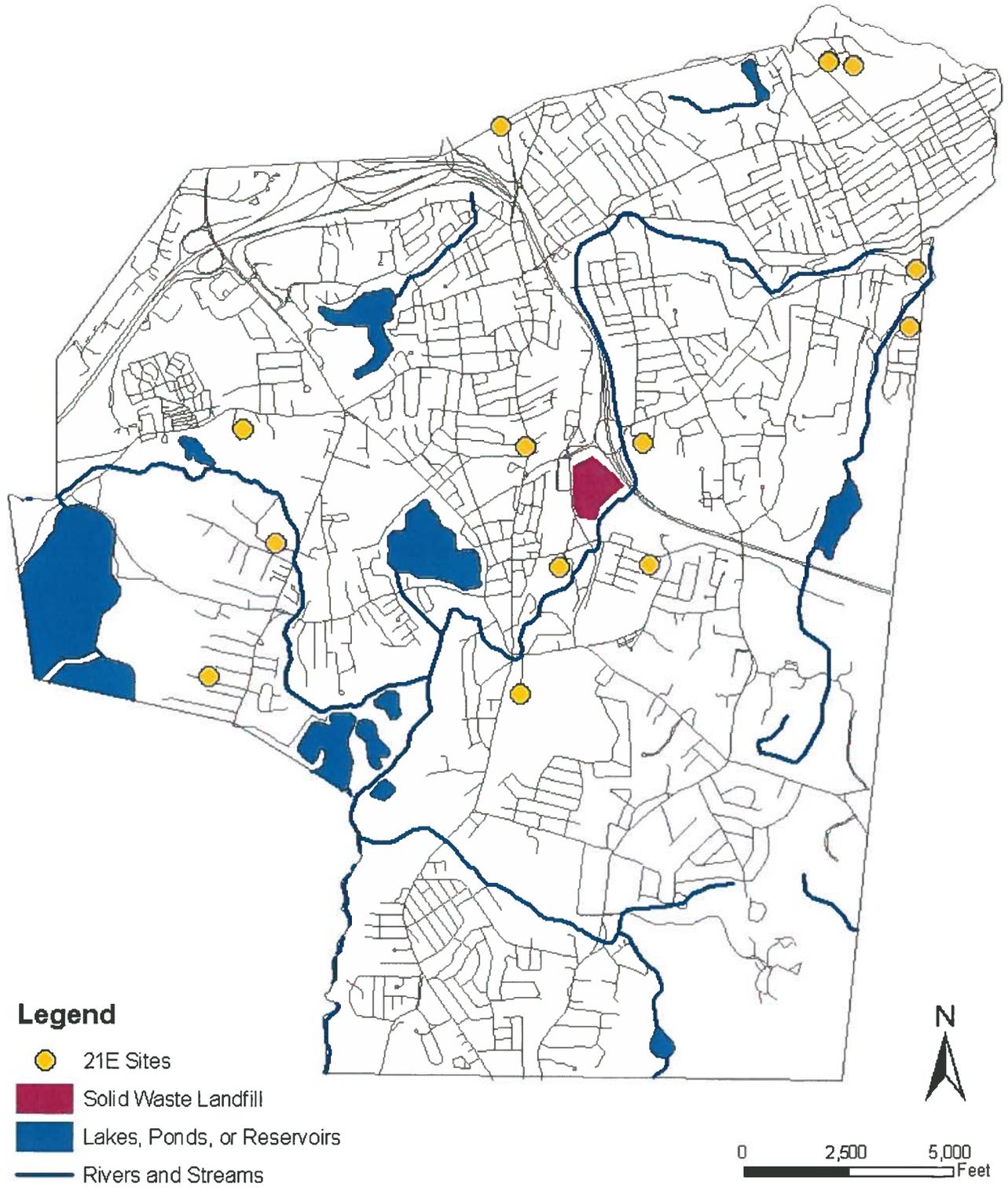
### *Ground and Surface Water Pollution*

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. This also can 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 which allowed for more infiltration and retention of stormwater. This would provide for increased base flow and a less “flashy” waterway as well as treatment of the stormwater to remove pollutants before they enter the waterways.

### *Aquatic Weeds and Eutrophication*

Sunset Lake, Eaton’s Pond and Pond Meadow all experience problems with nuisance growth of 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 which fuels plant growth. Bacterial levels of Sunset Lake have also been a problem. The source of this bacteria appears to be a large population of geese and seagulls around the lake.

# Environmental Challenges



### *Forestry Issues*

For a highly developed Town, Braintree has significant tracts of forest land as noted in the section on Vegetation. These forests are not actively managed for forestry or wildlife management.

Many of the shade trees throughout Town, especially the newly planted trees, have or will require treatment for winter moth and/or cankerworm and require watering.

### *Invasive Species*

Invasive species are a common occurrence in disturbed areas. Japanese knotweed can be found throughout the Town, along with phragmites, glossy buckthorn, bittersweet, ailanthus and purple loosestrife. Efforts to control invasives should be focused on monitoring for their spread into the intact native ecosystems, such as the Cranberry Pond Area.

### *Environmental Equity*

Open space areas are fairly well distributed throughout the Town as seen on the open space management map. However, East Braintree residents commonly express concern that there needs to be more open areas in that part of Town. Redevelopment of the Braintree Electric Light Department site on Allen St. should include an open space component. Also efforts to restore sites along the Monaquot River should benefit East Braintree.

## SECTION 5: INVENTORY OF LANDS OF CONSERVATION AND RECREATION INTEREST

The open space and recreation areas in Braintree encompass a variety of natural and historical resources, both public and privately-owned. 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.

Open space protection enhances quality of life in many ways. It provides for recreational opportunities and public health benefits. It protects drinking water supplies, provides wildlife habitat and usually raises the value of surrounding properties.

The following table provides a summary of management of public open space in Braintree.

Table 11: Public Open Space

<u>Property</u>	<u>Managing Agency</u>	<u>Acres</u>
Conservation Lands	Conservation Commission	434
Devon Woods Conservation Restriction	Conservation Commission	243
Water Supply Protection	Water & Sewer Department	381
Parks & Playgrounds	Department of Public Works	262
Town Forest	Town Forest Committee	130
School Trust Land	School Trust Fund	22
School Lands	School Department	470
Pond Meadow Park	Weymouth-Braintree Regional Recreation-Conservation District	300
Blue Hills Reservation	(State) Division of Conservation & Recreation	70
Braintree Dam	(State) Division of Conservation & Recreation	64
		<b>Total 2376 acres</b>
		<b>25% of Town (9209 acres)</b>

Appendix A is a parcel by parcel breakdown of Town-owned land. It lists all of the parcels under the management of the Conservation Commission, Parks Department, Water Department, Town Forest Committee and School Department (although most school parcels contain school buildings, they also provide significant acreage of playing fields and other open space). Pond Meadow Park land is also included in Appendix A, though that land is owned by the Weymouth-Braintree Regional Recreation-Conservation District. Information on county and state-owned land is also included.

Many of these parcels are permanently protected open space per Article 97 of the Massachusetts Constitution. Article 97, adopted in 1972, is the 97<sup>th</sup> 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 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 purposes were not converted to other inconsistent 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 (Article 97 Protection)
- Private Land which is protected by a Conservation Restriction pursuant to Massachusetts General Law, Chapter 184, Sections 31-33

*Open Space Equity*

Open space areas are fairly well distributed throughout the Town as seen on the open space management map. However, East Braintree residents commonly express concern that there needs to be more open areas in that part of Town. Redevelopment of the Braintree Electric Light Department site on Allen St. should include an open space component. Also efforts to restore sites along the Monaquot River should benefit East Braintree.

**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. This list is basically the few large pieces of undeveloped land, as well as those pieces of previously developed land which could be restored to provide access to waterways or environmental benefits.

Table 12: Lands of Interest

<b>Property Name</b>	<b>Owner/Managing Agency</b>	<b>Public Access</b>	<b>Notes</b>
Norfolk County Land	County	N	Town has right of first refusal
Braintree Rifle and Pistol Club	Braintree Rifle and Pistol Club	N	Parts in Chapter 61B. Town has right of first refusal on those parcels
BELD property Allen St.	BELD	N	Planning process identified this as a desirable location for a public access walkway to the Fore River
Fore River Shipyard	Private	N	Planning process identified this as a desirable location for a public access walkway to the

			Fore River
Grossman Land	Private	N	Abuts the Monatiquot River off of Middle St.
Miscellaneous Riverfront Areas	Private	N	Several sites along Monatiquot River are degraded with pavement and disturbance to the edge of the river and would provide environmental, aesthetic and recreational benefits if restored to natural areas.
Parcels of off Columbian and Grove Streets	Private	N	Forested lands which abut the ACEC and protected open space.

## B. Description of Major Open Space

### *Parks and Playgrounds*

#### **Adams Playground**

Just under 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 some play equipment. 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 Braintree Park Department since 1954, the facility is located on approximately 148 acres along the Monatiquot River and 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 to the old 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 equipment 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 path. Limited on-street parking is available.

### **French's Common**

In use since the beginning of the 20<sup>th</sup> 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 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, benches and shade trees. There is no 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, Goggins, Duffy and Hall of Fame fields (5 youth baseball fields, one lighted). There is also a basketball court, children's play apparatus, a concession stand for B.A.L.L. There is off street parking for approximately 100 vehicles.

### **Hollis Field**

Hollis Field is a 9 acre complex of playing fields (football, soccer, softball, baseball), two tennis courts and two basketball courts. The field is located behind the Hollis School and the courts are behind the Daugherty Gym. Parking 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; extensive play apparatus and much of property is tree studded and undeveloped. There is limited off-street parking.

### **Mattulina Park**

Mattulina Park is approximately 6.5 acres and is located at Kendall Ave 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 at facility.

### **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, tot lot and a parking lot for approximately 30 vehicles. The land abuts the Monatiquot 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 has been used as a community garden (the upper hillside).

### **Smith Beach**

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

### **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 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 boating slips 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 canoes, sail craft and rowboats are permitted.

### **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. There is children's play equipment 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.

### **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 Braintree National Youth League (baseball and softball for boys and girls 6-15) and has a refreshment stand/storage building/restroom facility, children's play apparatus area, 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.

### **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.

### **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.

### *Undeveloped Park Land*

### **Hobart/Tremont St. Island**

An open space of approximately a half-acre at 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', this 3 acre area is located off Grove Street. area 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 include 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, 4 softball fields (1 lighted), an 8-lane all weather track, a 1 mile fitness trail, 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) with 8 soccer fields, 2 tennis courts and a natural surface track. 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. Outdoor athletic facilities consisting of 2 football/soccer fields and a basketball court are available. 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 three 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 softball field, play apparatus 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 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 tennis courts, play apparatus 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 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. The building was the former Monatiquot School and is now leased to a private entity. 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.

## *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 was recently re-marked and a GIS based map of the area was developed by a volunteer.

In addition to the Town-owned land, a Conservation Restriction (CR) exists on 243 acres of land surrounding Cranberry Pond. The CR prevents development but allows for private ownership and is associated with the Devon Woods condominium development.

Currently, the Cranberry Pond Conservation Area can only be accessed from Braemore/Eutaw Road and very limited parking exists. If this area is to be promoted as a recreational resource for the Town, additional access points and parking need to be developed. Since the Cranberry Pond area abuts the Holbrook Town Forest (also part of the ACEC district) opportunities for a shared access point and joint trail map should be pursued. No handicapped accessible parking spaces are designated in the existing three car capacity parking area. Trails are hard-packed soil but numerous rocks protrude above the trail surface.

### **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 Monaquot River floodplain. There are no trails or designated public access points to the swamp.

### **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 the former county hospital and 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.

### **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 or the reservoir although it is easily reached and problems with dumping and drinking are common.

*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 as a mile of paved walking/bike trails around the pond, a picnic area and a fishing dock. The park is very popular and provides excellent recreation opportunities and a popular summer camp program. Pond Meadow is handicapped accessible. # of parking spaces .....

### **Town Forest**

Town Forest consists of 126 acres of forestland as well as Cranberry Brook and associated wetlands. Access is from primarily from Peach St. where there is a small parking lot. Parking is also available in the lot at the South Middle School across the street from the Forest. A designated pedestrian crossing point should be developed if parking at the school lot is encouraged. Providing parking at the Forest entrance should be considered.

A trail system throughout the Town Forest exists though no maps of the trail network are available. Also, signage is lacking at the entrance. Trails are hard-packed but, like the Cranberry Pond area, numerous rocks protrude above the trail surface.

### **Blue Hills Reservation**

Sixty-eight acres of the MDC's Blue Hills Reservation are located in the northwestern corner of Braintree. The small portion that lies within Braintree is largely 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 map kiosk are located on West Street.

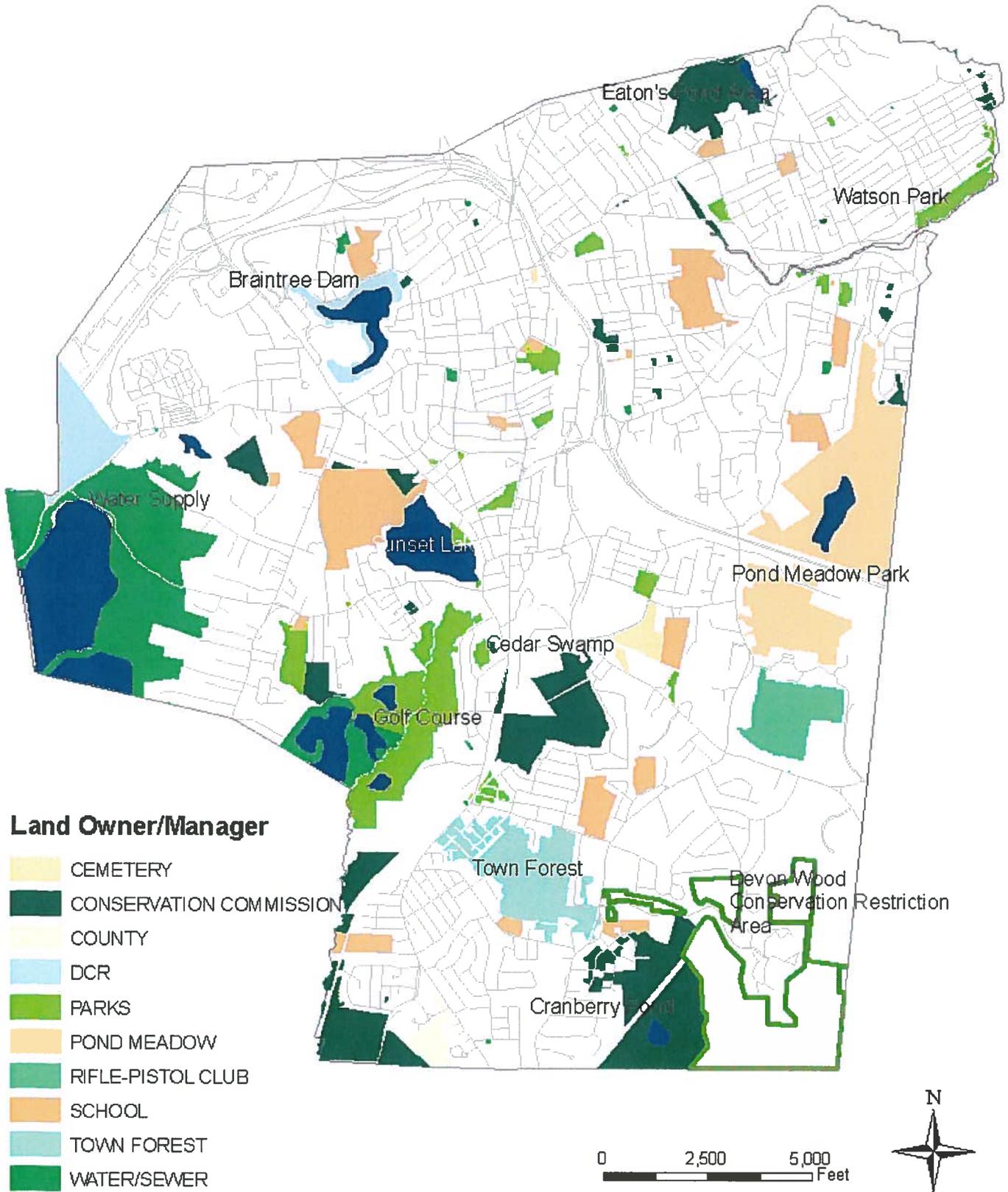
### **Braintree Dam**

The Braintree Dam (also known as the Quincy Reservoir) is former water supply for 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.

In addition to the lands listed above, other open lands in Braintree include two cemeteries (one Town-owned and one privately owned) and the capped landfill on Ivory Street which has the potential to be used as a recreational area, including playing fields and dog-walking areas.

# Protected Open Space



## **SECTION 6: COMMUNITY VISION**

### **A. Description of Process**

Previous Open Space and Recreation Plans (1988 and 1995) were used as the foundation of this update. Planning and Community Development staff did much of the background research, data collection and map development. An ad hoc Open Space Recreation Plan committee of Conservation Commission and Planning Board members provided direction and input to the planning process.

A survey was available on the Town's website and in the public library, parks department, Council on Aging and Town Hall. Approximately 140 responses were received, tabulated and discussed at a public hearing in June of 2006. The Patriot Ledger and Braintree Forum both covered the planning process. The planning process was put on hold during the transition to a mayoral form of government and resumed in late 2008.

### **B. Statement of Open Space and Recreation Goals**

Braintree is a mature community with a long and rich history. As an inner core suburb of Boston, there is very little land left in Braintree which can be developed. At this point, protecting the remaining open land from development is the number one priority of residents. Improving access to the waterfront is also very important as well as improving recreational opportunities.

Goal 1: Protect Remaining Open Space

Goal 2: Increase Public Access to Waterfront

Goal 3: Improve Recreation & Conservation Areas and Opportunities

## **SECTION 7: ANALYSIS OF NEEDS**

### **A. Summary of Resource Protection Needs**

The Town needs to secure the permanent protection of the last large remaining pieces of land. Increased maintenance and stewardship of Town resources is a pressing need.

Water quality improvements are needed in several areas. Bacterial contamination and nutrient enrichment is a problem at Sunset Lake as well as other waterways. Implementation of modern stormwater management standards is a high priority for the Town.

The Town's natural resource areas also provide opportunities for recreation, and the Town should consider ways to increase pedestrian access without depleting natural habitat. With a number of significant Town owned natural resource areas and numerous waterways, the Town should consider ways to provide linkages between open spaces.

## B. Summary of Community Needs

According to the survey respondents, more recreational opportunities are needed for walking, biking, swimming and playground use. These results are supported by the findings of last Statewide Comprehensive Outdoor Recreation Plan (SCORP) which identifies tennis, road biking, walking, swimming and playground use as the top unmet needs in the metropolitan Boston area.

The National Recreation and Parks Association provides guidelines to set the minimum standards a community should provide.

Table 13

Activity	Service radius	No. per population	Minimum for Braintree (proj.pop. = 36,858)	Existing in Braintree
Basketball	¼ - ½ mile	1 per 5000	7.37	17
Tennis	¼ - ½ mile	1 per 2000	18.42	14
Baseball	¼ - ½ mile	1 per 5000	7.37	24
Football	15-30 min. travel time	1 per 20,000	1.84	4
Soccer	15-30 min. travel time	1 per 10,000	3.68	14
¼ mile running track	15-30 min. travel time	1 per 20,000	1.84	1
Softball	¼ - ½ mile	1 per 5000	7.37	16
Golf (18 hole)	½ - 1 hour travel time	1 per 50,000	.73	1
Swimming pools	15-30 min. travel time	1 per 20,000	1.84	0
National Recreation and Parks Association				

According to these guidelines, Braintree has an adequate number of playing fields but needs more tennis courts, another running track and a swimming pool.

Several survey respondents would like to see the reservoirs opened for walking however best practices in drinking water supply management recommend against allowing public access to drinking water supplies. The Braintree Dam reservoir area is not used for drinking water supply. Allowing public access to this area would provide a valuable recreational asset in North Braintree.

Many respondents asked for trail maps and more (and better marked) trails through Town-owned land, as well as more overall information on the open space and recreational areas of the Town. Residents have also requested dog parks, designated areas to be fenced in, within which owners can let the dogs run and play off-leash.

Other community needs, particularly for the handicapped and elderly, include another paved trail such as the bike path around Pond Meadow Park but with a more level grade and more frequent (and shaded) benches along the trail. Better sidewalks to link the open space in neighborhoods were also identified as a need.

The addition of the community garden in Braintree has been very well received. Respondents would like to see another community garden with more raised beds for those with limited mobility.

### **C. Management Needs**

It is important for the Town to have the tools and policies at hand to implement the recommendations of this Plan.

The Town needs to be able to move quickly when opportunities to acquire land arise. Mechanism for funding acquisition should be established (including funding acquisition of conservation restrictions).

A focused effort on improving water quality in the Town's waterbodies is needed. Mechanisms for funding upgrades to the Town's stormwater management system in order to remove pollutants before they are discharged to the Town's waterways are needed. A particular emphasis should be placed on improving the water quality at Sunset Lake as it is an integral part of Braintree's character and provides unique recreational opportunities.

Management, maintenance and stewardship of the Town's land holdings are a significant challenge. The Town owns many, many pieces of land throughout Town. The boundaries of these parcels should be fielded marked and monitored for encroachment, dumping, presence or spread of invasive species on a regular basis. A volunteer land steward program could be implemented to accomplish this or it could be done by interns.

## **SECTION 8: GOALS AND OBJECTIVES**

### **Goal 1: Protect Remaining Open Space**

- A. Actively engage landowners of undeveloped parcels in discussion of land protection options

### **Goal 2: Improve Recreation Areas/Opportunities**

- A. Provide a range recreational areas, facilities and programs to serve the needs of the population
- B. Maintain a high standard of quality for all recreational areas through careful management and upkeep of equipment, land and facilities
- C. Increase public access along the Monatiquot and Fore River
- D. Improve existing trail system
- E. Increase awareness of existing facilities
- F. Work with neighboring communities on joint management of neighboring resources

### **Goal 3: Improve Environmental Quality of the Town**

- A. Address water quality problems at Sunset Lake
- B. Improve the quality of wildlife habitat

## SECTION 9: SEVEN YEAR ACTION PLAN

**Responsible Party Key:**

MO = Mayor's Office

PCD = Planning & Community Development Department

CC = Conservation Commission

RAC = Recreation Advisory Commission

RD = Recreation Department

CD = Commission on Disabilities

BELD = Braintree Electric Light Department

PB = Planning Board

DPW = Department of Public Works

### **GOAL 1: PROTECT REMAINING OPEN SPACE**

**Objective 1A: Actively engage landowners of undeveloped parcels in discussion of land protection options; including purchase, donation or conservation restriction.**

<b>Actions</b>	<b>Responsible Party</b>	<b>Funding Source</b>	<b>Year</b>
Identify properties of interest	PCD	Staff time	1
Contact landowners to discuss options	PCD	Staff time	2
As available, use expertise from land trusts to negotiate transactions	PCD	Staff time	Ongoing
Utilize both CPA and Conservation Trust fund for land acquisitions	CC PCD	CPA funds Conservation Trust	Ongoing
Consider expansion of cluster zoning to preserve open space	PCD	Staff time	2

### **GOAL 2: IMPROVE RECREATION AREAS/OPPORTUNITIES**

**Objective 2A: Provide a range of recreational areas, facilities and programs to serve the needs of the population.**

Move forward with recreational re-use of landfill as part of a mixed-use redevelopment	MO PCD	Partner with private developers as part of mixed use	3-4
Build the Petersen Pool	MO RAC	Designated funds from Capt. Petersen's estate.	4-5
Establish programs appropriate for all levels of ability and improve physical access to recreational areas	RD CD	Recreation programming budget, grants, Community Preservation	Ongoing

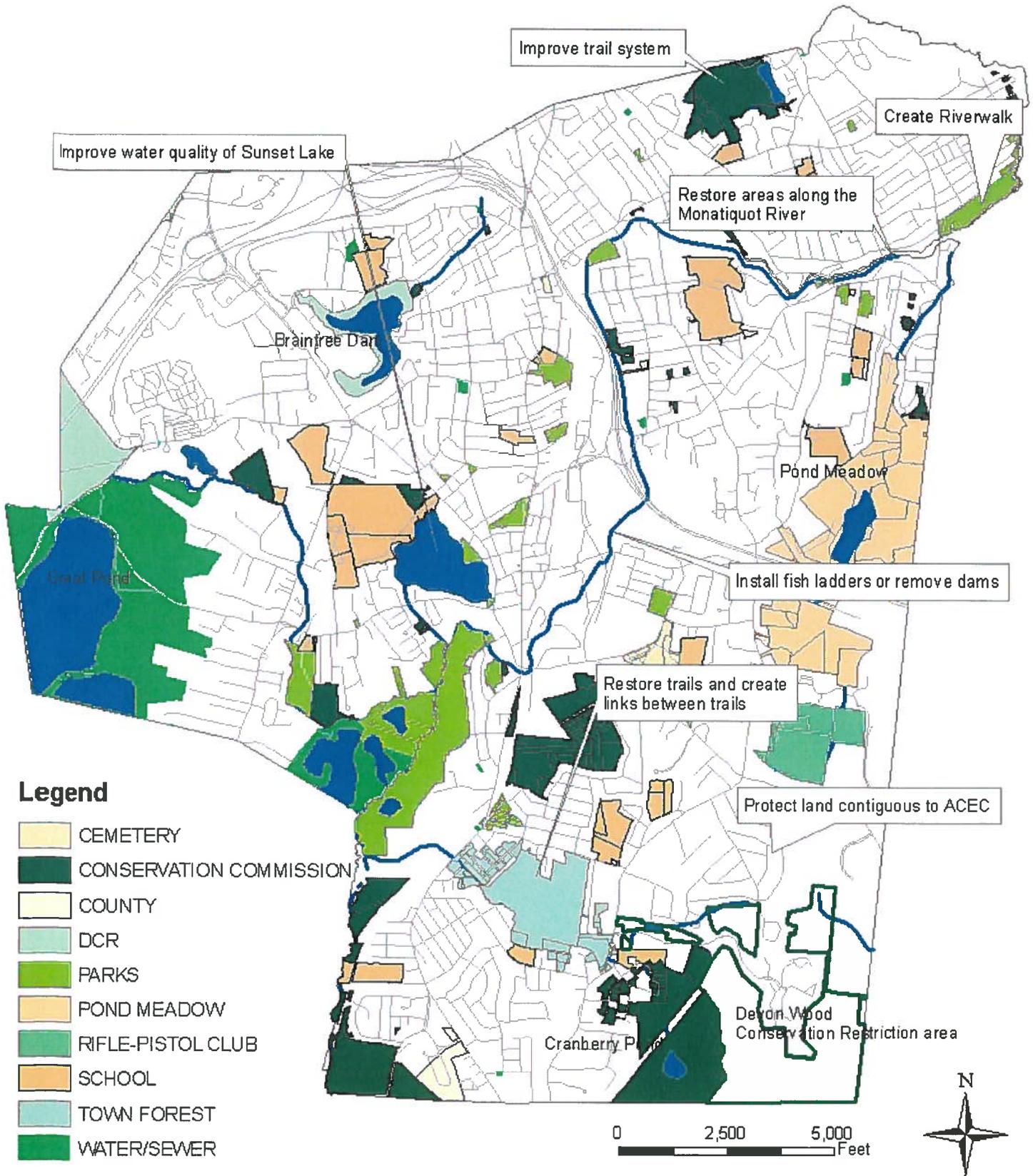
**Objective 2B: Maintain a high standard of quality for all areas through careful upkeep of equipment, land and facilities.**

Conduct routine inventory of recreational equipment and facilities	RD	Staff time	Ongoing
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Secure funding for maintenance and replacement	RD	Grants, donations, friend's groups, etc.	Ongoing
Implement a monitoring program for conservation land to identify problems such as dumping, encroachment, etc.	CC PCD	Conservation Trust Fund	2
<b>Objective 2C: Increase public access along and to the Monaquot and Fore River.</b>			
Consider future of BELD property on Allen St.	MO BELD PCD	Boston Architectural group	1
Determine plan for property	MO BELD PCD	Staff time	2
Create Riverwalk along Monaquot/Fore River	MO PCD	Staff time Grant funding CPA	3-4
Incorporate public access into mitigation for redevelopment projects	PB CC	No cost to Town	Ongoing
Investigate opportunities and locations for riverfront restoration	PCD	Staff time	Ongoing
Implement opportunities for riverfront restoration	CC PCD	CPA funds Grant funds	Ongoing
<b>Objective 2D: Improve existing trail system and create Town-wide walking routes.</b>			
Restore and remark existing trails	CC	Conservation Trust Fund Volunteers	Ongoing
Develop trail maps, install map signs at trailheads & post on Town website	CC PCD	Conservation Trust Fund Staff Time	Ongoing
Sponsor seasonal nature walks to increase appreciation of Braintree's natural resources.	CC PCD	Staff time & volunteers	Ongoing
Provide parking at trailheads	CC PCD DPW	Staff time	Ongoing
<b>Objective 2E: Increase awareness of existing facilities</b>			
Post trail maps, walking routes, park information, etc on Town website	PCD RD	Staff time	1
Organize on-site events at locations throughout Town	RD CC PCD	Staff time	Ongoing
<b>Objective 2F: Work with neighboring communities on joint management of neighboring resources.</b>			
Continue discussions with Holbrook about joint management of the	CC PCD	Staff time	Ongoing

Cranberry Pond ACEC.			
<b>GOAL 3: IMPROVE ENVIRONMENTAL QUALITY OF THE TOWN</b>			
<b>Objective 3A: Address Water Quality Problems at Sunset Lake</b>			
<b>*Actions recommended by 1999 CEI Report</b>			
Correct stormwater bypass of infiltration trench in beach parking lot*	PCD CC	Grant funds CPA funds Conservation Trust	2-4
Install stormwater treatment for southeastern shore*	PCD CC	Grant funds CPA funds Conservation Trust	2-4
Provide stormwater treatment for other stormwater discharges to the lake	PCD CC	Grant funds CPA funds Conservation Trust	2-4
Reduce sediment load through street sweeping and catch basin cleaning	DPW	DPW budget	Ongoing
Outreach to lakefront properties on vegetative buffers for water quality & fertilizer use	PCD CC	PCD budget	1-3
Dredge the near shore areas of the lake to decrease rooting area for nuisance aquatic plants.	PCD CC	Grants CPC funds Conservation Trust	6-7
<b>Objective 3B: Improve Quality of Wildlife Habitat</b>			
Identify corridors, crossings and pinch points and improve or restore as feasible	CC PCD	Staff time	Ongoing
Restore anadromous fisheries by installing fish ladders or removing dams to provide access to upstream habitat	PCD	With DMF Grants	As feasible

# Action Plan Map



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Appendix A

List of Town-owned open space parcels

Appendix B

ADA Self-Evaluation

Appendix C

Letters of Review/Acceptance

Mayor of Braintree

Braintree Planning Board

Metropolitan Area Planning Commission