SECTION 4 – ENVIRONMENTAL INVENTORY AND ANALYSIS

A. Geology, Soils and Topography

1. General Description

Foxborough is located in Norfolk County in eastern Massachusetts. It shares many characteristics with other New England towns, including varying soils, abundant forest land and wetlands, and a system of rivers and streams. Soils are typically shallow, stony, and dry on hillsides, richer and deeper in drainage areas, with wetlands and the fertile flatlands toward the south. To the northwest, the topography is more rugged, with hilltop elevations reaching 430 feet. From the top of High Rocks in the State Forest, you can see Boston and Southeastern Massachusetts. Throughout the town, the highest elevations are no more than 100 feet above surrounding areas.

The Town lies on the divide between two major watersheds, the Neponset River to the north and the Taunton River to the south. Topographic extremes are found at either end of a line between High Rock and Beaumont's Pond. The land grades from 430 feet at the fire tower to 150 feet where Canoe River enters Mansfield; this line passes across Foolish Hill, which is prominent more because of its isolation than its height. The land from east of the South Street/Mechanic Street line is for the most part flat or gently rolling interspersed with numerous wetlands and vernal pools. It appears to be a transitional plateau between the more irregular uplands and the broad flat plan which characterizes the Mansfield/Easton area.

a. Bedrock Geology - Foxborough is located in the Eastern Plateau of Massachusetts. The majority of this area is characterized by glacial deposits that overlay a flat, well-dissected bedrock plateau which slopes gently eastward with summit altitudes generally less than 500 feet. According to the USGS Bedrock Geologic Map of Massachusetts, there are four major bedrock units in Town:

- Dedham Granite, a Proterozoic aged Diorite (northwestern and eastern sections),
- Barefoot Hill Quartz Monsoite (north central region of Town),
- Sharon Syenite (along the northwest edge of Town in the area of Crack Rock pond and Edwards Road), and
- the Rhode Island Formation (found on the southwestern edge of the town; South Street area to the base of Foolish Hill, east to Summer Street area at the Mansfield town line).

In addition, early historic reports tell of coal deposits in South Foxborough; coal and graphite beds were uncovered when Route 95 was cut through the North High/Walnut Street area.

b. Surficial Geology - The landscape of Foxborough was molded by glaciers that buried it in sheets of mile thick ice as they advanced, melted and receded around 10,000 years ago. In general, alluvial soils have formed in glacial outwash deposits at lower elevations. Compact glacial till and ground moraine, which was deposited by the glaciers over bedrock, predominates at higher elevations. The two areas can generally be identified in the field by stands of white pine trees in the sandy deposits of glacial outwash deposits and the association of stone walls with ground moraine. Soils within floodplains along the Town's rivers and major streams are formed in alluvial materials. On the slopes of the State Forest and some other hills in the area, soils have developed over the mantle of ground moraine. The following lists include types and approximate extent of the soils found in Foxborough (Table 8: see Map 3A ~ Table 9: see Map 3B).

Table 8 – Foxborough Soil Types

Soil Association	Percent	Characteristics	Best Uses
Hinckley-Windsor-Deerfield	33% (4,353 acres)	Very deep, nearly level to steep, excessively to moderately well drained soils formed in glacial fluvial deposits on outwash plains, deltas, kames, and ice contact deposits.	Generally well suited for building site development but seasonal high water tables requires mounded septic systems. Also well suited for woodland and cropland but irrigation is required for optimal growth. Soils occur in areas of aquifer recharge and caution should be taken to protect the aquifer.
Canton-Chatfield-Rock outcrop	26% (3,433 acres)	Very deep to moderately deep, gently sloping to very steep, well drained soils formed in glacial till and ice-contact, stratified drift; in areas of bedrock controlled uplands.	Well suited for cropland and residential development, and fairly well suited for woodland. Areas of bedrock outcrop are poorly suited for most uses due to the shallow depth to hard bedrock where blasting is often required for excavation.
Woodbridge-Paxton-Ridgebury	14% (1,897 acres)	Very deep, gently sloping to steep, well drained to poorly drained soils formed in loamy glacial till overlying dense glacial till; on upland oval hills (drumlins) and ground moraines.	Well suited for woodland and cropland. Poorly suited for septic systems due to slow permeability. Subsurface drainage is also a problem as the firm substratum causes a perched seasonal high water9.
Urbanland-Udorthents	10% (1,385 acres)	Nearly level to gently sloping, land is covered with impervious surface or the original soils have been cut away or covered w/fill.	Generally well suited for parks, recreation fields, and building sites. These soils differ greatly from place to place; consequently, onsite investigation is needed to assess the soil suitability for specific land uses.
Freetown-Swansea-Scarboro	9% (1,251 acres)	Very deep, nearly level, very poorly drained soils formed in very deep to shallow freshwater organic deposits, underlain by glacial fluvial deposits in swamps and depressions.	Very poorly suited for most uses due to seasonal high water table and low soil strength. Well suited for wooded and scrub-shrub wetlands, wetland wildlife habitat, and cranberry production.
Water	4% (570 acres)	Water bodies including ponds, lakes, and reservoirs.	N/A
Raynham-Scio-Birdsall	2% (237 acres)	Very deep, nearly level to gently sloping, moderately well to very poorly drained soils formed in silty lacustrine deposits.	Poorly suited for most uses due to wetness. Generally poorly suited for dwellings with septic systems due to slow permeability and seasonal high water tables.
Scituate-Montauk-Norwell	2% (213 acres)	Very deep, gently sloping to steep, well drained to poorly drained soils formed in loamy glacial till overlying dense glacial till; on upland oval hills (drumlins) and ground moraines.	Well suited for woodland productivity and cropland. Poorly suited for septic systems due to slow permeability. Subsurface drainage is also a problem as the firm substratum causes a perched seasonal high water table.

Table 9 – Foxborough Agricultural Soils

Soil Category	Percent	Characteristics
All Areas Are Prime Farmland	21% (2,801 acres)	Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water). For a full definition, see: http://soils.usda.gov/technical/handbook/contents/part622.html#04.
Farmland of Unique Importance	3% (366 acres)	Land other than prime farmland that is used for the production of specific high value food and fiber crops. Examples of such crops are citrus, tree nuts, olives, cranberries, fruit, and vegetables.
Farmland of Statewide Importance	7% (918 acres)	This is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, fiber, forage, and oil seed crops, as determined by the appropriate state agency or agencies. Generally, these include lands that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods.

2. Effects of Geology, Soils and Topography

a. Effects on Development - In many towns, the type of soils found in the town limits or prohibits the installation of septic systems, and thus limits development. In Foxborough, some soils are hydric soil, floodplain soils or soils with a shallow depth to bedrock, thereby putting significant pressure on the remaining upland areas for development.

The remaining soils are the sandy soils of glacial outwash soils which have a fast percolation rate and the more compact till soils have a slower percolation rate. Most of these soils are suitable for septic systems, given enough depth of soils, percolation rate, water table and adequate land area for the system.

b. Effects on Water Supply – Foxborough is served by 13 operating wells (not all run simultaneously), located in seven well fields, which are administered by the Foxborough Water Department. The Water Department provides water to town residents and also water for fire protection. Most wells produce good quality water.

Foxborough is fortunate to have large areas of surficial stratified deposits with saturated thicknesses greater than 50 feet which are suitable for public wells. Unfortunately several of the Town's major wells are located in aquifers with a high vulnerability to contamination due to the absence of hydro geologic barriers (clay) that can prevent contamination migration. This is of great concern since the Plainville landfill (Laidlaw) is just north of one of these wells.

c. Effects on Wastewater Treatment - Since 80% of Foxborough's septic systems are private, the types of soils are an important factor in the growth rate of the Town. Only 20% of the Town has public or private sewer, including access to the Mansfield Wastewater Treatment Plant, however the Mansfield plant is unable to accept additional flows. In 2007, the Regional Sewer Study Commission began to study the feasibility of regionalizing sewage disposal for the towns of Foxborough, Mansfield and Norton. Town voters have since supported the establishment of a regional sewer district.

d. Effects on Recreation - While hydric and floodplain soils are not suitable for development, the associated rivers, streams and wetlands provide a wide variety of passive recreational opportunities. Canoeing, kayaking, hiking, bird watching and catch and release fishing activities abound in the ponds, streams and wetlands in Foxborough. The Town has several primitive canoe launching sites on the Neponset Reservoir that are open to the public, including Kersey Point, Beach Street, Edwards Road and McKenzie Lane.

Recreational fields are in great demand in Foxborough. Since the upland soils in Foxborough are generally suited for many active and passive recreational activities, proper design, maintenance, irrigation and resting of the fields are important. The limiting factor in new site development for active recreational activities is more often the cost of land, slope and water table, rather than soils.

B. Landscape Character

Few communities this close to Boston can boast of such a rural and open entrance from almost all sides. Acres of flat, fertile, productive soil greet those who arrive from the south, while a working dairy farm, one of the last in Norfolk County, welcomes those who enter from the west.

Because Foxborough is a semi rural residential community, preserving open spaces that will provide active and passive recreational opportunities, while preserving farmland and wildlife habitats are of critical importance to residents. Foxborough's numerous ponds, lakes and river corridors need to be promoted as recreational assets and more planning must be performed to determine the most ideal recreational opportunities for all residents to enjoy.

C. Water Resources (Map 5A)

1. Watersheds (Map 1B)

Foxborough is situated on top of the divide between the Neponset and Taunton river basins. Its groundwater aquifers are replenished solely by rain and snowmelt. Since the Town's water supply is derived entirely from groundwater sources, their recharge is vital. Development, which necessitates access to water, increases the demand on the Town's limited water resources.

The Town marks the beginning of three major river basins, the Taunton River Basin, Neponset River Watershed and Ten Mile River Basin as follows.

a. Taunton River Basin - The Taunton River is the longest coastal river in New England unimpaired by dams, and has a significant watershed encompassing approximately 562 square miles. It is also one of the flattest watersheds with only a 20-foot elevation drop along its 40-mile length along the main stem, eventually ending at Narragansett Bay near Fall River. The streams associated with this basin include Billings Brook, Cocasset Brook, Wading River, Robinson Brook, Canoe River, and Rumford River.

The watershed is generally characterized by low-permeability (glacial till) soils with more limited sand and gravel (outwash) soils, shallow depths to groundwater and numerous wetlands. While these features exacerbate stormwater runoff issues, they also afford unique habitats for both aquatic and terrestrial wildlife. For additional information, please refer to the Taunton River Watershed Management Plan Phase I: Data and Assessment, December 2008, downloadable at www.horsleywitten.com/tauntonwatershed/TauntonRiver-WS-finalreport.html?refreshed.

(1) *The Billings Brook sub-basin*, which begins in Foxborough, drains south through Gavin's Pond and then approximately 1.4 miles before converging with Murray Brook at Vandy's (aka Smith) Pond. After becoming the Rumford River at Vandy's Pond's outlet, it flows through the two Bleachery (aka Glue Factory) Ponds before continuing in a southwesterly direction through Mansfield and eventually into the Taunton River.

(2) *The Cocasset Brook sub-basin* begins in Foxborough, near the Upper Carpenter Pond which flows into Lakeview Pond and Sunset Lake *(photo, right)*; both flow into Cocasset Lake, which flows via Cocasset Brook (aka Cocasset River) through Foundry Pond (aka Furnace Lake). After exiting Foundry Pond's outlet, it flows in a southerly direction, eventually merging with, and becoming, the Wading River, which flows out of Lake Mirimichi which is located partially in the southwestern portion of Town.

(3) *The Canoe River sub-basin's* upper watershed begins in Sharon, flows through Greeley's Pond, becomes the Canoe River which flows through the Canoe River Watershed ACEC and Beaumont Pond before flowing southward.

b. Neponset River Watershed - This watershed is roughly 130 square miles in size, beginning in Foxborough's Neponset Reservoir, at Gudgeon Brook, near Gillette Stadium. The Neponset River flows in a northeasterly direction, eventually exiting at Dorchester Bay. Because the river ultimately enters Boston Harbor, its watershed is considered to be part of the larger Boston Harbor Watershed.

c. Ten Mile River Basin - Only a very small portion of this basin's upper watershed is located in Foxborough, beginning at Witch Pond in the southwestern portion of town.

2. Surface Water (Map 5B)

Surface water areas, in the context of this Plan, include permanent standing water bodies and rivers, regardless of size. Foxborough's water bodies include the Neponset Reservoir, part of Lake Mirimichi, Witch Pond and Beaumonts Pond (through which the Canoe River flows), as well as numerous man-made ponds along Cocasset Brook and Rumford River.

The Town's major ponds that have significant recreational opportunities include:

a. Neponset Reservoir - Although there is no established boat launch at the Reservoir small boats, canoes or kayaks can be portaged (for a short distance) and launched off of Edwards Road or Kersey Point (*photos, left and right, by A. McGillicutty*). Fishing is allowed on the Reservoir, but please catch and release.

Lane Property - Eighty-six acres of land, with 1.5 miles of Reservoir shoreline, pine forests, the Reservoir's dam and several large open hay fields that are managed by a local farmer.

Blueberry Island (1.5 acres) is located just off shore from the Lane Property. You can portage your canoe or kayak for a picnic on the island (please carry out what you carry in) or camp there with the written permission of the Conservation Commission.

Chestnut Street - This area includes 12 acres of conservation land, bordering the Reservoir, also on the Warner Trail.

b. Lakeview Pond and Upper Carpenter Pond - These ponds are mostly shallow and are best paddled during the spring and early summer. Lakeview Pond has a small launch site for canoes and kayaks, which would need to be portaged for use on Upper Carpenter Pond (aka Upper Reservoir). Fishing in Upper Carpenter Pond is excellent year round, especially during ice fishing season. Catch and release is suggested, but record-sized fish are still caught here.

c. Rumford River Greenbelt - More than 225 acres of open space along the Rumford River, including forests, fields, marshes, two ponds, several vernal pools and the river.

Glue Factory Pond, aka "The Bleachery" - This area is a nice place to picnic, with a trail to Hocking Esker, a long narrow hill of stratified sand and gravel, which was in an ice tunnel under the last glacier, 15,000 years ago.

Murray Brook Land – Forty-five acres of woodland with scattered wetlands and a stream that extends up to Route 95.

d. Greeley's Pond Area - Greeley's Pond, part of Canoe River ACEC (see Section 4.F.4.a) and the surrounding forest are owned by the Norfolk County Commissioners. After crossing the pond's dam, trails marked by the boy scouts can be followed. The trail around the east side of the pond takes you to an abandoned dam, which was once used to flood a cranberry bog that is now a red maple swamp.

e. Beaumont's Pond - The Conservation Commission's 27 acre parcel abuts this privately owned pond. Hodges Brook, which supports brook trout, flows through the conservation land from Summer Street. Portions of this stream start near Judge Brown Lane at a spring, which supplies clean water year round and, reportedly, has never gone dry.

f. Sunset Lake - The Sunset Lake (*photo right*) Trail is part of the State Forest; trails from Governor's Meadow link up with this area of low hills and lake.

g. Cocasset Pond and Foundry Pond - Both of these impoundment ponds are located along the Cocasset River. Cocasset Pond is privately owned, but still provides scenic vistas along its abutting roadways. Foundry Pond's water rights are owned by the Conservation Commission, but its access is not marked and is difficult to find.

h. Wading River Watershed Area – Twenty-three acres of land bordering the Wading River near Lake Mirimichi. The Mass Department of Fish and Game stocks the river with trout at South Street.

3. Aquifer Recharge Areas (Map 5A)

In Foxborough, ground water of sufficient quality, quantity and yield is usually found in stratified drift deposits; ground water in stratified drift aquifers is unconfined. This type of aquifer is not overlain by a confining low permeability deposit, which would pressurize the system. Recharge to the aquifer is by infiltration from precipitation and by lateral leakage from adjacent till and bedrock. Discharge from the aquifer is by leakage to the small rivers and ponds in the Town, by evaporation in areas where ground water is near land surface and by non-returned pumpage.

In 1993, the Canoe River Aquifer was awarded sole source status, which provides for additional levels of review in certain projects that may impact water quality (see Section 4.F.4.a).

4. Flood Hazard Areas (Map 5A)

Foxborough's flood hazard areas are generally associated with the Rumford and Cocasset Rivers and their tributaries. Although sites along these rivers are prone to flooding, much of the land along their tributary streams was built upon prior to regulations limiting such actions. The Flood Insurance Rate Maps (FIRM), which show the 100-year flood areas, including elevations in some study areas, are available for review at the Building Department.

Foxborough's Zoning Bylaws now prohibit construction or filling in the Flood Plain Overlay District without a Special Permit from the Zoning Board of Appeals. Foxborough also incorporates extensive stormwater runoff zoning performance standards for all projects, and requires compliance with the Massachusetts DEP Stormwater Management Policy Standards, now incorporated into the Wetland Protection Act's Regulations.

5. Wetlands (Map 5B)

Wetlands have many beneficial functions including the protection of public and private water supply, protection of surface and ground waters, nutrient retention, shoreline anchoring and dissipation of erosive forces, pollution prevention, fisheries and wildlife habitat, and aquifer recharge. In Massachusetts, wetlands are protected by the Wetlands Protection Act (MGL Ch. 131 §40) and rivers are protected by the Rivers Protection Act (Ch. 258, Acts of 1996). More information about these wetland laws is available at www.mass.gov/dep/water/lawsrule.htm.

Foxborough supplements the state law with a local bylaw, the Wetlands and Groundwater Protection Bylaw, Article IX of the Foxborough General Bylaws. The Conservation Commission is charged with protecting the wetlands, and will soon be promulgating regulations for Article IX.

Under Article IX, alterations are prohibited within 25 feet of a bordering vegetated wetland or an inland bank. The bylaw's "no build zone, no disturb zone" or vegetated buffer strip not only serves as the first line of defense in protecting the beneficial functions of wetlands but also provides water quality protection to wetlands and lakes, flood protection and habitat to a wide variety of wildlife species.

A 25-foot buffer is considered by experts to be a minimum standard for water quality protection. A 60-foot buffer is considered a minimum, depending upon site conditions (increased width is recommended in areas with steep slope or high sediment or pollutant concentrations). Wider buffer strips provide wildlife habitat which support a higher diversity of plants and animals (biodiversity). Studies show that a width of about 30 to 100 feet will protect most plant species yet widths of at least 200 to 500 feet are necessary to protect most bird and amphibian species.

For a planning level survey of the Town's wetlands and NHESP potential vernal pools as individually demarcated by the MassGIS, see Map 4. These surveys are based on aerial photography interpretation.

Classic example of a vernal pool

D. Vegetation

1. General Inventory

As further described below, Foxborough's landscape includes many types of vegetative plant communities, ponds, lakes, rivers and streams.

2. Forest Land

As shown in Table 7 (Section 3), the most recent land use data available indicates that 6,702 acres (about 50% of the town's total land area) of land was in its natural, undisturbed state in 1999. The residents of Foxborough receive direct and indirect benefits from protecting forest lands. Clear-cutting of forested areas for residential or commercial development drastically alters wildlife habitat, increases air and water pollution and decreases the ability to harvest renewable wood products and provide recreational opportunities.

a. Economic Studies - Open space preservation is a fiscally sound alternative to development in Foxborough, as demonstrated in the following three studies.

(1) In a report entitled *Cost of Community Services in Post 2000 America – A Current View* (Stabile, 2005), on average, residential land costs $1.16 for services for every $1 of tax revenue, industrial/ commercial costs $0.27 and open space costs $0.36 for every $1 of tax revenue. The report contained many case studies from around the country, including the Massachusetts towns of Brewster and Plymouth. In Brewster, the study showed residential properties had an average cost of $1.30 for each $1 generated in taxes, industrial/commercial properties required $0.48 in cost and open spaces required only $0.31 for each $1 in tax revenue. Plymouth had similar results.

(2) In a Trust for Public Lands' report entitled *The Economic Benefits of Land Conservation* (2007), there was no correlation found between the number of buildings in a town and lower residential taxes. On the contrary, it was found that the tax bill for a typical house was, on average, higher in towns with higher populations and more buildings (*Brighton, 2005).*

(3) The American Farmland Trust completed a study in Massachusetts examining the economic impacts of land use. The study demonstrated that the cost of providing

services to new residential developments and commercial businesses is far greater than the benefits from the taxes that would be collected had the property been developed. Similarly, the study demonstrated that the agricultural and open space land cost the town less money in municipal services.

Foxborough's forests are typical of southeastern Massachusetts forests. In the west side of Town, forests are characterized by a mixed hardwood forest, including several species of oak (historically cut over for charcoal), sugar maple, beech and white ash. Evergreen species include pine and hemlock, although eastern red cedar and pitch pine also are common.

In the south side of Town, noted for its flat terrain and fertile soils, low-lying areas often contain red or swamp maple swamps; white pine and hardwoods may be found in the upland areas. The northeast section of Town is similar, with a forest cover of white pine and mixed hardwoods including birch, black cherry and American elm.

b. Town Forest Lands - Major forest lands in Town that have recreational opportunities include:

(1) *Canoe River Wilderness Area* - With more than 300 acres, this area is part of the Canoe River ACEC which runs from the Sharon town line to the Mansfield line. Containing forest land, streams, and wetlands and traversed by a power line easement, it offers a large forested area with recreation trails for passive activities such as hiking and bird watching.

(2) *F. Gilbert Hills State Forest (Map 10B)* - This 1,027-acre site in Foxborough and Wrentham is owned and managed by the Massachusetts Department of Conservation and Recreation. The State Forest is a passive use pine and oak forest with 23 miles of trails for various uses looping through the forest. One of these trails leads to the Warner Trail, a long-distance hiking trail that travels through Norfolk County on its way to Rhode Island. Mountain biking is a widely popular activity and there are also trails for off road vehicles or "ORVs" (motorcycles only) and horseback riding.

Wolf Meadow (Town conservation property) – A diversified terrain of 102 acres including Wolf Meadow, a forested swamp pond created in Colonial times for water power. The pond's stone dam is still intact and maintains the meadow's water level. Access is from Mill Street and by foot trails from the State Forest.

(3) *Harold B. Clark Town Forest* - This Town conservation area consists of 275 wooded acres, with two ponds. The main trail encircles Upper Carpenter Pond (see Section 4.C.2.b), a secluded woodland pond surrounded by an oak and pine forest, whose shallow waters provide visual and biological diversity.

(4) *Cocasset River Greenbelt*

Sallie Property/Governor's Meadow
This 112 acre conservation area has a trail leading from the main parking lot on Rt. 140 *(photo right of recently dedicated Bill Hocking Memorial Garden and Trail)* that is a continuation of the Warner Trail. Portions of the trail lead to the Devil's Den, which is a large boulder (glacial erratic) located near a brook that runs through Governor's Meadow. Additional recreation trails through this area, located off of Granite Street, are for passive recreational use.

Cocasset River Park - A 50-acre recreation facility containing ball fields, a man-made pond, and diverse wetland and forested areas for passive recreation including hiking, bird watching and cross country skiing. A trail system connects the area with the Cocasset River Recreation Area.

Cocasset River Recreation Area (Map 10C) - This 20 acre multi use property includes a rec hall, pool, small overnight cabins, ball fields, hiking trails that connect to the Cocasset River Park and State Forest and a chapel meeting house. The property was purchased by the Town in 2004 to insure the preservation and significance of this former camp as a recreation center for children, adults and families.

Cocasset River Watershed - Includes 13 acres of preserved open space along both sides of Cocasset River, with access off Spruce Street, through wetlands, swamps, hills and rock outcrops.

(5) *Rumford River Greenbelt* - More than 225 acres of open space along the Rumford River that includes woods, fields, marshes, two ponds, several vernal pools and the river.

Keystone Project - Residents should consider participating in the UMass Amherst Cooperative Extension Program's Keystone Project, which provides assistance to land owners by investing education and reference materials in important, keystone people who are in a position to influence forest conservation decisions. Participants in the program are provided with a three-day training intensive at Harvard Forest, Petersham, as well as a bag of take-home resources. Topics include historical perspectives on land use, forest succession and ecology, forest and wildlife management, land protection tools, and community outreach. This Program was created to improve wildlife habitat through sound forestry management practices.

3. Public Shade Trees

Trees keep roads cool, making them more enjoyable to ride, walk or run on. They also allow wildlife, such as turtles, frogs, toads and salamanders, to cross from one side of the street to another without becoming dehydrated. An added benefit of a shaded roadway is that it protects the road's surface from scorching heat, cracking and cooling.

Public shade trees are protected by Chapter 87 of the Massachusetts General Laws and include all trees within a public way or planted by or caused to be planted by the Tree Warden on adjoining land (with the permission of the owner) within 20 feet of a public way. Violations of Chapter 87 shall be punished by forfeiture of no more than five hundred dollars to the use of the town.

The powers of the Tree Warden are detailed in M.G.L. Ch. 87, §2. Under this Act, the Town can hire a tree warden to care and have control over all public shade trees, shrubs and other vegetation (except those within the state highway), as well as within public parks and open space areas under the jurisdiction of park commissioners. The tree warden is charged with preserving trees, shrubs and other vegetation.

As detailed in the Act, public shade trees shall not be cut, trimmed or removed, by anyone other than the tree warden or his deputy, except by written permit from the tree warden. Neither the tree warden nor his deputy shall cut down or remove public shade trees without a public hearing, posted in at least two public places in Town, on the tree proposed for removal, and legally noticed in a town newspaper for two weeks, at least seven days before the hearing. Tree wardens shall not cut down a remove or permit the cutting down or removal of a public shade tree if, at or before a public hearing, written objection is made by one or more persons, unless approved by the selectmen.

Foxborough's public shade trees are managed by a Tree Warden who is responsible for both their care and maintenance. The Tree Warden is a three-year termed position appointed by the

Board of Selectmen. Foxborough's Tree Warden works with the Highway Department's Tree and Park Division.

Tree City USA - Foxborough might want to consider applying for the designation of Tree City USA. The National Arbor Day Foundation and the National Association of State Foresters set the standards that each community must meet to be eligible for the designation. Standards include the designation by the community of a tree board or department; a tree care ordinance; a community forest program with an annual budget of at least $2 per capita and an Arbor Day proclamation. Benefits of the Tree City USA designation include a plan for management of the town's forest resources, community education, environmentally conscience public image, a sense of pride among citizens, financial assistance for planting trees and managing forests, and publicity for the community's accomplishments.

4. Agriculture Land

As shown in Table 7, 314 acres of land in Foxborough were classified as agricultural as of 1999. Some agricultural lands are permanently protected under the Agricultural Preservation Restriction (APR) program, while others are temporarily protected under Chapter 61, the tax-incentive program for farmers. Agricultural lands are essential to our community's character.

a. *MetroFuture* Recommendations - The economic viability of farming and agriculture in the region must be enhanced to ensure their continued presence in the years to come. A sustainable farming economy requires farmers, land, capital, labor, and access to markets. The MetroFuture recommendations seek to ensure all these elements are present, so that the market can operate efficiently and with minimal dependence on subsidy.

   The latter recommendations in this strategy are designed to encourage appropriate methods of development in rural areas. Appropriate development in rural areas will ensure that priority open spaces, natural resources, and farmland are not subject to development. Such methods of development include transfer of development rights programs, mandatory conservation subdivision bylaws, and other methods of zoning, such as down-zoning and purchase of development rights.

   Many of the region's farmers are reaching (or long past) retirement age; younger skilled and resourceful farmers are needed to keep those existing farms in production. If the region is to increase the amount of acreage in agricultural production and the production of the local food/ agricultural system economy, even more new farmers will be necessary. At the same time, changing tastes, environmental factors, and market conditions will demand that farmers adopt best management practices and continuously improve operations in order to remain sustainable. Access to fiscal and technical resources will help farmers increase their contribution to the local agricultural economy.

Haying operation at Hersey Farm, Rt. 140

b. Foxborough Agricultural Commission - Foxborough still takes great pride in its farming community and to that end, the Town recently enacted a bylaw establishing an Agricultural Commission which will be made up of five members and three alternates whose charge is to

   "serve as facilitators for encouraging the pursuit of agriculture in Foxborough: shall promote agricultural-based economic opportunities in Town; shall act as mediators, advocates, educators, and/or negotiators on farming issues; shall work for preservation of prime agricultural lands; shall pursue all initiatives appropriate to creating a sustainable agricultural community and preserving the rural character of Foxborough."

c. MGL Chapter 61, 61A and 61B - These land classification programs are designed to encourage the preservation and enhancement of open space, including agriculture, recreation and forest lands. They offer significant local tax benefits to property owners who are willing to make a long term commitment to land preservation. In exchange for these benefits, the Town is given the right to recover some of the land owner's tax benefits if the land is going to be removed from Ch. 61 by giving them the option to purchase the property (right of first refusal) within 120 days after a bona fide offer to purchase has been received by the owner. A "right of first refusal" is an agreement by an owner to offer a property to a specified individual or organization at the same price and terms as those in a bona fide offer to purchase received by the owner. To insure that land under Chapter 61 is actually managed in a long-term sustainable fashion, there is a penalty for withdrawal from the program and changing it to residential, industrial or commercial use. This penalty consists of payment for the difference between taxes paid and taxes deferred plus interest. The penalty is computed for the previous five years under certification. Details about the three different Chapter 61 classifications follow:

(1) *Chapter 61* - The Forest Assessment Act provides reduced real estate taxes to participants who devote land (10 or more adjacent acres) to the production of forest products. Chapter 61 classifications run for ten-year periods. An owner who wishes to sell land classified under Chapter 61 for a different use during the first ten years of certification must repay all back taxes to the town plus interest (minus payments made for the 8% yield tax.) The assessment of land classified under Chapter 61 is reduced by 95%.

(2) *Chapter 61A* - The Farmland Assessment Act provides for assessing and taxing of actively farmed land on its farm use value rather than its potential development value. Chapter 61A is most commonly applied to agricultural or horticultural land but can be used for the forested portions of a farm, provided a management plan is approved by the Mass. Department of Environmental Management. To qualify for Chapter 61A, a farm owner must have five or more contiguous acres being used for agricultural or horticultural purposes. This land must produce annual gross sales of not less than $500. For each additional acre over five, the minimum produce value is $5. There is no product value for woodlands and wetlands, for which the added value is $.50 per acre. Property under Chapter 61A is assessed at rates which vary for different agricultural uses. Generally, classification will result in a reduction of 80% in assessed value.

(3) *Chapter 61B* - The Open Space/Recreation Land Act provides reduced real estate taxes assesses to participants who devote land (over 5 acres) to the protection of wildlife habitat, resource preservation or passive recreation. Chapter 61B is intended for land designated for recreational use. To qualify for Chapter 61B, a landowner must own five or more contiguous acres. The land must be retained in a natural state to preserve wildlife and natural resources, must be devoted primarily to recreational use, and must provide a public benefit. Recreational uses include hiking, camping, observing and studying nature, golfing, hunting and skiing. The assessed valuation of Chapter 61B land is reduced by 75%. A written management plan is not required, but approval by local assessors is required.

d. Community Sponsored Agriculture (CSA) - CSA is a system in which members of the public purchase "shares" of a farm's output in advance and then receive the farm's products as they are harvested.

Healthy Futures Community Garden The Conservation Commission recently granted Invensys Foxborough YMCA a trial license to grow produce on their Mechanic Street conservation property. The YMCA created a Healthy Futures Community Garden *(photo right)* and CSA model in an effort to make fresh produce more accessible to the community.

e. Agricultural Preservation Restriction Act (APR) - The APR program is a voluntary program that offers a non-development alternative to farmland owners, when making decisions about the future use and disposition of their

farmlands. The program offers farmers a payment, up to the difference between the "fair market value" and the "fair market agricultural value" of their farmland, in exchange for a permanent deed restriction which precludes any use of the property that will have a negative impact on its agricultural viability. The farmer retains all property rights of ownership, including the right to lease, sell or will the land. The Daniels Farm on West Street is the only farm in Town that has been protected under the APR program.

f. Current Working Farms include:

- Lawton's Farm, a family operated farm on North Street that sells raw milk and cheeses. In addition to running their family farm, they also plant crops and maintain hayfields on both the Lane Property and Willow Street conservation properties.
- Grossmith's Farm on Cocasset Street raises Scotch Highland cows *(photo, right*).
- Willow Grove Nursery on West Street raises prize Guernsey cows and runs a nursery.
- The Community Garden and Farm Stand at Hersey Farm on Walnut Street is staffed solely by volunteers, with all proceeds going back into the community via the Discretionary Fund (a non profit group with no ties to the town government).

5. Wetland Vegetation

Foxborough had 471acres of water as of 1999 (see Table 7). Foxborough's wetland vegetation is typical of wetland vegetation found throughout New England.

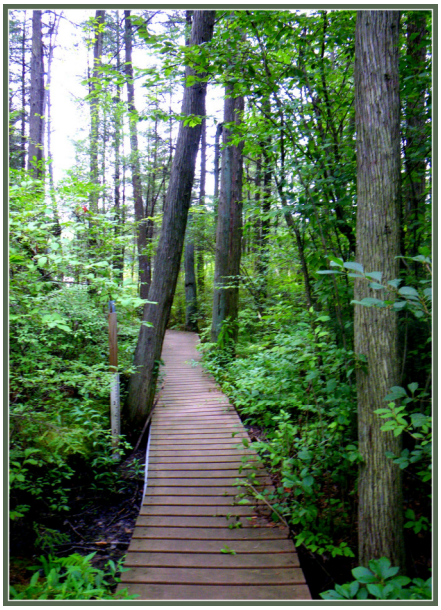
a. Deep Marsh and Shallow Marsh Meadows - These two types of wetlands support plant species that either prefer or are adaptable to root growth in permanently saturated or inundated soils. Deep marshes are generally wetter than the shallow marsh meadow or fen and are typically associated with borders of shallow ponds. Typical deep marsh vegetation includes cattails, arrowroots and smartweed. Shallow marsh meadows tend to be dominated by wildflowers such as joe-pye weed, grasses and sedges.

b. Bogs are found in areas of permanent inundation where there is little nutrient exchange. These areas tend to be found in isolated pockets that have no surface water flow. Because of the lack of nutrient flushing, low pH levels are found in bogs. Low pH levels result from the containment of natural acids produced by vegetation, including sphagnum moss, which is often the dominant plant species. Other plants adapted to this acidic environment include leather-leaf, pitcher plants, sundews and cranberries, which may be grown for commercial purposes.

c. Shrub Swamps (*photo right, a vernal pool; note salamander egg masses in foreground)* are found in temporarily inundated areas and can include a wide variety of plant species such as alder, dogwood, viburnum, northern arrowwood, and buttonbush.

d. Wooded Swamps (Deciduous) are found in areas of seasonal inundation or saturation. The overstory is often dominated by red maple trees with an understory of high bush blueberry, winterberry and/or viburnum shrubs.

e. Wooded Swamps (Coniferous) are found in areas of seasonal inundation or saturation and include plant communities generally composed of white pine, hemlock, or balsam fir trees that provide a dense overstory. The understory vegetation tends to be thin and is often comprised of fern species, dewberry and goldthread. A rare type of coniferous swamp found in Foxborough is the Atlantic white cedar swamp (*photo, right*), which is discussed in Section D.7.d.



f. Wooded Swamps (Mixed Trees) are found in areas of seasonal inundation or saturation, with deciduous and coniferous trees throughout the wetland.

6. Rare and Endangered Species (Plants)

The Division of Fisheries and Wildlife determines a status category for each rare species listed. Rare species, listed below (with date of record), are categorized as endangered (E), threatened (T), or of special concern. According to NHESP, Foxborough is home to three different rare species of vegetation as shown below:

Table 10 – State Listed Plant Species in Foxborough

Vascular Plant	*Ageratina aromatica*	Lesser Snakeroot	E	1940
Vascular Plant	*Nabalus serpentarius*	Lion's Foot	E	1946
Vascular Plant	*Ophioglossum pusillum*	Adder's-tongue Fern	T	1919

Source: Natural Heritage and Endangered Species Program (NHESP), 2011

The following is a brief review of each of these species:

Lion's foot is native to the Southeastern U.S. but extends as far north as Massachusetts. It was last seen in Foxborough in 1946 and is now listed as endangered. It is a long-lived perennial with flowering stems as tall as one to two meters. It is found inland in open rocky woods and along power line right of ways. Its current threats are shading from trees and shrubs and deer browsing. (www.newenglandwild.org/docs/pdf/Nabalusserpentarius.pdf)

Lesser snakeroot is a perennial herb of dry, open woods found primarily on south-facing, rocky hillsides or at the bases of rock ledges, usually in relatively sunny spots within oak-hickory forests. It is probable, however, that the 150-year trend of forest maturation and fire suppression in the region is making it difficult for this species to maintain itself. The primary threat to the species, therefore, is habitat loss through development and forest succession. (www.newfs.org/docs/pdf/Ageratinaaromatica.pdf)

Adder's-tongue Fern is a small terrestrial fern, up to 12 inches high, consisting of a single fleshy green stalk. It is found in boggy meadows, acidic fens, borders of marshes, wet fields and moist woodland clearings that provide suitable open and sunny habitat. Threats to the species include, grazing, trampling, logging, and any activities which would alter the hydrology of the sites. (www.mass.gov/dfwele/dfw/nhesp/species_info/nhfacts/ophioglossum_pusillum.pdf)

7. Unique Sites (Map 4)

a. BioMap and Living Waters (first edition) - Both BioMap and Living Waters delineate *Core Habitats* that *identify the most critical sites for biodiversity conservation*. Core Habitats represent habitat for the state's most viable rare plant and animal populations and include exemplary natural communities and aquatic habitats.

One of the most effective ways to protect biodiversity for future generations is to protect Core Habitats from adverse human impacts through land conservation. For *Living Waters Core Habitats*, protection efforts should focus on the *riparian areas*, the areas of land adjacent to water bodies. A naturally vegetated buffer that extends 330 feet (100 meters) from the water's

edge helps to maintain cooler water temperature and to maintain the nutrients, energy, and natural flow of water needed by freshwater species. To further ensure the protection of Core Habitats and biodiversity in the long-term, the BioMap and Living Waters projects also identify two additional areas, *Supporting Natural Landscape* and *Critical Supporting Watersheds* that help support Core Habitats.

(1) *Foxborough's Biomap Core Habitats* - Although currently somewhat outdated, the NHESP 2004 report entitled *Core Habitats of Foxborough* includes the following Core Habitats (the most recent Atlas was in 2008):

BioMap Core Habitat BM1094 - This Core Habitat encompasses much of Borderlands State Park in Sharon and undeveloped and unprotected areas to the northeast and southwest (SE corner of Town, near Beaumont's Pond). The southwest portion includes habitat bordering the Canoe River and some of its tributaries, while the northeast part of the Core Habitat encompasses upland forests and many vernal pools. The area contains a good interspersion of forested uplands, wetlands, small ponds, and vernal pools. Together these areas provide significant habitat for the five rare vertebrate species listed below.

Common Name	Scientific Name	Status
Eastern Box Turtle	*Terrapene carolina*	SC
Spotted Turtle	*Clemmys guttata*	SC
Marbled Salamander	*Ambystoma opacum*	T
Blue-spotted Salamander	*Ambystoma laterale*	SC
Four-toed Salamander	*Hemidactylium scutatum*	SC

BioMap Core Habitat BM1140 - This area includes the dry, rocky upland oak woods on Foolish Hill that are habitat for the Oak Hairstreak butterfly. Open and sunny areas around the perimeter of the woods, including human-influenced habitats, provide wildflower nectar sources for the adult butterflies. While the habitat is surrounded by development, it is itself unfragmented and located less than 10 km from populations at the Wrentham State Forest and near Moose Hill in Sharon, which probably allows for dispersal of individuals among these locations.

Common Name	Scientific Name	Status
Oak Hairstreak	*Satyrium favonius*	SC

BioMap Core Habitat BM1162 - This area includes Witch Pond Swamp, an Atlantic White Cedar swamp and habitat for Hessel's Hairstreak butterfly. Although surrounded by development, the Core Habitat is itself relatively unfragmented and located less than 10 km from populations at the Walpole Cedar Swamp and at Wolomolopoag Pond in Sharon, which may allow for occasional dispersal of individuals among these locations.

Common Name	Scientific Name	Status
Hessel's Hairstreak	*Callophrys hesseli*	SC

(2) *Foxborough's Living Waters Core Habitat LW091* - This Core Habitat supports one of eight known populations of Bridle Shiner in the Taunton Watershed. This population, in Lake Mirimichi, has persisted since at least 1951. This fish, a Species of Special Concern, is thought to be in decline in eastern Massachusetts as it was found at only 23% of its former sites in recent surveys. The Bridle Shiner is typically found in well-vegetated, quiet waters. It feeds on small aquatic insects and other invertebrates, and is an important part of the freshwater ecosystem as prey for larger fishes.

Common Name	Scientific Name	Status
Bridle Shiner (fish)	*Notropis bifrenatus*	SC

b. BioMap2 - The Massachusetts Natural Heritage & Endangered Species Program and The Nature Conservancy's Massachusetts Program developed *BioMap2* in 2010 as a conservation plan to protect the state's biodiversity. *BioMap2* is designed to guide strategic biodiversity conservation in Massachusetts over the next decade by focusing land protection and stewardship on the areas that are most critical for ensuring the long-term persistence of rare and other native species and their habitats, exemplary natural communities, and a diversity of ecosystems. The summary document is available for download from www.nhesp.org or

available upon request from the Massachusetts Natural Heritage and Endangered Species Program. An interactive map is available online that allows exploration of BioMap2 data.

c. Vernal Pools - The Town's gently rolling topography lends itself to the existence of many vernal pools. The Conservation Commission has identified numerous vernal pools, but to date only 11 pools have been certified. The Wetland and Groundwater Protection Bylaw protects vernal pools, as well as the adjacent 100-foot upland area around vernal pools. The Commission has been a strong advocate of maintaining a large buffer zone around vernal pools to ensure the viability of the animals frequenting the pool (see Section E.2, below).

d. Witch Pond Bog and Cedar Swamp - Reportedly, there used to be numerous white cedar swamps in Foxborough. There are still several pockets of cedar swamp habitat in town and at least two large cedar swamps; one is in the southwestern corner of town, and another is located on Water Department property along the Cocasset River. The Witch Pond Bog also is located in the south-western corner of town, adjacent to the above cedar swamp; both are located on Water Department property and are not accessible to the public (*photo right;* see Section F.4.c).

8. Vegetation Mapping Projects

During MassDEP's recent Wetlands Loss Project, the DEP created wetlands maps for the entire state, including different types of wetlands and wetland vegetation. In order to protect the State's wetlands, the DEP began compiling aerial photographs to track the alteration and loss of wetlands. By comparing the photos, the DEP can more effectively enforce the Wetlands Protection Act to restore already damaged areas and devise better strategies to prevent the destruction of these valuable resource areas.

The wetlands mapping was accomplished by the analysis of stereo 1:12,000 scale color infrared aerial photography taken during the period of 1990-1999. The interpreted wetlands information was field verified when necessary to produce the most comprehensive wetlands dataset available. Copies of the digital wetlands maps were distributed to each Massachusetts town. Although several areas of wetland loss are noted on Foxborough's map, none were significant.

E. Fisheries and Wildlife

The Commission is pursuing the protection of wildlife migration corridors and vernal pool breeding sites which are in the process of being identified.

1. Inventory

The Town also is fortunate to have a wide range of New England wildlife, including numerous vernal pools which could be referred to as the bottom of the food chain.

a. Reptiles - As in most New England towns, reptile populations seem to be decreasing in Foxborough, although some species such as garter snakes, snapping turtles and painted turtles are very common. The recently delisted spotted turtle (*photo, above)* can be found in many parts of Town. Recently documented Wood Turtles and Blanding's Turtles indicate that the Foxborough still contains suitable habitat to support such rare wildlife. Endangered species (Table 11A), including Eastern box turtles, have been documented in neighboring towns (Table 11B) and could also be found in Foxborough.

b. Amphibians - Wetlands are vital to the protection and survival of the town's amphibians, including several endangered species, listed in Table 11A.

c. Mammals - Foxborough's mammals include a wide variety of species, from the ever-increasing deer population and newly expanding population of fishers to a host of other wildlife species commonly seen throughout New England with the exception of moose, bear, porcupines and beavers, which have yet to be seen in Town.

d. Birds - Wild turkeys (*photo, right)*, now common in town, have been seen in numerous locations. Bluebirds have made a dramatic comeback. Indigo buntings, Lawrence's warbler, prairie warbler, yellow warbler, ruby throated hummingbirds and scarlet tanagers have also been sighted in town and northern orioles and other song birds abound. Bald eagles and loons have been reported at Neponset Reservoir and Canada geese are common.

e. Fisheries - Foxborough is fortunate to have many excellent fishing spots, including several ponds and rivers. In addition, the Mass Division of Fisheries and Wildlife stocks the lower reaches of the Wading River with trout.

One of the Town's favorite fishing spots is the Neponset Reservoir, which supports a variety of warm water fish species. The Final Neponset Reservoir Phase II Comprehensive Site Assessment Report prepared for Invensys, Inc., Foxborough, MA by MACTEC, Merrimack, NH, September 15, 2003, identified the following species:

> American eel, black crappie, bluegill, brown bullhead, chain pickerel, golden shiner, largemouth bass, pumpkinseed sunfish, redbreast sunfish, white perch, yellow perch, white sucker and goldfish ("Koi").

2. Vernal Pools

Vernal pools support rich and diverse invertebrate faunas; Elizabeth Colburn's book "Vernal Pools, Natural History and Conservation" states:

"*More than 550 species* of multicellular animals have been reported from northeastern vernal pools. If animals that have been identified only to the family or generic level are included, the number exceeds 700."

Vernal pools are unique wildlife habitats best known for the amphibians and invertebrate animals that breed in them.

"Vernal" means spring; many vernal pools are filled by spring rain and snowmelt, and then dry out during the summer. Vernal pools have variable hydroperiods; many fill in autumn and persist throughout the winter, while others remain ponded into summer and do not dry out every year. These periodic periods of dryness prevent fish from establishing permanent breeding populations in vernal pools.

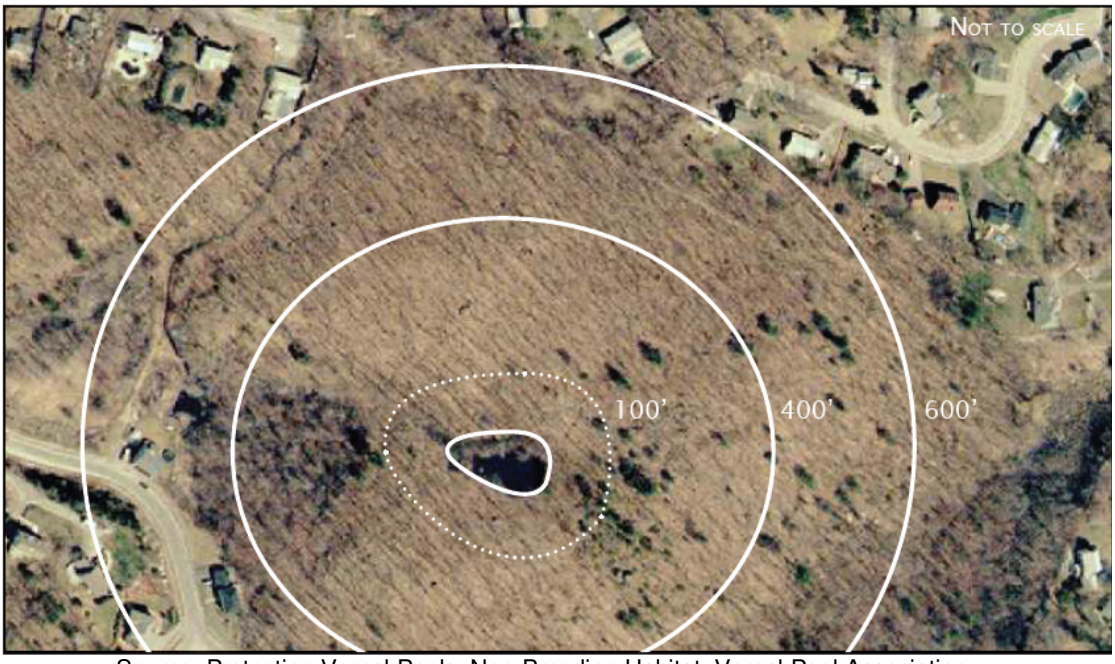
Obligate species (species that only breed in vernal pools), including wood frogs (*Lithobates sylvaticus*) and mole salamanders (*Ambystoma* spp.), have evolved breeding strategies intolerant of fish predation. Obligate species usually return to the same pool year after year. Wood frogs

live three to five years and mole salamanders live 20 years or more. Some invertebrates, such as the fairy shrimp (*Eubranchipus* spp.), are completely dependent upon vernal pools. Vernal pool ecosystems are also an important resource for birds, mammals, reptiles, amphibians, and invertebrates including many species listed under the Mass Endangered Species Act (MESA).

Non-breeding habitat for obligate vernal pool-breeding amphibians is found in the uplands surrounding breeding pools. Protecting populations of these species requires that we look beyond the pool itself, and even the 100 feet immediately surrounding the pool. These animals will migrate from non-breeding habitat as many as several hundred feet away. Retaining some of the non-breeding habitat, as well as preserving migratory pathways to the breeding pool, is essential to effectively protecting these populations.

The Massachusetts Natural Heritage and Endangered Species Program (NHESP) serves the role of officially certifying vernal pools. Locating vernal pools is only the first step in protecting them. The Massachusetts Aerial Photo Survey of Potential Vernal Pools GIS datalayer has been produced by the NHESP to help locate areas that are likely to contain vernal pools. At least 11 of Foxborough's vernal pools have been officially certified, and many more have been observed by the Conservation Commission during the normal course of work but have not yet been formally certified. Certified and Potential Vernal Pools are identified on Map 4.

Foxborough's Wetland and Groundwater Protection Bylaw serves as the first line of defense in protecting vernal pool species and maintaining the habitat function by protecting 100 feet from vernal pools as a "no build, no disturb zone" or vegetated buffer strip. However, this buffer zone should be considered the minimal protection as it preserves just a small percentage of the habitat used by vernal pool species *(the vernal pool is located at the center of the photo, below).*



Source: Protecting Vernal Pools, Non-Breeding Habitat, Vernal Pool Association

Migration Distances of Vernal Pool Species:

Species	Average* Distance	Maximum Distance
Marbled Salamander	368 ft	1,476 ft
Spotted Salamander	390 ft	817 ft
Jefferson Salamander	476 ft	2,051 ft
Wood Frog	633 ft	1,549 ft

*Migration distances reported in Science and Conservation of Vernal Pools in Northeastern North America by Calhoun and deMaynadier, 2008.

3. Wildlife Migration Corridors

One of the more significant contributors to the loss of species diversity is the loss of appropriate habitat to maintain a healthy ecosystem. For many species, a key inhibitory factor is the fragmentation of habitat areas into many small, preserved parcels between which it is difficult, if not impossible, for species to pass. Animals use natural and man-made features as corridors along which to migrate in addition to water bodies. These can include railroad beds and pipeline or electric transmission line rights-of-way, as well as undeveloped areas of woodlands, meadows, wetlands, or other lands. Some of these features can be important links between habitats within and between towns.

The ability to range over wider areas benefits both animal and plant life by providing more access to food sources, maintaining a healthy gene pool within species, and spreading seeds of native plants around a greater area (Fretz, 1996) all of which help promote biodiversity. While some species will travel through developed areas, others (fox, fisher, bobcat) need undeveloped areas to travel.

Although Foxborough has seen significant growth in the last decade, with the concomitant loss of many differing habitats and their resident natural communities, several unique resources still remain. Foxborough's natural wildlife migration corridors, such as streams and rivers, as well as man-made migration corridors, including utility transmission easements and railroad right of ways are heavily used as wildlife migration corridors. Unfortunately, Route 95 bisects the town, creating few wildlife migration corridors along its length through Town. To a lesser extent, Route 495 creates a similar barrier to wildlife in the southern portion of Town.

It is clear that these man-made corridors provide a valuable edge connecting different plant communities and habitats. They are significant to wildlife by either directly providing all of the food, shelter and water requirements of various species, or by facilitating easier access to these requirements when they exist in distant areas of a species range. Additionally, utility easements provide permanently maintained linkages between open space parcels and are clearly important recreation and wildlife corridors.

Significant wildlife corridors on the east side of Foxborough include a utility transmission easement *(photo, including vernal pool, right)* a railroad right of way, Water Department land on Oak Street and several adjacent parcels preserved as conservation land and, most significantly, the Canoe River ACEC.

The ACEC is contiguous on its southern border with the 16,950 acre Hockomock Swamp ACEC, another vast natural and scenic area comprising wetlands, archaeological sites and high-yield aquifers located in Bridgewater, Easton, Norton, Raynham, Taunton and West Bridgewater. Contiguous lands with and between communities enhance the value of the land for wildlife by providing travel corridors for animals moving through developed areas and enough open space to meet their habitat requirements.

On the west side of town, the State Forest and several contiguous preserved parcels in the Cocasset River Recreation Area create a significant wildlife migration corridor. To the north, the Neponset Reservoir and associated conservation properties create excellent wildlife habitat as well as multiple recreational uses. These wildlife corridors are home to a wealth of resident and migratory species, some of which are rare, threatened or endangered. These species range from the smallest of insects and crayfish, rare salamanders and turtles, exotic plants such as orchids as well as large predators like the Northern Harrier, coyote and bobcat.