

# **Open Space and Recreation Plan**

## **Littleton, Massachusetts**

**PLEASE NOTE: The revised draft will be paginated as required**

*Presented to:*

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**With assistance from the Metropolitan Area Planning Council**

**2016**

## TABLE OF CONTENTS

### **Section 1 Plan Summary**

### **Section 2 Introduction**

- A. Statement of Purpose
- B. Planning Process and Public Participation, including Environmental Justice

### **Section 3 Community Setting**

- A. Regional Context
- B. History of the Community
- C. Population Characteristics
- D. Growth and Development Patterns

### **Section 4 Environmental Inventory and Analysis**

- A. Geology, Soils and Topography
- B. Landscape Character
- C. Water Resources
- D. Vegetation
- E. Fisheries and Wildlife
- F. Scenic Resources and Unique Environments
- G. Environmental Challenges

### **Section 5 Lands of Conservation and Recreation Interest**

- A. Private Parcels
- B. Public and Nonprofit Parcels

### **Section 6 Community Vision**

- A. Description of Process
- B. Statement of Open Space and Recreation Goals

### **Section 7 Analysis of Needs**

- A. Summary of Resource Protection Needs
- B. Summary of Community's Needs
- C. Management Needs, Potential Change of Use

### **Section 8 Goals and Objectives**

### **Section 9 Seven-Year Action Plan**

### **Section 10 Public Comments**

### **Section 11 References**

**Appendix A – Section 504: Handicapped Accessibility Self-Evaluation**

**Appendix B – Public Survey, Meeting Notes**

**Appendix C – List of Abbreviations and Acronyms**

**Appendix D – Maps**

**In Memory of**  
**Peter W. Tierney Sr.**  
**1935-2015**



The 2016 Open Space and Recreation Plan for the Town of Littleton is dedicated in memory of Peter W. Tierney Sr. Peter proudly served the Town as a Conservation Commissioner for nearly twenty years after a long and distinguished career teaching science at Littleton High School.

During his exemplary tenure on the Commission, Peter was a passionate advocate and champion for the preservation and enhancement of the Town's open space and rural character, and for the protection of its natural resources. This report, which shall guide and support Littleton's future open space and recreational opportunities, honors Peter's selfless dedication to the Town, and his many contributions over the years to help make it a better place to live for its people.

## Section I Plan Summary

The 2016 Littleton Open space and Recreation Plan Update updates and revises the 2009 Open Space and Recreation Plan. This Plan Update was prepared by the Littleton Open Space and Recreation Implementation Committee, with the assistance of Littleton residents, and members of Town boards, committees, and staff.

The Plan Update provides information on the community's growth; open space and recreation needs and goals; and then develops an action plan for meeting those needs.

### **Littleton's Vision for Open Space and Recreation**

Littleton's ideal open space system would provide links between existing open space lands, whether they are owned by the Town, Littleton Conservation Trust, or other entities. The connections would extend to neighboring communities' open spaces and trails. Agriculture would be a prominent land use, helping to preserve our rural character. All ages and interests would be accommodated by a variety of recreational facilities, including parks and sports fields.

### **Important Issues**

Major issues identified at community forums, at meetings of the Open Space and Recreation Plan Implementation Committee (OSRPIC), through the Open Space and Recreation survey:

- Preserving the rural character of Littleton, including its agricultural heritage
- Providing recreation facilities for all members of the community, including organized sports teams and seniors

### **Critical Needs**

- Protect and enhance water quality in Littleton
- Preserve Littleton's important land resources through land acquisition, conservation restrictions, agricultural preservation restrictions
- Provide improved recreational opportunities for Littleton residents of all ages and abilities

### **Implementation: Actions to Meet the Needs**

#### **A. Priority Actions for Land Conservation**

- Purchase open space and farmland as it comes available, and monitor upcoming opportunities for land acquisition
- Work with interested landowners to put land under conservation restriction or agricultural restriction
- Work with the Agricultural Committee to ensure the long-term viability of existing farm operations

#### **B. Priority Actions for Recreation**

- Create and implement a comprehensive plan for maintenance, repair, and acquisition and/or construction of adequate playing field capacity for the town
- Rebuild or renovate the bathhouse at Long Lake
- Make recreational facilities wheelchair-accessible and Americans with Disabilities Act (ADA) compliant

***Major Projects*****A. Conservation and/or Recreation and/or Agricultural Projects****Couper Farm Property**

Preservation of at least a portion of the Couper Farm property on Great Road is a high priority for the Town. The Town will continue to work with the property owner to identify mutually beneficial alternatives to conventional subdivision of this important property. The acreage preserved could be utilized for recreation, conservation and/or agricultural use(s).

**Other Open Space Acquisition Priorities**

Investigate the Town's potential preservation (through purchase, restriction, or other means) of the "Williams Land" off Boxborough Road (40 out of 60 acres); the "Smith Property" on Whitcomb Avenue, and the surplus state land currently held by the Massachusetts Department of Transportation off of Boxborough Road (5 acres).

**Projects**

Construct a parking lot for the Oak Hill Conservation area on Harvard Road.

Work with developers and Town boards/departments to help preserve land in, and create bike/walking trails through/around the Durkee and Kaye properties.

**B. Recreation Projects**

Locate and investigate suitable spaces for building new athletic fields. Potential sites include Town-owned land on White Street, behind the Police Department, off Delaney Drive, at the Morgan Property, and on the land in back of the "Minor Chord" abutting the High School property.

Complete 300 King Street Renovations and Improvements: Construct walking paths, fitness course around the property.

Improve the conditions of existing fields, such as "Alumni Field", to make them safe and usable for athletic activities.

Replace/Renovate existing bathhouse and facilities at Long Lake beach.

Work with developers and Town boards/department's to create walking/biking paths and athletic fields on the Couper property.

Work with Town boards/departments to create more sidewalks/walkable areas around the Long Lake and Town common areas.

## SECTION 2 INTRODUCTION

### A. Statement of Purpose

The 2016 Littleton Open Space and Recreation Plan (“the Plan” or “the OSR Plan”) is an update of the 2009 Littleton Open Space and Recreation Plan. The 2009 Plan has been a critical document in the town of Littleton’s planning efforts since it was written. This 2016 Open Space and Recreation Plan will again be a document that is actively referred to for future planning efforts, including the project to update the town’s Master Plan, now underway.

This Plan will aid the town’s ability to apply for financial assistance to acquire and maintain open space and recreation resources. It is imperative that the Plan be kept up to date in order for Littleton to be able to seek grants and support from State agencies and other funding sources.

#### **Previous and Current Efforts to Protect and Enhance Open Space and Recreation**

An Open Space and Recreation Plan Implementation Committee (“OSRPIC” or the “Committee”) was formed in 2002 in order to complete and implement the 2003 Plan. The Committee has had an ongoing role in working with other groups in Littleton to acquire, protect and promote open space and recreation resources.

These efforts include:

Inventory of Open Space Lands. This study classified the remaining open space in town that is not permanently protected. This land includes private parcels that exceed five acres and are critical for preservation based on the views they provide, the wildlife habitats they protect, or the water resources they contain. The Committee used a prioritization model to help systematically evaluate these parcels and rank them in order of critical importance for future acquisition consideration.

In 2007 and 2013 Littleton voters adopted the Community Preservation Act and established a 1% real estate surcharge on all classes of property, with exemptions for the first \$100,000 of property value, to be used for open space, historic preservation, community housing and recreation programs.

In 2014, Littleton became the first town in Massachusetts to accept “blended” CPA, which authorizes Town Meeting to appropriate additional municipal revenues into the CPA fund to increase the base for State CPA matching funds up to the equivalent of a 3% surcharge. With a 1% property surcharge, Littleton can appropriate municipal revenues into the CPA fund up to the equivalent of another 2%. Together with conservation restrictions, LAND (Local Acquisition for Natural Diversity) grant funds, Trust for Public Land projects, APRs, cell tower funds, MGL c. 40B mitigation funds, and donations the CPA fund will be used to protect the land and water most important for Littleton’s open space goals, as well as provide for active recreation purposes.

Also during the last 10 years townspeople have voted favorably to allocate Town funds for open space purchases. Going forward, we hope to expand the use of creative funding mechanisms and techniques to continue to preserve our open space resources.

## **Land Acquisition/Preservation**

Since its establishment, the Open Space and Recreation Plan Implementation Committee has worked cooperatively with the Littleton Conservation Commission (CC), the Littleton Conservation Trust (LCT) and the New England Forestry Foundation (NEFF) to preserve 107 acres of land in town. Eighty-five acres of this land, managed by NEFF, are also protected by a conservation restriction held by the Conservation Commission.

Over the past several years the Town has received several donations of land and conservation restrictions through the work of the Planning Board and the Conservation Commission. In addition the Littleton Conservation Trust has secured properties through donations.

The community, the Implementation Committee, the CC, the LCT and the Littleton Clean Lakes Committee are committed to preserving the rural character that both historically and currently describes the Town of Littleton. The Town is planning on making critical land purchases in the future to preserve this character and to preserve valuable farmland, as well as to add to the existing contiguous parcels of open space in the town.

An emerging green belt can be traced from our border with the Town of Acton, across Littleton to the border of Groton. Much of this green belt is prime farmland, the importance of which cannot be overestimated. Littleton has also engaged in many regional efforts with our neighbors to expand trail systems, contiguous open spaces, and wildlife corridors.

At several times during the last 10 years, the townspeople have voted favorably for Town funds to be allocated to open space purchases. This movement is on the rise. Going forward, we hope to expand the use of creative funding mechanisms and techniques to continue to preserve our open space resources.

## **Recreation**

A large portion of the renovations at 300 King Street were completed in Spring 2015. These improvements include three resurfaced basketball courts, an asphalted walking path that surrounds the courts, and a redesigned parking lot. The future phases include installation of fencing at the basketball courts and a fit course that will extend the distance of the walking path. There will also be a complete rebuild of Castle in the Trees thanks to the hard work of the Littleton Children's Fund.

The two tennis courts located next to Town Hall were renovated and resurfaced in Summer 2015.

The installation of a new playground at Long Lake beach was also completed in Spring 2015. The intended use of this playground is for children age six to twelve. This improves the recreational options at the beach and will encourage visitors outside of the summer season.

Over 1,500 children participate in recreation sports and more than 5,000 school-aged children participate in the Department of Parks, Recreation and Community Education's offerings over the course of a calendar year. The Department, in conjunction with the Parks and Recreation Commission, seeks to increase program offerings and open-play and green spaces.



Play Structure at Long Lake Playground

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

The Open Space and Recreation Plan Implementation Committee led the planning process and drafted the 2016 Littleton OSRP.

### **Committee Members**

Gary Austin

Sam Bell

Peter Church

Vera Spohr

Andrew Sammarco, Chair

Jeanne Bracken, Administrative Support

Rick Findlay and Donald MacIver of the Littleton Conservation Trust have also contributed to the Plan and have been instrumental to the process.

The Committee began preparing for the Plan update in October of 2013. The planning process included a review of previous plans. These include:

- |      |  |
|------|--|
| 1968 | Conservation Commission's Open Space Plan accepted by Town Meeting |
| 1976 | Park and Recreation Plan - Littleton, Massachusetts prepared       |
| 1977 | Conservation Commission's Open Space Plan updated                  |
| 1986 | Littleton Massachusetts Open Space and Recreation Plan prepared    |
| 1997 | Littleton Massachusetts Open Space and Recreation Plan updated     |
| 2003 | Littleton Massachusetts Open Space and Recreation Plan updated     |
| 2009 | Littleton Massachusetts Open Space and Recreation Plan updated     |

Based on the thoroughness of the last Plan a decision was made to update the Plan internally and not hire a consultant. The Metropolitan Area Planning Council (MAPC) was retained to update all the maps, perform the American with Disabilities Act (ADA) Self-Evaluation, revise the demographic information, and review the overall Plan.

### **Public Participation**

In April of 2014, a town-wide survey was conducted to help learn from the people of Littleton what their attitudes were towards protecting open space and what was important to them as residents. The survey was mailed to approximately 3800 homes by the Littleton Electric Light and Water Department with the water bills. In addition, the survey was also available on-line by going to the town's website and SurveyMonkey.com. The committee received 189 completed surveys back.

In line with the results of the survey for this Plan, our Committee has heard that people have a strong desire to keep the natural character of Littleton preserved. Drinking water was rated very highly in the survey followed by quality of life, and lake and stream protection. A large majority of respondents said they would be inclined to vote favorably at Town Meeting to protect open space land when it becomes available for purchase.

On May 30th, 2014, the Committee held a public forum to discuss Littleton open space and recreation. The results of the survey and forum have been very beneficial to provide guidance in writing this document and the goals and objectives for the town in the coming years. The survey and summary of results as well as the minutes from the forum are included in Appendix B of this Plan.

A Community Forum on Recreation was held on June 1, 2015 to gather information on the kinds of recreational resources that are needed and desired in Littleton. An Open Space and Recreation Forum was conducted on March 15, 2016 to present the draft Plan so that it could be finalized.

Meeting minutes, memos and press coverage of the Open Space and Recreation Plan Implementation Committee's public participation activities are included in Appendix B.

### **Environmental Justice and Equity (See Map # 2 Environmental Justice)**

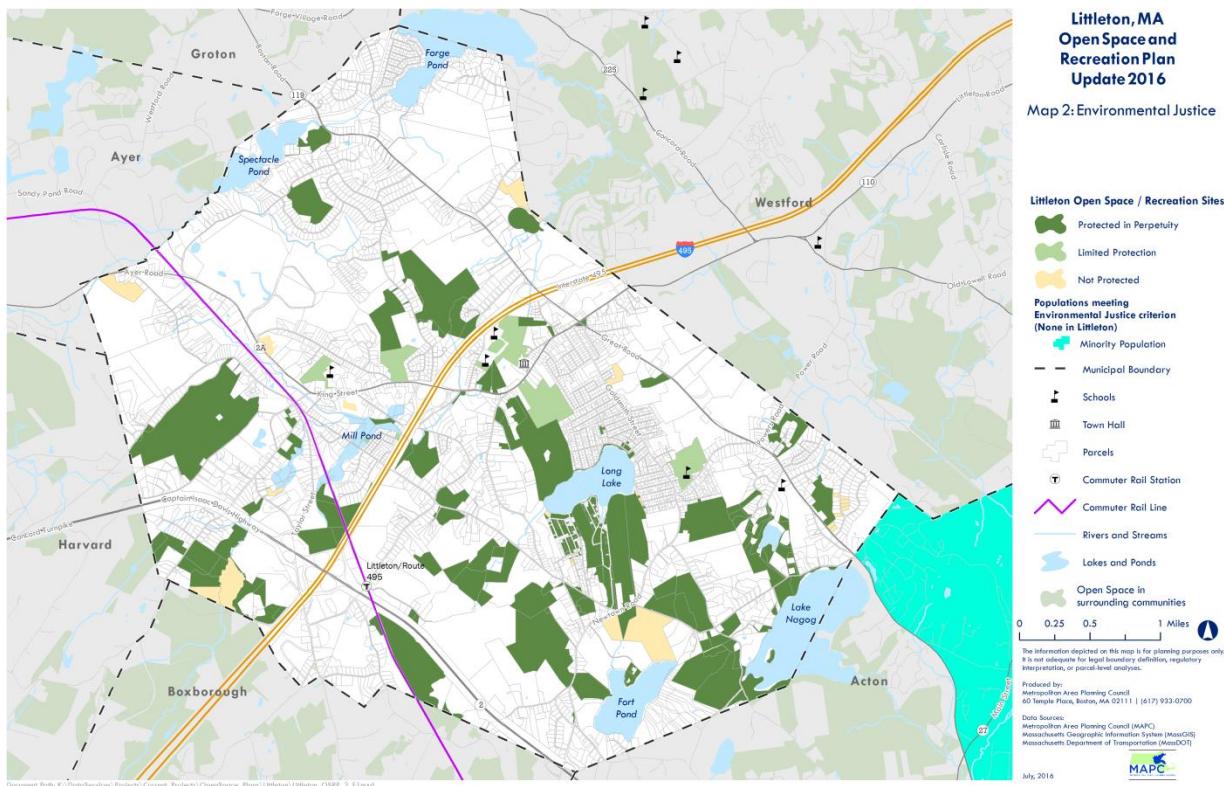
Since 2002, MA Executive Office of Energy and Environmental Affairs (EOEEA) has been implementing an Environmental Justice Policy to help ensure that all Massachusetts residents experience equal protection and meaningful involvement with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits. This policy was instituted recognizing that communities across the Commonwealth, particularly those densely populated urban neighborhoods in and around the state's older industrial areas, are facing many environmental challenges associated with Massachusetts' industrial legacy. Residents in these predominantly low-income and minority communities, nearly 29% of the state population, often lack open space and

recreational resources. They may also live near sources of pollution and abandoned, contaminated sites that can pose risks to public health and the environment.

Critical to advancing Environmental Justice (EJ) in the Commonwealth is the equitable distribution of environmental assets such as parks, open space, and recreation. Toward this end, and where applicable, municipalities shall identify and prioritize open space sites in their Open Space and Recreation Plans that are socially, recreationally, and ecologically important to EJ populations within the community. The Environmental Justice (EJ) populations are determined by identifying all Census 2010 block groups that meet the State's criteria.

Littleton has not been identified as a community with Environmental Justice populations. However, the neighboring communities of Acton and Ayer have EJ populations. The EJ population in Acton on the eastern boundary of Littleton is based on the presence of a minority population, where, according to Massachusetts EEA criteria for 2010, 25% of more of residents identify as a race other than white. This area is shown on Map # 2, in the turquoise color.

Ayer, Littleton's neighbor to the northwest has designated minority EJ population, as well as an EJ population meting the Income criterion, which is that 25% or more of households earn 65% or less than the Massachusetts median household income. Neither of these populations, however, is immediately adjacent to the Littleton boundary, and therefore is not shown on the EJ map.



## Plan Overview

The 2016 Plan carefully builds on earlier plans. There is a presumption that the goals and objectives that have guided the Town for some years should continue to be supported, except where there are specific grounds for change. One change identified in the public process is the strong demand for the existing recreation resources, especially playing fields, and the need to prioritize meeting these needs in the latest Plan. The particulars of how to achieve goals can be expected to change, but implementation should be expected to be on-going and to move relatively slowly.

The emphasis of efforts continues to be on how to achieve results given limited financial resources, and without use of aggressive regulation, with a spirit of "partnering" between public and private interests as well as across communities.

These goals and objectives will not only meet the wishes of Town residents to preserve our open space resources and rural character, but further meet the environmental needs of the regional community by protecting our ground water and surface water resources, as well as our farm lands. The Town is strategically positioning itself for future key land purchases.

The challenge to protect our rural character is growing. The Town's pace of development is accelerating and fiscal constraints are greater than ever. Land resources are steadily being removed from availability, and prices continue to escalate. Still, community expectations for recreational opportunities and the protection of natural and cultural resources are higher than ever. In that context, sound planning is critical.

The balance of this Plan expands on these concepts, ideas and strategies to create a comprehensive, actionable Plan that will guide the Town over the next seven years. It begins with an overview of the community setting: the region, Town history, and recent growth (Section 3). This is followed by an inventory of the Town's environmental resources (Section 4), and a detailed inventory of all land parcels that are used for conservation or recreation purposes (Section 5). Section 6 provides an overview of the community's goals, and Section 7 outlines the needs for resource protection, recreation facilities, and open space and conservation management. Section 8 details more specific objectives to advance the goals, and Section 9 lays out a seven-year action plan to meet the goals. Section 10 includes public comments followed by references in Section 11.

### Section 3 Community Setting

#### A. Regional Context (see Map 1)

The Town of Littleton is situated at the junction of State Route 2, a radial corridor running west from Boston, and Interstate Route 495, a circumferential corridor 25 miles from Boston. The Town is 16.5 sq. miles and enjoys excellent access from Boston and surrounding employment centers along Route 495. Littleton is bordered by Acton, Westford, Groton, Ayer, Harvard and Boxborough.

Littleton is located within Massachusetts' Northeast Region (as categorized in the Massachusetts Statewide Comprehensive Outdoor Recreation Plan, later referred to as "SCORP"), or the Massachusetts Central Upland (as categorized in the Massachusetts Department of Environmental Management Landscape Inventory, later referred to as "Landscape Inventory"). The eastern portion of the Town drains to the Concord River, (it goes to Assabet first, then Concord) making it part of the Sudbury, Assabet, Concord River (or SuAsCo) basin. That portion of the Town's drainage largely reaches the Assabet via the Nashoba and Fort Pond Brooks. In 1995, the Metropolitan Area Planning Council (MAPC) completed a study for the basin, The SuAsCo River Basin Water Supply Protection Plan. As is often the case, water supplies cross municipal boundaries and therefore the study urges cooperation and coordinated efforts to protect water resources in the basin. In Littleton's case, 18% of the recharge area for its local water supply within the basin is located in adjoining towns. The western portion of the Town drains to the Merrimack River via Beaver and Stony Brooks.

The regional landscape was long dominated by agriculture, but in recent decades this has become one of Massachusetts' prime growth regions for both housing and business; reflecting generally developable land, and location within easy reach of both Merrimack Valley and Route 128 labor pools for businesses and job opportunities for residents. Additionally, the recent trends in industrial and commercial development along the I-495 Corridor have provided more opportunities for jobs and a convenient commute for those residents preferring to reside in suburban communities as opposed to an urban setting.

Water resources vitally link communities in this region. Nagog Pond is divided between Littleton and Acton, and it supplies drinking water to the Town of Concord. The aquifer associated with the Beaver Brook is important for water supply not only in Littleton but down-gradient in Westford and Chelmsford, where it serves as a source for public water supply. Its integrity is vulnerable to mishaps in Boxborough, as well as locally. Similarly, Spectacle Pond is shared with Ayer, and Forge Pond is shared with Westford. Fortunately, there is a history of cooperation and caring for these shared resources. Protection of these water resources through cooperation and regional planning will help to ensure viable drinking water, recreational and aesthetic resources for Littleton now and into the future. In fact, this is the number one Open Space and Recreation goal for the community.

Open space and recreational resources amongst the communities are shared and linked through trail systems, wildlife corridors and youth recreational programs. Caught between a quiet, more rural past and a potential future as bustling suburbs, Littleton and surrounding towns have the opportunity to preserve their regional small-town character through the acquisition of open space, smart growth and natural resource protection. In 2007 and 2013, Littleton took an important step in ensuring the character of the community by passing the Community Preservation Act, which provides a funding mechanism for the Town to acquire open space to further the goals and objectives of this Plan.

## **Regional Planning Context**

### **MAPC**

Littleton has been included in the Boston-centered Metropolitan Area Planning Council (MAPC), but at its extreme northwestern edge. It is one of 101 municipalities included in this regional planning agency (RPA), which is one of 13 RPAs in Massachusetts. See [MAPC](#). Created by an act of the Legislature in 1963, MAPC serves as a forum for communities to address issues of regional importance. Council membership consists of community representatives, gubernatorial appointees and city and state agencies that collaborate in the development of comprehensive plans and recommendations in areas of population and employment, transportation, economic development, regional growth and the environment. The Council's professional planners, GIS specialists, demographers and others also provide technical assistance to its member communities.

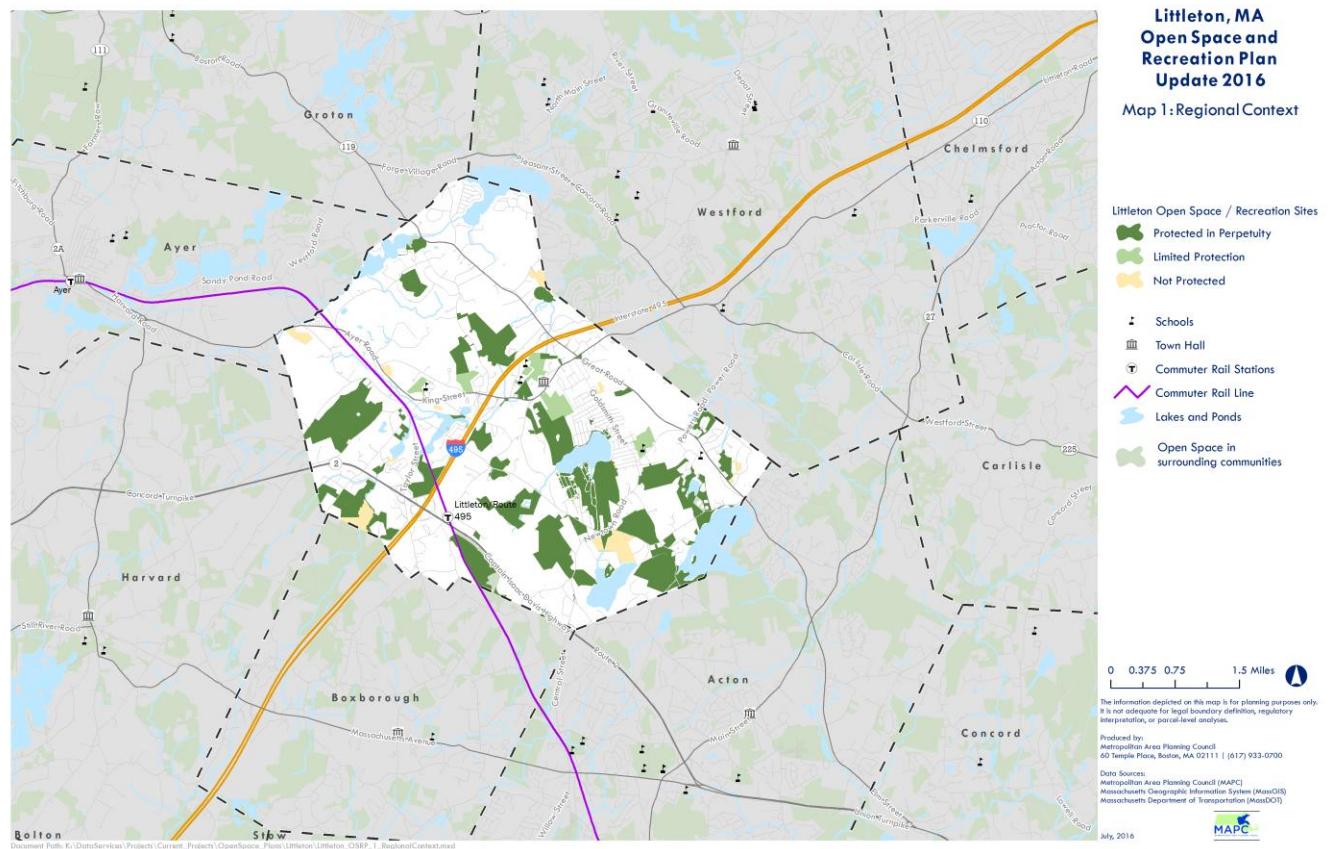
### **MAGIC Subregion**

Littleton is part of the "Minuteman Advisory Group on Interlocal Coordination" (MAGIC), a subregion of MAPC stretching from Carlisle to Marlborough and Lincoln to Bolton. MAGIC provides the opportunity for communities within the subregion to meet and discuss issues of common interest. Over the years, MAGIC has focused on many open space issues providing a forum for discussion of shared open space concerns, such as developing the Minuteman Area Comprehensive Agricultural Planning Program in 2014. The Program is [here](#).

### **MetroFuture**

*MetroFuture Making a Greater Boston Region* is the official regional plan for Greater Boston, adopted consistent with the requirements of Massachusetts General Law. The plan includes goals and objectives as well as thirteen detailed implementation strategies for accomplishing these goals. The plan's relevant goals include the protection of 139,000 acres of developable land identified as a high priority by the State Land Conservation Plan. The plan also envisions at least 1,800 acres of new urban parks and community gardens. The implementation strategies can be viewed by visiting the web site at <http://www.metrofuture.org/>.

**Map # 1 Regional Context NOTE: Larger maps are in Appendix D.**



## **B. History of the Community**

Littleton is a town with a full and rich history. Originally named Nashoba, this area was first settled by Indians with their leader Tahattawan. As evidenced by our current street names, areas of Town and water body names, Littleton has been greatly influenced by that first Indian culture.

The Indians lived peacefully in Nashoba for years with its many ponds, lakes, streams, wooded hillsides and fertile valleys. Reverend John Eliot translated the Bible into the Indian's language and converted Tahattawan and his people. In 1654, Nashoba was established as the sixth "praying Indian" town by the Massachusetts General Court and ruled by Tahattawan and his successors.

The King Philip Wars of 1675-76 put the Indians in an impossible position. The English did not trust them because they were Indians and other Indians did not trust them because they lived like white men. The fifty or sixty Nashobas were placed in protective custody in Concord and later sent to Deer Island.

The Town was touched by the Indian War when Mary Shepherd (a development of that name still exists) was taken prisoner and her family killed by hostile Indians. The Nashobas did not fare well on Deer Island. All lost their possessions, many died, and few ever returned here. The last of the tribe was Sarah "Indian" Doublet. When the Town was incorporated for the English in 1714, a 500-acre reservation at Fort Pond was set aside as the Indian's New Town. This property was sold in 1734 by the aged and blind Doublet to pay for her maintenance. Today that section of Town is still referred to as Newtown, and in remembrance of the Nashoba's last survivor, an area of conservation land near Nagog Pond is the Sarah Doublet Forest and there is a Sarah Doublet and Sarah Indian Way in her memory.

Over the years, settlers established a town typical of the time. There was a center of Town around a green common with streets branching off of it. Around the Common were typical businesses and shops helpful to the traveler - an inn, blacksmith shop, a store for provisions, etc. Further away from the Town center was where the farmers homesteaded.

Some of these farms are still in existence today, although fewer in number and smaller in size. Besides dairy and beef farms, the agricultural community boasted a bountiful crop of orchard and garden goods, primarily apples and potatoes. The railroad came to Town in 1840. Shortly thereafter, Littleton was the site of choice for a relocating federal quarantine station for cattle. This was located on Harwood Avenue backing up to the train tracks. As years went on and the Town grew, Great Road became a state highway, sidewalks were laid, the first automobile came to Littleton and Town water and electricity were introduced.

Although primarily still an agricultural community, some industrial uses were established. There were still several icehouses, a barrel making plant and a suspender factory, which was very influential as a World War II supplier of webbing materials.

In looking at a historical map of Littleton, it is easy to see how development spread from the Common outward. Much of the industry was around the Town center, followed by houses and outward to the farmland. It was a desirable community because of its open spaces for gardens, parks, playgrounds, and available space for building. This statement was true in 1946 and still is today, even as we see more and more development in town.

The dense clustering of homes on relatively small lots around the lake areas (predominantly Long Lake and Forge Pond) were originally camp developments built as summer homes for Bostonians in the 1930's. Littleton was desirable and attractive at the time because of its low tax rate, proximity by rail and auto to Boston and Fort Devens, and natural beauty. These same community characteristics apply today.

Then, as now, Littleton was struggling with growing pains. Many in the Town would prefer that it stay low density residential rather than continue to increase commercial land uses. However, growth of any kind has its price whether it be adequate schools, medical facilities and other Town services such as police, fire and ambulance; and business can help support these costs.

Now, as in the 1950's, Littleton has some choices to make. We are still a community with lots of history, beautiful vistas, proximity to Boston, and accessibility to major highways. How will we monitor and regulate future development and plan accordingly to save some of our natural resources and wildlife from here on in?

## C. Population Characteristics

### Population and Housing

Data on demographic factors such as population and housing can be used to determine a community's open space and recreation needs.

As Table 3-1 below shows, the Town of Littleton experienced a burst of growth in the 1970's that slowed in the 1980's. Since 1990, the town's population has increased significantly, adding almost 2,000 people. Between 2000 and 2010, Littleton grew 9%, a rate higher than the state as a whole (3.1%). MAPC projects this trend to continue in Littleton through 2030, with an estimated addition of 1,059 residents.

**Table 3-1: Littleton Total Population, 1970 – 2010 and Projections 2020-2030**

	Total	% Change from Previous Census
1970	6,380	n/a
1980	6,970	9.2%
1990	7,051	1.2%
2000	8,184	16.1%
2010	8,924	9.0%
2020 Projected	9,365	4.9%
2030 Projected	9,983	6.6%

Source: U.S. Census Bureau, MAPC Analysis

Table 3-2 below compares Littleton's growth from 1990-2010 with that of other MAGIC subregion communities. Growth in Littleton outpaced all but two MAGIC towns.

**Table 3-2: MAGIC Population Change, 1990-2010**

	1990	2000	2010	% Population Change, 2000-2010
Acton	17,872	20,331	21,924	7.8%
Bedford	12,996	12,595	13,320	5.8%
Bolton	3,134	4,148	4,897	18.1%
Boxborough	3,343	4,868	4,996	2.6%
Carlisle	4,333	4,717	4,852	2.9%
Concord	17,076	16,993	17,668	4.0%
Hudson	17,233	18,113	19,063	5.2%
Lexington	28,974	30,355	31,394	3.4%
Lincoln	7,666	8,056	6,362	-21.0%
<b>Littleton</b>	<b>7,051</b>	<b>8,184</b>	<b>8,924</b>	<b>9.0%</b>
Maynard	10,325	10,433	10,106	-3.1%
Stow	5,328	5,902	6,590	11.7%
Sudbury	14,358	16,841	17,659	4.9%

Source: U.S. Census Bureau

Corresponding with the increase in population, the Census reports a 13.8% increase in total housing units constructed between 2000 – 2010.

Total population changes are noteworthy, but perhaps more important in identifying a community's open space and recreation needs are the changes and trends in the age distribution of the residents. Table 3.3 depicts various age cohorts from the 2000 and 2010 U.S. Census and the percent change in those age ranges.

**Table 3-3: Littleton Age Distribution, 2000-2010**

	2000	2010	% Change 2000-2010
Under 5	671	516	-23.1%
5-19	1,672	2,006	20.0%
20-34	1,213	901	-25.7%
35-64	3,663	4,256	16.2%
65+	965	1,245	29.0%

Source: U.S. Census Bureau

Littleton's age profile has shifted significantly since 2000. Like other suburban communities in the State, the Town's population is aging. Littleton's median age in 2010 is 44.1, compared to 37.9 in 2000. Since 2000, about a quarter of young adults between ages 20 and 34 have migrated out of the town while those born before 1945 or earlier have increased by nearly 30%.

Another statistic to help examine open space and recreation needs is the composition of households in Littleton, shown in Table 3.4, below. Littleton is a community predominantly made up of families. Seventy- three percent of all households are families. Thirty-seven percent include children under 18 years of age. The rest, 27 % are non-family households. Just as the percentage of older residents has increased in Littleton, note that 10% of non-family households are comprised of persons aged 65 and over, living singly.

**Table 3-4: Households by Family Type, 2010**

	Total	%
<b>Total Households</b>	<b>3,297</b>	
Family Households	2,409	73.1%
With children under 18	1,231	37.3%
Single Households with person age 65 and over	328	10.0%
Non-Family Households	888	26.9%

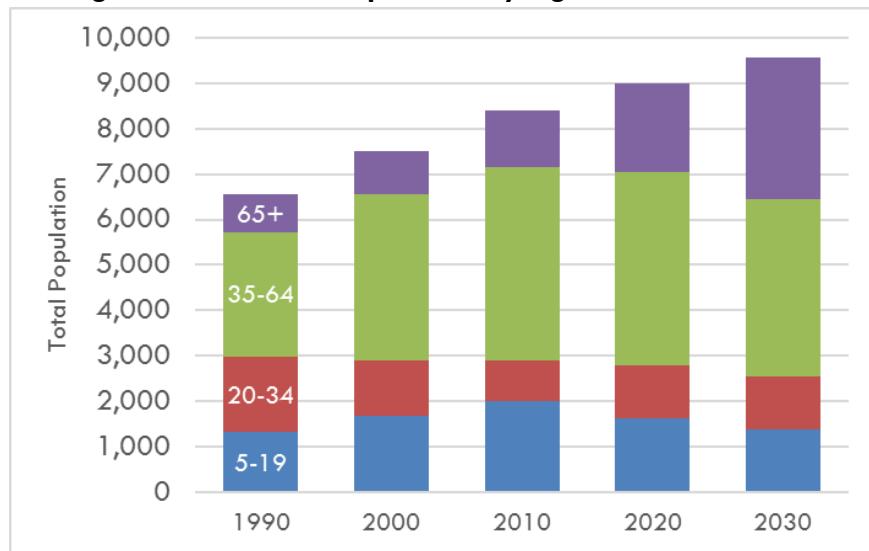
Source: U.S. Census Bureau

As the population has grown, Littleton has done a good job increasing the amount of protected open space utilizing land purchases and Conservation Restrictions, and through the efforts of the Littleton Conservation Trust. There is more to be done on the recreation side, however, as the community noted at both the June, 2015 and March 2016 Public Forums that the number and condition of existing playing fields are inadequate to meet the demands. (See Appendix B, Public Comments).

### Projections

Recreation opportunities will continue to be in demand as evidenced by the population and household projections done by MAPC. Figure 3.1 charts the population by age ranges from 1990 to 2030.

**Figure 3-1: Littleton Population by Age 1990 - 2030**



Source: U. S. Census Bureau, MAPC Analysis

The number of children under age 5 and youth aged 5 to 19 will decrease slightly, but not significantly enough to lessen the demand for active recreation opportunities. The increase in adults 65 and over will also require some planning, particularly for passive recreation such as walking trails.

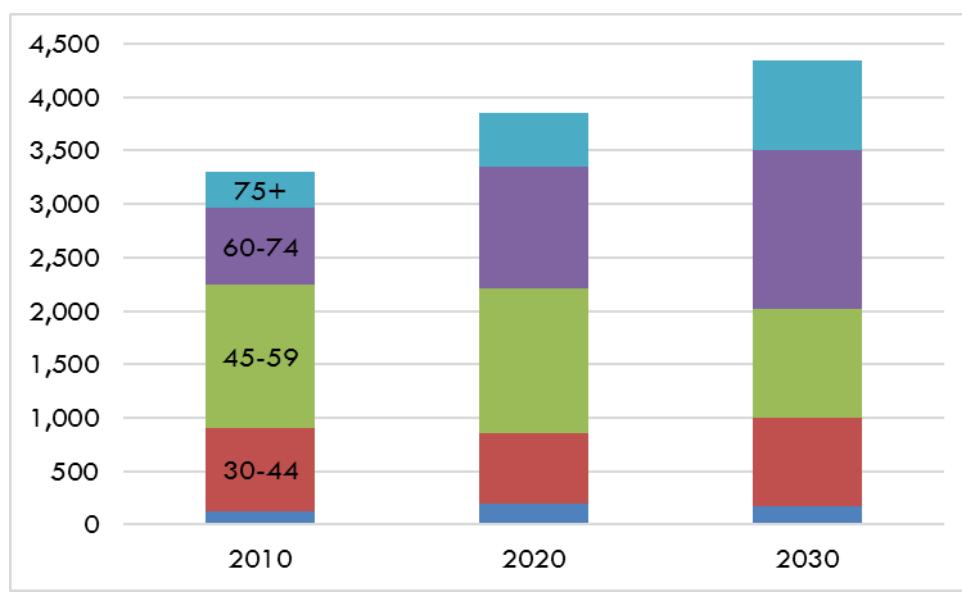
The population projections are mirrored in the household projections, shown below. These projections provide more details on older households. Figure 3-2 charts the information in Table 3-5.

**Table 3-5: Households by Age of Householder**

Age of householder	2010	2020	2030
15-29	129	200	167
30-44	777	653	829
45-59	1,339	1,361	1,025
60-74	718	1,134	1,486
75+	334	504	833

Source: U.S. Census Bureau, MAPC Analysis

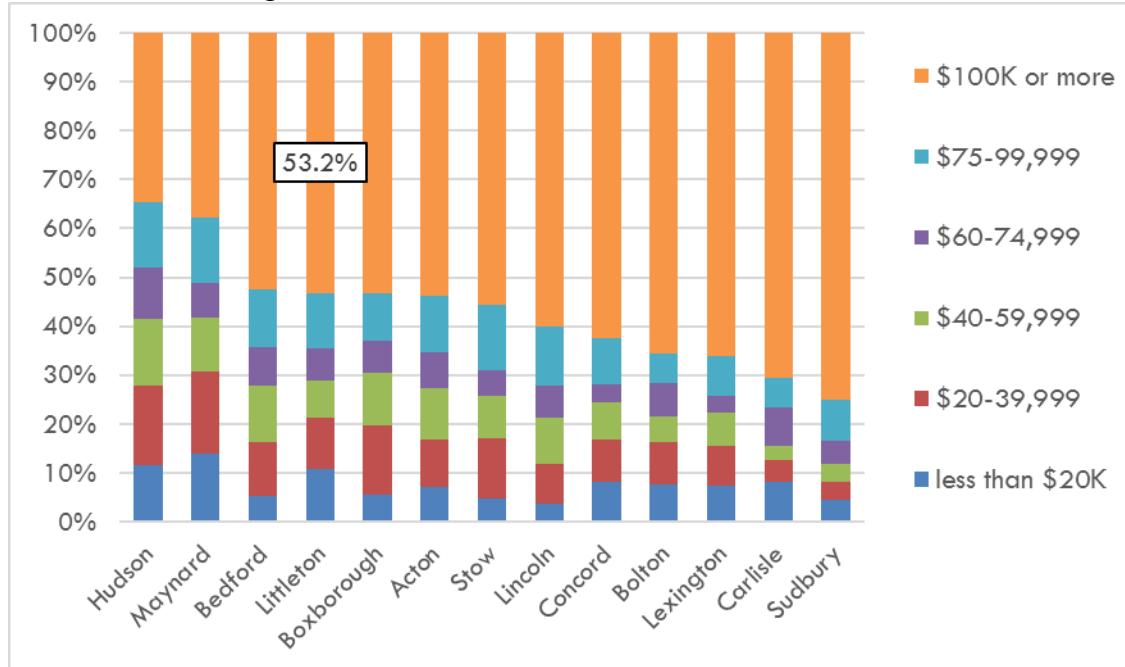
**Figure 3-2: Littleton Households by Age of Householder**



## Income and Employment

More than half of Littleton's households have an annual income of \$100,000 or more. This percentage is similar to that of Acton, Bedford and Boxborough. The Town's median household income is \$107,518, compared to a State median of \$ 66,866.\*

**Figure 3-3: MAGIC Household Income Distribution**



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

Littleton and many of its adjacent communities have experienced significant job growth since the 2008 recession. The increase in employment opportunities in the region may be a factor in the population and housing growth in the area since 2000, and the projections for 2020-30.

**Table 3-6: Number of Jobs by Place of Employment, Littleton and Adjacent Communities**

	2008	2009	2010	2011	2012	2013	2014	% Change, 2008-2014
Acton	10,095	9,451	9,286	9,489	9,837	9,728	10,008	-0.9%
Ayer	7,713	8,366	8,512	7,628	7,160	4,002	4,511	-41.5%
Boxborough	3,966	3,970	3,841	4,160	4,248	4,068	4,097	3.3%
Groton	3,253	3,266	3,183	3,083	3,212	3,369	3,447	6.0%
Harvard	1,048	909	892	912	906	4,161	4,031	284.6%
<b>Littleton</b>	<b>5,223</b>	<b>4,703</b>	<b>4,803</b>	<b>4,634</b>	<b>6,447</b>	<b>6,864</b>	<b>6,966</b>	<b>33.4%</b>
Westford	11,681	11,617	11,714	11,997	12,501	12,435	12,419	6.3%

Source: MA Department of Labor and Workforce Development, ES-202

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

### **Patterns and Trends**

Littleton originated as a rural, agrarian community, as did many other Massachusetts towns. Until the 1940's, agriculture and large land holdings were the predominant land uses. Residential uses continue to characterize the Town, as a result of which a strong suburban component supplements the Town's rural flavor. Transportation developments in the late half of this century have strengthened the influence of metropolitan areas on the Town. Growth of the commercial and industrial sectors has been very strong in the past three decades, and development pressure is expected to continue.

The western half of the community, west of Route 495, appears largely rural in nature, though the populated Forge Pond neighborhood lies in the Town's northwest corner, along with the industrial zone along Route 110 leading into Ayer. The major concentrations of residences are located east of Route 495 in the areas of Littleton Common and Long Lake. Many residences both in the Long Lake and Forge Pond areas were originally built on small lots as summer cottages. A growing number of subdivision developments are found off main roads. Commercial and industrial activities follow the Town's major transportation routes and nodes. Commercial enterprises are found along the length of Routes 2A and 119. Industrial activities tend to cluster at the three Route 495 interchanges, along with the previously mentioned area along Route 110.

The Town is fortunate in that much of its acreage remains undeveloped open space land. However, given past trends and current projections, the Town will continue to grow. Population forecasts and buildup analyses predict a substantial increase in the residential population. Similarly, pressures for commercial and industrial development are expected to continue given the growth trends along the I-495 corridor. Most of this growth will be accommodated at the expense of the Town's open space lands, particularly those former agricultural lands located along major travel roads. Therefore, it is critical that areas most important for their resource, agricultural, or scenic qualities be identified and plans for their protection developed, as is being done.

The Town can readily accommodate new development. However, that development must be targeted to suitable areas. Soil capability, proximity to sensitive environmental features, accessibility, and compatibility with existing development are only a few of the factors which should be considered. Industrial Districts as currently mapped are located in some environmentally sensitive areas such as Well #2 near the Westford Town Line and adjacent to Fort Pond. Residentially zoned lands currently occupied by agricultural uses along Route 119 / Route 2A may face conversion to residential subdivisions as development pressures grow. Open space planning does not preclude growth; rather it serves to guide future development.

Despite continued growth in its total population, Littleton remains one of the least dense among MAGIC communities. At 510 persons per square mile, the town is at the low end of the range.

**Table 3-7: MAGIC Population Density 2010**

	Population Density (persons per sq mi), 2010
Acton	1,080
Bedford	963
Bolton	244
Boxborough	480
Carlisle	313
Concord	684
Hudson	1,607
Lexington	1,887
Lincoln	425
<b>Littleton</b>	<b>510</b>
Maynard	1,883
Stow	366
Sudbury	715

Since the early 20<sup>th</sup> century, the areas surrounding Long Lake and the Common have maintained the highest population density in Town. Today, with increased development, this part of town continues to grow with new residential structures being built. The location is popular among new home buyers due to its close proximity to the lake, as well as routes 110, 119, and 495. There are other subdivisions, however that are gradually dispersing the population.

### Future Growth

In 2001, a Buildout Analysis was issued by the Executive Office of Environmental Affairs (EOEA) revealing demographic projections for Littleton at complete buildout. A buildout analysis is a tool to help communities understand the potential impacts of future growth that might occur given the amount of developable land remaining consistent with how the land is zoned. A summary is below:

Population	
2001	8,714
At Full Buildout	15,433
Percentage	43.5
Households	
2001	3,233
At Full Buildout	5,909
Percentage	45.3

These numbers are based on currently available land for development under existing zoning regulations within Littleton. While these are projects, and actual build-out is subject to changes in zoning and environmental regulations, given the rate of growth in Littleton, these numbers for future growth should cause concern amongst residents and hopefully spark interest in preserving remaining open space lands.

### **Implications**

The increasing population growth in Littleton will continue to add pressure to the housing market, traffic and other municipal services. The potential conversion of currently undeveloped lands within Town to meet the demand of such population increases has had and will continue to have significant impacts on open space, recreational needs and water supply. Given the rate of population growth, the increasing sizes of homes and loss of agricultural and forested land, the necessity for open space land acquisition continues to require attention from both residents and political officials. Allowing planned, harmonious growth with the open space and recreation interests of the community is in the best interest of the Town from both an environmental and fiscal standpoint.

### **Infrastructure**

#### **Transportation**

Changes in transportation technology and transit networks have been a major influence on the development of the Town. The community is well-served by highway systems; access to Boston and points west, as well as to points north and south along Route 495 is very good.

I-495 has served as a channel for industrial and residential growth in many of the communities it serves. Littleton is no exception. Industrial growth in the area of the highway's three Littleton interchanges has been substantial.

Route 2 runs the length of the Town and serves as the major link between the Metropolitan Boston area and the western portion of the state. Route 2A/119 is the local north-south route. Much of the Town's commercial activity is found along this major local road.

A rail line crosses the Town's western corner. Freight service is offered between Boston and Western Massachusetts. The Massachusetts Bay Transit Authority Commuter Rail also operates on this rail line. Passenger service originates in Boston, and from Littleton continues through Ayer and Shirley, terminating in Fitchburg - approximately 30 miles west. This existing rail station is currently well utilized. Expansion of the parking facilities to accommodate larger volumes of passengers has been considered for years, and a privately-owned, paid lot opened in 2006.

#### **Water Supply and Sewage Disposal**

Groundwater is the sole source of all drinking water in the Town. The Littleton Water Department services approximately 80% of the population. Residents in outlying areas, primarily those

residing near the Boxborough town line, and some in the Forge Pond and Oak Hill areas, continue to rely on private wells for drinking water.

The Town maintains three wells, which tap groundwater supplies. Two of these wells lie in the Beaver Brook Watershed; the third lies just southeast of Spectacle Pond. Three storage facilities hold public water: One on Oak Hill, one on Newtown Hill, and the third on Cedar Hill off Cedar Road.

Well #1, and wells #3 and #4, actually a wellfield, are north and east of Routes 2 and 495 off Whitcomb Ave. Well #1 and the wellfield, #3 and #4, have a combined drinking water capacity of 1.4 million gallons per day. Well #2 borders Beaver Brook at the Westford town line and has a capacity of 432,000 gallons per day. Well #5 at Spectacle Pond is the Town's newest and largest well. Located in the Bennett's Brook watershed, installation of this well has allowed greater flexibility in the use and maintenance of the Town's water system. Further, well #5 ensures that in the event wells #1 through #4 are lost due to a chemical spill in the Beaver Brook watershed, the Town will not be without a drinking water supply. An iron and manganese removal facility is operating at the Spectacle Pond well site. Well #5 has a drinking water capacity of 1.5 million gallons per day. Four additional well sites have been identified, and their development is being explored. Currently, the Water Department is exploring the possibility of bedrock wells in the Nagog Pond area of town, near the Acton town border. Bedrock wells would allow another source of potable drinking water in the region, outside of the sand and gravel aquifers and away from possible impacts from major highways. The Water Department has acquired an easement for three sites on the Island near Cobb Pond and has purchased two building sites of approximately 5 acres and gifted the land to the Conservation Commission. Preliminary assessments have found good water yield in the three bedrock wells and the Department plans to undertake a full investigation of the potential of this site to be a municipal groundwater source, composed of three bedrock wells, during the summer of 2009.

No public sewerage is available in the Town, though development of such a system is the exploration phase for the Long Lake area. Residential, commercial, and industrial users rely on on-site systems for sewage disposal. Old and insufficient systems on small lots with poor soils for sewage disposal have resulted in a number of septic system failures in the Town. Mill and Long Ponds are also listed on the Massachusetts DEP 303d list as water bodies not in compliance with water quality standards due to high nutrient levels, low dissolved oxygen and high numbers of noxious aquatic plants. Septic system failures have also occurred in the Littleton Common, Forge Pond, and Mill Road areas causing water quality problems in those areas as well.

Cognizant of the Town's dependence on groundwater and the sensitivity of this resource to contamination, Littleton has developed a comprehensive aquifer watershed management program. Industrial growth over the seventies had begun to tax water supply and raise concerns over the potential for groundwater contamination. Thus, in 1979, the Town initiated a study of its groundwater resources. Extensive hydrological studies were done and a program for water resource protection proposed. As a result of this study, a number of regulatory, programmatic, and management techniques have been instituted including: an Aquifer and Water Resource

Zoning Bylaw amendment; a Toxic and Hazardous Materials Bylaw; development of a third Town well; a groundwater monitoring and industry inspection program; and an innovative water supply management program designed to minimize risks to water supply. The Town maintains many observation wells to monitor groundwater quality. During winter de-icing operations, the Town utilizes one of the lowest salt/sand ratios in the state. Finally, through the joint efforts of the Fire, Police, Highway, and Water Departments, an Emergency Response Contingency Plan has been developed. In the event of accident or spill involving hazardous materials on any of the Town's major transit routes, critical Town officials will be notified, immediate spill contamination actions taken, and public water supply wells shut down if necessary.

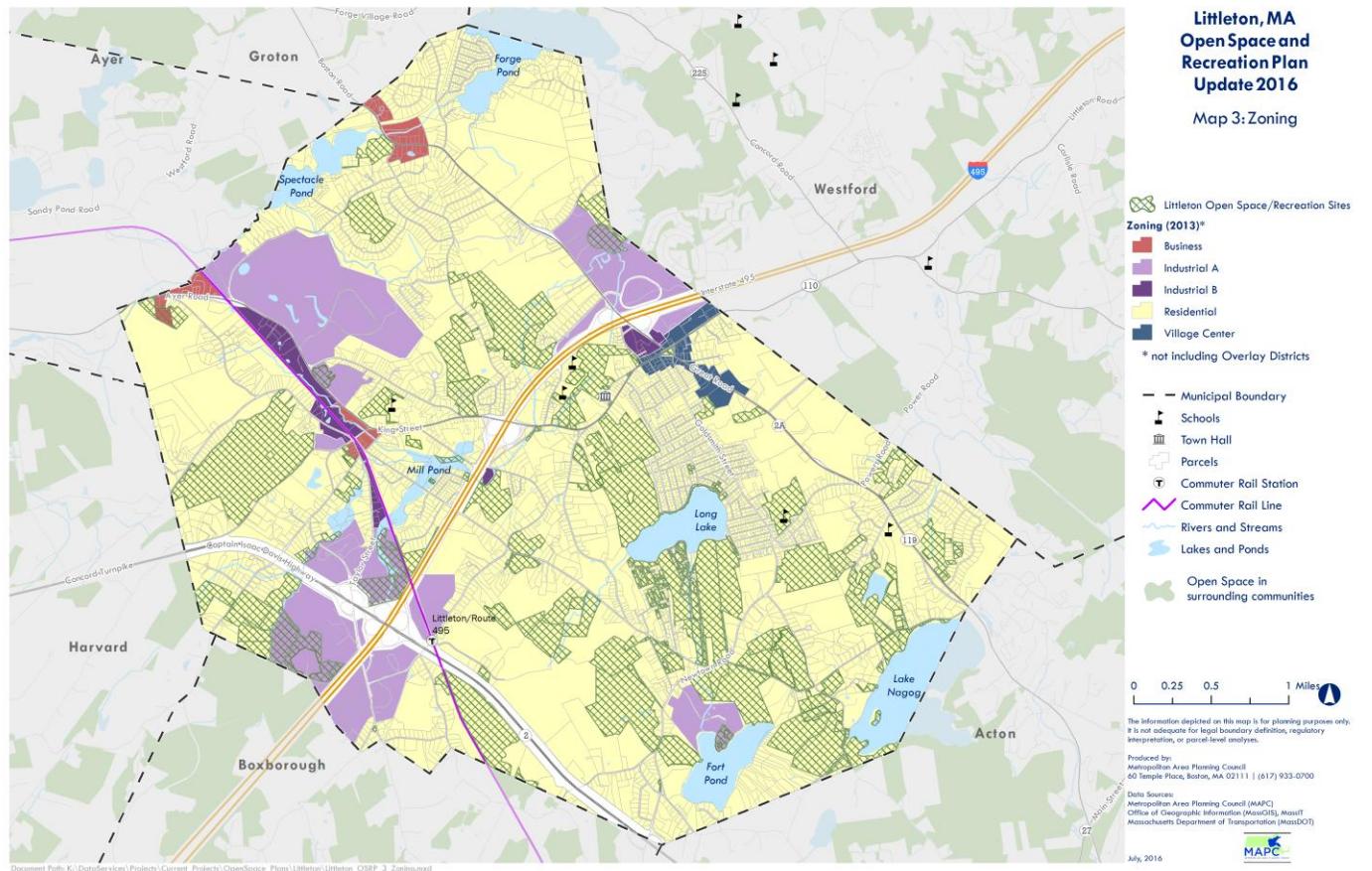
The Town updated the Aquifer and Water Resources District Bylaw (the zoning overlay districts that protect groundwater supplies) in May 2004, adopting a new Aquifer and Water Resource District map based on new modeling of the extent of the areas contributing to the Town water supplies. In May 2007 Littleton Town Meeting approved a DEP requested update to the Aquifer and Water Resource District Bylaw to better align with State goals. May 2007 Town Meeting also implemented a zoning bylaw change requiring Low Impact Development design and associated Best Management Practices guidelines for stormwater be incorporated for all new residential and commercial development. Finally, in light of continued growth and development in the Town, acquisition of areas identified as potential sources of public water supply is necessary so that future residents are ensured an adequate supply of quality drinking water.

### **Long-Term Development Patterns (See Map 3 Zoning)**

Littleton's current zoning by-law (Town Code, Chapter 173, Zoning) identifies four zoning districts – residential, business, and industrial A & B. A detailed schedule of permitted and prohibited uses within each district can be found under Article V, §173-26. Business and industrial zones are concentrated in three areas: (1) Littleton Common and junction of Routes 2A/119 and Rte 110, (2) I-495 and Rte2 interchange, and (3) western end of Rte 110/Ayer Rd. The remainder of the town is zoned residential, which includes single family homes and "lodging" houses, with two family homes and residential social service facilities allowed by special permit of the Board of Appeals. Residential subdivision projects of 10 acres or more are subject to the "open space development" rules under Article XIX, which are designed to "encourage the preservation of significant parcels of agricultural land and open space." In addition to the zoning districts, Article XIV also identifies an Aquifer and Water Resource District overlay which places additional restrictions on allowed uses within these sensitive resource areas.

Table 3-3 lists all of the approved subdivisions from 1997 to 2014, as well as the number of lots that have been built within each. Note the amount of land that remains as open space, in some cases due to zoning techniques that promote clustering of houses and preservation of open space.

### Map 3 Zoning



**Table 3.3 Littleton Subdivisions 1997-2014**

Name	New Lots	Total Acreage (Acres)	# of Lots Built as of January 2016	Year Approved	Open Space Area (Acres)
Farmers Row Estates/Fletcher	9	72.7	0	2014	56.4
Bennett Orchard Sanderson	32	45.2	0	2014	22.6
The Orchards McIntosh Lane	21	32.5	9	2013	14
Chestnut Farm	12	60	6	2009	N/A
Lexington Place	1	1	1	2008	0.1
Village at Newtown Hill	4	18.26	0	2008	8.98
Reed Meadow Over-55 Housing	9+2	7.5	11	2007 2012	3.8
Hobby Horse Sleigh Ride Lane	9	10.8	9	2006	N/A
Shelburne Village Over-55 Housing	9	9.1	9	2006	5.3
Meadow View Bumblebee Lane	6	21.6	6	2002	9.4
Cobb Development*	17	118.6	4*	2001	98
West View Jillian Lane	5	7	5	2001	N/A
Mary Shepherd Estates	17	36.5	17	2000	20.3
Wilson Estates Nancy's Way	5	7.7	5	2000	N/A
Richard Way	7	8.9	7	2000	3.3
Delaney Drive	14	31.4	14	1999	21.6
Laury Lane	4	7	4	1999	N/A
Highland Farms	5	8.6	5	1999	N/A
Center Village	3	5	3	1999	N/A
Jane's Drive	5	8.64	5	1998	N/A
Partridge Lane	5	7.83	5	1998	N/A
Russell Court	2	10	2	1997	7
Apple D'Or	70	Not Available	Not Available	1997/8	
<b>TOTAL</b>	<b>203</b>	<b>525.8</b>	<b>1123</b>		<b>270.8</b>

\* Cobb Development: of 17 the approved lots, 4 are developed, 6 are preserved for Open Space, 3 are used for agricultural purposes and 4 are available for development.

In addition to residential development, there have also been a number of significant commercial development projects, particularly along Great Road and Taylor Street.

Population and development trends suggest Littleton will continue to grow steadily in the coming decades, and is perhaps poised to experience accelerated growth as surrounding communities such as Groton, Harvard, Boxborough, and Acton have higher taxes and property values making them less “affordable”. As shown in the previous table, build-out projections for Littleton indicate roughly a doubling of both population and number of households.

These trends and projects suggest the Rte 2A/119 and Rte 2A/110 corridors will continue to experience significant residential and commercial development pressure in the coming years. Such expansion is consistent with observations of development that has occurred along Rte 2A in neighboring communities to the east. Without intentional efforts to conserve open space and manage development along these corridors, they will likely be developed in a similar manner. In addition to the major corridors, large tracts of open land are also likely to experience development pressure for conversion to residential subdivisions. Large subdivisions and “sprawling” development along travel corridors would result in “fragmentation” of the landscape from an ecological standpoint, with significant negative impacts for certain wildlife, such as the stated listed Blandings turtle. As the landscape becomes more “fragmented”, wildlife will lose, and become disconnected from, important habitat necessary for survival. As a whole, the long-term development patterns suggest a significant threat to open space, or the “green infrastructure”, which supports wildlife, outdoor recreation, agriculture, and the scenic qualities that are all currently part of the defining characteristics of the community.

## Section 4 Environmental Inventory and Analysis

### A. Geology, Soils and Topography

#### Geology and Soils (see Map 4)

The Town of Littleton's geology is characterized by relatively shallow bedrock covered by unconsolidated glacial deposits. The bedrock, which outcrops at numerous locations, consists primarily of northeast-southwest trending schist and gneiss formations. Schist and gneiss are hard metamorphic rocks estimated to be up to 900 million years old. The observed bedding or attitude of the arranged component minerals is very high angle and is typically highly weathered at the surface. Schist is composed of extremely fine-grained minerals (quartz and mica) arranged in roughly parallel bedding planes. Gneiss is composed of fine to coarse-grained quartz, mica, feldspar and iron bearing minerals also arranged in roughly parallel bedding planes. Often schist and gneiss is intruded by masses of hard coarse-grained granite pegmatite that is more resistant to weathering than the surrounding schist and gneiss. Pegmatite consists of very large crystals of quartz, mica and feldspar. A variety of pegmatite, called quartz monzonite, is actively quarried in Town by Middlesex Materials Corp. for crushed stone for the construction industry. Several historic abandoned limestone (actually marble) quarries exist within the Town. Nearly all of the marble was quarried out completely at least 100 years ago. The northeast-southwest trending Oak Hill (highest hill in town) is on the edge of the Clinton-Newbury Fault which experiences relatively frequent earthquake activity.

Almost the entire bedrock surface is overlain by very thin to relatively thick glacial deposits comprised of unconsolidated stratified and un-stratified silt, sand, gravel and boulders that remained following continental glaciation which retreated from this area about 15,000 years ago. The advancing ice mass left a very dense non-stratified layer of silt, sand, gravel and boulders. This material is called "till" but is often referred to as "hardpan". When the glacier retreated, the meltwater streams and ponds left many irregular features that we see today. These features cover the till, and are typically stratified deposits of sand and gravel, generally referred to as "glacial outwash". In more recent years (up to about 10,000 years), decaying vegetation has formed thick to thin soft black deposits of "organic silt", "muck" and "peat" in swamps, marshes and ponds.

Unique geologic features in Littleton are identified on Table 4-1. Below.

**Table 4-1 UNIQUE GEOLOGIC FEATURES**

Site	Location	Significance	Owner
Oak Hill	Oak Hill Road	Major fault zone Highest hill in town View from top	Town of Littleton
Tophet Chasm	Harvard Road	Glacial lake outlet; 80' steep chasm; 10' to 40' muck in bottom; Subject of early geologic studies	Town of Littleton

Site	Location	Significance	Owner
Old Limestone Quarries	Whitcomb Ave.	Small historic quarry sites	Smith, under Conservation Restriction
Old Limestone Quarry	#6 Old Orchard Lane	Medium size historic quarry site	#6 Orchard Lane Owner with historic preservation restriction
Granite Quarry	Nashoba Road, Sarah Doublet Forest	Small historic granite quarry being restored	Littleton Conservation Trust
Beaver Brook and Marshland	Boxborough to Westford,	Largest and longest brook in town  Overlies important aquifer Extensive associated marshland	Numerous land owners including Town, Water Dept. and Littleton Conservation Trust
Sanderson Esker	Oak Hill Road	Distinctive unusual glacial esker and pond	Private Ownership
Glacial Lake Outlet	Harwood Ave., Long Lake Park	Glacial lake outlet (brook) and steep valley wall to Long Lake	Town of Littleton

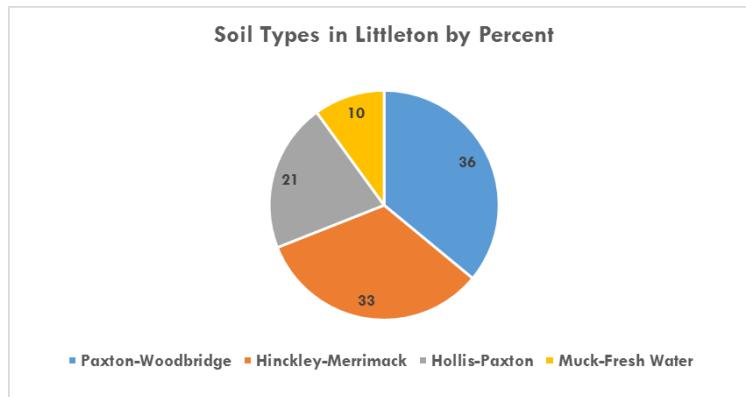
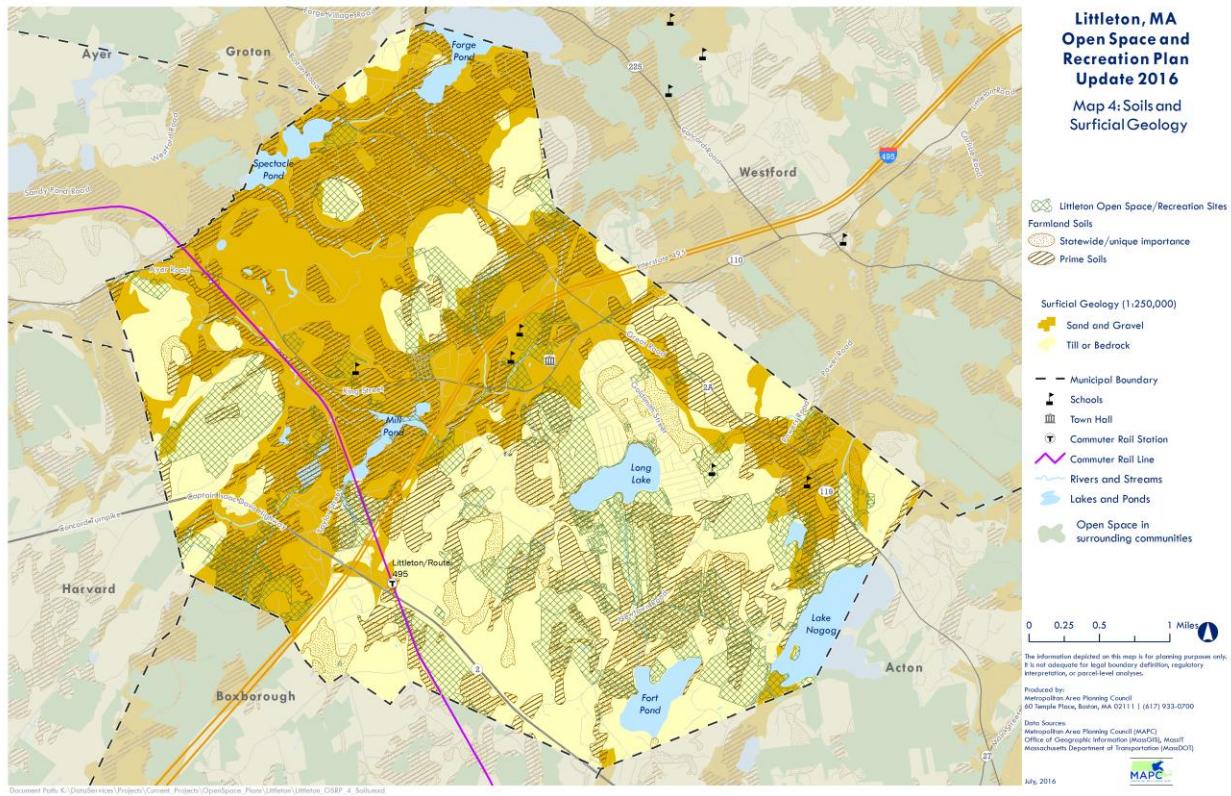
## Soils

The National Resource Conservation Service (or NRCS) has identified four general classes of soil in the Town. The Paxton-Woodbridge association occupies about 36% of the Town. These are well-drained stony soils underlain with hardpan - generally unfavorable for high-density development. The Hinckley-Merrimack-Gravel Pit-Made Land association makes up 33% of the Town. These are sandy, gravelly soils found in areas that have been altered by removal or addition of fill. Most of these soils are found west of Route 495 and generally present few development limitations.

The Hollis-Paxton association comprises 21% of the Town. Rock outcrops and bedrock close to the surface limit development on these soils. Finally, the Muck-Fresh Water association occurs in the Town's wetland areas. Occupying 10% of the Town, development on such soils is severely constrained due to its wetness.

About one-quarter of the Town's land area is classified by the NRCS as either "Prime" or "Locally Important" for agriculture, based on soils analysis reflecting topography, drainage, depth to bedrock, and other considerations. Interestingly, neither development nor still-active agriculture are strongly correlated with the pattern of that land resource, with substantial amounts of agricultural activity on lands not so-identified, and substantial amounts of urban development on land which was so identified.

## Map # 4 Soils



## Topography

The Town of Littleton's topography may be characterized by a large number of small irregular shaped hills with relatively small spaces of nearly level land near the town center. Within the hills are numerous small to large ponds, lakes, marshes, swamps and brooks. The topography of the town has been disrupted by Interstate Route I-495, Route 2A-119, 110, 2, and an active commuter railroad. The town's topography is influenced also by being in a transitional position between the lowlands extending eastward to Boston and the highlands extending northerly into New Hampshire.

The elevation of the town varies from a low of 210 feet above sea level at Spectacle Pond and a high of 504 feet at the top of Oak Hill (a difference of about 300 feet). Both locations are in the northern section of town. Oak Hill is part of a 219 parcel protected in perpetuity by the Town of Littleton Conservation Commission.

There are five named hills (Oak, Proctor, Long Pond Brothers, Newtown and Nashoba) and eight unnamed hills for a total of 13 hills. There are seven named small to large ponds and lakes (Nagog, Fort, Long, Cobb, Mill, Spectacle and Forge) and numerous smaller unnamed vernal ponds. One major brook (Beaver) flows eastward from Boxborough through Mill Pond, then to Forge Pond in Westford. Forge Pond then empties into Stony Brook to end up in the Merrimack River. Reedy Meadow Brook runs along Rt. 2A into Mill Pond, and Bennett's Brook into Spectacle Pond. Numerous smaller unnamed permanent and intermittent brooks occur in nearly all areas in town.

#### **B. Landscape Character (See Map 5 Unique Features on Page 14)**

Littleton covers about 16.5 square miles of gently rolling hills in northwest Middlesex County. The elevation above sea level ranges between 200 and 500 feet with the higher areas located mostly toward the northern end of town. The Landscape Inventory places Littleton in the “Upper Nashua Valley–Shrewsbury Ridge Unit” and identifies both “Distinctive” and “Noteworthy” areas with regard to landscape character. Open space workshops and community surveys also identified significant landscapes that are important to protect including:

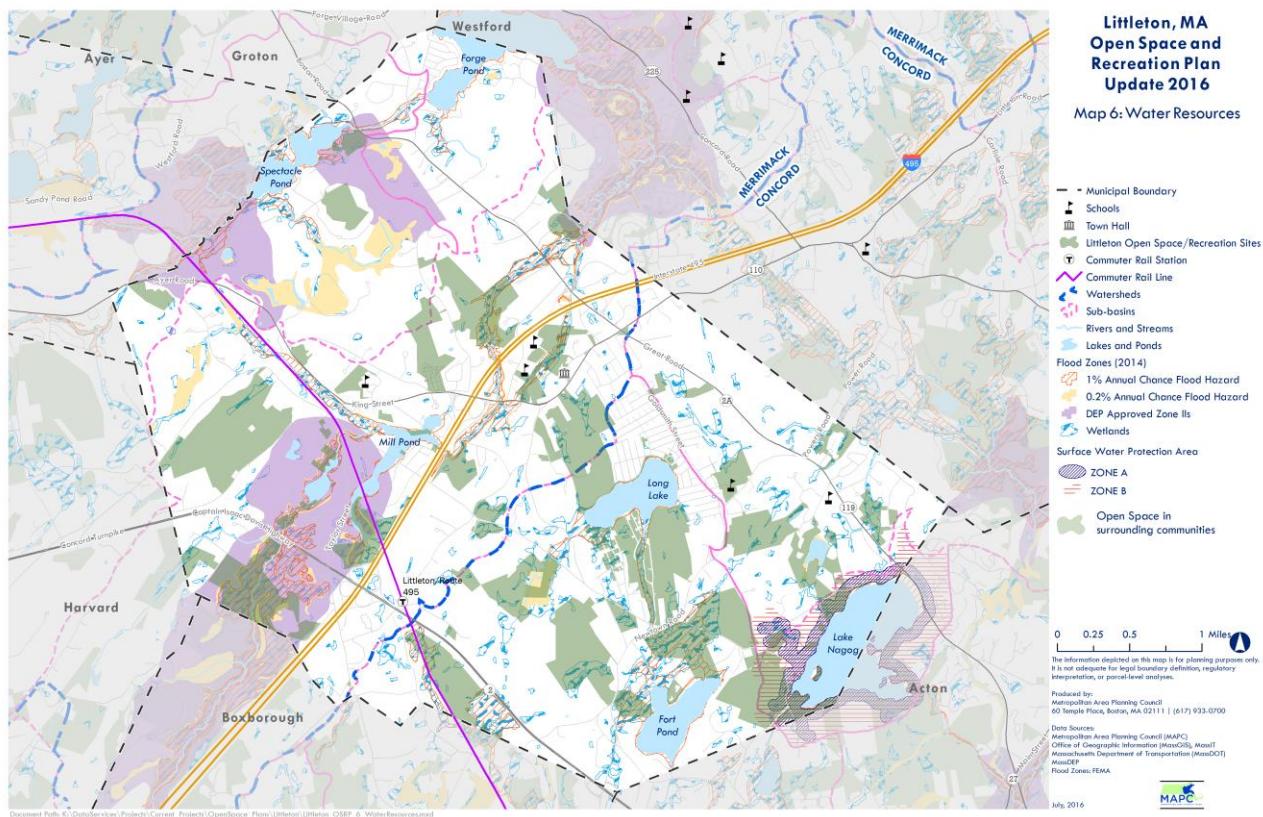
- The Long Lake area affords scenic views and comprises part of an Acton to Groton greenbelt. It also contains important cultural resources, including stone walls, some of which mark routes of historic importance.
- Property north of Long Pond off Wilderness Road, important as a wildlife corridor, and again affording scenic views and protection for Long Pond. The New England Forestry Foundation’s property on top of Wilderness Hill offers views to the west of Mt Watatic and Mt Monadnock in New Hampshire.
- Were the property surrounding Beaver Brook protected, it would provide recreational opportunities and would serve to protect Beaver Brook wetlands, which are important for flood control, habitat protection, and water resource integrity. This area is also important as a wildlife corridor and includes several certified vernal pools.
- Farmland along Routes 2A and 119, which is designated as “prime” by the state of Massachusetts, plus other open fields that tie into existing open space.
- The large parcel of land that is bordered by Route 2, Harwood Avenue, Foster Street, and Boxborough Road. This land has the potential of being the largest contiguous open space parcel in the town, but it is currently under increased pressure for development, and is likely to be developed within the next year or two.

Selected items are depicted on the Unique Features Map included within this Plan.

### C. Water Resources (See Map 6)

Water and wetlands occupy over 1,000 acres of the Town's area. Two major watersheds drain the Town. The SuAsCo basin drains Littleton's southern regions. Initially, runoff is received by the Assabet River. In Concord, the Assabet then joins the Sudbury River to form the Concord River. In the northern half of the Town, Beaver Brook and Bennett's Brook drain into Stony Brook and then ultimately into the Merrimack River. An overall analysis of Littleton's water resources would state that Littleton is rich with water resources for water supply, recreational and wildlife habitat purposes.

#### Map 6 Water Resources



#### Surface Water

Nagog Pond is the Town's largest body of water. Located on the Acton/Littleton town line, 140 of its 284 acres lie within Littleton. The Pond serves as public water supply for the Town of Concord. Other significant surface water bodies include Forge Pond, Fort and Mill Ponds, Spectacle Pond, and Long Lake.

There is extensive developed recreational access to Long Lake on lands variously managed by the Parks and Recreation Commission, the New England Forestry Foundation, and the Conservation

Commission. There are protected lands on several of the major water bodies, generally affording at least limited use for passive recreation where that is compatible with water supply interests. Generally, land surrounding a pond or lake would optimally have restrictions regarding possible water pollutants, such as fertilizers.

### **Wetlands**

Wetlands border many of these ponds. Fort Pond and Long Lake have large areas of associated wetlands. Littleton's most valuable wetland lies adjacent to Beaver Brook. Flowing west-to-east, Beaver Brook wetlands form an extensive central greenbelt spanning the width of the Town. Three of the community's four public wells are located adjacent to this marshy area and other potential well sites within it are being investigated. Again, protection of the surrounding areas would be optimal for town waters.

### **Aquifer Recharge Areas**

Each of the Town's four (4) drinking water wells have been located on Town maps with their respective Zones I, II and III delineated. The Town has purchased open space around the Whitcomb Avenue wells and the Spectacle Pond well for aquifer protection. A significant parcel upgradient of the Route 119 well is owned by the local gun club and is undeveloped.

Development within the aquifer recharge areas would threaten local groundwater supplies with nitrate loading and reduced recharge. Groundwater impacts stemming from commercial development is assessed via the local groundwater-monitoring program.

The Town of Littleton also purchased a water easement around Cobb Pond for potential future use as a well site. Zoning for water protection is also in place, with a special permit required for most projects within the Aquifer Protection Overlay zone.

### **D. Vegetation**

Littleton's past has heavily influenced the vegetative features of the area. Open space created by farming was predominant throughout the 1800's and early 1900's. As farmland reverted to woodland, early succession growth gave way to the red oak/white pine forests we have in the area today. Other trees such as red and sugar maple, black and yellow birch, shagbark and pignut hickory, American beech, ash and eastern hemlock can be found throughout the town's woodlands. A large stand of eastern hemlock can be found on the northwestern side of Oak Hill around Tophet Chasm.

Besides woodland, wetlands and agricultural open space also make up a large area of the town. The Town's varied terrain of woodland, open field and wetland provide habitat to a rich diversity of plant and animal species. Shade trees have played an important role in the community. At the turn of the century many American elms lined Littleton's roadways. Today the town has an

active shade tree committee that works closely with the town's tree warden on annual tree plantings.

The Executive Office of Environmental Affairs (EOEA) report "The State of Our Environment" (April 2000) states that "the two biggest threats to biodiversity in Massachusetts are the destruction and fragmentation of wildlife habitats and the introduction of invasive non-native species". Non-native species that are invasive have been transported out of the ecosystem in which they evolved and put in an environment without the population controls native to their original ecosystem. Land disturbance is a common cause for the proliferation of invasive plants. Invasive plants have a tendency to out-compete native plants because of the lack of population controls. Since the writing of the 2003 Plan, fragmentation and invasive species threats, continue to be a major issue in Littleton. The Littleton Conservation Trust (LCT) is closely monitoring invasive species threats on both town owned and LCT properties. Invasive species that have been problematic include autumn olive, burning bush, buckthorn, bittersweet, phragmites, purple loosestrife, knotweed, multiflora rose, and water chestnut to name a few. Working with the LCT and volunteers, the town must find ways to survey, catalogue and address problem invasive species threats. LCT has been especially helpful to the town in surveying and containing a patch of mile-a-minute vines that was identified in town. The Trust has coordinated organized picks of this site on a continuous basis during each growing season, in an effort to eradicate this volatile species.

Hemlock, a distinctive tree that can be found throughout Massachusetts is in danger of being decimated by the woolly adelgid, an insect native to Asia. This insect has spread throughout the East Coast up into Massachusetts over the past decade feeding on and killing large stands of hemlock. Since the writing of the 2009 Open Space Plan, the woolly adelgid has been identified in Littleton, and its effects on our hemlocks have become quite evident.

Another invasive species that is common to Littleton is purple loosestrife, a prolific wetland plant with striking purple flowers. While attractive, this invasive plant displaces native food sources for waterfowl and threatens breeding waterfowl habitat.

In 2008, a new threat emerged in the state of Massachusetts and has needed to be monitored carefully. The Asian Longhorned Beetle has been identified in the Worcester area. This non-native beetle infests maple trees and other hardwoods and beetle larvae girdle tree stems and branches eventually leading to the death of the tree. The only effective means of eradication are to quarantine an area and then remove infested trees and destroy them by chipping or burning.

The Town and Conservation Trust also remain vigilant of the notorious Emerald Ash Borer. This beetle has decimated ash trees in other regions, and remains a concern to our community, although there have been no confirmed sightings of the species in town.

Littleton presently does not have an active forest management program on its town owned lands but has approved environmentally sound forest management on existing Conservation Restrictions that the town holds. The town may consider forest management planning in the future for its properties.

The Massachusetts Natural Heritage and Endangered Species Program has identified two rare plant species that have been observed in Littleton, the first is the Purple Milkweed and the second is the Green Rock Cress. The Purple Milkweed is listed as endangered.

#### **E. Fisheries and Wildlife**

The variety of habitats that can be found in the town help to promote the numerous wildlife species that live in the area. The biggest single threat to wildlife is the current rate of open space fragmentation due to development. Protecting open space areas is just part of the solution to diverse wildlife habitat. Wildlife corridors are also vital in order for animals to survive and reproduce. The disappearance of non-forested open space, such as open fields also contribute to the decrease in certain wildlife populations.

Several sites in Littleton have been identified and designated by the Natural Heritage and Endangered Species Program as priority habitats. There are twelve vernal pools that have been officially certified by the Natural Heritage and Endangered Species Program. Vernal pools are temporary bodies of water that provide critical habitat for many wildlife species, including spotted salamanders, wood frogs and four-toed salamanders, which are a state-listed species of special concern. Littleton has the potential to have many more pools certified. Vernal pools that are certified have the added protection of Massachusetts law, providing a 100-foot buffer and preventing alterations provided that the vernal pools fall within wetland resource areas as defined by the Massachusetts Wetlands Protection Act.

Littleton is home to many species of wildlife, including deer, coyote, beaver and turkey.

The Massachusetts Natural Heritage and Endangered Species Program has identified several priority habitats within the Town. The Marbled salamander, a threatened species in Massachusetts, has been identified in the town. The Blue-spotted salamander, the spotted turtle and the Mystic Valley amphipod have also been spotted in Littleton. All three are state listed species of special concern. Several other rare wetland species occur within Estimated/Priority habitats designated by the Natural Heritage Program that share boundaries with the town. Two rare wetland birds, the American Bittern and the Least Bittern, occur in these areas. The Blanding's turtle has also been documented in a Priority Habitat area that crosses into Littleton.

The Massachusetts Natural Heritage and Endangered Species Program's BioMap was produced to help guide the protection of the state's biodiversity through land conservation and acquisition of BioMap Core habitats. According to the MNHESP's BioMap, Littleton has several Biomap core areas, of which only a small fraction is protected open space.

**F. Scenic Resources and Unique Environments (See Map 5 Unique Features on Page 14)**

Littleton's scenic resources include the landscapes identified in the Landscape Inventory as cited above, but go beyond that. Some of these items are depicted on the Landscape Character Map. In Littleton's 2002 Master Plan, citizens have also cited:

- Agricultural lands, whose openness and activity are central to the rural character of the community and highly prized by many of the town's residents. These lands are threatened by the possibility of development.
- Scenic vistas across open water and fields. Littleton's topography isn't dramatic, so the benefit of those views depends upon unobscured roadside and middle ground areas. In this region, these open areas can quickly become overgrown unless agriculture or some similar activity maintains openness.
- Historic resources unique to Littleton. The town has a rich legacy of historic structures, roads, walls, and archaeological remains. While there are several concentrations of such resources, they are widely distributed across the community, in that way enriching many areas, but at risk of being overshadowed by newer and potentially unsympathetic development.

Archaeological and historical areas of special priority are:

- The recently restored stone chamber on Whitcomb Avenue near the Harvard town line. The chamber is located along the road side next to the barn. This site is classified as a Stone Chamber – not a root cellar. It is historically significant because it is 1 out of 150 such chambers in the area from New York to Maine.
- The glacial boulder located off Beaver Brook Road. This large boulder is now hidden within the woods (that used to be farm land). This rock is historically significant because it is related to the American Indian history of Littleton. It is mentioned on the original layout of Nashoba plantation in 1654. It was used as a marker along the property line. This boulder could be lost through land development for housing. (It could be blasted to get it out of the way.)
- The old stone bridge that crosses Beaver Brook.

The following sites are also of importance but they are already under some form of protection:

- The Gray Farm barn and shed on Hartwell Avenue, which was restored with the development of the houses on Gray Farm Road. These are not only historic structures, but they also provide a very scenic view, especially at sunset.
- The lime quarry off Whitcomb Avenue, across from Porter Road. This site is located on private land but is preserved via a conservation preservation easement.
- Tophet Chasm on Oak Hill as described in the "Geology, Soils, and Topography" section (4.1).
- The Westlawn cemetery is an important historical site. It contains important Revolutionary, Civil, and Spanish-American war burials. In addition, a certified vernal pool is located in

the back of the cemetery; this area was recently transferred to the Conservation Commission.

- The old burying ground on King Street is listed on the National Historic Register. The first burial in this cemetery is dated 1717.
- Also on the National Historic Register is the Houghton Memorial Building at the corner of Foster and Rogers Streets. It was built in 1895 by the children of William Houghton. It had been Houghton's wish to have a Town library building. For many years it housed the Reuben Hoar Library, and is now owned by the Town. It is rented by the Littleton Historical Society with a one-hundred-year lease.
- The Rose Wood House on Meeting House Road is on the National Historic Register. The home was built before 1780. The current owners, who bought the home in 1996, have restored the home to much of its original detail.
- Liberty Square at the intersection of Taylor and Hill Roads. There, the Littleton Minutemen held drills under the command of Lieutenant Aquilla Jewett. The Minutemen assembled there on the way to Concord in 1775. A monument was erected with the names of all of Littleton's Revolutionary War soldiers.
- The "Long Store", a structure previously located along Route 119, was recently deconstructed with much of its original materials being stored for future proposed reconstruction on separate site. This building, circa 1715, served as a significant place of commerce prior to and during the Revolutionary war.

The following are priority habitats because they are home to rare and endangered wildlife:

- Beaver Brook Marsh (also acts as a wildlife corridor)
- Spectacle Pond
- Cobb's Pond

Note: See the Fisheries and Wildlife section (Section 4.E) above for details on the rare and endangered species that live in these areas.

## **G. Environmental Challenges**

Littleton's major environmental problems stem from growth, despite the vigilance with which it is managed by the town. New development along the Route 2A corridor has contributed to land consumption, and displacement of habitats, and possible threats to groundwater quality.

### **Hazardous Waste Sites**

According to data maintained by the Massachusetts Department of Environmental Protection – Bureau of Waste Site Cleanup, there are a number of properties in Littleton that have been or are currently being remediated or have completed remediation.

### **Landfills**

Littleton has one landfill, now capped and serving as a transfer station for Littleton residents only; it is maintained and operated by the Littleton Highway Department. There is an active recycling

program in place, with separate dumpsters and trailers set up for plastics, wood, bulk items, bottles and propane tanks, among other items.

There is a monitoring well network encompassing the landfill footprint area, with one well located upgradient and four wells downgradient. These wells continue to be sampled annually by the Littleton Water Department; past sampling results have been favorable, identifying no negative impacts on local groundwater supplies.

As the landfill now serves as a transfer station, it is likely that future solid waste disposal needs will be met.

### **Erosion**

Widespread erosion problems are not apparent in Littleton. Localized areas of erosion have occurred associated with the development of land and the clearing of vegetation.

While Littleton does have larger areas of agricultural land, there are no known cases of large-scale erosion problems. However, there may be localized runoff of nitrates within the stormwater.

### **Sedimentation**

Sedimentation is evidenced locally after heavy rains at sites of residential development and commercial properties. Hay bales, waddles, and sediment fences, although required, are not always utilized or utilized optimally, resulting in localized sedimentation in streams and ponds. Stricter controls at the time permits are granted by the Town would be helpful, as would encouraging residents to report heavy sedimentation events as they occur.

### **Flood Hazard Areas**

Littleton has several areas designated as 100 or 500-year flood zones. These areas are concentrated along Beaver Brook and the larger surface water bodies in town. Developed areas along the shores of these water resources could be at risk of flooding during larger storm events. Many of these flood zones coincide with existing wetlands protected and regulated by the Wetlands Protection Act, thereby reducing development impact in these areas.

### **Development Impact**

The latest population boom has seen homes built on previously undeveloped land, most notably on lands formerly used for agricultural purposes. While some of these developments have preserved open space as part of their development process, overall the acreage lost to new subdivisions to accommodate Littleton's population growth is significant. A list of subdivisions approved since 1997 is noted in Table 3-3.

### **Climate Change**

While the full environmental impact of climate change cannot be predicted, it is likely to present a number of environmental challenges. Perhaps more accurately, climate change is likely to amplify

a number of environmental challenges previously mentioned. For example, there will likely be greater frequency and severity of storm events, such that major flooding associated with 50 or 100 year storm events will become more frequent. There is also the potential for an increase in seemingly unusual or unpredictable weather events. Invasive plant species will also likely become even more pervasive with shifting temperatures and weather conditions. The changing conditions will result in added stress to some native plant species, weakening them and making them even more susceptible to being outcompeted by invasive species. Further, poison ivy is also likely to become more pervasive, increasing the potential for inadvertent exposure by residents using public open space, and presenting a potential increased health risk. Other outdoor related health risks such as mosquito and tick borne illnesses such as Lyme disease are also likely to increase. There have been no cases of EEE or West Nile Virus.

### **Ground and Surface Water Pollution**

Surface water and groundwater are closely interrelated. The quality of the Town's groundwater has, in general, been very good. In the early 1980's Littleton adopted a Water Resource Overlay by-law and Groundwater Monitoring Program. This program, which focuses on land-use planning, groundwater monitoring, groundwater quality trend analysis, and early contamination detection, has served the Town well over the years. Littleton's drinking water quality continues to meet or exceed all State and Federal Safe Drinking Water Act Regulations and Guidelines; this program has been so successful, that it has become a national model for local Groundwater Protection.

Surface water quality has been somewhat variable. Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify those water bodies that are not expected to meet surface water quality standards after the implementation of technology-based controls and, as such, require the development of total maximum daily loads (TMDL). Long Lake and Mill Pond are included on the list, threatened by pollution from noxious aquatic plants, nutrients, and organic enrichment.

A study of surface water conditions was done for Long Pond in 1980 followed by studies for Forge Pond and Long Pond in 1990, Mill Pond in 1998 and Spectacle Pond in 2001. Funded jointly by the Town and State Programs, the studies suggested a number of remedial actions for the Town to take to improve water quality in the ponds.

A 319 Non-Point Source Grant and a DEM Demonstration and Remediation Grant were awarded to the Town of Littleton to install a series of BMP's (best management practices) throughout the Long Lake neighborhood; this approach was designed to control and remediate the stormwater runoff that drains the steep neighborhood streets and discharges directly into the Lake. Other segments of this remediation project included: a) the construction of a large engineered wetland cell, which will retain and attenuate stormwater runoff from a large segment of the neighborhood area, before being released to the Pond; b) the reconfiguration of the beach and boat ramp drainage systems, parking lots and accesses to receive and remediate stormwater runoff; c) the reconfiguration of the Lake Shore Drive drainage system; d) limited shoreline dredging; and e)

limited, select herbicidal application aimed at the proliferation of exotic, aquatic plants around the beach area and northern half of the pond.

The Town of Littleton also received a state grant to revitalize Long Lake; among the measures being implemented with the funding are bioretention cells and rain gardens in the neighborhoods surrounding the Lake. These kinds of stormwater management tools are becoming increasingly popular in communities looking to treat stormwater before it is discharged into storm drains and makes its way to our lakes and streams.

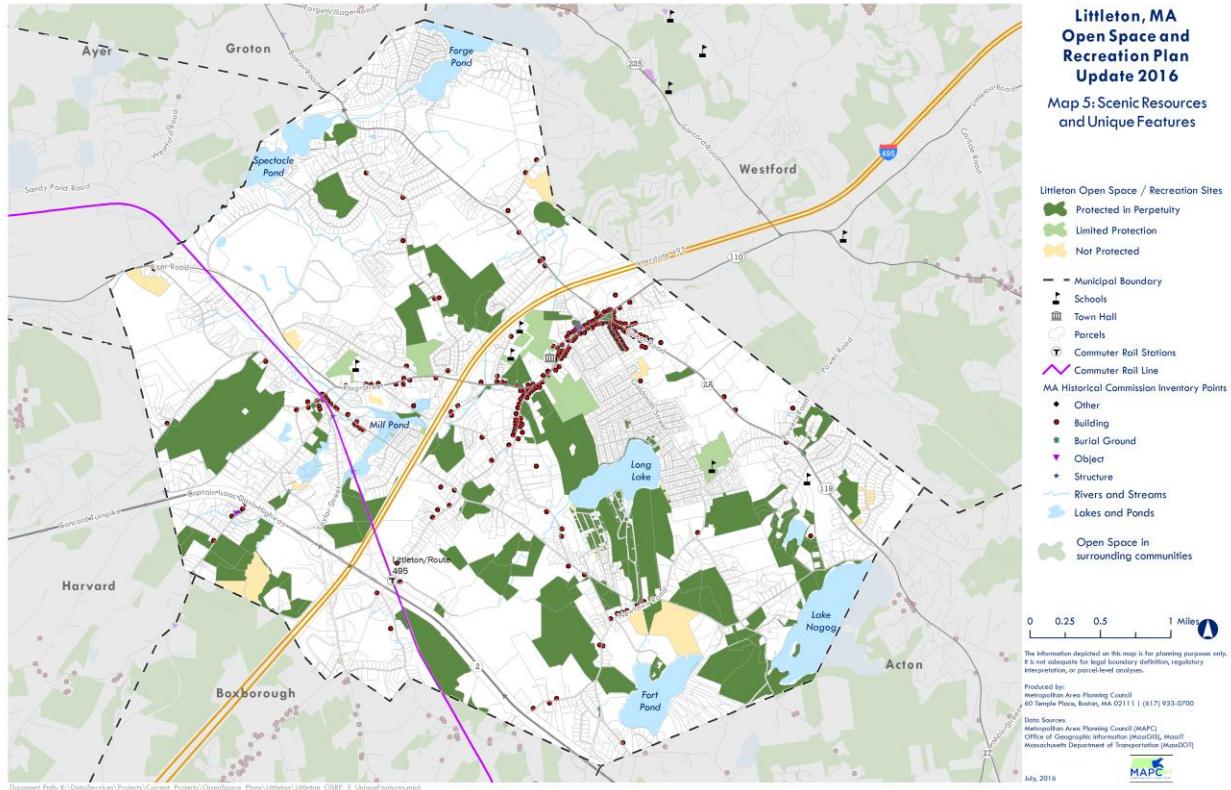
The rain gardens are designed to collect stormwater runoff from roofs and impervious surfaces and allow it to recharge into the ground. These gardens filter out the harmful nutrients that would typically be flushed directly into the Lake. Perennial plants are planted in the garden and thrive off the nutrients left behind. Rain gardens have an additional benefit in reducing the need for large amounts of turf; they create a pleasing landscape that does not require additional watering that a lawn would need.

Accelerated eutrophication in Mill Pond has been an ongoing problem for many years, resulting from the Pond's shallow depth and heavy nutrient loading from nearby farms, homes, and industrial discharges. The Pond's open water body has been compromised significantly by the proliferation of exotic, aquatic plants. Local industries have reduced the nutrient loads in their effluent, but dredging the pond bottom and remediating stormwater runoff is needed if substantial Pond improvements are to be made.

### **Environmental Equity**

While Littleton does not contain any “environmental justice” (EJ) areas as designated by the Massachusetts Executive Office of Energy and Environmental Affairs, there are EJ populations in the neighboring towns of Ayer and Acton (see Map 2) that could be served by outdoor recreation opportunities in Littleton. Further, environmental equity is recognized not only with regard to EJ populations. Equitable access and use for residents of all ages, socioeconomic backgrounds, ethnicities, and physical abilities is an important part of meeting the open space and recreation needs of the community. Currently, Littleton enjoys a relatively even geographic distribution of conservation lands and open space, with certain high use recreation and community event areas centrally located. For example, Long Lake, which supports the town beach, is centrally located within an area of town with the greatest population density. While this location has the advantage of serving a large number of residents in close proximity, it is important to ensure the outdoor and recreation opportunities at Long Lake continue to be a community-wide resource, and do not simply become a neighborhood amenity. Prouty Woods and Fay Park also support many community events and outdoor programs and are centrally located. Access and recreation facilities specifically designed to serve residents with physical disabilities, as well as young children and elderly adults, presents an ongoing challenge and opportunity for improvement. Finally, as changing demographics present more foreign born and/or non-English speaking residents, it may be necessary to give more consideration to language and communication of messages on open space and recreation related signage.

## Map 5 Unique Features See Appendix D for larger map



## Section 5 Inventory of Lands of Conservation and Recreation Interest (see Map 7A and 7)

### What is Open Space?

Before presenting an inventory of Conservation and Recreation lands in Littleton, it will be helpful to define what is meant by open space. The State's Open Space and Recreation Planner's Workbook provides the requirements for all community Open Space and Recreation Plans. The Workbook defines open space as "conservation land, forested land, recreation land, agricultural land, corridor parks and amenities such as small parks, green buffers along roadways or any open area that is owned by an agency or organization dedicated to conservation".

Community open space and recreation goals frequently involve acquisition, so the definition of open space should also include undeveloped land with conservation or recreation potential. Another component of open space relates to its status as protected or unprotected. Whether a parcel is protected in perpetuity or not is a critical distinction because unprotected parcels or parcels with limited protection may cease to provide conservation or recreation opportunities.

All of these elements are considered in this Section.

Open space preservation is necessary if Littleton is to maintain the rural character treasured by most residents. It is an important resource for local agriculture/food, outdoor recreation, and drinking water protection, as well as habitat for animals and plants. The goal of this section is to identify and map all protected and unprotected land of interest for conservation and recreation. This inventory has been developed by reviewing the files of lands held by the Town or State and lands with special tax-exempt or tax-reduced status. Each parcel has been categorized and numbered for reference on the accompanying tables at the end of this Section.

Below is a summary MAPC prepared based on the detailed parcel inventory

<b>Littleton Conservation and Recreation Facility Acreage</b>		
Town-Owned Active Recreation Facilities	19.21	0.94%
School-Based Recreation Facilities	87.04	4.27%
Town-Owned Passive Recreation Areas	0.37	0.02%
Town-Owned Conservation Land	909.83	44.64%
Other Littleton Town-Owned Land	143.32	7.03%
Publicly Owned Parcels for Water Resource Protection	118.2	5.80%
State-Owned Lands	79.67	3.91%
Land Trust and Other Non-Profit Open Space Lands	390.07	19.14%
Private Owners of Open Space/Recreation Sites	143.34	7.03%
Other	140.94	6.91%
Potential	6.25	0.31%
<b>Total</b>	<b>2038.24</b>	

**A. Private Parcels (See Map # 7As Chapter 61 Lands)**

Private open lands may provide either conservation or recreation opportunities. They vary in the level of protection from development. The designation of private parcels as Forest lands (Chapter 61), Farm lands (Chapter 61A), or Private Recreation lands (Chapter 61B) restricts the use of land in exchange for significant reduction in taxes. Land that is currently taxed under the exemptions allowed by M.G.L. Chapters 61, 61A, and 61B has very little protection. Currently, there are approximately 3,675 acres of land in Littleton that are classified as temporarily protected under this tax abatement program.

Properties under these designations allow the Town a right of first refusal to purchase the land should the property owner intend to take the land out of the restricted status. Land may be taken out of Chapter 61, 61A or 61B classification by notifying the Town and paying a withdrawal penalty tax. However, such land may not be sold for, or converted to, residential, commercial or industrial use while taxed under the classification without written notification to the municipality in which it is located. The Town has 120 days in which to exercise its right of first refusal option to purchase the land. Should this time period pass and/or the Town states in writing that it will not act on its option, the land may be developed for alternatives use(s), removing it from its "open" status as forest, farm or recreation land.

Town-owned "apparent" open space properties that are held in municipal status are also not permanently protected. These lands include the Town Forest on Harwood Avenue, (86 acres), Morgan Land on King Street, (50.8 acres) and parts of the Morrison Orchard. It would take a Town Meeting vote to remove these lands from their current condition.

There are additional lands of high value to the Town owned by individuals who have chosen not to put their land into one of the state programs, and which are not specifically identified here.

**Chapter 61 Forest Lands**

Forest Lands require a minimum of ten contiguous acres under a minimum 10-year management plan certified by a State Forester. Once the application has been received and approved, the classification statement functions as a lien upon the land for taxes levied under the provisions of M.G. L. Chapter 61. The landowner must re-file every ten years or the land shall be removed from classification by the Town Assessor. A tax payable on stumpage income for the two years prior to management and a much reduced property tax is payable once per year during the management period. Approximately 199 acres in Littleton are classified as Chapter 61 Forest Lands.

**Chapter 61A Farm Lands**

Farm land requires a minimum of five contiguous acres "actively devoted" to agricultural or horticultural use. These classifications include animals, fruits, vegetables, and forest products. To qualify as "actively devoted," a minimum of 500 dollars in gross sales income during the two

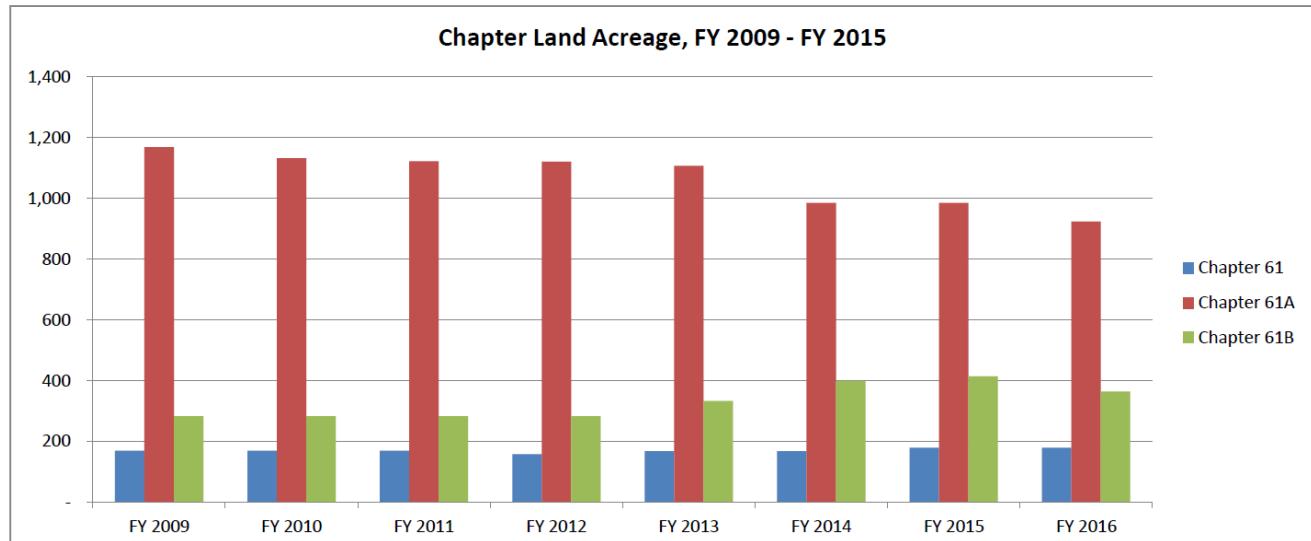
prior years is required. One must apply to the Town Board of Assessors for consideration, and the status must be renewed every year. A reduced property tax is applied if approved. There are approximately 1,447 acres of land classified as Chapter 61A Farm Lands in Littleton.

### Chapter 61B Private Recreation Lands

Private Recreation land must have a minimum of five acres that is left wild and/or maintained for wildlife habitat or used for recreational purposes either by the public or a private non-profit group. One must apply to the Town Board of Assessors for consideration and the status must be renewed every year. A reduced property tax is applied if the land is approved. There are approximately 355 acres of land in Littleton classified as Chapter 61B land.

Below is a summary of changes from Fiscal Year 09 to Fiscal Year 16 in the Chapter 61Lands. It was prepared by the Town of Littleton.

#### TOWN OF LITTLETON CHAPTER LAND SUMMARY, FY 2009-FY 2015



Acreage	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Estimate FY 2016
Chapter 61	168.55	168.55	168.55	157.12	167.35	167.35	178.55	178.55
Chapter 61A	1,168.41	1,131.79	1,121.79	1,120.79	1,107.68	985.10	985.10	923.00
Chapter 61B	282.70	282.70	282.70	282.70	332.67	399.42	413.81	364.81
All Chapter Land	1,619.66	1,583.04	1,573.04	1,560.61	1,607.70	1,551.87	1,577.46	1,466.36

<b>CHAPTER 61 (FORESTRY)</b>							change	% change	
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY09-FY15	FY09-FY15
Total Parcels	11	11	11	10	11	11	12		
Acres	168.55	168.55	168.55	157.12	167.35	167.35	178.55	10.00	5.9%
Assessed Value	\$18,204	\$11,293	\$8,091	\$5,501	\$7,196	\$8,200	\$8,513	-\$9,691	-53.2%
Full Value	\$1,100,066	\$1,041,043	\$1,041,043	\$985,093	\$1,012,938	\$1,012,938	\$7,070,489	\$5,970,422	542.7%

<b>CHAPTER 61A (AGRICULTURE/HORTICULTURE)</b>							change	% change	
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY09-FY15	FY09-FY15
Total Parcels	47	47	46	46	45	42	42		
Acres	1,168.41	1,131.79	1,121.79	1,120.79	1,107.68	985.10	985.10	(183.31)	-15.7%
Assessed Value	\$188,646	\$161,759	\$154,872	\$147,281	\$160,408	\$154,067	\$153,605	-\$35,041	-18.6%
Full Value	\$8,444,584	\$7,968,093	\$7,941,843	\$7,782,849	\$7,774,637	\$7,070,489	\$7,070,490	-\$1,374,094	-16.3%

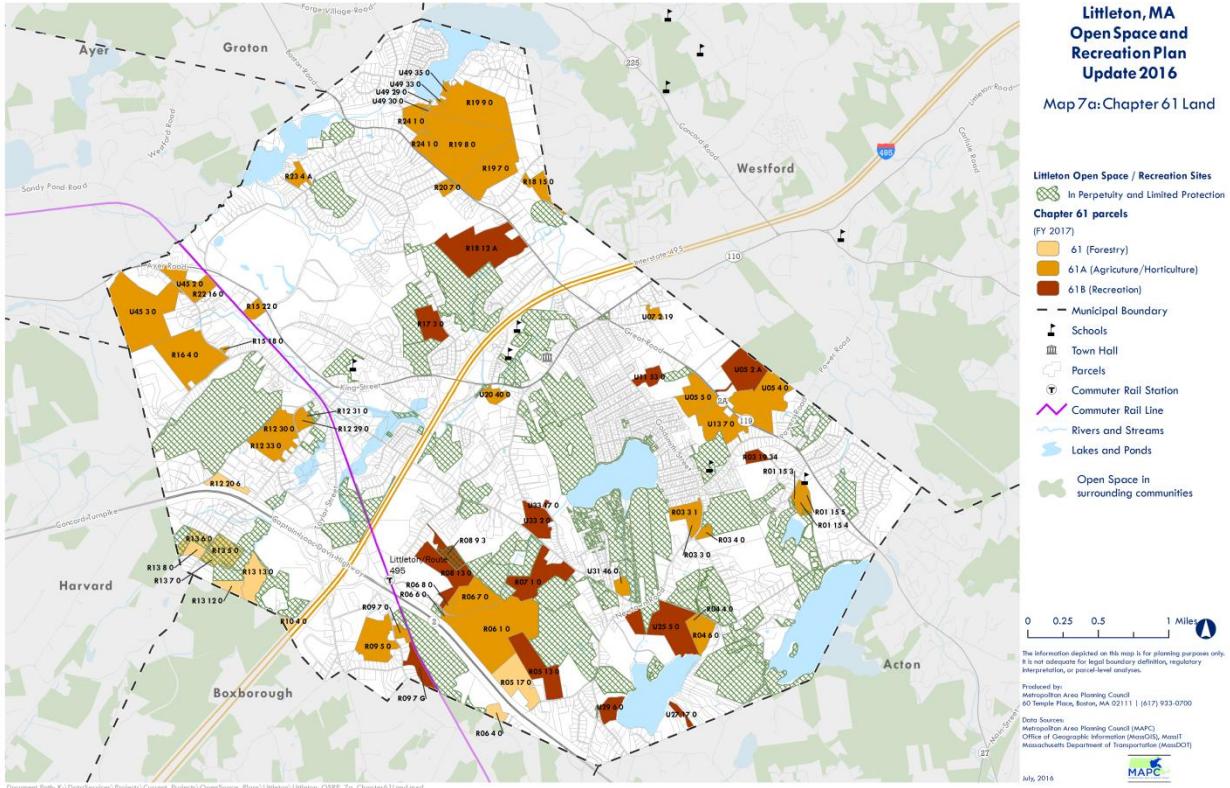
  

<b>CHAPTER 61B (RECREATION)</b>							change	% change	
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY09-FY15	FY09-FY15
Total Parcels	11	11	11	11	13	14	16		
Acres	282.70	282.70	282.70	282.70	332.67	399.42	413.81	131.11	46.4%
Assessed Value	\$386,457	\$374,592	\$374,592	\$374,592	\$517,964	\$636,088	\$672,630	\$286,173	74.1%
Full Value	\$1,545,825	\$1,498,363	\$1,498,363	\$1,498,364	\$2,071,853	\$2,544,351	\$2,690,503	\$1,144,678	74.0%

<b>ALL CHAPTER LAND (61, 61A, 61B)</b>							change	% change	
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY09-FY15	FY09-FY15
Total Parcels	69	69	68	67	69	67	70		
Acres	1,619.66	1,583.04	1,573.04	1,560.61	1,607.70	1,551.87	1,577.46	(42.20)	-2.6%
Assessed Value	\$593,307	\$547,644	\$537,555	\$527,374	\$685,568	\$798,355	\$834,748	\$241,441	40.7%
Full Value	\$11,090,476	\$10,507,498	\$10,481,248	\$10,266,306	\$10,859,428	\$10,627,778	\$16,831,482	\$5,741,006	51.8%

## The Map of Current Chapter 61 lands is below, Map # 7A



### **Other Privately-Owned Lands of Conservation or Recreation Interest**

The major parcels in this category include the Boston Minuteman Campground, 18 acres at 264 Ayer Road; the Harvard Sportsmen's Club parcels totaling 36 acres; Nashoba Day Camp at 65 acres and the Littleton Sportsmen's Club with almost 17 acres. Several of these require membership, and because they have no permanent level of protection, have the potential to be sold and developed at any time.

### **B. Public and Nonprofit Parcels**

Public and Nonprofit Parcels are those owned by either the Town, or another municipality (such as the watershed protection lands owned by the Town of Concord), or a nonprofit organization such as the Littleton Conservation Trust (LCT), or the New England Forestry Foundation (NEFF). For town lands, the property may be managed by the Water Department, the LCT, the School Department, the Conservation Commission (CC) or the Parks and Recreation Department. These lands include a variety of conservation lands, parks, wetland areas and others that serve the recreation and open space needs of the citizens of Littleton. The lands may have permanent protection for conservation or recreation, or they may not. Public ownership does not guarantee protection in perpetuity. The Littleton Conservation Trust's lands are permanently protected.

Beyond Town-owned lands, there are State-owned lands, conservation restrictions ("CRs") and agricultural preservation restrictions ("APRs"). Restricted lands are defined as less than fee interests in land that can keep land in an open state in perpetuity. For example, a property owner might be willing to sell or donate a conservation easement or restriction, which would prevent future development on the land. As is true in most places, this land is preserved but is generally not available for public access. The use of these easements and restrictions is helpful in maintaining community character without the actual purchase of the land by the Town or Conservation Trust.

#### **Permanently Protected Land** Permanently protected lands in Littleton include:

Total land area = 10,760 acres

<b>Manager</b>	<b>Acreage</b>	<b>% of Town</b>
Water Departments	118.2	1.1%
Conservation Commission	909.8	8.5
Littleton Conservation Trust and other Non-Profit Lands	390.0	3.6
State Owned Lands	79.7	.7
Other, including Conservation Restrictions	141.0	1.3
Littleton Recreation and Park Sites	19.6	.2
Ag. Pres. Restrictions: Nagog Hill Orchard	33.5	.3
<b>TOTAL</b>	<b>1691.8</b>	<b>15.7%</b>

Among these protected lands are Bumblebee Park (CC), Sarah Doublet Forest (LCT), Newtown Hill (CC) and Nagog Hill Orchard (some CC, some APR, some municipal). More sizeable parcels of

land include the Oak Hill Conservation Land (220 acres, CC) and the Long Lake Park (115.35 acres, CC). The OSRPIC and LCT completed a “Guide to Conservation Land” in May 2005, which highlights Town-owned conservation lands, provides maps and information on each site which has been helpful in informing the public of the conservation land opportunities throughout Town.

### **State-owned Land**

Massachusetts Fisheries and Wildlife owns 79.7 acres bordering Route 2 and the Boxborough line. At one time a Commuter Rail Station was planned for the site, but later abandoned because of environmental concerns. It is now protected in perpetuity.

### **Agricultural Preservation Restrictions**

The Agricultural Preservation Restriction (APR) program is a way for farmland to be protected from future development. The APR program pays farmers the difference between “fair market value” and the “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 three sections of the Nagog Hill Orchard totaling 33.5 acres are under an APR.

### **Conservation Restrictions**

Conservation restrictions (“CRs”) can be placed on a parcel of land for a specified number of years, or in perpetuity. The conservation restriction (or easement) is a restriction to a particular specified use or an exclusion of certain types or degree of development. The restriction runs with the land and is recorded at the Registry of Deeds in a deed instrument. This tool functions to retain the property in its natural state or in agriculture, farming or forest use; to permit public recreation; or to restrict development activities. Conservation restrictions, sometimes called development restrictions, must be granted voluntarily; however, the Conservation Commission and/or Planning Board can encourage this mechanism as a way of maintaining privately owned land in a natural state.

There are three Conservation Restrictions (CRs) held by the Conservation Commission:

- A 1-acre lineal easement from Moore Lane to Black Pond in Harvard;
- A 1-acre with old limestone quarry on Orchard Lane off of Whitcomb Ave.
- An 85 acre CR on land owned by the New England Forestry Foundation, known as Prouty Woods

In addition, there are three Conservation Restrictions held by the Littleton Conservation Trust on Whitcomb Avenue, donated by Edith and Paul Smith.

There are CRs totaling approximately 10 acres on 5 building lots with restricted building envelopes in the Cobb Pond subdivision. These are held jointly by the Conservation Commission and LCT.

## Recreational Facilities

The recreational facilities available in Littleton are listed below. In addition to a shortage of sports fields, as evidenced by the need for many fields to host multiple uses, many of these fields are on municipal land associated with schools, or are on leased land

- Koerper Field (1) – Ayer Road; soccer;
- King Street Fields (2) –King Street; (leased from St. Anne's Church) multi-purpose;
- High School Fields (5) – King St; 2 tennis courts, 1 baseball, 1 softball, 1 soccer, 1 Lacrosse;
- Russell Street Fields, also known as Alumni Field (10) – including track, football, 1 softball, 1 baseball, 6 Multi- purpose
- Shaker Lane Fields (3) - 2 baseball, 1 softball;
- Shattuck Street behind Town Hall - (1) 1 baseball, 2 tennis courts;
- 300 King Street - 3 outdoor basketball court, asphalted walking path, "Castle in the Trees" playground;
- Foster Street - Fay Park some playground equipment, large field for public gatherings, concerts, picnics, events, etc. and gazebo;
- Town Road- Town Beach with beach house, picnic area, playground, swing set, seasonal access to canoe, and kayak, sailboat rentals and lessons; as well as, a deep dock and dock to separate the shallow swimming area.

## Regional Open Space

Map 1 shows areas of open space located in towns adjacent to Littleton. The conservation restriction given by Edith Boyd Smith creates linkages between Littleton and Harvard which serve wildlife communities which do not recognize town and state borders. The town has pursued working relationships with neighboring towns' conservation groups. It is beginning to connect trails and look at other cooperative ventures. The town will continue this very worthwhile pursuit.

It should also be noted that Littleton has numerous water resources which present unique challenges to the effort of preserving open space and maintaining water resources in the area. There is Beaver Brook and many small streams, some of which connect lakes or ponds. There are seven lakes and ponds, four of which are entirely within its borders, and three shared with Ayer, Groton and Acton. These bodies of water add immeasurably to the quality of life for Littleton residents, as well as being a valuable resource for wildlife of many kinds. Keeping these lakes and ponds clean and healthy is the particular concern of the Clean Lakes Committee, along with the Littleton Conservation Commission and the Littleton Conservation Trust. Good water quality requires care taken regarding runoff from surrounding land; necessitating education about fertilizer use, septic system care and in addition, the washing of boats brought from other lakes and ponds so that invasive weeds and other water plants are not transported into a body of water.

## Opportunity Areas

Littleton is fortunate to have protected parcels distributed throughout Town with major holdings adjacent to the most densely populated area around Long Lake. These serve the community well, but opportunities exist to expand holdings to further secure town character, outdoor recreation and wildlife corridors. The following table lists some general areas of Town that have unique or natural lands that are not presently protected and should be considered in the future for protection. This expansion should be consistent with the Town's policies towards open space acquisition and community needs. Sections 6 and 8 discuss the Town's open space and recreation goals and Section 7 summarizes the needs of the community that have been described earlier in the text and analyzes these needs. Section 9 is the Action Plan, which identifies the five-year plan for implementation of responses to community and regional needs.

Privately-owned properties provide a rural atmosphere, with cluster zoning such as the development on the Sanderson land a bonus. The town has no legal standing on the open space there but the town reaps the benefits.

**Unique or Natural Lands Currently with Limited or No Protective Status**

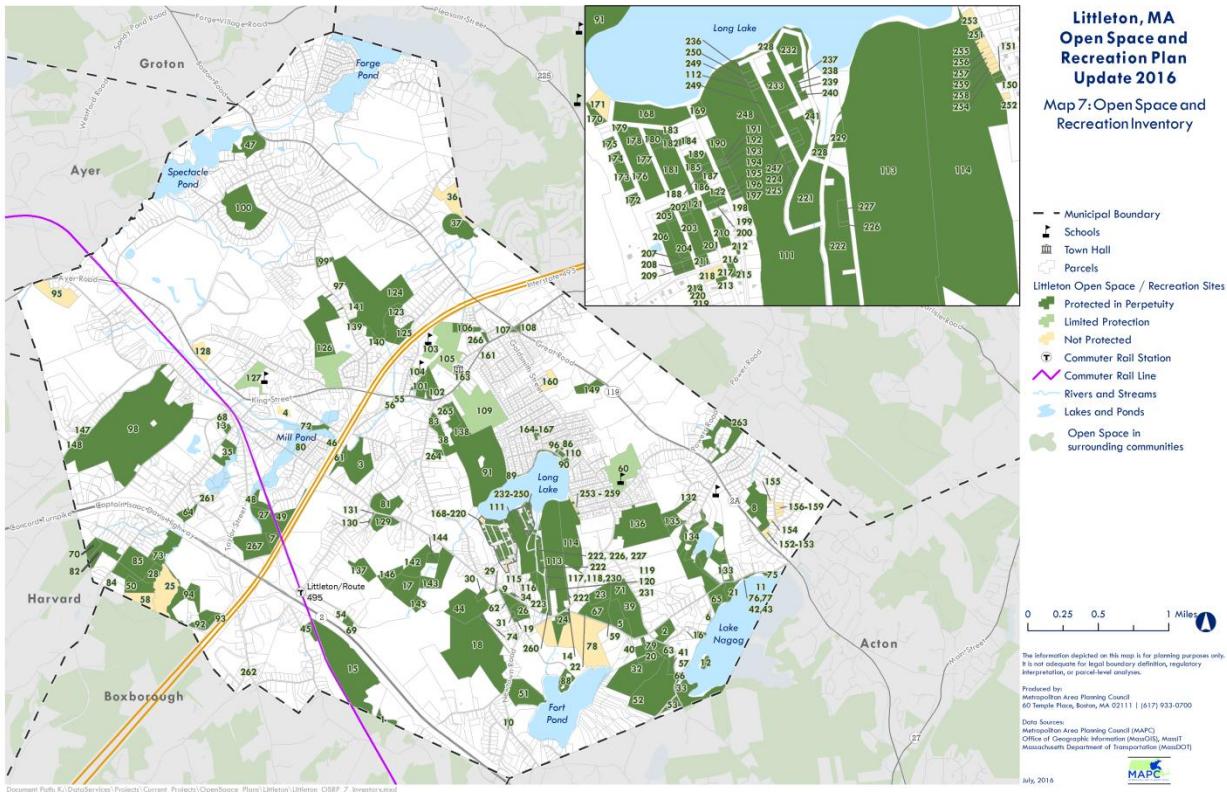
Name	Address	Current Protection Status	Potential Use and Condition
Route 2A/ Route 119	From Powers Road to Gilson Road	Limited; privately held	Maintain current scenic roadway, preserve agricultural use.
Newtown Road	From Telephone Tower to Ipswich Drive; Nagog Hill Road to the Yapp Cons. Land	Limited; privately held	Maintain scenic views, add to existing protected land
King Street	Across from Congregational Church	Limited, Municipally owned	Maintain wildlife corridor, viewshed, rural quality
Harwood Avenue	Town Forest	Limited; Municipally owned	Maintain wildlife corridor,
Beaver Brook Corridor	Along Great Road and Rt. 495	Limited; privately held	Maintain aquifer, wildlife corridor
Whitcomb Avenue / Sanderson Road, Oak Hill Rd.	Across the road from Oak Hill Conservation Land	Limited; privately held	Protect aquifer; add to wildlife corridor
Land adjacent to Newtown Hill & other area Cons. Land	Boxboro Rd. to Foster St.	Limited; privately held	Maintain wildlife corridor
Remaining Cobb Development Lots	Pickard Lane Ext.	None	Complete multi-parcel aggregate. Wildlife habitat
Aggregate Industries Quarry Site	Ayer Rd.	None	Playing fields/Park

The following pages contain the Inventory of all Lands of conservation and Recreation Interest.

This inventory categorizes the conservation and recreation lands in Town and identifies the name, location, owner, manager, acreage, public accessibility and degree of protection for each parcel.

Note that the **zoning** for all of the Parcels Protected in Perpetuity is Residential, except the following: Parcel # 37, 88; the grouping of parcels 48, 27, 7 and 267; and the grouping of parcels 92, 93 and 94. These are all currently zoned Industrial A.

### Map # 7 Open Space and Recreation Land Inventory



<b>Table 5-1</b> <b>Inventory of Littleton Conservation and Recreation Facilities</b>									
<b>Name of Site</b>	<b>Location/ Assessing Parcel #</b>	<b>OSRP Map #</b>	<b>Owner</b>	<b>Mgt.</b>	<b>Acres</b>	<b>Funds Used</b>	<b>Degree of Protection</b>	<b>Public Access</b>	<b>Current Use/ Condition/ Recreation Potential</b>
<b>Town-Owned Active Recreation Facilities</b>									
Castle-In-The-Trees Playground	300 King St.	102	Town of Littleton	Littleton P & R Dept.	8.42	Gift	Perpetuity	Yes	Children's playground Renovation planned 2016/Recreation
Fay Park	Foster St.	83	Town of Littleton	Littleton P & R Dept.	3.36	Gift	Perpetuity	Yes	Children's play area; band stand; skating Good condition; Recreation
Long Lake Town Beach	Town Rd.	90	Town of Littleton	Littleton P & R Dept.	0.99	Self Help	Perpetuity	Yes	Recreation/ Swimming Excellent condition; Recreation
Beaver Trot Meadows Recreational Area	82 Russell St.	125	Town of Littleton	Littleton P & R Dept.	6.44		Perpetuity	Yes	Undeveloped; Recreation potential -- Possibly practice fields?
<b>Total</b>					<b>19.2</b>				
<b>School-Based Recreation Facilities</b>									
Shaker Lane School	35 Shaker Ln.	60	Town of Littleton	School Dept.	31.77		Limited	Yes	Recreation
Littleton Public School Athletic Fields	55 Russell St.	103	Town of Littleton	School Dept.	4.89		Limited	Yes	Partial lot. Recreation
Littleton Public School Athletic Fields	55 Russell St.	104	Town of Littleton	School Dept.	2.84		Limited	Yes	Partial lot. Recreation
Littleton Public School Athletic Fields	55 Russell St.	105	Town of Littleton	School Dept.	32.07		Limited	Yes	Partial lot. Recreation
Littleton High Athletic Fields	55 Russell St.	127	Town of Littleton	School Dept.	15.47		Limited	Yes	Partial lot. Recreation
<b>Total</b>					<b>87</b>				

Town-Owned Passive Recreation Areas									
Hathaway Park	Shattuck St.	161	Town of Littleton	Littleton P & R Dept.	0.16	Town	None	Yes	Good; Recreation
Shattuck Street park	Shattuck St.	162	Town of Littleton	Littleton P & R Dept.	0.11	Town	None	Yes	Good; Recreation
Shattuck Street park	Shattuck St.	163	Town of Littleton	Littleton P & R Dept.	0.10	Town	None	Yes	Good; Recreation
<b>Total</b>					<b>0.37</b>				
Town-Owned Conservation Land									
Apple D'or Farms Conservation Area	U02 32 0	8	Town of Littleton	ConCom	20.88		Perpetuity	Yes	Conservation
Beaver Brook	U36 8 0	56	Town of Littleton	ConCom	0.70	Gift	Perpetuity	Yes	Good. Site is underwater
Black Pond Marsh	R14 2 4	70	Town of Littleton	ConCom	5.62		Perpetuity	Yes	Conservation
Bumblebee Park	R08 5 0	81	Town of Littleton	ConCom	14.74	Self Help	Perpetuity	Yes	Conservation
Cobb Meadows Estates	R03 19 35	132	Town of Littleton	ConCom	3.98		Perpetuity	Yes	Conservation
Fort Pond Conservation Land	U29 1 0	51	Town of Littleton	ConCom	23.02		Perpetuity	Yes	Conservation
Frost and Whitcomb Conservation Area	U24 1 2	113	Town of Littleton	ConCom	61.26	Self Help	Perpetuity	Yes	Conservation. 2 lots conveyed. SH agreement recorded under 28137/163.
Frost and Whitcomb Cons. Area	U24 3 0	114	Town of Littleton	ConCom	39.68	Self Help	Perpetuity	Yes	Cons. 2 lots conveyed. SH agreement recorded under 28137/163.
Grove Road Conservation Area	U17 190 0	164	Town of Littleton	ConCom	0.10		Perpetuity	Yes	Conservation

Grove Road Conservation Area	U17 191 0	165	Town of Littleton	ConCom	0.18		Perpetuity	Yes	Conservation
Grove Road Conservation Area	U17 197 0	166	Town of Littleton	ConCom	0.10		Perpetuity	Yes	Conservation
Grove Road Conservation Area	U17 198 0	167	Town of Littleton	ConCom	0.65		Perpetuity	Yes	Conservation
Hartwell Family Memorial Preserve	R17 2 15	124	Town of Littleton	ConCom	88.08		Perpetuity	Yes	Conservation
Harwood Ave #1	R07 8 0	142	Town of Littleton	ConCom	14.89	Self Help	Perpetuity	Yes	Conservation
Harwood Ave #2	R07 3 0	143	Town of Littleton	ConCom	18.70	Self Help	Perpetuity	Yes	Conservation
Harwood Ave #3	R07 6 0	144	Town of Littleton	ConCom	3.96	Self Help	Perpetuity	Yes	Conservation
Harwood Ave #4	R07 4 0	145	Town of Littleton	ConCom	4.87	Self Help	Perpetuity	Yes	Conservation
Harwood Ave #5	R08 10 0	146	Town of Littleton	ConCom	8.28	Self-Help	Perpetuity	Yes	Conservation
Harwood Ave #6	R07 9 0	17	Town of Littleton	ConCom	21.70	Self-Help	Perpetuity	Yes	Conservation
John Cantino Memorial Conservation Area	U32 109 0	121	Town of Littleton	ConCom	0.24		Perpetuity	Yes	Conservation
John Cantino Memorial Conservation Area	U32 104 0	122	Town of Littleton	ConCom	0.46		Perpetuity	Yes	Conservation
Lake Drive Conservation Area	U12 22 0	86	Town of Littleton	ConCom	0.23		Perpetuity	Yes	Conservation

Long Lake Cons. Area	U12 14 0	89	Town of Littleton	ConCom	2.64		Perpetuity	Yes	Conservation
Long Lake Cons. Area	U17 208 0	96	Town of Littleton	ConCom	0.32	Self Help	Perpetuity	Yes	Conservation
Long Lake Cons. Area	U12 15 0	110	Town of Littleton	ConCom	0.95	Self Help	Perpetuity	Yes	Conservation
Long Lake Cons. Area	U31 46 A	111	Town of Littleton	ConCom	26.11		Perpetuity	Yes	Conservation
Long Lake Cons. Area	U23 45 0	112	Town of Littleton	ConCom	0.09		Perpetuity	Yes	Conservation
Mill Hill Conservation Area	U35 30 0	3	Town of Littleton	ConCom	26.71	Self Help	Perpetuity	Yes	Conservation Encroachment?
Mill Hill Cons. Area	U35 1 0	61	Town of Littleton	ConCom	4.02	Self Help	Perpetuity	Yes	Conservation
Mill Pond Marsh	R11 23 16	49	Town of Littleton	ConCom	9.19		Perpetuity	Yes	Conservation
Nagog Hill Orchard	R04 5 0	5	Town of Littleton	ConCom	14.13	Self Help	Perpetuity	Yes	Conservation. One of two sites for this project; Lot 103-A of Morrison Orchard
Nagog Hill Orchard	R04 5 0	59	Town of Littleton	ConCom	0.50	Self Help	Perpetuity	Yes	Conservation. One of two sites for this project; Lot 103-A of Morrison Orchard
Nagog Hill Orchard APR	R02 4 0	2	Town of Littleton	ConCom	8.82		Perpetuity	Yes	Part of large taking by town of Morrison Orchard
Nagog Hill Orchard APR	R04 8 0	39	Town of Littleton	ConCom	30.24		Perpetuity	Yes	Part of large taking by town of Morrison Orchard (Lot 102- A); Agriculture
Nagog Hill Orchard APR	R02 9 1	57	Town of Littleton	ConCom	1.92		Perpetuity	Yes	Part of large taking by town of Morrison Orchard (Lot 109); Agriculture
Nagog Hill Orchard APR	R02 9 1	63	Town of Littleton	ConCom	3.27		Perpetuity	Yes	Part of large taking by town of Morrison Orchard (Lot 11); Agriculture

Nagog Hill Orchard APR	R02 3	79	Town of Littleton	ConCom	6.22		Perpetuity	Yes	Part of large taking by town of Morrison Orchard; Agriculture
Newtown Hill Conservation Area	R05 21 0	18	Town of Littleton	ConCom	96.85	Self Help	Perpetuity	Yes	Conservation
Oak Hill Conservation Area	R15 2 0	98	Town of Littleton	ConCom	219.22	Self Help/ LWCF	Perpetuity	Yes	Conservation Location of Tophet Chasm and Summit Rock
Yapp Conservation Area	R03 4 1	136	Town of Littleton	Conservation Commission	53.85	LAND/ CPA	Perpetuity	Yes	Conservation. Legal reference is for CR. See legal reference 53098/292 for order of taking. "Lucy's Land"
Open Space	U29 21 0	10	TOL	ConCom	0.48		Perpetuity	Yes	Conservation
Open Space	U31 61 B	19	TOL	ConCom	0.74		Perpetuity	Yes	Need to Check SH11 Source Docs to see if this was supposed to be included.
Open Space	U31 61 0	26	TOL	ConCom	7.41	Self Help	Perpetuity	Yes	Conservation
Open Space	U31 61 A	31	TOL	ConCom	0.73		Perpetuity	Yes	Need to Check SH11 Source Docs to see if this was supposed to be included.
Open Space	U31 15 0	34	TOL	ConCom	0.54		Perpetuity	Yes	Conservation
Open Space	R02 9 1	41	TOL	ConCom	1.64	Self Help	Perpetuity	Yes	One of two sites for this project.
Open Space	R08 25 0	54	TOL	ConCom	1.66		Perpetuity	Yes	Conservation
Open Space	U31 60 0	62	TOL	ConCom	4.75	Self Help	Perpetuity	Yes	Conservation
Open Space	R08 25 0	69	TOL	ConCom	1.25	Self Help	Perpetuity	Yes	Conservation
Open Space	R04 8	71	TOL	ConCom	3.86		Perpetuity	Yes	Conservation
OS #147	R14 6 1	147	TOL	ConCom	1.47		Perpetuity	Yes	Conservation
OS #148	R14 10 0	148	TOL	ConCom	0.69		Perpetuity	Yes	Conservation
OS #150	U15 24 0	150	TOL	ConCom	0.15		Perpetuity	Yes	Conservation
OS #151	U15 25 0	151	TOL	ConCom	0.09		Perpetuity	Yes	Conservation

OS #168	U32 69 0	168	TOL	ConCom	2.53		Perpetuity	Yes	Southern shore of Long Lake. Conservation; possible dock?
OS #169	U32 70 0	169	TOL	ConCom	0.33		Perpetuity	Yes	Long Lake Area. Conservation Possibly – would need evaluation
OS #170	U33 36 0	170	TOL	ConCom	0.37		Perpetuity	Yes	Long Lake Area. Conservation
OS #172	U32 38 0	172	TOL	ConCom	0.23		Perpetuity	Yes	Long Lake Area. Conservation
OS #173	U32 41 0	173	TOL	ConCom	0.60		Perpetuity	Yes	Long Lake Area. Conservation
OS #174	U32 42 0	174	TOL	ConCom	0.22		Perpetuity	Yes	Long Lake Area. Conservation
OS #175	U32 45 0	175	TOL	ConCom	0.23		Perpetuity	Yes	Long Lake Area. Conservation
OS #176	U32 48 0	176	TOL	ConCom	2.48		Perpetuity	Yes	Long Lake Area. Conservation
OS #177	U32 51 0	177	TOL	ConCom	0.22		Perpetuity	Yes	Long Lake Area. Conservation
OS #178	U32 51 0	178	TOL	ConCom	0.21		Perpetuity	Yes	Long Lake Area. Conservation
OS #179	U32 52 0	179	TOL	ConCom	0.17		Perpetuity	Yes	Long Lake Area. Conservation
OS #180	U32 53 0	180	TOL	ConCom	0.44		Perpetuity	Yes	Long Lake Area. Conservation
OS #181	U32 54 0	181	TOL	ConCom	1.89		Perpetuity	Yes	Long Lake Area. Conservation
OS #182	U32 56 0	182	TOL	ConCom	0.22		Perpetuity	Yes	Long Lake Area. Conservation
OS #183	U32 57 0	183	TOL	ConCom	0.17		Perpetuity	Yes	Long Lake Area. Conservation
OS #184	U32 58 0	184	TOL	ConCom	0.14		Perpetuity	Yes	Long Lake Area. Conservation
OS# 185	<b>Vicinity of Long Lake</b> U32 61 0	185	TOL	ConCom	0.55		Perpetuity	Yes	Small parcels in the vicinity of Long Lake. Conservation.
OS #186	U32 62 0	186	TOL	ConCom	0.23		Perpetuity	Yes	"
OS #187	U32 64 0	187	TOL	ConCom	0.10		Perpetuity	Yes	"
OS #188	U32 65 0	188	TOL	ConCom	0.14		Perpetuity	Yes	"
OS #189	U32 66 A	189	TOL	ConCom	0.23		Perpetuity	Yes	"
OS #190	U32 72 0	190	TOL	ConCom	0.51		Perpetuity	Yes	"
OS #191	U32 73 0	191	TOL	ConCom	0.05		Perpetuity	Yes	"
OS #192	U32 74 0	192	TOL	ConCom	0.05		Perpetuity	Yes	"
OS #193	U32 75 0	193	TOL	ConCom	0.10		Perpetuity	Yes	"
OS #194	U32 77 0	194	TOL	ConCom	0.43		Perpetuity	Yes	"
OS #195	U32 77 0	195	TOL	ConCom	0.10		Perpetuity	Yes	"
OS #196	U32 78 0	196	TOL	ConCom	0.10		Perpetuity	Yes	"

OS #197	U32 79 0	197	TOL	ConCom	0.10		Perpetuity	Yes	“
OS #199	U32 103 0	199	TOL	ConCom	0.14		Perpetuity	Yes	“
OS #200	U32 105 0	200	TOL	ConCom	0.14		Perpetuity	Yes	Small parcels in the vicinity of Long Lake. Conservation. Potential Recreation?
OS #201	U32 108 0	201	TOL	ConCom	0.98		Perpetuity	Yes	“
OS #202	U32 110 0	202	TOL	ConCom	0.27		Perpetuity	Yes	“
OS #203	U32 111 0	203	TOL	ConCom	0.90		Perpetuity	Yes	“
OS #204	U32 128 0	204	TOL	ConCom	0.80		Perpetuity	Yes	“
OS #205	U32 129 0	205	TOL	ConCom	0.27		Perpetuity	Yes	“
OS #206	U32 131 0	206	TOL	ConCom	0.91		Perpetuity	Yes	“
OS #207	U32 127 0	207	TOL	ConCom	0.05		Perpetuity	Yes	“
OS #208	U32 132 0	208	TOL	ConCom	0.24		Perpetuity	Yes	“
OS #209	U32 133 0	209	TOL	ConCom	0.23		Perpetuity	Yes	“
OS #210	U32 107 0	210	TOL	ConCom	0.64		Perpetuity	Yes	“
OS #211	U32 112 0	211	TOL	ConCom	0.24		Perpetuity	Yes	“
OS #212	U32 98 0	212	TOL	ConCom	0.10		Perpetuity	Yes	“
OS #213	U32 124 0	213	TOL	ConCom	0.09		Perpetuity	Yes	“
OS #214	U32 139 0	214	TOL	ConCom	0.09		Perpetuity	Yes	“
OS 3215	U32 93 0	215	TOL	ConCom	0.10		Perpetuity	Yes	“
OS # 216	U32 95 0	216	TOL	ConCom	0.14		Perpetuity	Yes	“
OS #221	U23 5 0	221	TOL	ConCom	3.11		Perpetuity	Yes	
OS #222	U31 49 0	222	TOL	ConCom	6.39		Perpetuity	Yes	“
OS #223	U31 48 0	223	TOL	ConCom	7.71		Perpetuity	Yes	“
OS #224	U23 36 0	224	TOL	ConCom	0.26		Perpetuity	Yes	:
OS #225	U23 35 0	225	TOL	ConCom	0.27		Perpetuity	Yes	“
OS #226	U23 2 0	226	TOL	ConCom	0.09		Perpetuity	Yes	“
OS #227	U23 3 0	227	TOL	ConCom	0.43		Perpetuity	Yes	“
OS #228	U23 8 0	228	TOL	ConCom	1.09		Perpetuity	Yes	“
OS #229	U23 9 0	229	TOL	ConCom	0.45		Perpetuity	Yes	“
OS #230	U31 51 0	230	TOL	ConCom	0.07		Perpetuity	Yes	Small parcels in the vicinity of Long Lake; Conservation

OS #231	U31 55 0	231	TOL	ConCom	0.11		Perpetuity	Yes	“
OS #232	U23 13 0	232	TOL	ConCom	1.24		Perpetuity	Yes	“
OS #233	U23 26 0	233	TOL	ConCom	1.79		Perpetuity	Yes	“
OS #234	U23 31 0	234	TOL	ConCom	1.24		Perpetuity	Yes	“
OS #235	U23 40 0	235	TOL	ConCom	0.80		Perpetuity	Yes	“
OS #36	U23 48 0	236	TOL	ConCom	0.17		Perpetuity	Yes	“
OS #237	U23 17 0	237	TOL	ConCom	0.28		Perpetuity	Yes	
OS #238	U23 19 0	238	TOL	ConCom	0.05		Perpetuity	Yes	“
OS #239	U23 20 0	239	TOL	ConCom	0.06		Perpetuity	Yes	“
OS #240	U23 21 0	240	TOL	ConCom	0.13		Perpetuity	Yes	“
OS #241	U23 23 0	241	TOL	ConCom	0.16		Perpetuity	Yes	“
OS #242	U23 25 0	242	TOL	ConCom	0.09		Perpetuity	Yes	“
OS #243	U23 30 0	243	TOL	ConCom	0.09		Perpetuity	Yes	“
OS #244	U23 32 0	244	TOL	ConCom	0.08		Perpetuity	Yes	“
OS #245	U23 33 0	245	TOL	ConCom	0.18		Perpetuity	Yes	“
OS #246	U23 34 0	246	TOL	ConCom	0.09		Perpetuity	Yes	“
OS #247	U23 37 0	247	TOL	ConCom	0.08		Perpetuity	Yes	“
OS #248	U23 39 0	248	TOL	ConCom	0.25		Perpetuity	Yes	“
OS #249	U23 46 0	249	TOL	ConCom	0.09		Perpetuity	Yes	“
OS #250	U23 47 0	250	TOL	ConCom	0.22		Perpetuity	Yes	“
OS #251	U15 33 0	251	TOL	ConCom	0.23		Perpetuity	Yes	“
OS #260	U31 57 0	260	TOL	ConCom	0.23		Perpetuity	Yes	“
<b>Total</b>					<b>909.8</b>				

#### Other Littleton Town-Owned Land

Open Space #149 Church Meadows	U06 4 0	149	TOL	Brd of Select- men	7.19		Perpetuity	Yes	Agriculture
Mill Pond	U39 25 0	46	TOL		1.02		Limited	UK	Recreation (fb)
Mill Pond	U39 25 0	80	TOL		0.55		Limited	UK	Recreation (fb)
Littleton Common	U10 1 0	107	TOL		0.47		Perpetuity	Yes	Historical/Cultural
Littleton Common	U07 42 0	108	TOL		0.74		Perpetuity	Yes	Historical/Cultural

Morgan Property	U18 108 0	109	Town of Littleton		49.49		Limited	Yes	Deed does not indicate who manages the property but does have language indicating property is to be used "...for conservation, recreation, and other public purposes."
Conservation Area ("Goldring")	U31 34 0	115	Town of Littleton		0.08		Perpetuity	Yes	2 lots conveyed. Deed does not indicate management by Conservation Commission but does have language stating land is to "...be used exclusively for open space and park use."
Conservation Area ("Goldring")	U31 46 8	116	Town of Littleton		3.37		Perpetuity	Yes	2 lots conveyed. Deed does not indicate management by Conservation Commission but does have language stating land is to "...be used exclusively for open space and park use."
Westlawn Cemetery	U37 1 0	126	Town of Littleton		61.98		Limited	Yes	
Koerper Field	U43 1 0	128	Town of Littleton		7.37		Limited	Yes	
OS #152	U01 32 14	152	Town of Littleton		0.98		None	Yes	Recreation and Conservation; At "Cloverdale" subdivision?
OS #153	U01 32 15	153	TOL		0.97		None	Yes	Recreation and Conservation
OS #154	U01 32 102	155	TOL		0.94		None	Yes	Recreation and Conservation
OS #155	U01 32 97	156	TOL		0.88		None	Yes	Recreation and Conservation
OS #156	U01 32 127	157	TOL		0.91		None	Yes	Recreation and Conservation
OS #157	U01 32 128	155	TOL		0.93		None	Yes	Recreation and Conservation
OS #158	U01 32 46	158	TOL		0.91		None	Yes	Recreation and Conservation
Open Space #159	U01 32 47	159	Town of Littleton		0.91		None	Yes	Recreation and Conservation
Open Space #171	U33 37 0	171	Town of Littleton		0.75		None		

Open Space #198	U32 81 0	198	Town of Littleton		0.11		None		
Open Space #217	U32 125 0	217	Town of Littleton		0.24		None		
Open Space #218	U32 126 0	218	Town of Littleton		0.24		None		
Open Space #219	U32 137 0	219	Town of Littleton		0.42		None		
Open Space #220	U32 138 0	220	Town of Littleton		0.23		None		
Open Space #252	U15 22 0	252	Town of Littleton		0.10		None		Vicinity of Long Lake, off of _____
Open Space #253	U15 34 0	253	Town of Littleton		0.42		None		
Open Space #254	U15 26 0	254	Town of Littleton		0.09		None		
Open Space #255	U15 31 0	255	Town of Littleton		0.22		None		
Open Space #256	U15 30 0	256	Town of Littleton		0.14		None		
Open Space #257	U15 29 0	257	Town of Littleton		0.10		None		
Open Space #258	U15 27 0	258	Town of Littleton		0.10		None		
Open Space #259	U15 28 0	259	Town of Littleton		0.13		None		
Open Space #262	R09 30 0	262	Town of Littleton		0.34		None		
<b>Total</b>					<b>143.3</b>				

**Publicly-Owned Parcels for Water Resource Protection**

Open Space #105	U41 38 0	13	Town of Littleton	Water Dept.	2.46	ALA	Perpetuity	Un-known	Need to double check project ID. Might be switched with ALA-15802. Water Supply Protection
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Aquifer Prot. Land - DEP/ALA	U40 14 0	35	Town of Littleton	Water Dept.	8.74	ALA	Perpetuity	No	Need to double check project ID. Might be switched with ALA-15801. Water Supply Protection
Well 2	R18 14 1	37	Town of Littleton	Water Dept.	18.07		Perpetuity	No	Water Supply Protection
Well 3	R24 15 0	47	Town of Littleton	Water Dept.	15.43		Perpetuity	Yes	Water Supply Protection
Open Space #113	U20 41 0	55	Town of Littleton	Water Dept.	0.58		Perpetuity	Yes	Water Supply Protection
Open Space #115	U41 44 0	68	Town of Littleton	Water Dept.	0.80	ALA	Perpetuity	Un- known	Need to double check project ID. Might be switched with ALA-15802.
Beaver Brook Marsh	R13 3 15	73	Town of Littleton	Water Dept.	16.19		Perpetuity	Limited	Water Supply Protection
Open Space #133	U30 5 A	74	Town of Littleton	Water Dept.	1.59		Perpetuity	Yes	Water Supply Protection
Water Supply Land	R17 2 15	123	Town of Littleton	Water Dept.	14.22		Perpetuity	Un- known	Water Supply Protection
Lake Nagog Shore	R01 17 2	6	Town of Concord (TOC)	Town of Concord (TOC) Water Depart- ment (WD)	1.24		Perpetuity	Un- known	Water Supply Protection
Lake Nagog Shore	R01 9 0	11	TOC	TOC WD	0.16		Perpetuity	Un- known	Water Supply Protection
Lake Nagog Shore	R02 9 0	12	TOC	TOC WD	1.86		Perpetuity	Un- known	Water Supply Protection
Lake Nagog Shore	R02 9 1	16	TOC	TOC WD	2.26		Perpetuity	Un- known	Water Supply Protection
Lake Nagog Shore	R01 9 1	21	TOC	TOC WD	4.48		Perpetuity	Un- known	Water Supply Protection
Lake Nagog	R2 13 0	33	TOC	TOC WD	17.65		Perpetuity	Un-	Water Supply Protection

Shore							known	
Lake Nagog Shore	R01 9 0	42	TOC	TOC WD	0.10		Perpetuity	Un-known
Lake Nagog Shore	R01 9 0	43	TOC		0.34		Perpetuity	Un-known
Lake Nagog Shore	R01 9 0	65	TOC		10.15		Perpetuity	Un-known
Lake Nagog Shore	R02 9 0	66	TOC		0.51		Perpetuity	Un-known
Lake Nagog Shore	R01 9 0	75	TOC		1.09		Perpetuity	Un-known
Lake Nagog Shore	R01 9 0	76	TOC	TOC WD	0.11		Perpetuity	Un-known
Lake Nagog Shore	R01 9 0	77	TOC	TOC Water Dept	0.18		Perpetuity	Un-known
<b>Total</b>					<b>118.2</b>			
<b>State-Owned Land</b>								
Boxborough Station WMA	R06 3 0	1	Department of Fish and Game		2.72		Perpetuity	Un-known
Boxborough Station WMA	R06 2 0	15	Department of Fish and Game		76.95		Perpetuity	Yes
<b>Total</b>					<b>79.7</b>			
<b>Land Trust and Other Non-Profit Open Space Lands</b>								
Beaver Brook Marsh	R13 5 A	28	Littleton Conservation Trust (LCT)		6.68		Perpetuity	Yes
Beaver Brook Marsh	R13 7 A	50	LCT		12.18		Perpetuity	Yes
Beaver Brook	R12 8 A	64	LCT		5.58		Perpetuity	Yes

Marsh									
Brook Way Conservation Area	King St.	101	LCT		7.43		Perpetuity	Yes	Conservation
Bulkeley Road Marsh	R09 3 0	45	LCT		3.73		Perpetuity	Yes	Conservation
Bumblebee Meadows	Foster St./ Harwood Ave.	129	LCT		9.48		Perpetuity	Yes	Conservation 3 lots conveyed.
Bumblebee Meadows	Foster St./ Harwood Ave.	130	LCT		0.29		Perpetuity	Yes	Conservation 3 lots conveyed.
Bumblebee Meadows	Foster St./ Harwood Ave.	131	LCT		0.36		Perpetuity	Yes	Conservation 3 lots conveyed.
Conant Park	White St.	106	LCT		6.66		Perpetuity	Yes	Conservation
Conservation Area	R20 75 0	99	LCT		3.82		Perpetuity	Yes	Conservation
Conservation Area	U31 52 0	117	LCT		0.46			Yes	Conservation 4 lots conveyed
Conservation Area	U31 50 0	118	LCT		0.27		Perpetuity	Yes	Conservation 4 lots conveyed
Conservation Area	U31 56 0	119	LCT		1.39		Perpetuity	Yes	Conservation 4 lots conveyed
Conservation Area	U31 54 0	120	LCT		0.15		Perpetuity	Yes	Conservation 4 lots conveyed
Frost Corner	Newtown Rd. & Nashoba Rd.	14	LCT		0.22		Perpetuity	Yes	Conservation
Frost Corner	Newtown Rd. & Nashoba Rd.	24	LCT		9.74		Perpetuity	Yes	Conservation
Holly Park	Harwood Ave & Tahat-tawan Rd.	9	LCT		0.77		Perpetuity	Yes	Conservation

Mill Pond	U38 29 0	72	LCT		3.33		Perpetuity	Yes	Site is underwater
Mill Pond Marsh	R11 31 0	7	LCT		4.82		Perpetuity	Yes	Conservation
Mill Pond Marsh	R11 26 0	27	LCT		13.86		Perpetuity	Yes	Conservation
Mill Pond Marsh	R11 29 0	48	LCT		5.61		Perpetuity	Yes	Conservation
Nashoba Road Conservation Area (CA)	Nashoba Rd.	22	LCT		0.03		Perpetuity	Yes	Conservation
Nashoba Road CA	Nashoba Rd.	23	LCT		10.15		Perpetuity	Yes	Conservation
Nashoba Road CA	Nashoba Rd.	67	LCT		15.50		Perpetuity	Yes	Conservation
Open Space	U31 8 0	29	LCT		0.57		Perpetuity	Yes	Conservation
Sarah Doublet Forest	Charter Rd.	20	LCT		6.13		Perpetuity	Yes	Conservation
Sarah Doublet Forest	Charter Rd.	32	LCT		37.89		Perpetuity	Yes	Conservation
Sarah Doublet Forest	Charter Rd.	40	LCT		3.63		Perpetuity	Yes	Conservation
Sarah Doublet Forest	Charter Rd.	52	LCT		46.32		Perpetuity	Yes	Conservation
Sarah Doublet Forest	Charter Rd.	53	LCT		3.91		Perpetuity	Yes	Conservation
Sprong Gift	U31 7 0	30	LCT		2.85		Perpetuity	Yes	Conservation
Sprong Gift	U31 7 1	44	LCT		29.69		Perpetuity	Yes	Conservation; Sprong Gift
Whitetail Woods CA	Spectacle Pond Rd.	100	LCT		36.37		Perpetuity	Yes	Conservation Eight lots conveyed. Whitetail Woods Conservation Area
Prouty Woods Community Forest	Foster St.	38	New England Forestry Founda- tion		7.97		Perpetuity	Un- known	Conservation New England Forestry Foundation Headquarters (NEFF)

Prouty Woods Community Forest	Foster St.	91	NE Forestry Founda- tion		81.98		Perpetuity	Limited	Conservation Partial lot. Legal reference is for CR. See legal reference 41148/67 for title.
Prouty Woods Community Forest APR	Foster St.	138	NE Forestry Founda- tion		10.25		Perpetuity	No	Agriculture Legal reference is for APR. See 41148/67 for conveyance of land in fee to NEFF.
<b>Total</b>					<b>390</b>				
<b>Private Owners of Open Space/Recreation Sites</b>									
Boston Minuteman Campground	264 Ayer Rd.	95	Nussdorfer Ted and Maureen		18.24		None	Limited	Recreation
Harvard Sportsmen's Club	251-267 Littleton Cty Rd.	25	Harvard Fish and Game Club		26.44		None	Limited (mem- ber ship only)	Extends from Harvard into Littleton. Recreation and Conservation
Harvard Sportsmen's Club	251-267 Littleton County Rd.	58	Harvard Fish and Game Club		10.39		None	Limited (mem- ber ship only)	Extends from Harvard into Littleton
Littleton Sportsmen's Club	13 Beaver Brook Rd.	36	Littleton Sports- men's Club		16.83		None	Limited (mem- ber ship only)	
Nashoba Day Camp	140 Nashoba Rd.	78	Camp Nashoba, Inc.		65.20		None	Limited	CHAPTER 61
Park	R12 9 B	261	Private owner	Littleton Parks & Rec Depart- ment	3.00		None	Yes	

St. Anne Church	75 King St.	4	Roman Catholic Archdiocese of Boston	Parks & Recreation Department	3.24		None	Yes	PARTIAL PARCEL
<b>Total</b>					<b>143.3</b>				
<b>Other</b>									
Black Maple Development LLC CR	R17 1	97	Black Maple Development LLC		0.52		Perpetuity	No	Subject to CMP 005-062.DFW. Conservation (nfb)
Black Maple Development LLC CR	R17 3	139	Black Maple Development LLC		0.77		Perpetuity	No	Subject to CMP 005-062.DFW. Conservation (nfb)
Black Maple Development LLC CR	R17 3,5,6	140	Black Maple Dev. LLC		3.10		Perpetuity	No	Subject to CMP 005-062.DFW. Conservation (nfb)
Black Maple Development LLC CR	R17 1,2	141	Black Maple Development LLC		1.53		Perpetuity	No	Subject to CMP 005-062.DFW. Conservation (nfb)
Cobbs Pond CR	R01 15 14	133	Cobb Jr Robert C and Perkins John A Trustees of Emily B Cobb Trust		25.48		Perpetuity	Limited	CR #6 amends CR #2 and CR #6A-1 amends CR #6. Legal reference for CR #2 is 13616/365. Legal reference for CR #6 is 37573/588. Conservation (nfb)
Cobbs Pond CR	R01 15 17	134	Same as Above		17.10		Perpetuity	Limited only)	Conservation (nfb)
Cobbs Pond CR	R03 21,22,23	135	Same as Above		6.40				Conservation
The 546	U25 1 0	88	Cohen		6.61		Perpetuity	No	Partial lot

Newtown Road RT CR			Vera S TR: 546 New- town Rd RT					Conservation
Daley CR	R10 16 B	92	Daley Frederick		8.25		Perpetuity	No
Daley CR	R10 14 0	93	Daley Frederick		2.44		Perpetuity	No
Daley CR	R10 16 0	94	Daley Frederick		18.18		Perpetuity	No
Herget CR	R08 9	137	Herget Alfred C. III		10.62		Perpetuity	Limited
Smith CR	R13 7 3	84	Smith Paul E. Jr.		7.27		Perpetuity	No
Smith CR	R13 5 4	85	Smith Paul E. Jr.		20.47		Perpetuity	No
Smith CR	R13 6 0	82	Smith Edith B		12.20		Perpetuity	No
<b>Total</b>				<b>141</b>				
	<b>Potential Open Space</b>							
	U11 60 0	160		6.25			Possible future Conservation Restriction	Follow-up
<b>Total</b>				<b>6.25</b>				
<b>Grand Total</b>				<b>2038</b>				

## Section 6     Community Vision

### **Littleton's Vision for Open Space and Recreation**

Littleton's ideal open space system would provide links between existing open space lands, whether they are owned by the Town, Littleton Conservation Trust, or other entities. The connections would extend to neighboring communities' open spaces and trails. Agriculture would be a prominent land use, helping to preserve our rural character. All ages and interests would be accommodated by a variety of recreational facilities, including parks and sports fields.

#### **A. Description of the Process to Develop the Plan**

The community vision and associated goals and objectives were developed after reviewing previous plans and studies, meetings with town staff, and the community outreach activities noted in Section 2, the Planning Process and Public Participation outlined below.

The Town of Littleton's Open Space and Recreation Plan (OS&RP) Implementation Committee began work in fall of 2013 to guide and oversee the development of this Open Space and Recreation Plan Update.

The committee developed a town-wide survey that was posted on the Town website from March 10 to May 19, 2014 and was mailed out to the Town (approximately 3800 households) to solicit feedback on draft goals and objectives that were developed by the Implementation Committee. There were 189 respondents to the survey, about a 5% response rate. The survey and the complete results can be found in Appendix B.

The Committee also held a forum on May 30th to ask for feedback from residents as to open space and recreation goals and objectives for the future. The meeting consisted of a brief summary of the work the Committee had done to date followed by a presentation of maps depicting protected and unprotected open space. An open discussion followed, allowing participants to express opinions and concerns, as well as to provide additional information on certain aspects of the Plan.

A Community Forum on Recreation was held on June 1, 2015 to gather in-depth information on the recreation vision and goals for Littleton. Another Community Forum was held on March 15, 2016 for community feedback on the draft Open Space and Recreation Plan.

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

Based on the input from the survey and the forums, the following are the town's broad, long-term goals regarding open space and recreation:

- 1. Protect and enhance the quality of Littleton's surface and groundwater as a source of drinking water and for recreational use.**
- 2. Preserve Littleton's important land resources through land acquisition, conservation restrictions, agricultural preservation restrictions, improved management and education.**
- 3. Provide improved recreational opportunities and greater access to recreational facilities for Littleton residents of all ages and abilities.**
- 4. Find funding resources outside of taxes for protecting open space and building recreational facilities.**
- 5. Balance development with the preservation of open space to help retain Littleton's rural character.**
- 6. Link Littleton's open spaces and trails both throughout the Town and on a regional level, particularly near shared natural resources.**
- 7. Promote the use of Littleton's open space by residents, through developing better access to publicly accessible protected properties and encouraging community participation in open space maintenance.**
- 8. Enhance bicycle and pedestrian access and safety throughout Town.**
- 9. Identify and preserve significant Native American, historical, and culturally significant sites in town.**

## Section 7 Analysis of Needs

### A. Summary of Resource Protection

Littleton has large quantities of land and water resources that require careful management and planning to ensure their long-term protection. This protection will help maintain the rural character of the Town and its precious, and limited, natural resources. The open farmland, ponds and forested areas create a small-town atmosphere despite development pressures and Littleton's proximity to main transportation routes.

Littleton's residents strongly value the Town's land and water resources. When asked in the town-wide survey to rate for importance various aspects of open space preservation, drinking water and lake and stream protection were among the top three answers, with quality of life intersecting the two. This was followed by agriculture and local food. When asked what was most important with regard to preserving open space and recreation, the number one answer was preserving conservation land, followed by farmland. When asked what other parcels in town the respondent would like to see conserved, most referred to one or more of agricultural significance.

#### Land Resources

Although the Town and private trusts own over one thousand acres of permanently protected land in Littleton, even more remains threatened by development. There are over two thousand acres of unprotected woodlands, farmland and water resources that are part of the landscape and serve other important functions.

More than two thousand acres of land are considered "temporarily protected" in the State's Chapter 61, 61A and 61B Program. This number has decreased since 2009. Approximately three-quarters of this land is used for agriculture in some form (field crops, orchards, productive woodlands and pastures), while the other sections remain in long-term forestry management or private recreation land. There exists an opportunity for Littleton to expand and link its open space inventory by acquiring rights to these lands when they are removed from the Chapter 61 Programs. The Town has acquired a number of such properties since the 2003 update of the Plan, including the Hartwell, Yapp, Church Meadows, Cobb, and Prouty land.

Further acquisition of lands such as these will also provide an opportunity to secure lands contiguous to or within the aquifers, sensitive wetlands, agricultural lands and lands that provide scenic views. This would protect the rural character of the Town, and help to extend the "Green Corridor" that is desired by many residents. In addition, it is important to protect distinct natural communities of flora and fauna, such as wetland areas, grasslands, vernal pools, and old-field growth.

The Town has adopted the following zoning provisions to assist with land protection:

- The Open Space Development bylaw allows, by special permit, for clustering of residences and protection of open space.
- The Extensive Recreation bylaw that authorizes by special permit commercial uses associated with recreational uses in residential zones (ex: golf course clubhouse).
- Also in place is a Farmland Protection bylaw. This special permit provision allows accessory commercial uses on active farms (animal feed sales, veterinary clinic, machinery repair) in order to help sustain farming operations in Littleton.

### **Water Resources**

Littleton has several water bodies that afford recreation and drinking water supply opportunities, and Littleton residents have overwhelmingly expressed interest in keeping these resources safe and protected. Long Lake, Mill Pond, Spectacle Pond, and Lake Mattawanakee/Forge Pond on the boundary with Westford) are major water resources that need to be protected. Additionally, the Littleton/Acton border is bounded in part by Nagog Pond, the surface water supply for the Town of Concord. A highly productive aquifer is located along Beaver Brook and supplies water for the Town.

Protection of surface and groundwater supplies for recreation and drinking water purposes is critical to maintain and enhance the quality of life in Littleton now and into the future. As existing homes in the watersheds of the ponds are sold, the septic systems will be tested for Title 5 compliance and those that are in failure will be upgraded or replaced. This will assist in protecting the water resources. The Town is also in compliance with the Stormwater Management regulations that have been set forth by the Environmental Protection Agency.

In addition, the following steps have been taken to continue to protect Littleton's water:

- Town Meeting adopted a local wetlands protection bylaw in May 2003, and in 2012, allowed the Conservation Commission to draft and implement regulations to expand upon this original bylaw.

The following will assist to meet the need for water resource protection in Littleton:

- The Clean Lakes Committee continues to pursue stormwater management strategies to support the restoration of Long Lake, Mill Pond, Spectacle Pond and Lake Mattawanakee
- An invasive plant eradication program is in place at Long Lake, Lake Mattawanakee, and Spectacle Pond through limited herbicide treatment and manual pulling.
- The "Low Impact Design Best Management Practices Manual" developed by the Littleton Water Department and adopted by Town Meeting continues to be followed.
- The Planning Board continues to encourage development via the Open Space Residential bylaw, enabling additional open space to be preserved.
- Identify critical lands that need to be preserved in order to protect the water resources.

## **B. Summary of Community's Needs**

### **Conservation**

Conservation needs as expressed by the community reflect residents' appreciation for Littleton's rural character and their desire to actively use open space. Overwhelmingly, response to the survey indicates that citizens want to continue to preserve open space, and specifically would like to protect open space from development. In addition, citizens are interested in finding alternate sources of funding (other than tax increases) to purchase land.

At the Town Meeting in May 2013, voters approved the purchase of Church Meadows using CPA funding. Notably, 74% of respondents to the Open Space and Recreation Survey indicated that they would vote favorably to purchase a piece of conservation land at Town Meeting.

Survey and forum results also expressed the need to better maintain the open space properties currently protected and to make them more accessible to a broader range of citizens, including senior citizens and people with disabilities. Community work days, education, and newspaper articles were mentioned as ways to engage more residents. Residents would like to see better parking areas and more trails for walking and biking. The senior population in particular requested more benches and picnic tables for passive recreation, and sidewalks to the conservation areas were also frequently requested.

In addition to protecting conservation land within Littleton, there is also a need to connect parcels and trails with existing protected properties and trails in other towns. Preliminary talks have been held between members of the Littleton Conservation Trust and members of the Conservation Trusts in Westford, Harvard, Acton, Groton and Boxborough to discuss linking trails, but thus far no plan to do so has been decided upon. The connecting of the Conservation Trust's Sarah Doublet Forest to properties held by the Acton Conservation Commission has been proposed in recent years.

The Town of Acton has established a "trail through time" that passes through sites of Native American significance on its conservation areas. Connecting the Sarah Doublet Forest, which consists of 100 acres of the historic 500 acre Nashoba Praying Indian Village that pre-dated the founding of Littleton, would greatly enhance the trail for the citizens of both towns.

### **Recreation**

At the June 1, 2015 Community Forum, attendees overwhelmingly identified the need for more athletic playing fields. This was Priority # 3 in the Littleton's Open Space and Recreation Goals, and the consensus priority # 1 Action Item under that goal is to: ***Create and implement a comprehensive plan for maintenance, repair and acquisition and/or construction of adequate playing field capacity for the town.***

Long Lake provides most of Littleton's public water recreational opportunities, though there is public access to Mill Pond, Spectacle Pond and Fort Pond. Long Lake hosts the Town Beach, and is a focal point of The Park & Recreation Department's summer Recreation Programs, which includes swimming lessons, summer day camp, boating access, canoe and kayak rentals, and sailing lessons. The facilities on the Town beach are a playground and swing set build in May 2015 and a Bathhouse and Snack Shack. The Bathhouse was built more than 50 years ago and the last renovation to update ADA compliance was done in 1998.

This building truly needs an overhaul to meet the growing needs of our community as it currently only houses 3 bathrooms, 1 of which is handicap accessible, 1 sink, and one changing room on each of the men's and women's bathrooms. There is only 1 outdoor shower for all visitors to use and there no access to a water fountain as it had to be removed due to repetitive vandalism.

Littleton has playing fields and tennis courts available on Town and school owned properties that are not permanently protected, and also leases fields from St. Anne's Church. Current fields in town are heavily utilized by sport organizations throughout the spring, summer and fall seasons, as 65% of Littleton Public School students play at least one sport, and as a result of this high demand and repeated use, field availability and conditions continue to suffer. Without the ability to rotate and rest the sports fields continued deterioration of playing surfaces and impaction of the soil will dramatically increase over time.

Recently, the town has explored various solutions to this problem. These alternatives have included constructing new fields on municipally held land, and the possibility of transforming grass fields to artificial turf. Park and Recreation and the community continue to seek economically feasible solutions to this problem. According to survey results, Littleton residents are extremely interested in maintaining and improving current recreation land.

Additionally, citizens would like to see more bike paths and lanes, especially those which would connect to existing bike paths already established in contiguous towns. Within the last year, the Town created a new Bicycle and Pedestrian Advisory Committee to explore and further the development of such lanes and paths. When asked what additional recreational facilities Littleton needs in the near future, most respondents listed bike paths/lanes, followed by trails.

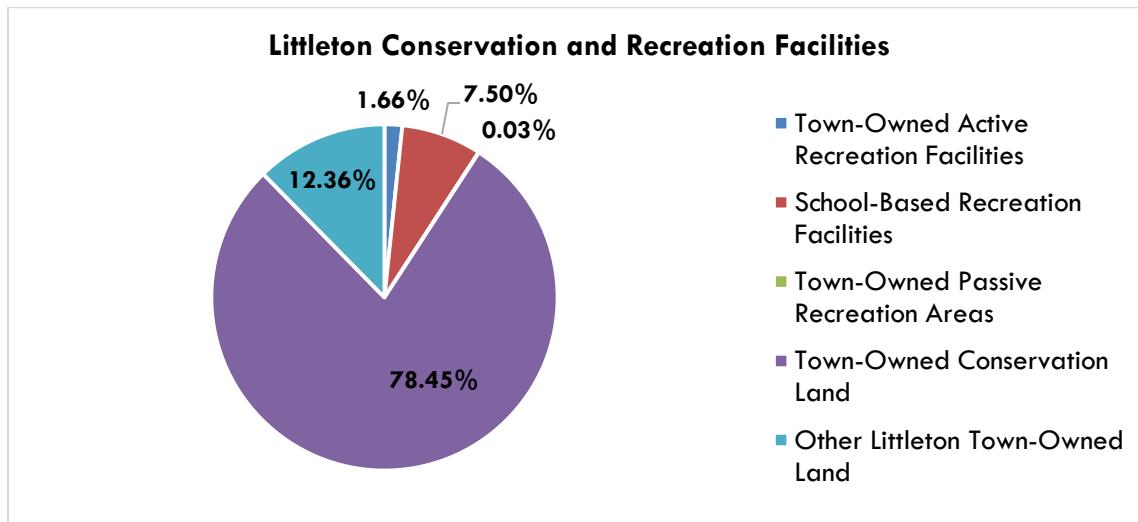
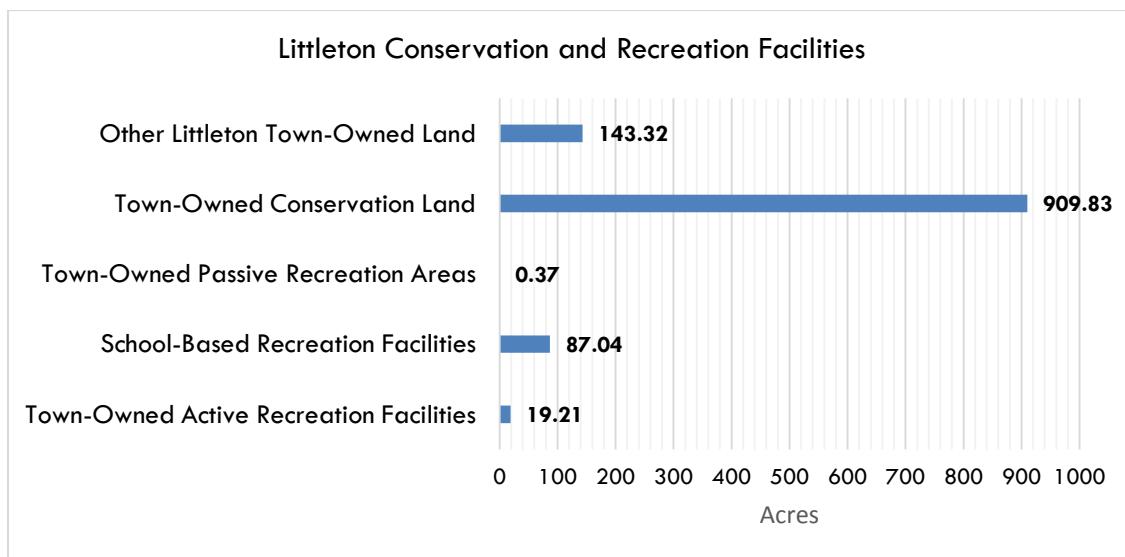
Indoor space is also needed to address the growing requests for community education and recreational programming. The Parks, Recreation, and Community Education Department is currently at capacity, and there is no indoor space available for expansion. In addition, the Council on Aging and the Veteran's Affairs Department have also expressed the need for program space. A community building could serve the needs of several town constituencies.

Developing a creation/community center was the third priority of respondents to the open space and recreation survey.

Recreation needs as expressed by the community were varied, but overall themes could be identified. The following were most popular:

- Sports fields
- Bike lanes/trails
- Community/recreation center
- Programs for young children
- Programs for seniors and youth

Below is a summary of conservation and recreation facility land use, based on the information in Section 5.



## **Massachusetts Outdoors 2012 SCORP**

The SCORP (Statewide Comprehensive Outdoor Recreation Plan) is the state's equivalent of a municipal open space plan. SCORP plans are developed by individual states to be eligible for federal Land and Water Conservation Fund (LWCF) grants. The current plan was completed in 2012. It was prepared by the Executive Office of Energy and Environmental Affairs.

In many ways Littleton's recreation needs as determined by the community closely relate to those identified in the SCORP as a result of extensive stakeholder outreach. For example, 8 out of 10 Massachusetts residents said that they run, jog or walk multiple times per week. Trails have become the most popular type of recreation "facility" within the past five years, with residents wanting more town trail systems and loop trails within long distance trail networks.

The SCORP identified the most popular activities by demographic segment:

For Families	playgrounds and water facilities (beach, pond, pool, etc), and playgrounds and
For Children	playgrounds and athletic fields athletic fields, hiking/walking trails for adults,
For Adolescents	athletic fields and skate parks
For Adults	hiking/walking trails
For Seniors	senior centers and hiking/walking trail

Other aligned open space and recreation issues include the desire to protect wildlife corridors, and creating more water-based recreation opportunities as well as protecting water qualities.

Improving access for people of all abilities to existing conservation and recreational facilities is also a common theme in both Littleton's community review and the SCORP. When it comes to funding, Littleton's citizens strongly expressed the same desires of the broader region to better maintain and improve existing recreation and conservation areas.

### **C. Management Needs, Potential Change of Use**

#### **Management**

The following should be considered by the Town to address open space and recreation needs:

- Discuss and implement undeveloped municipal lands coming under the ownership of the Littleton Conservation Commission or Conservation Trust in order to establish "protected" status under the Open Space and Recreation Plan guidelines.
- Continue to fund the Community Preservation Act and use income from cellular telephone towers to provide funding to purchase open space lands of interest and importance.
- Continue to use the Senior Tax Abatement through Work Program and the student community service requirement to maintain/mow certain trails.

## **Threatened Areas**

The area along Rt. 2A / Rt. 119 provides a distinct character to Littleton, reflecting its pastoral and agrarian history. This area, commonly referred to as “the Gateway to Littleton”, should be a prime focus of preservation as it contains large tracts of farmland, providing a unique landscape for those passing through Town, and potentially providing local food for Littleton and the greater Boston area. Already, hundreds of acres of previously open space along this corridor have been replaced by strip malls, condominiums, and a day care center. In the past, the Town was asked to change the zoning of 81 acres of prime agricultural land from residential to commercial, and though the request was pulled before a vote, this parcel of concern has reappeared for consideration for development in recent years. The Town should seriously consider the ramifications of such requests for zoning changes as farmland and prime agricultural soils are very valuable and can never be restored once converted to commercial/industrial use. In addition, such rezoning becomes a “slippery slope” for other properties along this stretch of rural highway and elsewhere in town.

Areas adjacent to Beaver Brook and the ponds provide distinct wildlife habitat, recreational resources, and are critical to the surface and groundwater supply. These areas help maintain the groundwater aquifer and are at risk of further development. Preservation and land acquisition goals should recognize the importance of these lands to the overall water quality and quantity available in Town.

## **Special Opportunities**

Among the opportunities identified by the community and the OSRIP are:

### **Couper Farm Property**

Preservation of at least a portion of the Couper Farm property on Great Road is a high priority for the Town. The Town will continue to work with the property owner to identify mutually beneficial alternatives to conventional subdivision of this important property. The acreage preserved could be utilized for recreation, conservation and/or agricultural use(s).

### **Other Open Space Acquisition Priorities**

Investigate the Town’s potential preservation (through purchase, restriction, or other means) of the “Williams Land” off Boxborough Road (40 out of 60 acres); the “Smith Property” on Whitcomb Avenue, and the surplus state land currently held by the Massachusetts Department of Transportation off of Boxborough Road (5 acres).

Work with developers and Town boards/departments to help preserve land in, and create bike/walking trails through/around the Durkee and Kaye properties.

## Recreation Projects

Locate and investigate suitable spaces for building new athletic fields. Potential sites include Town-owned land on White Street, behind the Police Department, off Delaney Drive, at the Morgan Property, and on the land in back of the “Minor Chord” abutting the High School property.

Improve the conditions of existing fields, such as “Alumni Field”, to make them safe and usable for athletic activities.

The Town should restart efforts to create a Multi-Town Conservation Area with Acton, Boxborough and Harvard. Where possible, focus should be on acquiring lands to create linkages with existing conservation land.

There is currently an opportunity to build a bike path connecting the Long Lake residential area from Goldsmith Street to the town common. Planning is underway.

Continue to use “blended CPA” to increase the state match for the town’s Community Preservation Act revenue. The chart below, prepared by the Town Administrator, indicates the success of this approach.

CPA category	FY 2014	FY 2015	FY 2016	FY16 %
Open space reserve	\$143,682	\$266,439		55%
Community housing	46,186	72,665		15%
Historic resources	65,100	72,665		15%
Recreation	200,000	72,665		15%
<i>Blended CPA sub-total</i>	<i>\$454,968</i>	<i>\$484,434</i>		<i>100%</i>
CPA 1% Surcharge	\$218,700	227,484		242,217
<b>CPA total (Local)</b>	<b>\$218,700</b>	<b>\$682,452</b>		<b>\$726,651</b>
Resulting State Match	\$68,814	\$267,349		\$287,995
State Match Rate	31.5%	39.1%		If 39.1%

## **Section 8 Goals and Objectives**

These goals were identified in Section 6, “Community Needs” and are augmented by objectives that expand on the goals. The goals and objectives Littleton’s Goals and Objectives for Open Space and Recreation are:

### **Goal #1**

**Protect and enhance the quality of Littleton’s surface and groundwater as a source of drinking water and for recreational use.**

#### **Objectives:**

- # 1** Conserve lands to maintain aquifer and surface water health
- Educate residents about protection of surface and groundwater with non-polluting land and water practices
  - Acquire/preserve new sources of drinking water
  - Fund lake restoration
  - Work with Littleton Water Department to coordinate maintenance/improvement efforts of ground water, surface water and wetlands

### **Goal #2**

**Preserve Littleton’s important land resources through land acquisition, conservation restrictions, agricultural preservation restrictions, improvement management, and education.**

#### **Objectives:**

- Conserve lands that support agricultural uses and contain important agricultural soils
- Conserve land for historical and natural purposes including unique geological features and a variety of wildlife habitats
- Enlist cooperation of local and regional conservation organizations as well as town boards and committees to improve management of existing properties
- Improve education and communication efforts about value of open space and specific properties
- Coordinate efforts with Community Preservation Committee
- Coordinate with the Littleton Conservation Trust, Conservation Commission, and New England Forestry Foundation to develop a management plan for invasive species

### **Goal #3**

**Provide improved recreational opportunities and greater access to recreational facilities for Littleton residents of all ages and abilities.**

#### **Objectives:**

- Update facilities to meet Americans with Disabilities Act requirements
- Explore opportunities for additional recreational facilities and athletic fields
- Provide more recreational options
- Maintain and improve existing recreational facilities
- Work with Park and Recreation and similar groups towards broadening the scope of recreational opportunities for all ages

**Goal #4**

**Find funding resources outside of taxes for protecting open space and building recreation facilities.**

**Objectives:**

- Partner with local, regional and state agencies to acquire sources of open space, agricultural or recreation funding
- Develop/continue creative mechanisms within town resources to fund protection of open space
- Pursue state and federal grants
- Work with state and local officials to establish more funds for land purchases, protection and maintenance
- Work cooperatively with private conservation organizations to leverage philanthropic resources
- Continue to work with town Committee Preservation Committee to secure funding for future open space purchases

**Goal #5**

**Balance development with the preservation of open space to help retain Littleton's rural character.**

**Objectives:**

- Provide/educate landowners about alternatives to selling land to developers
- Modify bylaws to provide better protection of sections of town considered historic, agricultural and/or scenic, and to prevent environmental degradation
- Conserve agricultural lands that are "Gateways" to Littleton
- Permanently protect the Town Common
- Encourage mixed-use and/or higher density development in and around Littleton Common and Historic Depot areas
- Lessen environmental impact of development through stricter wetlands and erosion control by-laws and certification of vernal pools
- Establish a permanent committee to oversee all open lands and implement acquisition, conservation restrictions, and the careful monitoring of 61A & B lands

**Goal #6**

**Link Littleton's open spaces and trails both throughout the Town and on a regional level, particularly near shared natural resources.**

**Objectives:**

- Work to link public and private open space and recreation areas to each other, as well as to population centers or neighborhoods
- Cooperate with neighboring towns to link adjacent open space and recreation areas.
- Create larger areas of contiguous open space in ecologically sensitive areas, as well as wildlife corridors

- Work with the LCT, Conservation Commission, SVT, NEFF and contiguous towns to establish/expand trail systems and bike paths to connect the various areas in Littleton and within the region.

**Goal #7**

**Promote the use of Littleton's open space by residents, through developing better access to publicly accessible protected properties and encouraging community participation in open space maintenance.**

**Objectives:**

- Promote active public use and stewardship of conservation lands through outreach and education of citizenry
- Publicize needs and opportunities for volunteer help with maintenance
- Ensure that open space is accessible to all citizens regardless of age or ability
- Implement strategies that will facilitate the permanent care of recreation and conservation areas
- Develop forestry plans for harvesting and maintenance of wooded areas
- Add more vehicle parking to current open space properties
- Work with appropriate town boards and agencies to ensure enforcement of land management policies

**Goal #8**

**Enhance Bicycle and Pedestrian access and safety throughout the town.**

**Objectives:**

- Establish bicycle paths between residential areas and commercial properties.
- Upgrade town sidewalks to increase pedestrian safety in town common and other areas.
- Incorporate town's Complete Streets Policy into future town roadway designs.
- Install Bicycle racks at commercial and town owned properties.
- Encourage town Highway Department to paint bicycle lanes on existing and future town roads where applicable.

**Goal #9**

**Identify and Preserve significant Native American, historical, and culturally significant sites in town.**

**Objectives:**

- Acquire or preserve through conservation or agricultural restrictions, properties of Native American, historical, and or cultural significance in town.
- Promote public education and awareness of the town's history, especially relating to its lands and special sites.

## Section 9 Seven Year Action Plan (see Map 8)

The Seven Year Action Plan is designed to implement Littleton's Open Space and Recreation Plan. The Action Plan directly addresses the recreation and conservation deficiencies identified in the analysis of community needs. The plan elements are based on information gathered from town wide surveys and the collective knowledge and experiences of the OSRPI Committee.

The Action Plan addresses the intersection of the existing open space and recreation resources identified in the Inventory of Plan Section 5, the needs and desires of the residents, as outlined in Section 7, and the goals and objectives developed in Section 8. The Committee, with public input has designated the # 1 Priority Action Item for each Goal. The Committee decided that most other Action Items will need attention/funding over several years, and so indicated on the Table.

Town of Littleton Open Space and Recreation Goals and # 1 Priority Action Items	
Goal #1: Protect and enhance the quality of Littleton's surface and groundwater as a source of drinking water and for recreational use.	Action: 1.1 Protect all surface and sub-surface waters.
Goal # 2: Preserve Littleton's important land resources through land acquisition, conservation restrictions, agricultural preservation restrictions, improved management, and education.	Action 2.1 Purchase open space of interest and farmland as it comes available, and stay aware of upcoming opportunities.
Goal #3: Provide improved recreational opportunities and greater access to recreation facilities for Littleton residents of all ages and abilities.	Action 3.1 Create and implement a comprehensive plan for maintenance, repair, and acquisition and/or construction of adequate playing field capacity for the town.
Goal #4: Find funding resources outside of taxes for protecting open space and building recreation facilities.	Action 4.1 Work with Finance Committee to locate available funding sources.
Goal #5: Balance development with the preservation of open space to help retain Littleton's rural character.	Action 5.1 Establish partnerships with land owners and developers to preserve valuable portions of land in exchange for expanded development opportunities.
Goal #6: Link Littleton's open spaces and trails both throughout the Town and on a regional level, particularly near shared natural resources.	Action 6.1 Work with local conservation commissions and land trusts from contiguous towns to identify parcels of open space which might be connected across town borders.
Goal #7: Promote the use of Littleton's open space by residents, through developing better access to publicly accessible protected properties and encouraging community participation in open space maintenance.	Action 7.1 Improve/expand parking areas near open space properties, including Handicapped Parking (HP) as applicable.
Goal #8: Enhance bicycle and pedestrian access and safety throughout town.	Action 8.1 Establish more bicycle and pedestrian routes on new and existing town, and state owned land.
Goal # 9: Identify and preserve significant Native American, historical and culturally significant sites.	Action 9.1 Create a Town historic or neighborhood conservation district.

**PLEASE SEE APPENDIX C FOR A LIST OF ABBREVIATIONS AND ACRONYMS**

<b>Table 9-1</b> <b>Seven-Year Action Plan</b>					
Action	Who	Funding AS available/TBD	2016-2018	2019-2021	2022-2023
<b>Goal #1: Protect and enhance the quality of Littleton's surface and groundwater as a source of drinking water and for recreational use.</b>					
1.1 Protect all surface and sub-surface waters	Littleton Conservation Commission, Water Dept., Clean Lakes Committee, Board of Health, and Littleton Conservation Trust	Town-regulatory changes/grants	Top	Priority	For this Goal
1.2 Educate residents on the importance of water quality (e.g. negative impacts of excessive lawn fertilizers and pesticides)	Littleton Water Department and the Clean Lakes Committee		X	X	X
1.3 Identify and acquire potential new well sites	Littleton Water Department		X	X	X
1.4 Identify and pursue grant funding options for lake restoration	Clean Lakes Committee		X	X	X
1.5 Establish volunteer "stream team" for monitoring water quality in Beaver Brook	Conservation Commission and Littleton Conservation Trust (LCT)		X	X	X
1.6 Establish programs to eradicate invasive aquatic plant species without the use of harmful chemicals	Conservation Commission, Water Dept., Clean Lakes Committee, LCT		X	X	X
<b>Goal # 2: Preserve Littleton's important land resources through land acquisition, conservation restrictions, agricultural preservation restrictions, improved management, and education.</b>					
2.1 Purchase open space of interest and farmland as it comes available, and stay aware of upcoming opportunities	Conservation Commission, Littleton Conservation Trust, Littleton Selectmen, Agricultural Commission		Top	Priority	For this Goal

<b>Table 9-1</b> <b>Seven-Year Action Plan</b>					
<b>Action</b>	<b>Who</b>	<b>Funding AS available/TBD</b>	<b>2016-2018</b>	<b>2019-2021</b>	<b>2022-2023</b>
2.2 Work with interested and willing landowners to put land under conservation restriction or agricultural restriction	Littleton Conservation Trust, Conservation Commission, Agricultural Commission		X	X	X
2.3 Permanently protect town owned land not currently protected under Article 97	Littleton Selectmen, Conservation Commission		X	X	X
2.4 Work with the Agricultural Committee to ensure the long-term viability of existing farm operations	Littleton Selectmen, Conservation Commission, Littleton Conservation Trust		X	X	X
2.5 Improve maintenance to existing open space properties	Littleton Conservation Trust, Conservation Commission, Littleton Highway Department, OSRPIC, Volunteers, Agricultural Commission		X	X	X
2.6 Inventory, monitor and develop management plan for land-based and aquatic invasive species control or eradication	Littleton Conservation Trust, Conservation Commission, Littleton Highway Department, OSRPIC		X	X	X
2.7 Provide environmental education to residents through newspaper articles, walks, school programs and outreach events	Littleton Conservation Trust, Conservation Commission, OSRPIC		X	X	X
2.8 Continue and expand Land Stewardship Program	Littleton Conservation Trust, Conservation Commission, OSRPIC		X	X	X
2.9 Acquire in fee or by voluntary easement, sites of cultural and/or historical significance.	Conservation Commission, Historical Commission, Board of Selectmen, Agricultural Commission		X	X	X

<b>Table 9-1</b> <b>Seven-Year Action Plan</b>					
Action	Who	Funding AS available/TBD	2016-2018	2019-2021	2022-2023
<b>Goal #3: Provide improved recreational opportunities and greater access to recreational facilities for Littleton residents of all ages and abilities.</b>					
3.1 Create and implement a comprehensive plan for maintenance, repair, and acquisition and/or construction of adequate playing field capacity for the town.	Town of Littleton, Parks and Recreation Commission, Community Preservation Committee, Agricultural Commission		Top	Priority	For this Goal
3.2 Rebuild or renovate the bathhouse at Long Lake	PMBC, Planning Board, Parks and Recreation Commission	CPC, Grants, and donations	X	X	X
3.3 Completion of the additional phases at 300 King. This includes installation of a fit course that would add active recreation for the elderly and individuals with disabilities, extension of the walking path, landscaping, and bathroom access.	PMBC, Planning Board, Parks and Recreation Commission		X	X	X
3.4 Explore opportunities for a community center	Parks and Recreation, Council on Aging, Veteran's Affairs	CPC, Grants, and donations, Town funds	X	X	X
3.5 Make recreational facilities wheelchair-accessible and ADA compliant	Town of Littleton, Parks and Recreation Commission		X	X	X
3.6 Develop/support more programs for youth/teens	Parks, Recreation and Community Education Department		X	X	X
3.7 Develop/support more programs for seniors	Parks, Recreation and Community Education Department		X	X	X
3.8 Enlist community's aid in maintenance of facilities where applicable	Parks and Recreation Commission		X	X	X

**Table 9-1**  
**Seven-Year Action Plan**

Action	Who	Funding AS available/TBD	2016-2018	2019-2021	2022-2023
3.9 Build more sidewalks for better access to facilities	Littleton Highway Department		X	X	X
3.10 Provide benches and picnic tables at more locations	Town of Littleton		X	X	X
3.11 Provide for ADA compliance at conservation	Littleton Conservation Commission		X	X	X
3.12 Find logical routes for bike paths bikeways, walkways and work to develop them	Planning Board, Bicycle and Pedestrian Advisory Committee		X	X	X
3.13 Study feasibility of constructing facilities that can be utilized for youth and senior citizens	PMBC, Planning Board, and Council on Aging		X	X	X
3.14 Implement bicycle lanes into existing and future town roadways in compliance with the town's Complete Streets Policy			X	X	X
<b>Goal #4: Find funding resources outside of taxes for protecting open space and building recreation facilities.</b>					
4.1 Work with Finance Committee to locate available funding sources	Finance Committee, Conservation Commission, Board of Selectmen		Top	Priority	For This Goal
4.2 Increase funds to CPA account	Town of Littleton, Community Preservation Committee		X	X	X
4.3 Increase funds to cell tower accounts and continue the use of said funds for conservation purposes and acquiring conservation land	Town of Littleton		X	X	X

**Table 9-1**  
**Seven-Year Action Plan**

Action	Who	Funding AS available/TBD	2016-2018	2019-2021	2022-2023
4.4 Consider other sources of community income which might be dedicated to preservation of open space or building new recreation facilities	Littleton community		X	X	X
4.5 Work with Agricultural Property Working Group to establish appropriate lease fee rates for town owned agricultural properties	Conservation Commission, Board of Selectmen, Agricultural Commission, Agricultural Property Working Group		X	X	X
4.6 Partner with qualified conservation land trust organizations to protect land of mutual interest and work to keep land that is in active agricultural use in said use.	Town of Littleton		X	X	X
4.7 Apply for L.A.N.D. grants as parcels of land become available	Town of Littleton		X	X	X
4.8 Apply for Recreational Trails grants	Town of Littleton		X	X	X
4.9 Apply for P.A.R.C. grants for active recreational needs	Town of Littleton		X	X	X
4.10 Develop a funding source for active recreation and facility maintenance	Park and Recreation Department		X	X	X
4.11 Establish partnerships with Businesses and Corporations in Town to carry out projects that will improve "quality of life" in Littleton and help attract clients and personnel	Town of Littleton		X	X	X

**Table 9-1**  
**Seven-Year Action Plan**

Action	Who	Funding AS available/TBD	2016-2018	2019-2021	2022-2023
4.12 Apply for Farm Viability Program funds through Massachusetts Department of Agricultural Resources	Town of Littleton, Agricultural Commission, Conservation Commission		X	X	X
4.13 Advocate having Littleton included in the federal forest legacy program, as well as other state and federal funding programs	Con Com, State, Board of Selectmen, Littleton Cons. Trust, Agricultural Commission		X	X	X
<b>Goal #5: Balance development with the preservation of open space to help retain Littleton's rural character.</b>					
5.1 Establish partnerships with land owners and developers to preserve valuable portions of land in exchange for expanded development opportunities	Planning Board, Conservation Commission, Littleton Conservation Trust, Agricultural Commission		Top	Priority	For This Goal
5.2 Work with landowners who are interested in voluntary CRs and APRs	Conservation Commission, Agricultural Commission, Littleton Conservation Trust, NEFF, Agricultural Commission		X	X	X
5.3 Educate the public and encourage the acceptance and use of transfer of development rights among willing land owners	Planning Board, Agricultural Commission, Conservation Commission		X	X	X
5.4 Develop an Agricultural Incentive District to preserve prime and other agriculturally significant properties.	Planning Board, Department, Conservation Commission		X	X	X

<b>Table 9-1</b> <b>Seven-Year Action Plan</b>					
<b>Action</b>	<b>Who</b>	<b>Funding AS available/TBD</b>	<b>2016-2018</b>	<b>2019-2021</b>	<b>2022-2023</b>
5.5 Educate citizens about and promote the use of voluntary conservation and agricultural restrictions and easements	Conservation Commission, Agricultural Commission, Littleton Conservation Trust, NEFF, Agricultural Commission, and other qualified land conservation organizations		X	X	X
5.6 Certify additional vernal pools on public land	Conservation Commission and volunteers		X	X	X
5.7 Continue preservation of open space and agricultural lands through the use of the Planning Board's open space cluster bylaw	Planning Board, Agricultural Commission		X	X	X
5.8 Build more sidewalks for better access to facilities	Littleton Highway Department		X	X	X
5.9 Study feasibility of constructing facilities that can be utilized for youth and senior citizens	PMBC, Planning Board, and Council on Aging		X	X	X
<b>Goal #6: Link Littleton's open spaces and trails both throughout the Town and on a regional level, particularly near shared natural resources.</b>					
6.1 Work with local conservation commissions and land trusts from contiguous towns to identify parcels of open space which might be connected across town borders	Conservation Commission, Littleton Conservation Trust, Board of Selectmen		Top	Priority	For This Goal

<b>Table 9-1</b> <b>Seven-Year Action Plan</b>					
<b>Action</b>	<b>Who</b>	<b>Funding AS available/TBD</b>	<b>2016-2018</b>	<b>2019-2021</b>	<b>2022-2023</b>
6.2 Acquire parcels of land in fee or by department/agency transfer in Littleton which are adjacent to existing open space in order to create a broader protected area	Littleton Conservation Trust, Conservation Commission, Town Land Sale Committee, SVT, land protection organizations		X	X	X
6.3 Map potential trail corridors and "greenways" on public land for pedestrian traffic and bike ways	OS&RPIC, Littleton Conservation Trust, Parks and Recreation Commission, NEFF		X	X	X
6.4 Expand trail system to connected multiple open space and recreational areas across town via public/land trust-held land	Conservation Commission, Littleton Conservation Trust, SVT		X	X	X
<b>Goal #7: Promote the use of Littleton's open space by residents, through developing better access to publicly accessible protected properties and encouraging community participation in open space maintenance.</b>					
7.1 Improve/expand parking areas near open space properties, including Handicapped Parking (HP) as applicable	Conservation Commission, Littleton Highway Department		Top	Priority	For This Goal
7.2 Develop "Community Work Days" for maintenance of open space	Littleton Conservation Trust, Conservation Commission, OSRPIC		X	X	X
7.3 Work with students to fulfill their community service requirements through maintenance of open space	Littleton Highway Department, Conservation Commission		X	X	X

<b>Table 9-1</b> <b>Seven-Year Action Plan</b>					
<b>Action</b>	<b>Who</b>	<b>Funding AS available/TBD</b>	<b>2016-2018</b>	<b>2019-2021</b>	<b>2022-2023</b>
7.4 Continue to recruit volunteer land stewards, and expand current volunteer public open space maintenance programs.	Littleton Conservation Commission, OSRPIC		X	X	X
7.5 Continue to utilize senior citizen tax-work-off volunteers for invasive plant control, as well as maintenance, on town properties	Town of Littleton		X	X	X
7.6 Develop and implement policies regarding dog conduct and control on open space properties to ensure public safety	Littleton Conservation Commission, Board of Selectmen, Animal Control; LCT		X	X	X
7.7 Add signage at town open space properties to promote a “carry in, carry out” policy regarding litter	Littleton Conservation Trust, Highway Dept.		X	X	X
7.8 Continue to work with aspiring Eagle Scouts by sponsoring projects to better existing and future town open space properties	Conservation Commission and LCT		X	X	X
<b>Goal #8: Enhance bicycle and pedestrian access and safety throughout town</b>					
8.1 Establish more bicycle and pedestrian routes on new and existing town, and state owned land and Littleton Conservation Trust land	Conservation Commission, Littleton Conservation Trust, Bicycle/ Pedestrian Advisory Committee, Highway Dept, Planning Board, Board of Selectmen, State		X	X	X

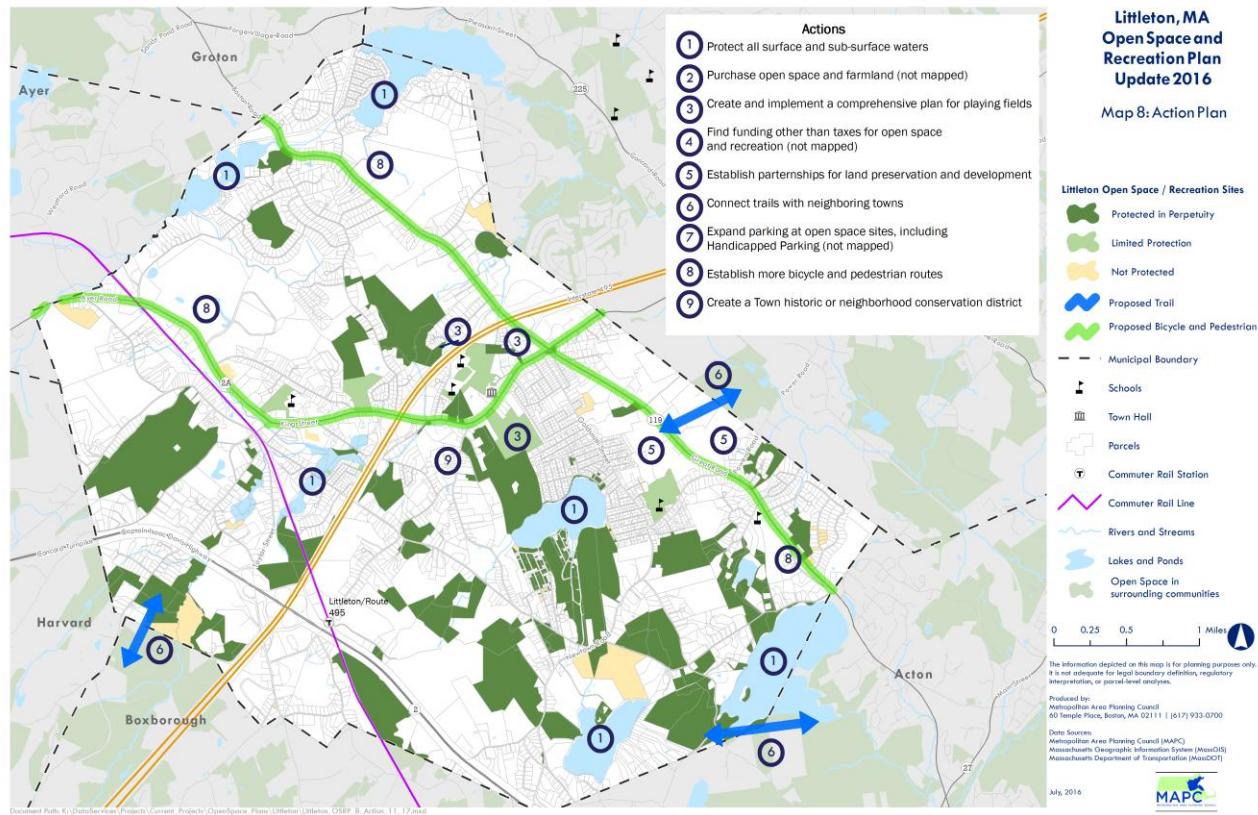
**Table 9-1**  
**Seven-Year Action Plan**

Action	Who	Funding AS available/TBD	2016-2018	2019-2021	2022-2023
8.2 Add more signage and marked lanes to bicycle and pedestrian routes as needed and applicable	Conservation Commission, Littleton Conservation Trust, Bicycle/ Pedestrian Advisory Committee, Highway Dept, Planning Board, Board of Selectmen, State		X	X	X
8.3 Establish more bicycle lanes and sidewalks on new and existing roads	Bicycle and Pedestrian Advisory Committee, Highway Dept, Planning Board, Board of Selectmen, State		X	X	X
8.4 Incorporate sidewalks and bicycle routes into development planning via the Town's "Complete Streets" policy	Bicycle and Pedestrian Advisory Committee, Board of Selectmen, Planning Board		X	X	X
8.5 Build more sidewalks for better access to facilities and commercial sites	Littleton Highway Department, State		X	X	X
8.6 Educate the public about bicycle and pedestrian safety, and encourage the use of bicycles and walking as forms of transportation	Police Dept., Bicycle and Pedestrian Advisory Committee; Parks, Recreation and Community Education Dept.		X	X	X
<b>Goal # 9: Identify and preserve significant Native American, historical and culturally significant sites.</b>					
9.1 Create a Town historic or neighborhood conservation district	Historical Commission, Board of Selectmen		Top	Priority	For This Goal
9.2 Preserve lands with known/documented historical value	Historical Commission, Board of Selectmen, Con Com, Littleton Cons. Trust, Community Preservation Committee, Agricultural Commission		X	X	X

**Table 9-1**  
**Seven-Year Action Plan**

Action	Who	Funding AS available/TBD	2016-2018	2019-2021	2022-2023
9.3 Obtain and/or review local and state resources on the historical significance of land in town	Historical Commission, Board of Selectmen, Con Com, Littleton Cons. Trust, Community Preservation Committee, State		X	X	X
9.4 Perform archaeological assessments and field reviews of town, state, and other publicly accessible land that may be of historical significance	Historical Commission, Board of Selectmen, Con Com, Littleton Cons. Trust, Community Preservation Committee, State		X	X	X

### Action Plan Map # 8 Showing Top Priorities for Each Goal



## **SECTION 10 PUBLIC COMMENTS**

To Be Added:

Dated distribution list to the:

Board of Selectmen (as "chief elected official");  
Planning Board  
Regional Planning Agency

Other groups, if any

Please Note:

Open Space and Recreation Survey, meeting notes, agendas, etc. are in Appendix B

**SECTION 11.0 REFERENCES**

Arendt, Randall. *Rural by Design*

Federal Emergency Management Agency. Flood Insurance Rate Map (FIRM) for Littleton, Massachusetts, 2014

Lemire, Robert, *Creative Land Development*

Littleton Conservation Trust

Littleton Highway Department

Littleton Open Space and Recreation Plan, 2009

Littleton Water and Light Department

Massachusetts Department of Conservation and Recreation *Landscape Inventory*

Massachusetts Executive Office of Energy & Environmental Affairs

*Buildout Analysis;*

*The State of Our Environment Report, April 2000;*

*The Open Space Planner's Workbook @ [www.mass.gov/envir.dcs](http://www.mass.gov/envir.dcs)*

*Massachusetts Statewide Comprehensive Outdoor Recreation Plan (SCORP) @ [www.mass.gov/envir](http://www.mass.gov/envir)*

Massachusetts Department of Environmental Protection

Massachusetts Department of Housing and Community Development *Community Profiles*

Massachusetts Department of Revenue, Division of Local Services

Massachusetts Division of Employment and Training

*Massachusetts Local Food Action Plan*, Metropolitan Area Planning Council, Franklin Regional Council of Governments, Pioneer Valley Planning Commission and Massachusetts Workforce Alliance, December, 2015.

MassGIS

*MetroFuture, Making a Greater Boston Region*, Metropolitan Area Planning Council, 2008

*Minuteman Area Comprehensive Agricultural Planning Program*, January 17, 2014 prepared by Metropolitan Area Planning Council (MAPC)

*Municipal Food Systems Planning Toolkit for MAPC Communities*, December, 2013 by MAPC and Conservation Law foundation (CLF) Ventures

Natural Heritage and Endangered Species Program - Division of Fisheries and Wildlife

*Official Dedication Booklet of the 250th Anniversary of the Town of Littleton, 1965*

Preserving Agriculture Public Forum in Littleton, May, 2013

*Statewide Comprehensive Outdoor Recreation Plan, 2012*

Sykes, John Thomas, *A History of Littleton*, 1953

United States Bureau of the Census